

YOUTH SOLUTIONS REPORT 2020



Solutions
Program

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This Report has been prepared with extensive advice and consultation of Members of the SDSN Leadership Council, Members of SDSN Secretariat and representatives of our partner organizations. These individuals serve in their personal capacities, so the opinions expressed in this report may not reflect the opinions of their host institutions. They are also not necessarily in agreement with every detail of this Report.

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Cover design by Molane Hu and Zen Koo. Report layout by Amy Au, Molane Hu and Zen Koo.

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Suggested Citation

Sustainable Development Solutions Network - Youth (2020). Youth Solutions Report - 4th edition. Sustainable Development Solutions Network - Youth, New York.

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SDSN Youth is an initiative of the UN Sustainable Development Solutions Network; a program launched by UN Secretary-General in 2012 to mobilize global expertise around the Sustainable Development Goals (SDGs).



Partners

The following partners have collaborated with the Youth Solutions Program:



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QUOTE BY JEFFREY D. SACHS



"The Solutions Report demonstrates again that it is a powerful tool in advancing and accelerating youth innovation all over the world. Young people are crucial leaders of change, and we need their ideas and solutions now more than ever in order to achieve the SDGs by 2030. During one of the most difficult times for the world population, in the midst of the COVID-19 pandemic, these young innovators succeeded in pivoting their ideas and adapting successfully to the world's critical challenges. Let us learn from these successes, and shine a light on their creative ideas and solutions."

STATEMENTS OF SUPPORT

"Today, many young people not only ask for sustainable development but are at the forefront of building it, with energy and passion, creativity, and the ability to innovate. They are also able to inspire, through concrete examples, the world of institutions and businesses made up of us adults. It is necessary to multiply the initiatives that make young protagonists and for this reason, we are proud to renew our collaboration with SDSN Youth and the Youth Solutions Report that showcases brilliant ideas to some of the most difficult global sustainability challenges."

Mario Cerutti,
Chief Institutional Relations and
Sustainability Officer, Lavazza

"We are currently facing three major crises: A health crisis, an economic crisis, and not least the climate crisis. This very extraordinary and serious situation for world society requires everyone to join forces and think innovatively. By empowering young talents around the world, UNLEASH and SDSN Youth both play a valuable role in creating the new solutions that we need to overcome the crisis. The Youth Solutions Report stands out as an outstanding tool in this fight and I am pleased to learn that it once again includes solutions provided by UNLEASH talents."

Flemming Besenbacher,
Chairman of UNLEASH

"We have a long way to go to achieve the SDGs and we desperately need young people to be fully engaged in the task. The Youth Solutions Report casts light on some of the most innovative work being done by young people around the world and serves as an important tool for informing and inspiring others to play their part"

Ross Hall,
Learning Societies Co-Lead at Jacobs Foundation & Friend at Ashoka

"Our capability to thrive, in harmony with all the other species, as well as to achieve a better life and a better world, depends on our ability to embrace change, break the status quo and evolve. It's when we are young that we have the energy, the courage, and the ambition to question things and change them...when we are old, we rather tend to accept things as they are and preserve the existing."

Thus, every youth initiative to change society for the better is a celebration of hope. Providing our support and guidance to these initiatives is the clearest sign that we are finally transitioning from the age of information to the age of knowledge. The Youth Solutions Report is a celebration on steroids: it honors youth applying its core capabilities to the challenges of global development, and at BABELE we are proud to be part of this crew so that we can implement this vision together."

Emanuele Musa,
Co-Founder & CEO, Babele

"We find ourselves today in a layered global crisis which has – at its heart – a deficit of leadership and solutions around the world. Young leaders have the capability, clear eyes, enthusiasm, energy, and intellect to lead today. Their social enterprises and initiatives already make a difference around the world, and I am given hope and renewed faith by the actions of our young people. The future cannot wait for these impressive leaders."

Oliver B. Libby,
Chair & Co-Founder,
The Resolution Project

"In this "Decade of Action", it is crucial to have young committed leaders, bright ideas and a strong empowerment of new generations to enable a truly sustainable development."

For this reason, education on global citizenship, innovation, and digital transformation is key.

The Barilla Foundation strongly supports the SDSN Youth Solutions Report and encourages youth to reshape the future, starting from our daily food choices, becoming concrete actors of change for our wellbeing and the one of the Planet."

Anna Ruggerini,
Operations Director,
The Barilla Foundation



"Seedstars is happy to partner with UN SDSN Youth and support The Youth Solutions Report to empower the next generation of innovators for sustainable development bringing positive change, and amplify their solutions. Both organizations deeply care about the impact young people can bring through entrepreneurship, global innovation and technology in solving global challenges and helping the world achieve the Global Goals. Together, it is our collective responsibility to engage, promote and advocate for, and inspire the next generation of leaders and entrepreneurs to take responsibility, building SDG-focused solutions, sustainable businesses and innovative technologies for the future. We must not forget that sustainability is the only insurance policy for our planet, and these stories you see in the report gives us hope for a better and sustainable tomorrow."

**Anurag Maloo,
Head of Partnerships
(Asia-Pacific), Seedstars**

ADVISORY PANEL MEMBERS



Dr. Alexander Dale

Dr. Alexander Dale is the Lead for MIT Solve's Sustainability pillar, where he supports myriad people and organizations passionate about tackling food, energy, water, and climate challenges. He also supports Solve's Indigenous Communities Fellowship and growing work in the interior of the US. He has an academic background in the life-cycle impacts of energy and water infrastructure and a professional background in environmental policy, engineering education, and non-profit management.

Alexander was previously the Executive Director of Engineers for a Sustainable World (ESW), and an AAAS Policy Fellow hosted by the US EPA's Transportation and Climate Division. He has also taught courses in social entrepreneurship, energy and science communication, and technical sustainability.

Ana Nikolova

Ana Nikolova holds a Master's degree in International Project Management and is finishing a Doctorate in the same field. She is running a business consulting company working with start-ups and SMEs. She is also an external expert evaluator for the programs of European Commission. Ana is an experienced trainer on topics such as Entrepreneurship, Project Management, etc. She has graduated from the Training of Trainers course under Erasmus+ Program.

Nikolova is a member of Junior Chamber International (JCI) since 2012, where she has been serving in different positions on local, national and international level. She has been JCI Sofia Local President and JCI Bulgaria National President. Nikolova has been a Counselor assigned to 12 countries while serving in the JCI European Development Council. She has been a member of the JCI Marketing Committee. Currently is serving as JCI Vice President assigned to Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway, and Sweden.



Asha Auckloo

Born 29 December 1981 in Mauritius, Africa, Asha holds a Master of Science in Bioinformatics and Molecular Biology. She works as a Senior Forensic Scientist and is also involved in training delivery to stakeholders such as Police and Crime Scene Managers in various aspects of Forensic Science. She resides in Mauritius, Africa, with her family. Asha joined JCI City Plus in 2011. She became Local President of JCI City Plus in 2014 and National President of JCI Mauritius in 2017.

At the International Level, she served as 2018 JCI Vice President and received the JCI Presidential Award for Most Outstanding Vice President for Africa and the Middle East. She has been honored as JCI Senator No. 76757.

In 2020, Asha is serving as JCI Executive Vice President assigned to Africa and the Middle East and has received the JCI Presidential Recognition of Most Outstanding Executive Committee Member.

Cecile Fattebert

Cecile has been working since January 2020 with the Global Protected Areas Programme at the International Union for Conservation of Nature. As Programme Officer, Solutions with the Blue Solutions Initiative, she provides support for reviewing, learning, and sharing good practices and solutions for Marine Protected Areas' effective management and good governance across selected regions. She comes almost straight from Madagascar, where she was responsible for implementing the Barren Isles Marine Protected Area with key partners. She had previously worked in the Philippines with fisher communities as well to promote sustainable local resources use. In the early years of her career, she built some experience in eco-tourism in Bosnia-Herzegovina and Vietnam.

Cecile holds a Master's degree in Ethnology and Sociology from the University of Neuchatel, Switzerland. She loves immersing in different cultures, reading, music, and diving/snorkeling.





Cherie Nursalim

Cherie Nursalim is Vice Chairman of GITI Group. She chairs the Southeast Asia Chapter of United Nations Sustainable Development Solutions Network, the Tsinghua University Southeast Asia Center, and United in Diversity Foundation. She serves on the Advisory Boards for MIT Sustainability Initiative Sloan School of Management, Columbia University, Nanyang Technology University Business School, and the Research Center for Climate Change for University of Indonesia. Ms Nursalim is the Vice Chairman of the International Chamber of Commerce, board member of Publicis Groupe, IMAGINE, the Business and Sustainable Development Commission Global Blended Finance Taskforce and Partnering for Green Growth (P4G). She is a recipient of the Baiyulan Award from the Shanghai Government and awarded naming of orchid species for her contribution as founding board in Gardens by the Bay. She was listed among Forbes' 48 Heroes of Philanthropy.

Corrinne Graham



Dr. Graham was recognized in 2019 by New York City SBS (Small Business Services), for 2018 and 2019 WENYC (Women Entrepreneurs NYC) Mentor Role; LIBN Class of 2017 Long Island Business News Top 50 Most Influential Women in Business; Diversity in Business Awards and MWBE. She is a highly accomplished speaker, mentor, project manager, commercialization and technology transfer specialist, workforce and personal and professional development trainer, and consultant to midsize, small, and start-up businesses. A small business specialist with nearly two decades of experience across a diverse spectrum of businesses with revenues ranging from US\$20m to US\$500m.

Appearances include: Huffington Post, WLIW 21, Newsday, CBS 1010 Win, LIBN, Fios1-Money, and Main Street, Innovate LI, APICS (American Production and Inventory Controls Society), SCORE, and others. Dr. Graham is a staunch community advocate and partner and board member of community organizations throughout Long Island as well as regional and international.



Dinh-Long PHAM

Dinh-Long is a proud French-born Vietnamese supporting youth to achieve a greater impact on the SDGs. He is a social gardener, community builder, facilitator, and happy podcast host with a passion for youth empowerment & engagement, social justice, and climate change. He is currently working with young social entrepreneurs and community builders across Asia-Pacific through Youth Co:Lab, an initiative co-led by UNDP and Citi Foundation. When not working, he is performing improv comedy, playing badminton, and having meaningful conversations with changemakers from all around the world with Life Line Podcast! Dinh-Long holds a Master in Management and Marketing from HEC Paris.

Emma Torres



Emma Torres is Vice- President for the Americas and Head of the New York office of the Sustainable Development Solutions Network. She also serves as Senior Adviser on Sustainability at the Regional Bureau for Latin America and the Caribbean, United Nations Development Programme, UNDP. She has a long working experience in the United Nations.

Ms. Torres served as Deputy Executive Coordinator, UNDP/GEF- a partnership among the UNDP, UNEP and the World Bank, the Global Environment Facility (GEF) is the financial mechanism of three main UN Global Conventions. She is currently a member of Independent Advisory Group on Sustainability, InterAmerican Development Bank (IDB) appointed by the President of IDB, and of the IDB's Biodiversity and Ecosystems Services Advisory Committee. She Chairs the Standing Advisory Group on Technical Assistance and Cooperation (SAGTAC) to the Executive Director of the International Atomic Energy Agency (IAEA). She is Co-Chair of SDSN Amazonia she is advancing several initiatives in Latin America including as Strategic Coordinator of the Science Panel for the Amazon

Ms. Torres holds an MA, Economics, Universidad Complutense, Madrid, Spain; a Diploma on Language and French Civilization, Sorbonne, Paris; Certificates in Environmental Economics and Climate Change, IIED, Harvard University.



Fabio Petroni

Fabio is the Director of Programmes at the E4Impact Foundation, the Catholic University of Milan's spin-off aiming at growing impact entrepreneurs in Africa. In partnership with African universities, E4Impact has trained and accelerated 2.000 entrepreneurs in DR Congo, Ethiopia, Ghana, Ivory Coast, Kenya, Rwanda, Senegal, Sierra Leone, Sudan, Uganda, and Zimbabwe.

Previously, Fabio worked for the Italian oil company Eni as a Sustainable Development Expert contributing to Eni's work on the UN Rio+20 Conference. He interned in the European Parliament.

Helén Nilsson

Helén Nilsson is Director of Nordic Council of Minister's office in Lithuania, tasked with developing and managing regional activities, networks, and projects in the Nordic-Baltic region with the vision to make the region the most sustainable and integrated region and the best place for children and youth in the world. Co-operation with the Baltic countries focuses on issues such as strengthening welfare and democracy, social innovation, culture, digitalization, environmental and climate issues. Helén is also responsible for the organization's work in Belarus, managed from Vilnius.

Before joining the Nordic Council of Ministers in 2017, Helén was the Head of International Organization for Migration (IOM) office in Istanbul, and she has also worked at The Swedish International Development Cooperation Agency (Sida) and the Swedish Institute.



Dr. Kate Roll

Dr. Kate Roll, Assistant Professor in Innovation, Development and Purpose and Head of Teaching at UCL's Institute for Innovation and Public Purpose, is a political scientist interested in vulnerability, with a particular focus on how people in poverty gain greater social and economic security.

Her multi-disciplinary work brings together politics, technology, business ethics, and development studies. Committed to grounded research, she has conducted fieldwork in Timor-Leste, Indonesia, the Philippines, and Kenya.

Prior to joining IIPP, Kate taught at the University of Oxford. She holds a BA from Brown University, an MPhil in International Development Studies and a DPhil in Politics from the University of Oxford.



Katherine Sparkes

Katherine Sparkes is a global entrepreneur and charity changemaker. Sparkes founded Flamingo Creative, a consultancy which helps businesses function ethically and responsibly as well as providing management consultancy services to the third sector. Her work also includes acting as CEO for a variety of charities. Sparkes has worked with global corporations such as KPMG, Accenture, and Credit Suisse, as well as with the British government, where she is a regular speaker at the Cabinet Office. Sparkes also founded two not-for-profit organizations; Styleability and inclusive dance school Flamingo Chicks, which sees 3000 disabled children come through its doors each year. She has won numerous awards for her contribution to the global community, including the JCI Ten Outstanding Young Persons of the World Award in 2012, a Point Of Light Award from the British Prime Minister and the Queen's Award for Voluntary Service.



Kevin Hin

Kevin Hin currently serves as the Junior Chamber International (JCI) Secretary General, responsible for managing the JCI Headquarters team and supporting the President, Board of Directors, and members worldwide to achieve the organization's strategic goals. He holds a Master's degree in International Accounting and Finance from the London School of Economics. Most recently, he worked as deputy Sales Director for the APM Monaco jewelry brand and a sales and marketing consultant.



Kevin Hin's JCI journey began in 2003 as a member of JCI Monaco. He became Local President in 2006 and National President in 2010, as well as occupying several national board positions. At the international level, he served as COC Managing Director of the JCI European Conference in Monte-Carlo in 2013 and JCI Vice President for Europe in 2016. He finally served as 2018 JCI Executive Vice President for Europe before being appointed as Secretary General at the 2019 JCI World Congress in Tallinn, Estonia. He truly believes in making the organization members feel special and is passionate about the positive impact that JCI can have on enterprising young leaders around the world to sustain and rebuild economies.



Dr. Klaus Kunz

Dr. Klaus Kunz holds a PhD in Organic Chemistry and a degree in Economics. After joining Bayer's central Research Department in 2001, he gained 19 years of experience directing business strategic topics in R&D at a global level, taking leadership roles in research, R&D project management, and regulatory and public/governmental affairs, including issues management and stakeholder engagement. In 2018, he took over the lead for Sustainability and Business Stewardship. He also holds a lectureship for Chemistry at the University of Aachen.

Lauren Barredo

Lauren Barredo is Head of Partnerships for the SDSN, where she manages relationships with institutions, companies, and individuals, finding new ways to collaborate on SDG implementation. In addition, she manages three Thematic Networks (Health, Agriculture, and Extractive and Land Resources) as well as three Regional Networks (Amazon, Australia Pacific, and Caribbean). From 2010 to the SDSN's founding in 2012 she worked as a Special Assistant to Jeffrey D. Sachs at The Earth Institute, Lauren also held positions at the National Fish and Wildlife Foundation, the US Environmental Protection Agency (EPA), the Smithsonian Museum of Natural History, and the Yale University Herbarium.



Linden Edgell

Linden is the Global Sustainability Director and a Partner with 19 years of experience at ERM. She leads ERM's corporate approach to sustainability and reporting and the ERM Foundation.

She has led ERM's work on the Sustainable Development Goals and is currently working on a number of key projects with organizations and companies to further the business contribution to realising the Goals. Linden has been involved in the various WBCSD Sector Roadmaps for the SDGs with the chemical, forest, cement, and other sectors.

Linden leads ERM's strategic relationships with key international organizations, including the UN Global Compact, Global Reporting Initiative, and the World Business Council for Sustainable Development (WBCSD). Linden is currently seconded on a part-time basis into the WBCSD Vision 2050 refresh project to lead the regional engagement workstream. She has been involved in many UN events and has co-ordinated ERM's engagement in various UNFCCC and other key meetings.

Naiara Costa

Naiara Costa is an International Relations analyst serving, since 2018, as Senior Sustainable Development Officer at the Division for Sustainable Development Goals of the United Nations Department for Economic and Social Affairs (UNDESA), where she coordinates the stakeholder engagement program. Before that, she led the International Secretariat of Together 2030, a civil society network tracking the implementation of the 2030 Agenda and the SDGs. She was the Advocacy Director of Beyond 2015, a global civil society campaign. Prior to that, she worked as an Advisor at the Permanent Mission of the United Kingdom in New York as well as a development advisor at the UK Department for International Development (DFID) in Brazil.

Naiara has served the UN as a National Programme Officer at UNAIDS in Brazil for more than a decade and Brazil's government at the Presidency of the Republic and the Ministry of Finance. Naiara holds a master's degree in International Relations (University of Brasilia, Brazil) and an MBA on Projects Getulio Vargas Foundation, Brazil.





Prof. Paul Bottino

Paul Bottino is the Executive Director of Innovation Education at the Harvard Paulson School of Engineering and Applied Sciences, the creator of its flagship Startup R&D course, and the faculty director of the Harvard College Innovation Challenge. Having co-founded the Technology and Entrepreneurship Center at Harvard in 2000, Paul's career has been dedicated to empowering youth and building their innovative capacity through entrepreneurship education and practice.

Paul's incubation of hundreds of collegiate startups and his own experience founding for-profit and non-profit biotechnology companies and a blockchain company inform his international work as an innovation advisor to students, startups, investors, public and private companies, schools, universities, and NGOs, helping them formulate novel ideas and create new value for their stakeholders.

Oliver B. Libby

Oliver B. Libby is co-founding Managing Partner of Hatzimemos / Libby Holdings (H/L) and of CityRock Venture Partners. The H/L family of companies represents a new kind of venture firm, dedicated to building start-ups at the nexus of growth, impact, and diversity.

Mr. Libby is also Chair & Co-Founder of The Resolution Project, Inc., a non-profit which works with undergraduate students launching new socially-responsible ventures. Resolution supports hundreds of young social entrepreneurs in nearly 80 countries and across the United States. Resolution Fellows have helped over 2.7 million people. Mr. Libby is a Presidential Leadership Scholar, a Milken Young Leader, a Tech:NYC council member, and a Fast Company Impact Council Member.

Mr. Libby's work has been covered in publications including the New York Times, Bloomberg BusinessWeek, Fast Company, Reuters, and television appearances including CNBC. Mr. Libby graduated magna cum laude from Harvard College.



Wing Thye Woo

Wing Thye Woo is currently studying the design of efficient, equitable pathways to achieving the Sustainable Development Goals with projects on Green Finance, Middle Income Trap, and Global Economic Architecture for the Multi-Polar World. He is an expert on the East Asian economies, particularly, China, Indonesia and Malaysia.

Wing Woo is Research Professor at Sunway University in Kuala Lumpur where he heads the Jeffrey Cheah Institute on Southeast Asia and Jeffrey Sachs Center on Sustainable Development; and he holds academic appointments at Fudan University in Shanghai, Penang Institute in George Town, and Chinese Academy of Social Sciences in Beijing. He is Distinguished Professor Emeritus at University of California at Davis, which graciously privileged him to serve in 1985-2020.

Wing was born in 1954 in George Town, Penang, Malaysia. He graduated from Swarthmore College in 1976 with a B.A. (High Honors) in Economics, and a B.S. in Engineering; and received an M.A. in Economics from Yale in 1978, and an M.A. and a Ph.D. in Economics from Harvard in 1982.

Rachel Jarosh

Ms. Rachael Jarosh is president and chief executive officer of Enactus, the largest global experiential learning platform dedicated to creating a better world while developing the next generation of entrepreneurial leaders and social innovators.

Under Rachael's leadership, Enactus is driving innovation to create greater impact for the 72,000+ participating Enactus university students working in 70+ countries and for the countless communities in which Enactus students are addressing economic, environmental, and social challenges. As a global network of business, academic, and student leaders, Enactus believes investing in students who take entrepreneurial action for others creates a better world for us all. In 2019, Enactus positively impacted 2.9M people worldwide.

Rachael joined Enactus in 2016. Prior to that, she built a distinctive professional portfolio in law and finance, communications, and philanthropic strategy over the span of her 25+ year career.



EXECUTIVE SUMMARY

We are excited to present to you the Fourth Edition of the Solutions Report. The Report was brought to life through months of hard work during a very challenging year. This compilation of solutions is critical because it shows that young people are innovative, passionate, and hard-working. They are also quick to adapt, resilient, and don't easily give up on their dreams.

The year 2020 has presented a fair amount of challenges, to say the least. Every single person all over the world had to adapt to a new reality, facing unexpected challenges and uncertainties. However, we also saw new opportunities worldwide to connect and grow and continue the critical work towards realizing the 2030 Agenda. We particularly celebrate the efforts carried out by all young people featured in the Report to advance the SDGs, despite being faced with a global pandemic.

The Report focuses particularly on the Decade of Action and the acceleration of sustainable solutions for the world's biggest challenges such as hunger, education, poverty, and climate change, to name a few. We genuinely believe that young people can catalyze change, and we need to harness all their potential to reach the goals and milestones of the 2030 Agenda.

The Fourth Edition of the Report is composed of the following: a comprehensive analysis of the 50 solutions, showcasing the problems, solutions, and impacts addressed by 25 non-profits and 25 for-profit organizations. We can see the representation of different regions worldwide and the Sustainable Development Goals that every entrepreneur is trying to achieve or solve through their innovation. The second component zooms in on the various key trends found among entrepreneurs and findings that can help improve the general entrepreneurship environment globally.

The third component focuses on what we do at the Solutions Program and how we aim to help young innovators advance their agenda and enterprises. It is not an easy road ahead; however, we are willing to walk hand-in-hand with all the innovators who believe they have an idea that can help us get closer to achieving the 2030 Agenda. Successful social innovation depends on many factors, but one of the most crucial ones is the power of partnerships. And that is what we are here to do; partner with academia, private and public sector, and most importantly, young innovators to achieve the 17 Sustainable Development Goals.

Chapter 4 is provided by our partners at Youth Co:Lab. Since the outbreak of the virus, Youth Co:Lab has witnessed firsthand the innovative, resourceful, and rapid responses of

young social entrepreneurs across the Asia-Pacific region. This chapter highlights the pandemic's impacts on the general entrepreneurial environment in the region and how the innovators adapted to a new reality from one moment to another. Most importantly, the chapter highlights that although young innovators are resilient and able to withstand shock better than other entrepreneurs, they still need a reliable support network to forge an inclusive and sustainable society.

Chapter 5 is authored by our partners at E4 Impact and shines a light on the current access to finance for young people, especially on the African continent. Fabio Petroni highlights the missed opportunities of not investing in young talent from the countries in this region, considered the world's most entrepreneurial continent. This chapter provides an extensive overview of the current situation and the necessary steps to engage youth entrepreneurship in Africa.

Chapter 6 is co-authored by one of the talented Project Officers of SDSN Youth, Agnes Vinblad, and one of the most powerful voices representing youth today, Hillary Bakrie. Both of these women call for the inclusion of women in entrepreneurship and innovation, highlighting the potential of significant economic gain for both developed and developing countries alike when women are allowed to participate in the labor force on equal terms as men. This chapter is notably important as we are heading into a time where the economic impact of the COVID-19 pandemic disproportionately affects women.

Chapter 7 is co-authored by two amazing members of SDSN Youth, Muriam Fancy, and Navya Sharan. These women take a deep dive into the world of digital technology advancements and the extraordinary dominance of innovations related to technology from younger generations. This chapter also makes a case for investment in technology for the Sustainable Development Goals, which is desperately needed to achieve the 2030 Agenda.

Chapter 8 is authored by one of the Solutions Report's Alumni, Daniela Fernández, CEO of the Sustainable Ocean Alliance. The chapter describes the current biodiversity crisis that we face, remarkably even more so in our oceans. However, there is a strong willingness among young people to do something about these environmental challenges. We can see how young people act and respond to protect biodiversity through innovation, science, legislation, and robotics, to name a few.

Chapter 9 is provided by Kavell Joseph, International Development Lawyer, and Consultant at the World Bank Group. In this chapter, our author dives deeper into the challenges and

opportunities presented to youth social entrepreneurship due to the COVID-19 pandemic and identifies several initiatives being developed by organizations to address these circumstances and provide opportunities for these youth innovators.

Chapter 10 features a collaboration by Dr. Corrinne Graham, from Graham International Consulting, and Dr. David Smith from the Institute of Sustainable Development and who is also the chair of the Caribbean Chapter of SDSN. Dr. Graham and Dr. Smith take a closer look at the entrepreneurial journey in the decade of delivery. This informative contribution examines the road in every entrepreneur's life, from the current challenges and opportunities, to how to succeed in a crisis, support to young entrepreneurs, and partnerships between governments, academia, and the private sector to nurture youth innovation.

Finally, chapter 11 is provided by our partners at Seedstars and underlines how reaching the 2030 Agenda is absolutely possible through the power of entrepreneurship. The chapter emphasizes the global unemployment crisis and the possibility of reaching a long-term solution via the growth of Small and Medium Enterprises (SME's). Featuring different examples, our partners at Seedstars help us understand and analyze key elements fundamental for any entrepreneurial ecosystem and share with us the best ways to increase employment opportunities while at the same time advancing the Sustainable Development Goals. The chapter also features the work of Seedstars through their programs and their experience helping young entrepreneurs solidify their innovations and enterprises.

When looked at as a whole, the chapters of this Report contain different perspectives and views from innovators, catalysts of change, experts, and organizations. These different opinions provide an outlook into the current entrepreneurial environment, the challenges and opportunities, but most importantly - the resilience and the desire to do good for the world.



PART 1



**DECADE OF ACTION:
THE MULTIDIMENSIONAL CHAR-
ACTER OF YOUNG ENTREPRE-**



CHAPTER

01

**Analysis Of Key Trends
And Insights From
This Year's Solutions**

Trisanki Saikia, Sushil Rajagopalan
Youth Solutions Program

Introduction

This fourth edition of the Youth Solutions Report comes out amidst a historic time for humanity. As the world is grappling with an unprecedented pandemic situation, it looks towards the youth to provide innovative solutions and lead the change. By definition, "sustainable development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987) - recognizes and respects that our current actions needs to be considerate to the future, and the bridge is today's youth. The youth are instrumental in achieving the SDGs and this report highlights some of the young people and their solutions to achieve these goals.

What Is A Youth-Led Solution?

SDSN Youth defines youth-led solutions as "transformative projects and endeavours, ranging from entrepreneurial ventures to educational programs, and including research activities, charity initiatives and so forth, that showcase the innovative approach that youth are taking in solving the multiple challenges of sustainable development" (SDSN Youth 2017:16). For the purpose of this Report, these projects have been grouped into two categories in order to facilitate submissions and highlight the diversity of youth-led innovation for the SDGs: solutions that are non-profit projects, and those that are for-profit projects. Six eligibility criteria were developed when selecting projects to be included in the Report. As discussed below, these criteria were also used by the Advisory Panel of the Youth Solutions Report for assessing the applications that were received.

Relevance of the
Challenge Addressed

Innovative Character
of the Solution

Financial Viability

Scalability

Current or
Potential Impact

Integrated Approach
to the SDGs

What Was The Process Of Submission?

A. Call For Submissions

The call for submissions for the Fourth Edition of The Youth Solutions Report was launched in June 2020.

B. The Review Of Submissions

After the final deadline for submissions expired, SDSN Youth convened an Advisory Panel comprising 23 individuals, including world-renowned experts from different disciplines, representatives of the SDSN Secretariat and members of SDSN Youth Executive. After a first round of review which was conducted by the Solutions Initiatives team of SDSN Youth to exclude incomplete submissions and assess the most interesting applications, 90 Solutions and Ideas were shortlisted and presented to the Advisory Panel to receive individual feedback on each of them. The Solutions and Ideas were graded based on an evaluation of the criteria discussed in Section x and the results of this second round of review were evaluated by SDSN Youth in 2020.

Analysis Of The Selected Solutions

This year, 1,605 solutions originating from 121 countries applied. This short chapter, however, only considers the 50 solutions that have been selected for inclusion in the 2020 Youth Solutions Report. Among these solutions, the average age of for-profit program leads is 23 years old and the average age of non-profit program leads is 26 years old.

Organization Size

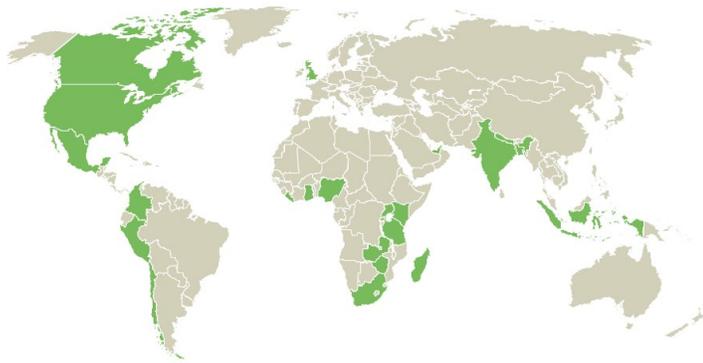
In the analysis, the organizational size saw immense diversity. Non-profits, on average, had bigger teams with the average organizational size (employees + volunteers) being 185 for non-profits and 19 for-profits. This difference reflects the difference in approaches for Non-profits and For-profit organisations. For-profits have an economic bottom line and appreciate efficiency in their workforce whilst the non-profits have broader objectives, many times including outreach and implementation drives, which require more people.

There were also a number of volunteer driven organizations, where the solutions were propelled by teams of volunteers without any regular paid employees.

	Non-profits	For-profits
Average employees	111	6
Average volunteers	74	13
Average organizational size (employees + volunteers)	185	19
Range of organizational size (employees + volunteers)	6 - 2457	4 - 125

Geographic Focus

Countries where the solutions come from (in green)



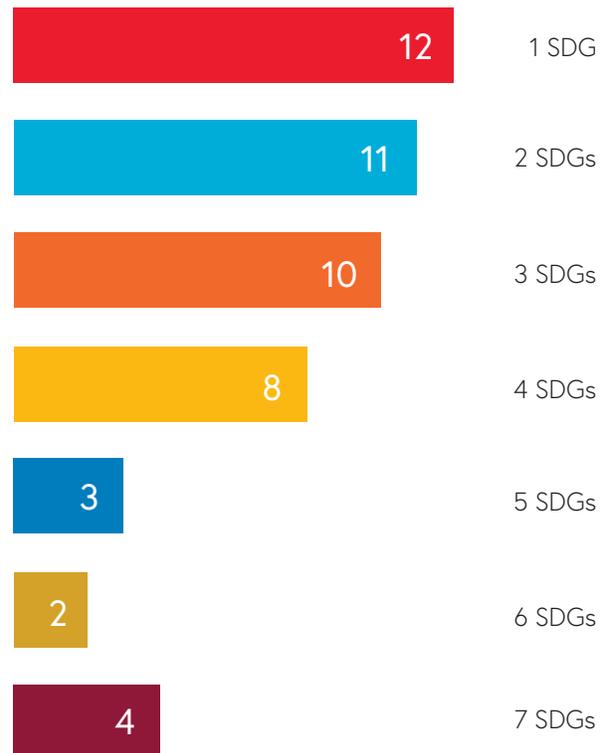
This year, like the previous years, the maximum contribution of both not-for-profit and for-profit solutions selected this year are registered and active in Africa, highlighting the continued boom of the African social entrepreneurship movement. Africa, also has the highest rate of youth population increase and this booming demographics' commitment to the SDGs is heartening. However, this year also witnessed more participation from other parts of the world. In the non-profit category, African solutions dominated with 14 solutions with the highest number of solutions emerging from Nigeria with 4 solutions, followed by Kenya, Ghana and India with 3 solutions each. Similarly in the for-profit category, there were 14 African solutions, Uganda contributing the most with 5 solutions, followed by Tanzania, Rwanda, India and Mexico (all with 2 solutions each).

While most of the solutions may have a local focus, many of them also operate on a national or sub-regional scale. Especially, in the African context, a number of solutions target multiple countries - usually in a regional bloc. Youth Solutions operate in more than 25 countries indicating the intent to create impact beyond their local communities and region, and thereby attempting to produce replicable and scalable solutions. Large section of submitted applications/solutions appears to be focused on the region of Africa and Asia. Understandably, the emphasis is on catering to the development needs by tailoring solutions that produce maximum impact towards the well-being of the environment and society overall.

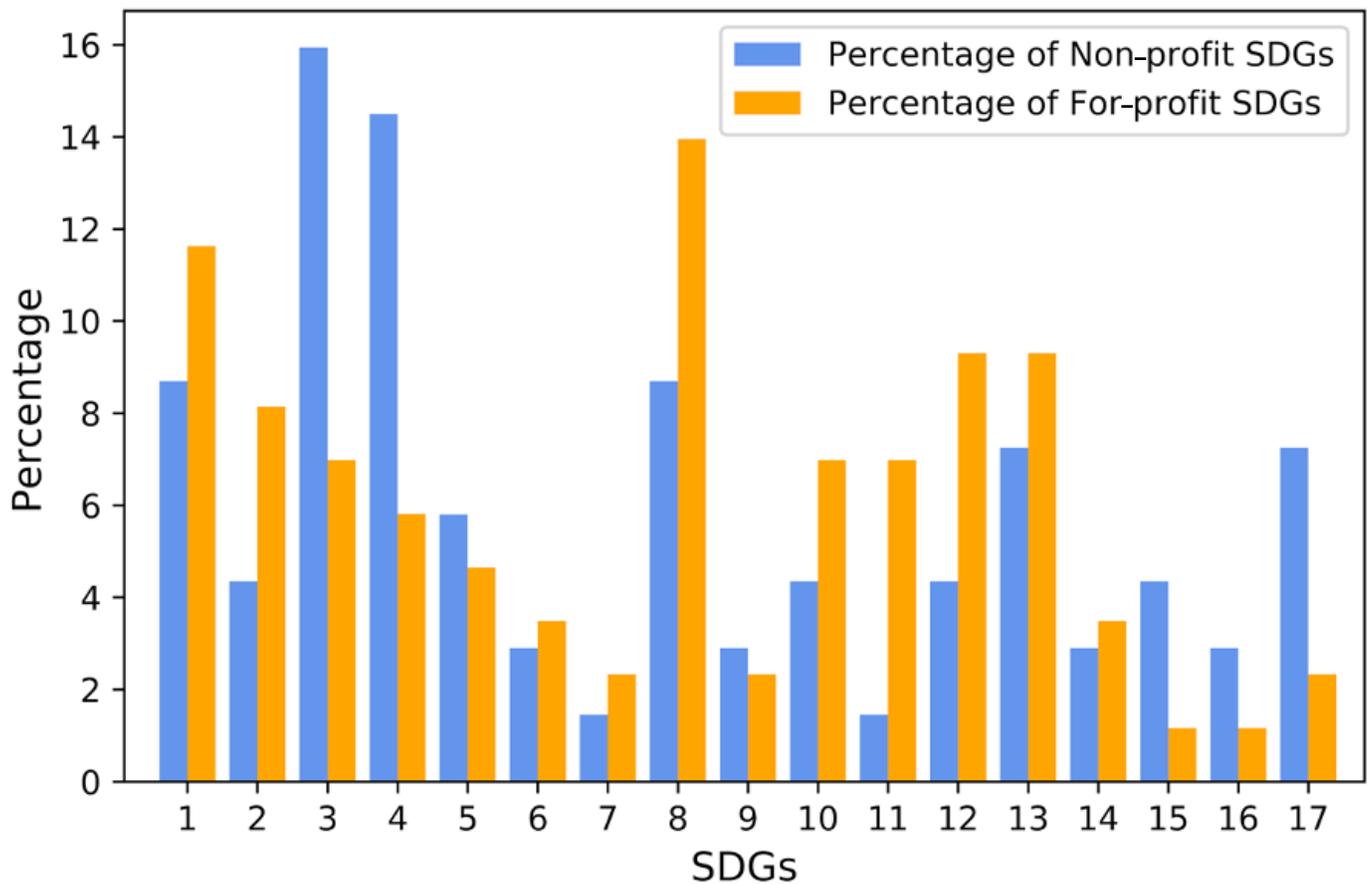
Main SDGs Addressed

All the submitted applications have emphasized their solutions are capable of addressing multiple SDGs. More than half the solutions (for-profit and non-profit) address three or more SDGs. This very well highlights the interconnectedness amongst the global goals as achieving one SDG is also capable of providing co-benefits.

Count of Solutions Addressing Number of SDGs



Most popular SDGs were related to human well-being as SDG 3 (Good Health and Well-being), Goal 8 (Decent Work and Economic Growth) and Goal 4 (Quality Education). Environmental SDGs such as Goal 15 (Life on Land) and Goal 14 (Life Below Water) have received relatively less focus as compared to the other goals. This trend was also visible in the previous editions of Youth Solutions Reports, thereby now by calling more attention into understanding the reasons for this trend. The low budget solutions are often better suited to address immediate concerns in the local communities, whereas goals which address marine ecosystems and land biodiversity often require larger capital and specialized expertise. In this year's solutions, we notice that non-profit solutions are more focused on societal goals such as good health (SDG 3) and education (SDG 4), while for-profits are inclined towards goals which contribute to economic growth and development (SDG 8, SDG 1).



Climate Action:

How working on one goal leads to co-benefits for others

Featured Projects:

Women and Youth in Beekeeping, Baala, Swing Green

Climate change is the most pressing challenge we face today with the youth being major stakeholders, and we increasingly have witnessed youth taking up leadership on climate issues. This youth initiative on climate action is reflected in this report's solutions with 13 out of 50 solutions dealing with climate action, either directly or indirectly. 5 not-for-profit solutions and 8 for-profits work for climate action either directly or their social enterprise contributes to SDG 13. Another interesting observation is most of these solutions do not just contribute to SDG 13 but to multiple SDGs which highlights the interconnectedness of the SDGs.

Ghana based "Women and Youth in Beekeeping and Value Chain" is providing education, training and the tools and equipment to women and youth in rural communities to appreciate the role of pollinators in crop farming and adopt sustainable farming practices. This solution is educating and increasing human and institutional capacity for climate change adaptation and impact reduction. Fur-

thermore, the programme addresses several other issues such as poverty alleviation, social impact, and gender inequalities in a single holistic program and contributes to several related SDGs.

On the flip side, we have a solution whose primary focus is good health and well being and gender equality also contributing to climate action. Baala, a non-profit based in India, aims to solve the main issues of menstrual hygiene by providing education as well as low-cost hygienic reusable menstrual products. The solution is helping to reduce the enormous non-biodegradable menstrual waste generated.

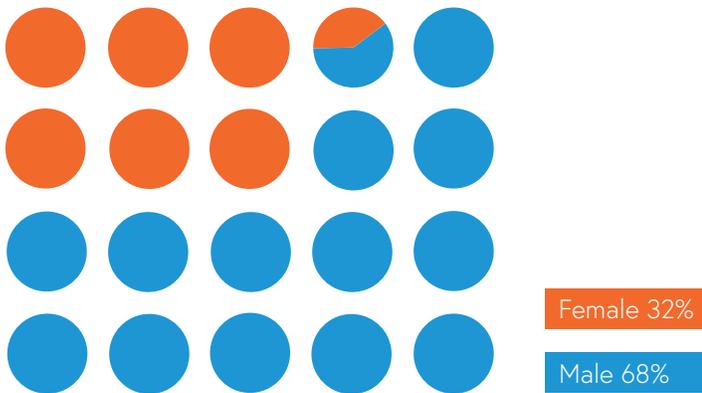
Swing Green, a Ugandan enterprise, crowdsources and crowdfunds agroforestry projects to address the problem of climate change within Uganda. They develop and advocate for environmental conservation strategies that bring about socioeconomic development to the people of Uganda. In addition to crowdsourcing, they provide advisory services and capacity building programmes on Agroforestry, soil and water conservation strategies, and integrated soil fertility management within the locality. In addition to SDG 13, the programme also contributes to the sustainable development goals on sustainable production and production, and good health and wellbeing.

Gender

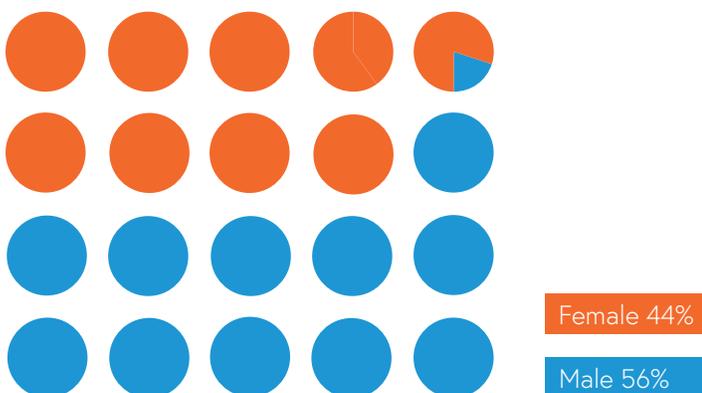
Entrepreneurship is challenging in itself, and being a woman in this space makes it even more challenging due to lack of support ecosystem and societal attitudes. The representation of young women in this year's solutions was only 32% for the non-profits and the for-profits solutions having a better representation of female program leads with 44%. There are several structural, social and cultural impediments for women that leads to a gender gap in employment and entrepreneurship, and there needs to be systemic changes to improve this. According to the 2019 Mastercard Index of Women Entrepreneurs, there is a dichotomy between opportunity driven entrepreneurial activity in high income countries and necessity driven entrepreneurial activities for women in low income countries.

Female entrepreneurship yields a number of performance enhancing outcomes such as collaborative teams; but this requires investments in their education, skills, and assets. In low income settings, finance is not the only factor determining success, other factors such as financial management skills, entrepreneurial capabilities and necessity (or limitation of other options) also play important roles (Afrin, Islam and Ahmed, 2009). 8 of the 50 solutions this year contribute to SDG 5 on gender equality.

Gender of Leadership (Non-Profit)



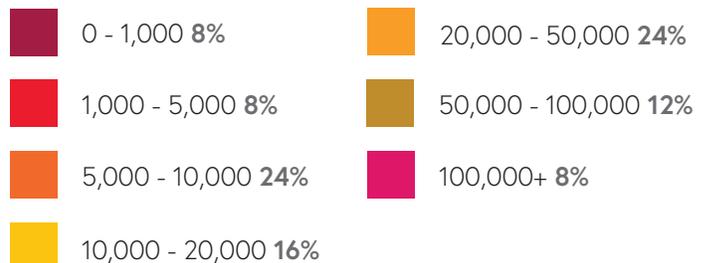
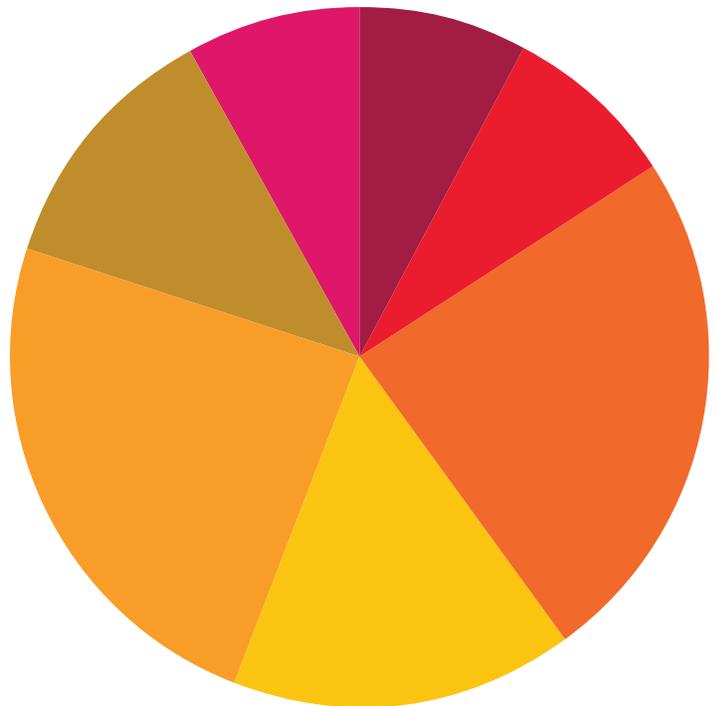
Gender of Leadership (For-Profit)



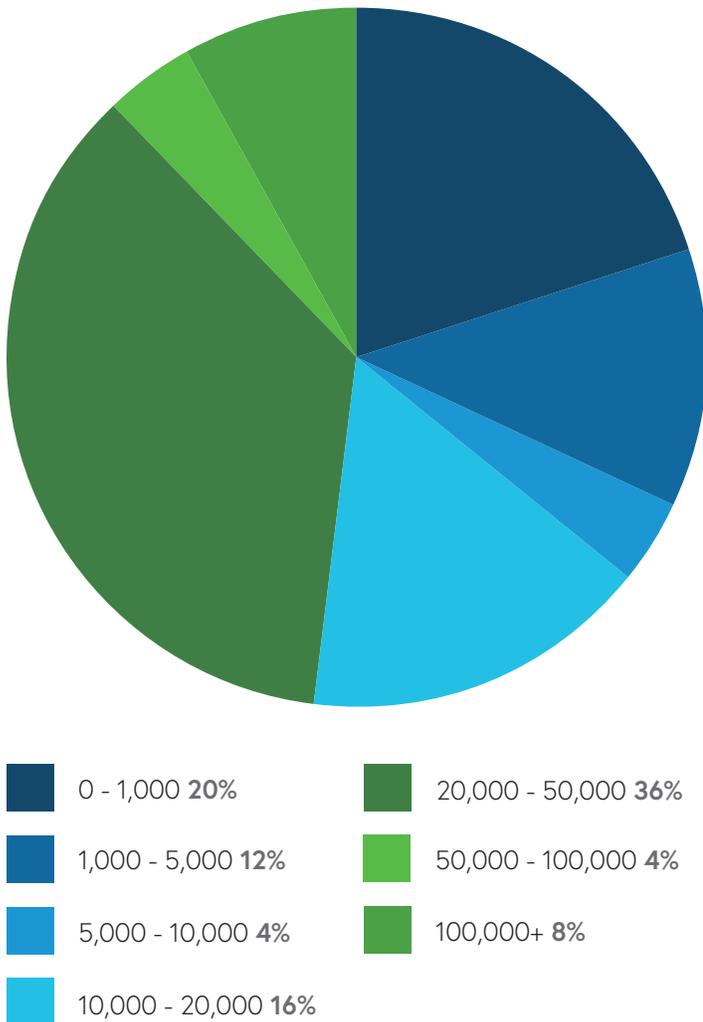
Budget

Funding is a crucial aspect for youth-led solutions, as different levels of access to capital and financial services often define not only the operations and scaling-up of the project activities, but also the legal form in which the solutions themselves are structured. Within the submissions, the data indicates that the majority of solutions operate on a small to medium annual budget, especially those currently in their initial phases. As compared to solutions (non-profits) from the 2019 edition, we see a significantly higher percentage of larger non-profits in this year's edition. Higher percentage of the non-profits operate with medium annual budgets (\$20000-\$50000) and high annual budgets (\$100000+). Similarly, 12 percent and 8 percent of for-profits operate with annual budgets of \$50000-\$100000 and above \$100000, a trend observed to be similar to the 2019 edition of the report. The data clearly indicates that the Youth Solutions Program of SDSN Youth is attracting traction from larger non-profit and for-profits as the years progress.

Budget (For-Profit)



Budget (Non-Profit)



Challenges and Needs

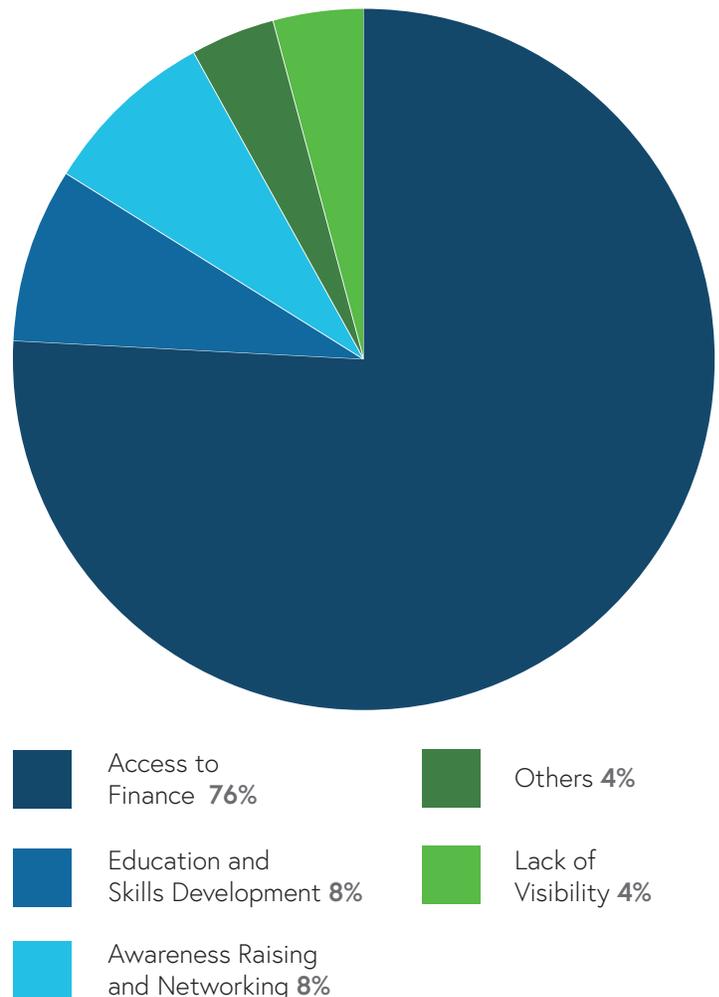
Each youth-led solution has its own challenges, inevitably influenced by local contexts, policy frameworks and opportunities. The application form asks the applicants to identify their most pressing challenges and needs, in order to identify the types of assistance or training most needed by young innovators. Around three fourths of the selected not-for-profit solutions suggested that access to finance is the number one challenge to start and scale their activities, followed by awareness raising, networking and skill development. Similarly, a majority of for-profits stated that access to finance represents their most pressing challenge. This trend also aligns with previous editions of the report where funding was mentioned as the top challenge by the youth-led solutions. Lack of funding can jeopardize ability of the solutions to meet operating and administrative expenses, and further also hindering innovations and scalability.

Another important challenge which is common across both, for-profit and non-profit, is the lack of visibility. Youth-led solutions, which are often resource constrained, do not sufficiently find avenues to showcase their work and impact sto-

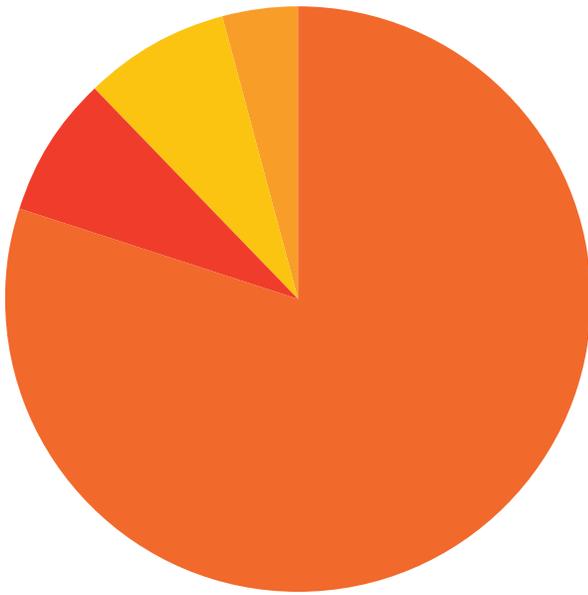
ries. This often leads to not having enough visibility which in turn can hinder their ability to attract investors and funders to scale innovation. Similarly, the need for expert advice and incubation (education and skills development) is widespread among the two categories.

Youth-led solutions need a support ecosystem to guarantee their success. While there is no one fit-for-all solution for youth solutions; their success is contingent on comprehensive support on accessing funding, networking, capacity building and most importantly, developing a long term vision to sustain itself is crucial for youth solutions. Access to finance has been identified as a major bottleneck in innovation development and scaling, but it is equally important that the sources of funding are sustainable. Grant or donor based funding can provide the initial impetus, but sustainable solutions build viable business models or empower the communities to sustain the impacts themselves. A large set of actors like the UN system, governments, multilateral donors, civil society and academia are involved in accelerating SDGs. These actors can help build appropriate ecosystems for youth-led solutions to leverage on their strengths and competencies and help sustain and scale the efforts of young innovators across the world.

Challenges (Non-Profit)

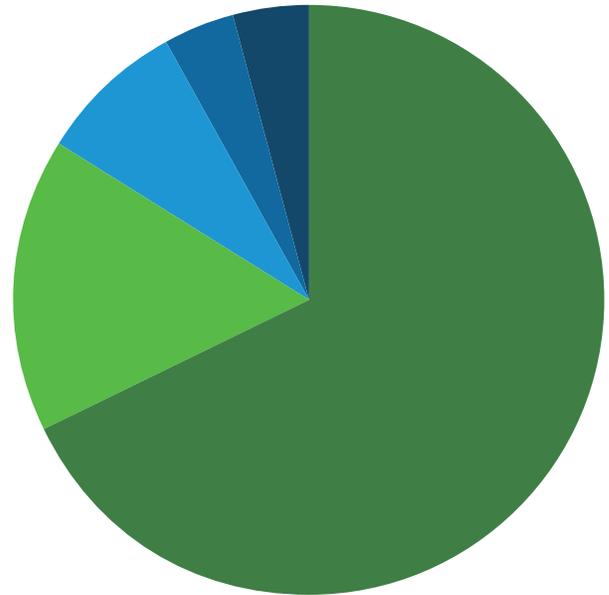


Challenges (For-Profit)



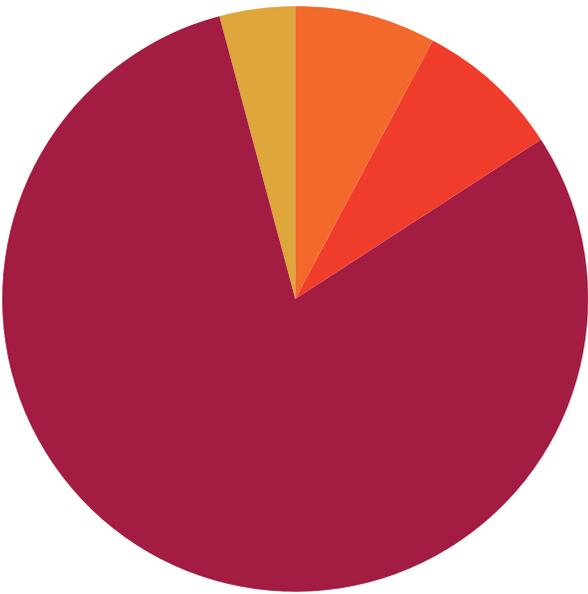
- Access to Finance **80%**
- Techology Exchange and Innovation **8%**
- Lack of Visibility **8%**
- Others **4%**

Needs Identified (Non-Profit)



- Access to Finance or De-risking (Debt Equity Grants Gurantees etc.) **68%**
- Marketing and Raising of Comapny/Organizatio Profile **16%**
- Expert Advice /Technical Assistance/Incubation **8%**
- Access to Skills Training and Capacity Building **4%**
- Others **4%**

Needs Identified (Non-Profit)



- Access to Finance or De-risking (Debt Equity Grants Gurantees etc.) **80%**
- Expert Advice /Technical Assistance/Incubation **8%**
- Marketing and Raising of Comapny/Organizatio Profile **8%**
- Others **4%**

Conclusion

The current generation is the largest youth cohort in history, and this immense potential should be efficiently used. The increased presence of youth in developing and implementing solutions is vital for a sustainable future. Through the insights provided by this report on the current practices and trends in youth projects, and presenting their innovative models, we can continue to understand, inspire and support young people's involvement in achieving the Sustainable Development Goals.

The trends and insights in this report represents a hopeful picture of young people contributing to a sustainable future. There are several challenges and needs which are identified and need to be addressed by policymakers, investors, educators and communities at large, because the success of youth innovations is not born in a vacuum, but rather emerges and prospers where there is an appropriate ecosystem that can provide support and opportunities to young students, leaders and entrepreneurs. The opportunities are present and should be harnessed to utilize youth skills and solutions to implement the 2030 Agenda.

References

- SDSN Youth, 2017. Youth Solutions Report - 1st edition. New York and Paris: SDSN Youth. Available at: <http://www.youthsolutions.report/publications> [Accessed 15 November 2020].
- SDSN Youth, 2018. Youth Solutions Report - 2nd edition. New York and Paris: SDSN Youth. Available at: <http://www.youthsolutions.report/publications> [Accessed 15 November 2020].
- SDSN Youth, 2019. Youth Solutions Report - 3rd edition. New York and Paris: SDSN Youth. Available at: <http://www.youthsolutions.report/publications> [Accessed 15 November 2020].
- Brundtland, G., 1987. Common Future. [online] World Commission on Environment and Development. Available at: <http://www.un-documents.net/our-common-future.pdf> [Accessed 15 November 2020].
- Mastercard Index, 2019. Mastercard Index Of Women Entrepreneurs 2019. [online] p.74. Available at: <https://newsroom.mastercard.com/wp-content/uploads/2019/11/Mastercard-Index-of-Women-Entrepreneurs-2019.pdf> [Accessed 20 November 2020].
- Afrin, S., Islam, N. and Ahmed, S., 2009. A Multivariate Model of Micro Credit and Rural Women Entrepreneurship Development in Bangladesh. *International Journal of Business and Management*, 3(8), pp.9 - 36. https://ifmrlead.org/wp-content/uploads/2020/11/Report_Women-Entrepreneurs-as-Powerhouse-of-Recovery-upd.pdf

CHAPTER
02

50 Solutions of 2020

African Impact Initiative



Lead: Efosa Obano

Website: www.africanimpact.ca

Type: Non-profit

Location: Canada

Current Reach: Across the African continent (Ghana in 2020, Kenya in 2021, and 3 more countries by 2025)

Budget: \$10,000-\$20,000 USD

PROBLEM

African Impact Initiative is trying to solve the high unemployment rate within Africa's youth population (youth currently account for 60% of Africa's jobless, according to the World Bank). This is made worse by the fact that the population of sub-Saharan Africa alone is expected to have doubled by 2050 (UN), and Africa's working-age population is projected to increase from 705 million in 2018 to almost 1 billion by 2030 (African Development Bank). Through this initiative, they are enabling young Africans to start impact focused businesses with technology. This helps them to earn a living, create employment for others, and tackle challenges in their communities.

SOLUTION

African Impact Challenge provides a solution in the form of four stages: application & screening, incubation, implementation and impact analysis. They start by rolling out the application in partnership with the brightest technology-focused tertiary institutions in the given year's country. By doing this, they encourage the local youth to apply with their ideas to solve identified community challenges. In their first version this year, they got applications from almost 100 young Ghanaians. This was followed by a virtual incubator for 3 months, where the selected ideas become reality. Here the teams receive stipends for upkeep, daily sessions to build the solutions, and staged funding to finance them. After this, the solutions are implemented as businesses in their target communities, to tackle the intended challenges. Then finally an impact analysis is conducted to assess community feedback and accordingly an iteration of the plan for long term sustainability is formulated.

IMPACT

The goal of the African Impact Challenge is to enable sustainable community development locally, by investing in the African youth. Ultimately it will empower the youth of Africa and empower them to solve identified challenges through market-creating innovations. They achieve this by providing the capital, resources and guidance necessary to begin from scratch. This assistance is provided by African Capital's partners, virtual incubator, and the African Impact True Blue \$100,000 fund. African Capital aims to successfully support 10 youth driven innovations who focus on technology enabled solutions and they operate from Canada. They hope to tackle the unemployment challenge that Africa is facing. By enabling young Africans to start technologically equipped businesses, they hope to create employment for others, and tackle challenges in their communities organically.

ALIGNMENT WITH THE SDGS

The African Impact Challenge aligns its work with SDG 1, 8, 9 & 17. By creating job opportunities through their solution they hope to reduce unemployment and alleviate poverty which aligns with SDG 1 and 8. Through the successful execution of each year's challenge through their solution they hope to directly contribute to SDG 9 by facilitating sustainable and resilient infrastructure development in developing countries- through enhanced financial, technological and technical support to African countries. Their operating model dampened son building synergies among partners with positive outcomes towards finance, technology which captures SDG 17. They hope to tackle the unemployment challenge that Africa is facing by enabling young Africans to start technologically equipped businesses. This will create employment for others, and tackle challenges in their communities organically.





Lead: Fernando Macedo Chagolla

Website: www.aragon.unam.mx/fes-aragon/#!/oferta-academica/centro-de-lenguas/ingles

Type: Non-profit

Location: Mexico

Current Reach: Nezahualcoyotl, Mexico

Budget: \$1,000-\$5,000 USD

PROBLEM

The education system is very restricted when it comes to visually impaired individuals amongst the general population. For the visually impaired, there is a lack of foreign language teaching, dearth of accessible materials, narrow acknowledgement of the use and need of the Braille system. Most importantly due to lack of the visual aids in the materials like textbooks and the lack of knowledge and skills of the teachers to work with this student profile, this issue becomes even more pertinent. All these aspects give the visually impaired a handicap in the educational system. This affects 3 million people in Mexico according to the National Demographic Census, and according to Education First 2014 Mexico ranks 39 out of 63 in English level for the general population, which is low and could be related to a missing national foreign language teaching strategy as an important goal related to a desirable graduate preparation.

SOLUTION

There are several issues to be solved concerning inclusion in education. The teachers have to work on awareness on disability and the proper interaction; that is how to address and work with a visually impaired person, always being aware of equality and a teaching style as wide as the diversity presented to. They must also receive training on the making up of didactic material since it has to be accessible. They must learn Braille to be able to read and write in their own code. They must be trained on new technologies which will allow them to create and adapt didactic materials. Finally they must do some work on didactic strategies as well as techniques to teach a foreign language. All that mentioned will make it possible to start creating analog and digital content which will be directly related to the needs of each and every student, taking into consideration diversity and so to give the same opportunities and teaching quality for all students.

IMPACT

Aragon hopes to ensure the right to a high quality education for the visually impaired by making didactic material accessible based out of Mexico. They hope to make sure learning of English as a foreign language is made possible by production didactic material which will be accessible on both formats- digital and physical. The use of new technologies, designing a classroom specific to the needs of the visually impaired and the training of teachers on strategies to work with people who are visually impaired are the driving forces for Aragon. Inclusion of students in the mainstream academic set up will open up better opportunities for the visually impaired and help in their professional lives. This minimizes the inequity of opportunity for the visually impaired.

ALIGNMENT WITH THE SDGS

Target 4.5 under SDG4 draws attention to providing equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities which is central to our work.



Future Heroes Rwanda



Lead: Niyoyita Bonaventure

Website: N/A

Type: Non-profit

Location: Rwanda

Current Reach: Rwanda & Burundi

Budget: \$0-\$1,000 USD

PROBLEM

In Rwanda, Adult (15+) literacy rate increased from 38.2 % in 1978 to 73.2 % in 2018 growing at an average annual rate of 12.62 %. 89 thousand (89,000) students are enrolled in schools. However, significant problems remain. Access to early childhood education is limited, classrooms are overcrowded, and elementary schooling remains plagued by high repetition rates and urban-rural divides. In Rwanda 89,000 students are enrolled in schools. Since the beginning of lockdown due to COVID-19, all schools have been closed, students and teachers have returned back home. They have stopped their studies and there is no way for them to keep studying and continuing their courses because they have to go with the guidelines of the country in slowing down the transmission of COVID-19. Despite this worldwide pandemic, in Rwanda, classrooms are overcrowded, and elementary schooling remains plagued by high repetition rates and urban-rural divides

SOLUTION

"Future Heroes Rwanda are making videos with contents starting from the basics needed for the beginners, as well as more advanced content for each level of primary school and high school. We did not forget students who are attending TVET school, they have their courses on our platforms or at our physical hub. The videos are being developed by qualified teachers with education skills. Digital Alpha Hub will have computers and a projector which will be used by beneficiaries who will wish to follow their courses to our hub and there will be a facilitator for moderating courses. In partnership with Rwanda Education Board, our beneficiaries who will be at desired levels will be encouraged to join public or private schools to continue education with the goal of getting degrees. After 6 months of intensive courses, students will be examined for being awarded a certificate.

IMPACT

Future Heroes Rwanda is an internet driven solution - Digital Alpha Hub. It hopes to give access to education to illiterate youth, disabled youth and financially unstable children who cannot afford ordinary schools. Digital Alpha Hub will resort to using the internet as an enabler to each illiterate person without the need of people seeking education to go to a classroom. It hopes to eradicate the problem of overcrowded classrooms and a limited number of teachers. Primary, high school courses and TVET (Technical and Vocational Education and Training) courses will be available on the online platforms such as their website, YouTube TV, Android application and also at their physical hub. Their vision is to impact 50,000 people in the next 5 years. Currently the solution is supporting youth as schools are closed due to COVID-19. Takeaway for the graduating of the classes would be that the students will then be able to join ordinary schools or TVET courses.

ALIGNMENT WITH THE SDGS

Future Heroes Rwanda aligns with the targets within SDG 4. They cover targets 4.3, 4.4, 4.5 and 4.6. They work towards ensuring equal access for all women and men, increase the number of youth and adults who have relevant skills, eliminate gender disparities in education and ensure equal access to all levels and help achieve literacy and numeracy.



Healthier and Happier Life Foundation



Lead: Dominic Dormenyo Gadeka

Website: <https://hhlfg.org/>

Type: Non-profit

Location: Ghana

Current Reach: Ghana

Budget: \$20,000-\$50,000 USD

PROBLEM

Cervical Cancer remains an important public health problem in Ghana. An estimated 8.57 million women aged 15 years and above out of the 13.8 million females in Ghana are estimated to be at risk of developing cervical cancer (United Nations, 2015). Every year, 3,038 women are diagnosed with cervical cancer, and 2,006 die from it in Ghana making it the first leading cause of female cancer and female cancer deaths (Ministry of Health, 2011). Cervical cancer does not only cause death but also psychosocial problems (Edwin, 2010). Vaccination and early detection through regular screening are therefore very imperative. A study has shown that women who screen twice or three times have a lower risk of cervical cancer by 50% (Campos et al, 2015). A key strategy for intervention in the prevention of cervical cancer is community education and participation (WHO, 2016) and that is what this project seeks to achieve.

SOLUTION

The proposed solution uses theatre for development [drama] as a key strategy for intervention in the prevention of cervical cancer. Every society upholds the culture and norms that defines it and the same applies in terms of disease prevention. In order to ensure an effective intervention at societal/community level, the cultural heritage of the people must be respected and intervention seen and understood with 'cultural eyes' and in a common language. Healthier and Happier Life Foundation leverage the knowledge and skills of professional dramatists who understand the culture of the various communities. The innovation combines the Arts and Science to break the cultural, language, educational and socio-economic barriers that hinder the Cervical Cancer awareness and routine checkup.

IMPACT

Healthier and Happier life Foundation promises to tackle a pressing public health issue in Ghana—Cervical Cancer. The incidence rate of cervical cancer in Ghana (24.3%) is higher compared to West Africa (17.2%) and the world (15.1%) at large (Ferlay et al, 2013). With the aim of promoting preventive medicine, improving healthcare quality and equity in access to good health, Healthier and Happier life foundation over the past three years has been committed to helping people understand and prevent diseases by connecting them based on their norms, traditions and social values. A key strategy for the promotion of preventive diseases is community education and participation which leads to early detection. This project seeks to educate and create awareness of cervical cancer through drama while centrally focusing on screening with the use of Evalyn Brush within the 260 administrative districts of Ghana. Healthier and Happier life Foundation prides itself in promoting good health practices and preventive medicine.

ALIGNMENT WITH THE SDGS

According to the SDG index 2020, Ghana's death rate due to non-communicable disease in adults aged 30–70 years (%) is 20.8, 2016. Interestingly, the average cost of treatment of cancer ranges from \$10,000 upwards, yet, the average Ghanaian earns less than \$1,000 a month. The SDG Index ranks Ghana at number 100 in 2020 and indicate that Ghana is moderately increasing with major challenges remaining in its achievement of SDG 3. Such major challenges would include quality healthcare and equity in access to good health and this is what Healthier and Happier life is committed to. In its commitment to cancer prevention and treatment, the organization also indirectly contributes to SDG 1.



New Voters



Lead: Jahnvi Sharanya Rao

Website: www.new-voters.org

Type: Non-profit

Location: United States

Current Reach: Marina, California, United States

Budget: \$10,000-\$20,000 USD

PROBLEM

Polarization and raging battles on social media between political figures have left the youth disheartened by the political process. America is experiencing a national identity crisis, and only 17% of Americans said they had trust in the government. Civic participation amongst youth is vital to restoring this faith -- the intense passion behind the youth that the 2020 election and other crises have uncovered can be translated into lasting change. While nationwide social distancing has the potential to spur low voter turnout and decreased levels of civic engagement, it can also pave the way for one of the most youth-driven elections of all time. Additionally, under-resourced communities typically have much lower voting rates due to several systemic barriers, making our mission especially crucial. We hope to leverage this once-in-a-generation opportunity to amplify the voices of marginalized young voters on a national stage and bring unity back into the political sphere.

SOLUTION

When the youth realize the importance of their vote, they turn up. All of the work that New Voters do revolves around empowering the youth voice. They have seven different departments each of which plays a key role in spreading this message and making the overall mission more effective. College students have the ability to train and share resource kits with high school student leaders. High school student leaders then develop clubs as their respective schools and register their peers to vote. They have a working group focusing on outreach to the communities that need it most- those in swing states and historically disenfranchised areas. In addition, on every level that New Voters functions, there is an emphasis on nonpartisan and accurate information for voters. Media literacy is a key part of democracy and New Voters want to ensure that students can understand and consume information on the local, state, and national level.

IMPACT

New Voters is a student-led initiative that promotes civic engagement in all 50 states in the US via innovative mentorship programs, registration materials, and engagement techniques. Participation is the foundation of democracy- yet only 30% of America's youngest eligible voters choose to access the ballot box. The solution here is simple: harness the youth vote. The short-term goal of New Voters is to register 100,000 students by the 2020 elections, with a vision of 1,000,000 students by 2024. The COVID-19 pandemic has amplified the barriers to civic participation endured by economically disadvantaged youth. In particular, the suspension of school has interrupted normal processes of voter registration that happen through educational institutions. As such, this under-represented demographic is at risk of being further silenced. To combat this, New Voters offers free resources and mentorship that enable youth in low-income communities to access civic engagement opportunities. New Voters's nonpartisanship allows them to remain peaceful and further our goals. New Voters' extensive work to ensure that historically disenfranchised communities make sure that the votes of all Americans count. They have also hosted summits in Florida and California where they prioritized engaging with underfunded/under resourced schools. This restorative justice levels the playing field and allows quality education and resources to all.

ALIGNMENT WITH THE SDGS

All of the programs intend to educate and register young voters which aligns with SDG 16 by contributing towards strengthening peace, justice, and strong institutions. Civic engagement targeted at the youth is instrumental to strengthening the core of the United States's democracy. Mass democratic participation yields greater accountability for those in office, especially because the youth are the largest voting block. In addition, we work to strengthen our country's institutions in a nonpartisan and equal way.



Conservation Alliance International



Lead: Yaw Osei-Owusu

Website: www.conservealliance.org

Type: Non-profit

Location: Ghana

Current Reach: Accra, Ghana

Budget: \$100,000+ USD

PROBLEM

Climate change manifested in flooding, erratic rainfall patterns, waterlogging and drought which are also major factors impeding maximum agricultural productivity in the Northern Ghana (AGRA; 2012). The northern region is currently producing 34%, 30% and 38% of its potential for corn, rice and soya respectively (AGRA, 2018). Additionally, yields of corn, soya and rice are estimated at 1.5 mt, 0.8 mt and 2.4 mt/ha, whereas the production potential is estimated to be 5.5 mt, 4.5 mt and 6.5 mt/ha, respectively (SRID, 2011). This results in farmers' low yields which get worsened by little or no farming activities during the dry season (AGRA, 2018). Conservation Alliance International aims to support the beneficiary communities often affected by climate change thus enhancing level of food security and nutrition; provision of additional incomes for women and youth farmers; and reduction in occurrence of migration of youth from the project site to southern Ghana.

SOLUTION

Conservation Alliance International provides access to water, smart irrigation technologies in an integrated model that looks at the entire food value chain with irrigation systems. The water-smart solar-drip kits developed use a locally fabricated siphon, to automatically deliver intermittent doses of water to pressurize the drip system, cutting operation time from hours to minutes on a daily basis. This is the first time such siphon will be used to automate small family drip systems. Another uniqueness of their solution is the intention on reducing negative or disruptive environmental footprints at all times whilst ensuring productivity and profitability. The irrigation technologies are powered by solar energy which will reduce CO2 emissions from the use of diesel pumps and also discourage farmers from cultivating crops in riparian buffers. The technology has been piloted three times indicating its robustness to deliver on this project and achieve the intended outcomes.

IMPACT

Conservation Alliance International formulated a solution called The Pave Technology (PIT) which is a rain water harvesting, aquifer recharge irrigation technology that injects excess water underground during periods of rainy days and floods. PIT stores water for dry season farming, and also supplements irrigation during short rainy periods in Ghana. The flood water captured is filtered through a constructed filtration system, and injected underground through a pipe. The unique feature of PIT is that it is a context-based technology and its design and model are dependent on the proposed area- hence it differs from one place to the other. All materials needed for its construction can be sourced from any part of the world, proving that the model is very adaptable. It aims to provide a solution to the climate change which manifests itself in the form of floods, erratic rainfall patterns, waterlogging and drought. These also pose as hindrances to agricultural productivity.

ALIGNMENT WITH THE SDGS

The work done by Conservation Alliance International aligns with SDG 1, 2, 6, 13 & 15. The project ensures that hunger (SDG 1) is reduced through dry season farming which was previously not possible and works towards ensuring that food security and nutrition (SDG 2) are improved through sustained all season food production. Additionally the project also focuses on the introduction of good agricultural practices (GAPs). They focus on SDG 6 by attempting to provide purified water. The project addresses flooding, long dry season spells and drought as a result of climate change. They also integrate a smart agricultural system that safeguards the terrestrial ecosystem through integrated pest and crop management and use of organic manure thereby addressing SDG 15 and reducing CO2 emissions (SDG 13).



Agriresearch



Lead: Usanase Abdu

Website: www.agriresearch.rw

Type: Non-profit

Location: Rwanda

Current Reach: Musanze, Rwanda

Budget: \$20,000-\$50,000 USD

PROBLEM

Pesticide and chemical fertilizer malpractice among small-scale farmers have contributed to environmental pollution. Offsite movement of transformation products of pesticides and chemical fertilizers contaminate groundwater, exposing humans to the chemicals through drinking water, and harm the aquatic ecosystem, leading to the death of fishes and pollinators. Similarly, defective chemical fertilizers application methods have harmful effects on both our surroundings and health. However, the farming communities, especially the developing worlds' have not a good level of such detrimental effects. The study conducted in Rwanda and Burundi on the pesticide use practiced in root, tuber, and Banana crops; 811 small holder farmers interviewed, less than half of them managed to use personal protective equipment. Death or self-or accidental poisoning was substantial in both countries. Farmers' Knowledge of negative impacts of pesticide use on the environment is very low, 12.6% and 29.2% in Burundi and Rwanda, respectively.

SOLUTION

Agriresearch has come up with an offline Android application which provides useful information regarding daily on-farm practices to boost agricultural production while saving our environment. Smart Input is an Android application that will help farmers precisely use agricultural inputs including seed, fertilizers and pesticides. It also contains useful information regarding identification of good quality seed, where depending on the crop a farmer is willing to grow in the current season they can have access to information regarding good quality seed. They also have well detailed information regarding agrochemicals including but not limited to their harmful impact on environment and people's lives, how these chemicals can be used with minimal negative impact on the environment and biodiversity in general.

IMPACT

Agriresearch based out of Rwanda came up with a technological solution called SmartInput which is an Android application that will help farmers precisely use agricultural inputs. This includes information on seed, fertilizers and pesticides. It also contains useful information on good quality seed, where depending on the crop a farmer is willing to grow in the current season they can readily have access to respective information. They also have well detailed information regarding agrochemicals including but not limited to their harmful impact on people's lives, how these chemicals can be used with minimal impact on the environment and biodiversity in general. Additionally, this application also promises to help farmers identify potential yields depending on grown crop, land sizes and agronomic practices to help them plan for future investment because if a farmer doesn't know what he or she is supposed to harvest seasonally, he or she won't plan accordingly in the upcoming seasons.

ALIGNMENT WITH THE SDGS

The project is closely related to SDGs 1 (No Poverty), 2 (Zero Hunger), and 3 (Good Health and Well-being) because the project will help the farmers and agripreneurs to increase their productivity which will feed their families and sell some to the market to satisfy their needs as the SmartInput app will help farmers precisely use agricultural inputs including Seed, fertilizers and pesticides and the app will ensure a good-safety-level use of agrochemicals by growers; and this will help reduce chemical residues in agricultural products, protecting consumers from the potentially harmful chemicals. The overall objective is to make agriculture more efficiency and environment friendly.



Technology for Social Change and Development Initiative (Tech4dev)

TECH4DEV

Lead: Diwura Oladepo

Website: www.tech4dev.com

Type: Non-profit

Location: Nigeria

Current Reach: Nigeria

Budget: \$50,000-\$100,000 USD

PROBLEM

According to UNESCO, women make up a minority in the Science, Technology, Engineering & Mathematics (STEM) field. In 121 countries with available data, women make up 29% in the STEM field. This is the issue that Tech4dev wanted to address. UNESCO (2010) states women continue to be significantly underrepresented in every sector of STEM. Men outnumber women as students, educators, researchers, and workers in these fields. While the number of women enrolling in higher education is increasing rapidly in many countries and in some countries women enrollment has surpassed male enrolment, men significantly outnumber women in science and engineering disciplines. A case study in Africa by the International Centre for Research on Women shows that improving a woman's access to technology has the potential to spur economic advancement and stimulate broader economic growth. Empowering women and improving the efficiency of work is critical for reducing poverty.

SOLUTION

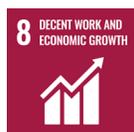
The enormous gender digital divide in STEM motivated the Women Techsters Initiative to take form. It is a solution focused at training and empowering 5 million in Web and mobile development, game development, embedded systems, data science/ artificial intelligence, cyber-security across African countries who will have equal access to decent job opportunities as well as build and scale their ideas into tech-enabled businesses and deep tech start-ups, which will aid Africa's economic growth. Our learning methodology is aligned with global best practices as it captures a curriculum that reflects global talent needs as it relates to digital skills within Africa and across the world. The program is designed and strategically positioned to encompass an end-to-end process that allows for basic - advanced learning as well as transitioning to experiential learning in the form of internship and entry-level jobs in line.

IMPACT

The Women Techsters program (WT) is an initiative of Tech4Dev and an offshoot of the Nigerian Women Techsters (NWT) program. Women Techsters (WT) program aims to train 5,000,000 women in coding and deep tech skills across 5 learning tracks; Web and mobile development, Games development, Embedded systems, Data science/ Artificial intelligence, Cyber-security across Africa by 2030. This ambitious hopes to promote women's participation in the STEM field and address the issue of underrepresentation of Nigeria. The learning methodology is aligned with global best practices as it captures a curriculum that reflects global talent needs as it relates to digital skills within Africa and across the world. The Program is designed and strategically positioned to encompass an end-to-end process that allows for basic - advanced learning as well as transitioning to experiential learning in the form of internship and entry-level jobs.

ALIGNMENT WITH THE SDGS

Technology for Social Change and Development Initiative (Tech4dev) aligns with SDG 4, 5 and 8. The Women Techsters initiative ensures quality and inclusive education for all (SDG 4) The initiative provides digital literacy skills for women in underserved communities for digital inclusion. These skills empowerment provides women with more healthy and sustainable lives (SDG5). The Women Techsters initiative seeks to create access to decent jobs and employability for women (SDG 8). With more opportunities emerging in the digital economy the Women Techsters initiative will be enabling a community of women fully prepared and ready to tap into the jobs of the future.



Every Child is a Star Foundation



Lead: Oyebimpe Arowosebe

Website: N/A

Type: Non-profit

Location: Nigeria

Current Reach: Abuja, Nigeria

Budget: \$0-\$1,000 USD

PROBLEM

Every Child is a Star Foundation is addressing the problem of improper menstrual hygiene management, girls missing school while on their period and girls trading sex for ultra modern pads.

SOLUTION

Every Child is a Star Foundation started a program called Pad Up a Girl which educates girls on the importance of menstrual health, sexual and reproductive health. They also teach them how to make reusable sanitary pads. This ensures that their education is not affected. They consult with experts and community stakeholders. The researchers are the ones who help carry out surveys on the best products to use per time, they give information on how best to do what can be done in order to meet global standards.

IMPACT

Pad Up a Girl is a project undertaken by Every Child is a Star Foundation that is focused on teaching young girls in the rural areas of Nigeria the importance of menstrual health management. They also plan to teach young girls how to make reusable sanitary pads. With this girls who cannot afford disposable pads do not have to miss school while on their period. Every Child is a Star Foundation consult with experts and community stakeholders. These community stakeholders and researchers are the ones who help carry out surveys on the best products to use per time and also provide ways to do what is best in order to meet global standards. They focus on providing education to girls on the importance of menstrual hygiene management and at the same time making sure they do not miss school because of their period by giving them reusable sanitary pads.

ALIGNMENT WITH THE SDGS

Pad Up a Girl contributes to the realization of SDG 3 (Good Health and Well-being) as well as SDG 6 (Clean Water and Sanitation). The project supports these SDGs mainly by providing education to girls on how to safely manage their menstrual health, enabling them to actively participate in school and regular everyday life while being on their periods.



Beyond the Surface International



BEYOND THE SURFACE
INTERNATIONAL

Lead: Emily Koch

Website: <https://www.beyondthesurfaceinternational.org/>

Type: Non-profit

Location: Canada

Current Reach: Peru

Budget: \$20,000-\$50,000 USD

PROBLEM

Beyond the surface international supports small-scale fishing villages to address the socio-ecological consequences of diminishing fish stocks due to overexploitation, habitat degradation, climate change, and other anthropogenic stressors. An estimated 280 million households worldwide depend on fish for their cash and calories. Industrial fishing fleets operating on fossil fuels capture in one morning what artisanal fishers harvest in one month. The result is socio-ecological collapse. However, those dependent on the ocean the most for their survival are systemically sidelined from conversations about the Blue Economy's future hence Beyond the Surface International believes in engaging directly with the small-scale fishing villages.

SOLUTION

Coast 2 Coast is a program undertaken by Beyond the Surface International which extends support to small-scale fisheries (SSF) facing enormous problems. Yet, fish-dependent stakeholders are enormous in number, making up 90% of all fisheries actors and accounting for 50% of total captured fish in the global sector. Coast 2 Coast seeks to provide a platform for SSF stakeholders to amplify voices, address challenges, and champion strengths. Coast 2 Coast is Beyond the Surface International's audiovisual program. They have a multidisciplinary team of artists, marine biologists, and educators engage youth in a playful way that fosters marine stewardship and cultural values for sustainability. They work with local students to pitch solutions and find implementation partners. Students participate in photography, stop-motion animation, street art, and storytelling workshops that transmit our lives' deep interconnectedness with Life Below Water. Through their own stories, youth educate their communities about ocean justice merging traditional knowledge and scientific data and reach policymakers to implement solutions according to the FAO's SSF Voluntary Guidelines.

IMPACT

Beyond the Surface International is based out of Peru and they hope to co-create artistic and audiovisual narratives with children from small-scale fishing villages that champion strengths, daylight challenges, and promote community-driven solutions to adverse socio-ecological situations in a changing climate and industrializing planet. These issues include ocean acidification, overfishing, illegal, unregulated, and unreported (IUU fishing), plastic & industrial pollution, sea-level rise, destruction of critical habitats, irresponsible coastal development, and cultural erosion. Essentially they provide artisan fishing communities with media tools, communication skills training, digital platforms, and a safe space for local youth and their ocean-dependent communities to share their perspectives with the world. They aspire for a global society that considers access to a healthy environment as a fundamental human right. They measure their impact by the number of stakeholders engaged, the number of multilateral organizations reached, and how governments and local institutions respond with resources or policy that addresses the challenges communities themselves have voiced.

ALIGNMENT WITH THE SDGS

Beyond the Surface International's work aligns with SDG 14 - Life Below Water. They also promote the implementation of the Food & Agriculture Organisation's (FAO) Securing Sustainable Small-Scale Fisheries (SSF) Guidelines, supporting SSF actors in monitoring the guidelines implementation process at a household-level. They engage with the youth in this process, disseminate information about the SDGs and also promote ocean literacy through creative audiovisual communication methods that weave together science, traditional knowledge, and impact storytelling in a digital age. They believe SDG 14 is only achievable by elevating the voices of those who depend most directly on the ocean for socio-ecological well being.



The Kalsom Movement



Lead: Dr Hannah Nazri

Website: <http://www.kalsom-movement.org/>

Type: Non-profit

Location: Malaysia

Current Reach: pan- Malaysia

Budget: \$20,000-\$50,000 USD

PROBLEM

The Kalsom Movement (TKM) through the Projek Kalsom Motivational Camp PKMC aims to address educational inequality in private versus government schools, town versus rural schools in Malaysia. The Malaysian Education Blueprint 2013-2025 highlighted poor SPM (Malaysian GCSEs) performances of students in rural areas, compared to their city's counterparts. SPM is arguably the most important Malaysian national exam as it has life-changing consequences. Our beneficiaries will be taking SPM in one year after our programmes. Most Malaysian university scholarships are offered post-SPM. In addition to poor SPM results, these students are not aware of scholarships or opportunities post-SPM, nor the resources to apply for scholarships or the necessary interview skills. Most do not have a role model from which they can emulate. PKMC wants to work in space and bridge this gap.

SOLUTION

TKM aims to connect Malaysia's best university students globally with younger, economically disadvantaged Malaysians through our meticulously designed programs based on its 4 pillars improving English language proficiency and confidence, development of academic and non-academic skills, exposure to tertiary education and nurturing the Kalsom Spirit – spirit of paying-it-forward. Its executive committee work from different parts of the world utilizing video-conferencing and project management tools to design proposal, modules, pitching and social media strategies. Mentors are selected from diverse pools of ethnicities and academic backgrounds. Mentors are directly involved in executing the modules, providing insight into furthering education and becoming role models for the beneficiaries. Due to COVID-19 this year's programmes are delivered online with the mobile internet provided by TKM. The schools ensure the beneficiaries attendance and safety physical measures. Overall, TKM beneficiaries benefit from the first-hand experiences of their mentors and new-founded inspiration to succeed. The mentors gain leadership and organizational skills while planning for TKM annual programmes as well as becoming more perceptive to issues surrounding educational inequality in Malaysia.

IMPACT

TKM aims to address education inequality in Malaysia by bridging the knowledge and opportunity gap faced by underprivileged students in rural areas, benefiting all students regardless of their background, to result in an impactful contribution to the development of the society and nation. Projek Kalsom Motivational Camp (PKMC) brings together academically-gifted 16-year old Malaysian students with a <USD720 monthly household income (bottom 40% of Malaysian income classification) for an annual week-long programme of English Language, careers and scholarship, basic computer programming, personal development, financial literacy and entrepreneurship workshops. They are guided to organize their own PKMC in their respective schools through Kalsom Academy (as a way to create a ripple effect in their own community) and join the larger growing Kalsom Alumni community. In its seventh year, 10 non-Malaysian students from UK universities are selected for a three-weeks long programme of travelling and exploring Malaysian culture and volunteering with TKM. TKM introduced the Commonwealth Cultural Programme (CCP) in collaboration with Bristol Student Commonwealth Society which allows knowledge and cultural exchange as well as understanding Malaysia's role as a Commonwealth country. TKM beneficiaries have always found it inspiring to practise their English with native speakers. It is hoped that CCP will be extended to applicants from all Commonwealth countries, not just the UK.

ALIGNMENT WITH THE SDGS

TKM is committed to SDG 4: 'Quality Education', and SDG 17: 'Partnership for SDGs'. TKM mission statement, relevant modules, target group selection and continuous impact measurement is driven by creating a level playing field, to bridge the educational discrepancies between schools in cities and rural Malaysia, and eradicate poverty. TKM introduced the Commonwealth Cultural Programme (CCP) in collaboration with Bristol Student Commonwealth Society to enhance bilateral relationships with Commonwealth countries.





Lead: Kruti Bharucha

Website: www.peepulindia.org

Type: Non-profit

Location: India

Current Reach: Madhya Pradesh, New Delhi, India

Budget: \$100,000+ USD

PROBLEM

The state of Madhya Pradesh in India has nearly 10% of the total number of government schools in India; it also has low student achievement levels (31% children in Grade 5 can read a Std. 2 level text). 68% of the school-going children in the state are dependent on the government education system to access quality education, highlighting the need for the system to support each child during the COVID pandemic albeit, virtually. To this end, the role of teacher is paramount, while the low budgetary allocations in many states, teacher training is extremely low (less than 1% in many). Therefore, supporting teachers and their development needs to be focused upon to safeguard quality learning for all children and ensuring the inequity does not widen further, given the pandemic. Empowering them with the right knowledge, skills and mindset that will thus be critical to the resilience of the education system.

SOLUTION

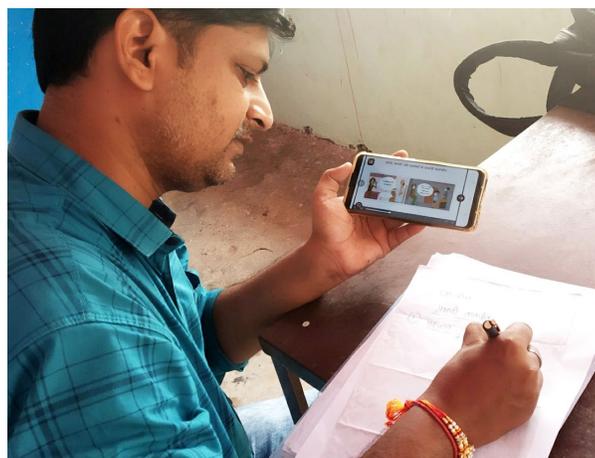
The Chief Minister's CM Rise is a flagship programme of the government of Madhya Pradesh co-created and developed in partnership with Peepul. CM Rise is a professional development program that aims to build the capacity of 320,000+ teachers supporting learning for over 9.5 million students in the state of Madhya Pradesh. This programme aims to 1.support at-scale teacher learning (directly impacting ~320,000 teachers and ~10,000 academic officials across 52 districts) and professional development through high quality virtual intervention. CM Rise also works towards creating an ecosystem of professional development for teachers that is personalized, and supports academic goals. The solution begins with a digital teacher training programme (integrated into the national teacher learning portal DIKSHA) during the lockdown period and builds the digital teacher training arm of the government. As normalcy restores, it will leverage blended training, professional learning communities, mentoring and monitoring & accountability mechanisms to nurture a holistic teacher development ecosystem to provide need-based, contextual support to teachers to facilitate meaningful student-teacher engagement in every classroom.

IMPACT

Peepul based out of India enables and delivers excellence in government schools in India by creating Exemplar Education Ecosystems which are focused on high academic outcomes. In the 6 months since launch, the CM Rise programme has seen immense success, engaging teachers on critical topics like distance learning, mental health, supporting parents through the COVID crisis, etc.. 280,000 Government school teachers across Madhya Pradesh are engaging on the CM Rise courses; an additional 134,000+ teachers from other states have enrolled as well. The courses have seen 90%+ completion rates on DIKSHA, consistently. The state-wide YouTube Live training conducted related to the digital courses, have had ~100,000 live viewers, with another ~200,000 viewing the stream post-event. In total, CM Rise has already delivered 3 million+ learning hours, with a cumulative 5 Million+ course completions. The programme has garnered appreciation from national ministries, including being extensively referred to in the SOP for digital training shared to all states and Union Territories of India. In line with the 3-year vision, the programme is now expanding to encompass blended training, learning communities, classroom support, mentoring and monitoring

ALIGNMENT WITH THE SDGS

Peepul aligns with SDG 4 by providing opportunities improving the quality of public education, and strengthening education for the poorest and marginalized communities in India, and also aims to reduce inequalities: SDG 10.



Vruksh Ecosystem Foundation



Lead: Abhijeet Khandagale

Website: vruksh.org

Type: Non-profit

Location: India

Current Reach: Nagpur

Budget: \$20,000-\$50,000 USD

PROBLEM

Traditional digital learning is completely broken. Ekatra helps institutions create, deploy, and assess text message-based micro-courses that dramatically improve learning and training. As per these studies alongside our own pilots, we learned that because we employ a spaced learning model, user retention of information is dramatically higher. There is a huge digital divide in urban and rural schools. Over 75% of students are impacted due to the lockdown as they found it hard to study online, over 80% students said they need hand-holding to shift from offline to online and over 25% said they need proper training to pursue education through online. This is still a dream for the majority of students in India.

SOLUTION

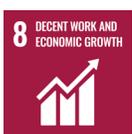
Vruksh Ecosystem Foundation came up with Ekatra which is a low data / no data learning platform. As per a report by Stanford's Center for Education Policy Analysis, text message learning is remarkably accessible and effective, Ekatra helps institutions create, deploy, and assess text message-based micro-courses that dramatically improve learning and training.

IMPACT

In an attempt to tackle the traditional digital learning which is completely broken, Vruksh Ecosystem Foundation started a solution called Ekatra in India which helps institutions create, deploy and assess text message-based micro-courses that dramatically improve learning and training. As Ekatra is a low data/no data learning platform, it makes text message-based learning remarkably accessible and effective. Ekatra helps institutions create, deploy, and assess text message-based micro-courses that dramatically improve learning and training. This learning model directly appeals to a user-friendly retention model of information which has proven to be dramatically higher.

ALIGNMENT WITH THE SDGS

Vruksh Ecosystem Foundation through Ekatra aligns with SDG 4, 8, 10 by providing quality education and promotion of life-long learning opportunities for all and ultimately facilitating in providing full and productive employment and decent work. It also strives to reduce inequality.



Ekatra
by Vruksh Ecosystem

An Integrated Education Platform for Under-Served Learners.

ĒKATRA | VRUKSH ECOSYSTEM

Youth Action for Global Development-Uganda



Lead: Onyok Joshua

Website:

Type: Non-profit

Location: Uganda

Current Reach: Lira, Uganda

Budget: \$1000-\$5000 USD

PROBLEM

Youth Action for Global Development devised a program called Dynamic Hospital Management System which is an online software designed to manage all the areas of a hospital/facility such as medical, finance, administration and the corresponding processing of services within the hospital/facility. The project is aimed at producing the best hospital/facility management systems for a better patient health care within the hospital/facility. It's objective is to provide total asset visibility, track staff locations using Google Map API, allow high level of patients history, reduce lead time, shelf space, facilitate just in time deliveries, provide full process control for patients, free online internship applications, high level of security and help in management planning, monitor and optimize resources

SOLUTION

The system has a super Administrator who is mandated to create a staff account for all the hospital/facility staff and generally monitor all the activity's progress within the hospital informed by figures, graphs and charts. All departments and wards are interlinked together to enable real time data transfer between them and this is intended to ease communications between the staff. The system automatically tracks staff locations via Google Map API and these rights are mandated only by the super Administrator. The system automatically generates a patient's reference number to help reduce the real time delay when attending to patients. It has an online internship application platform for internship applications. The system also caters for automatic auditing. The system stores hospital records which is intended to ease budgeting and planning by the hospital administrators.

IMPACT

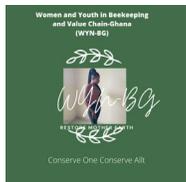
The software system requires an internet connection, username and password to access the system. The system provides an automatic auditing The system also tracks staff location via Google Map API All the departments are interlinked together to enable real time data transfer. The system generates patients reference numbers automatically The system stores data and information information of figures, graphs and charts. Our organization is best placed to achieve the outcomes because, The system has been designed by the organisation, presence of ICT skilled specialists in the project and the workable methodologies contained in the project.

ALIGNMENT WITH THE SDGS

The project contributes to Good Health and wellbeing for all : SDG3. The project seeks to ease the patients health consumption through creating easy access to the health services. The project is an innovative idea seeking to solve problems in the hospitals in an environmentally friendly manner : SDG 9. The project is environmental and climate friendly as it eliminates the use of papers and polyenes but rather computerized approaches are encouraged: SDG 13. Dynamic Hospital Management System considers partnership and building synergies in realising the different sustainable development goals : SDG 17.



Women and Youth in Beekeeping



Lead: Betty Appiah

Website: <https://www.natbawynbgco-dec.wordpress.com>

Type: Non-profit

Location: Ghana

Current Reach: Nkoranza, Ghana

Budget: \$20,000-\$50,000 USD

PROBLEM

Food crop productivity is very low in Ghana making farmers very poor. The youth are therefore not attracted to farming leading to high unemployment rates in the rural communities. Women and youth are the most vulnerable. The environment is being desecrated with indiscriminate bush burning, general misuse of agrochemicals, illegal mining, and others.

SOLUTION

Women and Youth in Beekeeping bring smallholder farmers, who produce more than 90% of food production in Ghana, together in associations and train them to increase crop productivity. We give them the needed education so they can produce food sustainably to feed the nation and reduce the food import bill of Ghana. The farmers earn more money from the sale of the crops, bee products, and natural cosmetics. The farmers are also preserving and increasing the population of bees and other pollinators. They are planting more tree crops thereby creating pollinator habitats. The trees also help in the sequestration of atmospheric greenhouse gases such as carbon dioxide to reduce global warming. Our Association is the most well organized women and youth beekeeping association in Ghana with well experienced dedicated team members committed to positively impact the lives of rural dwellers. We have technical collaboration, through the umbrella association National Beekeepers Association, with such international organizations such as PUM Senior Experts of the Netherlands, BeesAbroad and Bees 4 Development, both of the United Kingdom. We have also received support from Founders Live of the United States of America. We have received support from local institutions such as University of Cape Coast, Skills Development Fund, and the BUSAC Fund.

IMPACT

Women and Youth in Beekeeping of Ghana educates and trains women in youth in rural communities to appreciate the role of pollinators in crop farming and adopt sustainable farming practices. We then support them with beekeeping equipment to establish apiaries on their farms to increase pollination and crop productivity to produce more food to feed the nation.. We train them to produce high quality bee products such as honey and beeswax to sell, also add value to the bee products to produce natural cosmetics. Then they aggregate the produce and products of the farmers to sell to wholesalers thereby giving the Ghanaian farmers ready market and bargain with the wholesalers for better price for the farmers. As a result, farmers make more money due to the increase in crop yields as a result of increase in pollination. They further make money from the sale of the bee products and the natural cosmetics. Earning from 3 income streams. They are establishing businesses and employing women and youth in the production and sale of the bee products and cosmetics. They are planting more trees, conserving pollinators, promoting biodiversity, and conserving the environment.

ALIGNMENT WITH THE SDGs

Women and Youth in Beekeeping of Ghana support farmers to achieve higher levels of economic productivity (SDG 8) through diversification, and innovation, through a focus on high-value added and labor intensive sectors. They work towards reducing inequalities (SDG 10) and promote social and economic inclusion. Most importantly, they focus heavily on SDG 12- Responsible Consumption by adopting a sustainable way of farming which also has an impact on the climate action (SDG 13). They also encourage planting trees and plants to support afforestation and halt desertification (SDG 15).



Aadiwasi Janjagruti (Ulgulan for Social Change Foundation)



Aadiwasi Janjagruti
AN INITIATIVE BY ULGULAN FOUNDATION

Lead: Nitesh Bhardwaj

Website: <https://www.aadiwasijanjanjagruti.org/>

Type: Non-profit

Location: Pune, India

Current Reach: Nandurbar District, India

Budget: \$0 - \$1,000 USD



PROBLEM

Aadiwasi Janjagruti is working in Nandurbar District of Maharashtra state in India. The Nandurbar District is one of the most underdeveloped districts in the country; some villages within Nandurbar lack even the most basic necessities, such as access to clean water. Every year, millions of rupees are being spent on a multitude of development projects in Nandurbar, however, progress remains slow. Two of the main reasons for this slow progress are a lack of awareness and a generally low level of public participation in demanding improvement and holding elected officials accountable. Many people don't even know how to apply for benefits from different government schemes or whom to approach to learn about these opportunities. This lack of clear organization contributes to corruption. Due to the lack of proper communication channels between the people and government, many crucial issues remain unsolved.

SOLUTION

The solution, Aadiwasi Janjagruti, is working on creating a clear channel of communication between people and the government by using locally available resources. Aadiwasi Janjagruti is making short films, videos, news and other types of communications materials in the local language (tribal) covering local issues. Their work is centered around using a hyper localized method of journalism where the local youth, who are trained by Aadiwasi Janjagruti in producing news and video films, are making videos about critical issues and challenges faced by their local communities. They are recording, editing and producing these videos on their mobile phones by using free editing apps. Once produced, Aadiwasi Janjagruti screens these videos during different village meetings using mobile projectors, and the videos are shared across social media platforms. These locally produced videos are the ground pillars in the advocacy efforts of Aadiwasi Janjagruti, and they organization show the videos to people in leadership while trying to advocate for efficient solutions to the issues explored in the videos. Aadiwasi Janjagruti also raises awareness on different government schemes that could benefit the local population.

IMPACT

Through the locally produced videos highlighting critical challenges and issues, Aadiwasi Janjagruti have had a direct positive impact on the lives of hundreds of people. For example, the solution has efficiently helped resolve the water crises in multiple villages by bringing the concerns of the locals to the correct government officials. Another example can be seen in the solutions impact on corruption, as it provides a clear channel of communication between the locals and the government. Additionally, Aadiwasi Janjagruti have created a positive change in the lives of thousands of people by making them aware of different government schemes or by raising and resolving their issues. During the ongoing COVID-19 pandemic, the solution is the only source of information available in tribal language, having thousands of people dependent on their resources to stay informed. Additionally, Aadiwasi Janjagruti has entirely transformed the lives of the approximately 50 tribal youth who are working with the solution. By volunteering with Aadiwasi Janjagruti, many of them have been offered further opportunities through NGOs and different fellowships. Through their videos, the organization has reached more than 1 million people through different mediums. This solution have covered issues like child labour, corruption, water safety and access, road and network issues and, agriculture.

ALIGNMENT WITH THE SDGs

Aadiwasi Janjagruti's work aligns with multiple SDGs, mainly 3, 4, 5, 6 and 16. As an example, their advocacy work has drastically improved the lives of the women in the village Aamkhedi. Aamkhedi is located approximately 500 kms from Mumbai, in Nandurbar District. In this village, the women had to walk 3-4 kms to get water from a small natural water reservoir. This is a task that was not only difficult, but also dangerous. Aadiwasi Janjagruti made a documentary on the issues of water accessibility in the Aamkhedi Village and screened it to numerous officials. Today, there are water tanks in this village, and the women living there no longer need to travel far to collect water for their families. This project alone significantly relates to the realization of SDG 5 and 6.



The Youth Climate Action Agenda (CEUS Chile NGO)



Lead: Isabella Villanueva

Website: https://twitter.com/CEUS_Chile

Type: Non-profit

Location: Santiago, Chile

Current Reach: Chile

Budget: \$0 - \$1,000 USD

PROBLEM

Chile is one of the most vulnerable countries globally. As a nation, Chile meets 7 of the 9 parameters of vulnerability established by the United Nations. In addition, Chile is only responsible for emitting 0.25% of greenhouse gases globally. This puts the country in an unequal position (just as the rest of Latin American countries), as the nations who contribute the least to global pollution end up being the most impacted by the consequences of said pollution, and climate change. The global youth climate revolution initiated by Greta Thunberg finally showed to the world that youth is not a passive population group, but an active one with powerful voices and the ability to drive real social change. This is huge, especially when considering that there are 1.8 billion young people around the world, and, 160 million young people in Latin America alone (UNICEF, 2017). There is an incredible catalyzing youth power to be found and leveraged in Latin America, and Chile specifically. However, currently, youth in Chile are not included in the political discourse.

SOLUTION

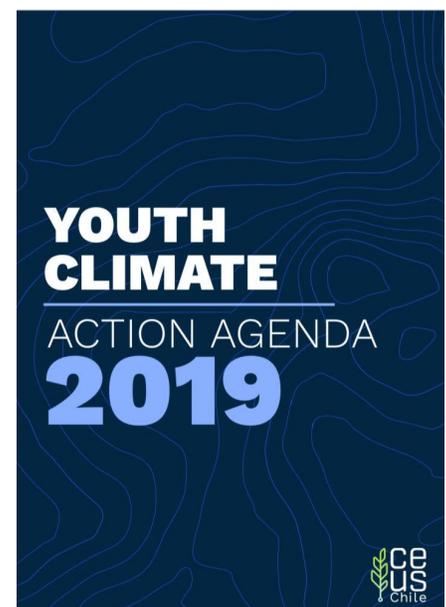
The motivation behind this solution is to empower youth to take action and participate in democracy and the overall political process, focusing specifically on decision-making forums related to climate change and the environment. Because of that, CEUS Chile NGO designed the Youth Climate Action Agenda, centered around an analysis of young people concerning a national plan on climate action. The main objective of the project is to give Chilean youth a roadmap while strengthening their skills and abilities to actively participate in political actions to fight climate change.

IMPACT

The solution has a high potential to be replicated throughout Latin America and the world, because CEUS Chile NGO has purposely designed an open methodology that can be implemented in other countries and regions. Right now, the solution is working with different youth organizations from 10 countries around the world and from all continents, to establish a worldwide Youth Climate Action Agenda. The goal is to present this Action Agenda during COP26 in Glasgow 2021. To achieve this, the Youth Climate Action Agenda needs to reach more people from more countries to ultimately enable their impact on climate action to reach the next level. The Youth Climate Action Agenda aims to bring the bold solutions from youth to act as templates for governments, institutions, and businesses all over the world.

ALIGNMENT WITH THE SDGs

This solution aligns with SDG 17 and 13. The Youth Climate Action Agenda is centered around facilitating meaningful partnerships between youth and institutions of power - such as governments, international organizations and corporations. They also focus on meaningful youth engagement and youth empowerment. This solution is also contributing to the realization of SDG 13, through its clear focus on climate action and how to efficiently engage youth in political processes to put an end to the climate crisis.



Swing Green Uganda Limited



Lead: Magezi Businge Walter Magezi

Website: <https://www.swinggreenea.com/>

Type: Non-profit

Location: Kampala, Uganda

Current Reach: Central Uganda; Nakaseke District, Mukono District and Hoima District.

Budget: \$10,000 - \$20,000 USD

PROBLEM

Swing Green Uganda is addressing the impact of climate change nationally within Uganda through stakeholder engagement across local communities. Our work is centered around capacity building, as many locals are unaware of how they can take direct action to fight climate change - this is the main problem we are engaging with. Capacity building is essential to the local community as it makes the general public realize that they have a much bigger role to play in climate change mitigation through their daily actions.

SOLUTION

Swing Green Uganda crowdsource individuals who have unused land, those who need to secure land, and most importantly - those who are looking to invest in agro-forestry. This solution sells an idea to establish forests and manage them on their behalf while offering advisory services on the return of the investment. In turn, Swing Green Uganda is contracted for a specific period to operate these projects which allows the organization to closely engage with the local communities. This gives them the opportunity to train, employ, and up-skill locals on agroforestry, soil and water conservation strategies, as well as integrated soil fertility management. These forests end up being very well managed as the community gets cash inflows through the work of the locals engaged by Swing Green Uganda. During the capacity building training, Swing Green Uganda also donates fruit trees to the local communities, they help with planting the trees and educating about how to care for them.

IMPACT

Since the start of Swing Green Uganda three years ago, they have established and are actively managing over 100 hectares of commercial forest throughout Uganda. Through this strategy, they are counteracting the overwhelming deforestation rate countrywide. The solution has also increased public knowledge and helped drive a general mindset-change relating to the importance of healthy forests and how agroforestry plays a key role in combating climate change. Swing Green Uganda is also creating employment opportunities as over 50 locals in each area have gained jobs to work in the forests during the establishment and have gained skills to apply in other areas. Some of the employed locals remain in permanent roles to help protect the forests. Additionally, Swing Green Uganda has made a significant impact on the general wellbeing of numerous local communities across the country, for example through the donated fruit trees as well as all the crucial training the organization provides.

ALIGNMENT WITH THE SDGs

SDG 13; Climate action. Tree planting is one of the strategies of curbing the continued climate change. But without community involvement and capacity building, tree planting would not be sustainable as the rate of destruction overwhelms the rate of reforestation. SDG 12; Sustainable production and production. Through the capacity building, locals become skilled in sustainable agricultural practices such as soil water conservation and integrated soil fertility management to ensure continuous production amid the changing climate. SDG 3; Good health and wellbeing. A healthy environment drives good human health free from diseases and suffering. Having a source of income gives people independence and security.



Build Like A Woman Course (The Amazing Woman)



T.A.W

The Amazing Woman

Lead: Buchi Nduka**Website:** <https://www.facebook.com/TAWISTHEAMAZINGWOMAN/>**Type:** Non-profit**Location:** Lagos, Nigeria**Current Reach:** Lagos, Nigeria, and Canada and Rwanda (remotely)**Budget:** \$1,000 - \$5,000 USD

PROBLEM

Build Like A Woman is working to support the rising number of stay-at-home mothers who are lacking an income and who often end up suffering depression or mental anxiety due to a lack of ability to meet financial family obligations. According to UN Women, women spend three times as many hours on unpaid care and domestic work than men everyday. 3-15 million girls under the age of 18 are forced into marriage which drastically increases the possibility of them remaining uneducated and raising a generation of uneducated children and continuing the poverty cycle. There are 750 million illiterate adults worldwide and two thirds of this population group is women. More than 48% of girls in sub-Saharan Africa remain out of school.

SOLUTION

The goal of Build Like A Woman is to reach 5000 women online and offline through our content, partnership opportunities, creative digital and financial educational training for stay at home mothers to help them monetize a skill they identify and are passionate about. The solution aims to achieve this through offering:

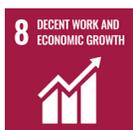
1. Digital training and empowerment using social media and online conferencing tools.
2. Key partnerships with stakeholders in the digital and financial ecosystem to create policies and opportunities for collaboration for women at the grassroots to access resources, grants, etc.

IMPACT

At the time of publication of this report, Build Like A Woman has trained over 2000 women in subjects ranging from online business creation, e-commerce, branding, photography, graphic design and many other topics. These training offerings have been conducted through webinars in partnership with prominent entrepreneurs and organizations. The solution also started the campaign #WomenAgainstCOVID in March 2020 in response to the COVID-19 pandemic. Through this campaign, they managed to raise \$600 which helped support 50 mothers during lockdown. The team is also actively working on developing The Amazing Woman Hub which will pioneer the first African hub and incubator dedicated solely to mothers who want to become entrepreneurs. This project is requiring fundraising and the team is currently partnering with organizations and angel investors to hopefully raise \$100,000 to develop this project into its full potential. Through their online campaigns, The Amazing Woman have reached a total of 2000 viewers on Instagram live across 16 countries.

ALIGNMENT WITH THE SDGs

Build Like A Woman Course and The Amazing Woman enterprise is making an impact on SDG 3, 5 and 8. The solutions impact on these specific SDGs can be seen through their support of making the digital economy available to all girls and young women, and in doing so, they support decent work and economic growth for stay at home mothers. Additionally, their work is centered around access to financial, digital and economic education and development opportunities for underserved women and children.



NCDs 365 by Stowelink Enterprises LLP



Lead: Oduor Kevin Otieno

Website: <https://stowelink.com/>

Type: Non-profit

Location: Nairobi, Kenya

Current Reach: Kenya, Tanzania, Uganda, Ethiopia, Rwanda, South Africa, Cameroon, and Nigeria

Budget: \$5,000 - \$10,000 USD

PROBLEM

Statistics from WHO indicate a steady increase in the fatality and incidence rates of non-communicable diseases (NCDs). Therefore, interventions aiming at mitigating risk factors are important in neutralizing the trend. Non-communicable disease risk factors are mainly attributed to lifestyle and social behavior. Access to quality information is the foundation of driving behavioral change in communities. However, most of the information available to the public is not verified and is full of medical jargon and is therefore not easily interpreted and understood by the general public. Individuals are also not aware of where to find, or how to identify, quality information. In general, various false facts and misconceptions about NCDs have spread in many countries where there is a lack of access to quality information.

SOLUTION

Stowelink initiated their project, NCDs365, to provide simple, yet verified information on the management, prevention and risk factors of NCDs to improve lives. The project heavily relies on the use of social media to provide the necessary information. The information is organized into key thematic areas. The thematic areas are various classification of NCDs. A different thematic area is discussed each month. The thematic areas are classified further into different weeks which then is divided into daily topics. Information is sourced from various verifiable outlets and a short write up plus a poster is developed for each daily topic.

IMPACT

The solution, Stowelink, has reached 1,358,013 people through their social media channels during the time period between January, 2020 and June 2020. Stowelink has also received 25 detailed stories directly from people who have benefited from their NCDs365 project. Some of those people have friends and family members living with NCDs, while others are survivors. The solution has also developed a NCDs Module (approved by the NCDs Alliance of Kenya) summarizing all the messages they are sharing on social media on prevention and management of NCDs. The module is pending publication due to inadequate finances. Additionally, the solution has also developed an information brochure on NCDs and COVID-19 (approved by the NCDs Alliance of Kenya). This brochure was aimed at informing about what it is like to live with NCDs during the COVID-19 pandemic, since people suffering from NCDs are among those vulnerable to the Virus. Stowelink was able to distribute this brochure to 500 households with people living with NCDs and youth in Vihiga County, Kenya.

ALIGNMENT WITH THE SDGs

NCDs365 is contributing directly to the 6th indicator of SDG 3 (Good Health & Well-being) which relates directly to NCDs. Through empowering the society with the necessary information on NCDs, NCDs365 is hoping to contribute to strengthening the existing NCDs prevention strategies. With the necessary information, people can change their behavior, avoid risk factors and extend their life Expectancy. The solution is also supporting SDG 9 on Industry, Innovation and Infrastructure. Since Stowelink is mainly communicating via social media platforms online, internet access is crucial in order to be able to learn from their resources. Due to this, Stowelink are actively advocating for expanded internet access in communities wherethey operate.



Fundación Barranquilla +20



Lead: Xiomara Acevedo Navarro

Website: <https://barranquilasostenible.wordpress.com/>

Type: Non-profit

Location: Barranquilla, Colombia

Current Reach: Colombia

Budget: \$1,000 - \$5,000 USD

PROBLEM

Colombia is the second most biodiverse country in the world, while also being the country with the highest number of social-environmental conflicts (EJ Atlas). Sadly, climate activists and human rights defenders in the country are also faced with an increased risk of violence. Furthermore, Colombia has a low contribution in terms of greenhouse gas emissions when compared globally, but it suffers a high deforestation rate, lack of water, climate induced disasters and more. All of these factors combined, makes Colombia especially vulnerable to climate change.

SOLUTION

Barranquilla + 20 is a youth led nongovernmental organization with 8 years of experience in the environment and nature field in Colombia. Founded in 2012 and legally registered in 2018, the solution has organized and supported grassroots movements fighting for climate action and the defense of territory at local levels in Colombia. Their mission is to educate and empower children and youth to create sustainable cities and territories.

IMPACT

Barranquilla +20 has successfully participated in numerous international negotiations at COP under UNFCCC, they have had representation at COP12, COP13, COP20, COP21 and COP25. The solution also organized the Colombian Youth Consultation post 2020 Aichi targets in Nariño, Colombia and are current coordinators of the GYBN Colombia chapter. Barranquilla +20 also participated in the World Water Forum Brasilia, Acodal Colombian water forum, and the Latin-American parliament for Water. During 2019, they participated in the Sendai DRR Forum, and the UNMGCY, GCF international Summit 2019. Additionally, the organization is working with numerous local adaptation consultations and policy analyses. Through their work, they continue to put climate change at the forefront of the national interest, while empowering Colombian youth to actively use their voices in the fight to protect the environment.

ALIGNMENT WITH THE SDGs

Colombia as a nation faces several environmental challenges, making it necessary to identify and prioritize more ambitious solutions for biodiversity conservation taking into account that the country is considered the most biodiverse country in the world per square meter despite only occupying 0.7% of the earth's surface. With this position, the work of Barranquilla +20 involves SDGs 7, 11, 12, 13, 14, 15.





DEC ATLÁNTICO
DECLARATORIA DE EMERGENCIA CLIMÁTICA

PARA MAYOR INFORMACIÓN:





We' for Change



Lead: Prayas K.C.

Website: <https://www.weforchange.org/>

Type: Non-profit

Location: Kathmandu, Nepal

Current Reach: Numerous cities across Nepal

Budget: \$20,000 - \$50,000 USD

PROBLEM

Nepal is home to approximately 31,020 people living with HIV, among them seasonal labor migrants are considered as the highest key-risk population. The Terai region is considered as a vulnerable area for the spread of HIV/AIDS due to its open border with India. With high level of poverty and free migration to India, male Nepali migrants contribute about 57.8% to the HIV/AIDS epidemics in Nepal, as their spouse/women have little power to negotiate for safer sex (NCASC, 2017). Due to geographical barriers, lack of awareness and inaccessible testing centers, core-affected population, i.e. the seasonal migrants, lag behind in getting tested, causing a national HIV data under-count indicating HIV infection rate is far higher than shown. There is a crucial need to endorse a flexible approach to voluntary counseling and testing centers where the clients feel safe and free from stigma. There is also a need to empower people living with HIV in the Terai community through support, healthcare and education.

SOLUTION

The identified most vulnerable groups to HIV/AIDS epidemics according to Nepal's national data were the migrant workers who reside in the most remote parts of the Terai region. Testing facilities are inaccessible and are very costly to the people who live there. Therefore, to tackle the problem, and with the goal to reduce overall HIV/AIDS infections, 'We' for Change has initiated an innovative solution of 'testing on the go' through their project Free HIV Testing Bus (FTB) which is breaking the barrier of mobility, cost, time issues, and prompting confidentiality for all patients. FTB provides free HIV/AIDS testing services, generates awareness to reduce the stigma of HIV/AIDS and other STIs and enroll positive clients to ART aligning with SDG 3 - Good Health and Well-being.

IMPACT

Vulnerable communities who have limited or no access to HIV testing facilities are provided counseling and are tested confidentially. This validates the mission of 'We' for Change to break the barrier of mobility, cost, time issues and promote confidentiality. The solution also contributes to the reduction of stigma related to HIV/AIDS and other STDs while working to prevent new infections in the targeted communities reached by the project. 'We' for Change has provided testing facilities to a total of 21,270 people and distributed 38,964 condoms. The impact was measured, tracked and finalized through the record of tested people and monthly reporting to our partner organizations: AHF Nepal, NCASC and NAP+N. Additionally, through HIV screening tests, 'We' for Change identified 78 positive clients and enrolled 35 of them in ART treatment.

'We' for Change has also reached over 200,500 youth through their social media channels by the production of the 'Testing Song' and the 'HIV Song' which were produced in the native language of the Terai region.

ALIGNMENT WITH THE SDGs

Free HIV Testing bus positively contributes to the SDG Target 3.3 and its indicator 3.3.1 of measuring the spread of HIV, reducing the infection rate and improving access to treatment by linking clients to ART. Their project has been helping people to find out their HIV status, referring them to sustained Antiviral Therapy, inform the communities about the use of condoms and advocate for safe sexual practices. Free HIV Testing Bus is promoting positive behavioral changes in sexual practices among migrant workers and their families by promoting safe sex, use of condoms and limiting the taboos associated with HIV/AIDS and other STDs through mass testing, referrals to ART and by promoting community engagement in awareness activities.



TIHARY Association



Lead: Ratsarasataharitera Aina Tiana Erick

Website: <https://www.facebook.com/tihary.association>

Type: Non-profit

Location: Antananarivo, Madagascar

Current Reach: Antananarivo, Madagascar

Budget: \$0 - \$1,000 USD

PROBLEM

According to UNICEF, Madagascar is ranked the 3rd lowest globally in the use of unimproved sources of water and use of basic sanitation and only 36% of the rural population have access to improved water sources (8th lowest country in the world). In Madagascar, diarrhea ranks third as the most common cause of death according to the Ministry in charge of health. 88% of deaths due to diarrhea are caused by unsafe water. Children under 5 are the main victims, with 51% suffering from acute diarrhea. That is the reason TIHARY Association decided to work in the village of Andranovaky, Madagascar. From the preliminary assessment, the team noted that the households are exposed to sanitary risks by consuming non potable water. This is where the idea for the project was born, which aims to improve the quality of the water in the area so that it can be consumed without worry.

SOLUTION

TIHARY Association proposes to change the behavior of people by using a water filter as the core of the solution. However, before that, the project will train young volunteers from the communities within different topics such as the importance of clean water, water related diseases, different methods to purify water, principles of sanitation and finally, how to make a simple and effective water filter. These young volunteers will then lead awareness campaigns within their respective communities and will constitute a generation that will educate their elders, their peers and their children on the importance of potable water.

IMPACT

At the moment, the team is in the process of selecting and training young volunteers from local communities. The approach used by the project is innovative because EAU'SYTECH will work with young people from the communities. After being trained, they will promote the use of a water filter as demonstrated in the training and they will also know how to make their own water filters, which they will also be able to show their communities. As a youth association, TIHARY always seeks a way to promote young people in all its works and encourage them to take action. TIHARY is composed of determined young people from various backgrounds who are united by the love of their country and its people.

ALIGNMENT WITH THE SDGs

The consumption of non-potable water can lead to diarrhea, the third most common cause of death in the country. By the promotion of using a water filter and the awareness campaigns about the importance of clean water, the project targets SDG 3, and specifically indicator 3.3. - by 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases. The project also targets indicator 3.9 - by 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination. TIHARY also targets SDG 6, as the project will diffuse the use of an artisanal type of water filter made by cheap materials that any household can replicate at home. Thus, the project will participate in achieving the indicator 6.2 - by 2030, achieve universal and equitable access to safe and affordable drinking water for all.



EAU  **SYTECH**
par **TIHARY**

ACAKORO Football



Lead: Adan Mohamed Rashid

Website: <https://acakorofootball.com/web/>

Type: Non-profit

Location: Nairobi, Kenya

Current Reach: Nairobi, Kenya

Budget: \$20,000 - \$50,000 USD



PROBLEM

ACAKORO C.B.O. – Football for the Future, decided to come up with the ACAKORO project to help the vulnerable children of the Korogocho slums and its surrounding areas, where families have no capacity to provide some of the most basic necessities for their children. The project has ensured that needy children are educated academically, as well as in terms of social skills through football, so that they can become resourceful in their communities. Many of these children lost their parents due to HIV/AIDS whereas others lost their parents to some curable diseases like malaria, tuberculosis and others due to poor access to health services. The organization aims to help children, empower them to avoid dependency, fight for the rights of children to ensure equality, liberty and fraternity in their communities, nurture in them values, and instill in them the spirit of responsibility with the goal of transforming communities.

SOLUTION

Sport has a powerful role to play as an educational tool and means to promote the SDGs. The ACAKORO project will help tackle the issue of school absenteeism and reduce juvenile delinquency through football based intervention in the Korogocho slums and its surrounding areas in partnership with public partner schools. It will also focus on other issues, such as reduction of child labour and gender based violence while providing leadership skills training. ACAKORO knows that team work and fair play can go a long way in building self-esteem and equal opportunities for both boys and girls. In many regions, sports can also be a way forward in promoting peace and social inclusion. Because of the importance of social inclusion, ACAKORO provides a department specifically for this area of operation. This unique combination of academic education, personal development, food program, talent nurturing and medical health care is of great potential to fight poverty and create role models through sports and education as tools of transformation.

IMPACT

The ACAKORO project uses sport as a tool to bring children back to school, educate them socially, develop a positive life attitude with values of respect, effort, self-confidence, co-operational spirit, time management and trust, among others. At the time of publication, ACAKORO has directly impacted the lives of 1000 children who live in extreme poverty in the Korogocho urban informal settlement in Nairobi. These children have benefited from educational opportunities and physical fitness programs. ACAKORO also provided crucial information related to COVID-19 to roughly 5000 people in Korogocho. The project has also provided remote access to psychological support to 5000 people in 1000 households through a program with 20 qualified and trained members of the emergency response team. ACAKORO has also increased the number of children and parents receiving access and capability to the remote learning from Kenyan Institute of curriculum development (KICD) online platforms.

ALIGNMENT WITH THE SDGs

ACAKORO actively contributes to SDG 4 through its work. For example, ACAKORO does interventions with children who have stopped attending school, the project re-enroll these children back to school while offering support to ensure their success. ACAKORO has positively impacted school attendance among the children they work with - those admitted to the ACAKORO program have maintained an average of 95% attendance each term. This has been achieved thanks to close monitoring of the children's school activities and other interventions, such as funding their tuition fees and providing equipment and materials to ensure their success as students. ACAKORO has also seen an improvement in academic performance among the children enrolled in their program. Additionally, ACAKORO has registered a 100% retention rate. The students who have been admitted to ACAKORO receive school related support and close monitoring to ensure they stay and complete their education. The support rendered includes provision of all necessary school items, academic tutoring and social support.



Petach Robotics



PetachRobotic

Lead: Peter Achieng

Website: <https://www.petachrobotics.com/>

Type: Non-profit

Location: Nairobi, Kenya

Current Reach: Multiple cities nationally

Budget: \$20,000 - \$50,000 USD

PROBLEM

There is a lack of skills within science and technology among youth in Kenya. The topics taught in school are not sufficient enough for the students to be encouraged to pursue careers within STEM and solve engineering problems. Additionally, technology is critical for innovation, yet schools struggle to get students interested in this area. This can only be addressed by starting to teach all subjects related to STEM from an early age.

SOLUTION

Petach Robotics provides a unique, challenging learning environment that inspires young minds to apply and sharpen their science, technology, engineering, and math skills. Through a series of competitions starting virtually online and face to face, students exercise their creative problem-solving skills and take on real world design problems. With a zero cost, zero setup, web-based environment that uses the latest web technologies, Petach Robotics provides students worldwide with a testbed to carry out research.

IMPACT

Petach Robotics have organized close to 100 competitions which have challenged the students and provided learning in critical thinking and STEM. In general, the work of Petach Robotics has drastically improved the skills of hundreds of students who have received training in STEM subjects such as robotics and coding. The solution has also worked with developing various apps, for example the dawa app which is a medical app that facilitates telemedicine appointments. Through their work with robotic labs, bootcamps and classes, Petach Robotics has employed 12 teachers which has provided them with income and meaningful work. The solution has also partnered with numerous organizations, such as Safaricom, which has ensured the quality of their classes.

ALIGNMENT WITH THE SDGs

Aligned with SDG 4, Petach's robotics training project is highly interdisciplinary and provides an excellent education platform for constructivism and experiential and challenged-based learning. Constructionism is an active learning process in which students build things that are personally meaningful to themselves and others around them. Instead of being served information in the traditional one-way setting, learners develop their own knowledge and understanding of a subject through physical construction and the implementation of their ideas. Petach Robotics also contributes to SDG 3 as they help in designing rehabilitation and medical robotics, and personal assistant robots for the elderly and physically challenged.



Baala Triple E Care Limited



Lead: Soumya Dabrial

Website: <http://www.projectbaala.com/#/>

Type: For-profit

Location: New Delhi, India

Current Reach: India, Nepal, Ghana, Tanzania

Budget: \$50,000 - \$100,000 USD



PROBLEM

68 percent of Indians live in villages (2011 Census of India). Only 48% of females have access to safe menstrual protection leading to severe repercussions on health, productivity and education which plague the 400 million menstruating women in the country. When girls and women are unable to manage their periods hygienically, it adversely affects their health and wellbeing, undermines gender equity, and disrupts their educational attainment and work-force participation. 40,000 women lose their lives to poor menstrual hygiene annually. 23% adolescent girls drop out of school at the onset of puberty every year. 31% women report a drop in productivity and income due to loss of 2.3 days of work monthly.

SOLUTION

Baala was established to solve the main issues of menstrual hygiene in India: the expense of modern sanitary products, problem of disposal, complete lack of menstrual awareness and the social taboos surrounding menstruation. Founded in 2016, the organisation has benefitted over 175,000 women and girls in India, Nepal, South Africa and Tanzania. There are 84 million girls in India who dropout of school and million other women who lose their daily wages due to lack of proper menstrual protection. Baala is a youth-led, impact-oriented social enterprise working on menstrual hygiene management (MHM). Our aim is to enable young girls and women manage menstruation effectively through disruption in the menstrual hygiene space with our twin solution of:

- 1) Technical and innovative reusable menstrual products
- 2) Unique and holistic menstrual awareness

IMPACT

Since 2017, Baala has prevented 18,900,000 non-biodegradable sanitary napkins from entering landfills. This is through directly benefiting 1,75,000 rural women and girls and distributing over 5,25,000 reusable sanitary napkins across 12 states of India and pockets of Nepal, Tanzania and Ghana. Baala have been able to bring about a switch to sustainable menstrual hygiene management practices by creating a robust ecosystem of users and ensuring access to education and employment opportunities as 63% of girls surveyed for feedback reported increased confidence in attending school and 93.6% reported that their perception towards menstruation changed positively. After 3 months of conducting workshops in an identified area, the Baala team goes back to the workshop areas for a feedback survey and interviews. The feedback shows that on average: 93% of girls report regularly using the Baala pads during menstruation. 82% girls who used the pads stated that they did not find any problem while using the pads (drying was highlighted as a problem by the rest) However, Baala's market share is only 0.6% of the total market. Baala have proof that their solution has the potential to disrupt the current market of menstrual protection. The combination of awareness through technology and personal communication and a unique menstrual absorbent that is sustainable, affordable, accessible and innovative.

ALIGNMENT WITH THE SDGs

Baala actively contributes to SDG 3 - 40,000 women in India lose their lives due to poor menstrual hygiene. Through certified and scientifically designed pads we ensure that menstrual health and improve knowledge. The organization also supports SDG 4 through their educational efforts, 23% adolescent girls in India skip school due to lack of menstrual facilities. By providing menstrual education and reusable products, Baala ensure higher school attendance. Since 79% women witness a drop in their confidence due to onset of periods, through provision of safe facilities and equipping them with knowledge, we increase self confidence and performance, this directly connects to SDG 5. Menstrual hygiene is one of the core elements of sanitation for women and girls. By providing reusable pads, Baala helps reduce menstrual waste and risk of diseases which contributes to SDG 6. The solution also helps support SDG 10, 12 and 13.



Project Pollen (Fourth Line Limited)



Lead: Chiyanka Nakasamu

Website: <https://www.fourthlinelimited.com/>

Type: For-profit

Location: Lusaka, Zambia

Current Reach: The towns Mpongwe, Solwezi and Lusaka in Zambia

Budget: \$20,000 - \$50,000 USD

PROBLEM

Half of Zambia's population is employed by the agriculture sector, but it makes up only 8.2% of our GDP. Despite having an abundance of open land, fertile soil, and access to water, more than 2.5 million Zambians experience food shortages and a majority of Zambian farmers still live in poverty. Over the years, there has been an increase in financial exclusion among many Zambian farmers. Remote locations make it expensive to onboard smallholder farmers through necessary KYC. Lack of digital identities, absence of collateral, and difficulty forecasting crop production makes it nearly impossible for financial services providers to offer loans at reasonable rates. The immediate and severe consequence of this is that thousands of farmers lack the much needed capital to invest in yield-increasing upgrades like irrigation systems, machinery, fertilizers, and technology for sensing and tracking crop growth. This hinders them from growing into emerging sustainable viable farmers.

SOLUTION

Fourth Line Limited is an African social-enterprise helping small scale farmers in Zambia find their unique purpose and create ecosystems for prosperity, for all. The solution currently works with more than 800 bee farmers in rural Zambia whom they have positively impacted through this project. The objectives of this project is to provide farmers with climate smart farming services, linking them to digital saving circle platforms, and providing them with proper technology, market access and distribution networks. Since Zambia has only one harvest season per year, many farmers are left with periodic and unpredictable cash flows. Therefore this project aims at empowering 2500 farmers with tangible income and access to market (40% women & 80% youth), enable farmers to grow and sell more as they will have access to credit, allowing them to reach prosperity.

IMPACT

The major impact of this solution has been the empowering of farmers with seRvices that increase their crop productivity and helps them to be climate resilient, thereby reducing food shortages. Since the time Fourth Line Limited started operating the business in 2019, their impact have been as follows:

- Increased productivity by 80% for 500 smallholder farmers (67%) through adoption of climate smart farming systems for food and cash crops.
- Increased access to farming inputs for 1200 smallholder farmers (60% women).
- Increased access to market, distribution networks and finance for 800 farmers
- Created employment opportunities for 30 young people (50% young women)

ALIGNMENT WITH THE SDGs

This solution contributes to the following SDGs: 1) No poverty; the solution empowers farmers with tools that help them to generate alternative sources of income. The solution empowers farmer with beehives for bee-keeping, a supplemental initiative to their agricultural crops in order to keep them afloat during the lean/dry season. 2) Zero Hunger; the solution empowers farmers with modern farming tricks, weather updates, accesses to discounted farming inputs and equipment, markets and distribution networks of their produce. 3) Reduced inequalities; the solution empowers farmers with an easily accessible digital platforms that enables them to build their financial data, literacy and saving circles. Through this, farmers are able to access soft credit facilities, the ability to borrow and lend from peers and save money for future use. This empowers them to lift themselves out of poverty.



NovFeed (T) Limited



Lead: Diana Orembe

Website: <https://novfeed.com/>

Type: For-profit

Location: Dar es Salaam, Tanzania

Current Reach: Dar es Salaam, Tanzania

Budget: \$20,000 - \$50,000 USD

PROBLEM

Tanzania holds great potential for aquaculture production. Its climate is ideal for farming indigenous fish species, including tilapia and African catfish - the favoured fish for Tanzania's lower- and middle-income classes. Market demand for fish is growing rapidly due to population growth and rising incomes (Ministry of Livestock and Fisheries 2019). However, supply from wild catch is dwindling as natural water bodies are overfished and enforcement of regulations on fishing is limited at best. This situation has resulted in an estimated fish demand deficit of 480,000 tons annually in Tanzania. These combined factors have been driving up fish prices, making fish less affordable for the lower and middle-income segments of the population. This development presents both a food security issue, while also providing an opportunity to supply the market with locally produced fish.

SOLUTION

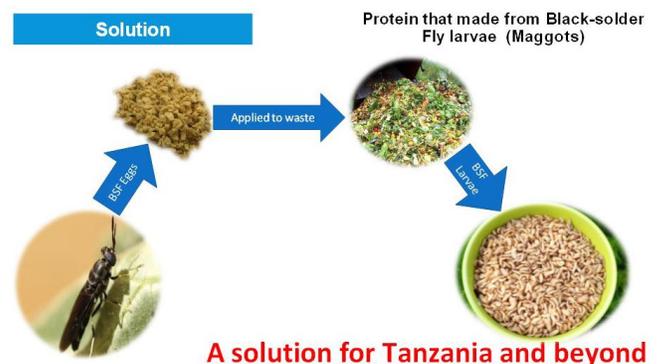
NovFeed produce, process and formulate new cost-effective fish feeds based on indigenous, locally produced and sustainable ingredients such as maggots. Black soldier flies in their larval stage feed on organic matter and can eat a wide variety of organic wastes, from different sources such as slaughtering houses. As the larvae mature, they consume this organic waste ravenously for 2-3 weeks before reaching the pre-pupae stage, at which point they are at optimal nutritional content and can be harvested. They are then dried and ground into a fine protein rich flour which then is mixed with other ingredients to produce fish feed pellets. These pellets are then sold to fish feed distributors that will sell to the fish farmers. NovFeed's superior product will increase yields to farmers, helping to decrease cost of production by 30% while supplying the food insecure in the region with healthier animal protein.

IMPACT

NovFeed was first born as a response to destructive fishing practices in Tanzania by commercial vessels. In the two and a half years since its founding, Novfeed has accomplished a lot. The solution has built a functional small scale prototype facility (feed preparation site and maggot production site), and they have validated that they can successfully grow maggots and aquatic plants (Macrophytes). Additionally, NovFeed has done lab tests, farm trials and customer research to further understand the market and its needs. Throughout this project, the team has partnered with leading experts in the fish feed industry, industrial design and microbiology. NovFeed has raised \$17,500 of non-dilutive financing.

ALIGNMENT WITH THE SDGs

An increase in productivity will increase the fish supply that is available to the market, and as a result, this will make fish more affordable and easily accessible as a healthy food choice. This positively contributes to the realization of SDG 2 and several of its specific indicators, such as; 2.1.1: Prevalence of undernourishment, and, 2.1.2: Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale. Additionally, over 15 tons of food waste will be recycled everyday through our products; this will reduce environmental pollution and keep the local environment clean, which aligns with SDG 12, "to ensure sustainable consumption and production patterns." NovFeed also focuses on hiring vulnerable groups, such as youth and women. In a near future, the solution plans to hire over 40 young people and 50 women on our out-grower system and increase their disposable income from \$2 to \$5 per day. This addresses SDG 8, "promoting sustained, inclusive and sustainable economic growth."



GREENfluidics



Lead: Juan Antonio Arriaga Viveros

Website: <https://greenfluidics.com/>

Type: For-profit

Location: Toluca, Mexico

Current Reach: Germany, Mexico, UEA

Budget: \$5,000 - \$10,000 USD

PROBLEM

Carbon dioxide (CO₂) is the primary greenhouse gas emitted through human activities. Carbon dioxide is constantly being exchanged among the atmosphere, ocean, and land surface as it is both produced and absorbed by many microorganisms, plants, and animals. However, emissions and removal of CO₂ by these natural processes tend to balance, absent anthropogenic impacts. Since the Industrial Revolution began around 1750, human activities have contributed substantially to climate change by adding CO₂ and other heat-trapping gases to the atmosphere. Global carbon emissions from fossil fuels have significantly increased since 1900. Since 1970, CO₂ emissions have increased by about 90%, with emissions from fossil fuel combustion and industrial processes contributing about 78% of the total greenhouse gas emissions increase from 1970 to 2011. Agriculture, deforestation, and other land-use changes have been the second-largest contributors. [IPCC (2014). Climate Change 2014: Mitigation of Climate Change .]

SOLUTION

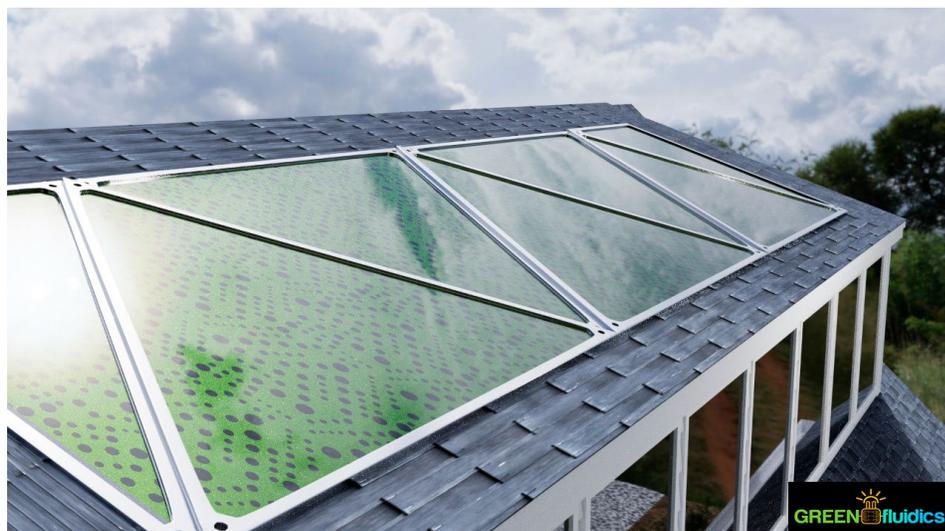
GREENfluidics have developed a unique technology called "Smart Solar Biopanel", whose objective is to give style while absorbing carbon dioxide, generating oxygen, and producing clean and affordable energy, thanks to the use of microalgae and carbon nanoparticles. This technology has been recognized by international institutions as a technology capable of combating climate change. Each square meter of our technology is capable of absorbing one ton of carbon dioxide and generating one ton of oxygen dioxide. as well as generating 160 W / h. GREENfluidics technology is tailored to the carbon dioxide capture and sequestration market; it is a set of technologies that can potentially greatly reduce CO₂ emissions from new and existing coal and gas power plants, industrial processes and other stationary sources of CO₂. For example, capturing CO₂ from the chimneys of a coal-fired power plant before it enters the atmosphere, transporting the CO₂ through a pipeline, and injecting the CO₂ deep into a suitable and carefully selected underground geological formation, such as a nearby abandoned oil field, where it can be safely stored.

IMPACT

GREENfluidics technology has been awarded internationally as a unique technology for combating climate change, by institutions such as MIT, Mission Innovation, GGGI, and the EIT. In addition to these international accolades, the solution holds a patent at the national level (Mexico) and internationally. This solution holds the power to transform how society deals with CO₂ emissions and waste.

ALIGNMENT WITH THE SDGs

Due to the adaptability of GREENfluidics technology to circular business models, and its benefit to the environment, their technology has a positive effect on compliance with the SDGs. Their work specifically impacts SDG 7,9,11,13 and 17 .



Essential Women in Agriculture (Yaniv Agric Trading)



Lead: Jochebed Mlambo

Website: N/A

Type: For-profit

Location: Brits, South Africa

Current Reach: Nationally in South Africa; Brits, Rustenburg, Pretoria

Budget: \$0 - \$1,000 USD

PROBLEM

In South Africa, 6 women are murdered at the hands of men every day. Majority of the victims are young unemployed women. Research shows that it is difficult for a woman to leave an abusive relationship if they depend on the abuser for food and shelter. This project aims to alleviate poverty through supporting underprivileged women to become financially independent and be self-sufficient individuals. This will help them make informed decisions and possibly reduce the occurrence of gender-based violence whilst promoting gender equality.

SOLUTION

Essential Women in Agriculture aims to empower youth and women who are victims of gender-based violence. The solution also supports underprivileged women. South Africa has a high rate of violence against women and many women are murdered. Research has shown that a core reason why most women stay in abusive relationships, is due to their dependence on the abuser for shelter and food. This project is about empowering young people and women to be able to pay their own rent and provide food for their household, without having to compromise their personal peace and safety.

Essential Women in Agriculture has two segments; one is focused on growing and selling vegetables, as well as growing and selling chickens. The waste from the chicken will be used as manure for growing vegetables. This project will build an independent and self-sustainable community for women. This solution already has a piece of land that is setup for starting the Essential Women in Agriculture project. The team will cultivate the land, plant seedlings and water them. Once they have grown, the team will start selling their produce to the community and local grocery stores, as well as restaurants. The project already has a market since they have already been doing this work on a small scale.

IMPACT

At the date of publication, Essential Women in Agriculture has donated food parcels to 50 child-led households, and to an additional 70 underprivileged households during the COVID-19 pandemic. The solution has also managed to donate around 500 sanitary pads to young girls. Essential Women in Agriculture has also provided farming training for 15 women, out of which 9 are youth.

ALIGNMENT WITH THE SDGs

This solution contributes to the realization of SDG 2, 5, 8, 10 and 11. Essential Women in Agriculture helps provide food and meaningful employment. The solution also has a clear focus on supporting women and gender equality, as well as enabling sustainable communities and responsible land usage.



Agro



Lead: Tafadzwa Ronald Chikwereti

Website: <https://agro.co.zw/> and the shop, <https://farmersmarket-africa.000webhostapp.com/>

Type: For-profit

Location: Harare, Zimbabwe

Current Reach: Harare and Bulawayo, Zimbabwe

Budget: \$1,000 - \$5,000 USD

PROBLEM

Over 6.1 million smallholder farmers in Zimbabwe are living in poverty, across Africa that number is 250 million, and globally there are over 500 million smallholder farming households. These households comprise a large proportion of the world's poor, living on less than \$2 a day. This is mainly due to inefficiencies in the demand-supply chain which causes high wastage of post-harvest food. Where in a typical Sub-Saharan African country, Zimbabwe smallholder farmers produce 20 million tons of food and a third of that produce is wasted before it reaches consumers. Meanwhile, in the same country, 7.7 million people are hungry according to "WFP". Across Africa, almost 50% of the food produced is wasted - that is enough food to feed 300 million people on the continent. (UN Environment)

SOLUTION

Agro has created an online platform to give smallholder farmers empowerment and sustainability in their entire production and supply chain through a 4 tier system. Agro gives farmers access to debt-free financing to minimize price risk through their service 'Agro-Contracts'. This service also provides crowdfunding through loans and an opportunity for farm produce processors to get a regular supply of high quality produce at lower costs since all middlemen are eliminated. This also guarantees complete traceability of all produce. 'AgroHow' gives farmers tailored knowledge about farming, access to smart farm technology through community renting and also provides access to constant updates on farm diseases. 'AgroCart' is another service offered by Agro, which allows farmers to sell their produce and buy inputs directly from and to manufacturers. This eliminates waste and increases supply chain efficiency, while also removing the middleman to increase the farmers profit and lowering the prices for consumers.

IMPACT

Currently, Agro is still in the prototyping and development stage, but they have still managed to secure funding for 50 farmers in the town of Norton. The solution has also managed to sell off 10 tons of grains for farmers and also 500 kgs of vegetables (broccoli and cabbage.) Additionally, Agro has been able to get 100 farmers access to speak to an agronomist through what's-app chat-bots. In total, the solution has a network of 200 farmers who they currently send pest outbreak alerts and information to.

ALIGNMENT WITH THE SDGs

Agro is linking farmers produce from high productive areas with in-need areas; the produce that used to be wasted is now being redirected to hunger prone areas. This work is actively aligning with SDG 2. By eliminating the middleman and the correct use of inputs, smallholder farmers profits will double, which contributes to decent work and economic growth through export of produce. These efforts align with SDG 8. Agro is also actively contributing to fostering sustainable cities and communities where sustainability is brought about by efficient use of water and fertiliser produced by women and smallholder farmers. This aligns with SDG 10 and 11.



Shaasan (Center for Entrepreneurship and Innovation)



Lead: Pratik Kunwar

Website: <https://ceinp.org/>

Type: For-Profit

Location: Kathmandu, Nepal.

Current Reach: Four locations in Nepal

Budget: \$5,000-\$10,000 USD

PROBLEM

The solution addresses civic disengagement in Nepal. This problem has two main facets - citizens and governments. Regarding citizens, there is widespread political apathy, unawareness about governmental processes and how it affects them, and lack of knowledge about how to hold public officials accountable. Regarding public officials and decision-makers, they lack resources and tools to deal with the variety and frequency of requests they receive, lead an inefficient bureaucratic system, and are unable to implement civic innovation due to inadequate capacity or support.

SOLUTION

Shaasan is a citizen-led movement that bridges this divide between citizens and their elected government. The movement comprises a digital platform and two on-the-ground programs. First, the citizen empowerment programs (CEPs) inform, educate, and shape citizen action towards stronger civic participation and mobilize communities on ways to inculcate accountability through public workshops, public talks and outreach efforts. Second, the representative enhancement programs (REPs) increase the capacity of decision-makers to engage, empathize with, and respond to their constituents through tailored technical and administrative support. Finally, through a mobile app, citizens can report public problems (e.g., vacant community health- centres, unrepaired roads, among others) to their representatives. These crowdsourced problems are categorized and geotagged for all to see. The representatives are then given a public scorecard based on their response, all in real-time. The combination of both technological and on-the-ground solutions serve to ensure that inclusivity and representation are reinforced.

IMPACT

Through various partnerships, Shasaan has shaped the sanitation habits of more than 4,000 citizens, educated more than 500 people on topics such as deforestation, women's participation, democracy and youth entrepreneurship. Shasaan has educated more than 500 young people on leadership, organizing and storytelling and has contributed to the efforts of distributing PPE during COVID-19 by allocating over 5,000 masks to 30,000 households and charitable healthcare organizations.

ALIGNMENT WITH THE SDGs

Shaasan's digital platform strengthens civic engagement and galvanizes the power to amplify cross cutting action among different SDGs. Citizens can report issues on community safety, (SDG 11.7.2), open defecation (6.2.1), strong institutions (16.6), inclusive civic participation (10.2) and participation of women in the decision making process (5.1).



EM Technology (Rwanda Bio Solution)



Lead: Elie Ntirenganya

Website: <https://www.facebook.com/rwandabiosolution/>

Type: For-profit

Location: Kigali, Rwanda

Current Reach: Kigali and Bugesera

Budget: \$5,000-\$10,000 USD

PROBLEM

Rwanda's economy is dominated by agriculture where more than 90% of people depend on it. While the population increases and the food need increases, the farming land never increases. On the contrary, production decreases which forces farmers to use chemical fertilizers and pesticides to increase productivity. Due to the population growth and the improvement of living standards, there is a growing concern associated with waste generation in Kigali city and secondary cities. All collected waste goes to the only one landfill in Kigali as same as secondary cities, and the waste composition is dominated by the organic waste of up to 68%. Deep-seated fires, methane explosions, landslides, and leachates threatening rivers and groundwater are some of the common problems born from dumpsites mismanagement. More than 50% of the waste that goes to landfills are of good quality for composting, such as waste from purely residential neighborhoods, and waste from special generators such as markets, restaurants, and slaughterhouses.

SOLUTION

The Solution uses environmentally-friendly effective microorganisms (EM TECH) to produce and sell organic fertilizers. Waste is collected from Kigali City and Bugesera secondary city landfills and deposited into working sites. The waste is then mixed with the EM solution and special fresh plants to regulate the minerals. The final product is ready to use within two months. The solution is also able to sell this fertilizer at a low and affordable price to the community, thus contributing to lowering annual farming expenses.

IMPACT

As of now, around 16 tonnes of waste are deposited in their dumpsters for sorting and managing. 120 farms are already using the product, saving around .48 USD. These farmers are allowed in pay in a number of ways, for example, through Mobile Money, which also helps small businesses.

ALIGNMENT WITH THE SDGs

The project is aligned with SDG11 through organic waste reduction and minimization of environmental toxicity accumulation, such as ammonium and other gases from dumpsites, by lowering the use of chemical fertilizers which are harmful to the environment. The solution is also focused on SDG12, through responsible production of safe fertilizers for quality crops. Finally the solution also contributes to SDG8 through decent work creation.



GR Nutrition (Greenrev GR)



Lead: Joseph Niyomukiza

Website: <https://greenrevgr.com/>

Type: For-profit

Location: Kigali, Rwanda

Current Reach:

Budget:

PROBLEM

Poverty, unemployment, malnutrition and food insecurity are some of the problems that can be among african countries. A wide percentage of the population lives below the poverty line, and food insecurity is a permanent problem. Additionally, levels of stunted growth among children remain high, at 38% in Rwanda, 34% in Uganda, 34% in Tanzania, 29% in Kenya and 37% in Malawi.

SOLUTION

GR Nutrition fights against malnutrition by adding micro- nutrients to crops, to improve livelihoods through diversified nutrient-rich diets, including vegetables and cereals from seed to processing. Their goal is to improve and modernize the agricultural sector. The solution requires minimal behavior change, which is key to its success. It also scales efficiently: it is projected to reach over 100 million people by 2025.

IMPACT

So far, the solution has provided fortified fresh fruits and vegetables to over 2.5 million customers. More than 6 million people have tried their fortified cereals and have reached around 65 cooperatives. Additionally, 421 farmers have been impacted through learning mechanisms on sales, supply and technology. The solution strengthens its ties with the community by creating jobs and working closely with small businesses by knowledge-sharing.

ALIGNMENT WITH THE SDGs

The solution is closely aligned with no poverty, zero hunger, but also highlights the importance of creating successful partnerships for the goals. Since not one actor can help reach the 17 SDGs by themselves, partnership is at the heart of Greenrev GR.



Pearl Entrepreneurs Academy



Empowering communities through eco-friendly development

Lead: Elvis Kadhama

Website: <https://peauganda.wordpress.com/>

Type: For-profit

Location: Mayuge, Uganda

Current Reach:

Budget: \$5,000-\$10,000 USD

PROBLEM

Electricity is unavailable and expensive for the majority of Uganda's low-income population. With limited options, communities rely on kerosene lighting and open-fire cooking to sustain everyday activities. Kerosene-based lighting is expensive, with monthly purchases of kerosene forming 10% of a family's monthly income. Despite the costs, it provides insufficient light for business operations and nighttime study for children. When in use, it also poses health and safety concerns from fire outbreaks and noxious emissions. Kerosene lamps reportedly cause respiratory problems, strokes, eye problems, chest pain and suffocation – heavily affecting women, children, and the elderly. Furthermore, the burning of kerosene emits significant amounts of smoke and CO₂, creating health and environmental concerns.

SOLUTION

Pearl Entrepreneurs Academy is a sales and service distribution social enterprise that provides access to affordable clean energy products. The enterprise provides solar energy products to rural low-income families by mapping the needs and demands of customers, educating customers through various marketing strategies, using a hub-and-spoke product distribution model, ensuring consumer trust through committed customer service and conducting follow ups with customers to evaluate product use, interest and future requirements. The solar energy lanterns are distributed through local entrepreneurs under the Green Home Project. The solution especially focuses on after-sales services to ensure all solar solutions have lasting impacts.

IMPACT

At the time of publication, the solution has reduced 2,116,021 hours of kerosene consumption and 448,868 hours of hours exposed to smoke. Overall, this solution reduces deforestation, CO₂ emissions and cleaner air, improved environmental outcomes and more sustainable living in off-grid communities. Additionally, the solution considerably improves economic prosperity by saving Ugandan's 58% of their income per beneficially annually, 186.5 million Ugandan shillings saved by families switching to using clean energy products and 197.1 million Ugandan shillings generated by families from charging mobile phones.

ALIGNMENT WITH THE SDGs

This solution is aligned with SDG 7, affordable and clean energy by providing an alternative to the usual business model. The solution is also aligned with SDG 11, because by building an economic model around clean energy, the solution is subsequently impacting the communities positively and sustainably. Finally, the solution targets SDG 13, climate action, by eventually reducing CO₂ emissions in the environment.



Upcycle Africa



Lead: Johnmary Kavuma

Website: <http://upcycleafrica.org/>

Type: For-profit

Location: Mpigi, Uganda

Current Reach: Mpigi, Kampala, Masaka (all in Uganda)

Budget: \$20,000-\$50,000 USD

PROBLEM

There are over 150 Million tons of plastic already in the oceans. Every year, 8 million tons of plastic waste end up in oceans and lakes. Experts predict that there will be more plastic than fish in oceans by 2050. Plastic waste is not the only challenge we have in Uganda and Africa as a whole. Housing is still very expensive especially for people living in slums and low-income areas. In Kampala, homes in slums are usually filled up with water when it rains, damaging property and making it difficult for people to live decently, and yet, dignified housing is expensive considering that these families earn an average of \$40 as monthly income. The lack of quality housing compromises people's health and development opportunities.

SOLUTION

The solution is transforming the waste crisis in Africa into employment opportunities for marginalized groups of people through creative skills training. Up-cycle Africa promotes an innovative mind-set while empowering youth through up-cycling plastic bottles. The solution trains local communities, especially the disadvantaged youth to protect the environment. Bottles replace environmentally unfriendly bricks, which are burnt for days promoting deforestation. Bottles are collected and compacted with soil, making the houses very cost-effective and affordable. Furthermore, the buildings are strong, buffer heat, and are earthquake resistant. This solution also trains local people and provides them the skills of turning plastic into eco-bricks as well as constructing their own homes from plastic waste.

IMPACT

Upcycle Africa has been able to inspire young people in Uganda and around the world to start thinking differently on plastic waste. Since the foundation, the solution has educated an estimated 20,800 students in 52 different schools. The second is a waste picker's program, and the solution has recovered over 3,000,000 plastic bottles. The third is waste compaction, whereby after categorization, plastic is used in the construction of Upcycle's buildings or sold to recycling companies. As a result, over 100 tons of plastic has been sustainably repurposed. The final aspect of their work is the construction of affordable housing. The organization empowers marginalized communities through training them in sustainable construction. They have built 117 houses for families including 11 from marginalized communities.

ALIGNMENT WITH THE SDGs

Upcycle Africa is in alignment with climate action through land restoration, environmental cleanup and education. Additionally, a large part of their efforts goes towards training young people and women the skills of turning plastic into products with value and eco-friendly bricks, thus tackling no poverty, decent work and sustainable consumption and promotion. Finally, the solution's final product is complete housing made out of recycled materials, thus making cities sustainable, inclusive, safe and resilient for all.



heySTARTIC, Artistic Eco Fashion



Lead: Vania Santoso

Website: <https://startic.co/>

Type: For-profit

Location: Surabaya, Indonesia

Current Reach: Indonesia, especially East and West Java

Budget: \$20,000-\$50,000 USD

PROBLEM

The solution believes consumers cannot really reduce the use of product packaging they buy, and a huge part of the responsibility to build a better future with less waste falls on the private sector. Companies need to be more responsible by providing a more environmentally-friendly packaging or taking care of the single-use packaging after consumption. The solution takes into consideration the responsibility these companies have by treating their rejected packaging (unused) better than the usual practice of discarding, or even burning it.

SOLUTION

Through a holistic approach, heyStartic upcycles companies' used and rejected packaging and turns it into signature merchandise. Additionally, heyStartic focuses on attracting a wider population through an innovative approach - fashion. The solution uses normally discarded packaging such as sachet packaging and turns it into women patterns, among others. Finally, heyStartic empowers underprivileged communities with upcycling innovation to become craftsmen and work on heyStartic orders, generating additional income for them and their families.

IMPACT

To date heySTARTIC has sold more than 5,000 products and art installations made of waste packaging. Examples include turning cement sacks into artificial leather, sachet packaging into woven textile, milk carton cardboard into lining material, plastic bags into crochet, plastic bottles into chairs, amongst many other applications. These sustainable fashion products are also available for sale to end-users, along with public workshops to raise people's awareness. In response to COVID-19, the digital activation during pandemic reached more than 4,000 live views on one of Instagram Live.

ALIGNMENT WITH THE SDGs

heySTARTIC works on Arts in Education, meaning that we provide training to transfer skills under the environmental-friendly concept. There have been up to 50 public workshops/trainings conducted across Indonesia, with two intensive empowerment training sessions to build pioneers in East Java and West Java. There are 11 pioneers of crafts(wo)men in East Java coming from low-income economic backgrounds (eight of them are female), leading the production and quality control process among their peers. There are seven corporate partnerships on sustainability using the circular economy practice, more than 1,000 people trained followed up with the school's programmes support on climate action, more than 100 designs of eco-products created, ranging from home decoration for café, sustainable fashion for customers, and others.



The Fusion Hub



Lead: Sagufta Salma Janif

Website: <https://fusionhubfiji.com/>

Type: For-profit

Location: Lautoka, Fiji

Current Reach: Lautoka, Fiji

Budget: \$10,000-\$20,000 USD

PROBLEM

In Fiji, the landfills receive 60,000 tonnes of waste in a year and that is just the amount that is collected from the urban areas. Rural communities do not have that access and resort to either burning, burying or dumping in the ocean. Globally 2.12 billion tonnes of waste is dumped into the ocean, killing over 100,000 sea mammals.

SOLUTION

The solution seeks to create a zero waste lifestyle alternative products and at the same time provide consultancy and sustainable tourism practices to address plastic waste. The first aspect of the social enterprise is to take in waste materials, like old tyres, discarded construction materials, textile waste, plastic and glass bottles, old broken furniture and we transform them into modern, handcrafted artistic furniture pieces. The second aspect of the solution is the "Waste-To-Worth" capacity building programme, where women and young girls living in poverty have access to a 2 weeks capacity building program that focuses on basic furniture making and designing. Upon completion, participants are given the opportunity to work for the organisation or they choose to become part of the supply chain which encourages more women-led ventures in the economy. The solution focused wants women to play a part in solving the global waste crisis. In the pacific women are most displaced during disaster and post disaster rehabilitation. When women are given these opportunities, the solution believes society is closer to achieving gender equality.

IMPACT

The solution has successfully upcycled 1,500 tons of waste and at the same time created income generating opportunities for 38 women. Additionally, the solution has stopped another 5,000 tons of plastic waste from ending up in landfills by selling environmentally friendly products.

ALIGNMENT WITH THE SDGs

The solution aligns itself strongly with SDG12, sustainable consumption and promotion. Recycling often requires high investments, contributes to CO2 emissions, and results in lower quality products. With upcycling, the solution increases the lifetime of the product by moving it up in the product life cycle. Upcycling turns that same waste into a product of a higher quality.



FeelGood EcoNurture LLP



Lead: Sharang Ambadkar

Website: www.feelgoodeco.in

Type: For-profit

Location: Mumbai, India

Current Reach: Mumbai, India

Budget: \$50,000-\$100,000 USD

PROBLEM

Globally, around 300 million tonnes of plastic waste is generated every year. About 60% of waste generated from the 1950's has ended up in either a landfill or the natural environment. Nearly 25940 tons of plastic waste is generated per day in India. Of the total 1.3 billion tonnes of solid waste generated each year, half of it is construction and demolition debris, expected to grow to 2.2 billion tonnes by 2025. Raw materials used to produce these resources are exhaustible precious natural resources like fossil fuels, wood, sand, stone, gravel, etc. The majority of the above mentioned waste is destined for dumping grounds or ocean.

SOLUTION

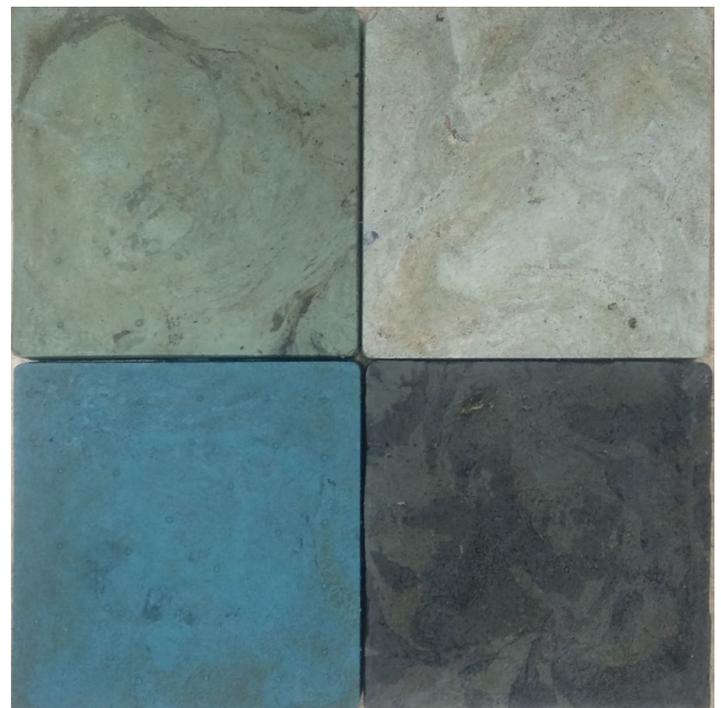
This solution aims to provide a new life to plastic waste and construction debris to reduce waste going to landfills. The founders have developed a process where a composite material is produced from mixed plastic waste and construction and demolition debris. This composite material can be molded into any shape or form leading to an endless possibility of product range like roof tiles, paver blocks, dividers, lumbers, etc. The efforts of this solution are to increase consumption and discarded mixed waste collected from source and C&DW and recycle it into new raw materials, keeping a closed-loop of material lifecycle, thus reducing the generation of new waste. The most notable characteristic being that not a single fraction of new natural resources are used and only waste is employed, and its waterproof, heat resistant, rustproof, and termite proof.

IMPACT

In a span of fewer than 4 months, the solution has achieved significant progress in prototyping a cost-effective, environmentally friendly, and recyclable product at a commercial level. During the COVID-19 pandemic, the solution has worn a number of partnerships that will be set to produce the product on a large scale. The solution could mitigate 1000 Kg of CO₂ per tonne of production.

ALIGNMENT WITH THE SDGs

The solution focuses on creating jobs in rural areas where their factories are located, and on creating new innovative infrastructure. 100% of the product is made from waste material, no new material is used, in alignment with sustainable consumption and production. The proposal utilizes plastic that would otherwise go to landfills and is actually eliminating plastic waste from the environment, by the repurposing of fishing nets for example.



La Cana, Knitting a Better Future



Lead: Daniela Ancira Ruiz

Website: <https://lacana.mx/?lang=en>

Type: For-profit

Location: Mexico City, Mexico.

Current Reach: Mexico City and State of Mexico

Budget: \$20,000-\$50,000 USD

PROBLEM

Having had the opportunity to learn about the undignified conditions in which Mexico's prisons are found, but above all the life histories of those who are deprived of their liberty, allowed the founders to understand that the problem of insecurity cannot be resolved only by isolating and separating; but by attending to and confronting the structural causes, motives and the social, psychological and family reasons that led that person to act in a certain way. It allowed the founders to understand that prisons have not had an effective result, because they have set out to prevent people from continuing to commit crimes, without combating idleness and without offering their inmates the opportunities and elements that allow them to choose another life option, one apart from crime.

SOLUTION

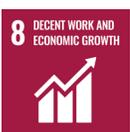
LA CANA is a social project that seeks to create job opportunities for women in prison, through the implementation of programs and workshops aimed at their personal development, as well as work and training for it, in order to promote a reinsertion process that contributes to reducing rates of recidivism and delinquency in the country. Inmates could acquire skills and tools that would help them to improve themselves, stay inside the prison, provide an income for their families, and above all, prepare them to face the challenges of life in freedom.

IMPACT

At the moment, the program has a 99% non-recidivism success rate. The rate of violent incidents has also been reduced by around 75% in the prisons where the program takes place. 97% of women polled say our programs keep them busy and away from trouble, and 99% of them got a job within 6 months upon release. Finally, 97% of them report feeling more tranquility, peace and less anxiety.

ALIGNMENT WITH THE SDGs

The solution aligns itself with decent work, by creating opportunities for women in prison through decent, formal and fair remunerated work. The solution is also reducing the gender inequality gap by giving incarcerated women equal rights to economic resources.



Quantum Polychemics



Lead: Md Zahin Rohan Razeen

Website: <https://quantumpolychemics.com/>

Type: For-profit

Location: Dhaka, Bangladesh

Current Reach: Dhaka, Bangladesh

Budget: +\$100,000 USD

PROBLEM

Current synthetic polymers – plastics - have been applied in a wide range of activities of our daily routine. However, extensive usage and their non-biodegradable nature have led to their accumulation in quantities, which are difficult to manage and a major cause of environmental pollution. As research shows there will be more plastic in the fish itself by 2050. All of this can be prevented by enabling a bio-compostable environment.

SOLUTION

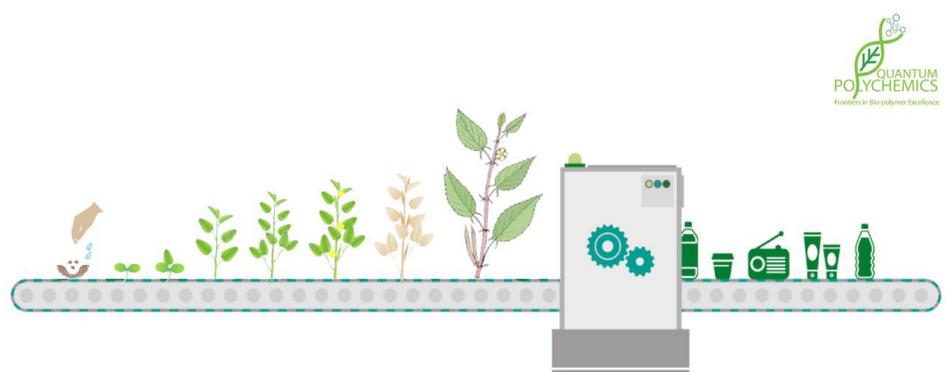
Quantum Polychemics has developed unique IP that offers an entirely new and unique solution to plastic pollution. Quantum Polychemics natural product jute biopolymer platform creates a wide range of polymers with tunable properties and practical applications to meet the growing demand for sustainable plastics. The materials are an environmentally friendly alternative to petroleum-based jute based bioplastics, such as those used in packaging, automotive interior, and exterior molding, medical equipment, and construction sectors. The proprietary polymer has the properties of increasing the fertility of the soil as it dissolves in water under 10 minutes and degrades in soil under a month making the entire process eco-friendly. The solution also has a human-centred design that captures the emotion of every household resonating to the value of those who seek environmentally friendly products.

IMPACT

100% of the jute waste is being used in making bio-cellulose for the production of poly-bags which has eliminated landfills in the region, while robust and comprehensive waste collection practices have been adopted for maximizing yield. 70% of the mendicants near the factories have been uplifted from unemployment since the commercialization has taken place. Furthermore, the economic status of over 200 jute farmers has been improved. Quantum Polychemics potential projection to curb approximately 1,545.3 billion tonnes of plastic waste through their products.

ALIGNMENT WITH THE SDGs

The solution focuses strongly on advancing clean water and sanitation, industry, innovation and infrastructure and life below water. The solution works tirelessly to reduce the number of plastics in oceans and waterways in order to provide a better future for the generations to come.



Oasis Agribusiness (u) Limited



"Water In The Desert"

Lead: Walter Odyek

Website: <https://oasisagribusinessug-limited.wordpress.com/>

Type: For-profit

Location: Lira City, Uganda

Current Reach: Lira City, Uganda

Budget: +\$100,000 USD

PROBLEM

In Uganda, access to agricultural inputs, grains market and inclusive extension services is estimated at approximately 30% in the Otaloyat Lira District. These are dominated by small-holder farmers in the rural areas, compared to urban areas. There is an existing need to use quality agro-inputs by farmers to increase their production and supply the available grains to more markets. The existing market opportunity delays to reach the smallholder farmers leaving them to be exploited by middlemen. The cost of agro inputs is normally increased by half from the urban agro-dealers shops, caused by long distance travelled to get inputs, limited extension & market services,

SOLUTION

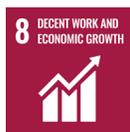
The solution's mission is to leverage ICT to improve access to agriculture related services to all social groups in Uganda and beyond. The project seeks to enhance inclusive access and affordability of quality agricultural inputs, agro based services, and inclusive markets approaches for rural community and job creation while using ICTs. The project target beneficiaries are youth, women, people with disability, and rural farmers. This project will supplement extension gaps, promote adoption and use of high-quality inputs and technologies, and will provide linkages for markets and other agricultural services required.

IMPACT

The project is expected to increase a farmers database up 20,000 farmers, and increase access and affordability of quality agricultural inputs, tools and equipment by small holder farmers. The project also seeks to increase the relationship of at least 30 market service providers with farmers, and improve the farmer's income growth by \$120 USD per annum.

ALIGNMENT WITH THE SDGs

The project works tirelessly to advance efforts in reaching no hunger, zero poverty, decent work and economic growth and sustainable consumption and production. The farmers' livelihoods have been considerably improved. This project demonstrates that sustainable economic growth is possible through knowledge-sharing and partnerships for the goals.



Targets Hygienic Inc



TARGETS

Lead: Willie Y. McGill

Website: Pending

Type: For-profit

Location: Monrovia, Liberia

Current Reach: Monrovia, Liberia

Budget: \$10,000-\$20,000 USD

PROBLEM

The rapid outbreak of diseases. 2014 Ebola is known as one of the deadliest viral diseases in Liberia and West Africa, by the Centers for Disease Control and Prevention. 2016. Presently, according to UNICEF (2020), COVID-19 is the world's most dangerous threat, exacerbated by poor water and sanitation practices. Many households do not have access to clean drinking water that is crucial for good health. The Ministry of Health and Social Welfare record that 58% use a non-improved sanitation facilities in Liberia. Additionally, the country faces a grave percentage of youth unemployment, around one in two young Liberians were unemployed in 2014.

SOLUTION

The project seeks to complete a modern local hygienic factory establishment in Monrovia by 2021 for the production of save, package, affordable, and sustainable, hygienic products that will serve and prevent the vulnerable population and slum communities from contracting and spreading virus or disease in Liberia. This project will make use of technology and machinery to provide good health and promote the well being of more than 10,000 people every year, with different, natural health products that will fill the need for locally produced hygiene products while reducing the country's dependence on imported goods.

IMPACT

The project, when established, will produce and distribute preventive agents (such as soaps and alcohol based hand sanitizers) to help combat the rapid spread of diseases according to the standard of WHO and the Centers for Disease Control and Prevention . The project will also install and operate a certified small water treatment plant technology, where treated water will be packaged and distributed in slum communities to serve dwellers who do not have access to clean water. The project will establish a modern local hygienic Factory in Monrovia, Liberia.

ALIGNMENT WITH THE SDGs

Liberia, like most underdeveloped countries in Africa, is challenged and needs citizens to get involved in accelerating its progress to achieving the SDG per country. The project is committed to contributing to the SDG3, (Good Health and Well-being) and SDG6 (Clean Water and Sanitation) which is not achieved and remains a major challenge in Liberia. The goals are to supply healthy products to more than 120,000 citizens per year for disease prevention and improvement of family livelihoods.



Youth Lens Hub.



Lead: Otwii Emmy

Website: <https://www.facebook.com/YOURLENS HUB>

Type: For-profit

Location: Lira City, Uganda

Current Reach: Lira City, Uganda

Budget: \$10,000-\$20,000 USD

PROBLEM

Unemployment among rural youths in Northern Uganda remains high and on the increase at 48.4% due to failure by youth to start, manage and grow business ventures. Normally, young people lack capital and collateral securities to access start-up capital and have limited opportunities for business incubation. The existing formal and semiformal finance providers prefer to lend to high growth and internationalized enterprises. These finance providers do not provide business incubation and risk funds to youths and women. Additionally, commercial banks and microfinance institutions are located in urban centres and are not accessible by rural youth. As a result, most youth businesses remain in the idea stage, and young people remain unemployed and live in absolute poverty.

SOLUTION

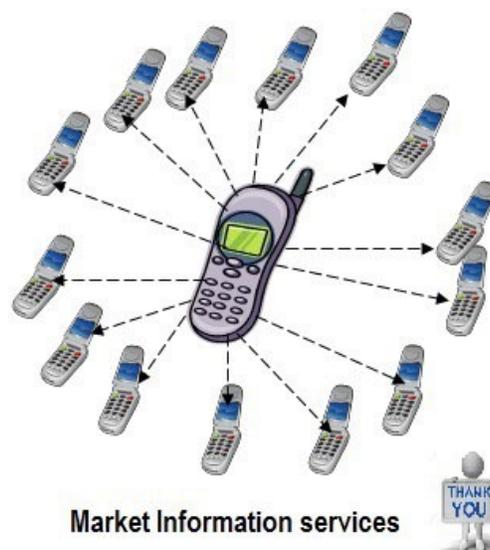
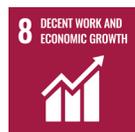
To solve the identified youth problem, the program mobilizes youth into business groups of 10-35 people. Group members are trained with entrepreneurship, business sustainability and financial literacy skills among others so that they are investment ready. The program supports youth to carry out Market Analysis to assess demand and price trends, profitability and risks among others. The program then provides seed capital and collateral free affordable credit to youth based on group recommendations and credit history of the borrower. Youth products are linked to the market via a Market Access SMS System (MASS), an online platform that collects and disseminates market information.

IMPACT

Since its launch in July 2018, YLH to-date has reached 660 rural youths and women, incubated 32 youth start-ups from different sectors in Alebtong District of Northern Uganda and generated an increase in revenue. The solution has also given employment to 15 young people, conducted market research on products, which has helped inform the clients on available markets as and when they need it. Finally, it has captured household information from clients using offline handheld tablets for fast and accurate data collection and geo location, that can help track business performance in line with the youth business plans.

ALIGNMENT WITH THE SDGs

The program upholds to SDG 8, meeting our needs while promoting sustained, inclusive, sustainable economic growth, productive employment, decent work for all. The YLH program also addresses SDG 1, (End Poverty in all Forms Everywhere). The project aims to diminish financial vulnerability with the inclusion of the poor and the unbanked in the financial system and expand financial services focused on this group of the population, by providing a cheaper form of credit as well as financial education.



Market Information services



Training Services



Seed Capital and Micro-credit services

Rentivo



rentivo

Lead: Diana Katherine Barreno Vargas

Website: <https://rentivo.cl/>

Type: For-profit

Location: Santiago, Chile

Current Reach: Santiago, Chile

Budget: \$10,000-\$20,000 USD

PROBLEM

A study from the Inter-American Development Bank shows that only 2% percent of total waste is recycled in Latin America and the Caribbean. This number highlights the relevance to focus on the source of the problem itself, the consumption and the lack of responsibility of distributors to have their products back to their factories for remanufacturing and the lack of reuse based models to make that happen. The baby gear industry combines the use of plastics and fabrics. Although they have made secure and long-lasting products, ideal for 8-10 cycles of use, they are still on the one-time purchase model which just goes for 1 to 2 cycles as the baby grows rapidly and generate significant waste, combined with the increasing demand for new ways of Product-As-Service rather than the one-time purchases that currently are in the market.

SOLUTION

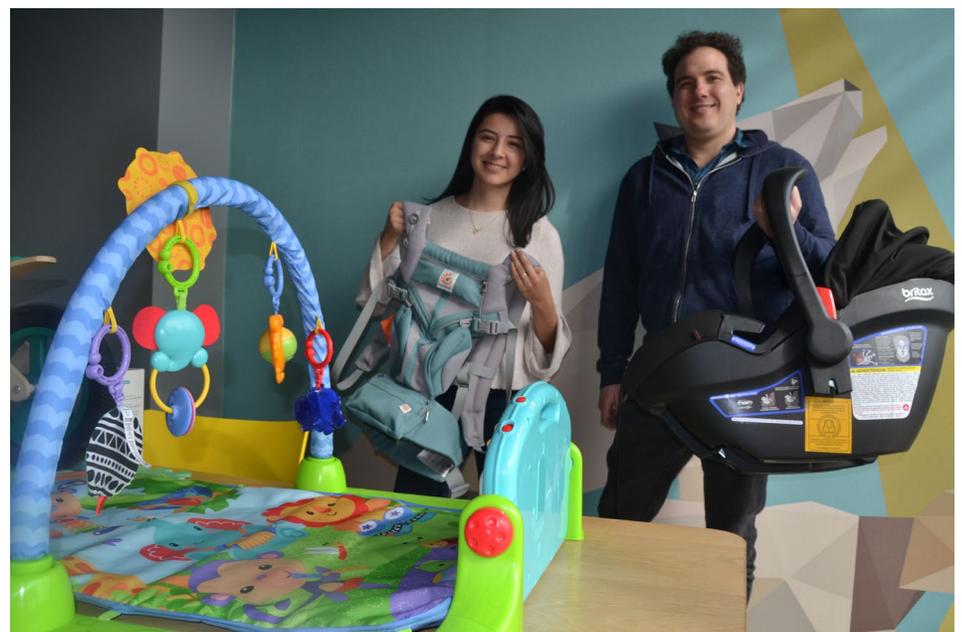
Rentivo is a circular economy platform that allows parents to get access to high-quality products for months, weeks, or days, all based on a rental model system where the founders work directly with manufacturers. The solution has developed sensors that will optimize the logistics process, product safety (sanitary and structural), inventories, delivery, and post-rental information management. The vision is to allow manufacturers to switch to a rental model and increase their income by 3X and users get to pay a fraction of the price with all the advantages and service that comes with a Product-As-Service platform, that will reduce 87% de waste of products mainly made with plastic.

IMPACT

Since its launch (June 2019), the platform has had over 2,790+ days of rental, with over 120 active users and a 57% retention rate, much higher than most traditional e-commerce. Additionally, the solution has more than 12 contracts within suppliers and corporates, from Hotels such as Novotel, to airlines such as Latam, and worldwide known suppliers such as Cybex.

ALIGNMENT WITH THE SDGs

The solution tackles SDG12, (Ensure sustainable consumption and production patterns). Through a series of educational outreach communications, the solution seeks to educate parents on the environmental toll on certain products and business as usual in the baby industry.



Libe Green Innovation



Lead: Liberatha Kawamala

Website: <http://libegreeninnovation.mystrikingly.com/>

Type: For-profit

Location: Dar Es Salaam, Tanzania

Current Reach: Dar Es Salaam, Tanzania

Budget: \$5,000-\$10,000 USD

PROBLEM

Approximately 2% of the urban population in Tanzania makes a living collecting, sorting, recycling and selling materials that someone else has thrown away. There is a growing recognition that waste pickers contribute to the local economy, to public health and safety, and to environmental sustainability. However, they often face low social status, deplorable living and working conditions and little support from local governments. In the context of waste management and recycling, inclusive recycling projects entail developing business models that integrate the activities and work of often informal waste pickers and their organizations into the value chain. This, in a manner that improves waste-pickers economic and social outcomes, generates solutions to municipalities and citizens, and involves companies along the value chain from waste management to recycling and consumer businesses.

SOLUTION

Libe Green Innovation is dedicated to the development of sustainable solutions to plastic pollution in Tanzania and the empowerment of disadvantaged groups, especially rural and tribal families. The solution utilizes grassroots action, research, and education. Libe Green Innovation has compiled a proposal for starting up a decentralized solid waste management scheme in Dar Es Salaam through empowering young people in different areas. The project will have a two-sided effect: it will improve the local environment and at the same time, offer continuous employment to individuals from socially and economically disadvantaged groups.

IMPACT

Libe Green Innovation has managed to work with different stakeholders both international and local partners, such as the World business Angel Investment Forum. Libe Green Innovation has managed to reach out to 6 regions in Tanzania including Dar Es Salaam, Dodoma, Arusha, Mwanza, Kigoma and Mbeya creating awareness on fighting plastic pollution.

ALIGNMENT WITH THE SDGs

Libe Green Innovation is a global goal champion working on goals 8, 9, 13, 14. As in promoting decent jobs creation, entrepreneurship, creativity, innovation and encouraging the formalization and growth of micro-small and medium sized enterprises. The solution also is working towards advancing SDG9 through improving industrial innovation and infrastructure that promotes inclusive and sustainable industrialization. The solution is also working towards SDG13 and SDG 14, fighting land and water pollution.



ila Generation Cic



Lead: Julie Sané-Pezet

Website: <https://www.ilageneration.com/>

Type: For-profit

Location: London, United Kingdom

Current Reach: London, United Kingdom

Budget: \$20,000-\$50,000 USD

PROBLEM

The COVID-19 pandemic and the preventive measures taken worldwide to restrict movements led to the spread of what the UN called a "shadow pandemic": domestic violence. And the UK is no exception. 4 weeks into the lockdown, calls to domestic violence helplines had increased by 120%. However, studies have shown that trained bystanders are 89% more likely to intervene.

SOLUTION

The solution comes in the form of an app to be extremely engaging with fun visuals, animations, nudges and incentivizing reward systems. The founders collaborated with a therapist and survivors of domestic abuse to include some modules about mental health and recorded testimonies. The great majority of apps available are targeting victims and providing them with information to get help. However, there are many obstacles to escaping a violent relationship: denial, fear of reprisals, feeling of isolation etc. The solution aims to target potential allies in strategic places so that this precious information is conveyed safely and wisely. Since its inception, ila has been focusing on supporting survivors of gender-based violence with different training programs. The training content for this new project has been developed by the team using their own experience working with survivors, the expertise of a mental health professional and a network of NGOs running helplines.

IMPACT

Due to the COVID-19 pandemic, the solution had to make a significant pivot. The app is part of the COVID response and is now in the prototype stage. After the launch of the app, the solution expects to train about 40,000 employees to support 16,000 victims over 2 months in the UK.

ALIGNMENT WITH THE SDGs

The project is aligned with the SDG 3, 5 and 17. The solution focuses on domestic violence as a health issue. It affects the mental & physical health of victims and survivors. The likelihood of having suicidal thoughts is 3.5 times greater for women who have experienced domestic abuse. Regarding SDG 5 (Gender Equality), domestic violence is a form of gender based violence. On average a woman gets assaulted 33 times before she reports it. Finally, SDG17 (Partnerships for the goals), since the solution works with a wide range of partners and experts.



ALLY

by *ila*

Girls Inspire Project (Care Promotion and Poverty Alleviation Initiative)



Lead: Adrama Faida

Website: <https://cpaiuganda.org/>

Type: For-profit

Location: Mbarara City, Uganda

Current Reach: Mbarara City, Uganda

Budget: \$0-\$1,000 USD

PROBLEM

Child marriage is a human rights violation and a practice that undermines efforts to promote sustainable development, and this remains a major challenge in Uganda. In 2015, a research was carried out in 9 districts and it was found out that the practice of child marriages affect 60% of the young girls in Uganda of which 15% are married by age of 15 and 49% by the age of 18. Teenage pregnancies remain high (24%) although statistics show a declining trend. This implies that a number of adolescent girls and boys are denied their childhood and their rights to exploit the expanded education opportunities. This in turn inhibits girls' and boys' general personal capability and career development. Many are trapped in a cycle of poverty due the limited opportunities for employment.

SOLUTION

The community faces the common challenge of child early marriages and the main cause being poverty. This program seeks to empower girls with skills and knowledge in mushroom growing and production through provision of information. In addition, mushroom growing implements are to be purchased and provided to these girls groups. These are to include drums, wheelbarrows, and tarpaulins, weighing scales, sealing machines, spawns, lime, timber, nails, gauze wire and cotton waste. A revolving fund is to be initiated to encourage these girls to develop a culture of saving so as to become self-reliant and attain economic freedom.

IMPACT

The solution will begin inception meetings with stakeholders training, provision of mushroom growing implements, conduct demonstrations in post harvest handling techniques and value addition, monitoring, field visits, as well as an impact assessment, project evaluation and dissemination of outcomes. The solution will also seek to train participants in marketing and business management approaches.

ALIGNMENT WITH THE SDGs

In Uganda, many girl dropouts are as a result of failure to handle their menstruation cycles, lack of school fees or lack of educational materials. This project enables them to meet their needs and make education so affordable for them. Additionally, ending hunger goes hand in hand with achieving food security, improving nutrition, and promoting sustainable agriculture. The solution seeks to build the capacity of vulnerable youths especially girls, to ensure food security at their household levels.



Sagefour

sagefour

Lead: Victor Ukachukwu

Website: <https://sagefour.com/>

Type: For-profit

Location: Lagos, Nigeria

Current Reach: Lagos, Nigeria

Budget: \$1,000-\$5,000 USD

PROBLEM

For young people aged 15 to 35 in Nigeria, there are 55.4% of them without work as of 2019. Through extensive research for innovation carried out by Sagefour, it was observed that young entrepreneurs have a hard time promoting and scaling their brands for visibility and profitability. This challenge limits the potential amount of jobs that can be created through these brands.

SOLUTION

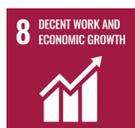
Sagefour is building an ecosystem that helps every young person actualize their potential. The Scaleet product helps young entrepreneurs promote and scale their brands and businesses for more visibility and profitability. The key objective is to have a product that would really help young entrepreneurs in Africa contribute to economic development by offering value through their brands and also create more employment opportunities. A digital platform where young entrepreneurs can promote their business by listing their brands and engaging with other brands for free, as well as hiring professionals for more visibility and accessing relevant opportunities to scale business at low cost.

IMPACT

The solution has been able to promote a number of promote brands, which includes a fashion brand scaling its social media presence and hope to distribute their product in order to help more entrepreneurs promote and scale their businesses.

ALIGNMENT WITH THE SDGs

The project aligns with the targets of SDG 8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all) through access to decent work and brands that contribute to economic development through this solution. Young entrepreneurs in Nigeria and across Africa have brands with high impact potential. The solution provides the opportunity for them to grow and impact work and the economy positively. The solution also supports SME and startup businesses of young entrepreneurs and gives relevant support needed to scale.





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@sagefour
www.sagefour.com

Zoeasy Solutions



Lead: Spandana Palaypu

Website: <http://www.zoeasy.co/>

Type: For-profit

Location: Dubai, UAE

Current Reach: Dubai, UAE

Budget: \$50,000-\$100,000 USD

PROBLEM

There are 4 Million Blue Collar Workers in the UAE, 26 Million in the GCC and 2 Billion worldwide who can contribute USD 7.5 Trillion to Global GDP. However, "talent platforms" are white-collar focused, with not much catering to this community. Fraud/exploitation has been prevalent for decades as the sector relies on networks of middle-men who make hiring archaic/cumbersome. Job seekers/employers cross 6 layers of middle-men before a placement is done, causing serious gaps in accuracy/transparency. Many workers are misinformed, and encouraged to emigrate on work visas that are unrelated to the jobs they wish to pursue or on tourist visas, resulting in them becoming undocumented economic migrants. Middle-men also have strong placement pricing leverage, with most of these costs being borne by migrant workers (USD 3000); they take loans/give up assets to help provide a better life for their families. Employers are also unhappy as the skills of candidates hired are not up to the mark.

SOLUTION

The sector needs to move away from the traditional "one-size-fits-all" model and place job seekers based on overall skills/experience. ZoEasy is a platform which educates and matches blue-collar job seekers to the right employment opportunities using ethical/transparent hiring. ZoEasy understands job seeker requirements, assess skills/psychometrics, enhance skills via training, and place them with best-fit validated employers. The solution also educates them on the pros/cons of migration, working conditions and cultural similarities/differences, to facilitate transparency/informed decisions.

IMPACT

So far, this project has generated a Database of 65,000 migrant blue collar job seekers whom we are classifying based on skills/psychometrics. Additionally, it has matched 150 migrant blue collar job seekers to employment opportunities based on their strengths / skills / basic expectations. These job seekers now have access to better salaries (majority of job seekers received an increase of 20 – 50%) and working conditions. On another note, the solution has managed to connect 170 job seekers to vocational / technical training through partnerships established of which 52% of the population were women.

ALIGNMENT WITH THE SDGs

ZoEasy aims to connect blue collar job seekers with vocational training followed by ethical employment opportunities to attain economic empowerment, thus advancing eradicating poverty. Through e-learning and established partnerships with State Governments / Skill Development Programs, ZoEasy not only helps up-skill but educates job seekers on the pros/cons of migration, working conditions and cultural similarities/differences. This reduces exposure to fraud/exploitation by middle-men and provides transparency & facilitates informed decisions. Regarding decent work, the solution is dedicated to helping the global blue-collar community by facilitating education (vocational / soft skills training) and migration of job seekers from low income regions to places with greater employment/economic empowerment. Job seekers are usually exposed to fraud and exploitation by middle-men, hence, and though the Government is trying to regulate, job seekers are still charged placement fees up to USD 3,000. ZoEasy aims to reduce the financial burden for job seekers by directly matching them with the right employment opportunities via the tech platform based on skills and expectations, thus, directly contributing to reducing inequalities.



CHAPTER 03

Summary Of The Work Of The Youth Solutions Program

How Do We Work With Youth Solutions For The SDGs:

Summary of the Solutions Program's work in 2019 and 2020

Ever since its launch in 2015, the Youth Solutions Program has emerged as the largest division of the Sustainable Development Solutions Network's youth initiative (SDSN Youth). Its work aims to overcome barriers to youth-led innovation, focusing on the multiple challenges that prevent young innovators in business, education, research, and the not-for-profit sector from implementing and scaling their projects.

The Youth Solutions Program addresses specific barriers to sustainable innovation, including limited access to finance, lack of mentoring opportunities and business development services, inadequate skills training, and insufficient channels to obtain visibility, in concrete ways. Rather than focusing on one-off grants and innovation challenges, it takes a systems approach. It makes young entrepreneurs more visible, raises awareness of their projects, bridging the necessary business skills required to scale up ideas, connect with a community of mentors and experts offering help to refine their projects, attract investors, and achieve their objectives. Furthermore, it specifically addresses the relationship between the Sustainable Development Goals (SDGs) and the potential of young innovators to contribute to their achievement.

To increase SDG-aligned action, the Program produces toolkits and resources focused on SDG-based impact assessment, ensuring that young innovators develop effective ways of monitoring their impacts across all 17 Goals. The Youth Solutions Program is also unique in that it combines many of the valuable aspects of a hackathon, an incubator, an innovation lab, a social network, and an advocacy campaign. It covers the full journey of the innovator, from idea to reaching full scale. Much of this work draws on the strength of SDSN Youth Networks: 20 national- and regional-level networks that boast more than 750 member organizations in 85 different countries. With these Networks, the Youth Solutions Program is able to spread messages and engage young people like few other organizations.

With an aim to helping young innovators from around the world scale up their contribution towards the achievement of the 2030 Agenda, the Program headed five main initiatives in 2018 and 2019: (i) the Youth Solutions Report; (ii) the Youth Solutions Hub; (iii) the Investment Readiness Program; (iv) the MY DATA initiative; and (v) SDSN Youth's Module on Youth and SDG Data.

1. Solutions Report

In 2020, SDSN Youth successfully launched the Fourth Edition of the Solutions Report (YSR), which featured 50 new solutions founded by young people from different regions of the world. The preparation of the report lasted around 6 months, which included the call for submissions, review of the submitted applications, and report preparation. The production team of the report, consisting of eight team members within the Youth Solutions Program, worked on various aspects and different stages of the report preparation. In its efforts, SDSN Youth collaborated with stakeholders including Fundacao Amazonas Sustentavel, Seedstars, Ashoka, the Barilla Centre for Food and Nutrition, Babele.co, Bayer AG, E4IMPACT Foundation, Luigi Lavazza S.p.A., MIT Solve, the Panorama - Solutions for a Healthy Planet initiative, Sustainia, the Circle of Young Intrapreneurs, The Resolution Project, the UN Major Group for Children and Youth, and Unilever, among others.

The report was divided into two parts, with Part I highlighting the overall global trends of youth-led innovation and its impact across various (SDGs). For the Fourth Edition of the YSR, the Solutions Team evaluated over 300+ applications from 61 countries, and after careful consideration, 50 solutions operating in more than 100 countries were selected to be showcased in the report. Given the urgent need to address socio-economic challenges in developing countries, many of the submitted solutions came from the African and Asian regions. While solutions broadly demonstrated a willingness to contribute to all the SDGs, the predominant ones were SDG 1 (No Poverty), SDG 4 (Quality Education), and SDG 8 (Economic Growth and Decent Work).

Part II of the 2020 Report contains eight different chapters that delve deeper into the discussion of existing opportunities and challenges for youth-led solutions, debating issues ranging from access to finance as the main barrier impeding the scaling of solutions to lack of visibility and limited exposure, and including the role of startup acceleration programs as key actors in the training of young innovators, pathways for youth inclusion in global policy dialogues, the emergence of social intrapreneurship approaches to youth-led innovation, the rise of impact entrepreneurship in Africa, the collaboration between young people and the private sector, and the importance of SDG-based impact reporting and impact assessment strategies for youth-led solutions.

Ever since the publication of the first YSR, the initiative has helped more than 100 youth-led solutions become more visible online, publishing over 50 blog posts, articles and news items on media channels; has offered over 20 young innovators the chance to present their solutions and take part in international conferences and events; has formed 25 partnerships with other solutions-oriented initiatives, foundations and companies.

2. Youth Solutions Hub

After having innovative SDG-oriented solutions showcased through the YSR, the team of the Youth Solutions Program worked to provide continuous visibility, mentoring and networking opportunities for the young innovators who founded these projects. That was how the Youth Solutions Hub was born: initially as a platform for connecting innovators who had been featured in the YSR, later as a growing 400+ member platform for connecting and sharing events, funding and mentoring opportunities, and educational and training materials. Although the YSR remains a fundamental part of the Youth Solutions Program, being selected for it is no longer a necessary precondition for accessing the Hub community, which represents a wider ecosystem of support for young innovators, their mentors, and any interested partner organisation.

The Youth Solutions Hub was launched in 2017. The Hub operates on two essential levels. First, it directly supports youth solutions by centralizing all the relevant funding and event opportunities into a single, free-of-charge, user-friendly online space, and by disseminating their stories through the platform. Secondly, it provides a direct channel of communication between the innovators themselves and a cohort of pro bono mentors. Through the Hub, the Youth Solutions Program ensures that young innovators are connected to fellow innovators, mentors, investors and partners with an interest in their areas of work. Among the mentors and partners who are already contributing to the Hub are SDSN's own network of experts, private sector experts in innovation and social entrepreneurship, and other researchers from academic institutions around the world whose work aligns with the SDG framework. When connected, young innovators are able to communicate their stories, crowdsource ideas, collaborate to better seize financial and innovation opportunities, and receive advice and invitations to events which would otherwise be inaccessible to them.

Above all, the Solutions Hub intends to shift boundaries by changing the narrative about the role of youth in the 2030 Agenda: instead of being the ones simply demanding solutions, the Hub enables them to be the ones building skills and creating solutions to address the world's biggest challenges. As an organisation largely consisting of students and early-career professionals, SDSN Youth itself knows the difficulties facing young innovators. Therefore, its mission is to not only mobilise a network of support for young people, but also to make their solutions more visible and credible through the SDSN brand. The Youth Solutions Program offers equal opportunity for young innovators from all countries to apply, free-of-charge. Moreover, the platform positively contributes to raising awareness among youth communities about the SDGs and the opportunities to concretely engage with them.

3. Youth Investment Readiness Program

Through discussions with the featured YSR projects, it became apparent that they face many barriers in getting their projects off the ground, or in scaling them up. Common challenges include gaps in the necessary entrepreneurial knowledge or skills, financial constraints, and lack of meaningful networking opportunities.

The Youth Investment Readiness Program (YIRP) was founded to support these entrepreneurs and address these 3 common challenges. It helps them develop the skills needed to launch a successful social business or non-governmental organization (NGO), links them to a network of mentors and peers that can further their objectives, and leaves them with a professional investment deck which can be used to raise funds. The curricula of this 16-week online acceleration program was developed jointly by SDSN, SDSN Youth, and Babele.co, a youth-led consulting firm with a technology focus. The program consists of 3 phases: Define, Market Testing, and Storyfy. The individual modules are as follows:

Each week the students listen to a 1-hour lecture by an expert in the field. They then perform a homework assignment in which they apply the week's lesson to their social business or NGO. As they progress through the program, these assignments taken together build up their investment deck. As assignments are completed, they are reviewed by mentors, who are paired with entrepreneurs for the full 16 weeks of the program, and provide tailored feedback on each assignment. Participants who complete all of their assignments before the end of the course also receive feedback from a real-world investor, who looks at their work as a whole. This provides an opportunity to further refine their materials. The lecturers, mentors, and investor-reviewers are all volunteers who are vetted by the SDSN and SDSN Youth to validate their expertise.

Thanks to generous support from Bayer AG, the program has run twice, in the spring and fall of 2018. The spring cohort consisted of 55 students with about 50% of them coming from the 2017 Youth Solutions Report and the other 50% from the 2017 Bayer Youth Ag Summit. Innovators came from over 40 countries. The second cohort consisted of 36 students, again with about half coming from the 2018 Youth Solutions Report and the other half being alumni of earlier editions of the Youth Ag Summit.

As next steps, the Youth Solutions Program team expects to offer the YIRP again in both 2019 and 2020 to participants from both the Youth Ag Summit (2019 program and alumni) and the Youth Solutions Report (2018 and 2019 publications). The team aims to enroll 30 projects in the third and fourth

editions, respectively, and expects at least half of the project teams to finish the course with a complete investment deck. SDSN Youth has reached approximately 20 countries each time the program has been offered and it seeks to increase this number, with most of the innovators coming from lower-income countries where entrepreneurial education opportunities are not readily available to this age demographic. Additionally, SDSN Youth plans to continue to improve the quality of the YIRP as well as to explore partnerships with other accelerator programs, so that the graduates of the Youth Investment Readiness Program seeking to learn more can expand their training further.

4. The Module On Youth And SDG Data

The Youth Solutions Program has continued its efforts to prepare a toolkit on youth and their role in the SDG Data Revolution. The toolkit, which upon publication will be made available to young innovators who seek to align their work with the SDG Indicator Framework (UN Stats 2019), as well as to any stakeholder interested in involving young people in the monitoring of SDG achievement, intends to contribute to the Data4SDGs Toolbox started in 2017 by the GPSDD. [1] On the one hand, the toolkit (called a 'module' in SDSN Youth's parlance) aims to educate young innovators and social entrepreneurs about the SDG Indicator Framework, encouraging them to align their impact assessment activities with the framework in order to better communicate their results, engage with funders, and track their progress. On the other hand, the module will also address the need for policymakers to devise pathways for citizen-generated data to inform SDG implementation and the monitoring of progress. Building capacity for increased youth-led data generation, while also including this data in national and subnational data ecosystems, could lead to youth-led organizations and youth communities to generate a substantial body of knowledge relevant to the SDG Indicator Framework, especially in geographical context where official data capacity is still limited. With these objectives in mind, SDSN Youth has administered a survey and a call for case studies to be included in the module. In consultation with other stakeholders, the Youth Solutions Program team has proposed an outline of the module, and two case studies have been finalized to be included in the module.

5. Together, We Fight Against The Virus

The COVID-19 outbreak has struck innovators as a result of an increasing number of cases confirmed alongside with the barrier to access to other countries. Meanwhile, youths and innovators maintain high flexibility, being able to shift

gears and make use of digital technologies to further drive the awareness of SDGs, promoting and encouraging actions around the globe. The Youth Solutions Program team continues to maintain a community for support. After all, youths are the future leaders of tomorrow.

References

UN Stats (2019). Global Indicator Framework for the Sustainable Development Goals and Targets of the 2030 Agenda for Sustainable Development. A/RES/71/313. New York: United Nations.

[1] See <http://www.data4sdgs.org/index.php/resource-listing> (accessed 30 November 2020).



PART 2



**THE MULTIDIMENSIONAL
CHARACTER OF
YOUNG ENTREPRENEURSHIP**



CHAPTER 04

Solutions From Young Social Entrepreneurs In Asia-Pacific To The COVID-19 Pandemic

Introduction

Asia-Pacific is home to 55 percent of the world's young people, or over 660 million youth (15-24 years). The COVID-19 pandemic and resulting economic crisis are inflicting a heavy toll on young people's education and training, economic opportunities, rights and mental well-being.¹ With ongoing disruption to learning and a sharp recession destroying employment prospects; young people are at risk of becoming a 'COVID-19 generation' who bear lasting effects of the crisis throughout their lives.

However, in spite of the deep and disproportionate impacts they are experiencing; young people are leading the way in responding to the challenge through volunteering, social innovation, and activism. In Asia-Pacific and globally; youth volunteers, youth-led organizations, and youth social entrepreneurs have mobilized to support their communities to mitigate the social and economic impacts of the pandemic.

Youth Co:Lab – an initiative co-led by the United Nations Development Programme (UNDP) and Citi Foundation – positions young people front and center in order to solve Asia-Pacific's most pressing challenges through leadership, social innovation and entrepreneurship.² Since the outbreak of the virus Youth Co:Lab has witnessed first-hand the innovative, resourceful and rapid responses of young social entrepreneurs from across Asia-Pacific. These young leaders have deployed their capabilities, energies and ingenuity to support their communities to prepare and respond to the pandemic; even while facing existential threats to their businesses' own survival.

From providing information and support to vulnerable groups, to developing grassroots innovations; young social entrepreneurs are playing critical roles in reaching those who may otherwise be left behind. However, social enterprises are not merely a safety net for systemic inequalities and market failures. They offer models of inclusive, sustainable organizations that transform societies for the better. These models must shape our vision for more resilient societies and our pathways beyond recovery, towards 2030.³

In this chapter, we highlight the impacts of the pandemic on youth and youth entrepreneurs in Asia-Pacific. We then discuss the characteristics that make young social entrepreneurs

effective as leaders in COVID-19 response; and share the innovative responses to the pandemic from young social entrepreneurs in Youth Co:Lab's network. Finally, we highlight the support that young social entrepreneurs need to survive the crisis, to multiply their impact, and to lead the way in forging an inclusive and sustainable recovery.

Impacts Of The COVID-19 Pandemic On Youth In Asia-Pacific

The impacts of the pandemic on young people have been multidimensional, deep and disproportionate. The Youth and COVID-19 Survey conducted by the Global Initiative on Decent Jobs for Youth found that of 12,000 young people surveyed, one in six had stopped working since the outbreak of the virus, and two out of five young workers had experienced a reduction in income.⁴ In Asia-Pacific, working hours dropped by 15.2 percent in the second quarter of 2020, equating to a loss of 265 million full-time equivalent jobs.⁵ It is forecast that youth unemployment could double in the region in 2020.⁶

It is important to note that the crisis is interacting with and compounding young people's pre-existing vulnerabilities. Young people are more likely to work in temporary, precarious, informal work without social protection; and are less likely to have assets. Underscoring their greater vulnerability, prior to the crisis 84 percent of young people in Asia-Pacific were in informal employment, compared to 69 percent of adults.

Beyond age, intersecting factors compound young people's vulnerability to the crisis – with young women, young migrants, Indigenous and ethnic minority youth, LGBTIQ youth, and youth with disabilities at particular risk. Young women are overrepresented in the hardest-hit sectors, such as tourism, hospitality and retail; and are losing jobs and incomes at higher rates.⁷ In Asia-Pacific, and particularly South Asia, the crisis threatens to cement young women's lower participation in the job market. The pandemic is also increasing young women's domestic care burden and increasing gender-based violence.⁸

While many countries in Asia-Pacific have been effective in containing the spread of the virus; the global nature of the pandemic and its cascading effects mean that deep and

1 Youth and COVID-19 Survey Report, Global Initiative on Decent Jobs for Youth, 2020

2 Over the last three years, Youth Co:Lab – co-led by UNDP and Citi Foundation – has been implemented in 25 countries and territories across Asia-Pacific. It has reached over 75,000 young people, supported over 7,100 young social entrepreneurs and helped launch or improve nearly 650 youth-led social enterprises. See more at <https://www.youthcolab.org/>

3 Under its COVID-19 2.0 response offer, Beyond Recovery, Towards 2030, UNDP – as the technical lead of the UN's socio-economic response to COVID-19 – is supporting decision-makers to make strategic choices that can be the tipping points that transform societies and economies for the better

4 Youth and COVID-19 Survey Report, Global Initiative on Decent Jobs for Youth, 2020

5 ILO Monitor: COVID-19 and the World of Work. Sixth Edition. September 2020.

6 Tackling the COVID-19 youth employment crisis in Asia and the Pacific: ILO and ADB, 2020

7 See evidence of the disproportionate impacts on women in UNDP's COVID-19 Socio-Economic Impact Assessments: <https://www.undp.org/content/undp/en/home/coronavirus/socio-economic-impact-of-covid-19.html>

8 UNDP Brief: Gender Based Violence and COVID-19. UNDP, May 2020

multidimensional socio-economic impacts will persist. Without urgent action, young people are at risk of long-term scarring effects.



9 out of 10 young entrepreneurs in Asia-Pacific report that coronavirus has negatively impacted their business

Impacts Of The COVID-19 Pandemic On Young Entrepreneurs In Asia-Pacific

Small business owners are particularly vulnerable to the crisis. Micro, small and medium-sized enterprises (MSMEs) have limited cash reserves, small inventories, and few mechanisms to withstand shocks; meaning collapsing demand and disrupted supply chain rapidly threaten their survival. MSMEs are also prevalent in the hardest hit sectors and have less capacity to adapt operations to virus containment measures.

Given their other vulnerabilities, such as limited financial assets, young entrepreneurs are even more at risk than adult entrepreneurs. Youth-led firms are more threatened by bankruptcy due to COVID-19: in one survey 42 percent of youth-led firms said there was a risk their business would permanently shut down because of the pandemic, compared to 35 percent of non-youth-led firms.⁹

In March 2020, Youth Co:Lab conducted a rapid assessment of 410 young entrepreneurs (aged 18-30) across 18 countries in Asia-Pacific and a wide range of sectors to understand how the pandemic was impacting them and how they were responding.¹⁰ The key findings were as follows:

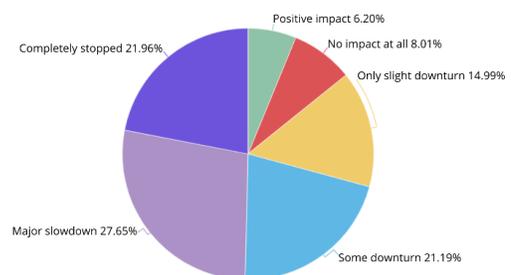
1. 86 percent of young entrepreneurs reported that COVID-19 had negatively impacted their business. Among those negatively affected, one in four reported that their business has stopped entirely, and one in three reported a major slowdown.
2. Of the young entrepreneurs who reported that COVID-19 had negatively impacted their business, 88 percent had experienced reduced customer demand, 34 per-

cent had experienced supply chain disruptions, 25 percent had experienced distribution disruptions, and 21 percent experienced lower financial/investor interest.

3. As a result of the crisis, 35 percent of young entrepreneurs had to lay off staff or reduce staff hours, 25 percent had to cancel orders from suppliers, 25 percent had to postpone investments in their business, and 24 percent had to reduce their wages or their staff's wages.
4. 86 percent of young entrepreneurs reported a decrease in financial turnover of their business. 43 percent had to borrow or reach into savings due to the pandemic.
5. Looking at impacts across different sectors, youth enterprises in the consumer products and retail, travel and tourism, and hospitality sectors reported the most negative impacts. Enterprises in the technology, telecommunications and education sectors reported the least negative impacts – and some even reported increased demand.
6. Only 9.5 percent of young entrepreneurs reported that their business had received support since the outbreak of the virus in the form of a tax break, loan, grant, subsidy, relief, or other form of assistance.

Youth Co:Lab is conducting a follow-on survey to assess how young entrepreneurs are being impacted by the cascading effects of the pandemic six months on, their coping strategies, any support they have received, and their needs for recovery.

How has COVID-19 impacted your business overall?



Youth Co:Lab survey of 410 young entrepreneurs across 18 countries in Asia-Pacific (March 2020)

Readiness Of Young Social Entrepreneurs To Support COVID-19 Response

Despite the shocks they are facing as a result of the pandemic, Youth Co:Lab's engagement with young social entre-

preneurs in Asia-Pacific reveals the inspiring ways in which they are deploying their capabilities, tools, networks, ingenuity and energies to support their communities to combat COVID-19 and mitigate its socio-economic impacts.

Before showcasing these, we highlight the unique set of attributes that young social entrepreneurs possess that make them well placed as partners and leaders in COVID-19 response and recovery:

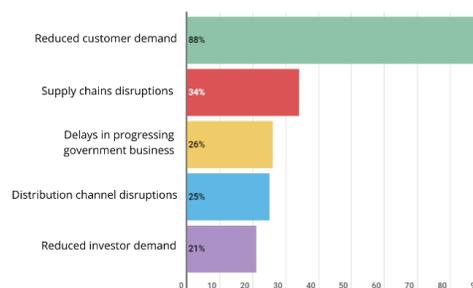
As Social Entrepreneurs

Social entrepreneurs are effective in responding to the needs of marginalized or vulnerable groups. Social entrepreneurship seeks to generate a positive impact on society by offering services or products that answer unmet needs or by offering different solutions to social and environmental challenges.¹¹ Social enterprises may serve vulnerable groups as their customers; or engage them as their employees, producers, suppliers, or distributors. They tend to be embedded within the communities they serve and have an in-depth understanding of the issues they face, a commitment to their needs, and a position of trust. This makes them well-suited as partners on the front lines of COVID-19 response and recovery.

Social entrepreneurs are effective in developing grassroots innovations and locally appropriate solutions. Although social enterprises do not pursue profit as their end goal; financial imperatives enable them to achieve self-sustainability, and to reinvest to expand scale and impact. This enables social enterprises to harness approaches from commercial business and to access diverse revenue streams. Market mechanisms in turn encourage efficiency, innovation, and agility. As a result, successful social entrepreneurs are able to pivot their strategies and business models to changes in conditions, such as the COVID-19 shock; and are experienced in testing and refining products or services to meet user needs. They are also well placed to partner with both public, private and civil society organizations and to address gaps.

Successful entrepreneurs possess traits of creativity, resilience, inspiration, risk tolerance and action orientation. In a crisis, the ability to come up with creative solutions, to bounce back from setbacks, to inspire collaborators, to take risks, and to follow through are all vital. These characteristics are all visible in the examples below of youth-led social enterprises in Youth Co:Lab's network responding to COVID-19.

In what ways has COVID-19 impacted your business?



Youth Co:Lab survey of 410 young entrepreneurs across 18 countries in Asia-Pacific (March 2020)

As Young People

Young people are networked, digitally native, resilient and socially conscious. As a result, across the world, young people, youth networks and youth-led organizations are demonstrating the huge value they represent as agents in COVID-19 response and recovery.¹² Since the outbreak of the virus young people have mobilized in unprecedented numbers through volunteering, social innovation, awareness raising, and activism. The Global Survey on Youth and COVID-19 found that thirty-one percent of young people had taken volunteer action in response to the pandemic.¹³

Young people are effective in reaching their peers and harder-to-reach groups. Based on emerging evidence, young people and youth-led organizations appear to be particularly well placed to support other youth, vulnerable groups, and those who are unaware of relevant government services and support.¹⁴ Young people are able to disseminate information rapidly among their networks, including online. This makes them powerful agents in disseminating accurate public health information and combating the spread of misinformation and disinformation online. As digital natives, youth are key to reaching other youth where they are: in Asia-Pacific, a third of "Gen Zers" spend six hours or more per day on their phones.¹⁵

Young entrepreneurs display greater agility than non-youth-led firms in adopting business coping strategies in response to the crisis. While youth entrepreneurs do have certain greater vulnerabilities relative to non-youth entrepreneurs, they are also agile. Evidence suggests that youth-led firms are more likely to create customized or new products, turn to online sales, and increase marketing efforts in response to the crisis.¹⁶ Youth entrepreneurs also represent a huge resource that can be mobilized: the most active age cohort of entrepreneurs in the Asia-Pacific region is 18–34.¹⁷

¹¹ UN DESA. World Youth Report: Youth Social Entrepreneurship and the 2030 Agenda. New York, 2020.

¹² UN DESA Policy Brief. Protecting and mobilizing youth in COVID-19 responses. 2020

¹³ Youth and COVID-19 Survey Report, Global Initiative on Decent Jobs for Youth, 2020

¹⁴ OECD 2020 Youth and COVID-19: Response, recovery and resilience. June 2020

¹⁵ McKinsey. What makes Asia-Pacific's Generation Z different?

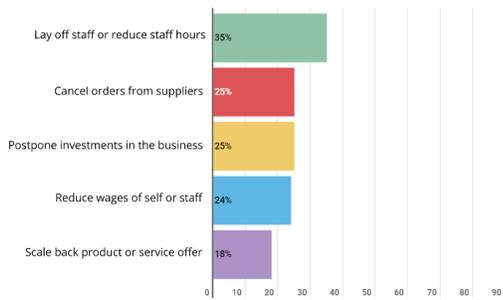
¹⁶ Borino, F., D. Cordobes, and S. Mohan. 2020. "Tailored Assistance for Agile Young Entrepreneurs in Times of Crisis". International Trade Centre Blog. 2 June.

¹⁷ Bosma, Ionescu-Somers, Kelley, Levie, and Tarnawa. 2020. Global Entrepreneurship Monitor Global Report 2019/2020.

Youth entrepreneurship has multiplier effects for youth employment. Finally, evidence shows that young entrepreneurs are more likely to hire other young people and to pay them higher wages than older firms would.¹⁸ Youth-led entrepreneurship can therefore play a vital role in COVID-19 recovery, given the disproportionately adverse effects of the economic crisis on young workers.

This combination of characteristics makes young social entrepreneurs especially well suited as key partners in COVID-19 response and recovery efforts.

What actions have you had to take in response to COVID-19



Youth Co:Lab survey of 410 young entrepreneurs across 18 countries in Asia-Pacific (March 2020)

Responses Of Young Social Entrepreneurs In Asia-Pacific To The COVID-19 Pandemic

Many of the young social entrepreneurs supported by the Youth Co:Lab initiative co-led by UNDP and Citi Foundation in Asia-Pacific have leveraged their core business model or pivoted to develop new products and services to support the fight against COVID-19. Here we highlight some of these inspiring responses.

A. Raising Awareness And Combating Misinformation

Youth-led social enterprises in Youth Co:Lab's network are leveraging their platforms and their trusted relationships with the communities they serve to disseminate accurate information about COVID-19 and to combat misinformation and disinformation. Many youth social enterprises serve marginalized communities which they are able to reach as a trusted source of information. For example:

PeaceMaker Studio in Bangladesh seeks to stop the spread of hate speech and radicalization online. Since the outbreak of COVID-19, PeaceMaker Studio has sought to

battle the "infodemic" of misinformation that has accompanied the pandemic. They have produced visual content on how to stop fake news online; and have published videos and interviews to raise awareness on health protection measures against COVID-19, including proper hand washing techniques.

Peace Maker Studio in Bangladesh has sought to battle misinformation online that has accompanied the COVID-19 pandemic.



Shop.141 is a tech-based social enterprise in Indonesia that offers a platform to provide nutrition rehabilitation to children suffering from stunting and parallel support for their caregivers. They have leveraged their trusted position on health with the community they serve to share public health information on COVID-19 and to work in hospitals to support families impacted by the virus.

DeafTawk has empowered over 9,000 deaf people in Pakistan through quality online sign language interpretation. During the crisis, DeafTawk is providing sign language interpretation services available 24/7 to enable deaf people to navigate hospitals and embassies.

DeafConsultancy Pacific (DCP) provides services to improve the lives of deaf people in the Pacific. They offer sign language training, translation, interpretation, and deaf workplace awareness training. DCP has published videos for the deaf community interpreting key government announcements about COVID-19 and has transferred sign language classes online to maintain employment of teachers.¹⁹

¹⁸ ITC: SME Competitiveness Outlook 2015: Connect, compete and change for inclusive growth, International Trade Centre

¹⁹ For more on DCP's COVID-19 response see Youth Co:Lab blog. July 2020. Available here: <https://www.youthcolab.org/post/adapt-to-challenges-that-come-your-way-the-story-of-krishneer-sen>

Krishneer Sen of Deaf Consultancy Pacific, which has published videos for the deaf community interpreting government announcements about COVID-19



B. Supplying Personal Protective Equipment

Many youth-led social enterprises in Youth Co:Lab's network have repurposed their operations to produce personal protective equipment (PPE) or to support distribution of PPE in their communities:

Himalayan Innovations is a social enterprise that provides affordable solar energy in remote areas of Nepal. Currently, Himalayan Innovations is manufacturing 31,000 face shields using 3D printers. In addition, Himalayan Innovations is making its solar generators available to rural health facilities to ensure uninterrupted power supply.

DOCHAA produces footwear that celebrates and conserves traditional Nepali art and artisanship. DOCHAA has now set up their own cloth masks manufacturing unit in Timni where it is working with rural women's groups.

SEPAK is an online platform where Cambodian handicraft producers can sell their products easily for an ethical price, while customers receive a guarantee of good quality. In response to COVID-19, SEPAK has started producing handmade masks that are sold through their e-commerce platform. When a customer buys ten masks, SEPAK provides one to a local charity.

LifeChangers Bhutan collects used Gho and Kira, traditional Bhutanese clothing, and turns them into utility products. These are individually handcrafted by housewives, youth and people with disabilities. In response to the pandemic, their weavers have been increasing sales through manufacturing masks.

C. Supporting Access To Basic Goods And Services And Protecting Livelihoods

Many young social entrepreneurs are using innovative means of ensuring access to basic goods and services and protect-

ing livelihoods:

iFarmer in Bangladesh is an agri-fintech startup that has developed an innovative online platform that enables anyone in the world to invest in farming and livestock. Since the crisis hit and supply chains broke down, iFarmer started a B2B supply of vegetables to e-commerce platforms in Dhaka, so that farmer families can sell their produce at a fair price and not remain reliant on relief.

DamoGO is a mobile app solution in South Korea that tackles food waste by helping retailers and farms sell unsold food and produce at a discount before it is thrown away. DamoGO was preparing to launch in Indonesia when the pandemic began. They pivoted and repurposed their platform to help people provide food and essential items to those in need, and created a donation option through their app.

Foodmario is an award-winning platform from Nepal that connects home cooks with customers. During COVID-19, Foodmario developed FoodPlus by Foodmario, to help households in Kathmandu with their daily needs by offering a grocery delivery service.

Shuttle is a mass-transit startup based in Bangladesh that provides affordable, safe transportation by moving more people with fewer vehicles. Since the crisis, Shuttle pivoted their operations to transport to essential workers who need to get to work during the lockdown in the absence of public transport.

Kepul is a waste management company that digitizes waste collection and recycling processes in Indonesia. To support individuals who have lost their livelihoods due to COVID-19, Kepul created a bank where people could exchange plastic waste in order to support access to daily basic needs.

D. Supporting Mental Well-Being

With the mounting impacts of COVID-19 on mental health and the increased need for psycho-social support; some young social entrepreneurs are supporting the mental well-being of their communities:

Moner Bondhu in Bangladesh is a platform that provides support for mental health and well-being via a helpline number, workshops, and online and offline counselling support. Since the COVID-19 outbreak, Moner Bondhu has provided 24/7 free video and tele-counselling sessions to people all over Bangladesh. 92% of cases involved COVID-19-induced anxiety and stress.

Mindo is an on demand and affordable mental health service platform in Bangladesh. During COVID-19, they are providing free mental health sessions to people in need and using their platform to promote public health information about COVID-19.

E. Supporting Authorities To Manage The Crisis

Youth-led social enterprises are involved in supporting national and local government authorities to manage their crisis response. For example:

AI4GOV is a tech social enterprise in the Philippines that uses artificial intelligence to enable participatory governance. AI4GOV were commissioned by the Department of Health to develop a COVID-19 digital triage and information system called KIRA KontraCOVID. Through chatbots on Facebook and Viber, Filipinos can send videos for consultation, access information, assess their risk, and have queries related to COVID-19 answered. The consolidated data is provided to government for predictive modelling and management of COVID-19 cases.²⁰

AI4GOV in the Philippines was commissioned by the Department of Health to develop a COVID-19 digital triage and information system.



Supporting Young Social Entrepreneurs To Survive The Crisis

While young social entrepreneurs are playing vital roles in supporting their communities to mitigate the social and economic impacts of COVID-19; they themselves are vulnerable and in need of support.

From a business survival perspective, youth-led enterprises across Asia-Pacific remain at high risk. With ongoing lockdowns in many countries, suppressed local and global demand, supply chain disruptions, and the impact on the real economy sending shockwaves across the financial sector; youth-led MSMEs are facing liquidity, credit and debt crises and risk of bankruptcy. Some have already had to shut down, particularly in sectors such as tourism, and many more are vulnerable. Beyond the Youth Co:Lab survey results outlined above and surveys at national level;²¹ UNDP's COVID-19 socio-economic impact assessments reveal broad, deep and multi-dimensional impacts of the crisis on youth-led MSMEs.²²

Governments across Asia-Pacific have enacted large fiscal stimulus and recovery packages to seek to mitigate the impacts of the crisis.²³ However, in many cases, these recovery packages are reaching large private sector firms and failing to reach the small and youth-led enterprises who are most vulnerable. Youth Co:Lab's survey of young entrepreneurs found that only 9.5 percent had received support since the COVID-19 outbreak.²⁴ As most relief efforts are administered through pre-existing formal relationships between governments and business; many MSMEs, particularly those in the informal sector, are being left behind.

Based on Youth Co:Lab's survey, the support measures that young entrepreneurs reported would be most helpful to their businesses to survive the crisis were: tax reductions or tax payment deferrals; loan repayment freezes; rent and utility subsidies; grants or concessional loans; and support to adapt business operations to deal with lockdown measures and maintain market access.

Youth Co:Lab has called for prioritization of support to those 'small enough to fail',²⁵ such as youth-led MSMEs, and for the structuring of recovery packages to push transition to more inclusive and resilient societies that reduce sources of vulnerability in the long-run. Youth Co:Lab has reviewed fiscal, monetary and structural policy responses from across Asia-Pacific

20 For more on AI4GOV's COVID-19 response see AI4GOV: Small Giants in COVID-19 Response. Blog. June 2020. Available here: <https://www.youthcolab.org/post/ai4gov-small-giants-in-covid-19-response>

21 See, for example, Impact of COVID-19 on Youth Entrepreneurs in Indonesia <https://www.id.undp.org/content/indonesia/en/home/library/Impact-of-COVID-19-on-Youth-Entrepreneurs.html>

22 UNDP Socio-Economic Impact Assessments: <https://www.undp.org/content/undp/en/home/coronavirus/socio-economic-impact-of-covid-19.html>

23 See IMF Policy Responses to COVID-19 Tracker available at <https://www.imf.org/en/Topics/imf-and-COVID-19/Policy-Responses-to-COVID-19>

24 See results of the Youth Co:Lab survey here: <https://www.youthcolab.org/post/young-entrepreneurs-explain-how-covid-19-is-affecting-their-businesses>

25 COVID-19 Policy responses for those small enough to fail - part 2. Blog post available at: <https://www.youthcolab.org/post/policy-responses-for-those-small-enough-to-fail-part-2>

that can help to mitigate the impacts of the crisis on young entrepreneurs;²⁶ and is working with national governments and other partners to advocate for the multi-stakeholder actions needed to make entrepreneurship ecosystems more inclusive of young entrepreneurs, throughout COVID-19 recovery and beyond.

As technical lead under the UN system for the socio-economic response, through its Beyond Recovery, Towards 2030 COVID-19 2.0 response offer, UNDP is supporting governments to develop socio-economic recovery plans that protect the most vulnerable, including youth entrepreneurs; and that make strategic choices now that are the tipping points that transform societies and economies for the better.²⁷

Youth Social Enterprises As Partners In COVID-19 Response And Recovery

Young social entrepreneurs are leaders on the front lines in crisis response and recovery. As can be seen from the examples above, youth social enterprises are partners in supporting the needs of vulnerable communities and developing grassroots innovations to help to mitigate the impacts of COVID-19.

Looking beyond the crisis; social enterprises offer models of self-sustaining organizations that address social and environmental challenges and transform societies for the better. Both the solutions that they advance and their more inclusive business models – including higher propensity to employ fellow youth and other vulnerable groups – provide models to follow for more resilient societies and achievement of the SDGs.

Supporting young social entrepreneurs to survive the crisis, to multiply their impact, and to harness their potential for recovery requires complementary actions by national and local governments, wider private sector, investors, network or intermediary organizations, civil society organizations and development partners. Based on Youth Co:Lab's learnings and experience from Asia-Pacific, key strategies will include:

Governments should take an intergenerational lens to COVID-19 recovery plans at national and local levels and identify fiscal, monetary and structural measures that can support youth-led enterprises to survive the crisis and harness their potential for recovery. This can include looking at conditions that can be applied to relief to larger private

sector firms to protect the small businesses in their supply chains; and providing targeted support – including subsidies, grants and soft loans – to vulnerable MSMEs. See, for example, how subsidies under South Korea's emergency COVID-19 response scheme have enabled youth-led social enterprises to survive and deliver vital services during the crisis.²⁸

Both during the crisis and beyond, local and national governments can commission youth-led social enterprises to deliver services, including in partnership with other actors; enabling them to reach marginalized groups, encourage grassroots innovation, and generate local employment. Innovative examples from the region include Malaysia's Social Outcome Fund, which provides finance for social enterprises to deliver services to marginalized communities. Governments can create the structures for effective public-private partnerships and partnerships between private firms and social enterprises.

Larger private sector firms should look for opportunities to support and partner with MSMEs, including social enterprises, both during the crisis and beyond. This can include prioritizing payments to and honoring contracts with MSMEs; joint ventures and partnerships; sharing assets, platforms, networks, financing facilities or infrastructure; and investing in skills or technology upgrading. Business Fights Poverty's MSME Action Toolkit contains ideas for companies on how to support their MSME partners.

Intermediary organizations, investors, financial institutions, philanthropic organizations and development partners should coordinate to amplify and expand the sources of financial support available to youth-led social enterprises to survive the crisis and multiply their impact. Partnerships can realize blended sources of finance for social enterprises, such as combining grants with debt or equity financing; combining short-term and medium-term finance; or uniting financial and non-financial support. Initiatives such as Covidcap.com are helping social enterprises to find COVID-19 relief.

Investors, with support from ecosystem partners, can leverage expanding interest in impact investment²⁹ to target investment to youth-led social enterprises achieving social and environmental benefits as well as financial returns, both during the crisis and beyond. SDG and gender lens investing can encourage the targeting of resources to social enterprises generating inclusive impacts.

26 COVID-19 Policy responses for those small enough to fail - part 1. Blog post available at: <https://www.youthcolab.org/post/covid-19-policy-responses-for-those-small-enough-to-fail>

27 Beyond Recovery, Towards 2030. UNDP. Available at: <https://www.undp.org/content/undp/en/home/librarypage/hiv-aids/beyond-recovery--towards-2030.html>

28 Youth-led Innovation & Entrepreneurship for COVID-19: Examples from Republic of Korea http://www.undp.org/content/seoul_policy_center/en/home/presscenter/articles/2020/youth-led-innovation---entrepreneurship-for-covid-19--examples-f.html

29 Global Impact Investing Network (2019) Sizing the Impact Investing Market

Intermediary organizations, private sector firms and development partners can make non-financial support – including business mentorship, legal services, financial management, market intelligence, marketing, and technological support – available to youth social enterprises. See, for example, the non-financial support leveraged from private sector partners for youth social enterprises by Youth Co:Lab. They can also support measurement and communications efforts to amplify social enterprises' impact.

Conclusion

Since the outbreak of the COVID-19 virus, Youth Co:Lab has witnessed first-hand the innovative, rapid and resourceful responses of young social entrepreneurs across Asia-Pacific. These young leaders have deployed their capabilities, energies and ingenuity to support their communities to mitigate the impacts of the pandemic; even while facing unprecedented threats to their businesses' own survival.

From providing services and care to vulnerable groups; to creating jobs for themselves and their peers; youth social enterprises represent huge potential as partners and leaders in COVID-19 response and recovery. More than offering a social safety net for systemic inequalities and market failures; social enterprises represent successful models of inclusive, sustainable organizations that transform societies for the better. These models must inform our vision for COVID-19 recovery and building forward better. With proactive support from the wider ecosystem; young social entrepreneurs can lead the way in forging a more resilient, inclusive and sustainable path beyond recovery, towards 2030.

References:

Global Entrepreneurship Monitor and Youth Co:Lab (2019) Youth Entrepreneurship in Asia and the Pacific. Available from: <https://www.undp.org/content/undp/en/home/librarypage/democratic-governance/youth-entrepreneurship-in-Asia-Pacific-2019.html>

Global Initiative on Decent Jobs for Youth (2020) Youth & COVID-19 Survey Report. Available from: https://www.ilo.org/global/topics/youth-employment/publications/WCMS_753026/lang-en/index.htm

ILO (2020) ILO Monitor: COVID-19 and the world of work. Sixth edition. Available from: https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/briefingnote/wcms_755910.pdf

ILO and ADB (2020) Tackling the COVID-19 youth employment crisis in Asia and the Pacific. Available from: https://www.ilo.org/asia/publications/WCMS_753369/lang-en/index.htm

United Nations (2020) The World Youth Report: Youth Social Entrepreneurship and the 2030 Agenda. Available from: <https://www.un.org/development/desa/youth/world-youth-report/wyr2020.html>

United Nations Development Programme (2020) Beyond Recovery: Towards 2030. Available from: <https://www.undp.org/content/undp/en/home/librarypage/hiv-aids/beyond-recovery--towards-2030.html>

United Nations Development Programme (2020) The Social and Economic Impact of COVID-19 in the Asia-Pacific Region. Available from: <https://www.undp.org/content/undp/en/home/librarypage/crisis-prevention-and-recovery/the-social-and-economic-impact-of-covid-19-in-asia-pacific.html>

Youth Co:Lab (2020) Young entrepreneurs explain how COVID-19 is affecting their business. Available from: <https://www.youthcolab.org/post/young-entrepreneurs-explain-how-covid-19-is-affecting-their-businesses>

CHAPTER 05

Access To Finance For Young Entrepreneurs In Africa: Are We On The Right Track

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"The Youth We Want"

Youth is at the core of the Sustainable Development Goals (SDGs). While SDG4 (Ensure inclusive & equitable quality education and promote lifelong learning opportunities for all) clearly focuses on young people and on supporting them to develop their skills (4.3-4.4) and have access to all the resources (4.1-4.2, 4.5-4.6) necessary to both fulfill their talents and contribute to a sustainable future (4.7), the Youth is a priority that cuts across all the SDGs:

19 targets specifically refer to the Youth;

36 indicators are age-sensitive.

Alongside with the strong focus on the Youth, one of the innovations that the SDGs Agenda has brought about is the role that it cuts out for young people. The Youth is not anymore a target group to support and a stakeholder to consult, it has become a constituency to enable. A key actor which is called to play a vital role in implementing the sustainable development agenda.

Indeed, goal 4.4 recommends the Youth to have access to the skills necessary to start a business. Far from being a generation to employ, the Youth is a force that we want to stop seeking jobs that seem not to exist and start creating jobs by launching startups.

Africa Is The Frontier

When considering the Youth-Jobs-Entrepreneurship nexus, the focus immediately shifts to Africa.

First of all, the Continent is undoubtedly young:

45% of the population is under the age of 15;

About 65% of Africa's citizens are under 25;

In absolute terms, this makes about 420 million people between 15 and 35.

Africa is young, and with the World's highest fertility rate, it will still be young in 2050, when the population will have doubled. By then, the workforce will be larger than China's and India's, the median age will be 25, and 38 of the 40 youngest countries in the World will be in Africa.

Secondly, jobs are a very rare commodity in Africa. Clearly. If properly harnessed, the Continent's Youth holds an incredible growth potential. Nevertheless, having such a high proportion of young people poses serious challenges even to fast-growing economies:

According to the African Development Bank, while 11 to 12 million young people enter the job market every year, only 3 million formal jobs are created;

One third of Africa's Youth is unemployed and another third is engaged in informal or vulnerable jobs, while only 17% has wage employment.

The consequence of not harnessing the Youth's potential is rather painful; missed economic growth translates into poverty which leads to migration (14% of World's migrants were born in Africa) and political instability (an AfDB study reports that 40% of people partaking in rebel movements were brought there by economic reasons). If the growth rate of population and job creation do not change by 2025, it is estimated that Youth unemployment will reach 50%.



Finally, Africa is very entrepreneurial: 22% of the Continent's population attempt to start a business at some point in time. Africa is the World's most entrepreneurial Continent.³⁰

Therefore, from a theoretical point of view Goal 4.4 makes a lot of sense: let us support this growing and entrepreneurial Youth to create their own jobs by establishing new businesses.

Coherently, African Governments, Development Agencies and the international community are streamlining Youth Entrepreneurship across their priorities and probably there have never been as many and as well-endowed programs supporting young entrepreneurs as in the last few years. These programs translate into technical assistance projects that aim to equip young entrepreneurs with the skills, knowledge, tools, technology and networks necessary to launch and grow innovative and sustainable businesses. Some of such projects get to the point of providing seed funding to the Youth-led businesses they support. In most cases, such funds are a small first round of investment, aiming to establish the

30 African Development Bank, Jobs for Youth in Africa. Strategy for Creating 25 Million Jobs and Equipping 50 Million Youth (2016).

company and launch a beta production and marketing. Sometimes these programs provide a second round to enable some growth. After that, these businesses are supposed to look for funding in the market. This is very healthy as, in most cases, the funding disbursed through technical assistance comes in the form of grants or subsidized loans; therefore, moving to commercial lending or equity is a way for such businesses to prove whether they have what it takes to succeed. But, what happens when a young person leading a startup approaches a financial institution?



The Narrow Trail To Investment

First of all, a young African entrepreneur does not have a highway of different opportunities leading to investment in front of him. In actual facts, the range of options available to a young entrepreneur is narrower compared to senior peers.

On the one hand, microcredit issues small financial facilities while venture capital and equity investment are too big. Options such as delayed payment (supplier's credit) and even overdraft are rarely in the picture since startups run by young people have no credit history and therefore are seen as way too risky. Crowdfunding requires the capacity to run a high-end visibility campaign with global outreach and access to a

wealthy middle class, not exactly what you always have at hand while starting a small business. One by one funding options decay to basically three: bank's loans, impact funds and business angels.

Now, if you are nurturing a start-up in the US, going after a loan may not sound like a big deal. It is in most of Sub-Saharan Countries. Banks in the region don't seem to be very eager to work with a young micro and small businesses, which is what an investor sees when s/he reads the financial records of a startup, even more so if the young applicant has no track record. Consequently, in Kenya, one of the countries with the friendliest lending system, interest rates on loans are around 12-15%. The situation worsens in Ghana, one of the most solid and fast-growing economies in the Continent, where interest rates can be as high as 30%. On top of that, according to the Global Impact Investors Network³¹, even if a start-up can afford such rates, they will still have to face collateral requirements. These can be as high as 100% of the loan amount. How many young entrepreneurs are able to strike a deal with a bank under these conditions?

Impact investing is a different story altogether where the movement is growing. Impact funds are sensible to the SDGs and patient when it comes to returns. They look like just what a business operating out of the Continent may need. Yet, if you are a young person running a young business, you may find out that most of the impact investors do not have the right financial facility for you. The issue is that impact funds are mainly looking at tickets bigger than what a young entrepreneur can possibly handle. Another survey run by the Global Impact Investing Network³² among their members showed that only 11% of funds are disbursed in mid-size tickets, meaning somewhere in between 250.000 and 1 million euros. To make things worse, most of the funding requests by youth-led startups fall way shorter even to that threshold. Basing on a survey run across the 1.184 entrepreneurs, the E4Impact Foundation has been accelerating in 13 African Countries since 2010. Most of under 35 entrepreneurs managing early stage businesses find themselves seeking investment tickets worth between 80.000-150.000 USD. When this is the case, the availability of impact funds shrinks down to 1% (see table on the right).

Ticket size	Ticket size	
>10	31%	
5-10	17%	
1-5	42%	
0,5-1	7%	
0,25-0,50	2%	(million USD)
<0,25	1%	(% on total impact investment)

31 GIIN, The Landscape for Impact Investing in East Africa, 2015.
 32 GIIN, Catalysing Impact Deal Flow in East Africa, 2015.

Adjusted from GIIN Catalysing Impact Deal Flow in East Africa, 2015

If impact investment funds prefer larger tickets, even more so the Development Finance Institutions do. About 50% of their disbursement goes into 50+ million USD worth projects and only 0.1% in deals under 1 million. Investing in larger and more mature ventures makes sense, as that means enabling a company which has already firmly established itself to grow faster. The risk profile of this type of investment is somehow lower. In short, things such as having a market share secured, a strong revenue model proven and ready to be scaled, operations fully in place, a strong entrepreneurial team in addition to one or two rounds of investments in the track record are rather key to access impact investing. A Youth-led start-up in its second or third year of existence rarely checks all the boxes.



Therefore, a young entrepreneur will be likely to turn to business angels. That seems to be the right move for them. The industry is on the rise and, according to Disrupt Africa, 2019 has been the record year in terms of amount of investment disbursed and 2020 is likely to break the record it despite the COVID-19 outbreak. Moreover, business angels in Africa are organizing themselves into a strong and vocal movement able to engage wealthy people and to channel their resources to early stage businesses. For example, the African Business Angels Network (ABAN) now counts 82 associations of angels across the Continent. On top of that, business angels offer young entrepreneurs what they are looking for:

Investment criteria that do not penalize small and early stage projects;

Workable tickets (average investment by ABAN's members ranges between 48.000 and 100.000 USD);

Flexibility, as angel investors are open to combine pure equity with convertible notes, traditional debt and revenue share models that allow the entrepreneur to keep control over the company while not being obsessed with exit and interest rates;

A partnership approach whereby angels, who are often

entrepreneurs and business savvy themselves, alongside with funding, contribute their networks, knowledge and managerial skills essential to safely pilot the business out of the dangers of the early stage.

While the outlook seems very positive, the issue with angel investing is that the total amount of funding disbursed by angels in 2018 cumulates to 1 billion USD for the whole of Africa, compared to 11 billion in India and 130 billion in the USA,

Although significant progress has been done through the rise of impact and angel investing, if you are a young start-upper in Africa, access to finance looks like a rather narrow trail and competition on limited options very fierce.

Step Steps

The path to funding also seems to be pretty strenuous. If a young entrepreneur starts looking for an investment, there are several Youth-specific hurdles s/he has to face³³.

1. Access to information. Young entrepreneurs are largely unaware of both funding opportunities and the requirements attached to that. Web portals and institutional communication do not seem to crossroads with the Youth.

2. Access to the investor. Assuming a young start-upper spots an investment opportunity, the next step is to engage the investor. This often proves to be extra complicated for the Youth. First of all, having no or limited track record and leading a small start-up, young entrepreneurs are not on the top of the investor's list. Secondly, not being able to rely on a business network seems to have the lower ground in building some visibility towards the investors. Eventually, when they finally engage an investor, young entrepreneurs discover they are not investment-ready. Therefore, they start seeking for support.

3. Access to Investment Readiness Programs.

In order to overcome the challenges that prevent them from qualifying for an investment, young entrepreneurs are often in need of technical assistance. Training, acceleration, and incubation programs are proliferating in Africa, but most of them offer classroom-based and network-oriented training programs. While this can be the first step in supporting entrepreneurs, a real investment readiness program requires to set up an individual business clinic for each start-upper where a set of experts fix the key issues of such business and investors are personally involved to hint the right path. As a consequence, many young entrepreneurs graduating from such programs aren't investment ready yet. Basing on consultations held by the E4Impact

33 GIIN, Global Impact Investing Network. Roadmap for the Future of Impact Investing: Reshaping Financial Markets (2018).

Foundation with Financial Institutions in 13 African Countries, most common challenges that remain unresolved after such programs are: limited or unreliable market information and projections; underdeveloped or unproven growth strategies; financial projections largely based on unchallenged assumptions.

4. From the investment case to implementation capacity. Those young entrepreneurs who have been able to overcome all these challenges and have put together a reliable and evidence-based business plan that show some promise, eventually sit at the table of an investor to find out they lack the capacity to deliver on the business plan. They often miss:

access to qualified human resources, especially professionals with a technical or financial background;

the basic network necessary to jump start the business, such as reliable distributors and suppliers and most importantly a solid group of early adopters;

resources of their own, both financial and not, to commit alongside with the requested investment, that most financial institutions demand to assure the entrepreneur's commitment to lead the start-up.

Such challenges could be easily overcome if investors provided additional technical support. Nevertheless, a study shows that investors have very little incentive to enter the³⁴ technical assistance space.

All in all, while they are encouraged to start-up business and to contribute to jobs creation, Africa's Youth path to financing access looks narrower and more strenuous than any other's on the Continent.

Hacks to funding



34 GIIN, Catalysing Impact Deal Flow in East Africa, 2015.

Although access to finance proves to be very challenging, young African entrepreneurs still start businesses and find a way to have them financed. They usually overcome the funding issue, either relying on family support or putting their creativity to work. An example of how young entrepreneurs are innovating the path to funding could be drawn from the Alumni of the Global MBA in Impact Entrepreneurship, the E4Impact Foundation, the Università Cattolica di Milan and African University offer in Africa.

In Sudan, Mohammed Sameer Galal Eldein, founder and CEO of Al-Shehab Electric Tricycles, have adopted a pretty unorthodox approach. More than in other African capitals, moving around Khartoum means jumping on a three-wheel tuk-tuk. Most of such vehicles are powered by old-fashioned 2-stroke engines that, on the one side, greatly contribute to CO₂ emissions (as they represent a large part of circulating vehicles) and, on the other, are the cause of various health issues drivers are suffering from (mostly caused by intoxications from exhausts smoke penetrating into the old, poorly maintained cabins. Hence, Mohammed founded Al-Shehab to produce in Sudan electric tuk-tuk that can wipe out the environmental and health issues while assuring lower running and maintenance costs. In 2019, after being rejected by the banking system and not having the chance to engage any equity investor, Mohammed was able to find the solution among some of his MBA colleagues. While assisting to one of Mohammed's investor pitches scheduled as part of the MBA, three of his fellow entrepreneurs develop an interest in Al-Shehab Electric. Each of the four entrepreneurs had some savings ready to be invested in their startups, but what each of them had was not enough to launch their projects. Excited by the promise showed by Al-Shehab Electric, the four decided to do something with it without forgetting about the other projects they have. Therefore, they have come up with quite an articulated and creative solution:

1. The first step was to establish a new company to which each entrepreneur contributed the same amount of funds, therefore becoming shareholders on an equal foot;
2. Next was to make this company a holding of the four projects they already had. Therefore 4 companies were established, one per each project the entrepreneurs elaborated through the MBA. The ownership of the project-related companies is shared by the holding company (majority share), the entrepreneur who elaborated the concept (second largest share) and the other three entrepreneurs (minor shares equally distributed).
3. Having established the holding of these startups was necessary to define the scheme in which the holding company would invest their capital and a small endowment

would be in the project-related businesses to manage their profits. The holding company would invest in most mature first, upon the condition that part of the profits generated would be returned to the holding company to set aside the amount necessary to invest in second most mature startup. Once the second startup receives the investment, part of the generated profits of the first two startups generate would be used to invest in the third startup and eventually, those of the three would be used to start operations for the fourth. What was left was to rank the companies based on the level of maturity and make the first "investment".

4. Eventually, they started implementing the plan. Al-Shehab Electric Tricycles being the most developed project, received the funding necessary to start the production plant. Following this model, in 2019 Al-Shehab Electric Tricycles started production and already delivered the first order of 80 all-electric tuk-tuks. Meanwhile, the holding company is nurturing the other three start-ups.

What Can Be Done

While such hacks are encouraging and prove how creative African young entrepreneurs can be, they cannot be the business as usual of Youth entrepreneurship. On the one side, they require a great deal of flexibility and innovation that may not be expected by each and every entrepreneur. On the other side, these are still sub-optimal solutions (in this case a startup is using part of its profits to fund another one rather than to use them to boost its growth).

The international community is well aware of the situation and is resolved to support the many Mohammed of the Continent. Some of the following actions may be recommended to the policymakers and may be welcomed by the Youth engaging in entrepreneurship in Africa.³⁵

1. Reinforce the reputation of entrepreneurship. In some countries two myths haven't been busted yet: a white-collar job is still the dream of many youngsters and entrepreneurship is often seen as a career path for those who failed in school. To make sure that entrepreneurship is on top of Youth's career options, it should be embedded at all levels of education, from primary and secondary (introducing leadership farms that feature entrepreneurs) to higher education with entrepreneurship camps aimed at stimulating the formulation of business ideas.

2. Assure Youth entrepreneurship is on top of the agenda. A Youth entrepreneurship index may be developed to measure how easy it is for young persons to start a business. A continental ranking may be generated to stimulate public action to support Youth entrepreneurship. Such index may be complemented by sector specific indicators measuring how much Youth entrepreneurship is taken into account by different stakeholders. For example, the financial sector could measure the percentage of Youth-led businesses in their portfolio; Schools and Academic institutions may look at the ratio of graduates that embark on entrepreneurship; Business associations at how many young persons they have among their members and what specific support they offer. Measuring such indicators on a routine base will surely help policy makers at the national and international level to assess whether they are on the right path when it comes to promote Youth entrepreneurship.

3. Re-target the support ecosystem. Currently, business development organizations (BDOs) such as accelerators, incubators, and training centers cannot build their business model around young entrepreneurs as financial sustainability would be a grand challenge. Supporting young entrepreneurs means working with customers who: do not have the funds necessary to pay for a business development program; very rarely are generating any significant revenue out of their startups; they have to cover a very big gap before becoming investment-ready. That means that BDOs can't generate revenues via fee for services, revenue sharing or success fees on investment secured/facilitated, or, in the best of the cases, that if they do, this will happen only long after the support service has been delivered. If they want to work with the Youth, BDOs are left to fund their action with corporate sponsorships and grants. This greatly discourages BDOs. AfDB's Youth Entrepreneurship and Innovation Multi donor Trust Fund provides an interesting solution. On the one hand, the Fund pays upfront part of the management costs the BDOs face to support the young entrepreneurs; on the other, it links the project milestones to actual investments that the supported Youth obtain. This model put the BDOs in the condition to provide services to the Youth that would otherwise be left out for economic sustainability reasons while assuring that the support they offer is concretely geared to secure investments for the beneficiaries.

4. Steer the financial flow. Once we have many young entrepreneurs who have been brought to the point of an investment, they will still face the competition of larger, better established and less risky businesses. To create a more conducive environment, there are few solutions

the international and local policymakers could look at: launch a set of investment criteria specifically designed to assess young entrepreneurs; attach incentives to financial institutions which hold a relevant percentage of Youth-led businesses on their portfolio (e.g. tax holidays); encourage the downsizing of impact investing towards 50-150.000 USD tickets by establishing guarantee funds; leverage on corporate funds dedicated to sustainability and corporate social responsibility to support impact investors and business angel networks focusing on Youth entrepreneurship.

Given where we are, supporting Youth entrepreneurship will require some kind of investment if the hurdles young entrepreneurs face have to be removed. Yet, Youth entrepreneurship is key to bringing the Youth unemployment rate to that of adults, which would increase Africa's GDP by 10 to 20% and create countless jobs. If a single start-up may seem risky, Youth entrepreneurship is a safe bet with exciting social and economic returns on the investment.

References

African Development Bank, Jobs for Youth in Africa. Strategy for Creating 25 Million Jobs and Equipping 50 Million Youth, 2016. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Boards-Documents/Bank_Group_Strategy_for_Jobs_for_Youth_in_Africa_2016-2025_Rev_2.pdf

GIIN, The Landscape for Impact Investing in East Africa, 2015. GIIN, Catalysing Impact Deal Flow in East Africa, 2015. [https://thegiin.org/assets/161025_GIIN_EastAfrica_FULL_REPORT%20\(002\).pdf](https://thegiin.org/assets/161025_GIIN_EastAfrica_FULL_REPORT%20(002).pdf)

GIIN, Catalysing Impact Deal Flow in East Africa, 2015. <https://thegiin.org/research/publication/catalysing-impact-deal-flow-in-east-africa>

GIIN, Global Impact Investing Network. Roadmap for the Future of Impact Investing: Reshaping Financial Markets, 2018. <https://thegiin.org/research/publication/giin-roadmap>

CHAPTER 06

Gender Equality As A Driver Of Young Entrepreneurship And Innovation

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Introduction

When the world walked into the new decade at the start of 2020, women and girls of today walked in with the same hope that has been shared by women from generations before: a world where gender equality will be guaranteed. Long before the world first celebrated International Women's Year in 1975, women have been advocating for equal rights and opportunities. Although the world has managed to make some progress in advancing women's rights, in practice, a lot of women are still unable to access opportunities to achieve their full potential and full contribution to social and economic development.

Data from UNWomen 2019



More women than men live in poverty, especially during their peak child-bearing years.

Women and girls around the world are

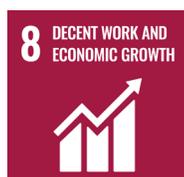
4%

MORE LIKELY than men and boys to live in extreme poverty, and the risk rises to

25%

for women aged 25 to 34.

The full participation of women in both social and economic development is not only inclusive, it is also necessary. A global study has shown the potential of significant economic gain for developing and developed countries when women can participate in the labor force as equally as men. Moreover, the United Nations also stated that the economic empowerment of women, as well as seizing gender gaps in work, are keys to achieving a sustainable future by 2030.



Wide gender gaps persist in labour force participation.

The labour force participation rate of women aged 25 to 54 is

55%

versus 94% for men in the same age group.



Globally, less than

1 in 3

OF ALL RESEARCH POSITIONS are held by women.

Ensuring the absolute equal access to resources and opportunities for women and girls remains one of our world's most urgent challenges to solve. A report released by the World Bank in 2018 found that, on a global scale, it is estimated that countries are missing out on \$160 trillion in wealth due to the gender gap in lifetime income when comparing the difference in pay between women and men. This realization further highlights the importance of achieving full gender parity in all aspects of society - it is not only the right thing to do, but it is a crucial step in empowering local economies and strengthening both individual women and their financial independence, as well as empowering the communities they belong to.

Furthermore, we cannot ignore the key role of specifically young women and girls in reaching gender equality. Investing in girls' education is one of the most powerful multiplier actions one can take - in a report released by the Brookings Institution, it is found that an extension of a girl's secondary education by just one year over the average will raise her future income by as much as 10 - 20%. Imagine how many female entrepreneurs we could foster by actively investing in the education of girls all over the world.

Economical Connection Between Entrepreneurship, Gender, And Innovation

One way to achieve the economic empowerment of women is by making entrepreneurship opportunities accessible for women and girls. Through entrepreneurship, women will have a better chance of being financially independent and becoming decision-makers on their own terms. A report launched by CARE stated that the empowering experience of entrepreneurship also encourages women to be leaders in their communities. However, we should note that the impact of women's economic empowerment is vice versa; the world also benefits from having more women and young women as entrepreneurs. By ensuring gender equality in entrepreneurship, the world is more likely to make development progress, including economic and social progress, because women are drivers of innovation.

Challenges And Barriers For Female Entrepreneurs

It is important to note that gender equality can drive innovation when we also equip the efforts with tangible support. However, in reality, the support given to women and young women in the entrepreneurial space has been historically underwhelming. According to a report published by GEM, between the year 2018 and 2019 there were approximately 231

million female entrepreneurs from around the world. However, compared to male entrepreneurs, women - especially young women - are still facing challenges to access entrepreneurship opportunities. In many countries around the world, the entrepreneurial space still sees low representation of female entrepreneurs, or if female entrepreneurs are present their enterprises are still considerably smaller.

UNWomen 2019

AT HOME, AT WORK AND IN POLITICAL LIFE, WOMEN ARE TOO OFTEN DENIED DECISION- MAKING POWER.

While women represent

39%

of the global workforce only



27%

of managerial positions
worldwide were occupied
by women in 2018, up marginally
from 26% in 2015.



In the United States, where tech start-ups have been growing exponentially over the last decade, AllRise reported enterprises with female founders are less likely to receive formal funding from Venture Capital (VC). For the past decade tech ventures have raised \$424.7B in fundraising, however, only 32% of these funds went to start-ups that are led by LatinX women-led companies and only .0006% of the funds went to companies led by black women.

Formal funding is not the only barrier that hinders women and young women face in accessing the entrepreneurship opportunities, challenges in accessing mentorship and training are also still felt among female entrepreneurs despite the clear benefits of the two capacity-building approaches. A study on driving innovation for technology by Zhoyvotovska et al

showed how the intersectional techno-feminist approach was able to highlight the positive impact of community-based mentorship to help shape innovation. Additionally, an impact report done by CARE showed 91% of women who have participated in entrepreneurial training have reported an increase in business improvement, as well as a significant connection between the training and increase of income.

Feminist Theory, Unpaid Labor And Female Entrepreneurs

We have clearly established the financial gains that are to be made by empowering women and girls, while also highlighting the important role that women play in innovation. Despite this, working women across the world are finding themselves battling the same issues as women belonging to generations before them. One of the main struggles for working women is the issue of unpaid labor which often includes housework, such as cleaning and cooking, as well as childcare and overall household management and planning. The gendered stereotype that women should be the caretakers in their family, has created this "second shift" where women first work long hours at their paid career job, and then go home only to continue working via unpaid housework. This dilemma stands at the core of feminist theory, with the discussion centering around the economic as well as social function of housework and how it relates to the oppression of women. According to the American sociologist and leading analyst within second wave feminism, Joan Acker, feminist theoretical perspective seeks to answers the questions and ideas of women's inferiority to men, how it came to be, how and why it is maintained, how it could change and what would life look like without it. Each perspective of these theories (social & liberal) provides a different view.

Liberal feminist theory makes the case for social reform as a tool to ensure women have the same opportunities and status as their male counterparts. The foundation of the liberal theory presumes that women and men are equal and that rationality, not sex must be the framework for an individuals' rights. At its core, liberal feminist theory focuses on the presence of discrimination and systemic prejudice against women. When talking about gender equality and entrepreneurship, this would mean that the lack of equal representation of female business founders is mainly due to unfair and limited access to opportunities and overall resources, not due to women being less fit to lead or found a business.

Social feminist theory on the other hand, presumes that women and men come across as being different from one another. It explains that there is a difference in how a man and a woman experience life due to purposeful socialization methods during their upbringing in society. This leads to inherently

different views and experiences of the world. For example, female socialization will create different priorities among women compared to those of men, which tends to be reflected in how women choose careers and how they might be as leaders. This is an intriguing theory, as it taps into the power of the unique attributes that female entrepreneurs can bring to the table, offering a refreshing and more compassionate way of business compared to the masculine business norms that have long been the standard.

Both liberal and social feminist theory provides ideas on how we can better support and encourage young women to start their own companies and contribute to innovation at a broader scale. It is reasonable to conclude that we must work hard to create policy, fund resources and education, and support social norms that in turn will support gender equality and minimize the unfair burden of unpaid labor in order to empower women to be in charge of their own time and have access to the same resources as men do. These types of support efforts are aligned with liberal feminist theory. Furthermore, it is also reasonable to conclude that we should work on redefining what leadership norms look like, and what startup culture might look like to normalize that female leadership often looks different and that those differences indeed are strengths as they offer diverse perspectives and innovative ideas. Embracing the differences between male and female entrepreneurs, and treating these differences as assets, aligns with social feminist theory.

Tales Of A Pandemic: How COVID-19 Is Undoing Decades Of Wins

As briefly touched upon earlier, the pandemic has caused 2020 to be a year of severe setbacks in regards to gender equality and women's rights. This is deeply concerning, especially when considering the fact that we are only seeing the first layers of the impact - only time will tell what the coming years will look like, and just how severely the COVID-19 pandemic has impacted women-owned businesses.

According to research by McKinsey & Co, the economic impact of COVID-19 is disproportionately affecting women. For example, women are in jobs that are 1.8 times more at risk of being lost due to the ongoing public health crisis, compared to the jobs that typically are held by men. Another stark number to look at is the fact that 39% of employment globally is held by women, but women account for 54% of the job losses caused by the pandemic so far. Here it is worth noting that the burden of unpaid labor and care has been exasperated due to school closures and general household isolation due to the pandemic. This new reality has caused women to lose their jobs at a far higher rate than normally - this stands true

even when taking into consideration that men and women tend to work in different industries and sectors.

McKinsey & Co. has further concluded that, if these negative trends will be ongoing, and no intervention will be made to try to make up for these gender-specific job losses, the global GDP growth could drop by as much as \$1 trillion by 2030, compared to if women's COVID-19 job losses would track the same pace as their male counterparts in every sector. It is also noted that the financial impact actually could end up being far greater if these models would also account for women's drastic increase in childcare responsibilities and household work. In quantifying the impact of this increase in unpaid labor carried out by women, one survey that the consulting firm Dalberg conducted among women in India showed that COVID-19 has increased the time spent on family responsibilities by as much as 30%, and by an estimated 1.5 - 2 hours daily for women in the U.S. These findings could be part of the answer to why women are currently falling out of the labor force at a much higher rate than what can be seen through labor-market relations alone.

In surveys carried out by Facebook Data For Good, it can be concluded that the disproportionate impact of COVID-19 on women-owned businesses is a global trend. This is likely due to the pandemic causing decreased access to financial resources, as well as due to women entrepreneurs now having to work as full-time teachers to their children while simultaneously working from home.

Graphs from the policy brief, "COVID-19 Pandemic Through a Gender Lens" by AFRICA GENDER INNOVATION LAB, WORLD BANK



Figure 2: Gender Gap in Micro and Small Firm Business Closures across regions
Facebook COVID-19 Future of Business Survey

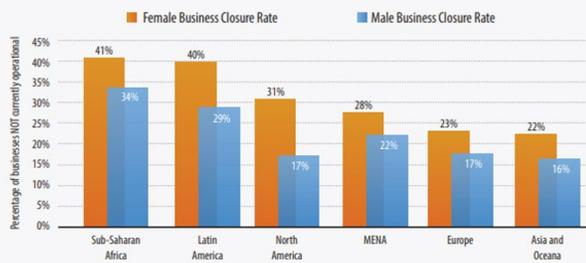


Figure 2 illustrates the gender gap in the rates of business closure within the Facebook COVID-19 survey sample, for micro and small businesses closed between January 1st and June 1st 2020. Regional averages computed using country averages (conditional on obs >100). South Asia closure rate is 44% (gender gap not shown since female-owned sample size too small for a meaningful comparison). Globally, female-owned businesses were 5.9 percentage points more likely to close their business than male-owned businesses, controlling for region.

Why Female Entrepreneurs Matter: What Value Do Female Entrepreneurs Create?

As we discuss women's entrepreneurship, it is crucial to understand why women are needed as business owners. It is important to know that this goes far beyond a symbolic pursuit of equality and fairness - female entrepreneurs bring completely unique and urgently needed perspectives that enrich the overall business ecosystem globally. Women-owned businesses are crucial to providing intersectional innovation where products and ideas take into account all different types of people and backgrounds.

In a report published by the Global Entrepreneurship Research Association at London Business School, it can be seen that globally women are less innovative than men by about 6%: globally, women have an innovation rate of 12.6%, while men come in at 18.7%. However, interestingly enough - in high-income nations, women's innovation rates are close to being twice as high as in low- and middle-income nations. Additionally, 18 nations present that women are more innovative or, equally as innovative as men. It is a reasonable conclusion to say that, when women have access to equal opportunities, adequate funding and quality education, their innovation levels skyrocket. This realization further builds the case for investing in women's and girls' education, which in extension will yield higher innovation rates among women, which in the end will result in heightened intersectional innovation where women stand behind products, companies and ideas that a man perhaps would not think about creating.

Additionally, it is impossible to talk about the value of female entrepreneurship, without discussing the positive multiplier effects it carries into families and communities. Women across the world stand as pillars in their communities - they often take the most responsibility for child rearing, emotional labor in their families, as well as general household work. Women tend to be the caretakers of their entire communities - when women are empowered and financially strong, commu-

nities follow suit and turn prosperous as well. When looking at one of the most disadvantaged regions of our world, Africa, it is extraordinary to see the positive impact that female business owners are having. Africa is unique in the sense that it is the only region globally where women outpace men in choosing to start their own businesses and become entrepreneurs. Therefore, it is yet again safe to say that investing in extended opportunities for female entrepreneurs in Africa would drastically impact economic growth in the region.

Female entrepreneurs bring financial strength and, if adequately funded and supported, could accelerate the development of an entire country. It is a fair assumption that female entrepreneurs are a key component in pushing gender equality forward, while also boosting both their own as well as their communities' financial health.

Gendering Innovation In This New Economy

The economic benefits of innovation have been well-researched and agreed upon. However, the need for the new economy to be innovative is inseparable from its need for digitalization. As written by Poutanen and Koavalainen in their writing on gender and innovation in the context of the new digital economy: "the power of the digital is in its ability to create new innovations and to transform and change the material world through those innovations". Both Poutanen and Koavalainen explained how digital space presents the opportunity to host the complex intersection of identities. In the digital space, the gender aspect that crosses over all the other identities (such as race and class) has uniquely influenced the way the new economy is shaped, presented, and analyzed. When looked at as a work of knowledge, innovation itself has always been highly gendered, which unfortunately was always more often associated with men, male, and masculinity. Gendering innovation, unfortunately, has not always been the most inclusive towards women, especially women who identify with vulnerable communities.

This inequality continues to persist despite the clear evidence of women's contribution to innovation and growth. At a global level, taking an example scenario developed by BCG, it was noted that when women can participate as equally as their male counterparts as entrepreneurs, it could raise the global GDP by approximately \$2.5 trillion up to \$ 5 trillion. On a local level, it's proven that startups that have female founders in their team will have better chances to generate higher revenue.

Gendering With Intersectional Lens

It is not enough for the diversity and inclusion efforts to ensure gender representation at all levels, these efforts need to also ensure racial inclusion and design programs to foster diversity by having intersectionality in mind.

A study by the Boston Consulting Group concluded that when it comes to innovation, diversity matters, particularly at the leadership level. The study shows that businesses that scored above-average in diversity at the leadership level gain a higher innovation revenue (45%) in comparison to businesses that scored below-average in diversity (26%).

The dimensions included in this diversity score include gender balance and nation of origin that boost innovation through an unconventional approach in solving challenges. But when taken into a focus-view perspective, the two factors of gender and nation of origin clearly drive innovation not only because of the variety of perspectives that the two factors offer, but most importantly because of the intersectionality of experiences that shaped these perspectives. Therefore, when including gender equality as a driver for innovation, it is important that an intersectionality lens is included in the process.

The concept of intersectionality that was first coined by Kimberlé Crenshaw criticized the view on gender equality that often failed to address the diversity of race, sexual orientation, able-body, and privilege that exist within a group that identify as the same gender. By embracing intersectionality, we are acknowledging the different layers of challenges that derived from the distinct experiences based on multidimensional identities such as gender and race. This ability to identify layers of challenges is an important key to drive innovation because innovative solutions come from being able to identify the "blind-spot" of the problems in the first place.

In the context of 2020 where the world is globally hit by the COVID-19 pandemic, AllRise reported that female founders of color have the lowest number of capital buffers required for their enterprises to face the downturn impact of the pandemic. However, the report also suggests that female founders are more resilient compared to their male counterparts during the time of the pandemic, 52% of female founders reported that they have spent at least 7 hours every day in caregiving in addition to their entrepreneurial role while only 26% male founders have reported doing so, and yet these female founders have reported that the caregiving hours do not add significant difference to the negative impact of COVID-19 towards their revenue.

Youth Entrepreneurs: The Importance Of Empowering Young Women And Girls

Young people represent the hope for our future - as a group, they are innovative, ambitious, and optimistic. Senior leaders and influencers within government and business should look more towards our youth as a source for solving some of our biggest challenges, such as gender inequality and climate change for example. As we are talking about gender equality as a driver for young entrepreneurs and innovation, it is exciting to see how the youth of today are leading the way in adapting to sustainable and impactful entrepreneurship; according to the United Nations 2020 World Youth Report, young people aged 18-24 are more likely to be social entrepreneurs than they are to be commercial entrepreneurs. Additionally, while challenges around gender inequality persist within the social entrepreneurship community, the gender gap is smaller within specifically social entrepreneurship than in commercial entrepreneurship. This is likely due to certain attributes that young women and girls possess, some of which we have touched upon earlier in this chapter, for example, the urge to contribute to their communities in meaningful ways and to feel that their work has an impact. Other reasons for young women to pursue social entrepreneurship, has to do with the inequality that many women still face when entering the labor market. Simply put, many young women grow tired of facing lower wages than their male counterparts, as well as not being recognized for their work in the same way as their male colleagues are. When faced with gender-based discrimination, some women choose to venture out on their own to be able to live out their full professional potential.

To fully understand why social entrepreneurship has a narrower gender gap when compared to commercial entrepreneurship, it is also important to look at what motivates entrepreneurs and how different founders are motivated by different purposes and goals. A recent study by researchers at Carnegie Mellon University and Columbia Business School looked deeper into what specific attributes drive different types of entrepreneurship. This study looked at how entrepreneurs of all types of identities responded to messages related to motivation in the form of money and social impact. The results are illuminating in building the case for supporting young women and girls to get into entrepreneurship; it was found that women and people in altruistic cultures are more motivated by messages surrounding social impact than by those about money. Meanwhile, men and people in less altruistic cultures valued messaging around money over social impact. These findings also support the idea of embracing feminine leadership styles and attitudes as a way of fostering altruistic values and in extension, create more compassionate communities where more people - regardless of gender

identity - will carry a sense of responsibility for their joint community and our shared world. This further aligns with the concept of social feminist theory which we introduced earlier in this chapter, where it is argued that we should embrace the differences in men and women and leverage them as strengths - instead of asking women to fall in line and adapt to a "man's world", we should encourage different leadership styles and unconventional ideas of what a professional environment might look like.

Investing in young women and girls' entrepreneurial education is a significant way to support the realization of Agenda 2030, which is why the empowerment of young female entrepreneurs must be prioritized by governments and international organizations alike.

Solving The Entrepreneurship Gender-Gap: A Closer Look At The European Union

While there is no single nation in the world that has successfully achieved full gender parity, some nations are combating gender inequality more efficiently than others. By taking a deeper look at various gender equality indices, national programs and policy efforts from around the world, we can piece together a picture of what needs to be done globally to achieve progress, and eventually, full gender parity across all aspects of society.

In an effort to promote and increase entrepreneurship within the European Union, the European Commission established The Entrepreneurship 2020 Action Plan, which they refer to as, "a blueprint for action to unleash Europe's entrepreneurial potential, remove existing obstacles and revolutionize the culture of entrepreneurship in the EU." Within this Action Plan, there are specific plans to support and increase female entrepreneurship. The population in Europe is made up of 52% women, however, women only represent 34.4% of the self-employed within the EU, and only 30% of all startup founders. The European Commission further states that female entrepreneurship and innovation represent an untapped area for increasing economic growth and job creation. It was found that some of the greatest challenges faced by female entrepreneurs include access to finance, proper training, and education, accessing information, being able to combine business ownership with family responsibilities, and lacking access to adequate networking opportunities and mentors. To solve these challenges, the Commission supports multiple tools and networks specifically geared towards promoting female entrepreneurship, for example, The European Network of Mentors for Women Entrepreneurs, The European network to promote women's entrepreneurship (WES), and WE-gate-platform: a one-stop-shop for women entrepreneurship,

to mention a few.

Through its work with The Entrepreneurship 2020 Action Plan, the European Commission conducted a public consultation with female entrepreneurs in the EU to learn about their challenges and to hear what women themselves need to be better equipped to succeed. These consultations took place during 2012, which is also when the Entrepreneurship 2020 Action Plan was introduced. Here are some of the illuminating results:

Two-thirds of all respondents agreed that the expansion of networks of women entrepreneurship mentors and ambassadors was either important or very important.

Establishing networking opportunities for female entrepreneurs and investors were considered important and very important by two-thirds of all respondents.

A question regarding the establishment of same maternity rights for female entrepreneurs as for employees was considered important and very important by 75% of respondents. Meanwhile, a minor 16% said it was not important.

64% of respondents said that availability and access to adequate child/dependent care facilities were very important and impactful.

All results come directly from the "Report on the results of public consultation on The Entrepreneurship 2020 Action Plan" by the European Commission.

These consultations show what women need to succeed as entrepreneurs: they need networking opportunities, they need networks to find support from other fellow female entrepreneurs, but overwhelmingly, female entrepreneurs need support for childcare. This highlights the unique challenges that female entrepreneurs face, and that their male counterparts do not feel the impact of - the burden of being the main caretaker while also carrying the brunt of unpaid labor in the household. What type of policy solutions and infrastructures should societies prioritize to ensure that female entrepreneurs are supported and able to flourish?

One example of a successful program can be found in Sweden, where an ambassadors program was established to encourage women to seek out entrepreneurship. The model used already existing women entrepreneurs as role models while providing a platform for them to share their experiences with other women as a way of inspiring and encouraging women to start their own businesses. The program was launched in 2008, and ran through 2014. Through the duration of the program, the ambassadors had managed to reach over 170,000 people by organizing around 11,000 activities, according to a

report launched by Tillvaxtverket - The Swedish Agency for Economic and Regional Growth in 2015. At the end of each workshop or other activity, the participants filled out a survey. These surveys showed that 50% of the women who listened to an ambassador from the program, felt "more interest" in entrepreneurship than they did before meeting with the ambassador. This program brought great success in reaching out to women across Sweden, especially young women, as the main target audience was female high school students. Due to its success, the European Union modeled the European Ambassador Network for Women's Entrepreneurship based on the Swedish program. The Swedish ambassador program provides a great example of the importance of being able to see yourself represented in order to feel empowered to seek out different opportunities and careers. Ambassador programs, and entrepreneurship networks for women, have been proven to be powerful tools in encouraging female entrepreneurship.

Best Practices: Policy And Infrastructures Needed To Achieve Progress

From our findings, it is clear that gender equality is imperative to accelerate both economic and social development growth. Gender equality drives innovation that leads to new solutions and approaches to achieve sustainable development goals. However, it is important to highlight that in the process of creating a gender-equal world, intersectionality must be kept in mind to ensure that the goal of gender equality is equality that benefits all women in all their diversity. To do so, we must ensure that all women could be supported by policies and infrastructure that are non-discriminating.

We learned from the recent COVID-19 survey that women spent more hours in caregiving in addition to the hours that they have spent on their entrepreneurial role when compared to men. Many women who are self-employed as entrepreneurs also face challenges beyond access to financial capital, they often have to also face the challenge of juggling their roles to childcare and caregiving, the risks of harassment in market space, and lack of social protection. These findings reflect the dynamics of women's ability to lead multiple roles in their lives, most importantly, it reflects the need for policies and infrastructure that are not created in silos but they should be designed to support this complexity.

In addition to this, the COVID-19 pandemic also adds another layer of challenges to this dynamic. To respond to this, policies must be able to create recovery plans that are gender-responsive as recommended by UNWomen this year. The recommendation includes designing economic responses with a gender lens, supporting women-led enterprises and

businesses, and promoting flexible work arrangements to address the increase of care burdens. In the long-term, these responses must also continue to invest in gender-responsive social protection systems, promote women's access to decent work, and provide fiscal support to industries with a higher prevalence of women.

Summary Of Findings

It is estimated that countries are missing out on \$160 trillion in wealth due to the gender gap in lifetime income when comparing the difference in pay between women and men. Achieving full gender parity in all aspects of society is not only the right thing to do, but it is needed to strengthen the global economy and build resiliency.

One of the ways to achieve the economic empowerment of women is by making entrepreneurship opportunities accessible for women and girls. Through entrepreneurship, women will have a better chance to be financially independent and become decision-makers on their own terms.

For the past decade tech ventures in the United States have raised \$424.7B through fundraising; only 32% of these funds went to start-ups that are led by LatinX women-led companies and only .0006% of the funds went to companies led by black women.

When women can participate as equally as their male counterparts as entrepreneurs, it could raise the global GDP by approximately \$2.5 trillion up to \$ 5 trillion. On a local level, it's proven that startups that have female founders in their team will have better chances to generate higher revenue.

It is clear that gender equality is imperative to accelerate both economic and social development growth. Gender equality drives innovation and entrepreneurship that leads to new solutions and approaches to achieve the Sustainable Development Goals. However, it is important to highlight that in the process of creating a gender-equal world, intersectionality must be kept in mind to ensure that the goal of gender equality is equality that benefits all women in all their diversity.

References

- Ackerman, X. A. (2015, March). INNOVATION AND ACTION IN FUNDING GIRLS' EDUCATION (No.84). The Brookings Institution. [http://www.ungei.org/files/Ackerman__Girls_Education_v2\(1\).pdf](http://www.ungei.org/files/Ackerman__Girls_Education_v2(1).pdf)
- Carnegie Mellon University. (2020, May 20). Women entrepreneurs are more motivated by social impact than money. Science X Network. <https://phys.org/news/2020-05-women-entrepreneurs-social-impact-money.html>
- Ferguson, Ann, Rosemary Hennessy, and Mechthild Nagel, "Feminist Perspectives on Class and Work", The Stanford Encyclopedia of Philosophy(Spring 2019 Edition), Edward N. Zalta (ed.).<https://plato.stanford.edu/archives/spr2019/entries/feminism-class/>
- Gaye, D., & The World Bank. (2018, November 29). Female Entrepreneurs: the Future of the African Continent. The World Bank. <https://www.worldbank.org/en/news/opinion/2018/11/29/women-entrepreneurs-the-future-of-africa#:~:text=Expanding%20the%20opportunities%20for%20female,tremendous%20impact%20on%20Africa's%20growth.&text=As%20a%20result%2C%20female%20Downed,those%20of%20male%20Downed%20enterprises.>
- Global Entrepreneurship Research Association (GERA), Babson College, Smith College, Korea Entrepreneurship Foundation, Elam, A. B., Brush, C. G., Greene, P. G., Baumer, B., Dean, M., & Heavlow, R. (2019). Global Entrepreneurship Monitor - 2018/2019 Women's Entrepreneurship Report. Global Entrepreneurship Monitor (GEM). <https://www.babson.edu/media/babson/assets/blank-center/GEM-2018-2019-Women's-Report.pdf>
- Madgavkar, A., White, O., Krishnan, M., Mahajan, D., & Azcue, X. (2020, July 17). COVID-19 and gender equality: Countering the regressive effects. McKinsey & Company. <https://www.mckinsey.com/featured-insights/future-of-work/covid-19-and-gender-equality-countering-the-regressive-effects>
- OECD/European Union (2016), "Women Ambassadors, Sweden", in Inclusive Business Creation: Good Practice Compendium, OECD Publishing, Paris. DOI: <https://doi.org/10.1787/9789264251496-23-en>
- Sidi Ali, R. (2018). Feminist Theory and its Influence on Female Entrepreneur's Growth Intentions. INTERNATIONAL JOURNAL OF INNOVATION AND ECONOMIC DEVELOPMENT, 4(3), 20–32. <https://doi.org/10.18775/ijied.1849-7551-7020.2015.43.2003>
- The European Commission. (2012, December). Public consultation on the Entrepreneurship 2020 Action-Plan. <https://ec.europa.eu/docs-room/documents/10378/attachments/1/translations>
- The European Commission. (2020). Female entrepreneurs.https://ec.europa.eu/growth/smes/promoting-entrepreneurship/we-work-for/women_en
- The World Bank Group. (2020). COVID-19 Pandemic Through a Gender Lens. AFRICA KNOWLEDGE IN TIME POLICY BRIEF, OFFICE OF THE CHIEF ECONOMIST, AFRICA REGION, WORLD BANK, 1(2), 1–8. <http://documents1.worldbank.org/curated/en/132121593107858356/pdf/COVID-19-Pandemic-Through-a-Gender-Lens.pdf>
- Tillväxtverket - The Swedish Agency for Economic and Regional Growth. (2015). Promoting women's entrepreneurship in Sweden 2007–2014 Results and lessons learned in brief. The Swedish Agency for Economic and Regional Growth. https://tillvaxtverket.se/download/18.76e25c0c1551556fb105c34/1465381142746/info_0607_webb.pdf
- United Nations Department of Economic and Social Affairs. (2020). 2020 World Youth Report. the United Nations.<https://www.un.org/development/desa/youth/wp-content/uploads/sites/21/2020/07/2020-World-Youth-Report-FULL-FINAL.pdf>
- Wodon, Quentin T.; de la Brière, Bénédicte. (2018) Unrealized Potential : The High Cost of Gender Inequality in Earnings. The Cost of Gender Inequality. The World Bank. <https://openknowledge.worldbank.org/handle/10986/29865> License: CC BY 3.0 IGO.
- Adwoa Bagalini, E. 5 ways intersectionality affects diversity and inclusion at work. World Economic Forum. <https://www.weforum.org/agenda/2020/07/diversity-inclusion-equality-intersectionality/>
- AllRaise. (2020). Against The Odds: Underrepresented Founders Report Positive Outlook on Business Despite Extra COVID-19 Pressures. https://www.allraise.org/assets/gms069_infographic_desktop_1400px.jpg
- CARE Emma Langbridge, E., Van Muijlwijk, M., Boone, P., Hai, S. (2020). CAREs: Women Mean Business Global Report: A Global Report on Women's Entrepreneurship. <https://www.careneland.org/wp-content/uploads/2020/06/CAREs-Women-Mean-Business-Global-Report.pdf>
- Council on Foreign Relations. Growing Economies Through Gender Parity. Council on Foreign Relations. <https://www.cfr.org/womens-participation-in-global-economy/>
- Crenshaw, Kimberle (1989) "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics," University of Chicago Legal Forum: Vol. 1989 , Article 8. <https://chicagounbound.uchicago.edu/uclf/vol1989/iss1/8>
- Laukhuf, R.L., & Malone, T.A. (2015). Women Entrepreneurs Need Mentors. International journal of evidence based coaching and mentoring, 13, 70-86. <https://www.semanticscholar.org/paper/Women-Entrepreneurs-Need-Mentors-Laukhuf-Malone/72d3d55402e0f99077e8e2ca6cd79a293d463961>
- Lorenzo, R., Voigt, N., Tsusaka, M., Krentz, M., & Abouzahr, K. (2020, July 17). How Diverse Leadership Teams Boost Innovation. Italy - IT. <https://www.bcg.com/it-it/publications/2018/how-diverse-leadership-teams-boost-innovation.>
- NHLP on Women's Economic Empowerment. (2016) Leave No One Behind: A call to action for gender equality and women's economic empowerment. <https://www.empowerwomen.org/-/media/files/un%20women/empowerwomen/resources/hlp%20briefs/unhlp%20full%20report.pdf?la=en>
- Ortiz, I., Chowdury, A., Durán Valverde, F., Muzaffar, T., Urban, S. (2019). UN Women Fiscal Space for Social Protection: A Handbook for Assessing Financing Options. <https://www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2019/fiscal-space-for-social-protection-en.pdf?la=en&vs=1903>
- Poutanen, S., & Kovalainen, A. (2017). Innovations, Gender and the New Economy. Gender and Innovation in the New Economy, 97–134. https://doi.org/10.1057/978-1-137-52702-8_4
- Shivers-Mcnaair, A., Gonzales, L., & Zhyvotovska, T. (2019). An Intersectional Technofeminist Framework for Community-Driven Technology Innovation. Computers and Composition, 51, 43–54. <https://doi.org/10.1016/j.compcom.2018.11.005>
- UN Women. (2018). Towards inclusive cities for all: How to protect the rights of women in informal self-employment (Policy Brief No. 10). <https://www.unwomen.org/en/digital-library/publications/2018/6/how-to-protect-the-rights-of-women-in-informal-self-employment>
- UN Women. (2020). Addressing the Economic Fallout of COVID-19: Pathways and policy options for a gender-responsive recovery Policy Brief No. 15).<https://www.unwomen.org/en/digital-library/publications/2020/06/policy-brief-addressing-the-economic-fallout-of-covid-19>

UN Women. (2020). Progress on the Sustainable Development Goals: The Gender Snapshot 2019. <https://www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2019/progress-on-the-sdgs-the-gender-snapshot-2019-single-pages-en.pdf?la=en&vs=5813>

UN Women. Macroeconomic policies and social protection: What we do: Economic empowerment. <https://www.unwomen.org/en/what-we-do/economic-empowerment/macroeconomics-policies-and-social-protection>.

United Nations, Department of Economic and Social Affairs, Statistics Division (2018). Technical Report on Measuring Entrepreneurship: Lessons Learned from the EDGE Project. New York: United Nations. <https://unstats.un.org/edge/publications/docs/Technical-Report-on-Entrepreneurship.pdf>

Unnikrishnan, S., & Blair, C. (2019, July 30). Want to Boost the Global Economy by \$5 Trillion? Support Women as Entrepreneurs. BCG Global. <https://www.bcg.com/publications/2019/boost-global-economy-5-trillion-dollar-support-women-entrepreneurs>.

CHAPTER 07

Young Entrepreneurship And Digital Technological Advancements

Navya Sharan
Youth Solutions Report
Muriam Fancy
Youth Solutions Hub

Introduction

Digital technologies have permitted a series of evolutionary changes in our society. It has changed the way we have shared data, media, and also how we have connected. Digital technologies are often spearheaded by youth, specifically millennials and gen z's! Millennials have created some of the largest technology companies, and gen z is following in their footsteps.

Digital technology has also had significant developmental implications. From the way we have made education more accessible through online platforms to developing new platforms to track climate change, there is no doubt that digital technologies are critically involved in the progression of SDGs. However, what makes digital technologies especially significant is how youth are utilizing digital technologies for change.

The purpose of this chapter is to answer the following questions: how does access to digital technology promote youth entrepreneurship for social change? The research question is addressed by reviewing technical entrepreneurs' types, why digital skill training is necessary for youth entrepreneurship, and understanding how digital technology advances the SDGs. Finally, this paper highlights case studies of youth utilizing digital technologies to accomplish the SDGs.

Types Of Entrepreneurs

We are currently experiencing the Fourth Industrial Revolution. Under this era, growth is largely defined by significant advancements in innovation and technology. Technological advancements include automation, artificial intelligence, and developing skills to work in these technical fields. When youth are attempting to utilize digital technologies, they often do it in the form of entrepreneurship. According to the G20 Young Entrepreneurs Alliance, 91% of youth believe that innovation is critical for developing new jobs and new technologies to achieve economic competitiveness.³⁶

When being an entrepreneur in the digital realm, there are three forms of technology and digital entrepreneurship.

1. Technology Entrepreneurship

demonstrates how research can transform into the application by developing new products through science-based advances. For this form, public research grants and small venture capital resources are necessary.³⁷

2. Digital Technology Entrepreneurship

products are developed based on ICT technology and IoT. Youth would have to rely on seed investments and crowdfunding for this form of technology.³⁸

3. Digital Entrepreneurship

these are products developed based on the internet – i.e., artificial intelligence or data-driven tech. Similar to the form above, seed funding and equity crowdfunding are among the main avenues to access resources to get this product to market.³⁹

These are the three primary forms of digital entrepreneurship. In all of these spaces, youth are actively taking a role to change the future of work, access to education, and alleviate inequality. There are three points of importance about youth being in these spaces. Firstly, it continues the innovation cycle. Scaling access to innovation and technological advances in parts of the world that lack access is significant for the country's economic development. Secondly, the job market evolves when there is access to funding and resources. Finally, accessing digital skills is imperative to drive all forms of entrepreneurship. Without access to digital skills, barriers for design, development, and deployment will be present. Hence, this paper will review why access to digital skills training is necessary for youth entrepreneurship and solve the SDGs in the following section.

Digital Training For Young Entrepreneurs

Youth entrepreneurs are vital for social and economic development. Often they act as a bridge between markets and barriers impacting society. However, as mentioned previously, for youth to reach the stage of being digital entrepreneurs, they have to have access to digital skills training. In many low-resource countries, access to education and technology is relatively low. Youth unemployment becomes a global issue

SDG 4.4 states, "relevant skills, including technical and vocational skills, for employment, decent jobs, and entrepreneurship."⁴⁰ Accessing digital skills is an action piece that the Global Alliance to Monitor Learning (GAML) has actively been working to solve, specifically focusing on digital literacy skills. Digital literacy is able to access, understand, and communicate information through digital technology to participate in society's economic and social sectors. Accordingly to UNESCO's digital literacy competence⁴¹, a country needs to achieve

36 Accenture (Firm). (2014). The promise of digital entrepreneurs: creating 10 million youth jobs in the G20 countries.

37 Giones, F., & Brem, A. (2017). Digital technology entrepreneurship: A definition and research agenda. *Technology Innovation Management Review*, 7(5).

38 Giones, F., & Brem, A. (2017). Digital technology entrepreneurship: A definition and research agenda. *Technology Innovation Management Review*, 7(5).

39 Giones, F., & Brem, A. (2017). Digital technology entrepreneurship: A definition and research agenda. *Technology Innovation Management Review*, 7(5).

40 Antoninis, M., & Montoya, S. (2018). A Global Framework to Measure Digital Literacy. UNESCO.

41 Antoninis, M., & Montoya, S. (2018). A Global Framework to Measure Digital Literacy. UNESCO.

a level 5-6 of literacy for youth to access career competence. Referencing to Accenture, if barriers to access digital skills were eliminated, there could be as many as 10 million youth jobs in G20 nations.⁴²

Taking the example of Bangladesh.⁴³ 33% of the country is youth (18-35 years old). Youth unemployment is one of the most prominent economic issues in Bangladesh. To combat this issue, the Government provided 'Technical Vocational Education and Training' (TVET) in collaboration with the ICT ministry is providing youth with digital skills to increase their chances for employment.⁴⁴

There needs to be a more significant initiative to provide youth with the necessary skills to pursue their entrepreneurial ventures. According to the Global Education Monitoring (GEM), youth are 1.6 times more likely to have entrepreneurial passions.⁴⁵ Furthermore, it is also clear that in countries such as Bangladesh, where youth make up a significant percentage of the population, having access to digital skills training is necessary to sustain the cycle of innovation. Focusing on providing the resources required to enable youths becoming entrepreneurs is one way to go.

Technological Innovation And The Advancement Of SDGs

In addition to building critical technical skills required to thrive in today's digital world, integrating new, emerging, and frontier technologies allows youth entrepreneurs to develop technological solutions that help accelerate progress towards the global goals. As technology continues to become an integral part of our everyday lives, ubiquitous sensors collect exponential amounts of data. With digitally-enabled platforms estimated to create 70% of new value in the economy in the next decade, advancing technologies are poised to substantially impact global GDP by 2030.⁴⁶ Advancing technology, coupled with big data, holds enormous potential for youth entrepreneurship geared towards the SDGs.

By now, it is widely understood that digital technologies could drive progress for all the SDGs and that it is essential to harness such a potential to be able to reach these goals by 2030. Youth entrepreneurs are already increasingly using evolving technologies to address systemic social challenges, for instance, by improving access to educational and health

services, facilitating the transition to affordable and clean energy, or helping communities adapt to climate change. Currently, digital trends like artificial intelligence (AI) have been sweeping the digital landscape. For example, AI-augmented computing has a wide variety of applications like minimizing medical errors, improving food production, customizing and disseminating education, modeling climate change, generating materials for cleaner fuels, and more.

Here's How Technology Can Advance The SDGs:

SDG2 – Zero Hunger

In 2019, an estimated 750 million people were exposed to severe levels of food insecurity and 2 billion people did not have access to safe, nutritious, and sufficient food.⁴⁷ If these trends continue, mass food shortages prevention and food production would need to be doubled by 2050⁴⁸ AI, sensors, and robotics hold promise for improving crop productivity and resilience, and to optimize food production, distribution, and consumption.

For instance, to optimize crop production, NRgene⁴⁹ uses machine learning and genetic sequencing to identify optimal gene profiles, which could improve yield, while Phyttech⁵⁰ uses its "Plant Internet of Things (IoT)" to send warnings, insights, and crop information to farmers' smartphones. Other solutions like Orbisk⁵¹ focus on reducing food waste. Orbisk monitors trash through its inbuilt camera and scale. By using AI-based image recognition, Orbisk captures what specific food and how much of it is wasted. This data is then used to recommend users what to buy, thereby preventing them from overspending and wasting food.

SDG3 – Good Health And Wellbeing

With the world in the midst of a global health crisis, ensuring healthy living and wellbeing is more important than ever. Health pandemics such as the COVID-19 destabilize the global economy and upend the lives of billions of people around the world, thereby showing the imminent need for better preparedness. A greater focus is needed on efficient funding of healthcare systems, improving sanitation and hygiene, and increasing access to healthcare services. Technological advancements such as AI, blockchain, sensors, and biotechnology can improve healthcare services. Healthcare startups have

42 Accenture (Firm). (2014). The promise of digital entrepreneurs: creating 10 million youth jobs in the G20 countries.

43 Bappy, Mehendi. (2020). Youth Skill For Entrepreneurship & Employment

44 Bappy, Mehendi. (2020). Youth Skill For Entrepreneurship & Employment.

45 Mayor's Digital Talent Programme. (2018). Digital Skills Training - Young Entrepreneurs.

46 Herweijer, C., & Kailash, D. (2018). A Global Framework to Measure Digital Literacy. World Economic Forum.

47 United Nations. N.d. Goal 2: Zero Hunger.

48 Fao. (2009). How to feed the world in 2050.

49 NRGENE. (2020). <https://www.nrgene.com/>

50 Phyttech. (2020). <https://www.phyttech.com/>

51 Orbisk. (2020). <https://orbisk.com/en/>

also attracted the attention of the largest tech companies like Alphabet, Amazon, Apple, and IBM.

One example is Kindara, a fertility and digital health company, which provides women with the tools, knowledge, and support to understand their fertility. Kindara offers a fertility app, which pairs with a Bluetooth-connected thermometer to track fertility data with greater ease and accuracy for healthier pregnancy outcomes.⁵² On the other hand, solutions like VRReliever by XRHealth tackle patient pain through pleasing and interactive imagery in virtual reality.⁵³ XRHealth also offers a range of virtual reality software for medical and wellness applications. Huge strides in AI-enabled diagnostics and treatment have led to the rise of companies like Optellum, which offers clinical decision support software for diagnosing and treating lung cancer.⁵⁴

SDG7 – Affordable And Clean Energy

According to the UN, 13 percent of the world population does not have access to modern electricity.⁵⁵ Since energy is the dominant contributor to climate change, it is essential to ensure access to reliable, affordable, and clean energy. Developments in AI, blockchain, advanced materials, battery technology, and other technologies mean that renewable energy mini-grids could now become the cheapest energy source for almost 300 million people.⁵⁶ AI and IoT could be used to build smart grids that optimize energy use by automating price based on market usage; or coordinating clusters of decentralized grids to improve operational efficiency and reduce waste. Technology-based solutions could reduce costs and bring cleaner energy alternatives to consumers.

Grid Edge, for instance, is developing a cloud-based AI software, which would allow building operators to predict, optimize, and control their energy consumption, thereby becoming active participants in the energy system.⁵⁷ Similarly, Energyly helps homes, businesses, and industries reduce their energy costs through an energy monitoring system that uses real-time energy data and an advanced visualization engine.⁵⁸ Blockchain solutions like LO3 layered into decentralized systems can facilitate peer-to-peer energy trading within microgrids.⁵⁹

A Way Forward

While technology holds tremendous potential to transform sectors rapidly and globally, it is not a silver bullet. Rapid technological development leads to social and econom-

ic disruptions; the effects of which are not yet clear. With the emergence of innovations, new policies and measures could be required to drive change to advance the SDGs. This would demand policymakers and governments to show awareness and adaptability. Technology is often only available to the wealthy and may exacerbate the gap with the vulnerable populations in society. Furthermore, the advent of new technologies may affect the labor market and could lead to the disappearance of some jobs. While new jobs may be created, this would need the re-skilling of large parts of the population.

A positive and technology-enabled sustainable future will not emerge unguided. Technology companies, governments, civil society, industries, and academics have to come together to harness the potential of technological innovation for the SDGs - from developing robust ethical frameworks to evolving legislation, training new skills, and even reforming labor markets. Additionally, greater awareness and capacity is required among policymakers not only to change mindsets in the public sectors but also to encourage investment in science and technology and design policies under which the counterproductive effects of technological change are mitigated.

Conclusion

Youths are drivers for sustainable change. By utilizing digital technologies, young entrepreneurs have developed new and innovative solutions that solve global issues to accomplish the SDGs. However, this paper finds that in order to ensure that youth are these drivers for change, they require resources such as seed funding and access to digital skill training programs. This paper demonstrates that when youth do not have access to these resources, it acts as a significant barrier that has detrimental impacts on their nation's economy. When youths are empowered to become entrepreneurs, they have a positive impact on creating new jobs and pathways to accomplish change. Finally, this paper concludes via a series of case studies about how youth have been able to utilize technology to accomplish the SDGs. Although digital technology solutions have overwhelming positive impacts on both accomplishing the SDGs and empowering youth, it cannot be the only means for positive and sustainable change. In order to have long-lasting impact, policies supporting innovation and creating an ecosystem of technological advancement are paramount for long term sustainable impact.

52 Kindara. (2020). <https://www.kindara.com>

53 XR Health. (2020). <https://www.xr.health/xr-health-platform/>

54 Optellum. (2020). <http://www.optellum.com>

55 United Nations. N.d. Ensure access to affordable, reliable, sustainable and modern energy

56 Rowling, M. (2019). Subsidise solar mini-grids to power rural Africa, investors urge. Thomson Reuters Foundation.

57 Grid Edge. (2020). <https://www.gridedge.co.uk>

58 Energyly. (2020) <https://www.energyly.com>

59 Lo3 Energy. (2020). <https://lo3energy.com>

References

- Accenture (Firm). (2014). The promise of digital entrepreneurs: creating 10 million youth jobs in the G20 countries. https://www.accenture.com/us-en/~/_media/accenture/conversion-assets/dotcom/documents/global/pdf/du
- Giones, F., & Brem, A. (2017). Digital technology entrepreneurship: A definition and research agenda. *Technology Innovation Management Review*, 7(5). https://timreview.ca/sites/default/files/article_PDF/GionesBrem_TIMReview_May2017.pdf
- Antoninis, M., & Montoya, S. (2018). A Global Framework to Measure Digital Literacy. UNESCO. <http://uis.unesco.org/en/blog/global-framework-measure-digital-literacy>
- Bappy, Mehendi. (2020). Youth Skill For Entrepreneurship & Employment. <https://www.msn.com/en-xl/news/other/youth-skill-for-entrepreneurship-26-employment/ar-BB16JyKN>
- Herweijer, C., & Kailash, D. (2018). A Global Framework to Measure Digital Literacy. World Economic Forum. <https://www.weforum.org/agenda/2019/09/technology-global-goals-sustainable-development-sdgs/>
- Mayor's Digital Talent Programme. (2018). Digital Skills Training - Young Entrepreneurs. https://www.london.gov.uk/sites/default/files/young_entrepreneurs_requirements_final_30.10.2018_2.pdf
- United Nations. N.d. Goal 2: Zero Hunger. <https://www.un.org/sustainabledevelopment/hunger/>
- Fao. (2009). How to feed the world in 2050. http://www.fao.org/fileadmin/templates/wsfs/docs/expert_paper/How_to_Feed_the_World_in_2050.pdf
- United Nations. N.d. Ensure access to affordable, reliable, sustainable and modern energy. <https://www.un.org/sustainabledevelopment/energy/>
- Rowling, M. (2019). Subsidise solar mini-grids to power rural Africa, investors urge. Thomson Reuters Foundation. <https://uk.reuters.com/article/global-energy-solar/subsidise-solar-mini-grids-to-power-rural-africa-investors-urge-idUKL8N23H1UC>

CHAPTER 08

The Role Of Young Entrepreneurs In Protecting Biodiversity

Daniela Fernandez
Founder, and CEO of Sustainable
Ocean Alliance

What once would have sounded impossibly hyperbolic is now a reality: we are in the midst of a biodiversity crisis. The incredible complexity and variance of the natural world are in danger, and mass extinction is no longer the stuff of science-fiction; it's instead a highly likely prediction of what we should expect to see in the next few decades.

Last year, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) published a report that detailed the state of nature's decline. Pulling from a variety of sources, including scientific and government sources as well as indigenous and local knowledge, the report found that approximately one million animal and plant species are threatened with extinction, with a high likelihood that many of these species will disappear within decades.⁶⁰ A number of this size is unprecedented in human history and it is nearly impossible to conceptualize what a loss of one million animal and plant species actually will look like — particularly because so much of this change will be out of direct view. While a mass extinction event will certainly have repercussions for land-based flora and fauna, 80% of life on earth is found in the ocean, and therefore much of the change will be in our global waters.⁶¹ Returning to the report by IPBES, one million animal and plant species reflects almost 33% of reef-forming corals and more than a third of all marine mammals. This kind of destruction is both tragic and devastating, yet, unsurprising.

The ocean exemplifies how man's impact on the environment has snowballed and reached a tipping point. For example, since 1980, plastic pollution has increased tenfold.⁶² Each year, eight million metric tons of plastic are dumped into the ocean — the equivalent of nearly 57,000 blue whales — which has a direct impact on the health of ecosystems and individual species. Plastic has been found in more than 60% of all seabirds and 100% of all turtle species.⁶³ Plastic pollution even dominates deeper ocean ecosystems, with one study finding nearly 15 bits of plastic in every liter of water 200m below the surface.⁶⁴ Another study from 2017 supports this finding, estimating that up to 196m tons of plastic may have settled from the surface into the deep ocean since 1950.⁶⁵ If this pace of pollution continues, by 2050, ocean plastic will outweigh all of the ocean's fish.⁶⁶

Ocean acidification is on a similar, worrisome trajectory, with some estimates indicating that by the end of this century, ocean surface waters could be nearly 150% more acidic than they are now.⁶⁷ Already, decreases in the ocean's pH levels has resulted in the structure of coral reefs around the world to become thinner and weaker, impacting their growth abilities.⁶⁸ Coral reefs are far from the only ecosystem impacted by ocean acidification, but they demonstrate how lower pH levels have massive impacts on marine habitats. Global increases in carbon emissions, the driver of ocean acidification, is resulting in monumental losses to ocean biodiversity, as ocean organisms can no longer withstand the water's increasing temperature and acidity.

The EPA states that the ocean surface layer absorbs approximately one third of human-released CO₂, a fact that has caused it to be nicknamed the "lungs of the earth" by UNESCO.⁶⁹ In the past, these "lungs" have been incredibly resilient and have accommodated many of the activities exacerbating climate change. However, plastic pollution and the warming of our waters has finally reached a tipping point, and the biodiversity of our ocean cannot withstand such monumental and devastating changes. As a result, neither can our current economies, food systems, or population. Solutions to the current crises facing humanity needs to be audacious and actionable. While non-profit initiatives and governmental legislation will play key roles in supporting ocean rehabilitation and biodiversity efforts, it will arguably be entrepreneurs that lead the charge in developing solutions that address our current biodiversity crisis.

Entrepreneurs have unknowingly been trained to take on just this sort of critical and wide-ranging challenge. They are used to prioritizing the development of solutions that scale. Additionally, they know that only solutions that make sense economically will be adopted. While an entrepreneur at any age could develop a cornerstone solution for addressing biodiversity's collapse, young entrepreneurs wield a unique power when it comes to imagining the solutions that will save our current environments and future economies.

Young entrepreneurs have grown up in an unstable world. Millennials entered the workforce during the Great Recession of 2008, and have since lived through the destabilizing events

60 "UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating' – United Nations Sustainable Development." United Nations. United Nations. Accessed September 10, 2020. <https://www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report/>

61 <https://media.nationalgeographic.org/assets/file/one-ocean-chapter-3.pdf>

62 UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating,' Ibid.

63 Giskes, Ingrid, Janis Searles Jones, Guest Blogger, and Nick Mallos. "Plastics in the Ocean." Ocean Conservancy, September 2, 2020. <https://oceanconservancy.org/trash-free-seas/plastics-in-the-ocean/>

64 Buranyi, Stephen. "The Missing 99%: Why Can't We Find the Vast Majority of Ocean Plastic?" The Guardian. Guardian News and Media, December 31, 2019. <https://www.theguardian.com/us-news/2019/dec/31/ocean-plastic-we-cant-see>

65 Ibid.

66 "Ocean Pollution: 11 Facts You Need to Know." Ocean pollution - 11 facts you need to know. Accessed September 10, 2020. <https://www.conservation.org/stories/ocean-pollution-11-facts-you-need-to-know>

67 January 22, 2018. Melissa Denchak. "Ocean Pollution: The Dirty Facts." NRDC, June 4, 2020. <https://www.nrdc.org/stories/ocean-pollution-dirty-facts>

68 Cosmos. "Reef 'Glue' Threatened by Ocean Acidification." Cosmos Magazine, September 6, 2020. <https://cosmosmagazine.com/nature/oceans/reef-glue-threatened-by-ocean-acidification/>

69 "Understanding the Science of Ocean and Coastal Acidification." EPA, Environmental Protection Agency, 23 Aug. 2019, www.epa.gov/ocean-acidification/understanding-science-ocean-and-coastal-acidification

of 9/11 and the Iraq War.⁷⁰ Gen Z'ers are now entering the workforce during a global pandemic. It is these generations that are the ones that will inhabit the world that IPBES forecasts — a world in which between 100 and 300 million people living on coastal areas are at increased risk due to loss of coastal habitat protection, leading to unsustainable amounts of climate refugees.⁷¹ Millennials and Gen Z'ers are the ones that will live to see our ocean overfished and experience the day when plastic officially overtake ocean ecosystems. They understand the stakes inherent in any solution they create, and they are aware of the time crunch implicit in their product roadmaps.

However, while some might consider these facts a barrier to entry, or representative of an insurmountable challenge, young What once would have sounded impossibly hyperbolic is now a reality: we are in the midst of a biodiversity crisis. The incredible complexity and variance of the natural world are in danger, and mass extinction is no longer the stuff of science-fiction; it's instead a highly likely prediction of what we should expect to see in the next few decades.

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Ocean acidification is on a similar, worrisome trajectory, with some estimates indicating that by the end of this century, ocean surface waters could be nearly 150% more acidic than they are now. Already, decreases in the ocean's pH levels has resulted in the structure of coral reefs around the world to become thinner and weaker, impacting their growth abilities. Coral reefs are far from the only ecosystem impacted by ocean acidification, but they demonstrate how lower pH levels have massive impacts on marine habitats. Global increases in carbon emissions, the driver of ocean acidification, is resulting in monumental losses to ocean biodiversity, as ocean organisms can no longer withstand the water's increasing temperature and acidity.

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Young entrepreneurs have grown up in an unstable world. Millennials entered the workforce during the Great Recession of 2008, and have since lived through the destabilizing events of 9/11 and the Iraq War. Gen Z'ers are now entering the

70 Lowrey, Annie. "Millennials Don't Stand a Chance." The Atlantic. Atlantic Media Company, May 15, 2020. <https://www.theatlantic.com/ideas/archive/2020/04/millennials-are-new-lost-generation/609832/>

71 UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating,' Ibid.

workforce during a global pandemic. It is these generations that are the ones that will inhabit the world that IPBES forecasts — a world in which between 100 and 300 million people living on coastal areas are at increased risk due to loss of coastal habitat protection, leading to unsustainable amounts of climate refugees. Millennials and Gen Z'ers are the ones that will live to see our ocean overfished and experience the day when plastic officially overtake ocean ecosystems. They understand the stakes inherent in any solution they create, and they are aware of the time crunch implicit in their product roadmaps.

However, while some might consider these facts a barrier to entry, or representative of an insurmountable challenge, young entrepreneurs view this simply as the reality of their market. An astounding 89% of youth respondents to a UN Environment Programme survey, said that they believed they could make a difference on climate change.⁷² Additionally, close to half a million youth around the world have already taken action on climate change through small grants programs and projects in their homes, schools and communities.⁷³ The Sustainable Ocean Alliance (SOA) has seen similar numbers of engagements in their Ocean Leadership Program, with young ocean leaders from over 165 countries participating.⁷⁴

Among these young leaders, SOA has seen companies being founded, such as Verdant Seas, which designs blends of marine microalgae to create aquaculture feeds for tilapia, the second most farmed fish globally. The company was founded by one of SOA's Young Ocean Leaders, Ashley Bae, in 2019. Bae was motivated to found Verdant Seas after searching for a solution to make aquaculture more sustainable and scalable.

Currently, aquaculture provides roughly 43% of all fish consumed globally.⁷⁵ This number is expected to increase, with The Food and Agriculture Organization of the UN estimating that aquaculture will be responsible for nearly two-thirds of the fish we eat by 2030.⁷⁶ Unfortunately, farmed fish today largely rely on unsustainable feed sources. For example, farmed tuna requires roughly 20kg of wild fish feed in order to produce 1kg of farmed fish.⁷⁷ While this is one of the most dramatic ratios, salmon, often used as a benchmark for the industry, still regularly require as much as 2.5-5kg of

wild fish for each kilogram of farmed salmon.⁷⁸ Unsustainable aquaculture practices compound into problems of biodiversity long-term, as the pressure to harvest fish for feed often leads to untenable levels of overfishing. Additionally, fragile ecosystems may be converted for aquaculture use, while aquaculture species themselves may transmit diseases to wild fish.⁷⁹

Bae was motivated to take on these challenges in a way that would challenge and compete with current market solutions. In founding Verdant Seas, she seeks to "[decouple] wild fish capture from farmed fish production while boosting fishes' growth rates and nutritional profiles."⁸⁰ As a consequence, Verdant Seas' microalgae-based feeds are completely fish-free. While both the company and founder are young, they've succeeded in imagining a world where current food production systems are aligned with the natural biodiversity of the ocean.

Similarly, Dan Watson was just finishing a program at the Glasgow School of Art when he began developing the technology that would become the bedrock of his future company, SafetyNet Technologies. Like Bae, Watson was motivated to find a solution to a seemingly intractable problem: Each year more than 27 million tonnes of fish and other sea creatures are being thrown away, as fishermen seek to capture targeted fish species and instead accidentally collect a whole host of other sea creatures.⁸¹ Known as "bycatch," the World Wildlife Foundation estimates that over 300,000 small whales, dolphins, and porpoises die as a result of bycatch each year.⁸²

Hoping to rectify this problem, Watson applied his product design engineering skills to develop a solution. His resulting technology is a device that emits 10 different colors of light, each specially programmed to attract or repel different kinds of fish. Fishermen can easily attach the device, known as a Pisces, to their nets in order to better target their desired catch and reduce bycatch by up to 60%.⁸³

Both Bae and Watson are a part of a broader ecosystem of youth engagement with entrepreneurship that paints a very clear picture: Young entrepreneurs understand the challenges of biodiversity, and despite discouraging odds, they are

72 "#YouthStats: Environment and Climate Change - Office of ..." Accessed September 10, 2020. <https://www.un.org/youthenvoy/environment-climate-change/>

73 Ibid.

74 Alliance, Sustainable Ocean. "Ocean Leadership Program - Sustainable Ocean Alliance." Homepage - Sustainable Ocean Alliance, 2020. <https://www.soalliance.org/leadership/>

75 "Challenging the Aquaculture Industry on Sustainability." <https://www.greenpeace.org/usa/wp-content/uploads/legacy/Global/usa/report/2008/3/challenging-aquaculture.pdf>

76 Renee Cho | April, Renee Cho, 2, Pinkeshwar Kumar, and Adrienne Caldwell. "Making Fish Farming More Sustainable." State of the Planet, April 25, 2019. <https://blogs.ei.columbia.edu/2016/04/13/making-fish-farming-more-sustainable/>

77 "Challenging the Aquaculture Industry on Sustainability," Ibid.

78 Ibid.

79 Diana, James S. "Aquaculture Production and Biodiversity Conservation." OUP Academic. Oxford University Press, January 1, 2009. <https://academic.oup.com/bioscience/article/59/1/27/306930>

80 <https://www.verdantseas.com/our-product>

81 Reid-Collins, S. "Imperial Start-up Turning the Tide on Fishing Bycatch: Imperial News: Imperial College London." Imperial News, March 17, 2020. <https://www.imperial.ac.uk/news/196216/imperial-start-up-turning-tide-fishing-bycatch/>

82 "Bycatch." WWF. World Wildlife Fund, 2020. <https://www.worldwildlife.org/threats/bycatch/>

83 Reid-Collins, S. Ibid.

eager to take on the problem. This is fortunate for humanity because, as SOA's solutions demonstrate, there is perhaps no better group to develop the solutions our ocean and world will need in order to combat the complex forces of pollution, habitat destruction, and resource extraction.

One key reason that young entrepreneurship has succeeded in developing solutions to protect biodiversity, is that young people are used to leveraging distributed networks. The United Nations confirms what most people have already observed: many young people today travel around the world for a variety of reasons, including work, education, and vacation. In fact, the UN goes on to estimate that 20% of all international tourists, or nearly 200 million travelers, are young people.⁸⁴ Travel has allowed this generation to see the effects of climate change first hand. Whether that means traveling to Iceland's melting glaciers, experiencing New Delhi's overwhelming air pollution, or simply visiting a beach that is clogged with plastic, the results are the same in that millennials and gen Z'ers are pushed towards change.⁸⁵ They are inspired to attend global conferences that will allow them to forge connections, as well as to make international connections that will allow them to continue to travel and learn.

Beyond physically traveling, the internet has proven to be a powerful tool for connecting young people with friends and resources all over the world. The UN states that information technologies, like the internet, have "played a central role in young people's rise to prominence on a global scale. It has helped them to mobilize and collaborate, and it has given them a voice where before they had none."⁸⁷ This has been demonstrated by youth environmental activist movements, like the Global Climate Strike,⁸⁸ but it's also been proven in entrepreneurial spaces. For example, 40% of the companies of SOA's Accelerator come from outside the US, with 85% being led by founders under the age of 35.

Global networks are key to solving a global problem such as biodiversity, as only by developing a diverse network can you ensure that your solutions and campaigns accurately reflect what's happening all over the world. The problem of ocean biodiversity needs a diversified perspective with a solutions-oriented approach, and that's exactly what young entrepreneurship brings to the table.

84 Machado, Amanda. "How Millennials Are Changing Travel." The Atlantic. Atlantic Media Company, July 24, 2018. <https://www.theatlantic.com/international/archive/2014/06/how-millennials-are-changing-international-travel/373007/>

85 Vargas, Nikki. "How Climate Change Is Affecting Iceland's Tourism Industry." Medium. The Omnivore, August 17, 2017. <https://medium.com/the-omnivore/how-climate-change-is-affecting-icelands-tourism-industry-688e20a3c2bb>.

86 Kotoky, Anurag. "Record Air Pollution Prompts Tourists to Avoid New Delhi, India." Bloomberg.com. Bloomberg, November 5, 2019. <https://www.bloomberg.com/news/articles/2019-11-05/record-delhi-pollution-prompt-tourists-to-head-for-the-hills>

87 "#YouthStats: Information and Communication Technology - Office of the Secretary-General's Envoy on Youth." United Nations. United Nations, 2020. <https://www.un.org/youthenvoy/information-communication-technology/>.

88 Irfan, Umair. "Greta Thunberg Is Leading Kids and Adults from 150 Countries in a Massive Friday Climate Strike." Vox. Vox, September 17, 2019. <https://www.vox.com/2019/9/17/20864740/greta-thunberg-youth-climate-strike-fridays-future>.

89 Intelligence, Business Insider. "Drone Market Outlook: Industry Growth Trends, Market Stats and Forecast." Business Insider. Business Insider, March 3, 2020. <https://www.businessinsider.com/drone-industry-analysis-market-trends-growth-forecasts>.

90 Lukas Schroth. "The Drone Market Size 2020-2025." Drone Industry Insights, August 26, 2020. <https://www.droneii.com/the-drone-market-size-2020-2025-5-key-takeaways>.

As the UN implies, these diversified networks fostered by a new generation of entrepreneurs would be nearly impossible without an intimate knowledge of how to leverage technology for their goals. Young entrepreneurs have grown up as technology natives, and this gives them another advantage when taking on the challenge of biodiversity. Not only do they know how to utilize the newest tech to support their goals, but they also know how to build on emerging tech to create new solutions.

This holistic understanding of the current technology landscape is crucial to ensuring that new solutions are capable and competitive. For example, one SOA Accelerator Alumnae, Ellie Mackay, was able to found her company, Ellipsis Earth, because of a thorough knowledge of drone technology and its emerging market. Drones are still a relatively nascent technology, given that it was just recently in 2016 that the Federal Aviation Administration granted a huge swath of new exemptions for companies to operate drones in the US.⁸⁹ It's estimated that the drone market will grow to \$42.8B by 2025, with applications across agriculture, insurance, and telecom.⁹⁰ In this emerging landscape of applications, Mackay was able to find the huge whitespace — drone usage for environmental monitoring and education — and develop the required technology to address this need. Now, Ellipsis has developed software that can classify plastic, as well as detect specific plastic types (e.g. PVA, PET or styrofoam), particular local items (e.g. coffee capsules) or named brands. By combining this software with drone technology, Ellipsis can partner with governments, corporations, academia and non-profits to produce wide-ranging content for environmental education.

Such a solution would have been impossible to dream up without a native understanding of drone technology and its capabilities. Additionally, only by utilizing a global network of support, like SOA's Accelerator program, was Mackay able to launch Ellipsis Earth. Her company is a prime example of the unique power of the millennial to develop an entrepreneurial solution capable of protecting biodiversity and ultimately changing the world.

The solutions that young entrepreneurs are just building today will soon form the foundation of humanity's push to protect biodiversity, complementing necessary changes in legislation. Right now, sustainability as a focus in entrepreneurship is

something relatively new. This fact is even more apparent when you look at the ocean technology sector, also known as the blue economy, which has only recently been named and defined.⁹¹

Before recent years, when society spoke of positive environmental changemakers, it was almost always in the context of conservationists and preservationists, as opposed to technologists and solutionists. However, entrepreneurship focused on sustainability and maintaining biodiversity fulfills a meaningful role in that it allows positive change to happen at a faster rate. Additionally, it allows the upcoming generations to truly take ownership of the problems we're facing and to identify the things that work in their own communities. At its heart, youth entrepreneurship is a way of bringing back responsibility and ownership to local communities, and then having local people there feel as though they have the resources and mentorship they need to be active innovators in this space. This is why we're seeing millennials and Gen Z founders build up the blue economy and its sister industries and turning them into powerful markets and desirable areas for investment.

Looking into the near future, it's fair to say that even 10 years from now, young entrepreneurs in the blue economy and beyond are going to be the norm. We will see an explosion of accelerators for the ocean to accommodate them, as well as scientific institutions dedicated to ocean entrepreneurship. As a result, the ocean and our planet will be on a much better path than it is today because young people will have met the challenge head-on.

What biodiversity needs is an incredibly diverse marketplace of ideas, varied enough to match the creatures at risk. Like any market, the solutions that are the best will be the ones that succeed and have a real impact. But in order for us to get there, we need to fill the market with these ideas. We need to do all that we can to encourage the next wave of young entrepreneurs.

⁹¹ Spalding, Mark J. "The New Blue Economy: the Future of Sustainability." Digital Commons @ Center for the Blue Economy. Accessed September 10, 2020. <https://cbe.miss.edu/joce/vol2/iss2/8/>.

References

- "UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating' – United Nations Sustainable Development." United Nations. United Nations. Accessed September 10, 2020. <https://www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report/>
- <https://media.nationalgeographic.org/assets/file/one-ocean-chapter-3.pdf>
- UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating,' Ibid.
- Giskes, Ingrid, Janis Searles Jones, Guest Blogger, and Nick Mallos. "Plastics in the Ocean." Ocean Conservancy, September 2, 2020. <https://oceanconservancy.org/trash-free-seas/plastics-in-the-ocean/>
- Buranyi, Stephen. "The Missing 99%: Why Can't We Find the Vast Majority of Ocean Plastic?" The Guardian. Guardian News and Media, December 31, 2019. <https://www.theguardian.com/us-news/2019/dec/31/ocean-plastic-we-cant-see>
- UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating,' Ibid. "Ocean Pollution: 11 Facts You Need to Know." Ocean pollution - 11 facts you need to know. Accessed September 10, 2020. <https://www.conservation.org/stories/ocean-pollution-11-facts-you-need-to-know>
- January 22, 2018. Melissa Denchak. "Ocean Pollution: The Dirty Facts." NRDC, June 4, 2020. <https://www.nrdc.org/stories/ocean-pollution-dirty-facts>
- Cosmos. "Reef 'Glue' Threatened by Ocean Acidification." Cosmos Magazine, September 6, 2020. <https://cosmosmagazine.com/nature/oceans/reef-glue-threatened-by-ocean-acidification/>
- "Understanding the Science of Ocean and Coastal Acidification." EPA, Environmental Protection Agency, 23 Aug. 2019, www.epa.gov/ocean-acidification/understanding-science-ocean-and-coastal-acidification
- Lowrey, Annie. "Millennials Don't Stand a Chance." The Atlantic. Atlantic Media Company, May 15, 2020. <https://www.theatlantic.com/ideas/archive/2020/04/millennials-are-new-lost-generation/609832/>
- UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating,' Ibid. "#YouthStats: Environment and Climate Change - Office of ..." Accessed September 10, 2020. <https://www.un.org/youthenvoy/environment-climate-change/>
- UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating,' Ibid.
- Alliance, Sustainable Ocean. "Ocean Leadership Program - Sustainable Ocean Alliance." Homepage - Sustainable Ocean Alliance, 2020. <https://www.soalliance.org/leadership/>
- "Challenging the Aquaculture Industry on Sustainability." <https://www.greenpeace.org/usa/wp-content/uploads/legacy/Global/usa/report/2008/3/challenging-aquaculture.pdf>
- Renee Cho | April, Renee Cho, 2, Pinkeshwar Kumar, and Adrienne Caldwell. "Making Fish Farming More Sustainable." State of the Planet, April 25, 2019. <https://blogs.ei.columbia.edu/2016/04/13/making-fish-farming-more-sustainable/>
- "Challenging the Aquaculture Industry on Sustainability," Ibid.
- UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating,' Ibid.
- Diana, James S. "Aquaculture Production and Biodiversity Conservation." OUP Academic. Oxford University Press, January 1, 2009. <https://academic.oup.com/bioscience/article/59/1/27/306930>
- <https://www.verdantseas.com/our-product>
- Reid-Collins, S. "Imperial Start-up Turning the Tide on Fishing Bycatch: Imperial News: Imperial College London." Imperial News, March 17, 2020. <https://www.imperial.ac.uk/news/196216/imperial-start-up-turning-tide-fishing-bycatch/>
- "Bycatch." WWF. World Wildlife Fund, 2020. <https://www.worldwildlife.org/threats/bycatch/>
- Reid-Collins, S. Ibid.
- Machado, Amanda. "How Millennials Are Changing Travel." The Atlantic. Atlantic Media Company, July 24, 2018. <https://www.theatlantic.com/international/archive/2014/06/how-millennials-are-changing-international-travel/373007/>
- Vargas, Nikki. "How Climate Change Is Affecting Iceland's Tourism Industry." Medium. The Omnivore, August 17, 2017. <https://medium.com/the-omnivore/how-climate-change-is-affecting-iceland-tourism-industry-688e20a3c2bb>
- Kotoky, Anurag. "Record Air Pollution Prompts Tourists to Avoid New Delhi, India." Bloomberg.com. Bloomberg, November 5, 2019. <https://www.bloomberg.com/news/articles/2019-11-05/record-delhi-pollution-prompt-tourists-to-head-for-the-hills>
- "#YouthStats: Information and Communication Technology - Office of the Secretary-General's Envoy on Youth." United Nations. United Nations, 2020. <https://www.un.org/youthenvoy/information-communication-technology/>
- Irfan, Umair. "Greta Thunberg Is Leading Kids and Adults from 150 Countries in a Massive Friday Climate Strike." Vox. Vox, September 17, 2019. <https://www.vox.com/2019/9/17/20864740/greta-thunberg-youth-climate-strike-fridays-future>
- Intelligence, Business Insider. "Drone Market Outlook: Industry Growth Trends, Market Stats and Forecast." Business Insider. Business Insider, March 3, 2020. <https://www.businessinsider.com/drone-industry-analysis-market-trends-growth-forecasts>
- Lukas Schroth. "The Drone Market Size 2020-2025." Drone Industry Insights, August 26, 2020. <https://www.droneii.com/the-drone-market-size-2020-2025-5-key-takeaways>
- Spalding, Mark J. "The New Blue Economy: the Future of Sustainability." Digital Commons @ Center for the Blue Economy. Accessed September 10, 2020. <https://cbe.miiis.edu/joce/vol2/iss2/8/>



PART 3



THE FUTURE OF YOUNG ENTREPRENEURSHIP



CHAPTER 09

The New Challenges And Opportunities Of Youth Social Entrepreneurship After COVID-19

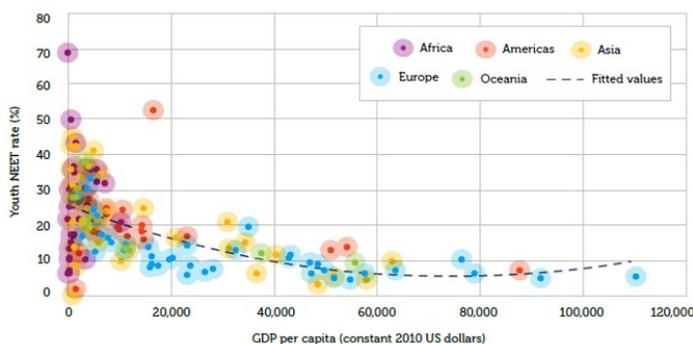
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Introduction

As the COVID-19 crisis has spread throughout the world, impacting millions of people, there has been a decreasing demand for labor, goods, and services, which disproportionately inhibits income-generation opportunities for the poor and vulnerable youth. Youth social entrepreneurs are young people who engage in entrepreneurial activity with the objective of addressing societal issues. The World Bank Global Economic Prospects Report shows that the global economy is expected to shrink by 5.2% in 2020, which is the deepest global recession since World War II.¹ This global economic downturn presents new challenges for youth social entrepreneurs operating in a COVID-19 environment as data indicates a strong relationship between GDP per capita and youth not in education, employment, or training (NEET) rate (Figure 1).

Worldwide, a total of 178 million young workers representing more than 40% of youth employment, were working in vulnerable sectors when the crisis began.² Additionally, the International Labour Organization (ILO) estimates that more than one in six young persons has become unemployed due to the pandemic.³ Furthermore, among young people who remained employed, working hours have fallen by 23%.⁴

Figure 1. Relationship between GDP per capita and the youth NEET rate, 2018 Or Most Recent Estimate based on Region



Source: United Nations World Youth Report (2020)

Fostering youth social entrepreneurship achieves the dual benefits of generating youth employment and sustainable development. Advancing effective entrepreneurial activity amongst youth is a critical development strategy to integrate the youth into the labor market as well as harness their potential to contribute to the broader society post COVID-19. While the COVID crisis has created new challenges, it has

also opened new avenues for youth social entrepreneurs to enter into the business arena and have greatly enhanced existing channels. In a post COVID-19 world, it is more urgent than ever to find data-driven solutions to the most pressing problems.

In this chapter, we present the challenges faced by youth social entrepreneurs across the globe during COVID-19 and identify several initiatives being developed by organizations to address these circumstances to provide opportunities for these youth innovators.

Challenges Faced By Youth Social Entrepreneurs After COVID-19



Pre-COVID youth entrepreneurs faced many issues that were further exacerbated by the crisis and will persist post COVID. These issues include:

- Digital access inequalities and digital skills gap,

- Lack of access to funding and financial opportunities, and

- Managing mental health and emotions

These issues are linked to social structural norms and individual characteristics such as age, gender, origin, and educational background. For example, young women continue to encounter gender-based barriers in their efforts to start and grow social enterprises due to cultural practices, limited voice, low representation, and unequal division of household responsibilities within their homes.⁵

A. Digital access inequalities and digital skills gap

Access to the internet and information communications technologies (ICT) can play a fundamental role in the success of a youth social enterprise. Unequal access to technology in a post COVID world is a hurdle that many youth social entrepreneurs will have to withstand as it has created a digital divide by heightening inequalities amongst youth in society.

1 See World Bank (2020), Global Economic Prospects Report <https://www.worldbank.org/en/publication/global-economic-prospects> (accessed 15 July 2020).

2 See ILO (2020), ILO Monitor: COVID-19 and the world of work. Fourth edition https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_745963.pdf (accessed 15 July 2020).

3 See ILO (2020), ILO Monitor: COVID-19 and the world of work. Fourth edition https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_745963.pdf (accessed 15 July 2020).

4 See ILO (2020), ILO Monitor: COVID-19 and the world of work. Fourth edition https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_745963.pdf (accessed 15 July 2020).

5 See United Nations (2020), World Youth Report <https://www.un.org/development/desa/youth/wp-content/uploads/sites/21/2020/07/2020-World-Youth-Report-FULL-FINAL.pdf> (accessed 20 July 2020).

Youth living in remote rural areas or poverty-stricken communities with little or no digital connectivity have limited access to online services. These include non-financial services such as online training opportunities and virtual freelancing, and financial services such as banking and e-commerce platforms to promote their business.

In comparison, youth living in metropolitan cities or privileged communities have opportunities to expand their social enterprises online, enhance their social networks, strengthen their knowledge base, and identify financing opportunities at a faster rate to support venture creation and development in a post COVID-19 environment. The crisis has accelerated the trend away from traditional brick-and-mortar sales towards e-commerce due to personal convenience and public health concerns. Therefore, youth social entrepreneurs' businesses with limited online presence encounter the prospect of being increasingly irrelevant in a post COVID world.

Furthermore, youth social entrepreneurs' lack of access to the internet increases the digital skills gap and limits vulnerable young people's educational opportunities. Many digital skills training programs have moved to virtual platforms, and this trend is likely to continue in a post COVID world. Digital skills training is vital for youth to adapt to new innovations such as cloud computing, data science, artificial intelligence, and advanced digital analytics that prepare young social entrepreneurs for the future entrepreneurial environment. Therefore, youth social entrepreneurs with limited access to educational opportunities would face the challenge of maintaining business continuity post COVID-19.

B. Lack of access to funding and financial opportunities

Prior to the COVID-19 crisis, youth social entrepreneurs struggled with obtaining sufficient funding for their business. Additionally, legal and regulatory restrictions relating to enterprises registration and funding platforms limited the uptake of youth social entrepreneurship, especially in the global South, as many youth entrepreneurs do not have access to Indiegogo or GoFundMe compared to youth in the global North.⁶ Therefore, when the crisis arose, the inability to access financing only intensified.

Retail banks have also limited the types of financing that are available to youth entrepreneurs or added more restrictive qualification criteria for loans to reduce the bank's credit risk.⁷ Economic impacts from the pandemic pose a serious threat to every entrepreneur, especially youth social entrepreneurs

who are in the business of creating social impact. This issue will continue in a post COVID environment as businesses will continue to struggle to pay back their creditors while governments, along with international development banks, attempt to inject stimulus packages to stabilize financial markets. These packages may be insufficient for youth entrepreneurs to remain solvent. Therefore, a significant hurdle for these youth businesses to overcome is searching out new avenues to obtain funding for their businesses as traditional avenues of commercial sales have changed drastically.

C. Managing physical and mental health

Prior to the crisis, isolation was on the rise for many youth entrepreneurs despite the increased use of social apps and phone connectivity. However, as economic impacts and social isolation measures continue, a current challenge for many youth social entrepreneurs is managing the increased needs of employees' physical and mental health. Compared to other groups, the OECD has found that many young people are experiencing significant stress, anxiety, and loneliness due to the psychological impacts of social distancing and quarantine measures.⁸ A workforce under mental strain can adversely impact the operational effectiveness of the business. Therefore, it is important that youth enterprises develop adequate internal systems in the workplace to ensure that physical and mental well-being is being maintained.

Opportunities For Youth Social Entrepreneurship After COVID-19



COVID-19 has accelerated underlying consumer trends and broadened changes in societies. Youth social entrepreneurs who embraced internet technology before the pandemic had the ability and advantage to fast track their business growth as the proficiency to utilize digital tools has become an essential element for businesses to survive. Additionally, the heightened economic restructuring by governments to manage the COVID-19 crisis and the launch by international organizations to enter into global partnerships with the private sector has begun to revitalize social programs that provide youth social entrepreneurs the requisite education

⁶ See United Nations (2020), World Youth Report <https://www.un.org/development/desa/youth/wp-content/uploads/sites/21/2020/07/2020-World-Youth-Report-FULL-FINAL.pdf> (accessed 20 July 2020).

⁷ See Deloitte (2020), Retail Banking in the Age of COVID-19 Scenarios for Resilient Leaders <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Financial-Services/gx-fsi-retail-banking-in-the-age-of-covid-19.pdf> (accessed 13 August 2020).

⁸ See OECD (2020), Youth and COVID-19 Response, Recovery and Resilience https://read.oecd-ilibrary.org/view/?ref=134_134356-ud5kox3g26&title=Youth-and-COVID-19-Response-Recovery-and-Resilience (accessed 8 August 2020).

al and financial incentives to enhance opportunities across societal sectors.

New opportunities in the education and finance sector have arisen for youth social entrepreneurs

A. Education Sector

The COVID-19 crisis has directly stressed the education sector globally due to public health measures such as social distancing and maintaining the safety of young students. In March 2020, approximately 1.5 billion students were not in school in 167 countries.⁹ School closures across the globe highlighted the inequalities in education, deficiencies in remote learning, the cost of the digital divide, and the crucial role schools provide in promoting students' health and well-being.

Pre-COVID global learning technology investments had reached \$18.66 billion in 2019.¹⁰ As many countries have begun phased school reopening, youth entrepreneurs have access to numerous opportunities post COVID-19 as these global learning technology investments will continue to progress.

Photo: © National Geographic Explorer Classroom



Increased access to diverse learning systems

One such area is in online learning, which can help youth entrepreneurs obtain knowledge and training from educational institutions across borders in different countries that would typically be limited to in-person classroom attendance. This could be seen with National Geographic's Explorer Classroom, which connects young people with

scientists, researchers, educators, and storytellers.¹¹ This free course is being offered for over eight weeks to young people worldwide to stay engaged in meaningful learning, ignite their spirit of exploration, and connect with others. Each week, students visit a different part of the world virtually and learn about its geographic features, population, climate, ecology, biodiversity, culture, and history.

Other private sector organizations have developed initiatives for youth to acquire new skills to fill new jobs in a post COVID-19 economy. Microsoft launched the global skills initiative to bring digital skills to 25 million people worldwide that include entry-level digital literacy to advanced product-based skills in technology.¹² The initiative will provide free access to learning paths and job-seeking tools along with low-cost certifications to help young people develop digital skills.¹³

Volunteers of the CS50x Introduction to Computer Science.
Photo: © Kodluyoruz



Providing digital skills training

Youth entrepreneurs have also been taking advantage of providing digital skills training that would continue in a post COVID-19 world. Kodluyoruz, co-founded by youth entrepreneur Gulcan Yayla, collaborated with Harvard University's CS50 team to offer the CS50x Introduction to Computer Science course to all Turkish young people for free.¹⁴ The course teaches young people about computer science and programming. Additionally, the organization is planning to train over 2,000 people on web development, mobile development, data science, and machine learning.

While there are challenges to online learning mentioned earlier in this chapter related to technology access gaps, in a post COVID-19 world, there will be increased access

9 See UNESCO (2020), COVID-19 Impact on Education <https://en.unesco.org/COVID-19/educationresponse> (accessed 10 August 2020).

10 See Metaari (2019), Metaari's Analysis of the 2019 Global Learning Technology Investment Patterns <http://users.neo.registeredsite.com/9/8/1/17460189/assets/Metaari-2019-Global-Learning-Technology-Investment-Patterns.pdf> (accessed 10 August 2020).

11 See National Geographic (2020), Explorer Classroom <https://www.nationalgeographic.org/education/student-experiences/explorer-classroom/> (accessed 10 August 2020).

12 See Microsoft (2020), Microsoft launches initiative to help 25 million people worldwide acquire the digital skills needed in a COVID-19 economy <https://blogs.microsoft.com/blog/2020/06/30/microsoft-launches-initiative-to-help-25-million-people-worldwide-acquire-the-digital-skills-needed-in-a-covid-19-economy/> (accessed 10 August 2020).

13 See Microsoft (2020), Microsoft launches initiative to help 25 million people worldwide acquire the digital skills needed in a COVID-19 economy <https://blogs.microsoft.com/blog/2020/06/30/microsoft-launches-initiative-to-help-25-million-people-worldwide-acquire-the-digital-skills-needed-in-a-covid-19-economy/> (accessed 10 August 2020).

14 See Kodluyoruz (2020), CS50X in Turkey <https://www.kodluyoruz.org/cs50/> (accessed 10 August 2020).

to blended learning that is interactive between face-to-face learning with online tools. This will allow more youth social entrepreneurs to take advantage of these opportunities simultaneously as they develop their businesses.

B. Finance Sector

As identified earlier in this chapter, a major hurdle for youth entrepreneurs to overcome in a post COVID environment is finding new avenues to obtain funding for their businesses. To confront this challenge, many organizations across the globe have developed initiatives to which youth entrepreneurs can utilize in a post COVID-19 world. Numerous institutions, including the World Bank, United Nations Commission for Africa, and UNICEF Nigeria, have launched Innovation Challenges for youth entrepreneurs.



Photo: ©UNICEF Nigeria/2020

Heightened development in innovation challenge funds

UNICEF Nigeria launched the COVID-19 Design Challenge between 13 May to 13 June.¹⁵ The initiative targeted Nigerian youth to inspire them to design solutions to the current and future challenges the pandemic creates. The competition provided weekly cash benefits to participants with the best idea, and participants were able to redeem rewards to enhance capacity building. The initiative helped fund several creative youth entrepreneurial solutions. These included innovations related to solar panels for sustainable water supply systems in communities without access to safe water; applications that provide verified

information on COVID-19 to community members; and skill acquisition projects to provide income for young people.¹⁶ Similarly, the World Bank's Mission Billion Challenge seeks to finance solutions to ensure the inclusivity of identification systems for vulnerable groups while taking into account the social distancing measures in response to the COVID-19 pandemic.¹⁷ The Challenge offered cash prizes totaling US\$150,000 for the most promising and innovative solutions.

Expanded avenues to financial support

Private sector organizations have also been developing financial opportunities for youth entrepreneurs to take advantage of in a post COVID-19 era. Since the pandemic Visa Foundation announced its commitment to provide US\$210 million to support Small and Micro Businesses globally.¹⁸ US\$60 million would be in grants to non-government organizations dedicated to supporting small and micro business owners, and US\$140 million would be allocated to small and micro businesses that generate positive social and financial returns.¹⁹ This investment would continue over a five-year period, which would help create financial security for many entrepreneurs, including women and youth.

Additionally, COVID-19 is reshaping the future of the financial services industry with the growth of the fintech market and the use of financial apps. The Global Fintech Market is expected to witness progressive growth and reach a market value of around US\$305 billion by 2025 due to increased investment by organizations.²⁰ The benefits of fintech for youth social entrepreneurs are significant as it enables greater access to financial services. It provides consumers with a broader choice of financial products and services at a lower cost.²¹

One of the key ways fintech is increasing financial inclusion for youth social entrepreneurs is by changing how customers have their creditworthiness scored.²² Fintech companies are using multiple data sources, including bank and nonbank data and information from credit bureaux, and supplementing this with information generated through mobile phones, IP addresses, ATM points, Facebook accounts, and various oth-

15 See UNICEF (2020), UNICEF launches COVID-19 Design Challenge for Nigerian Youth <https://www.unicef.org/nigeria/stories/unicef-launches-covid-19-design-challenge-nigerian-youth> (accessed 6 August 2020).

16 See UNICEF (2020), COVID-19 Design Challenge: Young Nigerians develop solutions to their country's problem <https://www.unicef.org/nigeria/stories/covid-19-design-challenge-young-nigerians-develop-solutions-their-countrys-problems> (accessed 6 August 2020).

17 See World Bank (2020), Mission Billion Challenge <https://id4d.worldbank.org/missionbillion> (accessed 6 August 2020).

18 See Visa Foundation (2020), Visa Foundation Commits \$210 Million to Support Small and Micro Businesses and Immediate COVID-19 Emergency Relief <https://usa.visa.com/about-visa/newsroom/press-releases.releaseId.17066.html> (accessed 6 August 2020).

19 See Visa Foundation (2020), Visa Foundation Commits \$210 Million to Support Small and Micro Businesses and Immediate COVID-19 Emergency Relief <https://usa.visa.com/about-visa/newsroom/press-releases.releaseId.17066.html> (accessed 6 August 2020).

20 See Research and Markets (2020), Global Fintech Market By Technology (API; AI; Blockchain; Distributed Computing), By Service (Payment; Fund Transfer; Personal Finance; Loans; Insurance; Wealth Management), By Application, By Deployment Mode, By Region, Competition, Forecast & Opportunities, 2025 https://www.researchandmarkets.com/reports/5031390/global-fintech-market-by-technology-api-ai?utm_source=dynamic&utm_medium=CI&utm_code=93v78s&utm_campaign=1401741+-FinTech+Industry+Report+2020-2025+-Trends%2c+Developments+and+Growth+Deviations+Arising+from+the+COVID-19+Pandemic&utm_exec=joca220cid (accessed 6 August 2020).

21 See OECD (2020), Advancing the Digital Financial Inclusion of Youth <https://www.oecd.org/daf/fin/financial-education/advancing-the-digital-financial-inclusion-of-youth.pdf> (accessed 6 August 2020).

22 See UNDP (2018), Youth Entrepreneurship And Financial Inclusion: Outlook For Asean And Saarc http://www.undp.org/content/dam/rbap/docs/Research%20&%20Publications/democratic_governance/UNDP-UNCDF-2018-Youth-Entrepreneurship-and-Financial-Inclusion-ASEAN-SAARC.pdf (accessed 6 August 2020).

er publicly and privately available information.²³ Alternative credit scoring can reduce lending risk by accurately scoring the youth's talent and entrepreneurial capability.²⁴ It can also reduce collateral requirements and the need for prior usage of formal financial services.²⁵ This in turn, increases the potential of youth entrepreneurs to access formal credit and thus establishes youth entrepreneurs within the formal financial system.²⁶ Therefore, the continued growth of the fintech service industry is a major opportunity for youth entrepreneurs in a post COVID environment as it provides alternative financing avenues for youth.

Opportunities for youth social entrepreneurs to provide innovative solutions have emerged

It is observed that previous global economic crises have led to many successful innovative start-up businesses. For example, Dropbox, Uber, Airbnb, and WhatsApp were founded by young entrepreneurs in their late twenties/early thirties around the period of the global 2008 financial crisis. This confirms that periods of crises are not only a challenge, but also provide new opportunities for entrepreneurship, where start-ups can help address the constraints created by difficult health or economic conditions, and respond to changing preferences and needs within society.²⁷

Therefore, youth entrepreneurs who are agile and can anticipate these changes to develop or upscale radical innovations that meet current immediate demands in sectors such as healthcare, agriculture, and employment have the opportunity to flourish and expand in a post COVID-19 environment despite the challenges they may face.²⁸

A. Healthcare sector

One of the primary areas of opportunity that exist for youth entrepreneurs in a post COVID-19 setting is in the healthcare field. The pandemic triggered the augmentation of surgical and respiratory masks due to the need to contain and mitigate the coronavirus.

ASIGE workers making masks Photo: © ASIGE



Addressing shortages in the healthcare system

Many youth entrepreneurs who have businesses in the manufacturing field have taken the initiative to make masks to address medical shortages. An example of this initiative could be seen by the Advocacy for Social Inclusion and Girls Education (ASIGE) project in Ghana.²⁹ ASIGE was established in 2014 by youth entrepreneur Dorcas Apooe Asige to help improve the skills of young people and bring financial independence to youth entrepreneurs. In 2017 the organization developed the ASIGE Basket project, which employed 300 women and teenage mothers in Ghana. Since the pandemic outbreak, the organization transitioned to producing sanitary items and masks for young women in Ghana's high-risk communities. This initiative by the organization has helped keep women and young people employed. Due to the pandemic, social norms around mask-wearing have normalized in many local communities. Therefore, the need for making masks would continue in a post COVID-19 world and is an opportunity for youth social entrepreneurs.

Young girls in Afghanistan have also tapped into the growing demand for medical supplies. The all-female Afghan Robotics Team in the city of Herat has created low-cost, long-lasting, and lightweight ventilators to help tackle the coronavirus pandemic.³⁰ The team, which comprises six

23 See UNDP (2018), Youth Entrepreneurship And Financial Inclusion: Outlook For Asean And Saarc http://www.undp.org/content/dam/rbap/docs/Research%20&%20Publications/democratic_governance/UNDP-UNCDF-2018-Youth-Entrepreneurship-and-Financial-Inclusion-ASEAN-SAARC.pdf (accessed 6 August 2020).

24 See UNDP (2018), Youth Entrepreneurship And Financial Inclusion: Outlook For Asean And Saarc http://www.undp.org/content/dam/rbap/docs/Research%20&%20Publications/democratic_governance/UNDP-UNCDF-2018-Youth-Entrepreneurship-and-Financial-Inclusion-ASEAN-SAARC.pdf (accessed 6 August 2020).

25 See UNDP (2018), Youth Entrepreneurship And Financial Inclusion: Outlook For Asean And Saarc http://www.undp.org/content/dam/rbap/docs/Research%20&%20Publications/democratic_governance/UNDP-UNCDF-2018-Youth-Entrepreneurship-and-Financial-Inclusion-ASEAN-SAARC.pdf (accessed 6 August 2020).

26 See UNDP (2018), Youth Entrepreneurship And Financial Inclusion: Outlook For Asean And Saarc http://www.undp.org/content/dam/rbap/docs/Research%20&%20Publications/democratic_governance/UNDP-UNCDF-2018-Youth-Entrepreneurship-and-Financial-Inclusion-ASEAN-SAARC.pdf (accessed 6 August 2020).

27 See OECD (2020), Start-ups in the time of COVID-19: Facing the challenges, seizing the opportunities https://read.oecd-ilibrary.org/view/?ref=132_132859-igoa9ao1mc&title=Start-ups-in-the-time-of-COVID-19-Facing-the-challenges-seizing-the-opportunities (accessed 8 August 2020).

28 See OECD (2020), Start-ups in the time of COVID-19: Facing the challenges, seizing the opportunities https://read.oecd-ilibrary.org/view/?ref=132_132859-igoa9ao1mc&title=Start-ups-in-the-time-of-COVID-19-Facing-the-challenges-seizing-the-opportunities (accessed 8 August 2020).

29 See ASIGE, <https://advocacyasige.blogspot.com/?fbclid=IwAR2nSBx3wlyMlafXkxFOtlpxwW06OR-KpuH6izyn2nh0Kucv3uC9ieNosk> (accessed 10 August 2020)

30 World Economic Forum (2020), COVID-19: Afghan all-female robotics team have designed a low-cost ventilator <https://www.weforum.org/agenda/2020/07/afghan-girls-robotics-low-cost-ventilator-coronavirus> (accessed 14 August 2020).

young girls, utilized the design created partly by the Massachusetts Institute of Technology and received guidance from experts at Harvard University.³¹ The device, which lasts on 10 hours of battery, costs roughly US\$700 to produce, compared with the US\$20,000 price of a traditional ventilator.³² While the ventilator is undergoing final testing from health authorities, the initiative addresses the ventilator shortage as there are only approximately 800 ventilators within the country to treat COVID-19 cases.³³ This innovation highlights the continued need for advancement in medical solutions in developing countries, which is an opportunity for youth social entrepreneurs to enlist in post COVID-19.

Members of an Afghan all-female robotics team work on a low-cost ventilator in Herat Province, Afghanistan. Photo: © REUTERS/Jalil Ahmad



Developing medical solutions in telemedicine

Another area of opportunity for youth entrepreneurship after COVID-19 is in the field of telemedicine. The COVID-19 pandemic propelled patients and physicians worldwide to quickly adapt to the use of telehealth. Due to social distancing rules consulting a health care provider over the phone, video, or text has become the new normal concerning non-urgent medical needs. There has been an increased interest in digital tools that can test and monitor at-risk patients safely within their homes.

Prior to the pandemic, the global telemedicine industry was expected to grow at an estimated rate of 15% by mid-decade.³⁴ However, recent projections indicate that the industry will accelerate to a forecast of 19.3% with a value of US\$175.5 billion over the same period.³⁵ The growth in the telemedicine industry is linked to emerging markets which have adopted telemedicine to provide health care service to underserved populations. This could be seen in India, where 1MG, the country's largest integrated online health platform saw a 440% spike for fever e-consultations from customers and increased demand for medical items through their e-pharmacy platform since the outbreak of the pandemic.³⁶

Photo: © AI4GOV team



Another organization that saw increases in the healthcare field is AI4GOV in the Philippines.³⁷ Since the virus outbreak in the Philippines, the not-for-profit youth organization has been

working with national agencies to develop a COVID-19 digital triage bot for medical professionals to triage cases and create predictive modeling of people infected.³⁸ The pandemic has caused telemedicine growth in areas such as primary care, geriatrics, pediatric specialties, physical therapy, obstetrics, and behavioral health.

Telehealth will continue to evolve in the long-term and become more ingrained in the healthcare system even after the pandemic subsides. This is because the increase in virtual health technologies can drive better care quality, provide greater flexibility, and extend access to healthcare reach to communities in rural areas with the use of smartphones.³⁹ Therefore, the ability to support telehealth is an opportunity for youth social entrepreneurs to take advantage of in a post COVID environment.

31 World Economic Forum (2020), COVID-19: Afghan all-female robotics team have designed a low-cost ventilator <https://www.weforum.org/agenda/2020/07/afghan-girls-robotics-low-cost-ventilator-coronavirus> (accessed 14 August 2020).

32 World Economic Forum (2020), COVID-19: Afghan all-female robotics team have designed a low-cost ventilator <https://www.weforum.org/agenda/2020/07/afghan-girls-robotics-low-cost-ventilator-coronavirus> (accessed 14 August 2020).

33 World Economic Forum (2020), COVID-19: Afghan all-female robotics team have designed a low-cost ventilator <https://www.weforum.org/agenda/2020/07/afghan-girls-robotics-low-cost-ventilator-coronavirus> (accessed 14 August 2020).

34 See Grand View Research (2020), Telemedicine Market Worth \$155.1 Billion by 2027 <https://www.grandviewresearch.com/press-release/global-telemedicine-industry> (accessed 27 July 2020).

35 See Global Market Insights (2020), Industry Trends <https://www.gminsights.com/industry-analysis/telemedicine-market> (accessed 10 August 2020).

36 See IFC (2020), Indian e-Health Service Adjusts to Lockdown, Meets Heavy Demand https://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/insights/1mg-india (accessed 10 August 2020).

37 See AI4Gov, <https://www.ai4gov.net> (accessed 7 August 2020).

38 See Youth Co Lab (2020), AI4GOV: Small Giants in COVID-19 Response <https://www.youthcolab.org/post/ai4gov-small-giants-in-covid-19-response> (accessed 7 August 2020)

39 See WHO (2010), Telemedicine Opportunities and Developments In Member States https://www.who.int/goe/publications/goe_telemedicine_2010.pdf (accessed 7 August 2020).

Photo: © Maria Fleischmann / World Bank B.



Agriculture Sector

The global agriculture industry has been impacted negatively by COVID-19 due to many countries closing their borders to manage the pandemic. However, the crisis has highlighted for many farmers the need to accelerate technology in local agriculture sectors, shorten and strengthen their supply chains, and improve their food supplies' resilience. Several United Nations agencies have identified that food produced locally can be distributed more efficiently and lowers food security risks while creating local jobs.⁴⁰

Youth entrepreneur Cherie Atilano Co-Founder of AGREA organizing local produce for the Move Food Initiative. Photo: © AGREA.



Promoting local agriculture

Youth entrepreneurs have the opportunity in a post COVID world to help develop local agriculture sectors in line with sustainable-agricultural goals. Youth entrepreneurs have already started the process of investing in the digitization of the local agricultural sector to provide innovative solutions to food security issues that have arisen. This approach could be seen in organizations like AGREA that

have developed agritech solutions in the Philippines that connect farmers directly to consumers, which has normalized the digitized market linkage within the country.⁴¹ The organization has achieved this through the development of an online fresh food ordering platform called the Move Food Initiative. The platform allows consumers to check AGREA's order form online for the list of available produce by local farmers and the prices. Once the local consumer purchases the agricultural produce the team mobilizes local private truck owners and youth food producers to ship the food from local farmers directly to customers. The initiative has provided an alternative avenue for local farmers to sell their fruits and vegetables to consumers in other villages, towns, and the capital. As of September 5th 2020, the Move Food Initiative transported 183,706 kilos of vegetables and fruits, supporting 20,902 Filipino farmers and ensuring food to 73,427 families. Agri-e-commerce will continue to flourish in a post COVID-19 world and is an area of opportunity for youth entrepreneurship to delve into.

A local farmer utilizing the Ujuzi Kilimo Solutions data analytics SMS system. Photo: © Ujuzi Kilimo Solutions.



Advancing data insights in agriculture

Furthermore, developing technology to provide data insights in agricultural production is another arena that provides youth entrepreneurs with business opportunities after the COVID-19 pandemic ends. This would help the industry strengthen data-driven insights and automation in the agricultural supply chain, which can better prepare communities for future crises and increase general efficiency in more stable times. Youth enterprises like Ujuzi Kilimo Solutions have already begun to tap into this area.⁴² The organization currently provides data analytics using sensors to capture soil quality data, which is then stored digitally on the Farm Suite database. The platform gener-

40 See UN Environment Programme (2020), Why sustainable food systems are needed in a post-COVID world <https://www.unenvironment.org/news-and-stories/story/why-sustainable-food-systems-are-needed-post-covid-world> (accessed 7 August 2020).

41 See AGREA, <http://www.agreaph.com/> (accessed 9 August 2020).

42 See Ujuzi Kilimo Solutions, <https://www.ujuzikilimo.com/> (accessed 9 August 2020).

ates timely insights that local farmers can access on their phones via the platform's interactive SMS system. The anticipated shock of COVID-19 on the agriculture sector has provided youth entrepreneurs with the opportunity to shift the industry from "business as usual" to forward-looking innovative solutions that invest in productivity and sustainability in a post COVID realm.

C. Employment sector

COVID-19 has negatively impacted youth employment opportunities globally, as many have experienced job losses due to the pandemic. The crisis has highlighted the discussion of developing the green economy to recover sustainably. This is an area that youth social entrepreneurs have the opportunity to explore post COVID-19.

Photo: © SunSaluter K-Plot Island, India



Boost in innovative green opportunities

Prior to the pandemic, the green economy was identified as having the potential to generate up to 60 million more jobs globally by 2030 if implemented effectively.⁴³ Additionally, several countries have already started investing in the green economy as a mechanism for a greener future. Therefore, youth social entrepreneurs that have the capacity to develop sustainable environmentally friendly goods like solar panels and or provide services in the green industry like green construction and green agriculture have the opportunity to flourish in a post COVID arena.

One such youth entrepreneur that has invested in green entrepreneurship is Eden Full Goh, Founder of SunSaluter, a global non-profit that has deployed an open-source solar panel tracker design in 19 countries, impacting 17,000+ people.⁴⁴ It is an innovative tracking device that passively follows the sun throughout the day, boosting energy output by 30% and producing four liters of clean drinking water.⁴⁵

Spread in micro-entrepreneurial opportunities

Additionally, since the pandemic outbreak, many offline activities were forced to move online, such as work, grocery shopping, education, and entertainment. The development of youth social entrepreneurship opportunities offers young people an alternative to traditional jobs. This is particularly for youth social entrepreneurs who participate in gig work driven by online digital platforms. The gig economy has a low barrier to entry since anyone with a smartphone can earn money in a variety of fields. Moreover, it allows time-dependent earnings and extreme flexibility as youth entrepreneurs can schedule their work according to their own plans. Since the pandemic, micro-entrepreneurial opportunities in home improvement, pet products, home beauty products, gaming, and fitness & health have increased.⁴⁶ While the gig economy is not perfect, its growth would continue post COVID-19 and provide youth social entrepreneurs with positive unique opportunities to develop their business and monetize their skillsets online.

Photo: © Microsoft Virtual Internship



Access to a diverse labor force

Furthermore, with the increased adoption of remote employment, work habits have changed for many citizens. It has become more socially acceptable to work remotely rather than in a typical office setting. This trend, which would continue post COVID-19, provides youth social entrepreneurs new opportunities to reevaluate their business organizational structure as their access to talent/employ-

43 See United Nations (2017), Green Jobs for Youth <https://www.decentjobsforyouth.org/wordpress/wp-content/uploads/2017/08/Thematic-Plan-4-Green-Jobs.pdf> (accessed 10 August 2020).

44 See IEA (2019), Seven Women Entrepreneurs of Solar Energy <https://www.iea.org/reports/seven-women-entrepreneurs-of-solar-energy> (accessed 20 July 2020); SunSaluter, <https://www.sunsaluter.org/> (accessed 10 August 2020).

45 See SunSaluter, <https://www.sunsaluter.org/> (accessed 10 August 2020).

46 See CNBC (2020), Op-Ed: Analysis of 8 billion page views shows where the next hot start-up can thrive <https://www.cnbc.com/2020/05/12/here-are-the-new-businesses-to-start-during-the-coronavirus-recession.html> (accessed 10 August 2020).

ees/consultants can be expanded beyond physical borders. Additionally, youth social entrepreneurs have greater access to virtual internships since many private sector organizations such as Microsoft, Google, and Facebook, have moved their internships online.⁴⁷ Microsoft's new virtual internship, which is available to a wider audience of youth, focuses on building connections, fostering learning, and empowering youth to achieve their goals and uncover their passions. This opportunity can aid youth social entrepreneurs positively to enhance skills further to develop their enterprise.

Conclusion

In a post COVID-19 environment, youth would continue to face challenges but will also have access to numerous opportunities. Youth social entrepreneurs have the potential to be agents of change. Young people are better able to overcome challenges and are more likely to have a social impact when fully supported within an enabling entrepreneurship ecosystem.⁴⁸ Therefore, governments and organizations must support youth social entrepreneurs by:

Bolstering social protection to support small youth businesses and increase incentives for consumers to buy from local youth social entrepreneurs,

Increasing investment in digital solutions for the development of practical skills to students and develop the capacity of teachers delivering online learning,

Strengthening access to entrepreneurial education and training to adapt to new technological realities with public and private partnerships. This includes a focus on Technical and Vocational Education and Training (TVET) programs,

Modifying support networks to the needs of young social entrepreneurs by improving entrepreneurial guidance and safeguarding young people's mental health with greater access to well-being services,

Ensuring strong avenues to financial services and products such as loans at lower interest rates or offer subsidized low-interest loans, and

Providing opportunities to access innovative technology such as artificial technology tools and access to virtual platforms.

References

AGREA. Available from: <http://www.agreaph.com/> (accessed 9 August 2020).

AI4Gov. Available from: <https://www.ai4gov.net> (accessed 7 August 2020).

ASIGE. Available from: <https://advocacyasige.blogspot.com/?fbclid=IwAR2nSBx3wlyMlafXklxFOtlpxwWO6OR-KpuH6izyn2n-h0Kucv3uC9ieNosk> (accessed 10 August 2020).

CNBC (2020), Op-Ed: Analysis of 8 billion page views shows where the next hot start-up can thrive. Available from: <https://www.cnbc.com/2020/05/12/here-are-the-new-businesses-to-start-during-the-coronavirus-recession.html> (accessed 10 August 2020).

Deloitte (2020), Retail Banking in the Age of COVID-19 Scenarios for Resilient Leaders (accessed 13 August 2020). Available from: <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Financial-Services/gx-fsi-retail-banking-in-the-age-of-covid-19.pdf> (accessed 13 August 2020).

Facebook (2020), Our Remote 2020 Internship Program. Available from: <https://www.facebook.com/careers/life/2020-summer-internship-program> (accessed 11 August 2020).

Global Market Insights (2020), Industry Trends. Available from: <https://www.gminsights.com/industry-analysis/telemedicine-market> (accessed 10 August 2020).

Google (2020), Google internships go virtual with the help of open source. Available from: <https://blog.google/inside-google/working-google/google-internships-go-virtual-help-open-source/> (accessed 11 August 2020).

Grand View Research (2020), Telemedicine Market Worth \$155.1 Billion by 2027. Available from: <https://www.grandviewresearch.com/press-release/global-telemedicine-industry> (accessed 27 July 2020).

IEA (2019), Seven Women Entrepreneurs of Solar Energy. Available from: <https://www.iea.org/reports/seven-women-entrepreneurs-of-solar-energy> (accessed 20 July 2020).

IFC (2020), Indian e-Health Service Adjusts to Lockdown, Meets Heavy Demand. Available from: https://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/insights/1mg-india (accessed 10 August 2020).

ILO (2020), ILO Monitor: COVID-19 and the world of work. Fourth edition. Available from: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_745963.pdf (accessed 15 July 2020).

Kodluyoruz (2020), CS50X in Turkey <https://www.kodluyoruz.org/cs50/> (accessed 10 August 2020)

Metaari (2019), Metaari's Analysis of the 2019 Global Learning Tech-

⁴⁷ See Microsoft (2020), Welcome 2020 Microsoft interns – announcing our virtual intern program <https://blogs.microsoft.com/blog/2020/04/06/welcome-2020-microsoft-interns-announcing-our-virtual-intern-program/> (accessed 10 August 2020); Google (2020), Google internships go virtual with the help of open source <https://blog.google/inside-google/working-google/google-internships-go-virtual-help-open-source/> (accessed 10 August 2020); Facebook (2020), Our Remote 2020 Internship Program
⁴⁸ See United Nations (2020), World Youth Report <https://www.un.org/development/desa/youth/wp-content/uploads/sites/21/2020/07/2020-World-Youth-Report-FULL-FINAL.pdf> (accessed 20 July 2020).

nology Investment Patterns. Available from: <http://users.neo.registeredsite.com/9/8/1/17460189/assets/Metaari-2019-Global-Learning-Technology-Investment-Patterns.pdf> (accessed 10 August 2020).

Microsoft (2020), Microsoft launches initiative to help 25 million people worldwide acquire the digital skills needed in a COVID-19 economy. Available from: <https://blogs.microsoft.com/blog/2020/06/30/microsoft-launches-initiative-to-help-25-million-people-worldwide-acquire-the-digital-skills-needed-in-a-covid-19-economy/> (accessed 10 August 2020).

Microsoft (2020), Welcome 2020 Microsoft interns – announcing our virtual intern program. Available from: <https://blogs.microsoft.com/blog/2020/04/06/welcome-2020-microsoft-interns-announcing-our-virtual-intern-program/> (accessed 11 August 2020).

National Geographic (2020), Explorer Classroom. Available from: <https://www.nationalgeographic.org/education/student-experiences/explorer-classroom/> (accessed 10 August 2020).

OECD (2020), Advancing the Digital Financial Inclusion of Youth. Available from: <https://www.oecd.org/daf/fin/financial-education/advancing-the-digital-financial-inclusion-of-youth.pdf> (accessed 6 August 2020).

OECD (2020), Youth and COVID-19 Response, Recovery and Resilience. Available from: https://read.oecd-ilibrary.org/view/?ref=134_134356-ud5kox3g26&title=Youth-and-COVID-19-Response-Recovery-and-Resilience (accessed 8 August 2020).

Research and Markets (2020), Global Fintech Market By Technology (API; AI; Blockchain; Distributed Computing), By Service (Payment; Fund Transfer; Personal Finance; Loans; Insurance; Wealth Management), By Application, By Deployment Mode, By Region, Competition, Forecast & Opportunities, 2025. Available from: https://www.researchandmarkets.com/reports/5031390/global-fintech-market-by-technology-api-ai?utm_source=dynamic&utm_medium=CI&utm_code=93v78s&utm_campaign=1401741+-+Fin-Tech+Industry+Report+2020-2025+-+Trends%2c+Developments+and+Growth+Deviations+Arising+from+the+COVID-19+Pandemic&utm_exec=joca220cid (accessed 6 August 2020).

SunSaluter. Available from: <https://www.sunsaluter.org/> (accessed 10 August 2020).

Ujuzi Kilimo Solutions. Available from: <https://www.ujuzikilimo.com/> (accessed 9 August 2020).

UN Environment Programme (2020), Why sustainable food systems are needed in a post-COVID world. Available from: <https://www.unenvironment.org/news-and-stories/story/why-sustainable-food-systems-are-needed-post-covid-world> (accessed 7 August 2020).

UNDP (2018), Youth Entrepreneurship And Financial Inclusion: Outlook For Asean And Saarc. Available from: http://www.undp.org/content/dam/rbap/docs/Research%20&%20Publications/democratic_governance/UNDP-UNCDF-2018-Youth-Entrepreneurship-and-Financial-Inclusion-ASEAN-SAARC.pdf (accessed 6 August 2020).

UNESCO (2020), COVID-19 Impact on Education. Available from: <https://en.unesco.org/COVID-19/educationresponse> (accessed 10 August 2020).

UNICEF (2020), COVID-19 Design Challenge: Young Nigerians develop solutions to their country's problem. Available from: <https://www.unicef.org/nigeria/stories/covid-19-design-challenge-young-nigerians-develop-solutions-their-countrys-problems> (accessed 6 August 2020).

UNICEF (2020), UNICEF launches COVID-19 Design Challenge for Nigerian Youth. Available from: <https://www.unicef.org/nigeria/stories/unicef-launches-covid-19-design-challenge-nigerian-youth> (accessed 6 August 2020).

United Nations (2017), Green Jobs for Youth. Available from: <https://www.decentjobsforyouth.org/wordpress/wp-content/uploads/2017/08/Thematic-Plan-4-Green-Jobs.pdf> (accessed 10 August 2020).

United Nations (2020), World Youth Report. Available from: <https://www.un.org/development/desa/youth/wp-content/uploads/sites/21/2020/07/2020-World-Youth-Report-FULL-FINAL.pdf> (accessed 20 July 2020).

Visa Foundation (2020), Visa Foundation Commits \$210 Million to Support Small and Micro Businesses and Immediate COVID-19 Emergency Relief. Available from: <https://usa.visa.com/about-visa/newsroom/press-releases.releaseld.17066.html> (accessed 6 August 2020).

WHO (2010), Telemedicine Opportunities and Developments In Member States. Available from: https://www.who.int/goe/publications/goe_telemedicine_2010.pdf (accessed 7 August 2020).

World Bank (2020), Global Economic Prospects Report. Available from: <https://www.worldbank.org/en/publication/global-economic-prospects> (accessed 15 July 2020).

World Bank (2020), Mission Billion Challenge. Available from: <https://id4d.worldbank.org/missionbillion> (accessed 6 August 2020).

Youth Co Lab (2020), AI4GOV: Small Giants in COVID-19 Response <https://www.youthcolab.org/post/ai4gov-small-giants-in-covid-19-response> (accessed 7 August 2020).

CHAPTER 10

The Entrepreneurial Journey in the Decade of Delivery

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"The only limits are, as always, those of vision." If you don't risk anything; you risk even more." Agility, flexibility, vision, resiliency and a sense of adventure are common to the world of social entrepreneurship and are some key elements of success (KEOS) in the decade of delivery.

The story of Disney and the series of its hired CEO's resonate when the words vision and entrepreneur come front and center to mind. For a number of years, it appeared that the leadership of Disney had lost sight of the value and importance of Walt Disney's vision and that such a vision would have a very critical role in continuity and success. Why? Customers. Walt Disney understood the importance of the customer and their needs and as such created invaluable added value in his vision for Disney that would last for generations.



In this decade there is a strong focus on attaining the Sustainable Development Goals (SDGs); ending absolute poverty and ensuring adequate food, health and education for everyone by 2030. Progress towards improving human wellbeing is hampered by inequality, waste, loss of biodiversity and the climate crisis (Independent Group of Scientists 2019). The social entrepreneur lives in a decade filled with data about limitless opportunities and transformation. The ability to commercialize, transfer technology and address social issues is at an all-time high. Indeed, the digital revolution is seen as one potential transformation that will support the achievement of the SDGs (TWI2050) and is identified as a cross-cutting lever to achieve transformation for the goals by the UN Global Sustainable Development Report. Social Entrepreneurs can and will continue to transform the world. In this decade we will see more and more of the iGens (Gen Z/Centennials) youths, Gen Y and women becoming Social Entrepreneurs. This process has started and it is changing how business is done and the services and products offered. A September 2019 article by Business Wire; (BW) a Berkshire Hathaway Company, Report Commissioned by American Express (AMEX), stated Women-Owned businesses were growing at a rate two times (2X) faster than all businesses in the USA nationwide.

Many women entrepreneurs are social entrepreneurs and this may be tied to the advocacy for family and communities; as research has showed women tend to score higher in emotional intelligence (EQ) in areas of empathy, interpersonal relationships and social responsibility; (Dr. Shawn Andrews, Forbes-October 9, 2019).

Social Justice is heightened in this decade of delivery and social justice trends will lead to many successful sustainable businesses, some of which will have a significant socio-economic and educational impact. The time of this report marks the 100th anniversary of the passage of the USA 19th Amendment of Women Suffrage and their rights to vote. The success and the passage of this Amendment almost did not happen, as in that same year was the Spanish Flu pandemic. The year 2020 has brought another pandemic, the COVID-19 (Novel Corona Virus) as well as we saw the global outcry against racial injustice. This activism brought tremendous education about individual rights, human rights, the right to vote, the importance of the vote, climate change, women's right and other social justice issues. The USA November 2018 elections saw record high turnout in a report from the USA Census Bureau. This report by Misra (2019), shared in 2014 midterm elections, 18-29-year-old was 20 percent; however, in 2018 midterm elections youths 18-29-year-old increased to 36% of voting population in the USA; which was the largest increase by any group. Whereas the 2016 election saw a 1.1 percent increase in youth voter. Identifying with a candidate is very important to today's youth. 2020 has seen an increase in community advocacy to get the message and education needed to understand that local and state government seats impact policies, safety, and growth and ensure it is understood the importance of the local seats outside of the presidential candidates. 2020 is an interesting year for the United States because it also has the 2020 Census and the importance of having everyone counted. Having an incomplete count impacts access to resources and political representation needed for disadvantaged families and communities. The impact of under-counting leads to schools not having proper allocation of the requirements to ensure the needs of its student are being met; for example, access to computers technology and resources; similarly, in terms of healthcare and food insecurities; The COVID-19 pandemic has highlighted these inequalities in the USA and many developed countries.



According To The US Census

(<https://www.census.gov/library/stories/2019/04/behind-2018-united-states-midterm-election-turnout.html>), women represent significant voter turnout; the 2018 midterm election showed 55% of women voted compared to 52% of men. The House of Representatives in 2018 saw a record number of women elected to office (though the percentage of women in the House is less than 25%). In the private sector, Business Wire (2019) states that women-owned businesses grew by 21% while others grew only by 9%. Women-owned businesses represent 42% of all USA businesses; an estimated 13 million, employing 9.4 million workers and generating almost \$2 trillion in revenue. Employment in women-owned business grew 8% and all other businesses by 1.8%. The Business Wire report showed a growth in revenue as well for women-owned businesses at 21% compared other businesses at 20%. The report used the term "Sidepreneurs" to refer to side hustle women entrepreneurs. Other points of importance to consider, over the last five years growth in side-entrepreneurship has increased:

- 99% amongst African-American women
- 70% among Native Hawaiian/Pacific Islander women
- 63% among Asian women
- 46% among Latina/Hispanic women
- 36% among Native American/Alaskan Native women

The report indicated that the top three (3) industry trends of these businesses are:

- 15% in Healthcare and Social Assistance (e.g. child day care and home healthcare)
- 13% in Professional, Scientific and Technical Services
- 22% in Other services such as hair care, salons and pet care businesses.

A key element of success for the social entrepreneur is being able to identify the value-added proposition. Looking at demographics may help to identify potential markets for services that a social entrepreneur could provide. The USA Small Business Association (SBA) in 2017 reported that 99% of all USA businesses were Small Business, which is about 29.6 million. Small businesses in the USA employ 57.9 million which is 47.8% of the workforce and created a net 1.4 million new jobs. Examination of the data on demographic groupings provides some interesting perspectives. Supporting the growth of entrepreneurship among minority demographics in the USA could be an opportunity for addressing some of the problems of inequality in that country. Data based on 2014 USA Employment by Industry (sba.gov), indicates the five (5)

leading Small Business Employment by Industry in USA are: Healthcare and Social Assistance; Accommodation and Food Services; Retail; Manufacturing and Professional, Scientific and Technical Services.

Demographic Group	Firms	Population
African American	2.6M	29.5M
Asian	1.9M	12.0M
Hawaiian/Pacific Islander	54.7K	387.5K
Hispanic	3.3M	35.3M
Native American/Alaskan	272.9K	1.9M
Other races	1.2M	10.6M
Nonveteran	24.1M	222.0M
Veteran	2.5M	21.9M

There is a growing need to address key developmental challenges and Social Entrepreneurs should play a role; achieving the SDGs is not the job of governments alone, achieving the goals requires the private sector, government, academia, individuals and civil society. Sally R. Osberg and Roger L. Martin (2015) in their article "Two Keys to Sustainable Social Enterprise" suggest a model incorporating government intervention, business entrepreneurship and social ventures could address problems that need legislative attention and achieve transformative socio-economic changes. This approach would be important in implementing the transformations needed to attain the SDGs. Social entrepreneurship provides opportunities to address many socio-economic challenges organically and seamlessly through technology to create an extensive and new world of entrepreneurs. This is a way to address socio-economic goals while ensuring financial sustainability which is sometimes a weakness of the entirely non-profit sector. Opportunities to create systems based on justice and equality, economic systems that address community-centric needs and help restore and create beneficial environmental outcomes. Social entrepreneurship in the decade of delivery is about expanding sustainable socio-economic outcomes. We can see young voters being very engaged in matters such as gun laws amidst the increase in school shootings and deaths, climate change and justice. The issues that provoke such activism create great opportunities for addressing those issues through citizens' action and also create an opportunity for sustained efforts by social entrepreneurs; so, there is a great demand for social entrepreneurship however, other factors that must be addressed;

What does success in Social Entrepreneurship mean?

What does success look like?

How do you ensure more young entrepreneurs are able to take risks for the visions they have to ensure success?

In the movie, "The Intern" we see the baby boomer character returning to a workforce where he is the odd one out. This character brings immense transferable skills that are a key element of success. There is a gap between generations that impacts profitability significantly. The film presents several ongoing conversations that are often contested amongst generation Boomers and XYers against millennials and the most blatant reason is that no one is truly listening. The art of listening is a critical tool and skill in effective communication and successful leadership. President Calvin Coolidge made the statement, "No one ever listened themselves out of a job" in the world of entrepreneurship "No one ever listened themselves out of a client;" (Dr. Corrinne Graham, we.nyc, 2017). Addressing the need for diversity in the workplace and business diversity. This movie shares several story lines which indicates how through listening and keen observation of the environment, behaviors can lead to success results through mentoring and organic leadership.

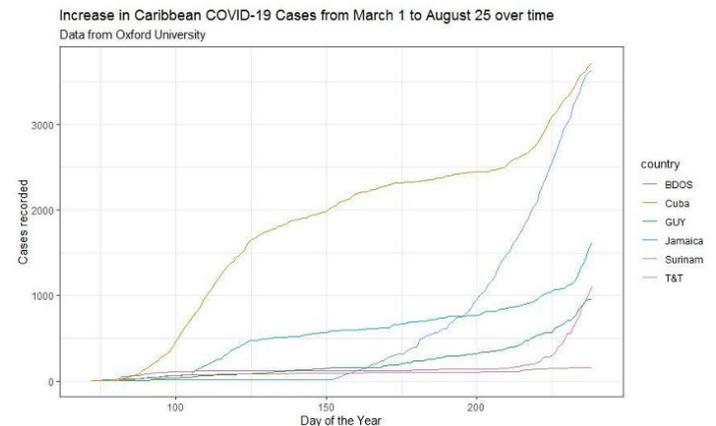


Identifying key elements of success (KEOS) are critical in social entrepreneurship. What does a social entrepreneur look like? The new social entrepreneur does not fit traditional or stereotypical roles. It's the young boy or girl who has a novel idea to solve an issue in their environment and has parents, guardians or a community creating strategic partnership for success. It's the college student, the retiree, a veteran, a woman, a minority woman or man, LTBTG, special needs child or adult; an economically disadvantaged or marginalized segment of society. Many social entrepreneurs are advocates for social issues from child labor to access to clean water and electricity. While many are not driven by a greed for wealth;

running a successful a business is critical and ensuring a fail-safe supply chain is a key element of success for the social entrepreneur. Technology, marketing and finance are often areas of challenge for small and start-up businesses. Access to free resources to help small and startup business in their success includes specific libraries, SBA, SBDC, (Small Business Development Corp), SCORE and many other including remote virtual on the go places with available Wi-Fi connections like Starbucks and Panera Bread to access internet and make mobile business connections.

Crisis Creates Opportunities.

An examination of the number of COVID-19 cases in Caribbean countries that were successful in containing the epidemic in early stages indicates a recent sharp increase in cases (data from the Blavatnik School of Government <https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker> downloaded 25th August 2020), once the original strictures were relaxed. This is likely because rather than embracing the "new normal," people went back to the old familiar ways of doing things and therefore facilitated the spread of the virus. The "new normal" should not be thought of as short-term but it will be the reality until the pandemic is over, which is unlikely to be in anything less than a year. This is because until the incidence of infection is brought down around the world, the normal movement of people around the planet for business or pleasure will ensure the virus' transmission.



Data from Hale, Thomas, Sam Webster, Anna Petherick, Toby Phillips, and Beatriz Kira (2020). Oxford COVID-19 Government Response Tracker, Blavatnik School of Government. Data use policy: Creative Commons Attribution CC BY standard.

Success in the pandemic is not likely to be confined to specific types of enterprise or businesses, rather it will be flexible and innovative businesses that will succeed. Pivoting may become the new normal and a much sought-after skill. Businesses will have to develop new ways of operating that facilitate doing business and reduce the risk of contracting COVID-19. This means updating the operating procedures and business continuity plan to address the challenges of the pandemic. This might include reducing contact between anyone asso-

ciated with the business. A variety of strategies should be employed. For example, increase the number of functions that can be automated or carried out by computers or smart devices and ensure that customers, clients and employees are protected from infection by reducing contact, social distancing, providing opportunities for frequent hand washing or sanitation and ensuring the use of masks and appropriate protective gear. While it's possible for some tasks to be done virtually, many will have to be done on site. As a result, entrepreneurs will have to be concerned about their employees' travel and the higher risks for those who must use public transport. Entrepreneurs should also include the actions they will take should they, or an employee test positive.

Succeeding In A Crisis

So, what areas might a flexible small business look at in these changing times? A recent noticeable Social Entrepreneurial trend for the past several years is the growth of sustainable eco farms; driven by the desire to grow one's own fruits and vegetables. Many individuals, communities and small businesses such as restaurants have started to create their own gardens as well, so that they will have fresh organic farm to table quality ingredients. This strategy can help to reduce cost and provide healthy options for families in disadvantaged communities. In some communities there are areas where individuals have started to grow their own gardens. With natural disasters having increasingly devastating impact on small island states, increasing small scale farming of plants that will help with soil, drainage, water and food can increase the number of options for short to medium term food sources and may allow faster recovery after an event. Many businesses that evolve and succeed are driven by customers need for goods and services that address social and economic problems. Increasingly, customers want to know if you are being socially responsible. Crisis leads to innovation. What is needed? How else can products or services be re-imagined; produced or redelivered? What other resources and methods can be used to develop a product or service? What technology can help to solve the problem at hand? What is the workforce available to deliver the goods and services needed? What new areas do employees need training in? How quickly can an entrepreneur pivot and scale?

The entrepreneurial journey relies on: Perseverance, Building Transferable Skills through Personal and Professional Development, a Diversity of Mentors along the journey, having a value-added product and or service, understanding costing and budgeting, an evolving marketing plan, knowledge and understanding of data, Emotional Intelligence (EI), Negotiations, Relationships, Technological tools, balance lifestyle and, determining what success means and looks like to you.

The past 20 years are not novel in that we will always face

new challenges, as we do today in the Decade of Delivery. The challenges may change but Social Entrepreneurship will become more a part of the new normal since it can legally and successfully bypass much of the bureaucracy that restricts progress. So, what kinds of actions can be taken by individuals, governments and entrepreneurs that can support the



growing interest in social entrepreneurship?

Support to Entrepreneurs

The innovative use of communications technology can support entrepreneurial and social enterprise development by increasing reach and efficiency in marketing and production. The role of government would be to set up safe facilities for entrepreneurs. This is an often-neglected factor and is of relevance to many minority start-ups and those based in inner-city or otherwise unsafe communities. Governments should find ways of providing public access to broadband internet. This is not intended to replace private sector access and internet cafes, but supplement them. Public broad band can be a means of providing access to government services, facilitating payments for them and providing important information and services to the public. For example, as the amount of online instruction for schools and universities increases, so does the demand for broadband. Government must ensure that all children have good quality access to schooling even if they cannot afford internet access and these should be non-political issues.

Creating more and supporting nonpolitical organizations to support starting businesses and helping them to become successful is key. This would include creating hubs or incubators and flourishing Main Streets, ensuring safety and providing technical expertise to ensure success. It would also include creating hubs that will encourage sidepreneurship and that provide a startup kit for the new sidepreneur. These startup kits will include a team of mentors who commit to the success of each new socially economically viable business with a product and service. An example of this is the Branson Centre of Entrepreneurship Caribbean located in Jamaica <https://bransoncentre.co/>. The function is to provide support and knowledge for the start-up as well as personal development support to the entrepreneurs.

To put a hub like this into place would require determining the philanthropic organizations that will be assigned to each hub/incubator. Local and national governments should facilitate by ensuring ease of business setup and security; if successful then there will be a contribution to economic growth and that observation will widen each community's engagement. Formal agreements should be signed for a minimum of one to two (1-2) terms ranging from 4-8 years. Why? Most small businesses; about 50%, fail within the first year and another 30% in year two while many will not show a profit for several years. A side hustle entrepreneur, "Sidepreneur" may have greater success and so having a successful Social Enterprise. College students often have a business, usually a side hustle or two; in addition to having a job. Leveraging and expanding what these entrepreneurs are accomplishing will aid in attaining sustainable models that are cost effective and timely.

Such hubs often provide opportunities for internships for college and university students to work alongside entrepreneurs. The growing comfort for remote and online working allows such centers to expand the pool of interns beyond the local to include students in other parts of the country or from other countries. Centers could link with developing countries businesses to provide credit hours and stipends to students involved in managing a project in each socio-economic business in each incubator or support the development of portals for entrepreneurs around the world to work together on projects.

How do organizations combine resources to track these models for successful entrepreneurship? Starting with identified KEOS would be a good first place. What are the KEOS and how are they identified? Are there successful models in that community that can be used? Who are vested community and government partners? How will achieving the established milestones be achieved? How many thriving social enterprises are needed and what is their added value? A great way to get desired results is to keep it simple clean and clear (KISCC). What does that mean? If you want a desired outcome you must get the interest and support at a community involved. Another way is to ensure that there is diverse representation of generations with a focus on millennials and gamers as project lead. Meyers and Farwell 2015 Motion picture "The Intern" is a good example of how Social Entrepreneurship in the Decade of Delivery can lead the way to sustainable socio-economics.

There is a growing need for local, sustainable, socially responsible and economic manufacturing. There are tremendous amount of viable social themed technologies and businesses awaiting commercialization and transfer of the technology. Unfortunately, there is a great lack in resources; be it labor or financing needed to enter the market. Take for example, several products that could help in disaster management,

housing, office and hospital care are often bypassed for established brands that are costly. For example, an emergency shelter system that can easily put together, cleaned, stored and recycled to other areas in need whether it is due to flood, fire, hurricane or healthcare or doctor's makeshift office is passed over for more expensive and less reliable resources.

Building opportunities to start and be successful in a local enterprise requires support. This may include creating Mentor Protégés who will be responsible for action outcome. Creating town hall style meetings that help to identify the need of each community/district and determine the goods and services that community can provide and a potential workforce that will be needed to create a sustainable socio-economic model and supply chain. Identifying community resources and who has what in our community? This buy-in is instrumental as most of the members of each district will have a sense of pride and purpose to ensure success. Involvement of each district's diaspora will be essential to be ambassadors, activists and influencers for their community. Building and supporting within local community will ensure that resources circulate within its community before leaving. This process will help with overall successful business enterprise.

Conclusion

In the final decade of action leading to the attainment of the Sustainable Development Goals there is an opportunity for social entrepreneurship to play a major role in attaining the Goals. Social entrepreneurship can address development and socio-economic problems such as inequality or climate change (Osberg & Martin 2015). Social Entrepreneurship may be able to add a sustainable dimension to addressing social problems that may not be provided by not-for-profit NGOs. This is important since Government action alone will not achieve the SDGs.

To succeed against the backdrop of pandemics, inequality, climate threats and other potential and actual global threats, Entrepreneurs should address the following:

Flexibility is a key factor of success, the ability to pivot and take advantage of opportunities is important.

The ability to use technology to form linkages, improve production and marketing is key.

Don't assume that the COVID-19 pandemic is ending soon. Adopt processes that reduce contact and risk in your new SOPs, be prepared to use them for as much as two years.

Don't neglect the need for improve existing skills and acquire new ones. Take advantage of skill improvement and training opportunities, especially in Information technology.

gy and its applications to marketing, service delivery, business planning and production.

Governments, academia and the private sector should work together to support the development of entrepreneurial activities. One way to do this is to provide incubators that can support development or start-ups and provide experience and practical knowledge through mentors and assistance through interns. Governments should ensure that access to broadband internet and safe places to work are provided. Academic institutions should also provide support to incubators and provide ways for entrepreneurs to improve relevant skills.

References

Andrews, Shawn. (2019) Are Men and Women Equally emotionally Intelligent? Forbes Magazine

<https://www.google.com/amp/s/www.forbes.com/sites/forbes-coachescouncil/2019/10/09/are-men-and-women-equally-emotionally-intelligent/amp/>

Business Wire (2019) Woman-Owned Businesses Are Growing 2X Faster On Average Than All Businesses Nationwide. American Express Report; September 23rd, 2019 online. <https://www.businesswire.com/news/home/20190923005500/en/Woman-Owned-Businesses-Growing-2X-Faster-Average-Businesses>

Independent Group of Scientists appointed by the Secretary-General, Global Sustainable Development Report 2019: The Future is Now – Science for Achieving Sustainable Development, (United Nations, New York, 2019) <https://sustainabledevelopment.un.org/gsdr2019>

Jordan Misra, Voter Turnout Rates Among All Voting Age and Major Racial and Ethnic Groups Were Higher Than in 2014; April 23rd 2019-Online (www.census.org) <https://www.census.gov/library/stories/2019/04/behind-2018-united-states-midterm-election-turnout.html>

Messerli, P., Kim, E.M., Lutz, W. et al. Expansion of sustainability science needed for the SDGs. *Nat Sustain* 2, 892–894 (2019). <https://doi.org/10.1038/s41893-019-0394-z>

Meyers, N. (Producer/Director); Farwell, S. (Producer); (2015). *The Intern* [Motion picture]. United States: Warner Bros.

Osberg, Sally R. and Roger L. Martin; Two Keys to Sustainable Social Enterprise (Harvard Business News, May 2015 Online). <https://www.google.com/amp/s/hbr.org/amp/2015/05/two-keys-to-sustainable-social-enterprise>

Small Business Profile 2017; U.S. Small Business Administration Office of Advocacy online; https://www.sba.gov/sites/default/files/advocacy/United_States_1.pdf

Sachs et al 2019 Six transformations to achieve the Sustainable Development Goals. *Nature Sustainability* 2 pp 805-814 https://www.nature.com/articles/s41893-019-0352-9.epdf?author_access_token=PYxHlftZicPDZ1f8Mpi4ddRgN-0jAjWel9jnR3ZoTv0OUvCcY5pZ8AaTx0MkoopkKOS7OzdwrS-BL-nqy90SNoGgHmldD2otpknRagcTqK2lJMLpfAw86QRMHI3QE-jytXGWz5FGotx9W9u1jWK0QbJVw%3D%3D or <https://resources.unsdsn.org/six-transformations-to-achieve-the-sustainable-development-goals-sdgs>

CHAPTER

11

Entrepreneurial Education As A Means To Better Lives And Achieve SDGs

Saniya Giniatullina, Anurag Maloo,
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Seedstars

Mission Possible: Reaching The SDG 2030 Deadline With The Help Of Entrepreneurship

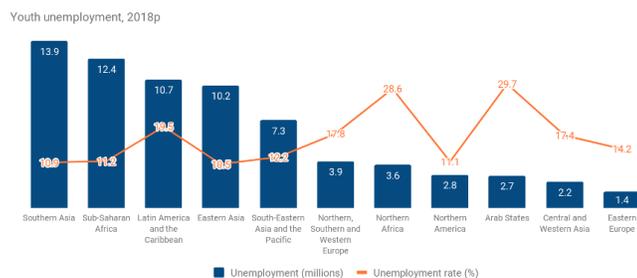
Sustainable Development Goal number 8 aims at promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

In 2019, 173.6 million people were unemployed globally. In the future, this number is expected to grow rapidly. Underlying reasons for this are the exponential growth of the global population, especially in emerging markets, and the rise of technologies and automatization of previously human-led processes and tasks.

The COVID-19 outbreak amplified these problems even more. One of the groups that has been impacted by the pandemic the most is youth. According to recent research by ILO, "young people are disproportionately affected by the COVID-19 crisis, with multiple shocks including disruption to education and training, employment and income losses, and greater difficulties in finding a job". Around 64 million young, unemployed people reside outside the EU and North America, representing 91% of unemployment talents.

Vulnerable employment (informal labour) among youth presents a further challenge. Vulnerable employment is often characterized by poor or lack of access to decent working conditions, which undermines workers' fundamental rights. It is associated with a lack of adequate social security, fair earnings, and effective representation by trade unions and similar organizations.

Source: ILO, 2017



So, what could be a long-term solution that can provide people with jobs, alleviate poverty, eliminate hunger and help reach other Sustainable Development Goals (SDGs) by 2030?

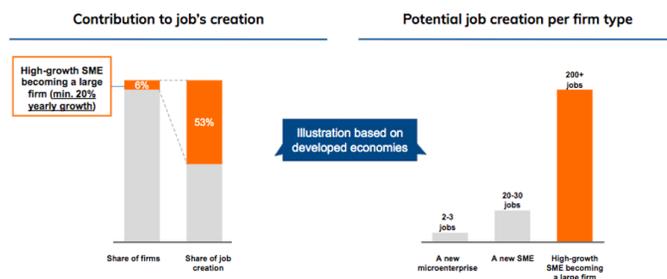
In developed economies, so called 'high-growth companies' contribute disproportionately to job creation.

According to the report on enterprise segmentation, published in partnership with the Collaborative for Frontier Finance, Omidyar Network, Dutch Good Growth Fund, and Dalberg Advisors, these companies have "highly innovative business models serving large addressable markets with a rapid growth trajectory". High-impact ventures account for around 5-6% of all businesses with employees, but they are capable of creating almost all [net] jobs in the economy.

Moreover, these companies tend to have more than "\$2m in financing needs within a few years and to be managed by entrepreneurs who seek to be recognized for achieving disruption at scale."

So, these SMEs have two main characteristics. On one side, they are trained to focus on a market that is scalable, and on the other side, their products and services are innovative and disruptive. In comparison to the livelihood of, for example, micro-entrepreneurs or sustainable enterprises that tend to create on an average ten jobs; high-growth companies tend to create more than 200 jobs each.

Source: UK's NESTA (promoting innovation in the UK), Coventry economic census data



One such example of a high-growth startup is Truck Lagbe from Bangladesh (means "Need a truck" in Bengali). It brings transparency to the logistics market in Bangladesh through its booking platform. Through a mobile application, Truck Lagbe connects truck drivers to companies and individuals requiring inter and intra city goods transportation. The platform digitalizes a traditionally low-technology sector resulting in reduced costs and improved driver salaries. In fact, Truck Lagbe is currently helping active drivers earn more than \$800 on average every month. Through its extensive driver network and active marketplace, Truck Lagbe is improving efficiency and accountability in a sector that is a critical enabler of economic activity in Bangladesh.

Another high-growth venture is Siembro from Argentina, an online lending-as-a-service platform connecting farmers with financial institutions to increase access to loans used to purchase machinery at the point of sale. Currently operating in both Argentina and Mexico, Siembro takes advantage of existing machinery distribution networks to increase access

to financing. Through its platform, Siembro has been able to shorten loan underwriting compared to legacy processes by providing improved credit analytics and digital loan processing. Thanks to this, Siembro has empowered Latin American farmers to finance over \$10mn in machinery.

Finally, MedCheck is one more example of a high-growth company contributing to economic growth and improving people's lives. It is a clinical data and e-consultation platform for medical specialists in the Philippines. Through its cloud platform, doctors can improve patient care via e-consultation, record-keeping, and disease and treatment analytics. MedCheck is currently helping over 1,000 medical specialists and 115,000 patients suffering from non-communicable diseases. MedCheck also works with research professionals to scientifically study the aggregate trends of such diseases and treatments in a highly safe, secure, and data-privacy compliant manner. MedCheck seeks to improve the work done by medical societies, academic medical research institutes, NGOs, government institutions, and pharmaceutical and biotechnology companies, who help sponsor innovative programs aimed towards improving the healthcare ecosystem.

So what could be done to boost the creation of more high-growth enterprises and as a result, more job opportunities globally?

SMEs in developing economies do not grow any faster than large firms. This finding is consistent with other studies, which show that the vast majority of small enterprises in developing economies are "entrepreneurs out of necessity" and often do not grow beyond a few employees.

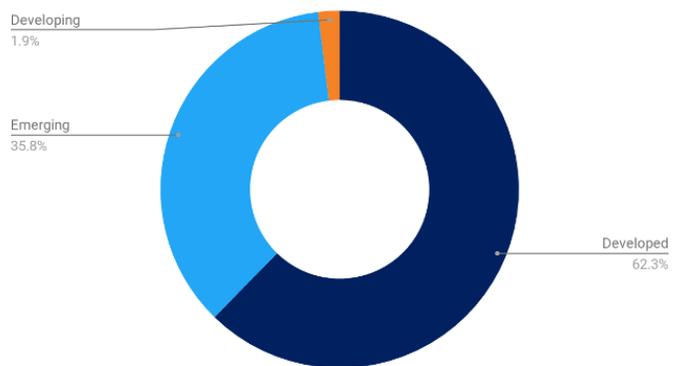
The evidence seems to suggest that the employment growth premium for smaller firm size is to some degree correlated with level of development. This could be because the economic environment in developed economies is more favourable to SME growth than that in lower income countries. Such factors may include:

- better macroeconomic conditions;
- infrastructure and access to resources, including skilled labour; and
- better access to finance, capital and technology.

Developing economies still have very few "unicorns" despite representing more than 90% of the global population.

Source: ILO, 2017; CB Insights, 2018

Split of number of Private Companies valued at more than USD 1Billion, 2018. Total: 260.

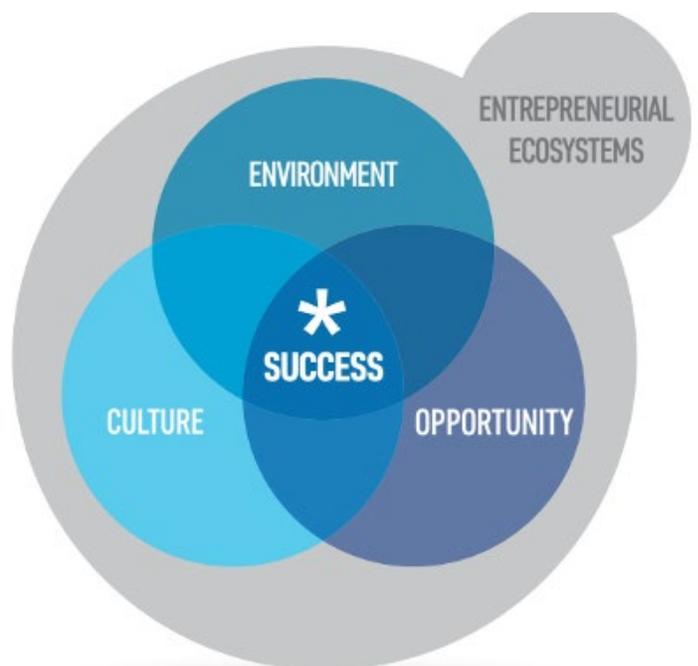


Most entrepreneurial ecosystems in emerging markets are immature. To be able to increase the maturity of the entrepreneurial ecosystems, it's crucial to understand the context and analyze key elements fundamental for any entrepreneurial ecosystem:

Culture. If an entrepreneurial culture does not exist, and attitudes towards risk and failure are harsh, it is very hard for the youth population to pursue it as a career option, and a critical mass of new ventures won't be launched...

Environment. Without a conducive administrative and legal environment, new ventures will be suffocated by harsh business conditions.

Opportunities. No venture can thrive without an opportunity to grow which requires talented team members, expert mentoring, access to funding and access to the market.



These three pillars form the foundation of a startup ecosystem and permit success cases which are both the desired output and the catalyst of an ecosystem. Success is also a vital element of an ecosystem as leading entrepreneurs lead by example, become role models, invest themselves, mentor and lobby for change. Successful entrepreneurs can impact all three elements of the ecosystem framework and accelerate change. With the right support and access to opportunities, these entrepreneurs can grow their ventures faster and, in turn, become high-growth companies.

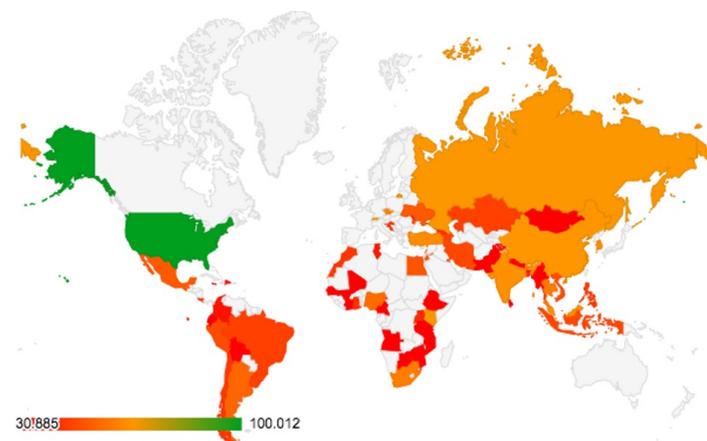
Investment and training of entrepreneurs can help in fostering economic growth in emerging markets and bring the world closer to achieving the SDGs. Every entrepreneur should, therefore, be exposed to quality tools, training and funding to grow their business.

To analyze the state of entrepreneurship in emerging markets, Seedstars developed Seedstars Index that measures the quality, potential, and maturity of the startup ecosystems.

For instance, in 2020, Nairobi, Cape Town and Johannesburg showed a clear advantage compared to their fellow African ecosystems. Nairobi led the group with 97 high-growth companies. Luanda, on the other hand, had only 2.

By better understanding the data, and strengths and weaknesses of entrepreneurial ecosystems, it is possible to efficiently tailor capacity building programs to startups' needs and take more data-driven investment decisions.

Source: Seedstars internal research, 2018



Emerging Markets, Entrepreneurial Education and Economic Growth

According to the OECD, by 2034, 95% of the world's population will be in emerging markets. Moreover, 89.8% of the world population under 30 years of age lives in these regions,

which represents a huge pool of untapped talent.

These factors combined mean opportunity: opportunity for talent and solutions that address the world's biggest challenges and support the SDGs 2030.

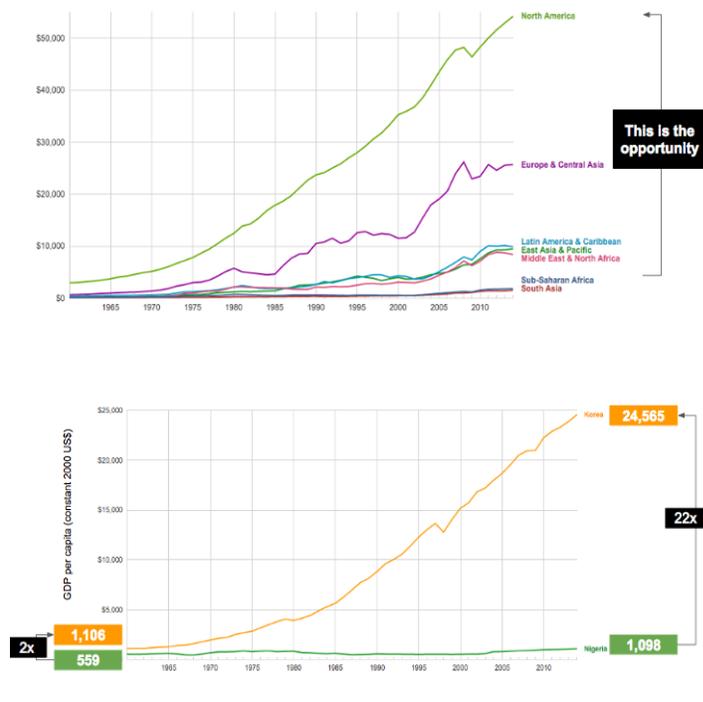
What are the proven models for growth at a national level?

In the framework of this piece, Gross Domestic Product (GDP) will be used as a proxy indicator for understanding levels of development. A higher GDP per capita generally equals a higher life expectancy and satisfaction. If one compares North America and Europe to emerging markets, the latter find themselves with a lower GDP per capita and so arguably with inferior life satisfaction. But what is interesting to see is that some emerging markets have had exponential GDP per capita growth. If you compare South Korea to Nigeria, back in 1965, the difference between their GDP per capita was twofold. Looking at the situation today, that gap is 22 times bigger.

So what made such a difference? How did they achieve this and can it be replicated?

Source: World Bank

GDP per capita

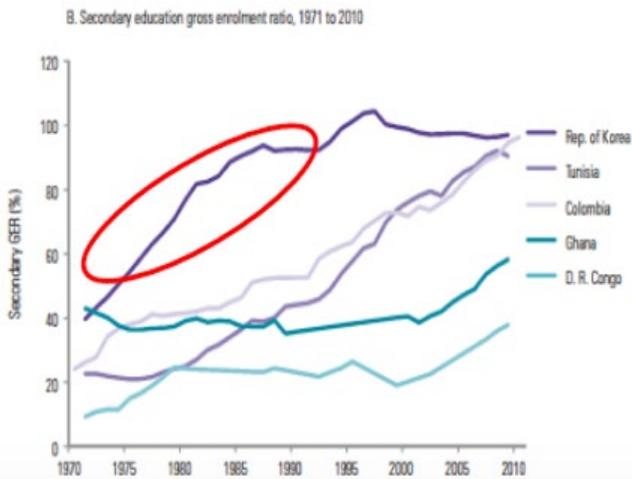


There are many factors that help explain how this shift happened in South Korea, and for the purpose of this exercise the role of the private and public sector will be further examined.

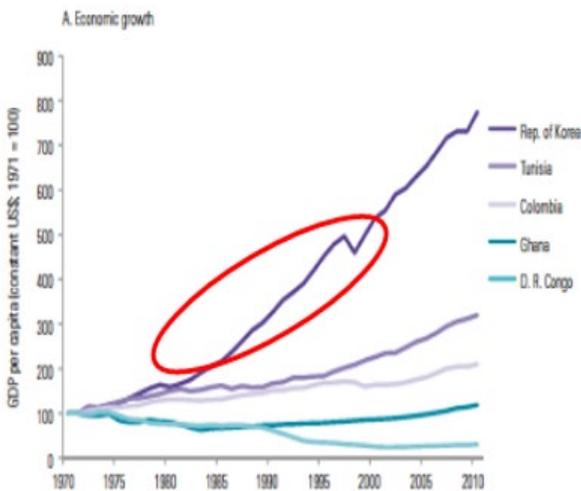
At the public sector level, the government initiated a very clear strategy of specialising the workforce in higher value-added services through heavy investments in education, such as electronics (everybody knows Samsung, right?). Even now, it continues to have a clear strategy to build niche expertise.

As we can see from the graph below, education has a direct impact on the GDP per capita.

Source: UNESCO EFA Global Monitoring Report 2012, "Youth and skills: Putting education to work"



Education



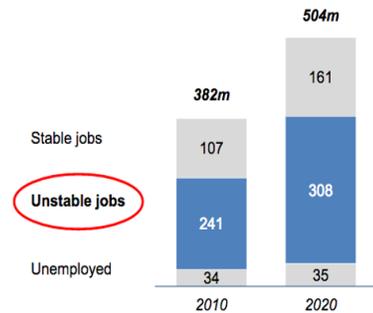
GDP per capita

Every dollar spent on education generates on average 10 to 15 dollars in economic growth. This investment creates jobs and balances higher value-added jobs with manufacturing

and labour-intensive jobs.

It is important to point out that for the above discussion of unemployment in emerging markets, we solely focus on formal unemployment, however unstable, informal jobs must be highlighted as well. The table below highlights Africa's split of population in stable and unstable jobs, as well as those unemployed. It is apparent that from 2010 to 2020, the proportion of unstabled jobs increased drastically.

Source: McKinsey Global Institute, "Africa at Work: Job creation and Inclusive Growth"



Source: McKinsey Global Institute analysis

Throughout its development, South Korea attempted to strike a balance between labour intensive, semi- skilled and low skilled industries that provide jobs for many, and more knowledge-intensive industries that require higher levels of skills and usually provide more stable jobs.

According to the report on high-impact entrepreneurship by Endeavor, Omidyar Network and Aspen Network of Development Entrepreneurs, over the next decade, more than 1 billion young people will enter the global labor market and 90% of these jobs will be created by the private sector, fueled by small and medium enterprises (SMEs), including startups.

At the same time, technology is changing the world, and we are still at the beginning of the digital revolution and haven't fully experienced its potential impact on our lives. This unprecedented pace of development is clearly illustrated through the famous example of the phone: It took telephone over 100 years to get to one billion consumers, and less than 10 years to reach a billion smartphone users.

The reality is that in the near future 85% of today's population will be working in jobs that are still inexistant. Technology will not only create new types of jobs it will also give access to (new) services to millions of people across sectors and industries.

"Too many young people around the world are becoming detached from education and the labour market, which can damage their long-term prospects, as well as ultimately undermine the social and economic development of their countries."

Sangheon Lee,
Director of the Employment
Policy Department of the ILO.

"Not enough jobs are being created for these young people, meaning the potential of millions is not being properly tapped. We can't afford to waste this talent or this investment in learning if we are to meet the challenges posed by technology, climate change, inequality and demographics. We need integrated policy frameworks and responsive training systems, designed using dialogue between governments, workers and employers."

Sukti Dasgupta,
Chief of the Employment and Labour
Market Policies branch of the ILO
Employment Policy Department.



Entrepreneurial Education in Practice (Case Studies by Seedstars)

About Seedstars

Seedstars is a Swiss company on a mission to impact people's lives in emerging markets through technology and entrepreneurship. Seedstars pursues this mission by supporting tech entrepreneurs in over 90 emerging ecosystems with capacity building programs, access to funding, and access to an international network of mentors and partners.

In 2019 Seedstars, in partnership with Official Development Assistance organizations, governments, foundations, corporates, universities and other ESOs, trained over 4'000 early-stage ventures around the world, and invested in nearly 60 companies, with a focus on impactful solutions in health-tech, education-tech, financial-tech, agriculture-tech and

clean-tech.

Through these activities, Seedstars aims to increase the quantity of investment-ready entrepreneurs to develop more high-growth ventures working on impactful solutions in emerging markets.

Entrepreneurial Programs

Since 2013, Seedstars has organized 350+ trainings and launched more than 15 programs for entrepreneurs in both online and offline formats.

Seedstars runs the below set of programs that are designed to support entrepreneurs holistically along their entire development journey:

Seedstars Academy Program

Seedstars Acceleration Program

Seedstars Growth Program

Seedstars Investment Readiness Program



Seedstars Academy Program

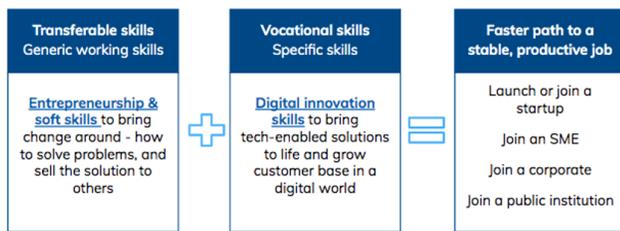
Seedstars Academy is a series of "pre-acceleration" programs designed to empower youth, shape entrepreneurial talent and provide each participant with the fundamentals to start their own businesses and launch new ventures. The training program consists of three 3-months long modules that offer hands-on guidance and mentorship through training sessions such as foundations of entrepreneurship, building an MVP, validating the market and getting first customers.

Seedstars Academy provides vocational and digital skill training, as well as mentorship and guidance along the startup's journey. The key program pillars are:

Foundation: Teaching the basic hard & soft skills for the entrepreneurial workplace and to upskill their employability.

Build: Teaching participants to validate a business model and launch a prototype.

Launch: Coaching participants to reach problem/solution fit and get their first clients.



Seedstars has developed material and proprietary tools to teach participants both transferable and vocational skills on global best practices. Internal mentors lead the cohort to ensure that knowledge is transferred and that the participants adapt the right mindset to succeed in their future projects.

Seedstars launched The Academy Program in collaboration with the Ministry of Youth Promotion and Youth Employment of Ivory Coast with the objective to enable and facilitate the entry of youth into the labour market and equip them with the necessary skill-set to succeed.

The Academy Program was an on-site six-month program for Ivorian participants, consisting of both Foundation and Build Academy and training altogether 26 startups teams. Due to the success achieved with the first batch, the contract was extended by a year.

As the result of the program, 16 new jobs were created and more than a half of participating startups became profitable during the course of the program.

Bora Digital based out of Abidjan is one of the Academy alumni that trains African talents in growth hacking and digital marketing; then making them available for short or long assignments with client companies. The company offers an e-learning platform and education opportunities for the youth. Their mission is to use digital marketing as a means of integrating young graduates. The company has \$8K recurring monthly revenue and has already trained 110 students since 2017.

In Myanmar, Seedstars is collaborating with the Yangon Regional Government to operate the Yangon Innovation Center (YIC) which aims to increase the countries' quantity and quality of founders. As part of the mandate, Seedstars trains youth and founders to launch their businesses through the Seedstars Academy Program.

In Cambodia, Seedstars works closely with the Ministry of Posts and Telecommunications (NIPTICT). In 2019, this partnership made it possible for 100 young people to go through the educational program called Smart Lean Launchpad in Phnom Penh.

This collaboration included the Regional Seedstars Summit Asia 2019, which brought together 470 participants and 66 startups from Southeast Asia along with the local ecosystem builders, change makers and investor community to connect, share knowledge and spark collaboration.



Seedstars Growth Program

Following the COVID-19 outbreak, the demand for efficient online training is at an all time high. To make sure entrepreneurs have access to quality education regardless of location, Seedstars has developed a Growth Program, a virtual three-month post-acceleration program focused on growth that helps startups successfully implement a Growth Machine, maintain consistent growth, develop a series of fundraising set up and expand the network of advisors, experts, and partners. Formats include group webinars and weekly personalized mentoring sessions delivered by 2-3 in-house mentors and 15-20 external experts.

One of the examples of such programs is the Misk Growth Accelerator powered by Seedstars and launched in partnership with Misk Foundation, a non-profit organization devoted to cultivate and encourage learning and leadership in youth in Saudi Arabia, and Vision Venture, a VC firm that invests in innovative startups in the early stages.

Like many petrol-dependent countries in the Gulf, Saudi Arabia feels a strong need to shift its direction to an alternative economic model. Top challenges that the country is tackling through its Vision 2030 include fostering private sector growth, improving education and training of youth to prepare them for the challenges of the market and job creation.

To help tackle this challenge, Seedstars focused on entrepreneurship as a means to boost the country's economy. The objective of the program was to support more high-growth companies in Saudi Arabia and encourage regional startups to expand and create jobs in the country.

The Program was a hybrid (virtual/on-site) three-month program for early-stage startups from the Middle East with product-market fit seeking a scalable growth model. Companies received an investment of up to \$100,000 from Seedstars and Vision Ventures.

Key Results Of The Program:

453 applications from the MENA region

11 selected startups

\$3.1mn raised in investment by startups

5 out of 11 participating startups expended to Saudi Arabia

Shezlong, one of the selected startups, is the first online psychotherapy clinic in the Middle East. It has 40 team members and lists more than 200 therapists from 20 countries who speak 7 different languages. In total, they have raised more than 670,000 USD. The startup team aims to turn Shezlong into a hub of wellness in the Arab world.



Seedstars Investment Readiness Program

Another online format of vocational training for entrepreneurs is Investment Readiness Program for idea/seed/growth stage startups to help them increase their investment readiness through courses and mentoring.

An example of such a program is GIZ-SAIS Investment Readiness Program for startups specializing in FoodTech and AgriTech from Africa. The program was initiated by 'Scaling Digital Agriculture Innovations through Startups' (SAIS), a project implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) on behalf of the German

Federal Ministry for Economic Cooperation and Development (BMZ). The program is aimed at 15 startups offering solutions from livestock management systems, platform for agri-investors, crowdfunding for farmers to e-commerce stores working with farmers and online delivery services. The full list of startups is here.

The fully-funded nine-month program provides its participants with weekly advisory and coaching sessions, access to additional service providers, integration in one of GIZ-SAIS' partner hubs and a demo-day with investors and business partners to conclude the program in July 2021.



Seedstars Acceleration Program

Seedstars Acceleration Program is another program for startups seeking a product/market fit. It is delivered by 2-3 in-house mentors and 10-15 external experts.

The objectives of the program are to provide participants with a full review of the market, provide an understanding of various business models and lastly help in team operations and product development. As a result of the training, startups should have validation of a product/market fit and a fundraising setup which includes a financial model and a strategy to start raising funds.

In 2018, Seedstars launched the fintech-focused onsite program in Nur-Sultan with AIFC (Astana International Financial Center) for an international batch of companies from Kazakhstan, Georgia, Ukraine, Russia and Nigeria.

The main objectives of the program were to:

- Implement a growth machine methodology.

- Prepare ventures for a funding round.

- Connect the founders to experts, advisors and partners from the Seedstars network.

The participants had access to weekly workshops, three bootcamps with international mentors from the US, Thailand, Sri Lanka, UK, Netherlands among other countries. By the end of the program, 5 out of 8 companies were in the final negotiation process for pilots with local banks and telecom companies.

An international company participating in the program launched a product in Kazakhstan after a month of completion of the training.

Testimonials From Participating Entrepreneurs



"The Seedstars experience, I believe, is very important for entrepreneurs. More than the money, I have received so much and taken in so many great ideas from entrepreneurs all over the world. Seedstars' work is fundamental in showcasing that great companies exist everywhere."

Federico Hernandez,
CFO and Founder of Blended,
winner of Global Competition
and Participant in Seedstars
Growth Program 2019

"In fact, for me personally this was the first such program that could combine not only theory, but also practical communication with mentors and potential investors, with companies that are interested in new solutions and partnerships".

Ivan Makarenko,
COO MOSST Payments,
alumnus of the Seedstars
Acceleration program in Kazakhstan

"The Edtech Prize we won and the Growth program opened us the door to the greatest opportunities. Thanks to this, we met the President of the Republic, who recommended our project to the Ministry of Education with whom we are signing a partnership for 23,000,000 students. We have also been approached by a multitude of local and international investors and have a large partnership in progress with the largest bank in the country (Rawbank) which will not only sponsor the production of educational content but also the global financing of Schoolap and its development."

Pascal Kanik,
founder of Schoolap,
winner of the Education Prize 2018
and Participant in Seedstars
Growth Program 2019

References

Refer to this: <https://www.mendeley.com/guides/harvard-citation-guide>

"The Impact of Entrepreneurship on Economic Growth" by Roy Thurik, June 2010 https://www.researchgate.net/publication/226229868_The_Impact_of_Entrepreneurship_on_Economic_Growth

"Entrepreneurship development" by International Labour Organization, 2020 https://www.ilo.org/moscow/areas-of-work/employment/WCMS_249136/lang--en/index.htm#:~:text=Entrepreneurship%20strengthens%20economic%20growth%2C%20speeds,in%20different%20types%20of%20economies

"Entrepreneurship in emerging markets" by Estrin, Mickiewicz, Stephan, Wright, 2018 https://www.researchgate.net/publication/327559193_Entrepreneurship_in_Emerging_Markets

"Entrepreneurship: Productive, unproductive, and destructive." by Baumol, 1990. *Journal of Political Economy*, 98, 893-921.

"Role of MSMEs and Entrepreneurship in Achieving the SDGs" by the International Council of Small Businesses, 2019 <https://icsb.org/msmes-entrepreneurship-sdgs/#:~:text=In%20regard%20to%20the%20SDGs,and%20decent%20jobs%20and%20entrepreneurship>

"The Role of Institutions in Entrepreneurship: Implications for Development Policy" by Sauter, 2005. The Catholic University of America (CUA) - Busch School of Business <http://ssrn.com/abstract=1264033>

Entrepreneurship in Education: What, Why, When, How

(PDF) Enterprise education as pedagogy

(PDF) Expanding the Focus of Entrepreneurship Education: A Pedagogy for Teaching the Entrepreneurial Method

Entrepreneurship Education (ENTERPRISES)

Fostering Future Entrepreneurs: The ILO approach to entrepreneurship education - Sustainable Enterprises

Building Business and Entrepreneurship Awareness by ILO, 2011.

Supporting Entrepreneurship Education: A report on the global outreach of the ILO's Know About Business Programme

UNDESA - Exploring Youth Entrepreneurship

CHAPTER 12

SDSN Youth And The Geneva Challenge 2020: The Challenges Of Social Inclusion

The SDSN Youth Special Prize is awarded in partnership with the UN Sustainable Development Solutions Network - Youth (SDSN Youth) to The 2020 Advancing Development Goals International Contest for Graduate Students aims to present innovative and pragmatic solutions to address the challenges of social inclusion. We are honored to present the finalists and winners of this year's edition.

Team from Africa: Gulu University

Vertical Farming in Refugees Setting (VEFIRS) - A Tool for Fostering Intergroup Relations and Social Integration. In the last decade, Uganda in East Africa has witnessed an influx of refugees from South Sudan, Burundi and the Democratic Republic of Congo. The demand for land continues to grow at a fast pace, especially in Bidibidi, the largest refugee settlement in East Africa. This continues to provoke tensions among refugees and host communities. As a result, refugees remain susceptible to exclusion from social, economic and political affairs in the country. The VEFIRS project aims to build the adaptive capacity of refugees and the host community of Bidibidi settlement, which is subject to land scarcity and rocky soil, through the multi-storey vertical farming approach. The goal of this initiative is to help refugees become self-reliant in overcoming food shortages and poverty, which are drivers of unethical behaviours.

Team from Asia: Tata Institute of Social Sciences

SAMHIT - Strengthening Aid For Maternal Health In Tribal Women. In 2017, 12% of global maternal deaths occurred in India, a large proportion including tribal women. In spite of various government programmes and policies for maternal care and childcare, the tribal women in interior localities of the country remain excluded from mainstream society. Their maternal needs remain unidentified and thus unaddressed. SAMHIT's main objective is to collect quality data through blockchain-enabled applications and analyse it using Predictive Analytics to identify high-risk pregnancy cases and to provide an aid for the prompt management of emergency specialty care. The application captures social factors along with clinical parameters to predict complications. This will enable frontline health workers to deliver proactive healthcare services with a timely referral for uneventful situations. Thus, the project aims to provide a contextualised solution to cater to indigenous tribal women in different geographies.

Team from Europe: KTH Royal Institute of Technology, Stockholm School of Economics

GerBound- A Platform Solution To Address Social Inequality In Mongolia. Climate change and economic pressures are impeding many Mongolians from sustaining their fragile nomadic way of life. In recent years, increasing inequalities have become strikingly apparent, with thousands of nomadic families forced to give up their traditional lifestyle and thus moving from the countryside into shanty towns outside of Ulaanbaatar ("Ger districts"), struggling to integrate into a modern urban society. GerBound addresses these gaps in the innovation ecosystem by connecting local changemakers with the Mongolian diaspora. GerBound provides the diaspora with a transparent channel to support the country in a more coordinated way. Mongolians living abroad can thereby decide what local projects they want to support financially or with their respective expertise.

Team from North America and Oceania: Harvard University

Project Gem: A Teletherapy Platform To Connect Elderly With Family Caregivers. One of the most profound challenges that people face in old age is social isolation. Nearly half of the elderly currently live alone or with just a spouse, and those who live alone are at increased risk for a number of serious behavioural and health problems, including cognitive decline, depressive symptoms, reduced physical activity and increased chronic disease morbidity. To connect isolated elderly to the families who care for them, Project Gem enables family caregivers to provide companionship for their elderly through reminiscence-based teletherapy.

Team from South America: The Graduate Institute, University of Chile, National University of La Plata, University of Geneva

YACHA: A Multiplatform Solution To Bolivian Youth's Education And Labour Inclusion. Bolivia has consistently struggled to include marginalised communities in policy and decision-making processes that have the potential to challenge the social status-quo and break the poverty cycle. This has been particularly noticeable among Bolivian youth who, despite constituting a growing portion of the population, have remained on the sidelines of development programmes. Facilitating vocational and professional connections, YACHA fosters youth inclusion by simultaneously bridging inter- and intra-generational gaps, and engaging young Bolivian leaders, especially minorities and disadvantaged youth. YACHA sheds light on the issues of education and employment in Bolivia, grounding our proposal on data-driven research

that cuts across the fields of economics, sociology, development studies and politics, among others.

SDSN Youth Special Prize Winners

Team from Europe : The Graduate Institute, Geneva, the Diplomatic Academy of the Ministry of Foreign Affairs of the Russian Federation, Higher School of Economics, and Moscow State Academic Art Institute.

RuRelief. Multifunctional System for Refugee Support in Russia RuRelief is an innovative system of information and service support that solves complex problems of asylum seekers in Russia and provides them with comprehensive advice on a broad variety of questions. The project is based on the studies of shortcomings of the existing practice of granting asylum and numerous violations of refugee rights in Russia. Their solution circumvents slow and ponderous bureaucratic machines unable to integrate refugees into the society, by adapting to the governmental structures and filling the gaps in refugee protection.

ACKNOWLEDGMENTS

This report has benefited from comments and inputs provided by members of the SDSN, its Leadership Council, and many outside experts. The authors are particularly grateful to the Members of our Advisory Panel, their assistants as well as the following individuals for comments, data, or other support provided by the following individuals:

Alexander Dale, Cherie Nursalim, Ana Nikolova, Asha Auckloo, Cecile Fattebert, Corrinne Graham, Anna Ruggerini, Kate Roll, Lauren Barredo, Dinh-Long Pham, Emma Torres, Fabio Petroni, H len Nilsson, Oliver Libby, Itai Manyere, Kevin Hin, Klaus Kunz, Linden Edgell, Naiara Costa, Paul Bottino, Katherine Sparkes, Rachael A. Jarosh and Wing Woo.

We would also like to thank the external authors of the specific Report chapters: Eleanor Horrocks, Marte Hellema, Dinh-Long Pham, Fabio Petroni, Hillary Bakrie, Daniela Fern ndez, Kavell Joseph, Corrinne Graham, David Smith, Saniya Giniatullina, Anurag Maloo, Nadiia Mykhalevych.

At the Sustainable Development Solutions Network - Youth, we thank the following members for their support and involvement in the production of the Report: Amy Au, Molane Hu, Siamak Sam Loni, and Zen Koo.

At the Sustainable Development Solutions Network, we thank the following members for their support: Lauren Barredo, Jeffrey Sachs, Wing Woo and Emma Torres.

Last but not least, we would like to thank our partners for their generous support and contribution throughout the entire process. We could not have done this without your help.

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Trisanki is a young professional interested in climate change, sustainability and resource management. Her previous engagements include researching and documenting climate change and landscape projects from Asia, Africa and Latin America, as well as climate change and sustainability projects in many different parts of India. She has experience with both qualitative and quantitative research and has worked with The Energy and Resource Institute, Solidaridad Network, ICIMOD and HI-AWARE.

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