



SDG INVESTOR MAPS COLOMBIA

Empowering investors with clarity, insights and tools to achieve the Sustainable Development Goals (SDGs)



SDG Impact

SDG Impact is a United Nations Development Programme **Sustainable Finance Hub flagship initiative** working to *accelerate private sector contributions* towards the achievement of the Sustainable Development Goals (SDGs).



SDG IMPACT'S OBJECTIVE

To help businesses and investors embed **sustainability at the core** of management decisions and **direct capital** to where it can make the most difference **to people and planet.**



THE WORLD WE LIVE IN

We are pushing against the boundaries of our social and natural systems. It has led us to two problems we need to solve on a global scale:



1

The private sector, whether knowingly or not, *is having negative impacts on people and planet*. Without a **universal yardstick for sustainable management practices**, they cannot authenticate their contribution to the SDGs, fuelling SDG-washing.



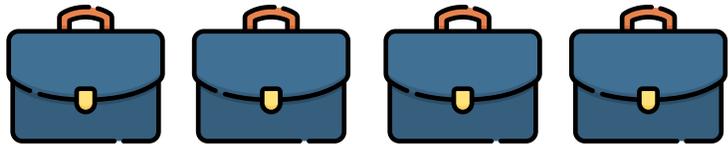
2

20% of *global capital* is held in developing countries which represent **84%** of the *world's population*.

THE SDGs PROVIDE OPPORTUNITIES

FOR PEOPLE & PLANET

380 M



jobs could be created in
developing countries

FOR BUSINESS & INVESTMENT

12 trillion



worth of market opportunities opened

2-3X growth



compared to average GDP growth
over the next 10 to 15 Years

SDG IMPACT'S THREE PILLARS OF WORK



SDG IMPACT STANDARDS

The only global management standards for sustainability

A family of Standards for 4 asset classes:

- Enterprises
- Private Equity
- Bond Issuers
- OECD/DFI

- SDG Impact Assurance Framework
- SDG Impact Seal



SDG IMPACT ADVISORY

An advisory service for private and public sector to enable the adoption of the SDG Impact Standards

Private sector programmes:
1:1 advisory workshop
Working Groups
Train the trainer

Public sector programmes:
Sustainable Finance and Impact Investing for Public Policymakers



SDG INVESTOR MAPS

A market intelligence tool highlighting where SDG priorities, government policy and market opportunity unite in the emerging markets

Currently 17 country SDG Investor Maps and 295 investment themes are housed on the SDG Investor Platform.

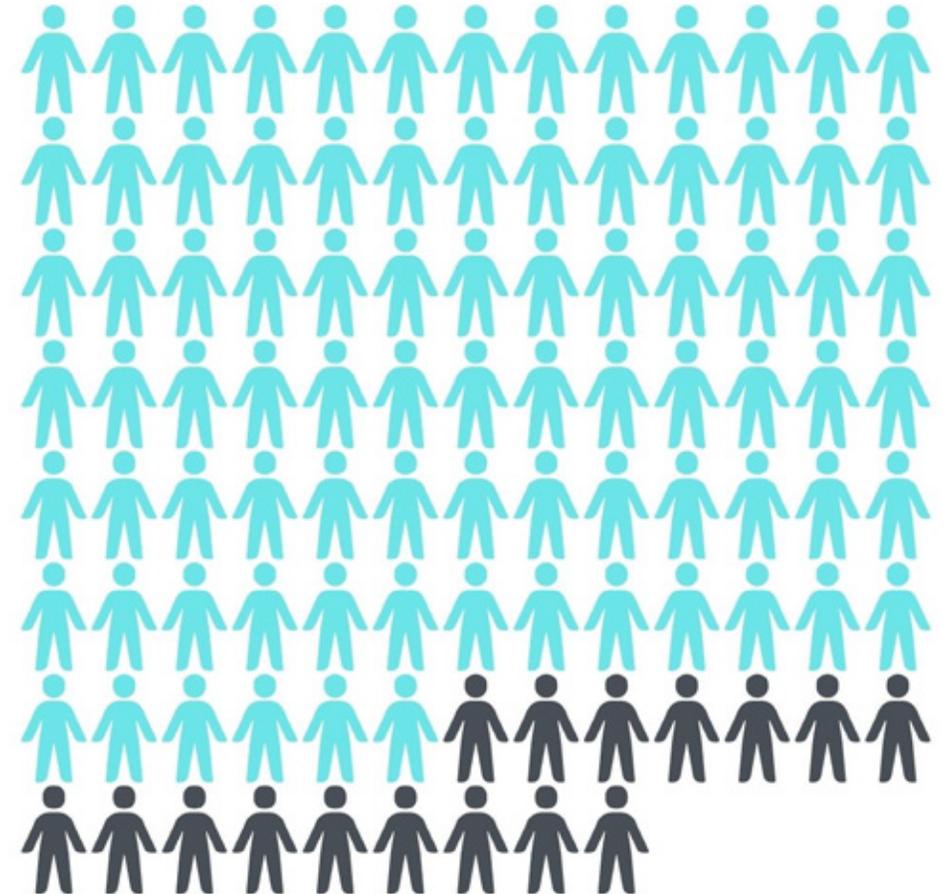
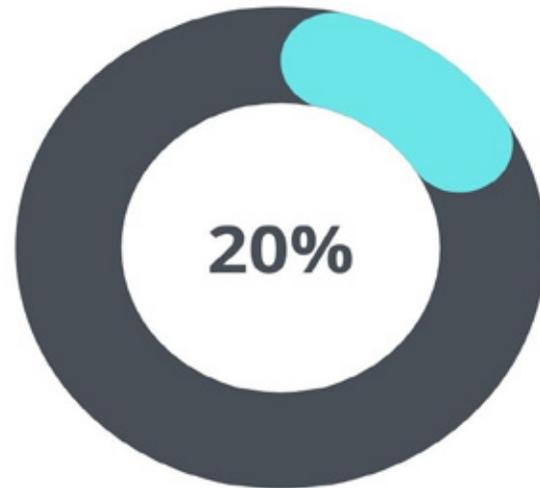


PILLAR 3 SDG INVESTOR MAPS



PRIVATE CAPITAL IS NOT TARGETED TO WHERE IT IS NEEDED MOST

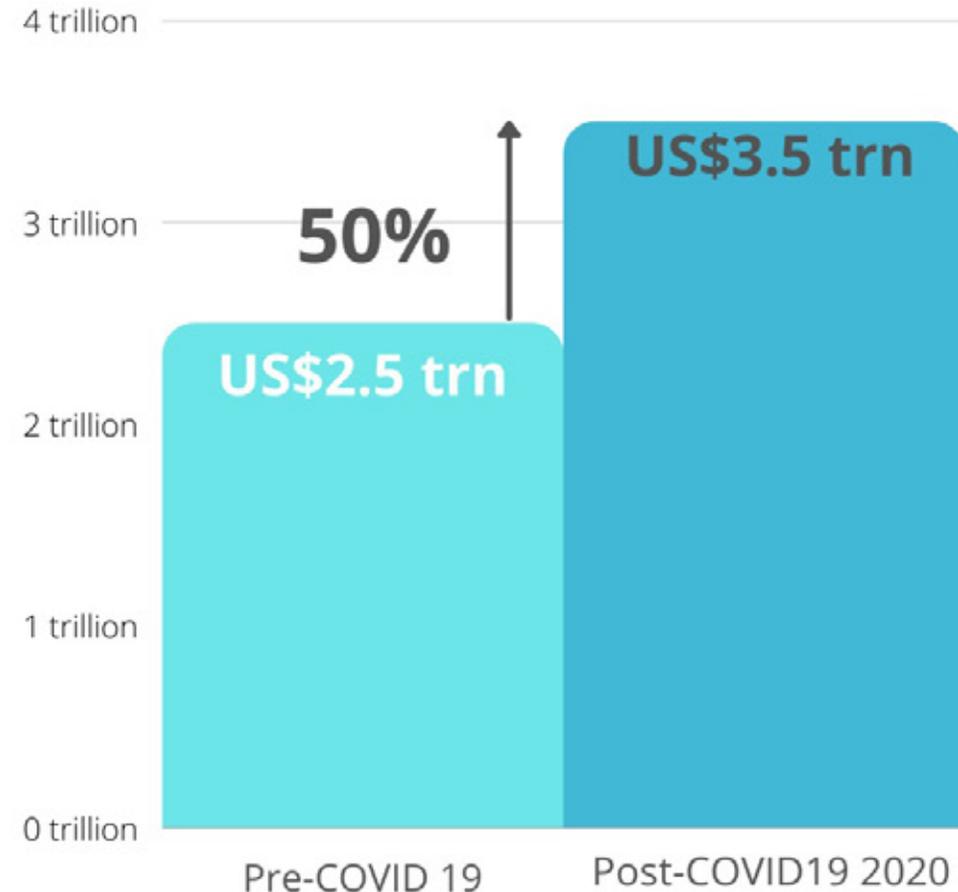
Just **20%** of global capital is in the developing markets which represents **84%** of the global population.



COVID-19 PANDEMIC INCREASED SDG FINANCING GAP

Pre-COVID-19, the annual SDG financing gap was estimated to amount to **USD 2.5 trillion***.

It increased by **50%** in 2020 to **USD 3.7 trillion****.



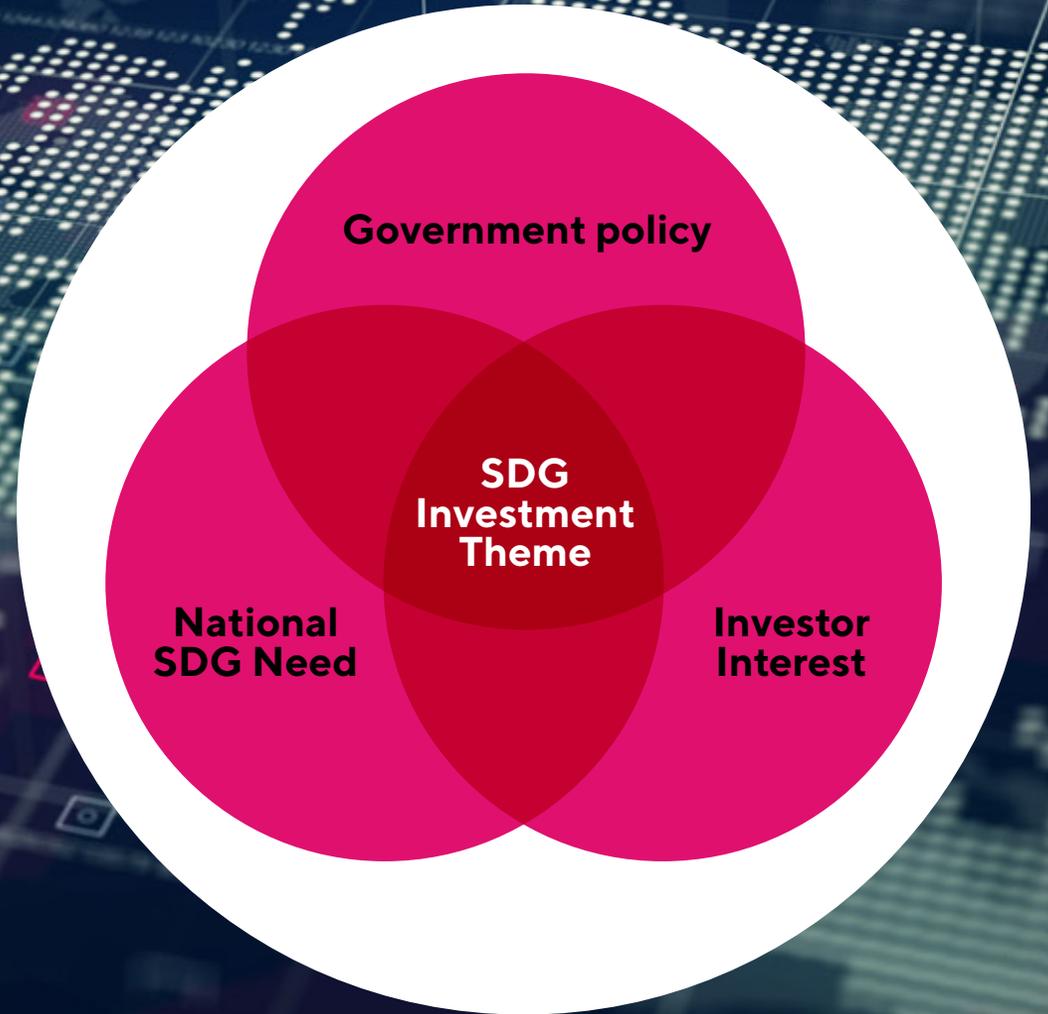
* (UNCTAD, 2020). // ** (OECD, 2020).



MOBILIZING PRIVATE SECTOR CAPITAL

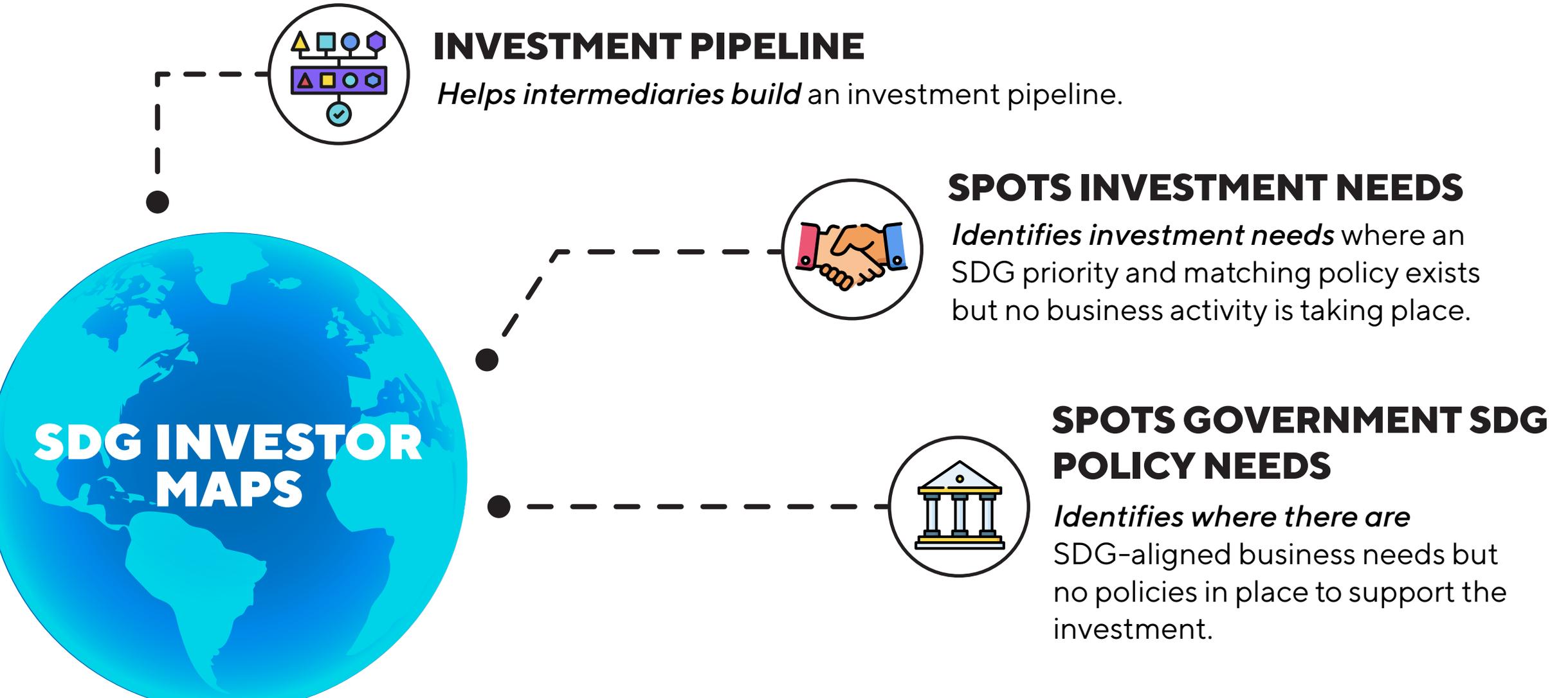
We need to bring developed market capital to the developing world for a more *equitable and sustainable global community*.

WHAT ARE THE SDG INVESTOR MAPS?



A **market intelligence tool** that identifies investment themes in **emerging markets** which have significant potential to **advance the SDGs** where government policy, national SDG need and investor interest unite.

WHAT CAN THE SDG INVESTOR MAPS DO?



SDG INVESTOR MAPS METHODOLOGY

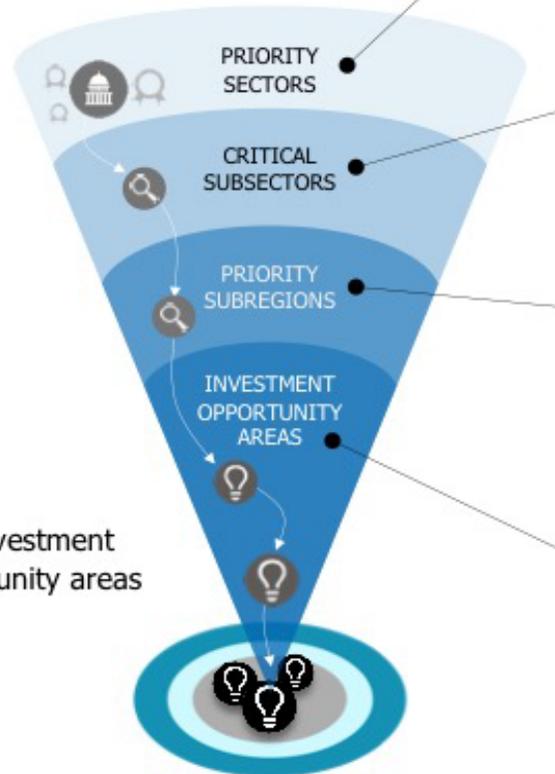
The methodology highlights *key intersections* between:

1. National Policy priorities.
2. National SDG need.
3. Investor interest.

It is a powerful tool providing detailed information about **the ticket size, timeframe, return, and SDG-impacts** of specific investment themes that we call **Investment Opportunity Areas and business models**.

From national economic and social development priorities...

...to investment opportunity areas



Define the national priority starting point

Distil and compare national development needs and national policy priorities to identify sectors where there is demonstrable political/financial commitment to stimulate development & investment

Identify critical subsectors to focus on

Prioritize subsectors where there is development need and policy/investment momentum

Identify priority subregions to focus on

Identify the subregions where there is both high development need within each subsector, and strong political/financial momentum to spur potential subsector growth

Derive more specific 'investment opportunity areas'

Highlight impactful business models within priority subsectors and subregions where new capital can facilitate scale, and identify potential 'white spaces' where new business models are most needed

SDG INVESTOR MAPS INVESTOR MEETINGS & POLICY DIALOGUES

UNDP Country Offices and SDG Impact host **Investor meetings** and **policy dialogues** to further channel private capital to SDG priorities.



Investor meetings bring investors and investee companies that have the potential to advance the SDGs together to mobilize capital to the investment opportunities identified by the SDG Investor Map.



Policy dialogues bring government, investors and enterprises together to discuss an enabling environment in which to channel investments towards SDG achievement.

IMPACT INTELLIGENCE

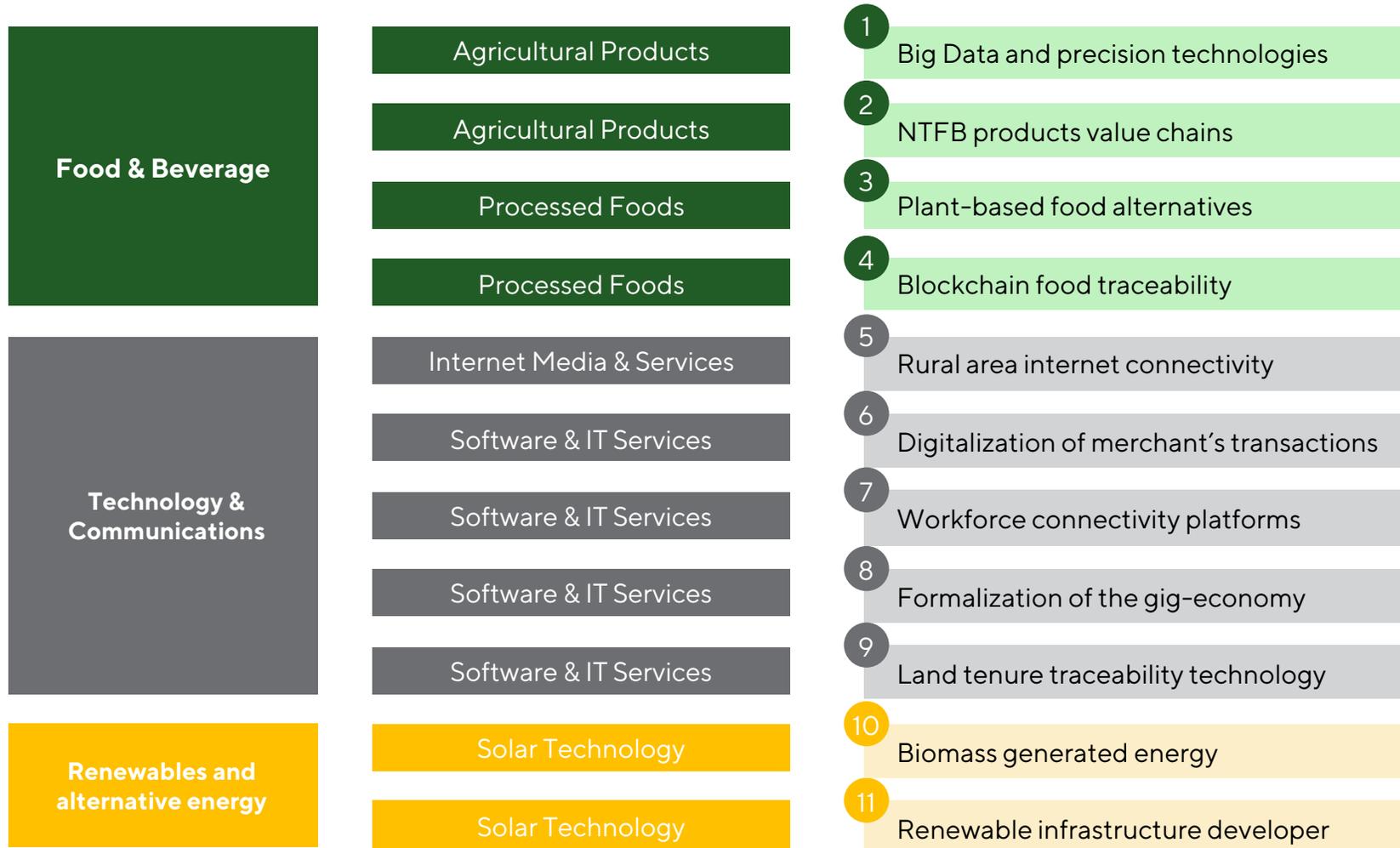
SDG Investor Map in Colombia

7 Priority sectors and subsectors with 22 Investment Opportunity Areas for Colombia

SECTORS	FOOD AND BEVERAGES	TECH & COMMUNICATIONS	RENEWABLES & ALT. ENERGY	HEALTHCARE	FINANCIALS	INFRASTRUCTURE	SERVICES AND EDUCATION
Sub Sectors	Agricultural Products Processed Foods	Software & IT Services Internet Media & Services	Solar Technology	Healthcare Delivery	Consumer Finance Insurance	Waste management Water Utilities & Services Transportation	Hotels & Lodging Educational infrastructure Education technology
1	Big data solutions for soil & yield through remote sensing technologies.	Free standalone WiFi stations to increase rural connectivity.	Biofuels and bio-based chemicals from palm and sugar-cane biomass.	Medical consultation and telemedicine platforms.	Financial technology to expand SMEs' access to credit.	Recycling of concrete and pre-manufactured materials from demolition.	Hybrid educational for remote locations.
2	Production and export of natural and high-quality cosmetics and cleaning products.	Transactional platforms for digital payment, purchase and credit for SMEs digitalization.	Unconventional renewable energy in non interconnected areas.	Electronic medical records software.	Parametric insurances for agriculture systems.	Self-sufficient private water treatment plants.	Platforms that connect rural, adventure/ecotourism experiences.
3	Healthy plant-based sustainably sourced food alternatives.	Workforce connectivity platforms targeted to entry-level individuals.	Renewable source pre-paid electricity to off the grid communities.			Services platform connecting cargo transportation providers with companies or users.	On-demand digital corporate micro-learning platforms.
4	Blockchain powered software that allow supply chain trace.	Digital tool that facilitates job formalization of 'self employed' workers.					
5		Traceability and imagery technology solution for land and property formalization.					

The pilot SDG Investor Map for Colombia identified twenty-two Investment Opportunity Areas (IOAs) across seven sectors

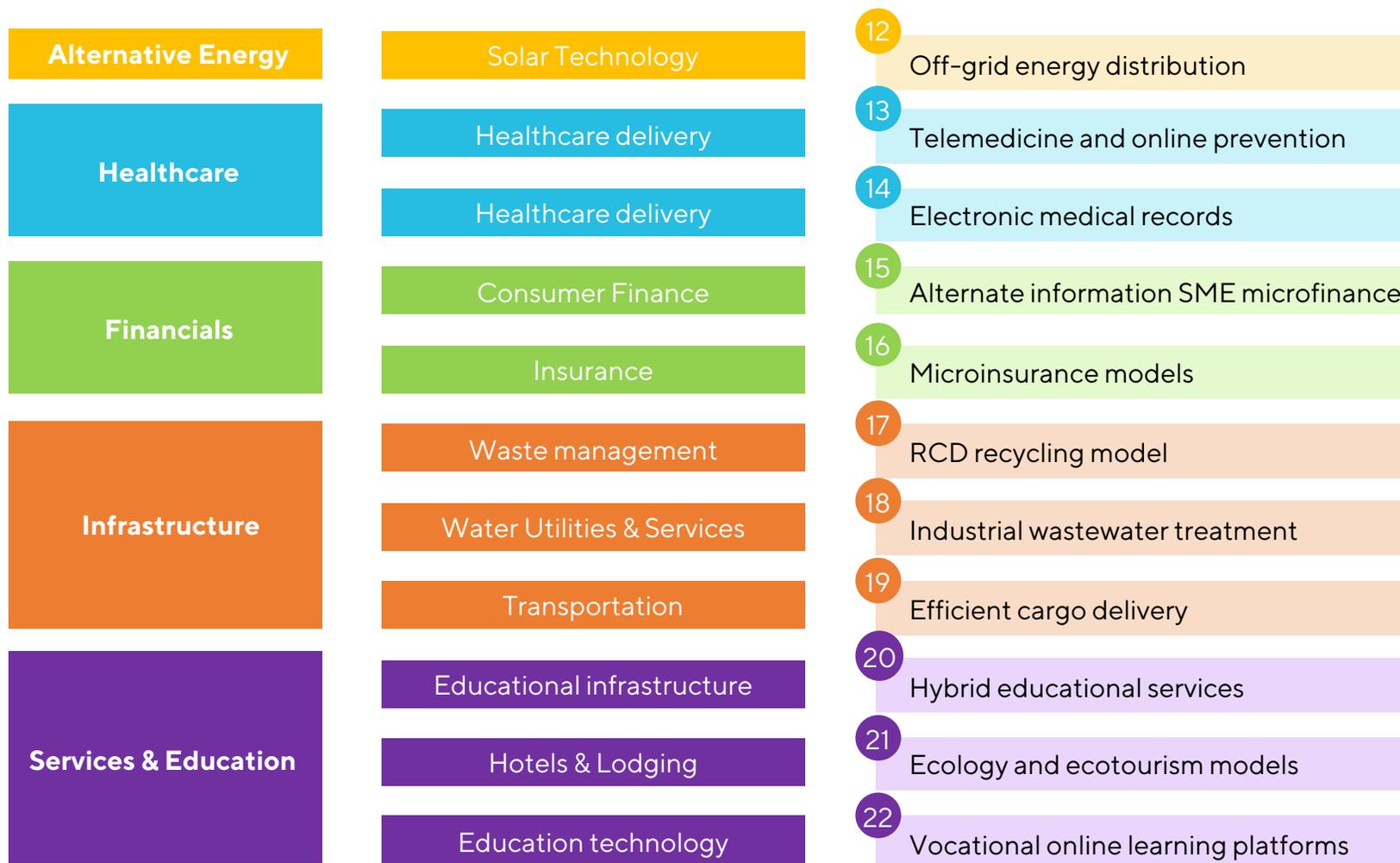
Priority sectors, priority subsectors, and sample Investment Opportunity Areas for Colombia



Note: see Country Office Handbook document for detailed explanation of sector taxonomy and on methodology for deriving IOAs

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Priority sectors, priority subsectors, and sample Investment Opportunity Areas for Colombia



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BIG DATA SOLUTIONS FOR SOIL & YIELD MAPPING, PRECISION IRRIGATION, MONITORING AND FERTILIZATION, THROUGH REMOTE SENSING TECHNOLOGIES



Food & Beverage

Agricultural Products

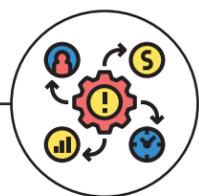
Big Data and agricultural precision technologies



Overview

Business Model

Hardware and software applications that use imaging and remote sensor technologies to gather and analyze soil, crops, yields and weather parameters. Through real time big-data and analytics (generated by drones & remote sensors), make data-based decisions to reduce weather related risks, improve crop productivity, lower operation costs and improve fertilizer applications.



Impact Case

Development need

Agriculture faces a productivity lag. Colombia produces \$28.6 k USD /km² of arable land, while Brazil, Mexico and the OECD produces \$33.3, \$35,5, and \$52,9 USD respectively.

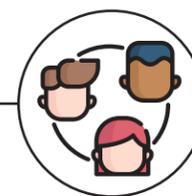
In Colombia, 9.76M tons of food are wasted per year; of which, 6.08M correspond to fruits and vegetables, out of which 42% (3,9M tons) are wasted during agricultural production.

There are 26.5M hectares with agricultural vocation of which only 7M are being used.

Potential Outcomes

Improve decision making, provide traceability, enhance market opportunities and improve the overall quality of the produce through inputting sampling and data to software over a number of years can build up a farm record that can then help to.

Measure resources and inputs and to quantify results from both. It allows farmers to use the most precise and correct amounts of inputs; whether this is water, fertilizer, chemical controls or seeds.



Beneficiaries

Direct Beneficiaries

4.7M individuals that work in the agricultural value-chain .

Agri-businesses that can use agricultural precision technologies to improve profits.

Indirect Beneficiaries

19,142 companies in Colombia that are in the Food & Beverage sector .

Rural businesses and communities that benefit from productivity boost.

Region

11 departments in which there are more cultivated hectares: Antioquia, Santander, Córdoba, Valle del Cauca, Tolima, Meta, Huila, Risaralda, Caldas, Cundinamarca y Casanare .



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Eje Cafetero y Antioquia

Centro Sur Amazonía

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BIG DATA SOLUTIONS FOR SOIL & YIELD MAPPING, PRECISION IRRIGATION, MONITORING AND FERTILIZATION, THROUGH REMOTE SENSING TECHNOLOGIES

	Food & Beverage	Agricultural Products	Big Data and agricultural precision technologies
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SDGs Alignment & Indicators



2.3 Double the agricultural productivity and incomes of small-scale food producers through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value employment.

Volume of production per labor unit by classes of farming/pastoral/forestry enterprise size and Average income of small-scale food producer.



9.4 Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes.

CO2 emission per unit of value added.



12.3 halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.

Global food loss index.



15.2 Promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.

Progress towards sustainable forest management.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

A full implementation for a hardware–software big data solution for 100ha, costs \$5.000USD. Colombia has 24million hectares of arable making this is a **\$1.2 B USD** market opportunity .

In the past 10 years, precision farming has seen unprecedented growth worldwide: About 80 percent of new farm equipment sold today has some form of precision farming component .

Expected Return & Timeframe

The application of precision agriculture technology leads to an increase in profitability and investment return between **16%–25% IRR** in the medium term (3–5 years) .

BIG DATA SOLUTIONS FOR SOIL & YIELD MAPPING, PRECISION IRRIGATION, MONITORING AND FERTILIZATION, THROUGH REMOTE SENSING TECHNOLOGIES



Food & Beverage

Agricultural Products

Big Data and agricultural precision technologies



Enabling Factors

Policy & Regulation

Science, Technology & Innovation Strategic Plan (SNCTA): Develop and implement information, knowledge management and specialized expert systems based on ICT solutions, for adequate decision-making in territorial agriculture production systems.

Agricultural and Rural Development Policy (2018-2022): Advance, towards a field with greater equity, productivity and competitiveness aligned with implementing an integrated rural reform.

Plan Nacional de Desarrollo (2018-2022): Seeks to invest in rural agriculture so that 550k producers have access to technologies, training and productive assets to increase productivity.

Finance & Partners

MinAgricultura (2019): The National Commission of Agricultural Credit approved new credit lines to strengthen competitiveness and associativity in agricultural value chain schemes.

MinAgricultura (2020): Alianzas Productivas para la vida is an instrument that links small rural producers with the markets through an agribusiness scheme with a formal commercial ally.

There are 20 investment vehicles available in LatAm that finance entrepreneurs in the Agtech sector that have performed 450 in startups focused on tech-innovation for agriculture.

NXTP Labs created an AgTech Accelerator that invests in agricultural technology. In 2017, it invested in ControlT, a platform for managing traceability and risk prevention in agriculture.

Microsoft and MinTic, are collaborating to expand of high-speed and low-cost internet connectivity, through devices that take advantage of blank spaces in the radioelectric spectrum-.



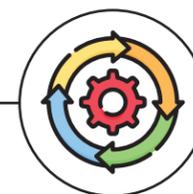
Risk Factors

Obstacles to Scale

Interoperability of different standards: The various available tools often do not follow the same technology standards. As a result, there is a lack of uniformity in the final analysis.

Lack of connectivity: In many remote rural locations strong, reliable internet connectivity is not available what makes implementation of digital farming will remain problematic.

Technological adoption: Getting farmers thoroughly acquainted with the concept of smart farming, it, is of the utmost importance before they can actually proceed with the implementation.



Impact Management

What

Positive and Important outcome due to increase yields and farm productivity.

Who

Underserved stakeholders working as smallholders in rural Colombia.

How much

Deep change & large scale due to the technological disruption in agriculture.

Contribution

Likely better due to the associated income improvement and efficiencies.

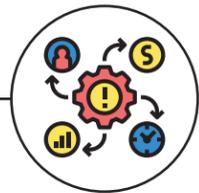
PRODUCTION AND EXPORT OF NATURAL INGREDIENT-BASED HIGH-QUALITY ORGANIC COSMETICS AND HOUSEHOLD CLEANING PRODUCTS



Overview

Business Model

Value shared, inclusive and sustainable export-oriented value chains that take advantage of Colombian biodiversity to transform non-timber forest-based (NTFB) bio-inputs into value added products for the cosmetics and home & personal care products (e.g. disinfectants, natural soaps, etc.)



Impact Case

Development need

Colombia is home to more than 10% of the planet's biodiversity, being the first in bird and orchid diversity, and the second in plant diversity: there are a total of 56,343 registered species .

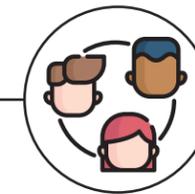
Despite huge economic development potential, informality, low levels of technification lack of management plans approved by the environmental authority, or the permits established in the regulations; have caused ecosystem destruction and biodiversity loss .

Emerging contaminants are present in personal care products. They are endocrine disruptive chemical agents that affect hormonal function and cause several diseases (e.g. cancer) .

Potential Outcomes

Generate economic opportunities by taking advantage of the countless plants, trees and fruits that provide great properties to produce natural cosmetic and homecare products.

Ensure forest conservation by formalizing, technifying and implementing sustainable management plans for the production of NTFB products.



Beneficiaries

Direct Beneficiaries

+1.6M people that today live on forest-based territories.

+56k people that work on the cosmetics industry.

Indirect Beneficiaries

+40k people that get sick due to chemical intoxications.

Region

Pacific, Amazonian and Orinoquía regions comprise 86% of the existing forest in Colombia . These are the regions most benefited by formalizing a NTFB economy.



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PRODUCTION AND EXPORT OF NATURAL INGREDIENT-BASED HIGH-QUALITY ORGANIC COSMETICS AND HOUSEHOLD CLEANING PRODUCTS



SDGs Alignment & Indicators



2.3 Double the agricultural productivity and incomes of small-scale food producers through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value employment.

Volume of production per labor unit by classes of farming/pastoral/forestry enterprise size and Average income of small-scale food producers.



3.9. By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

Mortality rate attributed to household and ambient air pollution.



Improve progressively, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation.

Material footprint, material footprint per capita, and material footprint per GDP.



15.1. By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.

Forest area as a proportion of total land area.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

The market for organic personal care and cosmetics products will reach up to USD \$2Bn in 2026, with a Compound Annual Growth Rate of 7.25%, over the forecast period (2020-2026) In Colombia, the cosmetics market is a USD \$3.6Bn opportunity.

Expected Return & Timeframe

Based on global investments and acquisitions in the cosmetics sector, investors will earn 20-22x returns in 5-10 years.

PRODUCTION AND EXPORT OF NATURAL INGREDIENT-BASED HIGH-QUALITY ORGANIC COSMETICS AND HOUSEHOLD CLEANING PRODUCTS



Food & Beverage

Agricultural Products

NTFB value-added products



Enabling Factors

Policy & Regulation

Productive Transformation Program (PTP): aims that by 2032 Colombia becomes a world leader in the production and export of natural ingredient-based high quality cosmetics and household cleaning products with sales of +US 2.2bn (+ US 780 in exports,) generating +40.000 Jobs.

Access to genetic resources: Resolution 1348 of 2014, Decisión Andina 391 de 1996, 1997 730 Decree and Ley 3570 de 2011 regulate the access, define contract requirements and identifies the national authorities to approve access and exploitation of genetic resources.

Use of non-timber forest resources: Decree 1791 of 1996 regulates the sustainable exploitation of non-timber forest resources designating the Corporaciones Autónomas Regionales (CAR) as the authorities that must approve the sustainable management permits.

Finance & Partners

Funding: Procter & Gamble Co. acquired the New Zealand skincare company Snowberry, which specializes in natural ingredients including products such as cleansers, toners and brighteners.

Bancoldex has a special program and credit lines for those sectors that are part of the Productive Transformation Programme.

Start-ups: Mae Selva, Waya Natural, Özö, EcoHome Kattalei are Colombian ventures that create, produce, market personal care products from natural bio-inputs.



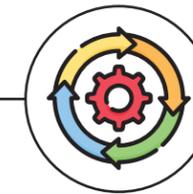
Risk Factors

Obstacles to Scale

Unclear regulations: Restrictions on access to target markets, long and inconsistent approval processes, intellectual property mechanisms and regulatory standards.

Lack of production knowledge: Lack of sustainable forest management plans definition technical assistance and implementation in potential territories that can benefit from the technology.

Lack of R&D: Expensive R&D for international commercialization permits and value-added product transformation.



Impact Management

What

Positive and Important outcome due to community integration

Who

Underserved stakeholders working in the NTFB value chain.

How much

Deep change & large scale due to the exponential expected growth of the industry.

Contribution

Likely better due to better use of resources to create better quality products.

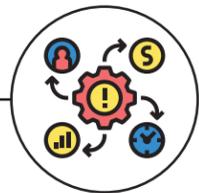
HEALTHY PLANT-BASED SUSTAINABLY SOURCED GLUTEN, MEAT, OR DAIRY-FREE FOOD ALTERNATIVES (CONTINUED)



Overview

Business Model

Food manufacturers and integrated supply chains that are bringing innovation in technology to meet gluten, meat, or dairy-free alternatives, driven by real or perceived health, environmental, and lifestyle benefits with foods that substitute for animal or gluten products while still offering pleasing flavor and texture (e.g. plant-based milk, fortified proteins, meat substitutes).



Impact Case

Development need

56% of population is overweight: 38% of young people and adults are overweight, 19% are obese. Overweight is more frequent in women (22%) than in men (14%).

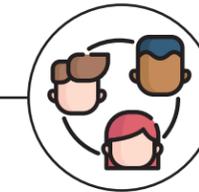
Food security is the safe and permanent access to sufficient nutritious food for a healthy and active life. More than half of Colombian households (58%) do not enjoy from food security.

Agriculture, forestry and other land uses is the sector that contributes the most to the total emissions of greenhouse gases in Colombia, with a total share of 55%.

Potential Outcomes

A plant-based diet is good for human health: a plant-based protein vs. red meat is associated with lower risk of cancer-related, cardiovascular disease-related and total mortality.

A plant-based diet could add up 49% to the global food supply without expanding croplands, significantly reducing carbon emissions and waste by products. Similarly, If we all eliminated meat and milk from our diets, we would be saving 50% of our water use.



Beneficiaries

Direct Beneficiaries

25.2 millions of Colombians who suffer from either malnutrition or overweight.

15 million individuals that identify themselves as farmers.

Indirect Beneficiaries

+19k companies in Colombia that are in the Food & Beverage sector.

The health system that spends US \$ 2.2bn in treating obesity related diseases.

Region

11 departments that have the biggest potential for plant-based cultivation alternatives: Antioquia, Santander, Córdoba, Valle del Cauca, Tolima, Meta, Huila, Risaralda, Caldas, Cundinamarca y Casanare.



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HEALTHY PLANT-BASED SUSTAINABLY SOURCED GLUTEN, MEAT, OR DAIRY-FREE FOOD ALTERNATIVES (CONTINUED)



SDGs Alignment & Indicators



2.4 Ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production.

Proportion of agricultural area under productive and sustainable agriculture.



3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.

Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease.



13.2 Integrate climate change measures into national policies, strategies and planning.



15.2 Promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.

Progress towards sustainable forest management.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

Consumer demand for a healthier and more sustainable diet drives plant protein products. The global plant-based protein market is a US \$10.8bn market growing at a 6.7% CAGR.

19% of Latin Americans declared themselves vegetarian.

Colombians spend an average of \$3.6M COP in food per month, with 45M of habitants the vegan market is a US \$9.0bn.

Expected Return & Timeframe

If you invested \$1,000 in Beyond Meat at IPO, that investment would be worth nearly \$4,500 as of Feb. 5, 2020, for a total return of around 345%.

HEALTHY PLANT-BASED SUSTAINABLY SOURCED GLUTEN, MEAT, OR DAIRY-FREE FOOD ALTERNATIVES (CONTINUED)



Food & Beverage

Processed Foods

Healthy plant-based food alternatives



Enabling Factors

Policy & Regulation

Plan Nacional de Desarrollo: Alliance for food security and malnutrition - Create a Food and Nutrition Security System, with functions and responsibilities within the government, with decision instances at the national and territorial level.

Política Agropecuaria y de Desarrollo Rural: Guidelines to advance between 2018-2022 towards greater equity and competitiveness in alignment with Reforma Rural Integral.

Plan Nacional de Negocios Verdes: advance in sustainable consumption and production and deepen green businesses, all this is part of our environmental policy.

Finance & Partners

Nutresa Ventures is a US \$ 50 million fund that invests in early-stage highly innovative companies aligned with Nutresa's core business (Plant Base 2.0 is an investment vertical).

According to the Acodres (restaurant guild) to 2019 there are 528 establishments with vegan and vegetarian offer compared to 2015 when there were only 43.5 .

Piétrán's Veggie Burger and Veggie Bites products were launched to the Colombian market in 2018, serving the needs of consumers and healthy trends.

Sannus Foods, is a a company that since 2018 imports the world's most recognized plant-based products to Colombia (e.g. Beyond Meat) and is growing at 800% a year.

UNDP is supporting victims of the Antioquia armed conflict, in the development of biofortified products - bean flour for the production of hamburgers.



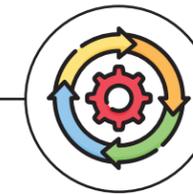
Risk Factors

Obstacles to Scale

Lack of knowledge of health benefits: Most consumers do not recognize that industrialized plant-based products end up being harmful to the body or that there are better alternatives.

High costs of certifying products: which results in a reduced supply of these products on the market and expensive processing and R&D Investments.

Lack of production knowledge: Lack of sustainable forest management plans definition technical assistance and implementation in potential territories that can benefit from the technology.



Impact Management

What

Positive and Important outcome due to increase in food quality and availability.

Who

Underserved stakeholders working as smallholders in rural Colombia.

How much

Deep change & large scale due to agricultural promotion.

Contribution

Likely better due to the associated income improvement and health improvements.

BLOCKCHAIN POWERED SOFTWARE THAT ALLOW SUPPLY CHAIN PARTICIPANTS TO TRACE FOOD ORIGIN AND CHARACTERISTICS FOR WASTE REDUCTION AND INCOME INCREASE

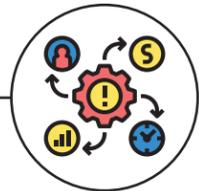


Overview

Business Model

Blockchain powered technology that supply chain participants (farmers, manufacturers, distributors) record transactions to strengthen food management, safety and quality of food.

Participants and consumers can access labelling information and supermarkets to analyze large amounts of data and manage inventory in order to increase income of supply chain participants including small producers.



Impact Case

Development need

The quantified food waste in the country is 9.76 million tons of food per year, which represents 34% of the total food that the country could consume during a year (8M people can be fed for a year). these wastes are related to the lack of infrastructure, limited capacities to access markets .

8% of greenhouse gas emissions (GHG) in the country are related to food waste .

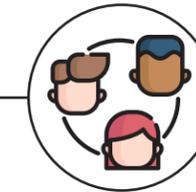
The costs of malnutrition in Colombia are calculated at 11% of the GDP, (US \$40US) while 4.8% of the population (2.4Mpeople), suffer from undernourishment (lack of access to food energy) .

Potential Outcomes

Maximize transparency in the supply chain communicating safety and quality by overcoming contaminated food entering the supply chain, providing reassurance to consumers while alerting both retailers and manufacturers to food identified as unsafe.

Increase local food availability, which has a positive impact on people's health and nutrition.

Reduce food loss and waste affect the environment due to the unsustainable use of natural resources, the generation of waste and GHG emissions.



Beneficiaries

Direct Beneficiaries

2.4M people that suffer from undernourishment.

Indirect Beneficiaries

19,142 companies in Colombia that are in the Food & Beverage sector .

Region

11 Departments in where food insecurity is below 57% Guajira Bolívar, Cauca, Vichada, Magdalena, Sucre, Nariño, Chocó, Cesar, Córdoba, Putumayo.



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BLOCKCHAIN POWERED SOFTWARE THAT ALLOW SUPPLY CHAIN PARTICIPANTS TO TRACE FOOD ORIGIN AND CHARACTERISTICS FOR WASTE REDUCTION AND INCOME INCREASE



SDGs Alignment & Indicators



1.4 Ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.

Proportion of population living in households with access to basic services.



2.1. End hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year.

Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES).



12.3 halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.

Global food loss index.



13.2 Integrate climate change measures into national policies, strategies and planning.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

Spoiler Alert charges US \$0.5/kg for every ton of food reallocated and managed through their software. If the annual food waste is 9.76M tons, there is a US \$4.7Bn market

Expected Return & Timeframe

A research conducted by Champions 12.3 finds that for every \$1 companies invested to reduce food loss and waste, they saved \$14 in operating costs in a 3 year span (141% ROI) and boroughs (country government), \$1 (100% ROI).

BLOCKCHAIN POWERED SOFTWARE THAT ALLOW SUPPLY CHAIN PARTICIPANTS TO TRACE FOOD ORIGIN AND CHARACTERISTICS FOR WASTE REDUCTION AND INCOME INCREASE



Food & Beverage

Processed Foods

Blockchain food traceability



Enabling Factors

Policy & Regulation

Plan Nacional de Desarrollo (2018 – 2022) Has the goal of reducing food losses and waste. Currently 34% of total food is lost as well as the number of households in which, at least one of its members did not consume all three meals one or more days in the week .

Draft Law 301 of 2018, policy to prevent food loss and waste, which prohibits throwing away food fit for consumption, and promotes donating this food to non-profit organizations .

Law 1990 of 2019, aims to prevent the waste of food fit for human consumption and prohibits the destruction of food that cannot be marketed. **The Comisión Intersectorial de Seguridad Alimentaria y Nutricional (Cisan)** will be in charge of executing the provisions of the standard .

Finance & Partners

Colombia hosted the 1st LatAm Summit on Food Loss and Waste (2019), organized by FAO, IDB and DNP, where 200 delegates from government, the food industry and academia participated .

FINAGRO and Banco Agrario, present financing alternatives for producers that present productive projects aimed at increasing productivity and reducing losses and food waste .

Food Cloud is a food traceability app and marketplace that connects food stores that have products about to expire with charities⁶. **Spoiler Alert** is a software platform to manage sales and donation processes for excess, food inventory that received \$2.7MUSD in investment .

"The Other Bar", a chocolate bar designed in Ecuador that has generated a positive impact on the sale price and therefore on the income of the producers .



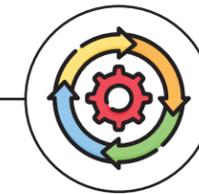
Risk Factors

Obstacles to Scale

Blockchain adoption: Despite the use of blockchain in other technologies such as bitcoin, its use in other software platforms is limited including interoperability challenges. An analytical solution can be first implemented to test for digital adoption and generate benefits.

Investment: Implementing software tracking solutions can be expensive and time consuming.

Causality: Having less food waste doesn't necessarily translate into solving the challenge of universal access to food or having traceability does not necessarily translate into better prices.



Impact Management

What

Positive and Important outcome due to improved malnourishment and reduced waste.

Who

Underserved stakeholders who benefit from increased food availability.

How much

Deep change & large scale due to responsible consumption.

Contribution

Likely better due to reduced GHG emissions and food availability.

FREE STANDALONE WIFI STATIONS IN PUBLIC AREAS TO INCREASE RURAL CONNECTIVITY IN EXCHANGE FOR ADVERTISING AND USER DATA



Technology & Communications

Internet Media & Services

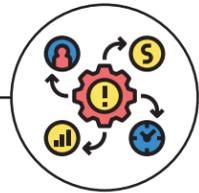
Rural area internet connectivity



Overview

Business Model

Direct capital investments in standalone WiFi stations in public areas offered to users for free and sold to sponsors in exchange for advertising while developing alternative revenue streams from both consumers and third parties taking advantage of the organizations that may benefit from the high value advertising and market information gained from a growing Internet user base .



Impact Case

Development need

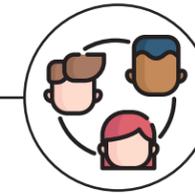
Colombia ranks 19th out of 27 countries in LatAm in terms of Internet penetration with 50% penetration (23.8 million people with no internet) presenting significant asymmetries between urban and rural: 45.7% in the head municipalities vs. and 6.2 % in scattered rural areas .

Colombia ranked 131 out of 206 countries in internet speed, with an average bandwidth of 3.4 megabytes. The average speed in Taiwan is 85 megabytes .

Potential Outcomes

Social wellbeing: create new ways in which people can connect with one another including increased access to financial capital services (mobile banking). Internet gives a powerful platform for propagating and testing their ideas and making improvements in their societies .

Economic Development: A 10% increase in penetration leads to a GDP per capita increase of 1.2% -1.4% and a 1 Mbps increase in speed increases GDP per capita in 1.6%2 . This is achieved as the internet boosts international trade by making it easier for SMEs to connect with suppliers, providing access to a wider customer base via e-commerce and reducing transaction costs .



Beneficiaries

Direct Beneficiaries

23.8 million Colombians without internet.

34% of SMEs that advertise using digital media.

Indirect Beneficiaries

+120 marketing agencies in Colombia.

Region

12 departments with lowest internet penetration Guajira, Nariño, Amazonas, Guanía ,Chocó ,Putumayo, Vichada, Casanare, Cauca ,Caquetá, Vaupés, Arauca.



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FREE STANDALONE WIFI STATIONS IN PUBLIC AREAS TO INCREASE RURAL CONNECTIVITY IN EXCHANGE FOR ADVERTISING AND USER DATA



SDGs Alignment & Indicators



4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all.

Proportion of schools with access to the Internet for pedagogical purposes.



8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labor-intensive sectors.

Annual growth rate of real GDP per employed person.

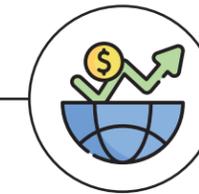


9.c. Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet.

Proportion of population covered by a mobile network, by technology



17.8 Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

OhMyFi estimates that the total potential in Colombia is +1M connection spots in the country. With +3000 connections and selling ~\$2MUSD/year the total market size is \$333 MUSD1.

According to international analyst BMI Research, the market value of Colombia's ICT sector was \$6.29bn in 2018, with this predicted to increase by 6.8% in 2020.

Expected Return & Timeframe

ITU has studied successful business models that are bringing broadband internet in rural areas. Depending on the geography of operation and year has show annual returns of 18%-32% .

FREE STANDALONE WIFI STATIONS IN PUBLIC AREAS TO INCREASE RURAL CONNECTIVITY IN EXCHANGE FOR ADVERTISING AND USER DATA



Technology & Communications

Internet Media & Services

Rural area internet connectivity



Enabling Factors

Policy & Regulation

National Development Plan: Improve internet quality and accelerate digital social inclusion deploying networks to expand connectivity. By 2022 11.8 million households (70%) will be connected and at least 80% of people over the age of 5 will use the Internet.

The National Plan for Rural Connectivity aims to deploy the infrastructure to guarantee access to the Internet, and offer conditions for using this service through public access solutions.

ICT Plan 2018-2022 will make the internet a tool for equity, through increased connectivity and the productive use of the internet by massifying and improving the quality of internet access.

Law 1978 of 2019 states that telecommunications network providers may execute projects for the benefit of the most vulnerable communities that contribute to closing the digital divide.

Finance & Partners

OhmyFi is a web platform for marketing, communications, loyalty and studies in real-time through free WiFi that allows users to customize, communicate and engage with clients.

The government created a \$1,4 billion COP fund (Fondo Único de Tecnologías de la Información y las Comunicaciones - FUTIC) to finance rural connectivity projects until 202 .

Lavazza, Microsoft and the Colombian National Coffee Growers Association of Colombia partnered in a digital transformation project to benefit 500k small coffee farmers in Meta region.

NGOs such as Malkaia and Colnodo are working to improve access in rural areas.



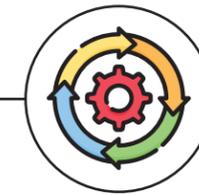
Risk Factors

Obstacles to Scale

Existing rural internet models have succeeded at a relatively small scale but face a lack of early-stage financing, limited partnership opportunities, and unfamiliar or restrictive regulations.

Affordability and lack of digital skills are still some of the most important obstacles to the adoption and effective use of the Internet, less than half of the population has basic skills.

If the underlying broadband infrastructure is not properly maintained (and expanded) could cause essential technology and service to fail and potential concerns on data privacy.



Impact Management

What

Positive and Important outcome due to increase in internet access and quality.

Who

Underserved stakeholders who do not have access to the internet.

How much

Deep change & large scale due to the huge benefits that the internet brings.

Contribution

Likely better due to the associated economic development from more and better internet.

TRANSACTIONAL PLATFORMS FOR DIGITAL PAYMENT ACCEPTANCE, ONLINE PURCHASING AND CREDIT LEDGERS FOR MERCHANT'S DIGITALIZATION



Technology & Communications

Software & IT Services

Digitalization of merchant's transactions

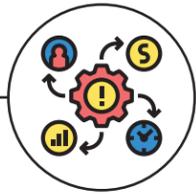


Overview

Business Model

Applications that use point-of-sale (POS) terminal that not only allows customers to pay electronically by any form of card, but also enables them to buy pre-paid airtime and pay their utility bills at the store as well as use food vouchers.

Same platform will allow merchants to consolidate the purchases of their inventory and create a digital log of transactions of the money it receives and spends.



Impact Case

Development need

SMEs are essential for Colombia's economy. There are more than 700.000 SMEs in Colombia that generate 52 percent of gross domestic product and 72 percent of employment.

Compared to other countries in LatAm where cash is losing its importance, In Colombia, 93.6% of the internet bankable population uses cash in their monthly expenses.

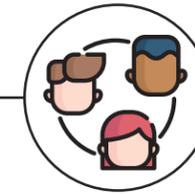
90% of merchants are informal, have no access to credit and are lagging behind in digitalization.

Potential Outcomes

Give previously 'unbanked' SMEs the ability to manage an irregular income stream, plan for the future, access to credit and recover from economic shocks.

Provide SMEs with technology and tools to increase their competitiveness, attract new customers, create new income streams and increase savings.

Help governments access transactional to formalize the economy and reach social assistance beneficiaries, and help banks have additional information to provide new credit lines.



Beneficiaries

Direct Beneficiaries

700.000 SMEs in Colombia that will improve their digital adoption.

13M people living in urban areas in *estrato* 1,2 or 3 who perform most of its purchases.

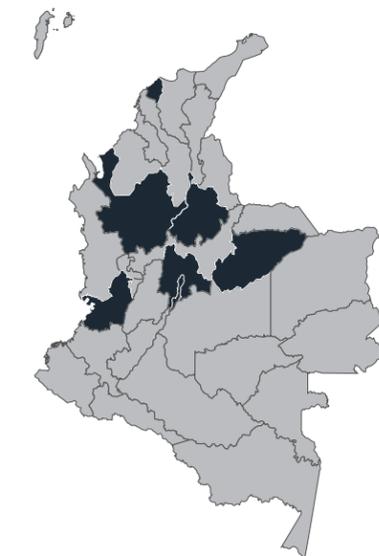
Indirect Beneficiaries

Banks that will have additional clients due to better information availability.

CPGs can sell to a wider customer base.

Region

Barranquilla, Bucaramanga, Cali, Medellín and Bogotá and its respective per-urban areas that concentrate 73% of total micro-merchants in the country.



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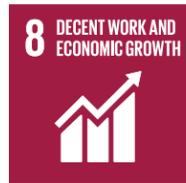
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TRANSACTIONAL PLATFORMS FOR DIGITAL PAYMENT ACCEPTANCE, ONLINE PURCHASING AND CREDIT LEDGERS FOR MERCHANT'S DIGITALIZATION



SDGs Alignment & Indicators



8.3 Promote development-oriented policies that support decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of SMEs, including through access to financial services.

Proportion of informal employment in non-agriculture employment, by sex.



9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.



10.2 Empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.



17.8 Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology.

Proportion of Individuals using the internet.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

Microcommerce is the sector that is growing the fastest in digital adoption in Colombia (+37%).

There are ~700.000 microenterprises in Colombia. A Solution that provides digital payments and vendor integration can cost \$150 USD/year, making this a \$1.05BUSD opportunity.

Expected Return & Timeframe

According to the average growth of the industry, the digital payment market will continue to grow at a 17.6% rate

Series A investors of a similar startup in Africa (Flutterwave) have gained 45-50% in IRR.

TRANSACTIONAL PLATFORMS FOR DIGITAL PAYMENT ACCEPTANCE, ONLINE PURCHASING AND CREDIT LEDGERS FOR MERCHANT'S DIGITALIZATION



Technology & Communications

Software & IT Services

Digitalization of merchant's transactions



Enabling Factors

Policy & Regulation

Plan Nacional de Desarrollo: Make life easier for citizens and their interaction with the State through the use of digital technologies, decrease the indicator of use of cash, measured as cash / monetary aggregate (M2), to 8.5% and increase digital transactions from 87 to 290 million.

Law 1978: Its objective is to modernize information and communication technologies, align the incentives of the agents and authorities, simplify and modernize the institutional framework of the sector to encourage private investment in the sector and close the digital gap.

Finance & Partners

AppsCo is an accelerator program led by MinTIC and Fondo Emprender del SENA that every year invests \$2,000M COP in 25 technology-based startups.

Project F is a project led by Asobancaria to reduce the use of cash and make Colombians more connected to the use of electronic media and services.

Bancolombia: Has a \$ 30,000M COP credit line for merchants in a model that seeks to accompany this traditional channel in its most urgent financial needs.

Tpaga, a mobile wallet, has just received a new capital injection of \$ 1.5M USD from strategic investors, led by the Corbeta group.

UNDP Colombia is leading **En Marcha Digital** an initiative to reactivate mom-and-pop shops under 6 dimensions: rural suppliers, bank correspondents, basic goods, e-commerce, digital connectivity and food safety.



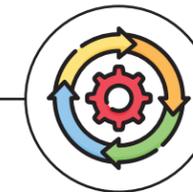
Risk Factors

Obstacles to Scale

Digital Security: Protecting users digital identities and data, ensuring money and identities safety and standardized reporting to avoid electronic fraud.

Consumer habits: Achieve a shift in consumer behavior to make digital transactions at the stores and increased electronic cash a new normal.

Digital Illiteracy: Low levels of financial literacy among unbanked consumers, small-scale retailers, consumers, limited interest perceived for digitization, and lack of supportive policies.



Impact Management

What

Positive and Important outcome due to increase efficiency and technology adoption.

Who

Underserved stakeholders working as micro-merchants in peri-ruban Colombia.

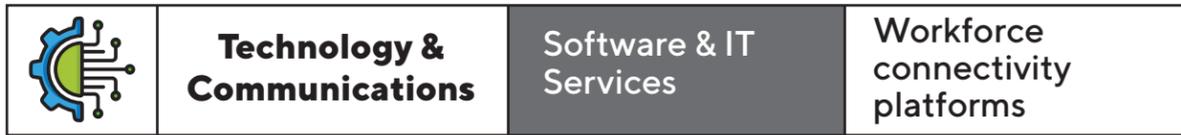
How much

Deep change & large scale due to the technological disruption in micro-commerce.

Contribution

Likely better due to the associated income improvement and efficiencies.

WORKFORCE CONNECTIVITY PLATFORMS TARGETED TO ENTRY-LEVEL, NON-TRADITIONAL BACKGROUND INDIVIDUALS

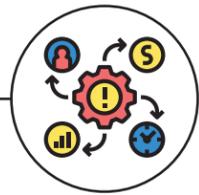


Overview

Business Model

Online vocational talent marketplaces that connect companies to hire for local vocational and entry-level professional and formal positions to individuals with entry-level skills, sourced from nontraditional backgrounds and train them for their first job.

Sources the job applicants through existing employment agencies and part-time workforce companies ('talent partners'), who pay for the placement support and associated data analytics.



Impact Case

Development need

Out of the 24.7M Colombians that could work, 19.4M have a job (21.4% unemployment rate May 2020) and 14.1M (63%) are informally employed.

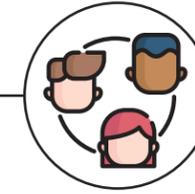
Women and young professionals are those who have the hardest time finding a job (28% and 31% unemployment rate respectively).

An average Colombian takes 120 - 180 days to find a job.

Potential Outcomes

Connect highly needed talent to living wage jobs by making it easier for employers to find, validate and retain skillful workers while reducing barriers to entry for candidates from non-traditional backgrounds and shorten time to employment.

Analyze how connectivity platforms and training can improve new employment generation.



Beneficiaries

Direct Beneficiaries

14.1M informal workers .

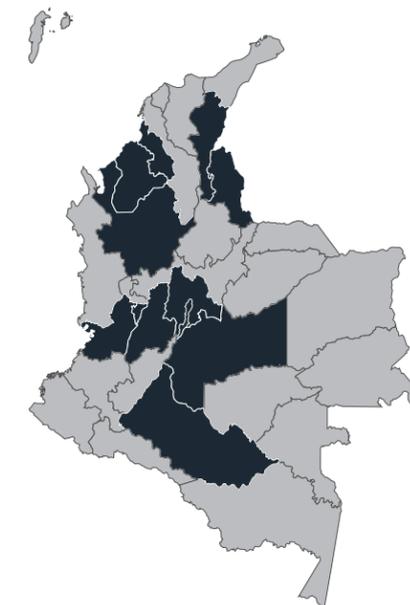
5.3M unemployed.

Indirect Beneficiaries

1.6M SMEs in Colombia looking for talent.

Region

12 departments with the highest unemployment rates: Tolima, Caquetá, Córdoba, Cundinamarca, Quindío, Meta, Antioquia, N. Santander, Cesar, Sucre, Chocó, Valle del Cauca.



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WORKFORCE CONNECTIVITY PLATFORMS TARGETED TO ENTRY-LEVEL, NON-TRADITIONAL BACKGROUND INDIVIDUALS



SDGs Alignment & Indicators



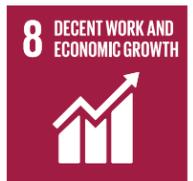
1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable.

Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons.



5.1 End all forms of discrimination against all women and girls everywhere.

Whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex.



8.5 Achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work.

Unemployment rate, by sex, age and persons with disabilities.

8.6. Reduce the proportion of youth not in employment, education or training.

Proportion of youth (aged 15-24 years) not in education, employment or training



10.1 Progressively achieve and sustain income growth of the bottom 40% of the population at a rate higher than the national average.

Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

Recruitment agencies charge 10%-15% of the first wage of a successful hire. Assuming a minimum wage hire (US \$300) for 16.4M of unemployed and informal individuals this is a \$740MUSD market.

Expected Return & Timeframe

According to a McKinsey study, employers have found that finding the right candidate can boost returns even by 30%.

WORKFORCE CONNECTIVITY PLATFORMS TARGETED TO ENTRY-LEVEL, NON-TRADITIONAL BACKGROUND INDIVIDUALS



Technology & Communications

Software & IT Services

Workforce connectivity platforms



Enabling Factors

Policy & Regulation

Plan Nacional de Desarrollo: Generate services that help locate people in quality jobs, with an emphasis on groups with greater problems in employment. Reduce job informality to 41.2%, contribute to connect 2 million job vacancies and reduce unemployment to 7.6%.

Empleo para la prosperidad aims at facilitating labor insertion of vulnerable population through the strengthening of their transversal skills and access to employment opportunities.

Servicio público de empleo: Manages and promotes the Public Employment Services, with a quality approach through the timely and efficient operation of the network of providers in the field of articulation and integration of active labor market policies.

Finance & Partners

IDB, Fundación Corona, Prosperidad Social and SECO, led the successful structuring of a social impact bond to transform the way of addressing the challenges of employability in Colombia and achieve greater cost effectiveness of employability projects for difficult to place populations.

The Law 2010 of 2019 (Law of economic growth), generates Income tax reduction incentives to those companies that hire young workers who aspire to get their First Job.

Startups such as Catalyte a software engineering services company that uses data science to build technology workforces from non-traditional backgrounds, has raised +60MUSD in VC.



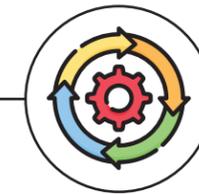
Risk Factors

Obstacles to Scale

Company conversion: Some companies may be skeptical about the qualifications of a non-traditional job applicants.

Lack of skills: No matter if the market place exists, Colombia lacks from a trained workforce with the right skills to fulfill companies requirements.

These types of business models must be coupled with training modules for first jobs and non-traditional backgrounds.



Impact Management

What

Positive and Important outcome due to increased job placements.

Who

Underserved stakeholders that are currently overlooked for certain jobs and companies.

How much

Moderate due to additional workforce that will enjoy from being hired.

Contribution

Likely better due to the associated income and job security.

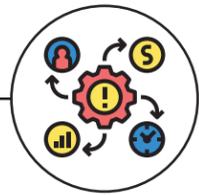
DIGITAL TOOL THAT FACILITATES JOB FORMALIZATION OF 'SELF EMPLOYED' WORKERS IN THE 'GIG-ECONOMY'



Overview

Business Model

Digital tool that facilitates job formalization by supporting employers who have little knowledge of correctly handling a payroll or individuals (who work as independents) to pay salary and social security obligations.



Impact Case

Development need

47% of employees in Colombia are informal meaning they do not contribute to paying social security, or work with the absence of contracts between the worker and contractor.

"Self-employed" workers (part of the gig economy), don't enjoy from basic benefits such as family leave and sick pay, mental health support and critical injury pay.

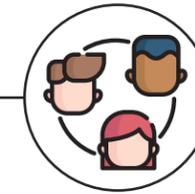
Out of the 25,000 'rapitenderos' in Colombia, 46% contribute to health insurance pay and 7% to a retirement fund. Out of the 88,000 'uber drivers', 71% contribute to health insurance pay and 36% to a retirement fund.

Potential Outcomes

Increase the promotion of decent and formal work, allowing to expand social security coverage for everyone.

Improve the 'safety net' for the 'self-employed' by making sure they have access to health benefits and retirement fund.

Encourage employers and population awareness about social security benefits, which lead to a healthier and more capable labor market.



Beneficiaries

Direct Beneficiaries

47% of the total occupied population in Colombia that work in the informality.

People that work as a freelancers and 'on-demand' platforms (e.g. Uber and Rappi).

Indirect Beneficiaries

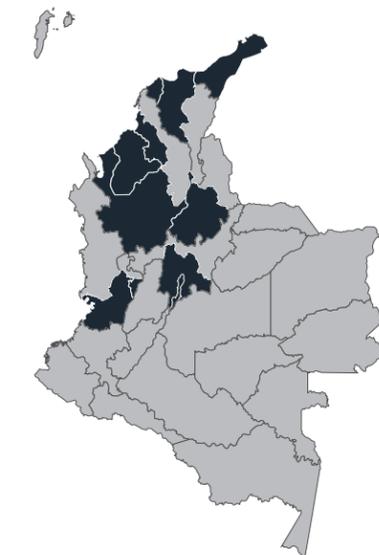
Technological companies such as Uber, Rappi that are exposed to receive lawsuits.

SMEs that do not have payroll department.

Region

The 5 departments in Colombia with higher levels of informality are: Santander, Sucre, Córdoba, Guajira and Magdalena.

The 4 departments in which 'gig economy' giants have a significant presence: Antioquia, Cundinamarca, Atlántico and Valle del Cauca.



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DIGITAL TOOL THAT FACILITATES JOB FORMALIZATION OF 'SELF EMPLOYED' WORKERS IN THE 'GIG-ECONOMY'

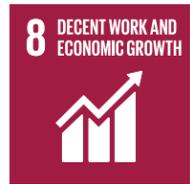


SDGs Alignment & Indicators



3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.

Coverage of essential health services



8.5 Achieve full and productive employment and decent work for all women and men, including young people and persons with disabilities, and equal pay for work.

Unemployment rate, by sex, age and persons with disabilities

8.8 Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, women and those in precarious employment.

Increase in national compliance of labor rights.



10.1 Progressively achieve and sustain income growth of the bottom 40% of the population at a rate higher than the national average.

Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

Considering that around 21M Colombians work under informality, and using the average monthly fee that Simplifica charges to its users \$1.5 USD the market size would be USD \$375M.

Expected Return & Timeframe

According to the WSJ, the ROI of contributing to the formal healthcare and pension systems increases has a 45% ROI.

DIGITAL TOOL THAT FACILITATES JOB FORMALIZATION OF 'SELF EMPLOYED' WORKERS IN THE 'GIG-ECONOMY'



Technology & Communications

Software & IT Services

Formalization of the gig-economy



Enabling Factors

Policy & Regulation

Plan Nacional de Desarrollo: Generate services that help locate people in quality jobs, with an emphasis on groups with greater problems in employment. Reduce job informality to 41.2%, contribute to connect 2 million job vacancies and reduce unemployment to 7.6%.

Decree number 1273, 2018: It dictates the rules of the Social security and health payment for independent workers.²
T-722/17: The constitutional court declares that the domestic workers must receive the benefits of the social security and therefore the employers must pay accordingly to the number of days, the domestic workers carry out their job.

The labor ministry coordinated a draft of a government bill (to be approved in 2020) that seeks to establish rules for workers in the 'gig economy' to make their contributions to social security.

Finance & Partners

Simplifica: It is a digital platform that facilitates the payment of wages and social security for employees.

Startups such as Collective Benefits raised £3.3 million seed round led by Stride.VC, alongside existing investors Delin Ventures, Insurtech Gateway and angels from executives at Uber.



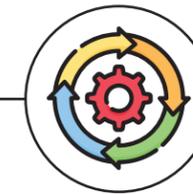
Risk Factors

Obstacles to Scale

Lack of clear policies: Currently in Colombia there is no clear legal framework for the formalization of the gig-economy.

Lack of information: There is no information in terms of new forms of worker-employee linkage that are presenting in developed markets.

Lack of adoption: Companies or independent employers might not be willing to pay social benefits and taxes.



Impact Management

What

Positive and Important outcome due to increase in labor formalization.

Who

Various stakeholders who currently do not enjoy from a safety net for health or retirement.

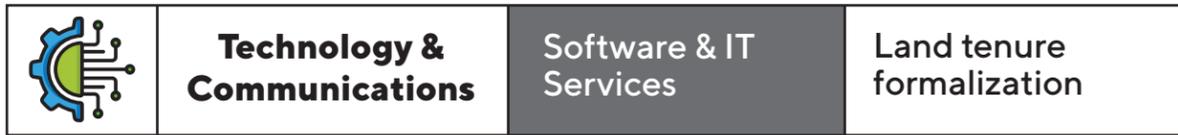
How much

Deep change & large scale due to the large number of people working as 'self-employed'.

Contribution

Likely better due to the created safety net for these workers.

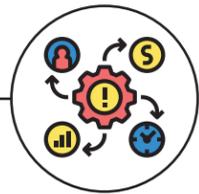
TRACEABILITY AND IMAGERY TECHNOLOGY SOLUTION FOR LAND AND PROPERTY FORMALIZATION



Overview

Business Model

Technology-based solution for property formalization (e.g. land titling, building registration, successions, property purchase studies) to secure rights for long-term prosperity powered by real-time property assessment (picture, data collection, satellite data, ownership traceability), legal and technical analysis, case preparation and governmental transactions traceability.



Impact Case

Development need

Land tenure informality is one of the main difficulties in rural Colombia: 60% of rural and 15% of urban properties do not have formalized property rights.

In many cases, necessary documentation to secure legal rights is non-existent, meaning householders can be evicted by another party making a claim on the land.

Securing right processes, which involves lawyers and negotiating complex government bureaucracy, can cost up to US \$2,500.

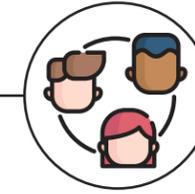
In Colombia, 94% of the cadastre is outdated and 28% is without information, this translates into an informality in land tenure of 60%.

Potential Outcomes

Research has shown that securing property rights:

Drops financing rates between 8% and 17% for owning and having psychosocial security, it is also a way to break intergenerational cycles of poverty.

Increases in approved credit rates in 12%, and doubles property improvements and property values and reduces 28% child labor in families.



Beneficiaries

Direct Beneficiaries

12.4M people that lack from property rights.

Indirect Beneficiaries

Financial institutions that can grant credit easier.

Region

Rural Colombia in departments in which land tenure is possible (no natural reserves or *baldíos*) and property rights are not formalized.



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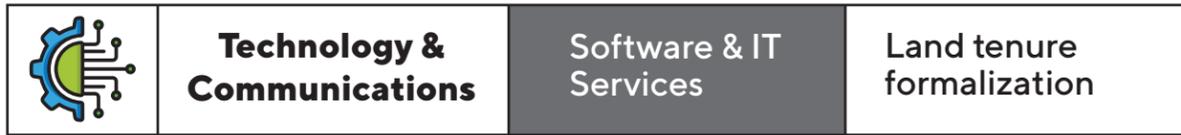
Pacífico

Eje Cafetero y Antioquia

Centro Sur Amazonía

Llanos

TRACEABILITY AND IMAGERY TECHNOLOGY SOLUTION FOR LAND AND PROPERTY FORMALIZATION



SDGs Alignment & Indicators



1.4 Ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.

Proportion of total adult population with secure tenure rights to land.



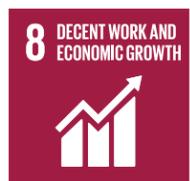
2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries.

The agriculture orientation index for government expenditures.



5.a Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.

Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex.



8.1 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all.

Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

Colombia has 48M Colombians of which 14M people (30%) live in rural areas. 12.4M of people lack of property rights (60% rural, 20% urban).

Suyo service charges US \$1,500 for securing property rights making it a US \$18bn market.

Expected Return & Timeframe

According to a couple of studies the benefits of investing in the formalizations of property rights can range somewhere in between 20-50%.

TRACEABILITY AND IMAGERY TECHNOLOGY SOLUTION FOR LAND AND PROPERTY FORMALIZATION



Technology & Communications

Software & IT Services

Land tenure formalization



Enabling Factors

Policy & Regulation

Plan Nacional de Desarrollo: Create the conditions for land tenure by increasing the titling of rural private property and properties that grant access to land by the State.

Conpes 3958 outlines the strategy to implement a multipurpose cadastral system.

Programa de la Formalización de la Propiedad rural - Develop a massive and participatory Land Sweep Procedure to support the cleanup of private property, patrimonial fiscal assets.

Law 1561 of 2012 - Established the process to grant property titles to the material possessor of urban and rural real estate and to clean up the false tradition and to dictate other provisions.

Ley Zidres, Law 1900 of 2018 - Promote equity in access to the allocation of national vacant land, in the allocation of rural housing, the distribution of resources for productive projects.

Finance & Partners

Federación Nacional de Departamentos, Agencia Nacional De Tierras, Instituto Agustin Codazzi the Ministry of Agriculture and the Superintendency of Notaries are leading a mobilization for the formalization and land securitization.

The government secured a World Bank loan for US \$ 100M to structure a multipurpose cadastral system, to strengthen security of tenure and facilitate access to property information.

Nuestra Tierra Prospera is a program led by Suvo and USAID that has three objectives:

1. facilitate massive access to land titles.
2. strengthen the capacities of local governments to administer land.
3. integrate of citizens into legal socioeconomic opportunities.

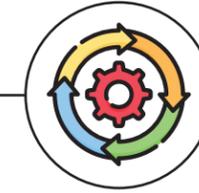


Risk Factors

Obstacles to Scale

Even if there is a system that can track land tenure, property rights might not be secured due to land disputes, and violent displacements over which land has been overtaken by the state.

Multipurpose cadastral system and related land and property tenure documents must be digitized and coincide un several databases.



Impact Management

What

Positive and Important outcome due to benefits related to property and land tenure.

Who

Underserved stakeholders that don't have their property rights formalized.

How much

Deep change & large scale due to the positive impacts related to property tenure.

Contribution

Likely better due to increased access to microfinance and property increase in value.

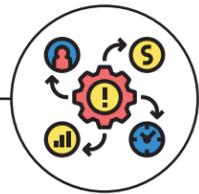
BIOFUELS AND BIO-BASED CHEMICALS FROM PALM AND SUGAR-CANE BIOMASS PRODUCTION



Overview

Business Model

Produce energy from lignocellulosic residues, biomass obtained from plant residues such as rice husks, coffee souks, palm oil, and sugar cane by implementing value-chains that include biorefineries that transform certified bio-products resulting in an array of alternative fuels such as biodiesel and ethanol.



Impact Case

Development need

Air pollution from burning fossil fuels causes 4.5 million deaths worldwide each year. Of the 223k deaths in Colombia in 2016, 8 % (18k) are attributed to environmental risk factors.

The annual cost to health of the contamination produced by the particulate material amounts to 1.5 trillion pesos (USD \$ 790 million), equivalent to 0.8% of the Gross Domestic Product.

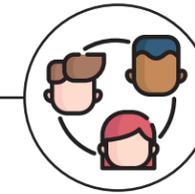
44% of green gases emissions in Colombia come from energy related activates that comprise the burning of fossil fuels in manufacturing, transportation, oil&gas industries.

Potential Outcomes

Achieve an independence from fossil fuels, with a sustainable energy matrix that ensures the growth of the industry, social development and preservation of the environment.

Improve the quality of the environment by reducing polluting emissions (e.g. ethanol reduces nitrogen vehicle emissions by 22%, carbon monoxide by 50% and hydrocarbons by 3%).

Reduce airborne related diseases and premature deaths and generate additional employment in agriculture and bio economy related activities.



Beneficiaries

Direct Beneficiaries

+400k families that benefit from the sugar-cane and palm value chain.

Indirect Beneficiaries

20M of Colombians living in highly dense urban centers that suffer from contamination and airborne diseases.

Region

The most significant impact is achieved in those regions where sugar cane or palm oil is produced (Cauca, Valle del Cauca, Risaralda, Bolívar, Casanare, Nariño) as well as those departments in which refineries operate (Atlántico, Magdalena, Santander, Meta, Cesar).



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BIOFUELS AND BIO-BASED CHEMICALS FROM PALM AND SUGAR-CANE BIOMASS PRODUCTION



SDGs Alignment & Indicators



2.3 double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs.

Volume of production per labor unit by classes of farming/pastoral/forestry enterprise.



7.1 Ensure universal access to affordable, reliable and modern energy services.

Proportion of population with primary reliance on clean fuels and technology.

7.2 Increase substantially the share of renewable energy in the global energy mix.

Renewable energy share in the total final energy consumption.



12.2 achieve the sustainable management and efficient use of natural resources.

Material footprint, material footprint per capita, and material footprint per GDP.



13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

Green house gas emission.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

According to Fedepalma, Colombian consumption of palm oil biodiesel will be 550 million kilograms and 440 million liters of fuel ethanol. Based on FedeBiocombustibles prices (\$0.8USD/liters of ethanol and \$1.2USD/kg of biodiesel, there is a USD \$1Bn local opportunity.

Expected Return & Timeframe

According to multiple studies^{3,4}, palm oil investment returns are between 19%-25%

Malasia and Indonesia, the biggest bioenergy producers, transformed their economies by betting on Bioenergy. Colombia has 3 times more available land to promote this industry.

BIOFUELS AND BIO-BASED CHEMICALS FROM PALM AND SUGAR-CANE BIOMASS PRODUCTION



Enabling Factors

Policy & Regulation

National Development Plan: Achieve diversified energy matrix increasing the shares of bioenergetics (biofuels, biogas, among others), and cleaner fuels (Gasoline at 50 ppm Diesel at 10 ppm) with alternatives that guarantee energy security and supply to all homes.

Tax Incentives: Income tax exemption for late-yield crops; VAT and Global Fuel Tax Rate exemption for mixed biofuels and fossil fuels. Mandatory mix of biofuels expanded to 20%.

Conpes 3510: Are guidelines to promote the sustainable production of biofuels and implement strategies aimed at generating conditions for the improvement of the productive efficiency Colciencias: Develop a technology transfer system for the biofuels sector, taking into account concepts of best available technologies and best environmental practices.

Estrategia Colombiana de Desarrollo Bajo en Carbono: Decouple the growth of GHG emissions from economic growth by promoting the alternative sector development.

Finance & Partners

Sugar mills: Incauca, Manuelita, Mayaguez and Providencia are huge sugar mills able to process and produce enough bio-inputs to generate bio-fuels.

Fedepalma: Consolidates a competitive and sustainable palm agribusiness, bringing together, guiding, representing palm growers to contribute to the well-being of their communities.

Paisaje Palmero Biodiverso: provided a route to incorporate environmental variables in crop planning and implement practices that protect biodiversity and increase productivity.



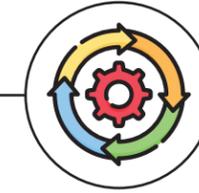
Risk Factors

Obstacles to Scale

Better coordination is lacking between agricultural policies adapted for biofuel production and food security policy in the country.

The need to import because the quantity of raw material produced is not enough to satisfy the 10% mix with E10 gasoline that is currently used.

Palm oil and extensive sugar cane industrial projects have traditionally received a negative connotation due to historical extensive unsustainable and exclusive agricultural practices.



Impact Management

What

Positive and Important outcome due to increase yields and farm productivity.

Who

Underserved stakeholders working as smallholders in rural Colombia.

How much

Deep change & large scale due to the technological disruption in agriculture.

Contribution

Likely better due to the associated income improvement and efficiencies.

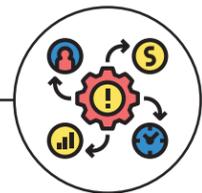
INFRASTRUCTURE DEVELOPER OF UNCONVENTIONAL RENEWABLE ENERGY SOURCES (URES) IN NON-INTERCONNECTED/UNSTABLE ENERGY SUPPLY AREAS



Overview

Business Model

Renewable Project Developers responsible for: Securing land rights, interconnection rights, building permits, and property tax agreements; working closely with engineering, finance and commercial teams when a project moves successfully to the pre construction phase; and acting as lead project sponsor for the successful financing and construction of the project. Furthermore technical assistance and knowledge transfer is paramount to achieve long-term sustainability.



Impact Case

Development need

Air pollution from burning fossil fuels causes 4.5 million deaths worldwide each year. Of the 223k deaths in Colombia in 2016, 8 % (18k) are attributed to environmental risk factors.

The annual cost to health of the contamination produced by the particulate material amounts to 1.5 trillion pesos (USD \$ 790 million), equivalent to 0.8% of the Gross Domestic Product.

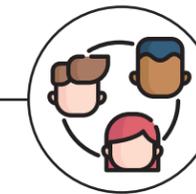
44% of green gases emissions in Colombia come from energy related activities that comprise the burning of fossil fuels in manufacturing, transportation, oil&gas industries.

Colombia is one of the 10 countries with the greatest potential for generating renewable energy due to its location and thermal floors. However, its energy depends, on non-renewable energy or hydro, exposing the country to shortages in the face of adverse climate events.

Potential Outcomes

Guarantee sufficient transmission capacity for energy generation to connect to the national grid and efficiently reach consumers and markets.

Enhance energy efficiency and reduce excess carbon emissions by ensuring reliability of supply.



Beneficiaries

Direct Beneficiaries

2.5 million Colombians living in off-grid communities.

Indirect Beneficiaries

The energy distributors and generators who will benefit from the stability and burden relief from the electricity generated by these projects

Region

Pacífico Region is the region where most people are disconnected from the grid followed by Amazon region and Orinoquía and Llanos and Guajira. These regions are prioritized by the Plan Indicativo de Expansión de Cobertura de Energía Eléctrica.



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INFRASTRUCTURE DEVELOPER OF UNCONVENTIONAL RENEWABLE ENERGY SOURCES (URES) IN NON-INTERCONNECTED/UNSTABLE ENERGY SUPPLY AREAS



SDGs Alignment & Indicators



3.9 substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

Mortality rate attributed to household and ambient air pollution.

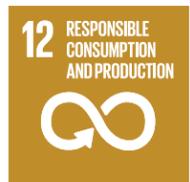


7.1 Ensure universal access to affordable, reliable and modern energy services
Proportion of population with access to electricity.

Proportion of population with primary reliance on clean fuels and technology.

7.2 Increase substantially the share of renewable energy in the global energy mix.

Renewable energy share in the total final energy consumption



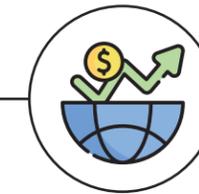
12.2 achieve the sustainable management and efficient use of natural resources.

Material footprint, material footprint per capita, and material footprint per GDP.



13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

Green house gas emission.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

It is expected that in the year 2020 values of 75,338 GWh will be reached (an increase of 11.2% compared to the year 2017) and 11,187 MW of maximum power.

The average cost of energy is US \$0.08 kWh making for a US \$6.0bn market.

Expected Return & Timeframe

According to Trina Solar, the ROI of providing an alternative to conventional electricity service can range between 20-30% Colombia has 3 times more available land to promote this industry.

INFRASTRUCTURE DEVELOPER OF UNCONVENTIONAL RENEWABLE ENERGY SOURCES (URES) IN NON-INTERCONNECTED/UNSTABLE ENERGY SUPPLY AREAS



Renewables and
alternative energy

Solar
Technology

Renewable
infrastructure
developer



Enabling Factors

Policy & Regulation

National Development Plan: Pact for the quality and efficiency of public services - Implement alternative solutions for access to electricity in most remote areas for at least 100 new homes leveraged by the National Rural Electrification Plan (PNER), which defines prioritization criteria and plans electrification investments in rural populations with higher unsatisfied basic needs.

Law 1715 of 2014 regulates the integration of URES into the national electricity system encouraging investment, R&D in the sector, by: (1) Authorizing small and large scale auto-generators to sell their surpluses to the distribution network and the development of projects based on URES is promoted through tax, tariff and accounting incentives.

Finance & Partners

Colombian Association of Renewable Energies (ACER): Promotes the development of renewable energies and supports research, innovation and technological application.

Tax incentives: (1) **Income tax:** 50% deduction from total investments and (2) VAT excluded for equipment and machinery purchases; services for new and existing investments and measurement and evaluation of the acquisition of potential resources.

Non-Conventional Energy and Efficient Energy Management Fund (FENOGE): Finances renewable energy small-scale self-generation projects in non-interconnected zones.



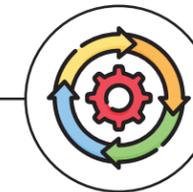
Risk Factors

Obstacles to Scale

Market dominant position of current players that control energy generation, distribution, information, human and financial capital, which translates into greater bargaining power. Controls are required to ensure an inclusive implementation and energy distribution.

Limited qualified human capital and available finance to develop large-scale projects.

Lack of complementary infrastructure (e.g. electricity) in remote rural areas to ensure project development quality and long-term sustainability.



Impact Management

What

Positive and Important outcome due to energy generated by renewable energy sources.

Who

Underserved stakeholders living in remote areas.

How much

Deep change & large scale due to benefits associated to renewable energy availability.

Contribution

Likely better due to access to higher quality energy sources.

RENEWABLE SOURCE AFFORDABLE PRE-PAID ELECTRICITY DISTRIBUTION TO OFF THE GRID COMMUNITIES

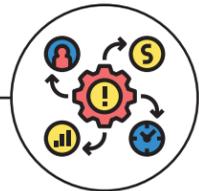


Overview

Business Model

Distribute accessible renewable electricity services to communities beyond the reach of an interconnected electric power distribution grid (OTG).

Install, distribute and maintain prepaid solar battery storage kits to homes, schools, hospitals and businesses through mom-and-pop shops that sell prepaid solar credit to customers, avoiding collection risk.



Impact Case

Development need

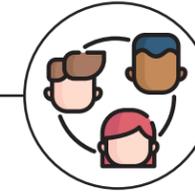
Colombia In remote areas of the country, many households do not enjoy access to electricity; in 2017, at least 2.5 million Colombians remained in the dark.

70% of the electricity is produced from water sources (vulnerable to climate change). 30% comes from thermoelectric plants that use gas, coal and diesel, and 0.13% is renewable energy.

Potential Outcomes

Electrification is a key mechanism to improve living standards, increase income through 'income-generating activities' and expand community services such as education and health services.

Traditional energy sources lead to: respiratory diseases, early childhood deaths, indoor fires and air pollution These problems will be reduced with off grid renewable alternatives.



Beneficiaries

Direct Beneficiaries

2.5 million Colombians living in off-grid communities.

1.2 million children in off-grid communities who can now study at home.

Indirect Beneficiaries

The energy distributors and generators who will benefit from the stability and burden relief from the electricity generated by.

Region

Pacifico Region is the region where most people are disconnected from the grid followed by Amazon region and Orinoquía and Llanos and Guajira. These regions are prioritized by the Plan Indicativo de Expansión de Cobertura de Energía Eléctrica.



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RENEWABLE SOURCE AFFORDABLE PRE-PAID ELECTRICITY DISTRIBUTION TO OFF THE GRID COMMUNITIES



SDGs Alignment & Indicators



1.4 Ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services.

Proportion of population living in households with access to basic services.



4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.

Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex.

7.1 Ensure universal access to affordable, reliable and modern energy services.



*Proportion of population with access to electricity.
Proportion of population with primary reliance on clean fuels and technology.*

7.2 Increase substantially the share of renewable energy in the global energy mix.

Renewable energy share in the total final energy consumption.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

Solar energy doubles its penetration every two years bringing prices down 20% each time Lithium-Ion batteries prices have decreased 50% a year over the last 6 years.

\$ 450M USD market opportunity assuming \$15 Average Revenue per User (ARPU) a month.

Expected Return & Timeframe

Kingo, a community solar company operating in Colombia since 2018, expects grow x10 in 5 years which will translate into a (58% IRR) for its Series A investors.

RENEWABLE SOURCE AFFORDABLE PRE-PAID ELECTRICITY DISTRIBUTION TO OFF THE GRID COMMUNITIES



Renewables and alternative energy

Solar Technology

Off-grid Solar + battery storage energy distribution



Enabling Factors

Policy & Regulation

National Development Plan: Pact for the quality and efficiency of public services - Implement alternative solutions for access to electricity in most remote areas for at least 100 new homes leveraged by the National Rural Electrification Plan (PNER), which defines prioritization criteria and plans electrification investments in rural populations with higher unsatisfied basic needs.

Estrategia de Desarrollo Bajo en Carbono: Increase electricity generation through renewable sources to reduce greenhouse gas emissions by at least 20%.

Ley 1715: Investors in unconventional energy sources and efficient energy management, can access to tax incentives: 50% income tax deduction and VAT exclusion for investment assets.

Finance & Partners

Bancoldex and the Ministry of Commerce, Industry and Tourism, launched \$ 100 billion pesos credit line to promote investment projects in sustainable development and energy efficiency.

PeopleFund, Engie, SEAF, FCP Innovación, Proparco, Low Carbon Enterprise Fund, Global Partnerships, IDB, FMO, Cabef are organizations that have funded community solar projects.

Colombia offers ideal conditions for solar energy, due to the equatorial nation's high radiation sunlight, high-altitude Andean mountain ranges and long stretches of windy coastline.

FAER allows Territorial Entities, to manage investment plans, programs and projects prioritized for the construction and installation of electrical infrastructure and coverage expansion.



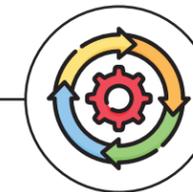
Risk Factors

Obstacles to Scale

Despite communities are used to prepaid cell phones, prepaid electricity services might require some cultural and financial adaptation and system usage training.

Solar electricity is a cheaper in the long run. Nonetheless it requires a significant upfront cost that might deter families to switch from the current alternative (candles) despite obvious benefits.

The selection of the correct technology to supply energy to remote populations and the involvement of communities in all phases of the project is critical for a successful implementation.



Impact Management

What

Positive and Important outcome due to improved basic services coverage.

Who

Underserved stakeholders living in remote rural areas.

How much

Deep change & large scale due to the associated benefits of access to electricity.

Contribution

Likely better due to the associated benefits of having access to electricity.

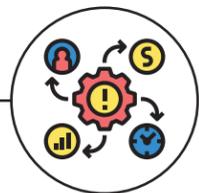
MEDICAL CONSULTATION AND TELEMEDICINE PLATFORMS THAT ALLOW UNDERSERVED COMMUNITIES TO RECEIVE REMOTE MEDICAL PREVENTION SERVICES



Overview

Business Model

Medical consultation and telemedicine that allow underserved communities to receive remote medical services, sold to consumers through a dynamic, per-user model that allows not only for external consultation but first care Q&As with information available coordinated with Insurance Providers, Health providers and Health Ministry.



Impact Case

Development need

Only 80% of healthcare providers schedule a medical appointment in 5 days or less.

Healthcare in remote regions such as Guanía, Guaviare, Vaupés and Vichada is limited because of understaffing and thus they offer less than half of the required medical services.

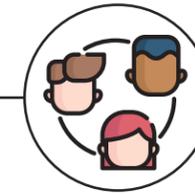
The national health system has accumulated a debt that is between 9.6 and 16.2 trillion pesos

53 deaths per 100.000 child births, maternal mortality rate and 13.0 deaths per 1,000 live births, mortality national late perinatal and neonatal.

Potential Outcomes

Provide critical preventive, primary and secondary health care services to patients in parts of the country that are either remote and / or not covered by the public healthcare system, offering better access to more specialists regardless of location.

Remote analysis and monitoring services significantly reduce healthcare service costs, saving money for patients, doctors and insurance companies. Telemedicine also reduces unnecessary non-urgent ER visits and eliminates transportation expenses for regular checkups.



Beneficiaries

Direct Beneficiaries

Populations in remote communities, particularly those with no access to healthcare.

Indirect Beneficiaries

Healthcare system that will cope with demand.

Region

The 10 departments where health coverage is less than 80% are the following: Chocó, Vaupés, Valle del Cauca, Guanía, Cauca, Nariño, Amazonas, Casanare, Guaviare, Vichada.



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MEDICAL CONSULTATION AND TELEMEDICINE PLATFORMS THAT ALLOW UNDERSERVED COMMUNITIES TO RECEIVE REMOTE MEDICAL PREVENTION SERVICES



SDGs Alignment & Indicators



3.4. By 2030, Reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.

Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease.

3.8. Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all

*Number of people covered by health insurance per 1,000 population.
Coverage of essential health services.*



9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.



10.4 Ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.

Proportion of population living in households with access to basic services.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

Approximately, 23.6M general medicine services are offered in Colombia every year. Of these services, 12% could be easily diverted to telemedicine, which in averages saves \$927USD/service to the health system, estimating a US \$2.6bn market.

Expected Return & Timeframe

Organizations that implement and track ROI saw annual returns of 20% or more.

MEDICAL CONSULTATION AND TELEMEDICINE PLATFORMS THAT ALLOW UNDERSERVED COMMUNITIES TO RECEIVE REMOTE MEDICAL PREVENTION SERVICES



Enabling Factors

Policy & Regulation

National Development Plan: Improve population's health, guaranteeing high quality standards and user satisfaction by supporting the implementation of telehealth projects aimed at remote populations and comprehensive treatment healthcare models.

Law 1955 of 2019 - the Ministry of Health, must promote the management of the provision of health services, through advances and improvements in connectivity in remote areas of the country, in coordination with the guidelines of Min ICT (e.g. telehealth programs).

Law 1419 of 2010: aims to develop Telehealth in Colombia, in support of the General Social Security System, under the principles of efficiency, universality, solidarity, integrity, and quality.

Finance & Partners

Teletropic is a web access platform that provides telemedicine services. Is a start-up that won the Emprende con Datos competition, a project led by MinTic and RutaN.

Colciencias launches multiple calls to finance innovation projects aimed at strengthening the health sector through the generation, adaptation, and use of new technologies.

Health-tech funding and startups have skyrocket in LatAm: between 2014 and 2019, the number of health startups jumped from 160 to 389 in the region.

Bive.co is a low-cost annual membership that allows families to access particular health services efficiently.

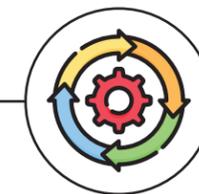


Risk Factors

Obstacles to Scale

Infrastructure: There is a lack of Set of inputs, equipment, forms and means of communication, technical platforms and equipment required to develop the computer and telecommunications infrastructure that guarantee connectivity for the implementation of Telemedicine.

Tele-education and knowledge management: to determine the status of the training of human talent in health informatics and the strengthening of the capacities and competences of health personnel through virtual platforms and in the creation of advanced training in universities.



Impact Management

What

Positive and Important outcome due to improved health coverage.

Who

Underserved stakeholders stakeholders living in remote areas with little or no access to health services.

How much

Deep change & large scale by enabling communities to receive health benefits.

Contribution

Likely better due to improved preventive low-cost health consultations.

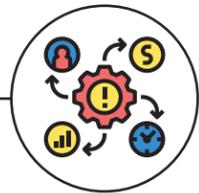
ELECTRONIC MEDICAL RECORDS SOFTWARE FOR THE CONNECTION, ANALYSIS AND BASIC EXCHANGE OF INFORMATION AND PROTECTION OF PATIENT DATA



Overview

Business Model

Electronical Medical Records (EMR) platforms where doctors can consult patient information from anywhere in the country regardless of the patient's care site, allowing health professionals to have clear, real and reliable data on all patients' health history easing processes and using Analytical tools to predict diseases by analyzing trends and clinical tests.



Impact Case

Development need

The affiliations to social security are made mostly through hand-filled forms that must be signed by the employer in the different entities and, in the case of health, in the EPS.

The national health system has accumulated a debt that is between 9.6 and 16.2 trillion pesos.

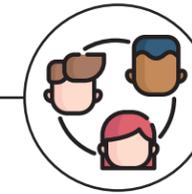
Every year in Colombia 180k people die at a hospital due to medical mismanagement, mistreatment and misdiagnose.

+14.5k medical errors were identified over the period of 8 years: A medical error is defined as an avoidable event that starts from the prescription until the fulfillment of the medical order.

Potential Outcomes

Improve quality of care, patient outcomes, and safety through improved management, reduction in medication errors, reduction in unnecessary investigations, and improved communication and interactions among primary care providers and patients.

Provide rapid diagnosis and treatments by guaranteeing real-time access to reports, history, medical results and medications provided, doctors will have an accurate view of the patient.



Beneficiaries

Direct Beneficiaries

Population that carry their medical history in paper.

Populations in remote communities, particularly those with no access to healthcare.

Indirect Beneficiaries

Healthcare system that will cope with demand.

Region

All cities where the health services are offered or that have at least one health institution.



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ELECTRONIC MEDICAL RECORDS SOFTWARE FOR THE CONNECTION, ANALYSIS AND BASIC EXCHANGE OF INFORMATION AND PROTECTION OF PATIENT DATA



SDGs Alignment & Indicators



3.4. By 2030, Reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.

Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease.

3.8. Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all

*Number of people covered by health insurance per 1,000 population.
Coverage of essential health services.*



5.6 Ensure universal access to sexual and reproductive health and reproductive rights
Proportion of women aged 15-49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care.



10.4 Ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.

Proportion of population living in households with access to basic services.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

The digital transformation of health in Colombia is necessary. According to recent data, investment in technologies for the digital transformation of companies in Colombia is expected to be US \$ 1.9Bn in 2022.

Expected Return & Timeframe

Medical institutions have the potential to achieve key improvements such as up to a 50% increase in profitability or a 20% reduction in operational costs.

ELECTRONIC MEDICAL RECORDS SOFTWARE FOR THE CONNECTION, ANALYSIS AND BASIC EXCHANGE OF INFORMATION AND PROTECTION OF PATIENT DATA



Enabling Factors

Policy & Regulation

Law 2015 of 2020: it dictates the regulation of the the Interoperability of the Electronic Medical Record - IEMR, through which the relevant clinical data elements will be exchanged, as well as the documents and clinical records of each person's life course (SISPRO).

Law 1978,2019: it helps to encourage the use of the TIC in different sectors such as healthcare.

Resolution 1448 of 2006, Law 1122 of 2007 and Law 1438 of 2011: formalization of ICT in health, the allocation of resources for its development and implementation.

Finance & Partners

MinTIC has the objective of positioning the country as a benchmark in the development of digital applications and content with focus in the healthcare industry. For example, ClicSalud application, registers more than 22,000 downloads.

The Interoperability of the Clinical History project will allow the connection, basic exchange of information and protection of patient data. It is led by Presidential Council for Innovation and Digital Transformation, the Ministry of Health and Social Protection, and the Ministry of ICT.

LatAm health-tech is attracting VC funding: Feegow Clinic, a SaaS that provides hospitals, healthcare institutions, and doctors better managements and information for day-to-day operations raised USD \$5.2M.



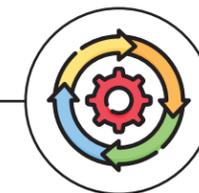
Risk Factors

Obstacles to Scale

Initial Investments and interoperability: High infrastructure costs for initial operations and digital transformation of the healthcare system and unique data base for non-repetitiveness.

Training information and culture: Lack of complete information and training in the ICTs in health from the health professionals or patients.

Connectivity difficulties: Limited access to internet in different parts of Colombia in order for smooth operations of the platform.



Impact Management

What

Positive and Important outcome due to increase efficiency and technology adoption.

Who

Various stakeholders living in different cities in Colombia with improved quality health service.

How much

Significant change & good scale by supporting the digital transformation on clinics.

Contribution

Likely better due to better operations and improved clinical service.

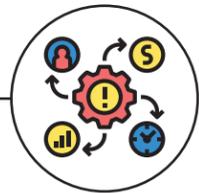
EMERGING FINANCIAL TECHNOLOGY TO TAKE ADVANTAGE OF ALTERNATIVE INFORMATION TO SUPPORT CREDIT SCORING AND EXPAND SMES' ACCESS TO CREDIT



Overview

Business Model

Emerging financial technology and innovations in traditional business models to take advantage of the information generated by the growing social and economic activities (e.g. e-commerce transactions, invoice data, and customer surveys) to support credit scoring, financial education to expand SMEs' access to credit.



Impact Case

Development need

In Colombia there are 2.5M SMEs (90% of existing companies), produce 30% of GDP and employ more than 80% of the workforce. 50% them will fail after the first year and only 20% will survive its 3rd year because 62% do not have access to loans, key to their growth.

SMEs face a scenario of low credit supply and high interest costs. According to the Financial Superintendence of Colombia, microcredits have decreased by 3.73% over the past 5 years.

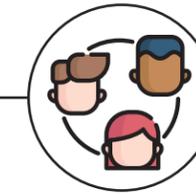
Traditional information (e.g. sales, growth potential, etc.) is not sufficient for banks to assess the creditworthiness of SMEs and banks incur economies of scale when evaluating loans for SMEs.

Colombia Responde is a programme that offers the tools for SMEs to improve its liquidity issues due to COVID-19. But those that have accessed these credit lines were those in the financial system.

Potential Outcomes

According to Asobancaria, access to capital and better management it could raise its 5-year survival rates from 43% to 80%, a notable impact for the national productive apparatus.

Improving the financial accessibility could enhance firm productivity: firms having access to a bank loan could improve its Total Factor Productivity (TFP) by 8.0%-9.0%.



Beneficiaries

Direct Beneficiaries

2.5M SMEs in Colombia.

Indirect Beneficiaries

15.4M of Colombians working in SMEs.

Region

The 10 departments in which the biggest number of SMEs exist Boyacá, Antioquia, Nariño, Bolívar, N. De Santander, Cundinamarca, Valle del Cauca, Atlántico, Tolima, Santander.



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EMERGING FINANCIAL TECHNOLOGY TO TAKE ADVANTAGE OF ALTERNATIVE INFORMATION TO SUPPORT CREDIT SCORING AND EXPAND SMES' ACCESS TO CREDIT

	Financials	Consumer Finance	Alternate information SME microfinance
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SDGs Alignment & Indicators



8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labor-intensive sectors.

Annual growth rate of real GDP per employed person.



9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.

Proportion of small-scale industries with a loan or line of credit.



10.1 Progressively achieve and sustain income growth of the bottom 40% of the population at a rate higher than the national average.

Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population.



17.8 Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology.

Proportion of individuals using the Internet.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

Of these alternative products, the factoring stands out: Out of the 2.5 million SMEs, 70% uses invoices representing 5.4% of the Colombian GDP (US \$ 333 Bn). Therefore alternative financing market in Colombia is a US \$ 17bn opportunity.

Expected Return & Timeframe

An investor that uses crowdfunding and alternative finance platforms in LatAm can obtain investment annual returns from 14%-18% within an investment timeframe of 4-5 years.

EMERGING FINANCIAL TECHNOLOGY TO TAKE ADVANTAGE OF ALTERNATIVE INFORMATION TO SUPPORT CREDIT SCORING AND EXPAND SMES' ACCESS TO CREDIT



Enabling Factors

Policy & Regulation

Plan Nacional De Desarrollo (2018-2020) – Has the objective of strengthening access to financing for SMEs In order to promote entrepreneurship and reduce informality by strengthening Banca de Oportunidades supporting cheaper corporate microcredit by Bancoldex and creating a of a comprehensive market for electronic invoice trading.

La Comisión Intersectorial para la Inclusión Financiera and MinTic will define a roadmap for taking advantage of new technologies and innovations in order to achieve gains in efficiency and competition in the financial services industry, promoting access for individuals and companies.

Decreto 2443 de 2018 – Regulatory adjustment that allows financial entities supervised by the Financial Superintendence to invest in the capital of financial innovation companies.

The regulatory LatAm '**Sandbox**' text for the 'fintech' ecosystem, seeks to promote financial innovation by expanding service offering, and facilitate access to financial products.

Finance & Partners

703 fintech startups in LatAm, over 50% of which were launched between 2014 and 2016, received over US\$186M in VCfunding last year, and one-third of that went to startups.

Sempli, Finaktiva and other VC backed alternative finance platforms are giving out credits from US \$ 7 M and US \$ 100M to SMEs that didn't have access to finance before.

Companies such as Lisim anticipate the behavior of current and potential clients, in order to reduce the risk and uncertainty involved in the client (non-payment, fraud, desertion, etc.).

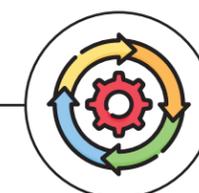


Risk Factors

Obstacles to Scale

Digital literacy from both entrepreneurs and credit *fintechs* to trust new sources of information and give out loans that hadn't otherwise been given out.

Lack of a comprehensive regulation that covers financial transactions originated from companies that are not regulated by financial superintendence,



Impact Management

What

Positive and Important outcome due to the positive outcome of access to credit.

Who

Various stakeholder that led SMEs and are currently looking for working capital.

How much

Deep change & large scale due to the benefits of having access to finance.

Contribution

Likely better due to increased financial coverage.

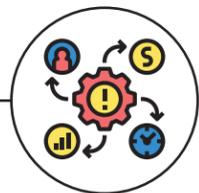
PARAMETRIC INSURANCES FOR AGRICULTURE SYSTEMS THAT EFFICIENTLY COLLECTS, TRANSFERS AND ANALYZES ALTERNATIVE DATA IN REAL TIME FOR AUTOMATIC CLAIMS



Overview

Business Model

Using tech-advances such as sensors, telematics etc. for insurance companies to better get to know their customers and efficiently collect, transfer and analyze alternative data in real time to improve price conditions and making claims processing faster, and thus transferring cost savings to the final premium paid by smallholders or associations.



Impact Case

Development need

The poor are the most vulnerable to multiple risks (e.g. illness, accidental death and disability, loss of property, etc.) and yet they are least able to cope with crisis and enjoy from lower levels of coverage: 22.6 million Colombians live on less than \$4 per day, but only 12.5% are insured.

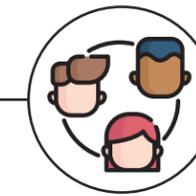
The greatest barriers for lower coverage correspond to insufficient income, self-exclusion and lack of financial education, unadjusted products and expensive processes related to reach, acquire, service, collect premiums from and pay claims to consumers.

El Niño is a phenomenon of climatic variability, which decreases rainfall and increases air temperatures. It negatively affects the agricultural sector due to variations in the yield of crops, decreased river flow, increased risk of forest fires and possible water rationing.

Potential Outcomes

Promote productivity and asset accumulation, allowing lower-income workers to invest more in their livelihoods and obtain higher returns if they are protected by insurance.

Prevent families from resorting to lowering their basic consumption to be able to attend to the losses or damages suffered, by granting compensation or benefits in the event of a claim.



Beneficiaries

Direct Beneficiaries

4.7 million individuals that identify themselves as farmers.

Agri-businesses that can use agricultural precision technologies to improve profits.

Indirect Beneficiaries

19,142 companies in Colombia that are in the Food & Beverage sector.

Rural businesses and communities that benefit from productivity boost.

Region

11 departments in which there are more cultivated hectares: Antioquia, Santander, Córdoba, Valle del Cauca, Tolima, Meta, Huila, Risaralda, Caldas, Cundinamarca y Casanare.



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PARAMETRIC INSURANCES FOR AGRICULTURE SYSTEMS THAT EFFICIENTLY COLLECTS, TRANSFERS AND ANALYZES ALTERNATIVE DATA IN REAL TIME FOR AUTOMATIC CLAIMS



SDGs Alignment & Indicators



2.4 Ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.

Proportion of agricultural area under productive and sustainable agriculture.



8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labor-intensive sectors.

Annual growth rate of real GDP per employed person.



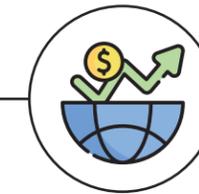
10.1 Progressively achieve and sustain income growth of the bottom 40% of the population at a rate higher than the national average.

Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population.



17.8 Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology.

Proportion of individuals using the Internet.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

Considering the the target people are \$ 14 millions potential underserved and an assuming an insurance premium of US \$ 1,000, the market size would be US \$1.4Bn.

Expected Return & Timeframe

According to a recent study, contrary to general belives, microinsurance for the base of the pyramid is a very profitable business that can generate returns anywhere between 20%-300%.

PARAMETRIC INSURANCES FOR AGRICULTURE SYSTEMS THAT EFFICIENTLY COLLECTS, TRANSFERS AND ANALYZES ALTERNATIVE DATA IN REAL TIME FOR AUTOMATIC CLAIMS



Financials

Insurance

Microinsurance models



Enabling Factors

Policy & Regulation

Plan Nacional De Desarrollo (2018-2020) Encourage investment in the field through the reform of the instruments of the National Agricultural Credit System and the management of market and climate risks and achieving 193 thousand hectares with agricultural policies.

Política Nacional de Gestión del Riesgo de Desastres - Is the set of guidelines aimed at preventing or reducing disaster risks, avoiding the generation of new risks and carrying out adequate preparation, care, rehabilitation and reconstruction in disaster situations.

CAF, The Ministry of Agriculture and UPRA are leading a project to consolidate and standardize an information system to support adequate risk management in the agricultural sector (SIGRA).

Finance & Partners

Seguro Agropecuario - The government has a (\$80.000 MCOP budget) to subsidize up to 90% of the cost of the insurance policy if the producer fulfills certain requirements.

Fondo Agropecuario de Garantías (FAG) back loans from the FINAGRO credit lines working as a "co-debtor" for those who wish to access credit and do not have the guarantees required.

The level of global interest and investment in insurance technologies, or insur-tech, continues to grow: Total investments in insurtech were \$4.4 billion in 2018.

The Agriculture and Climate Risk Enterprise (ACRE) makes use of the data from automated weather stations, satellites and other mobile technologies to bring affordable insurance to smallholder farmers in East Africa.



Risk Factors

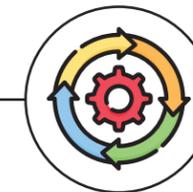
Obstacles to Scale

Access to network: The suggested solution relies on mobile access to activate the programs and sharing information in real-time.

There is a lack of information about the benefits of the insurance and financial education.

The distribution systems of most insurers are not designed to serve the low income market. The system of brokers, agents and direct sales traditionally used by insurers does not reach the poor.

Products that do not meet crop seasonality and individual farmer necessities.



Impact Management

What

Positive and Important outcome due to better resilience to unexpected events.

Who

Underserved stakeholders that need insurance the most.

How much

Deep change & large scale due to the positive impact of insurance.

Contribution

Likely better due to the associated safety net of counting with insured assets.

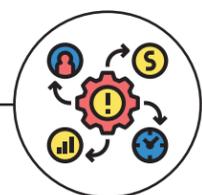
COLLECTION, RECYCLING AND MANUFACTURING OF CONCRETE AND PRE-MANUFACTURED MATERIALS FROM CONSTRUCTION AND DEMOLITION WASTE (CONTINUED)



Overview

Business Model

Plants that collect, separate and treat construction and demolition waste (RCD) which have high susceptibility to be transformed and reincorporated as raw material of aggregates in the manufacture of new products that can be sold back to construction developers as substitutes of natural aggregates as a way to transform the construction industry into a sustainable activity.



Impact Case

Development need

Colombia produces 22M tons of solid waste per year (0.5 tons hab / year), an alarming figure compared to other countries, becoming one of the main problems that impacts the environment and causes the depletion of authorized land-fill sites.

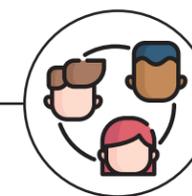
In Colombia only 17% are recovered/recycled, while the remaining 83% ends up in the country's sanitary landfills. Reuse figures for developed countries exceed 50%.

Colombia has greater efficiency in the consumption of materials per capita per inhabitant (about 3 times above the average efficiency in the use of materials in OECD member countries).

Potential Outcomes

RCD recycling results in less material being buried in the ground, which reduces the need for landfilling areas and the environmental issues associated with RCD disposal are lessened.

Provides an environmental benefit through saving natural resources and reducing possible pollution from landfills. Reducing the energy required for the extraction of the raw materials they replace, and the resulting greenhouse gas (GHG) emissions associated.



Beneficiaries

Direct Beneficiaries

12.5M people who will benefit from reduced pollution and improved waste management.

The construction sector who will save costs due to the availability of recycled materials.

Indirect Beneficiaries

The health system that treats more than 300.000 patients a year due to pollution related symptoms.

Region

Focus in the biggest 3 cities that generate 63% of RCD:



Bogotá 12.0 Million tons

Cali 0.8 Million tons

Medellín 2.2 Million tons

COLLECTION, RECYCLING AND MANUFACTURING OF CONCRETE AND PRE-MANUFACTURED MATERIALS FROM CONSTRUCTION AND DEMOLITION WASTE (CONTINUED)



SDGs Alignment & Indicators



9.4 Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes.

CO2 emission per unit of value added.



11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.

11.C Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.

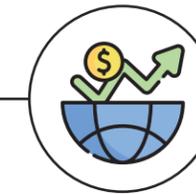
12.4 Achieve the environmentally sound management of chemicals and all wastes.



Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment

12.5 Reduce waste generation through prevention, reduction, recycling and reuse.

National recycling rate, tons of material recycled.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

The construction sector in Bogotá has grown steadily in recent years, concentrating between 20 to 30% of the Colombian construction GDP.

According to a 2013 detailed financial and business model study a company that processes 15% of the RCD in Bogotá has an income of 10M USD/year. Extrapolating assumptions for a 2020 scenario with current RCD volumes and prices, market size is \$160M USD.

Expected Return & Timeframe

This same study estimated under three different scenarios and a price sensitivity analysis that a the proposed business model can generate an IRR of 30%-35% in a 10 year timeframe.

COLLECTION, RECYCLING AND MANUFACTURING OF CONCRETE AND PRE-MANUFACTURED MATERIALS FROM CONSTRUCTION AND DEMOLITION WASTE (CONTINUED)



Enabling Factors

Policy & Regulation

National Development Plan: Implement strategies and instruments to achieve sustainability, innovation and reduce environmental impacts, with a circular economy approach.

Circular Economy National Strategy: Promote entrepreneurship and attract investment as a result of new forms of production, consumption and use of waste, which reduces the burden on sanitary landfills, considering a five-year useful life of sanitary landfills in 321 municipalities .

National Policy for Waste Management: Regulates non-hazardous waste management within sustainable development and climate change mitigation to move towards a circular economy.

Secretary of Environment 0472 Resolution: Describes the guidelines and principles for the comprehensive management, use and disposal of construction and demolition waste. It establishes that at least 25% of materials used in construction should be recycled materials.

Finance & Partners

15 companies are certified to manage the RCD of construction companies and report disposal and recycling information to the central tracking system (ID5).

EPMFCP Fund, invested in RCD recycling models: Reciclados Industriales (2016) and Triciclo.

UNDP set out to innovate solid waste management by integrating social inclusion strategies: poverty reduction, incorporation of the gender perspective and the promotion of youth.

The South African company Shisalanga Construction recently launched a pilot project to build a road using recycled plastic waste.

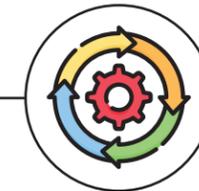


Risk Factors

Obstacles to Scale

There are insufficient comprehensive feasibility, material characterization and logistics studies of the location of RCD making challenging to build an efficient treatment RCD venture.

There is not a unified information, tariff structure, and tax incentive systems for RCD collection and disposal.



Impact Management

What

Positive and Important outcome due to waste recycling and reduced pollution.

Who

Various stakeholders living in the biggest cities in Colombia.

How much

Deep change & large scale due to the technological disruption in circular economy.

Contribution

Likely better due to the associated reduced pollution.

SELF-SUFFICIENT PRIVATE WATER TREATMENT PLANTS

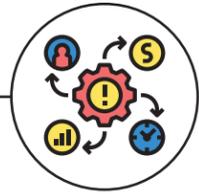


Overview

Business Model

Invest in self-sufficient private water treatment plants adjacent to or embedded into large institutional facilities like social housing, hospitals and schools.

Waste-water Treatment Plants are both the most important and the most expensive feature of wastewater management.



Impact Case

Development need

Water service coverage was 97.4% for urban areas and 73.2% for rural areas (total of 92.4%) while sewage coverage was 92.4% in urban areas and 70.1% in rural (Total of 88.2%).

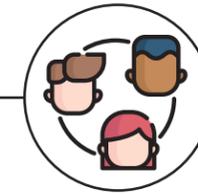
86% of urban and 42% of rural population with access to water service had access to drinking water and 42.8% of urban wastewater is treated in Colombia.

In 2016, 1,209 deaths were caused by waterborne diseases mainly: dysentery (severe diarrhea) and E. Coli (bacteria found in unsafe water sources).

Potential Outcomes

Provide clean water to millions of individuals through independent, localized water treatment systems within facilities providing key public services.

Reduce rates of water-borne and other infectious diseases by keeping these places water free of untreated wastewater improving people's livelihood.



Beneficiaries

Direct Beneficiaries

5.6M Colombians that don't enjoy from and adequate potable water and sewage service.

Indirect Beneficiaries

Reduced strain on the system for managing epidemics and water-borne diseases.

Region

There are 9 departments that do not have an adequate percentage of water and sewage coverage (less than 70%: Amazonas, Guaviare, Putumayo, Cauca, Vaupés, Vichada, Chocó, La Guajira y Guanía.



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SELF-SUFFICIENT PRIVATE WATER TREATMENT PLANTS



SDGs Alignment & Indicators



3.3. Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene.

6.1. Achieve universal and equitable access to safe and affordable drinking water for all



Proportion of population using safely managed drinking water services.

6.3. Improve water quality by [...] halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.

Proportion of wastewater safely treated.



9.1. Develop quality, reliable, sustainable and resilient infrastructure, to support economic development & human well-being, with a focus on affordable and equitable access for all.

Need Category



Productivity



Inequality



Access to Finance



Gender



Climate



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

According to IDEAM the average demand for water is 36.000Mm³. At an average price per m³ of US \$ 0.2, the potable water service is a US \$ 7.2bn market.

Expected Return & Timeframe

This same study estimated under three different scenarios and a price sensitivity analysis that the proposed business model can generate an IRR of 30%-35% in a 10-year timeframe.

SELF-SUFFICIENT PRIVATE WATER TREATMENT PLANTS



Enabling Factors

Policy & Regulation

National Development Plan: has the objective of increasing water coverage and close gaps in access to home public services by implementing the National Program for Rural Water Supply and Sanitation which promote access to services in rural areas and through the Implementation of Departmental Water Plans, for the formation of regional schemes.

The Colciencias program "Ideas for change" seeks to improve quality in the country's communities in conditions of poverty and vulnerability through innovative science and technology solutions and the use of wastewater treatment technologies.

Tasa retributiva is a tax that encourages behavior change among agents, that internalizes the cost of the environmental damage caused (e.g. wastewater discharge).

Finance & Partners

Colombian government will invest more than COP 1.8Bn for water and sanitation projects in 2020 for 1.4M people to have access to drinking water for the first time.

Water and sewage tariffs in Colombia are subsidized. There is a supply-side subsidies aimed to assist companies in covering the cost of production or service provision to make service payment it more affordable to consumers.

MinVivienda and DNP structured project guidelines (proyectos tipo) for the implementation of rural water treatment and sanitation facilities based on pre-manufactured materials.



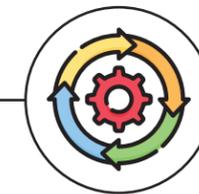
Risk Factors

Obstacles to Scale

Investors have largely concentrated on large centralized capital projects as solutions to water & sanitation challenges, and have been mired in regulatory, licensing and contract-protection challenges at the municipal and state level, without considering decentralized treatment models.

Localized water treatment infrastructure will likely need to be complemented with broad-based investment in the public sanitation system to solve for this development need.

Potential governance obstacles related to a public good provided by a private entity.



Impact Management

What

Positive and Important outcome due to access to potable water.

Who

Underserved stakeholders living in rural areas with no access to potable water.

How much

Deep change & large scale due to the technological disruption in water treatment.

Contribution

Likely better due to the increased coverage of high quality water.

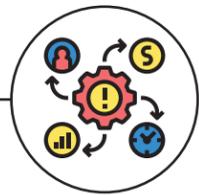
TRUCKING, MONITORING AND SCHEDULING SERVICES PLATFORM CONNECTING CARGO TRANSPORTATION PROVIDERS WITH COMPANIES OR PEOPLE WHO NEED THEM



Overview

Business Model

A B2B platform that uses technological innovation to connect, optimize, monitor, and solve problems in the logistics industry by connecting and scheduling shippers who need to deliver home goods, electronics, construction materials, and anything that fits into a truck with independent truck drivers who can fulfill those needs.



Impact Case

Development need

73% of the cargo moves by truck and transportation weights 4.2% of the GDP. Despite its importance, transportation is the 4th sector in Colombia with the highest labor informality (59%)^{1,5}.

Between 2010 and 2016, 40k Colombians died as a result of road accidents. These figures are alarming, as the year-to-year death toll has increased since since 2007 by 29% annuall.

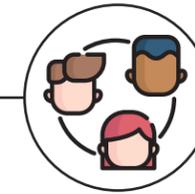
Freight transportation has lagged technologically, generating a lack of coordination and misinformation resulting in delays and over costs for the final user (highest in LatAm).

GHG emissions from transportation in Colombia correspond to 12.1% of total emissions in the country only after cattle raising and agricultural activities.

Potential Outcomes

Minimize congestion and thus emissions generated by trucks (due to reduced fuel consumption and travel times) as a result of better truck scheduling.

Improve truck scheduling which will in turn minimize congestion and thus emissions generated by trucks.



Beneficiaries

Direct Beneficiaries

+ 3,348 companies dedicated to cargo transportation in Colombia.

+ 400,000 truck drivers.

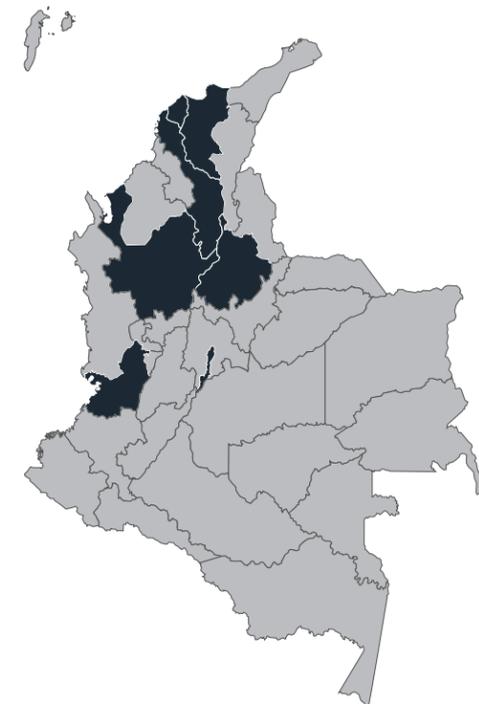
+ 11,000 export base companies.

Indirect Beneficiaries

Colombians living in dense cities.

Region

8 cities that comprise 80% of cargo transport in Colombia: Bogotá, Medellín, Cali, Buenaventura, Cartagena, Santa Marta, Barranquilla, Barrancabermeja.



TRUCKING, MONITORING AND SCHEDULING SERVICES PLATFORM CONNECTING CARGO TRANSPORTATION PROVIDERS WITH COMPANIES OR PEOPLE WHO NEED THEM



SDGs Alignment & Indicators

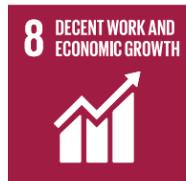


2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries.



3.6 Halve the number of global deaths and injuries from road traffic accidents.

Death rate due to road traffic injuries.



8.6. Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labor intensive sectors.

Annual growth rate of real GDP per employed person.



9.4 upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes.

CO2 emission per unit of value added.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

According to Asopartes, the number of trucks used for commercial purposes in Colombia are 376k. Liftit, a cargo delivery platform, charges US \$1,200 /truck/year: market: US \$ 457M.

Expected Return & Timeframe

According to LiftIt, they are improving their customers ROI by 25%.

TRUCKING, MONITORING AND SCHEDULING SERVICES PLATFORM CONNECTING CARGO TRANSPORTATION PROVIDERS WITH COMPANIES OR PEOPLE WHO NEED THEM



Enabling Factors

Policy & Regulation

National Development Plan: Strengthen the transport of cargo and passengers, improve the safety of users and cargo, and the quality of information for decision-making. Modernize public transport systems, with better technologies, greater accessibility for the population with disabilities and fares available to everyone.

Decree 047 of 2020, a measure to improve air quality by restricting the hours and delimiting the areas through which cargo trucks can circulate due to their environmental impact.

Finance & Partners

SICE-TAC a tool with which the Ministry of Transportation seeks to guarantee the payment of fair rates, monitor the industry and modernize the operation of cargo transportation.

Trucking and logistics services Colombian startup **Liftit** has raised \$22.5 million in a Series B that comes on top of Liftit's \$14.3 million Series A from some of the region's top investors.

Smart city is a monitoring system led by 'Bogotá Inteligente' for pollutant emissions in cargo vehicles that will provide useful information for companies and decision-makers in the capital.

Nutresa Group developed a Clean Transport Manual to define a framework for action, with an eco-efficiency criterion, so that transportation service reduces its impact to the environment.

Plan Nacional de Agrologística: Guidelines to achieve a comprehensive collection and distribution logistics consistent with product life cycles, which includes cold chain preservation and traceability tools that guarantee better penetration into global market.

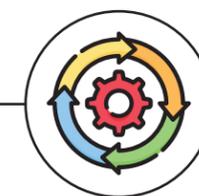


Risk Factors

Obstacles to Scale

The country's precarious and deficient road infrastructure. The deterioration and obsolescence of the automotive fleet. Insecurity and land piracy on the routes. In terms of infrastructure, according to the Global Competitiveness Index, Colombia ranks 83 among 140 countries and 97 when evaluating road connectivity (World Economic Forum, 2018), evidencing the existing lag.

Choosing the most suitable fleet in terms of capacity, performance and investment according to operating conditions facilitates maintenance and fuel economy.



Impact Management

What

Positive and Important outcome due to lower GHG emissions.

Who

Various stakeholders living in the biggest cities in Colombia.

How much

Deep change & large scale due to the technological disruption in transportation.

Contribution

Likely better due to the associated reduced pollution and efficiency gains.

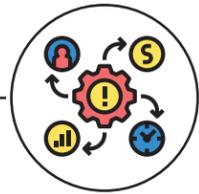
HYBRID EDUCATIONAL INSTITUTIONS THAT PROVIDE CERTIFIED DEGREES FOR REMOTE LOCATIONS BY OFFERING REAL-TIME COURSES



Overview

Business Model

Institutions that bring high-quality academic programs to all regions of the country, providing the opportunity to access information and knowledge with a face-to-face digital hybrid model where students in remote areas receive classes in real time, interacting with teachers and peers within a physical infrastructure with the technology and resources to support the learning experience.



Impact Case

Development need

Education coverage in Colombia is not universal. (1) 47.6% of children have access to middle school in urban areas while 31.4% in rural areas (2) Only 53.5% of young adults (17-22 years old) have access to technical, university or college degree programmes.

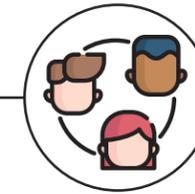
Colombia does not enjoy from high quality education: (1) It has the worst rating among OECD countries in terms of the academic performance measured by the PISA test² (2) Only 14% of urban schools and 4% of rural schools are ranked as superior quality according to SABER tests.

Although the cost of education in Colombia are no the most expensive in absolute terms compared to those in Mexico or Brazil, they are higher relative to country's minimum wage or debt capacity of families.

Potential Outcomes

Improve middle and higher education inclusion for people living in remote areas or those that do not have the resources to be part of the traditional educational model.

Improve the quality of education to people that live in the rural parts of Colombia improving the probability of being accepted in the labor market and thus improving the welfare of beneficiaries.



Beneficiaries

Direct Beneficiaries

26% of the total population in Colombia (11.7M) is between 14 to 28 years old.

Indirect Beneficiaries

Professional that work in the education sector.

Region

The 10 departments with lower education coverage: Chocó Vaupés, Putumayo, Guanía, Cauca, Nariño, Amazonas, Arauca, Guaviare, Vichada.



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HYBRID EDUCATIONAL INSTITUTIONS THAT PROVIDE CERTIFIED DEGREES FOR REMOTE LOCATIONS BY OFFERING REAL-TIME COURSES



SDGs Alignment & Indicators



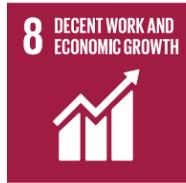
1.2 Reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions.

Proportion of population living below the national poverty line, by sex and age.



4.1 ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.

Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level.



8.6 substantially reduce the proportion of youth not in employment, education or training.

Proportion of youth (aged 15-24 years) not in education, employment or training.



10.1 progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average.

Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population and the total population.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

Young people to have a different education, reflected in the sustained increase in the last years of students in virtual education that for 2018 it reached around 200.000 students.

An average professional degree in Edupol costs US \$900.2 If every young Colombian decides to study under this model, this is a US \$10.5bn market.

Expected Return & Timeframe

In 2016, Gray Matters Capital (GMC) invested \$2MUSD in Aulas Amigas. GMC is a fund that seeks for returns in the range of 12%-18%.

HYBRID EDUCATIONAL INSTITUTIONS THAT PROVIDE CERTIFIED DEGREES FOR REMOTE LOCATIONS BY OFFERING REAL-TIME COURSES



Enabling Factors

Policy & Regulation

Plan Nacional de Desarrollo (2018 – 2020): Strives to provide quality comprehensive care in primary education to achieve universal coverage while improving the quality of higher education by recognizing and promoting the diversity of academic institutions and programmes.

Law 1978 of 2019, encourages the use of the ICT in different sectors such as education by promoting internet coverage and tech-adoption for virtual education.

Decree 1075, 2015 in which it dictates the rules for the education sector including the guidelines for certified virtual and long-distance education.

Finance & Partners

Kuepa, Aulas Amigas and Edupol are educational institutions with presence in LatAm bringing high-quality education programs to remote regions, giving people the opportunity to earn a degree or gain professional abilities without incurring the costs of regular tuitions.

Global investments in edtech, will reach \$252 billion by 2020. In fact, the global e-learning market is growing over 14% annually, being LatAm the fourth largest market with expectations to generate revenues of US \$3bn in 2023.

Escuela Nueva is a non-governmental organization created in 1987 by education experts with extensive experience and knowledge on country's social and educational problems, that offers an educational solution to improve the quality, efficiency and sustainability of education.



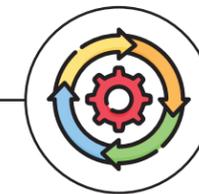
Risk Factors

Obstacles to Scale

Connectivity: Lack of internet infrastructure and connectivity in remote areas to enjoy the proper conditions that a hybrid educational system demands.

Adoption risk: There is still a predisposition towards the virtual education. Some people associate virtual education with mediocrity or low quality.

Early childhood: Educational problems are related to early childhood education. This model does not resolve this problem.



Impact Management

What

Positive and Important outcome due to increase in education coverage.

Who

Underserved stakeholders that do not have access to the traditional educational system.

How much

Deep change & large scale due to the benefits associated with education.

Contribution

Likely better due to the associated income improvement and efficiencies.

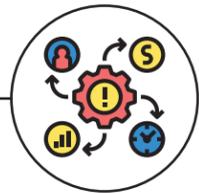
DESTINATION MANAGEMENT AND PROMOTION PLATFORMS THAT CONNECT AND DEVELOP WORLD-CLASS RURAL, ADVENTURE AND ECOTOURISM EXPERIENCES



Overview

Business Model

Destination management organizations that promote, connect, support de development and offer nature tourism experiences led by local communities that expressly use the natural resources, without degrading or exhausting them (e.g. bird watching recreational and leisure activities) to protect and promote biodiversity through world-class quality experiences.



Impact Case

Development need

Given its geographic, social and cultural particularities, Colombia has an advantage as a tourist destination. With improved security, the tourism has experienced a boom, but it still has room to grow: while tourism represents only 3.8% of the GDP in other latAm countries it weights 10%.

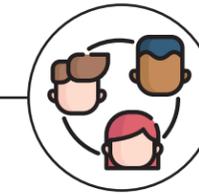
Due the lack of capacity of local communities to offer world-class experiences, agencies and large companies are those receiving the benefits: In 2019, Colombia received a record-breaking number of tourists (4.5M) and hotel-chain income grew by 10.6% and travel agencies by 3.7%

Tourism boom has brought informality, resulting in nature destruction (e.g. Construction of informal hotels have caused environmental damages, such as the cutting of trees).

Potential Outcomes

Raise consumer awareness and respect the integrity of the environment, providing incentives for the conservation of natural heritage and local culture of the destinations visited.

Offer economic opportunities for communities and local inhabitants to allow them to enjoy from an equitable distribution of the economic benefits derived benefits of natures-based tourism.



Beneficiaries

Direct Beneficiaries

4.1M of people that could work in the tourism industry (1 out of every 11 jobs).

60 protected areas that comprise 11.6M of Ha.

Indirect Beneficiaries

10M of international tourists expected in 2023.

Region

Rural: Caldas, Risaralda, Quindío, Vichada.

Ecotourism: Valle del Cauca, Amazonas, Magdalena, Meta, Antioquia, Chocó, Guajira, Nariño.

Adventure: Cundinamarca, Huila, Tolima, Boyacá, Santander, Bolívar, Antioquia, Meta, Caquetá.



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DESTINATION MANAGEMENT AND PROMOTION PLATFORMS THAT CONNECT AND DEVELOP WORLD-CLASS RURAL, ADVENTURE AND ECOTOURISM EXPERIENCES

	Services & Education	<i>Hotels & Lodging</i>	Ecology and ecotourism models
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SDGs Alignment & Indicators



8.9. By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products.

Tourism direct GDP as a proportion of total GDP and in growth rate.

Number of jobs in tourism industries as a proportion of total jobs and growth rate of jobs, by sex.



12.b. Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products.

Number of sustainable tourism strategies or policies and implemented action plans with agreed monitoring and evaluation tools.



14.7 Increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism.

Sustainable fisheries as a percentage of GDP in least developed countries.

Need Category

-  Productivity
-  Inequality
-  Access to Finance
-  Gender
-  Climate



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

Globally, nature tourism and ecotourism grew three times faster than the overall tourism industry and investment is estimated to increase by 20% annually.

By 2032, the Colombian tourism market can reach US \$14.9bn2 and in particular, the nature and wellness tourism will be a US \$2.90 Bn activity.

Expected Return & Timeframe

According to the Colombian National Business plan for Nature-based tourism, an IRR of 19%-26% can be achieved by investing in these types of projects.

DESTINATION MANAGEMENT AND PROMOTION PLATFORMS THAT CONNECT AND DEVELOP WORLD-CLASS RURAL, ADVENTURE AND ECOTOURISM EXPERIENCES



Services & Education

Hotels & Lodging

Ecology and ecotourism models



Enabling Factors

Policy & Regulation

National Development Plan: Promote tourism by (1) generating the conditions to strengthen destinations and offerings, (2) investing in better infrastructure and connectivity and (3) Increasing business development and human capital skills for a competitive tourism.

The Financing Law (law 1943 of 2018) provides incentives to new and remodeled hotel establishments, allowing them for a special tax income reduction of 9%, not be subject to wealth tax, nor to the payment of presumptive income. It also excluded from VAT the air transport service for nature tourism hotspots such as: La Guajira, Nuquí, Mompox and Tolú.

Plan Sectorial de Turismo (2018 - 2020) - Defines the guidelines to improve Colombia's tourism competitiveness based on: Productivity strengthening, value generation and co-responsibility among stakeholders, improved positioning in national and international markets.

Finance & Partners

With the aim of promoting tourism, since 2018 Colombian government has invested COP \$644.130million for 30 tourism infrastructure projects.

Awake Travel, a market and experience platform that connects nature travelers with local hosts in remote and rural destinations, raised a Series A investment led by Fundación Bancolombia and Fondo Accion and expects to sell US \$300k/month in Jan 2021 despite COVID-19.



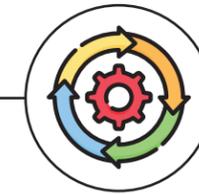
Risk Factors

Obstacles to Scale

Shortage of skilled, trained and qualified bilingual professionals.

Complex relationship between operators and minority communities for the development of the productive value chain and benefit sharing.

Poor access, quality accommodation and communications infrastructure and difficulty to obtaining tourist infrastructure development permits what promotes informality in the sector.



Impact Management

What

Positive and Important outcome due to economic opportunities for local communities.

Who

Underserved stakeholders working in the tourism industry.

How much

Deep change & large scale by enabling communities to share the benefits.

Contribution

Likely better due to improved conservation and protection of natural habitats.

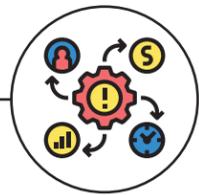
ON-DEMAND DIGITAL CORPORATE MICRO-LEARNINGS PLATFORMS DELIVERING EMPLOYABILITY, TECHNICAL AND/OR VOCATIONAL SKILLS



Overview

Business Model

On-demand digital corporate micro-learning platforms that train professionals and employees by offering courses that range multiple topics enabling professionals gain relevant skills to apply in their daily activities and job related problems.



Impact Case

Development need

Colombia's human capital productivity is low: measured as GDP per employed worker, it grew at 2.1% annually (2003- 2017) and the productivity of the average worker in Colombia is 1/4 of that of the average worker in the United States and 1/3 of that of the average European worker.

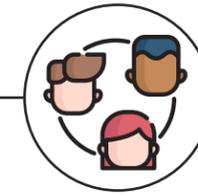
Lack of training and education opportunities result in Colombians not fulfilling basic requirements made by companies and accessing informal jobs that provide no possibilities of development nor stable labor contracts. This is reflected by a high talent mismatch index (6.4, in 2018).

Few Colombians are trained and those who do not are those who would need it most. According to data from the Household Survey, currently only 3% of adults of working age (15 to 64 years) received some type of training in the previous three months.

Potential Outcomes

Increase workforce employability to boost productivity by speeding up the reallocation of labor from less-productive activities to more productive ones and improving the wellbeing of workers.

Expand access to new jobs, make employment more inclusive and offer existing firms opportunities to access to new markets to expand sales and create more jobs.



Beneficiaries

Direct Beneficiaries

36M of people that make up the labor force in Colombia.

1.6M companies registered in Colombia.

Indirect Beneficiaries

-

Region

12 departments with the highest unemployment rates: Tolima, Caquetá, Córdoba, Cundinamarca, Quindío, Meta, Antioquia, N. Santander, Cesar, Sucre, Chocó, Valle del Cauca.



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ON-DEMAND DIGITAL CORPORATE MICRO-LEARNINGS PLATFORMS DELIVERING EMPLOYABILITY, TECHNICAL AND/OR VOCATIONAL SKILLS



SDGs Alignment & Indicators

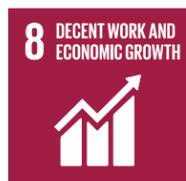
4.3. Ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.



Participation rate of youth and adults in formal and non-formal education and training.

4.4. Increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.

Proportion of youth and adults with ICT skills, by type of skill.



8.6 substantially reduce the proportion of youth not in employment, education or training.

Proportion of youth (aged 15-24 years) not in education, employment or training.



9.C Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.

Proportion of population covered by a mobile network, by technology.



Economic factors

Business Type



Product



Technology



Financing



Service



Infrastructure

Market Size

The worldwide e-learning market is projected to be worth \$325 Billion in 2025. Market size in LatAm is US \$3.0bn (2023) out of which Colombia enjoys a 39% share (US \$1.2 bn).

Expected Return & Timeframe

According to several studies, the return of an investment in professional training platforms are in the ranges of 20-40% in gains in productivity and new sales for companies.

ON-DEMAND DIGITAL CORPORATE MICRO-LEARNINGS PLATFORMS DELIVERING EMPLOYABILITY, TECHNICAL AND/OR VOCATIONAL SKILLS



Services & Education

Educational technology

Vocational online learning platforms



Enabling Factors

Policy & Regulation

Plan Nacional de Desarrollo (2018 – 2020): Provide quality education and improve job training for Colombians to obtain knowledge and skills that respond to market needs to increase workforce productivity and reduce unemployment.

Law 1064 of 2006 states that the Ministry of Education and ICETEX may allocate funds to promote Higher Technical and Technological Education in quality-certified institutions. In 2014 there were 3,410 private, 20 public and 22 mixed institutions.

Finance & Partners

SENA's is the leading public provider of job training offering Higher Technical and Technological Education through certified courses and apprenticeship contracts.

Technical sector roundtables, University-Business-State Committees and Productive Alliances organized by Ministry of education and the Private Competitiveness Council (CPC) conduct regional and cluster level pilots to identify gaps in human capital and design training plans.

Startups such as Ubits, Creahana, Domestika are platform-based education platforms that have participated in Y-Combinator and received funding from investors such as Acumen.

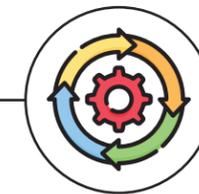


Risk Factors

Obstacles to Scale

Training vs. Need mismatch: Training offer may not be adequate and employers might not consider certified offerings valid to increase employability and hire new personnel.

Connectivity: Lack of internet infrastructure and connectivity in remote areas to enjoy the proper conditions that a hybrid educational system demands.



Impact Management

What

Positive and Important outcome due to better prepared workforce.

Who

Various stakeholders living in the biggest cities in Colombia.

How much

Deep change & large scale due to the important gains in employment performance.

Contribution

Likely better due to the associated benefits of a more capable workforce.