



DIGITAL FINANCING FOR **SUSTAINABLE DEVELOPMENT**

**An Ecosystem Assessment
and Strategy for Namibia**



2023



Copyright ©UNDP 2023. All rights reserved.

One United Nations Plaza, New York, NY 10017, USA

The United Nations Development Programme (UNDP) is the leading United Nations organization fighting to end the injustice of poverty, inequality, and climate change. Working with our broad network of experts and partners in 170 countries, we help nations to build integrated, lasting solutions for people and planet.

Learn more at undp.org or follow at @UNDP.





An Ecosystem Assessment and Strategy for Namibia

2023



FOREWORD

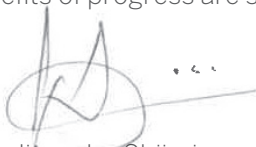
In an era defined by technological innovation and the relentless pursuit of the 2030 Agenda and its 17 Sustainable Development Goals (SDGs), we stand at a critical juncture. The global community's commitment to addressing the complex challenges of our time, from climate change to economic inequality, requires fresh perspectives and innovative approaches. One such approach is the transformative power of digital financing, and this assessment report explores its potential impact within the unique context of Namibia.

"A Digital Financing for Sustainable Development: An Ecosystem Assessment and Strategy for Namibia" represents a comprehensive endeavor to analyze and strategize the integration of digital finance into Namibia's sustainable development agenda. In the spirit of fostering positive change and harnessing the potential of technology for greater good, this study takes a deep dive into the digital financing landscape within Namibia.

Namibia, a country blessed with abundant natural beauty, resources, and cultural richness, has embarked on a journey towards achieving its development objectives. At the heart of this journey lies the ambition to create a more equitable society, ensuring that no one is left behind in the pursuit of prosperity. Digital financing, with its ability to drive financial inclusion, mobilize resources, and facilitate efficient economic activities, presents a promising avenue to advance these noble aspirations. This assessment report is the result of rigorous research, data analysis, consultations, and collaboration among experts, stakeholders, and policymakers. It provides an in-depth examination of Namibia's current digital financing ecosystem, shedding light on the opportunities and challenges that lie ahead. It outlines a strategic framework that leverages the strengths of digital finance to address pressing development issues, enhance financial resilience and inclusion, and accelerate progress towards the SDGs.

We recognize that the journey towards digital financing for sustainable development is not without its complexities. It demands concerted efforts, visionary leadership, and the unwavering commitment of all stakeholders. However, it is a journey worth embarking on, for it has the potential to unlock new avenues of economic growth, enhance social inclusivity, and contribute to a more sustainable future for all Namibians. In the pages that follow, you will find a rich tapestry of insights, recommendations, and case studies that illuminate the path forward for Namibia. From mobile payment solutions that empower rural communities to access financial services, to innovative partnerships that drive sustainable investments, this report showcases how digital financing can be a catalyst for change. As we present this assessment report, we do so with optimism and determination. We are confident that Namibia possesses the resilience, creativity, and the spirit of collaboration necessary to seize the opportunities that digital financing offers. We hope that the findings and recommendations contained within the report will inspire action, spark dialogue, and serve as a guiding compass for policymakers, businesses, civil society, and development partners.

In closing, we extend our sincere gratitude to all key stakeholders who contributed to this endeavor including the UN system through the technical leadership of UNDP Namibia that supported the assessment. Your dedication to the cause of sustainable development and your commitment to Namibia's progress are deeply appreciated. Together, let us embark on this journey towards a more digitally empowered and sustainable Namibia, where the benefits of progress are shared by all.



Hon. Iipumbu Shiimi
Minister
Ministry of Finance and Public Enterprises

PREFACE

Namibia, a land of diverse landscapes and cultures, has embarked on a journey towards a sustainable and prosperous future. In an increasingly interconnected world, the role of digital financing in achieving these aspirations cannot be overstated. The assessment report you are about to delve into, "A Digital Financing for Sustainable Development: An Ecosystem Assessment and Strategy for Namibia," is a testament to Namibia's commitment to harnessing the power of technology to drive its development agenda.

As we unveil this report, we stand at a unique juncture in history. Namibia, like many nations, faces multifaceted challenges, from socio-economic disparities to environmental sustainability. However, it also possesses a wealth of opportunities, rooted in its people's resilience, natural resources, and vibrant culture. At the core of this assessment is the recognition that digital financing can serve as a catalyst for transformative change. The journey to produce this report was a collaborative effort between the Government of the Republic of Namibia through the Ministry of Finance and Public Enterprises and the United Nations system under the technical leadership of UNDP Namibia, which brought together a diverse group of experts, financial institutions, policymakers, civil society, and other relevant stakeholders like digital finance service providers. Their dedication, expertise, and passion have been instrumental in shaping the insights, findings, and recommendations contained in this report. Together, we sought to understand the current state of digital financing in Namibia, its potential to drive sustainable development, and the strategies that can unlock its full potential.

This assessment report provides a comprehensive overview of Namibia's digital financing ecosystem, offering insights into its strengths, challenges, and opportunities. It delves into the nuances of financial inclusion, explores innovative financing models, and showcases case studies that demonstrate the tangible impact of digital finance on the lives of Namibians. It is important to recognize that the journey towards a digitally empowered and sustainable Namibia is not a one-size-fits-all endeavor. It requires adaptability, inclusivity, and an unwavering commitment to leaving no one behind. The strategies outlined in this report are not mere recommendations but a roadmap that must be shaped and refined through dialogue, collaboration, and the collective will of Namibia's diverse stakeholders. As you navigate through the contents of this report, we encourage you to envision a Namibia where every citizen has access to financial services, where innovative entrepreneurs thrive, and where the Sustainable Development Goals (SDGs) become a reality. This vision is not only aspirational but achievable, and digital financing is a critical enabler on this path.

We extend our heartfelt appreciation to all those who contributed to this assessment, from the consultant who conducted desk review and consultations to the policymakers and service providers who provided valuable insights. Your dedication and commitment to Namibia's sustainable development are commendable.

In closing, this assessment report is more than a compilation of findings; it is a call to action. It is a call to embrace the potential of digital financing, to chart a course towards inclusive and sustainable development, and to write a new chapter in Namibia's history. The journey begins here, and together, we can shape a brighter future for all Namibians.



Ms. Alka Bhatia
Resident Representative
United Nations Development Programme



ACKNOWLEDGMENT


The completion of this assessment, "A Digital Financing for Sustainable Development: An Ecosystem Assessment and Strategy for Namibia," was made possible through the dedication, collaboration, and contributions of numerous individuals, partners, and organizations. We would like to express our heartfelt gratitude to all those who played a pivotal role in shaping this study and supporting our efforts to advance sustainable development in Namibia.

The work on the digital finance ecosystem assessment and strategy report was commissioned by the Government of Namibia, with support from the United Nations system under the technical leadership of UNDP Namibia. The process was overseen by a technical oversight team through the Ministry of Finance and Public Enterprises (MFPE) in collaboration with the National Planning Commission (NPC), UNDP-UNCDF Joint Team on Digital Finance for the SDGs, and the Participating United Nations Organizations and the United Nations Resident Coordinator's (UNRCO) under the SDG Fund Joint Programme including UNDP, UNICEF, UNFPA, and the ILO. Members of the oversight included Festus Nghifewa (MFPE), Ndilimeke lipinge (MFPE), Sylvester Mbangu (NPC), Wilmot A. Reeves (UNDP), Orria Goni (former UNDP SDG Finance and SSC Regional Advisor), Jianing Ma (former UNDP JPO), Tupa-Omukumo Iyambo (former UNDP Economist Intern), Aiaze Mitha (UNCDF/UNDP), Pamela Eser (UNCDF), Johannes Schultz Lorentzen (UNDP), Jacob Nyamadzawo (UNICEF), Natalia Halweendo (UNFPA/ILO), and Eunice Ajambo (UNRCO).

Our gratitude goes to the various stakeholders, including financial institutions, civil society organizations, local communities and service providers of digital finance services, development partners, and private sector entities, who generously shared their insights, data, and expertise. Your collaboration was essential in gaining a comprehensive understanding of Namibia's digital financing landscape. Your commitment to sustainable development and firsthand insights have illuminated the transformative impact of digital financing on the daily lives of Namibians and many other residents.

The success of this assessment is a testament to the dedication and hard work of the consultant, Richard Ndahiro (UNCDF). His tireless effort in conducting desk review, consultations, engaging various stakeholders, analyzing data, and synthesizing findings have been invaluable. We also want to appreciate the diligent work of the graphic designer from Dae Media Solutions cc.

Finally, we express our gratitude to all those who will engage with this report, whether as policymakers, researchers, or advocates. Your commitment to realizing the vision of a digitally empowered and sustainable Namibia is central to our collective success. In closing, this assessment report is a testament to what can be achieved through collaboration and a shared commitment to sustainable development. While the stakeholders above represent a portion of those who contributed, our gratitude extends to all who have been part of this journey. Together, we aspire to make a lasting and positive impact on the future of Namibia.



Mr. Titus Ndove
Executive Director
Ministry of Finance and Public Enterprises



TABLE OF CONTENT

Foreward	4
Preface	5
Acknowledgement	7
PART 1: DIGITAL FINANCE ECOSYSTEM ASSESSMENT	
1. Introduction	11
1.1 Objectives of the Assessment	15
1.2 Scope of the Assignment	15
1.3 Approach and Methodology	16
1.3.1 Approach	12
1.3.2 Methodology	18
1.3.3 Desk research	18
1.3.4 Primary data collection	19
1.3.5 Data Analysis	19
1.3.6 Limitations to the Assessment	20
2 Namibia's Digital Finance Ecosystem	21
2.1 Introduction	21
2.2 Digital Finance Infrastructure	21
2.2.1 Introduction	21
2.2.2 Connectivity	21
2.2.3 Identity	24
2.2.4 Payment Rails	24
2.2.5 Interoperability	25
2.2.6 Distribution infrastructure	26
2.2.7 Gaps and Opportunities	26
2.3 Digital Finance Policy and Regulation in Namibia	27
2.3.1 Institutional and Policy Framework	27
2.3.2 Legal and Regulatory Framework	29
2.3.3 Gaps and Opportunities	35
2.4 Innovation ecosystem	36
2.4.1 Introduction	36
2.4.2 Ecosystem Actors	37
2.4.3 Ecosystem analysis across key dimensions	39
2.4.4 Gaps and Opportunities	44
2.5 Overview of the Namibian digital finance market	45
2.5.1 Market Players	45
2.5.2 The Market offerings – the products and services	46
3 Alignment of the digital finance market to Namibia's development priorities	49
3.1 Introduction	49
3.2 The impact of DF market players and offerings on sustainable development in Namibia	49
3.2.1 Understanding the impact pathways of digital finance offerings	49
3.2.2 Alignment of Namibia's Fintechs and digital innovators to the national development priorities	53
3.2.3 Awareness levels of national development priorities and the SDGs within the Fintech industry	54
3.3 The Inclusiveness of the Digital Finance Market offerings on the Namibian Market	54

TABLE OF CONTENT

3.4	The potential and opportunities for Digital Finance to contribute to Namibia’s sustainable development Agenda.	56
3.5	Learning from the rest of the world: Uses cases of digital finance for sustainable development	59
4	Key takeaways from the assessment	66
PART 2: DIGITAL FINANCING STRATEGY FOR NAMIBIA		
5	Introduction	68
5.1	Institutional arrangements	68
6	Harnessing digital financing for Namibia’s development priorities	69
6.1	The digital finance foundations	69
6.1.1	Digital Finance Infrastructure	70
6.1.2	Policy and Regulation for Digital Finance	71
6.1.3	Innovation ecosystem	72
6.2	Catalytic digital financing opportunities for Namibia	73
6.2.1	Deepening financial inclusion and decentralizing the financial system.	77
6.2.2	Improving transparency, accountability, efficiency and service delivery in the public sector.	79
6.2.3	Mobilizing retail savings for impactful projects and businesses	81
6.2.4	Enabling new ways to provide financial protection, risk management, risk transfer and diversification	84
6.2.5	Leveraging fintech to embed ESG / SDG considerations into Namibia’s financial system	84
6.3	Other key considerations to unlock the development impact of Digital Finance in Namibia	91
6.3.1	Building a vibrant fintech ecosystem that is SDG aligned.	91
6.3.2	Providing for a regulatory sandbox to foster innovation	92
6.3.3	A national data framework to harness the power of data for innovation and development	92
6.3.4	Investing in mindset change and consumer literacy	93
6.3.5	Implementing other key interventions: Level of effort required	94
7	Implementing the Strategy: A proposed Roadmap	95
8	Annexes	99
8.1	Implementing the strategic recommendations: Level of effort required	100
8.1.1	DF Infrastructure	100
8.1.2	Policy and regulation	101
8.1.3	Innovation Ecosystem	102
8.2	IDES Report	104
8.3	Key Informants Interviewed	111
8.4	References	113



ACRONYMS

3G	Third Generation (Wireless Network)
4G	Fourth Generation (Wireless Network)
APIs	Application Programming Interfaces
ATM	Automated Teller Machine
B2G	Business to Government (payments)
BoN	Bank of Namibia
CRAN	Communications Regulatory Authority of Namibia
CSR	Corporate Social Responsibility
DBN	Development Bank of Namibia
DF	Digital Finance
DFA	Development Finance Assessment
DFE	Digital Finance Ecosystem
DFS	Digital Financial Services
e-ID	Electronic Identity
e-KYC	Electronic KYC
e-money	Electronic Money
EBM	Electronic Billing Machine
EFT	Electronic Funds Transfer
FIC	Namibia Financial Intelligence Centre
Fintech	Financial Technology
Fintechs	Financial Technology Companies
FLI	Financial Literacy Initiative
G2P	Government to Persons (payments)
GDP	Gross Domestic Product
GRN	Government of the Republic of Namibia
ICT	Information Communication Technology
ID	Identity
IDES	Inclusive Digital Economy Scorecard



ACRONYMS

INFF	Integrated National Financing Framework
ITU	International Telecommunication Union
KYC	Know Your Customer
MHETI	Ministry of Higher Education, Technology and Innovation
MICT	Ministry of ICT
MoF	Ministry of Finance
MSME	Micro, Small and Medium Enterprise
MTC	Mobile Telecommunication Company
NBFIs	Non-bank financial institutions
NDP	National Development Plan
NFSS	Namibia Financial Sector Strategy
NISS	Namibia Interbank Settlement System
NPS	National Payment System
NUST	Namibia university of Science and Technology
P2G	Person to Government (payments)
P2P	Person to Person [Peer to Peer]
PAN	Payments Association of Namibia
PayGo	Pay as you Go
PPP	Purchasing Power Parity
PSD	Payment System Determination
SDFE	SDG-aligned Digital Finance Ecosystem
SDGs	Sustainable Development Goals
SME	Small and Medium Enterprise
SRM	Sales Registration Machine
UAT	User Acceptance Test
UNCDF	United Nations Capital Development Fund
UNDP	United Nations Development Programme
VAT	Value Added Tax



PART 1: DIGITAL FINANCE ECOSYSTEM ASSESSMENT

1. Introduction

The present SDG-aligned Digital Finance Ecosystem (SDFE) assessment seeks to provide an overview of the digital financing ecosystem in Namibia while highlighting opportunities and challenges to better align the ecosystem broadly with the Sustainable Development Goals (SDGs) and concretely with identified national development priorities. In practice, this means identifying ways in which to shape the ecosystem to channel new and more financing for national development priorities. The SDFE assessment is an integral component of the Integrated National Financing Framework (INFF) process.

Initiated by the Government of the Republic of Namibia (GRN), with the leadership of the Ministry of Finance and support from UNDP and other development partners, the INFF process aims to facilitate the mobilization of required resources more effectively from public and private sources in order to strengthen Namibia’s financing architecture to enhance the quality and scale of financing of national development priorities and the SDGs.

The SDFE assessment is part of Namibia’s efforts to think innovatively about financing its development priorities.

Namibia’s development ambitions and priorities are articulated in the medium

and long-term development plans - **the country’s vision 2030, the Harambee Prosperity Plan II (HPP II) and the National Development Plan (NDP5)**. Namibia is also committed to achieving regional and global goals as articulated in Agendas 2030 (the SDGs) and 2063 (African Union). A summary of Namibia’s development priorities is portrayed in figure 1 below – showing the key pillars of NDP5, the goals under each pillar, and the priority sectors contributing to each goal.

The pillars show a clear alignment and mainstreaming of the global 2030 agenda – the SDGs – via economic, social and environmental pillars.

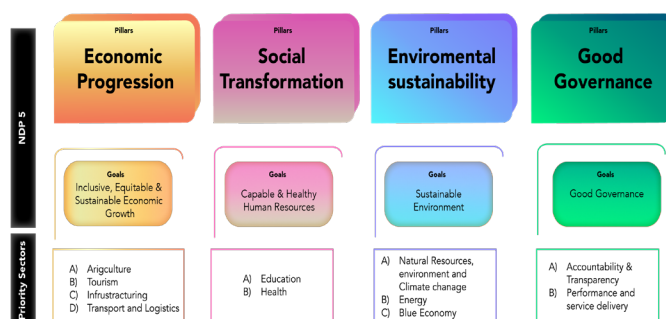


Figure 1: The pillars, goals and priority sectors of Namibia’s NDP 5

Financing Namibia’s development ambitions and priorities, however, remains a critical factor of concern in the face of recent economic challenges, the impact of Covid-19, limited public finances, and gaps in critical developmental infrastructure.

Namibia, in this quest, undertook a comprehensive analysis to determine the strengths, weaknesses, opportunities, and challenges of its financing architecture,



resulting in the 2019 Development Finance Assessment (DFA). The DFA identified a number of structural challenges within Namibia's financing ecosystem which inhibit its ability to adequately finance its national development priorities and the SDGs.

These challenges include limited resource mobilisation capacity, lack of an integrated and coherent financing architecture, limited institutional and technical capacity to plan and budget for SDGs, and weak budget transparency and alignment to SDGs.

The DFA also included a number of headline recommendations, namely: developing a financing strategy that incorporates a mix of tools and models; enhancing domestic resource mobilisation; improving the business environment to support private sector development; establishing a project development facility; championing and adopting GDP Plus² for mobilizing and targeting ODA; strategic use of ODA and new sources of finance; strengthening the monitoring and evaluation system; developing a responsive accountability and enforcement system; and making the existing dialogue architecture more inclusive. The INFF process was embarked on by the GRN to address these structural challenges and recommendations.

Digital financing, as a novel approach, has been integrated into the INFF process to support the GRN to develop and harness

² GDP Plus is an alternative measure of economic activity, to correct for some of the gaps in the classic measurement of GDP

its digital finance ecosystem to deliver financing for its national priorities and support the socio-economic recovery of the country from Covid-19. The aim is to create a Digital Financing Strategy, informed by an SDG-aligned digital finance ecosystem assessment, serving as a subset of the overall INFF-defined SDG Financing Strategy, which specifies a set of pathways to enable the domestic digital finance ecosystem to catalyse financing for national priorities.

There is growing recognition and evidence of the potential of digital financing for sustainable development. Digitalization is already making a big difference in people's lives across various economic sectors, including finance. Digitalization is generally credited for being (1) an accelerator and enabler of access to (and delivery of) basic services across various sectors (finance, agriculture, energy, education, health, transport, etc.) for excluded / vulnerable segments, (2) critical to cutting the costs of uncertainty, asymmetries of information, and securitization of information on transactions amongst large numbers of widely dispersed players, (3) a source of new solutions and business models that improve livelihoods, and (4) a source of improvement in transparency and therefore accountability in management and governance.

Digital finance is already enabling millions of people to access financing through innovative business models. In China, MyBank uses Alipay's technology to serve



SMEs resulting in loan applications taking less than three minutes to complete and one second for MyBank review and approve, all occurring with zero human intervention. Digitalization is also unlocking access to capital intensive utilities from pay-as-you-go and rent-to-own models allowing tens of millions of people to access solar home systems or pay school fees in instalments, to sharing economy models enabling farmers to mutualise expensive agricultural equipment. Satellite imagery and remote sensing are increasingly used in the design of hyper-granulated agricultural credit and insurance products that better account for natural risks and impacts.

These are but a few examples of the new possibilities opened up by the digitalization of finance. Additionally, the Covid-19 crisis has underscored the need for digitalization across sectors including finance. Digital payments have enabled governments to implement large scale Covid-19 relief funds in a timely manner despite the lockdowns; people have more than ever relied on digital payments to remit funds to friends and family in need; businesses have resorted to e-commerce to stay afloat; education, health, financial services, government services, and entertainment have all relied on digital means for business continuity.

This surge in the digital world amplifies the opportunity and the need for it to be harnessed in the longer-term pursuit and financing of sustainable development.

The United Nations, in its seminal publication “People’s Money: Harnessing Digitalization

to Finance a Sustainable Future”ⁱ uncovers the opportunities of how digitalization of finance can support financing that meets the priorities of the people it is intended to serve, by empowering them with greater agency over the use of their money as savers, lenders, borrowers, investors, and taxpayers. The report identifies a number of catalytic opportunities in this regard, including accelerating the use of domestic savings for long term development, enhancing accountability of public financing, making SDGs count in global financial markets, financing SMEs, and promoting SDG-aligned consumer spending.

The UN Environment Programme (UNEP) in its report on “Fintech and Sustainable Development”ⁱⁱ highlights extensively how financial technology (fintech) is already disrupting today’s financial system and offering sustainability solutions across the five core functions of the financial system: moving value, storing value, exchanging value, funding value creation and managing value at risk. It further highlights the promise of fintech innovations to enable a more efficient, accessible and less vulnerable financial system, while creating new markets and blurring the boundaries between financial services and adjacent industries, like retail and telecom.

The report identifies several impact pathways through which fintech innovations can help in harnessing the financial system to align financing with sustainable development outcomes.



These impact pathways include:

- Increasing access to and decentralization of the financial system and thereby unlocking increased financial inclusion while significantly reducing the costs of payments and access to capital for excluded individuals and SMEs.
- Increasing transparency, accountability and collaboration across sectoral boundaries: where advanced technologies can enable greater transparency, traceability, accountability and information sharing, to regulators, citizens and businesses to work together in the best interests of society.
- Mobilizing domestic savings at scale to enable long-term investment and direct it towards long-term sustainability of the real economy.
- Re-thinking the provision of financial protection, risk management, risk transfer and risk diversification for vulnerable and exposed communities, real economy assets and infrastructures, and nature's ecosystems.
- Improving the collection, analysis and sharing of information about the financial system and real economy for better economic decision-making, better regulation and better risk management.
- Improving effectiveness and efficiency in financial markets, providing a level playing field and enhancing market integrity.
- Embedding SDGs into financial and capital markets and enabling the redefining of how we can better account for (sustainable) value.

Increasing competition: disruption of the competitive landscape by the entry of fintech start-ups and the proliferation of alternative products and business models creates more accessible lower cost choices for all. The UN Capital Development Fund (UNCDF) further documents the strong linkages between digital finance and other sectors of the economy in its latest report on inclusive digital economies for the SDGs.

The report discusses how wider application of digital solutions to solve daily constraints and needs of the poor (around energy, health, education, entrepreneurship) strengthens the value proposition for the adoption and usage of digital financial services. Similarly, digital platforms that were not initially designed for the provision of financial services are increasingly moving into the provision of a wide range of financial services (including energy services companies and other types of entrepreneurs, platforms like Facebook, WeChat, Grab, etc.).

The point made in this report is that digital financial services will need to be tailored and interlinked with various sectors (agriculture, energy, health, education, transport, commerce, etc.) to be able to offer compelling value propositions for various segments of the population.

The SDFE assessment seeks to understand the relevance and potential of Namibia's digital finance ecosystem in financing its sustainable development priorities.



SPECIFICALLY FOR NAMIBIA, THE ASSESSMENT LOOKS AT HOW DIGITAL FINANCE CAN ENABLE:

- i. **Government:** in its efforts to better mobilize / collect finances, improve the deployment and allocation of resources, and improve its spending and procurement processes to impact sustainable development.
- ii. **Businesses and financial institutions:** to improve their business models, operational and financial management processes for efficiencies, improve access to financing, better align their spending and investments with SDG outcomes.
- iii. **Individuals:** with enhanced access to finance and agency to cater for their development needs, to improve their decision making in allocating and consuming their finances, and in managing risks.

Recognizing the documented potential and evidence of digital financing for sustainable development, the SDFE assessment seeks to understand what is happening already, and might be possible (the potential) for the case of Namibia based on the current status of its digital finance ecosystem.

1.1 Objectives of the Assessment

1. Develop an assessment of the domestic digital finance ecosystem (DFE) which will be part of the Integrated National Financing Strategy, including SDG financing. The objective for this SDFE

assessment is to provide an overview of the level of development of the domestic DFE, identify underdeveloped areas and point to digital financing opportunities. The assessment evaluates and maps a host of relevant areas, volumes, trends, and stakeholders, and assesses the extent to which the ecosystem is currently enabling financing for SDG-related national priorities.

2. Identify and build agreement on steps to develop digital financing solutions that directly respond to priority areas that are SDG aligned within the National Development Plan. This assessment aims to highlight and integrate the identified digital financing opportunities in the overall process of the financing dialogues under the INFF to create a plan/roadmap for a digital financing strategy in support of national development priorities.
3. Develop a digital financing strategy as a subset to the Integrated National Financing Strategy. The aim is to have the identified digital financing opportunities integrated into the overall INFF financing strategy with the identification of pathways for implementing large-scale digital financing solutions that can catalyse material development financing towards SDG-related national priorities.



1.2 Scope of the Assignment

The assessment follows a three-stepped approach:

- i Assessing and benchmarking the level of development and enabling environment of the digital finance ecosystem.
- ii Assessing the extent of the ecosystem's alignment to sustainable development and national development priorities
- iii Identifying gaps and opportunity areas that will result in a series of recommendations to harness digital financing for national development priorities.

The assessment report will outline the underdeveloped areas and constraints along with areas of opportunities for targeted sectoral, market and policy intervention.

Part 2 of this report will present the digital financing strategy which articulates a range of broad recommendations for implementing digital financing solutions which support financing for SDG-related national development priorities. The assessment and strategy will be further embedded in the INFF – as part of the broader INFF-financing Strategy spearheaded by the GRN (Ministry of Finance) and UNDP Namibia.

1.3 Approach and Methodology

1.3.1 Approach

The assessment focuses on four key components of the digital finance

ecosystem, namely digital finance infrastructure, policy and regulation, the innovation ecosystem and fintech market offerings (including supply and demand sides). For each of the four components, an analysis of their SDG alignment is provided in Section 3. The first two components of infrastructure and policy and regulatory environment are foundational to the digital finance (DF) ecosystem in terms of both the systems that enable access and usage of DF and the operating environment. The second two components (innovation ecosystem and fintech market) look into the capabilities of the market to deliver innovative and relevant products and services for all market segments (supply side), and capabilities of the users to uptake DF products and services (demand side).

The approach takes into consideration the fact that DF sits at the nexus of the digital sector and the financial sector. As such, the assessment of the DF ecosystem includes aspects of both sectors. The areas of assessment and their respective indicators therefore cut across the two sectors.

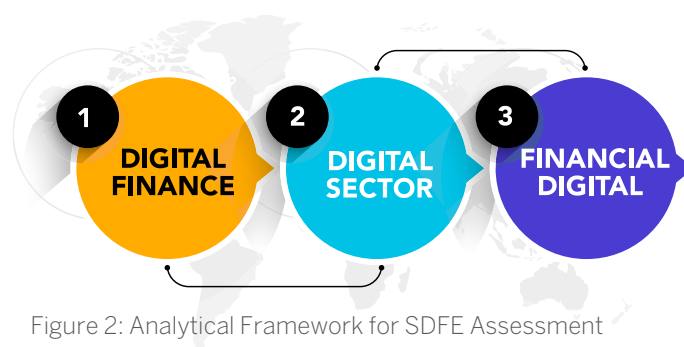


Figure 2: Analytical Framework for SDFE Assessment

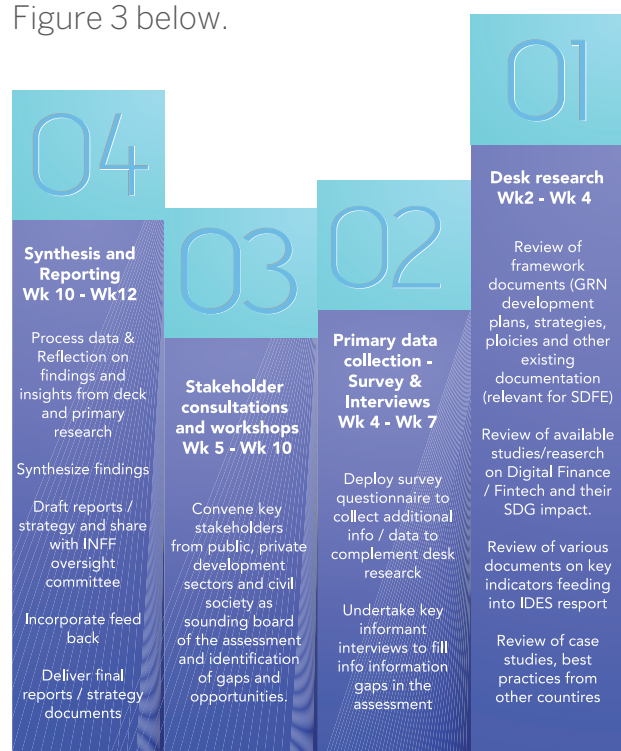
The analytical framework for the assessment is provided below, indicating the key areas of assessment and main indicators to be looked at for each of the components of the DF ecosystem.

Components of the Digital Finance Ecosystem	Key Areas of Assessment	Main Indicators of Reference
1. Policy and regulation A conducive environment for the digital economy and digital finance to thrive financial Institutions, Electronic transactions, Cyber security, Data Privacy and protection, Financial Integrity & consumer protection	Active Government promotion for the digital economy and digital finance	National and sector framework documents, policies, strategies, plans and statements - by Government, Policy Makers, and Regulators
	Existence of laws and regulations supporting the digital economy and digital finance	Payments regulation, Electronic money, Market entry for non-bank
	Active policy promotion for the digital economy and digital finance	Policies actively promoting legal and infrastructure attributes that enable an inclusive digital economy
	SDG alignment and inclusivity of policies and regulations	Any special focus on key underserved segments: Rural, Women, Youths, Elderly, Refugees and Migrants?
	Identity infrastructure	Existence and access to a National ID system Existence and access to a digital ID system
	Connectivity and coverage	Communication network, data, electricity
2. Infrastructure The technical systems that enable ease of access and usage of digital (finance) services	Ownership and usage of ICT tools and services	Access and affordability of mobile phones, devices, sim cards, data, digital services
	Digital Payments infrastructure	Access, usage, distribution of payment systems / networks, interoperability, open payment systems
	SDG alignment and inclusivity of the access to infrastructure	Any special focus on key underserved segments: Rural, Women, Youths, Elderly, Refugees and Migrants?
3. DF products and services The supply side - DFS market players, products and services and the Innovation ecosystem and its capability to deliver innovative services relevant for the market	DF Market status	
	DF suppliers	Number, diversity
	Products and services	availability, relevance, affordability
	Innovation ecosystem	
	Community of innovators	Size, diversity, level of development, synergies of/in the community
	Level of skills in the innovation community	Skills of graduates, state of entrepreneurship
	Availability of support infrastructure for innovation	Innovation hubs, innovation support initiatives
	Availability of financing / investment in innovation at all levels	Venture capital, SME financing, financing to private sector
	SDG alignment and inclusivity the DF products /services /innovations	Any special focus on key underserved segments: Rural, Women, Youths, Elderly, Refugees and Migrants?
4. Customers/ users Demand side capability to use DFS products and services	Basic literacy of the users	Literacy rate, years of schooling
	Digital literacy of the users	Curriculum, digital skills among active population
	Financial literacy of the users	Curriculum, literacy programmes, depth of financial inclusion
	SDG alignment and inclusivity regarding access to literacy /capabilities	Skills and capabilities of underserved segments: Rural, Women, Youths, Elderly, Refugees and Migrants?



1.3.2 Methodology

The methodology included four key phases, starting with desk research, followed by primary data collection, then stakeholder consultations and workshops, and finally synthesis and reporting. The methodology for the assessment exercise is detailed in Figure 3 below.



1.3.3 Desk research

To assess Namibia's national and sector level focus on fostering the DF ecosystem, we assessed key national and sector documents, existing regulatory frameworks and policy approaches. The focus was on identifying the role ascribed to digitalization and DF in the achievement of the development goals of the country and specific sector. We also looked at how well such a role is promoted by government and within the policies.

National data sources for the desk research focused on:

Key national policy framework documents, including:

- Vision 2030
- Harambee prosperity plan II
- National development plan 5

Finance and Digital Sector policy and strategy documents, including:

- MICT strategic plan
- Broadband policy
- Financial sector strategy
- National Payment System vision and strategy

Regulatory framework documents for the Finance and Digital sectors, including those concerning:

- The Payments system
- Electronic money issuance
- Electronic transactions
- Cyber security
- Data privacy and protection
- Financial integrity and consumer protection
- Strategic plans and statements of the key priority sectors of the economy, including Tourism, Infrastructure, Transport and logistics, Agriculture, Education, Health, Energy, Natural resources and environment, Mining, Manufacturing, and Blue economy.
- Researchwork, reports, statements, etc. about Namibia's fintech sector, financial inclusion, innovation ecosystem, and on any other assessment areas in the analytical framework.



Global data sources were also used throughout the assessment. Key data sources to mention include:

- GSMA Mobile Connectivity Index 2020
- WEF - Global Competitiveness Index 2020 (survey data)
- ITU ICT data 2019
- Global Innovation Index 2020
- EGDI 2020
- UNESCO Institute for Statistics (UIS)
- UNDP Human Development Index (HDI):
- World Bank Findex Data in Financial Inclusion (2017)

1.3.4 Primary data collection

The assessment relied on key informant interviews to gather in-depth insights and to complement the information gathered from desk research. Over 40 key informants were interviewed, selected from relevant institutions and organizations in public sector, private sector, development sector, civil society and academia. A list of the key informants interviewed is provided in Annex 8.3.

1.3.5 Data Analysis

Data and information collected through the primary and secondary data collection was processed, clustered, and triangulated to derive insights. We use a number of tools and templates to capture, present and analyse data, including the Inclusive Digital Economy Scorecard (IDES) tool, the SDG-aligned DFE template and a country benchmarking approach. The tools and

templates bring together a mix of global and local data sources to assess the level of development, barriers, inclusivity and potential of Namibia's digital financing ecosystem to finance SDG-related national priorities as provided in the analytical framework above in Figure 2.

The IDES Tool

In order to rely on a known framework and methodological approach, indicators from UNCDF's IDES are used to measure key aspects of the digital economy in Namibia.

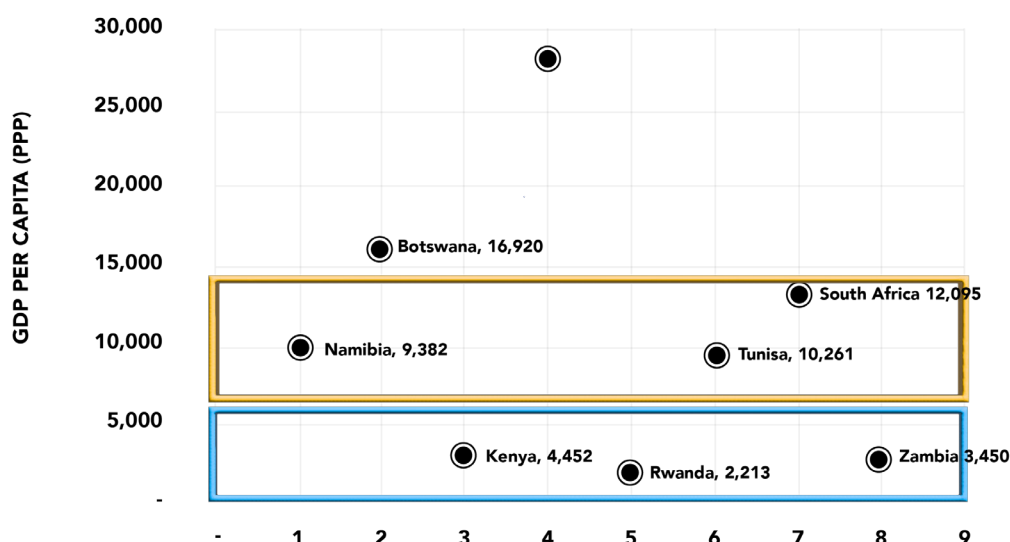
The IDES tool is also used to measure the inclusiveness of the digital economy based on specific population segments – namely Women, Rural, Youths, Elderly, MSMEs, Refugees and Migrants. Lastly, we leverage scores from the IDES to make comparisons across select countries.

1.3.5.1 Benchmarking

To situate Namibia when it comes to the state of its DF ecosystem, we benchmark it against a set of selected countries to enable comparative analysis on key indicators. A total of seven countries are selected and categorized based on their income levels (GDP per Capita, PPP 2020).

Two countries have similar income category (GDP/capita) as Namibia, two countries are in a higher income category and three countries are in a lower income category, as shown in Figure 4 below.





Source: <https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD>. The categorization is by the consultant.

1.3.5.2 Stakeholder consultations

The assessment significantly benefited from views of various key stakeholders, through the leadership and coordination of the Ministry of Finance. Findings from the assessment were reviewed first by members of the INFF oversight committee and thereafter presented to a broader set of stakeholders for subsequent feedback.

These consultations aimed to clarify assessment findings, receive feedback, create a harmonized view and understanding on the state of the DF ecosystem of Namibia, and provide a platform for broader contribution towards the recommendations and ultimately the strategy to harness digital financing for Namibia’s SDG-related development priorities.

1.3.6 Limitations to the Assessment

The findings and analysis presented in this assessment are a result of data collected

through secondary research and insights from interviews with key informant interviews. The level of analysis is however limited, in some sections, to the availability of quantitative data about the different components of the DF ecosystem in Namibia and the alignment /contribution to the SDGs.

It is worth noting data on aspects such as the flows, trends, density (transactions / amounts) within the fintech industry, data on financing of fintech, developments in the usage of various fintech and DF products is not available.

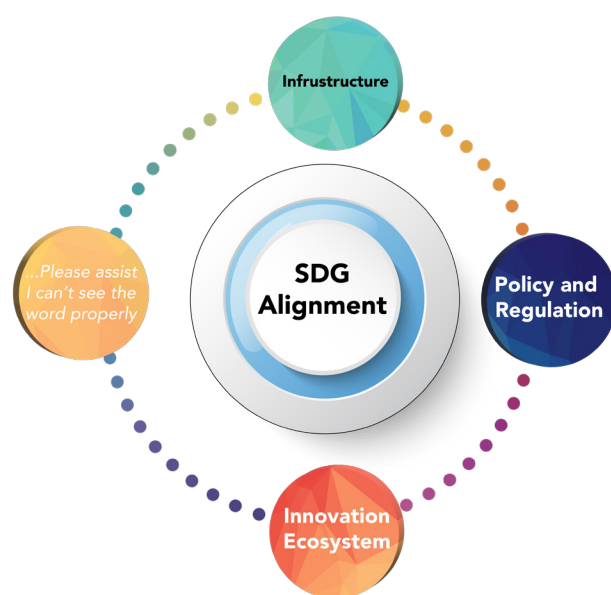
Nonetheless, the assessment endeavors to triangulate available data sources - from local and international publications – with insights from primary research to provide the current status of Namibia’s DF ecosystem and its SDG alignment.



2 Namibia's Digital Finance Ecosystem

2.1 Introduction

Digital finance is the term used to describe the transformational impact of new technologies on the financial services industry. It includes a variety of products, applications, processes and business models that have transformed the traditional way of providing banking and financial services. Indeed, finance is one of the sectors that is undergoing significant transformation through digitalization.



In this section, we provide an assessment of Namibia's DF ecosystem, looking at the four key components as spelt out in the analytical framework (see Figure 2): (i) the DF infrastructure (financial, technical, and other) that enables the delivery of the services, (ii) the current institutional, policy and regulatory framework which provides an enabling environment for DF services to be delivered in an accessible, affordable,

and safe manner, (iii) innovation ecosystem in terms of availability of key skills, financing and innovation infrastructure to enable local innovations in DF to thrive, and lastly (iv) the DF market in terms of the capabilities of the DF providers to deliver relevant products and services, and the capabilities of the users to uptake and benefit from DF.

2.2 Digital Finance Infrastructure

2.2.1 Introduction

Digital infrastructure is a foundational prerequisite for access to and usage of digital financial services. The quality and reach of the basic digital infrastructure needed for all citizens to get connected and get served affordably is starting to be regarded as a basic utility. This includes aspects of telecommunications connectivity (the network and devices to enable connectivity), identity, payments infrastructure, retail distribution, and data infrastructure. In the following sections, we assess the status of each of these key elements of the DF infrastructure.

2.2.2 Connectivity

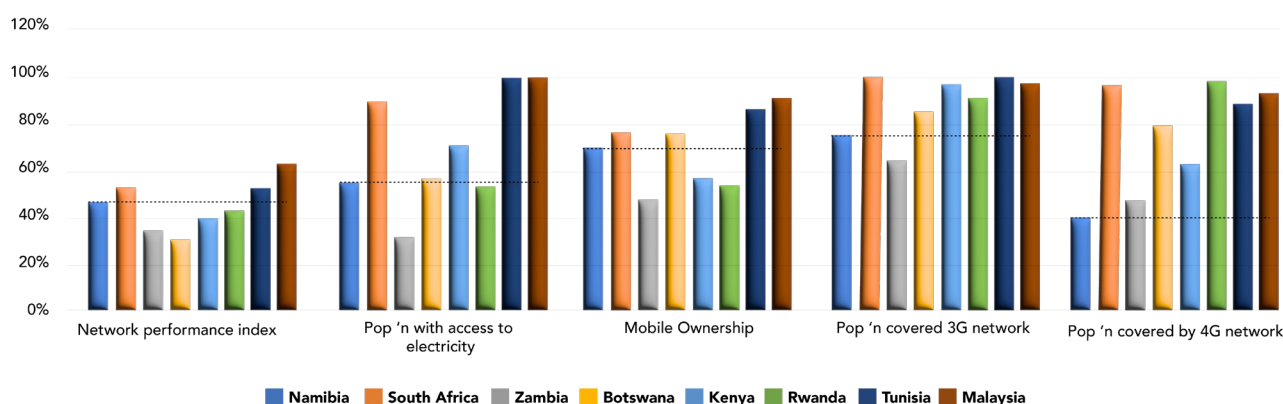
Connectivity is looked at both in terms of access to a network and usage of digital services. Based mainly on data from GSMA Index Data (2019)^v, we provide a picture of how Namibia stands on the main connectivity and usage indicators and

benchmark Namibia’s results to a set of other countries. We also score Namibia’s state of DF infrastructure using the IDES tool. Seventy five percent of the Namibian population is covered by a 3G network, while only 39 percent of the population is covered by a 4G network. To power the connectivity needs of today, a minimum of 3G network – considered as broadband - is needed. With the current 3G coverage and aiming for 95 percent coverage by 2024, Namibia is doing relatively well. However, with the rapid evolution of the digital world, and the proliferation of new technologies of the 4th industrial revolution, the need to quickly grow the 4G network becomes quite critical. Mobile phone subscriptions in Namibia

are at 113 percent, suggesting more than one phone subscription per person. On the other hand, mobile phone ownership is at 69 percent, reflecting a significant divide, where some people have multiple devices, while 31 percent of the adult population does not own a mobile phone. A deeper look at smart phone ownership – which enables higher usage of digital services – shows that the percent ownership in Namibia can be estimated between 48 percent (sub-Saharan Africa) and 60 percent (South Africa). Internet usage stands at 66 percent of the population. Other connectivity indicators include access to electricity at 56 percent, affordability of devices at 40 percent.

Below, we situate Namibia amidst the selected countries for comparison both on connectivity and usage levels.

Benchmarking Namibia: Key Digital Connectivity Indicators



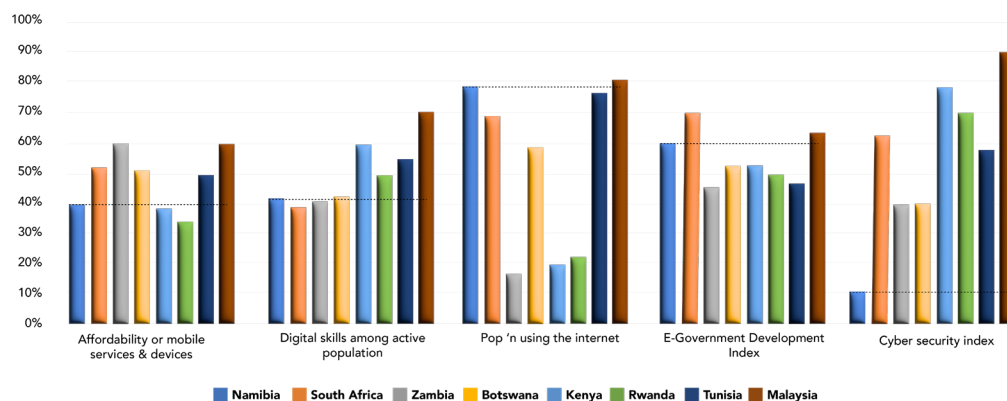
Network performance	Fair	Okay, but could improve given score of comparable countries
Access to Electricity	Weak	Relatively low, Much below comparable S.A and Tunisia and below Kenya.
Mobile ownership	Good	Good, although relatively lower than comparable countries (S.A, Tunisia)
3G Network	Very Good	High, although relatively lower than comparable countries (S.A, Tunisia)
4G Network	Weak	Overall, Namibia needs to significantly catch up



The above benchmarking shows us that Namibia is doing well when it comes to 3G connectivity and phone ownership but needs significant improvement when it comes to

4G network and access to electricity. There is also room for improvement when it comes to network performance.

Benchmarking Namibia: Key Digital Usage Indicators

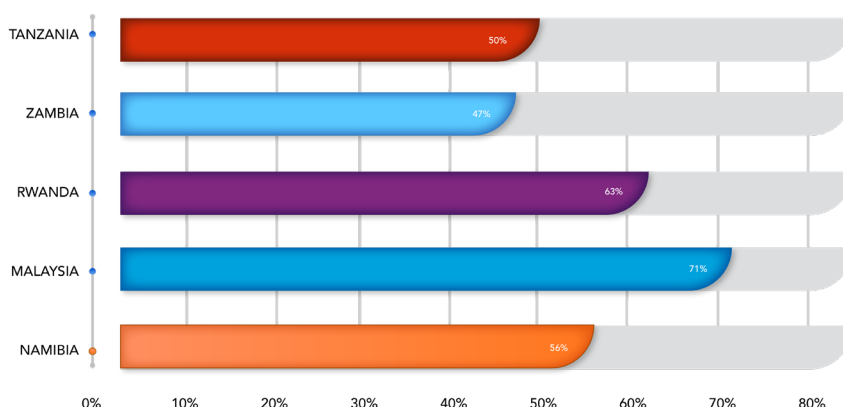


Affordability	Weak	Relatively low- given score of comparable countries
Digital skills	Weak	Relatively low- given score of comparable and even lower income countries
Internet usage	Very Good	High
EGDI	Very Good	High - comparatively
Cyber security index	Weak	Very low

When it comes to usage, Namibia is doing comparatively well with internet usage and e- government index (EGDI).vi Significant improvement is needed when it comes to cyber security, followed by digital skills and affordability. Using the IDES, we also compare Namibia’s scores on infrastructure against select countries whose IDES scores are available. The scorecard looks at the

infrastructure indicators of connectivity, identity, ownership and usage of ICT devices and tools, and digital payments . The scores largely corroborate the benchmarking done above. One can observe from the scoring below that countries like Rwanda and Malaysia can be cases for Namibia to emulate in the quest for improving the state of DF infrastructure in the country.

Infrastructure



2.2.3 Identity

A reliable ID is integral to providing and obtaining financial services. It is needed at various stages in an individual's interaction with the formal financial sector. The lack of a unique ID obscures a reliable view of customer activity and can impact access to the full range of financial services while increasing the costs of providing financial services to certain segments of society, thereby impacting financial inclusion.vii Digital ID allows for customer due diligence to be done electronically and is therefore a strong enabler for digital financial services.

The Ministry of Home Affairs and Immigration is responsible for the technical and organizational infrastructure used to define, design, and administer the identity management system in Namibia. Whereas the majority of the Namibian population has a legally accepted ID, there are multiple databases that are not interoperable. Also, Namibia does not have a digital identity system in place yet. An assessment by the World Bankviii of Namibia's identity management system confirmed that an e-ID card would increase the effectiveness of both public and private sectors in providing services to citizens.

"...Access to I.D. for KYC verification is big challenge for fintech innovators. All data sits with the Office of the Prime Minister but no one can access it".

"... With the lack of a national digital ID system, we are creating our own I.D. technology—which is very expensive and inefficient for a single market player"

"...There is need for government to provide foundational Digital identity as a utility. Namibia might borrow a leaf from the Adhaar identity

The ability for financial service providers in Namibia to query a single national ID database to verify customer identity has been mentioned by multiple stakeholders as essential for easing the KYC process. In the absence of a national digital ID system, some private sector innovators are deploying Identity/KYC as a service solution to enable third parties to authenticate customers – but all of these companies reckon that such solutions are inefficient.

2.2.4 Payment Rails

Whereas the potential is high, so is the effort and investment needed - in improving digital infrastructure, innovating and re-thinking existing business models in the provision of financial services. This therefore calls for identifying select catalytic projects and policy initiatives that can be implemented successfully to unlock further investment in DF and digital innovations, specifically those aligned with sustainable development.

Namibia's Payment system has evolved and modernized overtime. Key highlights on this evolution include the establishment of the Payments Association of Namibia (PAN) and establishment of electronic funds transfer system (EFT) in 2014, the introduction of the card processing system in 2008, the endorsement of the first mobile payment services provider in 2010, the issuance of guidelines for electronic money issuers in 2019 and the latest National Payment System Vision and Strategy 2021 – 2025.



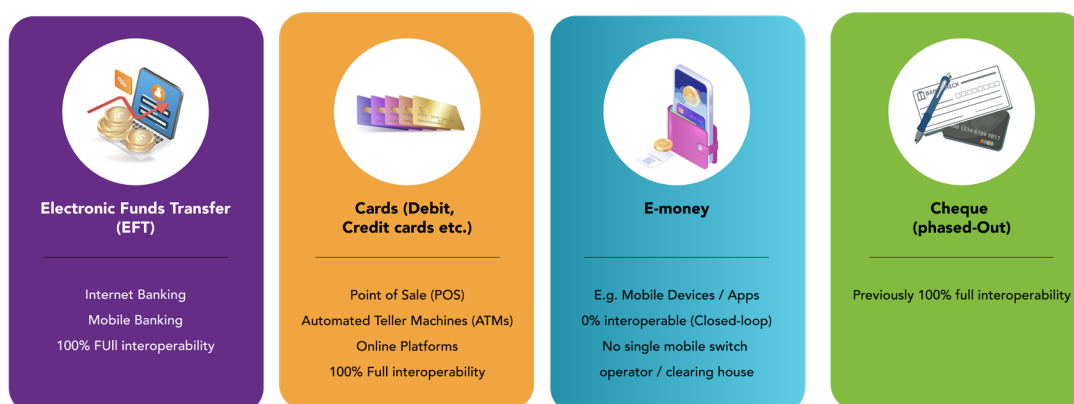
2.2.5 Interoperability

Latest policy guidance documents by BoN and PAN suggest a clear focus on interoperability within the NPS. In 2018, BoN issued a position paper on Interoperability which advocated for 70 percent interoperability of all payment instruments by 2020, and full interoperability by 2025.

The new NPS vision (2021-2025) has interoperability as one of its principles, with the aim to have all system players / payment instruments interoperable by 2025. It is not clear, however, to what level the above policy guidance is binding on the members of the

NPS. For example, the goal of 70 percent interoperability by 2020 was not achieved – as none of the e-money payments systems are interoperable. The figure below provides a full picture of the state of interoperability of the existing payment streams and instruments on the Namibian market.

Electronic fund transfers and cards are fully interoperable through the Namclear Switch run by PAN and the interbank settlement system (NISS) by BoN. On the other hand, e-money payments by banks or non-banks are still not interoperable.



Some e-money providers, like Mobipay and PayToday, do provide payment aggregation services and therefore can provide bank agnostic payments through their e-wallets.

However, this process is reported as quite unclear to the market users—who still regard the wallets as only serving specific bank clients. The institutions involved in Namibia’s payment system include eight commercial banks, five non- bank issuers

of e-money , 14 payment service providers and two clearing houses .

The digital payment instruments offered by these institutions are mainly EFT, cards, and e-money.

<https://ictechhub.com/wp-content/uploads/2020/09/BoN-UNDP-Presentation-15-September-2020-1.pdf>
Namclear and Namibia interbank settlement system (NISS)



2.2.6 Distribution infrastructure

Financial services in Namibia are mainly accessed through bank branches, Automated Teller Machines (ATMs) and some bank agencies. The number of branches has been on a decline since 2018 – attributed to a down scale of operations that are not profitable as well as digitalization of services. The number of agencies, on the other hand, has been on an increase.

	2016	2017	2018	2019	2020
Branches	139	163	167	149	145
Agencies	61	62	64	82	84
Total	200	225	231	231	229

Source: Bank of Namibia Annual Report 2020x

The number of ATMs has been growing quite steadily, according to available data as shown below.

	2013	2014	2015	2016	2017	2018
ATMs	754	813	852	1,008	1,068	1,119

In terms of reach, relative to the population, available data from the World Bank shows that the number of ATMs and bank branches serving 100,000 Namibians was growing moderately until 2018 but declined in 2019 as shown in the table below.

	2010	2015	2016	2017	2018	2019
ATMs per 100,000 adults	49.62	58.37	67.72	70.43	72.45	72.37
Bank branches per 100,000 adults	12.82	13.62	15.45	10.48	11.39	11.18

source: World bank Data

2.2.7 Gaps and Opportunities

The above assessment on DF infrastructure points to a number of areas that need particular attention, either because they are lacking, or because Namibia is scoring low compared to peers.

These areas include access to electricity, 4G connectivity, performance of network

connectivity, affordability of digital devices and services, digital skills, cyber security, a national digital ID system and interoperability in the NPS.

Considering the above, there are a number of opportunities worth pursuing.



Opportunities

1. Fast tracking the implementation of the broadband policy. The broadband policy already captures the main infrastructure gaps for digitization. However, there is need to re-consider the pace of roll-out of critical digital infrastructure, especially for segments of the population that are at risk of being left behind. This is necessitated by the fast pace of digitalization of economies and more so the urgency for digital transformation brought about by the Covid-19 realities. Specifically there is need to fast track access to electricity, 4G network roll out, and address the issue of affordability of services and devices.

2. Investigating the drivers of cost of digital services.

A major driver being cost of infrastructure and the lack of economies of scale on the market, consider:

- Looking into how to bring about efficiencies in the development and deployment of critical digital infrastructure.
- How government, as a large consumer of services on the market, could boost demand for digital services.
- Assess areas where subsidies could be used to unlock adoption especially for the informal sector.

3. Fast tracking the implementation of certain aspects of the NPS vision and strategy that are critical for unlocking innovation and inclusion in the financial services sector.

- This includes interoperability, open banking, and partnerships to enable new players with innovative solutions to enter the market and attend to niche market needs, especially for the informal sector.
4. Providing the newly launched national digital identity system as a KYC utility accessible to various service providers to ease customer due diligence (e-KYC).

2.3 Digital Finance Policy and Regulation in Namibia

The right policy and regulatory environment lays the foundation for DF to emerge and thrive. This section assesses the policy, legal and regulatory environment within which DF operates in Namibia. We first look into the policy and institutional framework that provides overall strategic direction for the provision of digital financial services (DFS). Next, we look at the legal and regulatory framework for DF, tackling both the institutions that regulate DF in Namibia and legal and regulatory provisions for the same. We go on to analyse the status quo to derive gaps and inadequacies, and also benchmark Namibia against select countries on the policy and regulatory aspects of DF.

2.3.1 Institutional and Policy Framework

The institutional and policy framework for DF is anchored on the strategic direction and mandate given to specific sectors by

the key national development framework documents including the country's vision 2030, xiii the Harambee Prosperity Plan lxxiv and the National Development Plan (NDP5).xv Here, we highlight specific policy directions and regulatory provisions spelt out in the national and sectoral plans of relevance to this assessment.

The National Development Plan (NDP 5) -2017/18-2021/22): Spells out the medium-term objectives and aspirations of Namibia. NDP5 is the reference document for sector strategic plans, including the financial sector and the ICT / Digital sector. For the ICT / digital sector, NDP 5 aims to achieve universal access to information and communication and technology infrastructure and services. Specific focus is placed on upgrading ICT infrastructure, expanding broadcasting services, promoting e-services and innovation, and building geo-ICT infrastructure. For the finance sector, the goal is to have an effective, resilient and inclusive financial system that supports industrialization and infrastructure development. There is also specific mention of efficiency and interoperability of the payment system, availability of interbank settlement system, funding towards SMEs and financial inclusion.

The Namibia Financial Sector Strategy (NFSS) 2011- 2021xvi is the reference guide for the development of the country's financial sector. The stated objective of the NFSS is "to develop a more resilient,

competitive and dynamic financial system that contributes to the growth of the economy and the achievement of the socio-economic objectives of poverty reduction and wealth creation." The NFSS has five key focus areas: - financial markets deepening and development, financial safety net, financial inclusion, localization of the Namibian financial sector, and skills development in the financial sector. The NFSS is developed and overseen by Ministry of Finance.

The MICT Strategic Plan 2017-2022xvii is the reference document for the development of the ICT / Digital sector. The stated mandate in the sector plan is to lay the foundation for the accelerated use and development of ICT in Namibia, and coordinate information management within Government. The plan clearly spells out the need to leverage ICT for innovation in service delivery, for improving transparency and accountability in government services and for enhancing accessibility. The plan's strategic objectives include accelerating ICT development, access and use for an inclusive ICT smart Namibia, enhancing unhindered access to information for an informed nation, and enhancing enabling environment for a high-performance culture and service delivery.

The National Broadband Policy: 2019-2029xviii provides the framework for the development of broadband in Namibia. It focuses on developing telecommunications, broadcasting, postal services, infrastructure



and provision of energy/electricity which is necessary for powering the network and devices. The policy aims to have 95 percent of the population, 100 percent of schools, and 90 percent of health facilities covered by broadband by 2024. In terms of usage, the policy aims to promote e-government for improved service delivery with 45 percent of services e-enabled by 2024. The policy also aims to develop the broadband ecosystem, improve digital literacy, and accelerate demand, stimulate innovation, and increase investment in broadband. The policy is developed and implemented through the line ministry, MICT, and the sector regulator, CRAN.

The National Payment System (NPS) Vision and Strategy: 2021-25^{xix} provides a good indication of where Namibia's NPS is heading over the next five years. As stated, the new NPS vision was developed in the spirit of continuous modernization of the payment system in line with the rapid changes happening worldwide driven by digitalization. The vision identifies several mega-trends in the payments space, namely: digital acceleration, open banking, stakeholder collaboration, financial inclusion, regulatory technology, common standards, value added services, and payments fraud. The vision is founded on the principles of consumer education and financial inclusion, access, transparency and inclusivity, digitized economy, stakeholder collaboration, interoperability, digital payments, consumer trust, cross-border collaboration, innovation, skills and

capabilities, and efficiency in payments systems. The principles are meant to guide stakeholders' behaviours and the overall operation and functioning of the NPS.

2.3.2 Legal and Regulatory Framework

2.3.2.1 Regulating Institutions

The Bank of Namibia

DF falls under the regulatory purview of the BoN which oversees banks and electronic money providers. Whereas non-bank financial institutions (NBFIs) are regulated by the Namibian Financial Institutions Supervisory Authority (NAMFISA), NBFIs offering digital financial services would also fall under the regulatory supervision of the BoN.

At the core of DF is the payment system. Namibia's National Payment System (NPS) was established in 2002 and - as mandated by the Payment System Management Act (2003)^{xx} - is overseen by BoN both from a policy and regulatory point of view. The NPS regulatory framework has evolved and modernized with time to maximize its effectiveness, improve its operational safety, security and efficiency and reflects the dynamic nature of the payments industry with new technologies, innovations and participants.^{xxi}

To regulate the NPS, BoN issues "Payment System Determinations (PSD)". With 10 PSDs issued so far, those worth highlighting are PSD-3 (2018) concerning the issuance

of electronic money and PSD-4 (2013) concerning card transactions xxii. BoN also set up the Payment Association of Namibia (PAN) in 2006, whose role is to govern and manage certain aspects of the NPS.

In terms of policy direction, in 2018 BoN issued a position paper on interoperability xxiii in the NPS. In this paper, BoN advocated for 70 percent interoperability, especially in respect of e-money by 2020, and alerted the NPS industry that BoN would consider mandating interoperability in the NPS by 2025. Together with PAN, BoN has developed and published the new NPS vision and Strategy 2021-25 which, as highlighted earlier, sets the direction of the industry over the next five years.

The Payments Association of Namibia (PAN):

PAN, the association of stakeholders in the payments system, plays a key role in the regulation of payments and DF in Namibia. Constituted under BoN in 2005 by an Act of Parliament, PAN acts as the payments system management body mandated to set, manage and develop standards governing payments clearing and settlement within Namibia.

The role of PAN in the industry is seen as threefold: as a convener of players in the industry, as the manager of the NamClear Switch, and as a quasi-regulator. As a convener, PAN represents its members on matters of policy, communication with

the regulator, fostering cooperation and promoting interests of its members. PAN also runs the NamClear, a clearing house for interbank payments that is privately owned by PAN members. As a quasi-regulator, PAN issues operating licenses to payment service providers (payment gateways, clearing houses, payment switches, payment facilitators) and to e-commerce service providers.

Whereas PAN has typically been led by members from the banking sector, the new NPS vision articulates the need for stakeholder collaboration between old and new players. Considering this, a new forum – the PAN E-money Forum - was created to enhance access, inclusiveness and interoperability in the NPS.

2.3.2.2 Legal and regulatory provisions for DF

Regulation plays a key role in ensuring DF can deliver on the goal of inclusive finance. In this section we look at the key enabling legal and regulatory provisions for DFS, including a legal basis for (i) the provision of e-money by both banks and non-banks, (ii) applying a risk based approach to customer due diligence (KYC), (iii) the use of third party agents to provide proximity services to customers, (iv) consumer protection, and (v) the legality of electronic transactions.

Provision of e-money and permissibility of non-bank providers



Providing legal certainty for parties interested – both banks and non-banks to participate on a level playing field in the provision of e-money / DFS goes a long way in promoting innovation and competition in the financial services sector. The provision of e-money in Namibia is regulated by the e-money guidelines issued by BoN in January 2019 under PSD-3xxiv. The guidelines allow for both banking and non-bank institutions to issue e-money.

They also permit all types of e-payments and transfers among and between persons and businesses, both domestic and cross border and value-added services. The guidelines are seen as open, proportionate and non-discriminatory as far as e-money issuance is concerned. Issuance of e-money is open to banks and non-banks, while key provisions in the guidelines are universal to all players on aspects such as use of agents, e-payment instruments, storage of funds, wallet sizes and transaction limits, customer protection, etc.

The guidelines also cater for aspects of interoperability and averting anti-competitive behavior. That said, the market is yet to experience successful non-bank players for various reasons including cost of entry, infrastructure access, market size and appropriateness of business models.

E-money, however, is not regarded as a deposit within the meaning of the Banking Institution Act 1998 and is not subject to any deposit protection. As such, e-money

wallets could be construed to be limited to payments and money transfers, and not as instruments that can drive financial inclusion in terms of savings and borrowing.

Risk based approach to customer due diligence (KYC)

The type of customer due diligence and documentation (KYC) required for accessing formal financial services is recognized as a potential constraint to financial inclusion. Without jeopardizing the requirement for financial integrity, proportionate (risk-based) KYC is meant to ensure that the requirements for small transaction size clients are different from those of large transaction size clients. Applying a one size fits all KYC is costly for providers and consumers in the lower income market.

The GSMA Mobile Money Regulatory Index indicates that countries with more proportional customer identification, verification, and KYC requirements tend to have higher levels of digital financial inclusion^{xxv}. Similarly, a 2015 study of 22 developing countries with mobile money services found that the eight countries where mobile money grew most rapidly had relatively light KYC requirements, whereas the eight countries where it failed to grow - generally had stringent regulations.

For Namibia, the Financial Intelligence Act and Regulations (2012)^{xxvi} - managed under the Namibia Financial Intelligence Centre (FIC) - provide the requirements for



establishment of identity for natural persons and businesses when undertaking financial transactions. The regulations also provide for the customer due diligence process that needs to be undertaken by financial services providers. The regulations mention that a risk-based customer acceptance policy and approach must be adopted, developed and implemented by accountable and reporting institutions (i.e., the financial services providers).

However, there is no evidence of the application of proportionate KYC, either in writing by the regulator or in practice by financial service providers – pointing towards the application of a one size fits all KYC regime on the market. That said, the impact of KYC requirements in Namibia does not seem to be a challenge for account opening. With over 90 percent of the eligible population having a national ID, the majority of the population is able to open a basic bank account – and this is also seen in the high number of individuals with an account. The challenge has more to do with the account opening for smaller businesses (MSMEs) that find it hard to find the required documentation. As indicated by the SME division of the Namibia Investment Promotion and Development Board, there is a strong need to promote business registration and account opening for the MSME sector. Proportionate KYC requirements could also play a role in enabling access to loans for those in the informal sector.

The use of third party agents to provide proximity services to customers

The ability of DF to improve access and inclusion in DFS is significantly enhanced by providers' abilities to utilize third party agents in the delivery of services—thereby extending their distribution reach and capturing efficiencies.

Namibia's e-money guidelines from 2019 allow for the use of agents to provide e-money services for both banks and non-bank institutions. Among others, the regulations allow for e-money issuers to offer all approved e-money services at agents and prohibit agent exclusivity –both seen as strong promoters of digital financial inclusion and competition.

However, e-money providers (banks and non-banks) have not embraced this delivery channel yet, except for a few instances where customers using cards can get cash-back at prominent retail chains mainly in urban locations. Given the strong need for last mile access to financial services and the potential opportunity for financial service providers, especially incumbent banks, to leverage this regulatory provision and extend services efficiently to last mile locations, there is need to dig deeper into what contributes to the status quo and establish formal mechanisms to incentivize market action.

Consumer protection

How the rights and interests of consumers

are protected and promoted is a pertinent aspect of DFS regulation. Consumer trust and confidence are the foundation for achieving sustainable uptake and active usage of DFS, especially for unbanked users who may not have prior experience with formal banking services. This includes protecting consumers from fraud, safeguarding personal data and consumer funds, ensuring transparency and ensuring recourse mechanisms are available. Four core themes are identified as central to consumer protection: provision of information and transparency, dispute resolution, fraud prevention and data privacy and protection. Namibia's e-money guidelines 2019 attend to the four core themes identified above.

Specifically, the guidelines stipulate the following provisions on consumer protection:

- e-money issuers are required to take steps to ensure that customers understand the services which they are using - including the inherent risks of using such services - and are protected from fraud and other forms of customer abuse.
- all fees and charges related to e-money services should be transparently displayed in the premises of the e-money issuers.
- e-money issuers must display, at their premises and those of their agents, information on disputes and complaints submission and expeditious resolution.

On matters of data privacy and protection and cyber-crime in financial services, BoN requires that regulated entities identify, measure and mitigate their exposure to the risk of losses attributed to cybercrime. Banking institutions are required to put in place a robust information security program that will ensure that the business impact from the occurrence of operational information security vulnerabilities or security incidents are kept at a minimum or within the banking institution's risk appetite levels.

That said, Namibia still does not have laws on data privacy and protection and cyber security and this remains an area of vulnerability in the legal and regulatory space for digital services in Namibia. According to the Ministry of ICT, a draft data protection bill is being finalized.

The legality of electronic transactions

The provision of a legal framework for the use of electronic transactions is a strong enabler not only for DF and e-commerce but also for the provision of e-services within the public and private sector. The shift from paper-based methods of communication and storage of information towards digital means requires that there is functional equivalence between electronic and paper transactions.

Such a legal framework helps to eliminate legal barriers to the effective use of electronic communications in transactions;



facilitate the appropriate use of electronic transactions to promote business and community confidence in electronic transactions; and enable business and the community to use electronic communications in their transactions with government. Namibia's electronic transactions act was enacted in 2019xxvii and came into force in March 2020.

It provides for a general framework for the promotion of the use of electronic transactions in Namibia, for the legal recognition of electronic transactions, for the admission of electronic evidence (including signatures); for consumer protection in electronic commerce; and regulates the liability of service providers for actions of their clients.

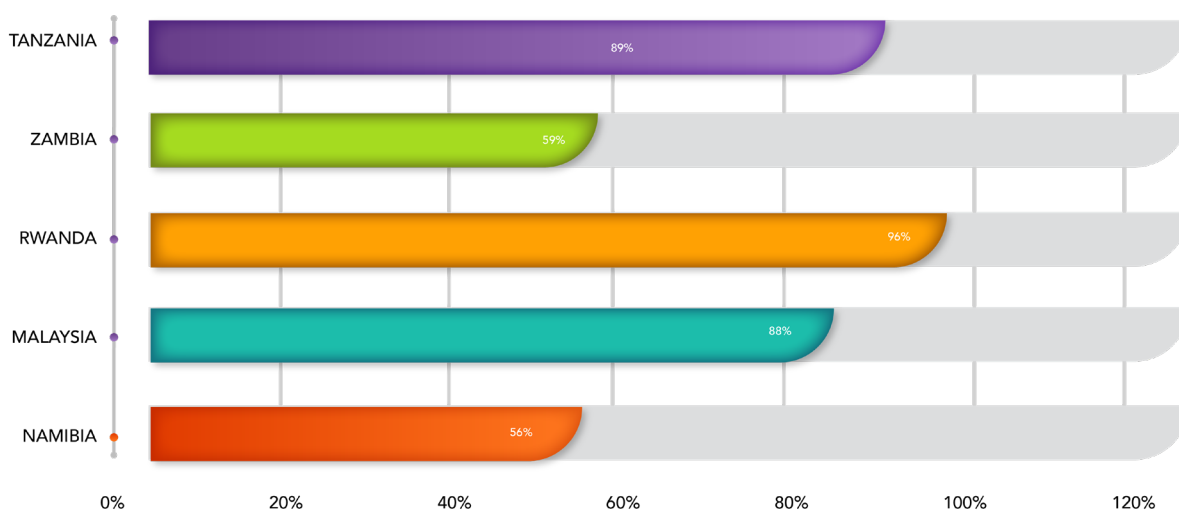
However, despite the enactment of electronic transactions act, adoption and usage has not followed suit. On the ground, the use of electronic signatures seems to

not be implemented yet. Given the role of e-signatures in fostering a paperless culture, driving expediency and cutting red-tape in how business is conducted within government and private sector, it is worth looking into the current inhibitors to the adoption of e-signatures.

According to the Ministry of ICT, the hold-up is due to the lack of an implementation framework for the act, which is currently being drafted.

To contextualize and situate the state of Namibia's policy and regulatory regime vis a vis on how enabling it is for DF, we benchmark it against select countries on aspects of (i) the existence of adequate policies, laws and regulations that address market conditions that impact DF, (ii) the extent to which government promotes DF, (iii) how well and actively the policies promote the digital economy and DF.

Benchmarking: Policy and regulation



The benchmarking above reveals that countries like Rwanda, Tanzania and Malaysia can be cases for Namibia to emulate in the quest for improving the policy and regulatory environment for the digital economy and DF. We generally observe that whereas Namibia scores well on the existence of regulations and policies, there is strong room for improvement in the other two areas of active government promotion and active policy promotion of DF.

In assessing the active government and policy promotion, we review key strategies, plans and statements regarded as either transformative or additive in the promotion of digitalization and DF from 18 government institutions.

We observe that the promotion of DF and digital transformation is mainly left to the institutions that specifically have this mandate. Other institutions are seen to remain rather quiet, even when they stand to benefit a lot from the adoption and use of digitalization and DF.

2.3.3 Gaps and Opportunities

As far as policy and regulation for DF is concerned, there are some gaps and opportunities that are worth paying attention to:

1. There is an opportunity to close key legal and regulatory gaps so as to foster a safe, secure and inclusive digital economy and DF ecosystem.

- a the need for a robust cyber security framework. CRAN reports that a Cyber Security bill is in advanced stages of discussion.
- b the need for a data privacy and protection law. Whereas the information technology policy(2008)xxviiiadvocates for information security and privacy, the lack of a specific legal framework for the same is a significant gap. A bill is said to be in place but is yet to be enacted into law.
- c the full adoption/ usage of electronic signatures.

2. Opportunity to better mainstream digitalization across most sectors of the economy.

Whereas national policy documents broadly advocate for the use of ICT and e- Governancexxix, and whereas the strategic plan and broadband policy of the Ministry of ICT and CRAN are clear on where the ICT sector needs be in 3-5 years, the same is not reflected in most sector strategic plans.

This applies to sectors like health, trade, agriculture, tourism, energy, finance, fishing, environment and natural resources management, etc.

“There is need for leadership across sectors towards leveraging digitalization, beyond what is written in national documents”.

“Low level of understanding of digitalization by the decision makers might be a reason why we don’t see yet, significant use of digitalization within various sectors”.



The ITU, in its documentation on the stages of digitalisation, states the need to mainstream digitisation across sectors in order to reap the full dividends. “It is when a country manages to diffuse ICTs (digital) and the corresponding innovations and platforms (search engines, marketplaces...), which enable the networking of enterprises to consumers and enterprises among themselves and with government, that the country can unlock the full dividends of digitization for the economy“. There is therefore a huge opportunity to think strategically about how each of the priority sectors of the economy are going to leverage ICTs.

3. Consider providing policy and strategic guidance on some pending key enablers of DF, including special attention to the segments that require specific targeting. These include:

- a. Promote test and learn approaches, including sandboxes and innovation hubs.
- b. Promote proportionate (tiered) KYC to cater for rural and lower income market segments.
- c. Use policy and regulatory guidance and incentives to specifically promote the inclusion of women, youths, the elderly, the disabled and MSMEs.

2.4 Innovation ecosystem

2.4.1 Introduction

Innovation in DFS and beyond is what delivers new or improved solutions that solve the market challenges and the needs of community and the country at large. Creating an enabling environment that promotes innovation takes an ecosystem approach that looks at the various actors and enablers.

This includes the innovators (entrepreneurs) themselves; the public sector as policy makers, regulators but also creators of demand; the private sector firms as partners and market for innovations; the funders/investors, the skilling institutions that shape the talent, and the innovation hubs that provide entrepreneurial support.

How the various actors and elements in the innovation ecosystem come together and work in harmony to deliver successful successful innovations and entrepreneurs is what indicates the maturity of the innovation ecosystem.

In what follows, we assess Namibia’s innovation ecosystem looking at the various actors and what they are engaged in, then assess the ecosystem from the point of view of the key dimensions of market demand and access, skills and human development, and access to capital.

While the assessment looks at the entire ecosystem, more focus is given to innovation in Fintech / DFS.



2.4.2 Ecosystem Actors

2.4.2.1 Innovators / Digital Entrepreneurship Community:

Namibia's innovation ecosystem is in an early stage of development but with a growing level of vibrancy. A 2021 ecosystem mapping done by Start-up Namibia enumerated close to 80 start-ups, 12 ecosystem builders, 13 investment institutions, and five incubation and acceleration hubs i. However, most market players interviewed could only mention a handful of innovations, start-ups and enablers on the market – pointing to the fact that most of those mentioned in the mapping are at early stage, too small, inactive, or that there might be poor information flow within the ecosystem.

In its baseline study, the broadband policy 2019-2029 ii concluded that Namibia's ICT industry is underdeveloped in terms of software development and manufacture of ICT devices and suggests that these gaps ought to be filled by innovators. The study further points out inadequate content, applications, and innovations in/for broadband as a barrier to adoption, and notes the lack of relevance or value proposition of the digital applications, services, and content available on the market to the needs of the population. Our primary research indeed corroborates the above findings, pointing towards limited skills in software development and a domination of imported solutions that might not be specifically customized to the local context.

In terms of sectors of innovation, fintech is relatively more established on the market, with some quite mature start-ups, for example Paytoday and Mobipay, which have managed to gain market traction with their wallet solutions and have unlocked partnerships with banks and other financial institutions. The Payments Association, which licenses new players in fintech, currently has 14 payment service providers registered with them. E-commerce is also mentioned as a growing sector, followed by entertainment and media, logistics and transport, and clean technology.

A few innovation and entrepreneur support organizations (hubs) are recognized on the market, including Start-up Namibia with support from GIZ, HTTP hub started by Namibia University of Science and Technology (NUST) in partnership with telecom provider MTC, and the UNDP Accelerator Lab.

2.4.2.2 Public Sector:

The passing of the new public sector innovation policy xxxiii promises to inject some level of vibrancy into the innovation ecosystem. Led by the Office of the Prime Minister and the Ministry of Higher Education, Technology and Innovation (MHETI) - which is charged with the coordination of the innovation ecosystem in Namibia - the policy focuses on nurturing a culture of creativity and innovation within the public sector, building capacity



in innovation, and developing a model for incubating innovations in the public sector. Much as the policy is focused on the public sector, there is opportunity for strong synergies with and demand generation for the private sector innovators.

The operationalization of the public sector innovation policy is still in its early stage. The public service innovation and reform office formed under the Office of the Prime Minister has embarked on some early efforts to institutionalize innovation across various government ministries and agencies. While this effort is commendable, it is also quite a daunting task and will require significant leadership support, talent acquisition and up-skilling, benchmarking and learning from successful cases on the continent and beyond.

2.4.2.3 Development Partners:

A few development partners are active in the innovation space in Namibia. The [UNDP Accelerator Lab](#) is already involved in identifying, incubating and accelerating innovations, with a current focus on innovation in/for governance, informal settlements and youth entrepreneurship. GIZ is also very involved, as the founding sponsor of “Start-up Namibia” – a three-year initiative providing incubation and acceleration for start-ups, including providing seed funding . UNFPA is also involved in innovation

<https://pan.org.na/list-current-service-providers>

[https://www.namibian.com.na/209299/archive-read/UNDP-boosts-entrepreneurs-with-N\\$75-000](https://www.namibian.com.na/209299/archive-read/UNDP-boosts-entrepreneurs-with-N$75-000)

<https://www.giz.de/en/worldwide/77863.html>

initiatives in the areas of family planning, maternal health, HIV, women and girls . In a young and growing innovation ecosystem like Namibia’s, the development community can further their support in fostering learning and exposure of local innovation actors to best practices, enabling linkages to partnerships and to the market, further strengthening incubation and acceleration programmes, de-risking innovation with seed funding and crowding in private financing.

2.4.2.4 Private sector

Some initiatives by the private sector in support of innovation include:

- MTC’s partnership with NUST on the HTTP initiative
- Sanlam innovation awards, a joint project between Sanlam Namibia and the Namibia Business Innovation Institute
- Total – start-up of the year awards , aims to identify and support good ideas and projects that help address a widespread problem affecting communities
- Standard Bank, in partnership with MIT University, kicked off the “BioHab” project on housing and food ; this follows the bank’s Crowdfunding Campaign – “Buy a Brick ” for low-cost housing as part of their corporate social responsibility (CSR).



Certainly, the private sector can play a bigger role in enabling / fostering innovation. Going beyond CSR initiatives, other areas like corporate innovation or open innovation, where they invite innovators to work on specific challenges, or co-create solutions together, goes a long way in developing the capacity of local innovators, while building demand for local innovations. In the financial services sector, open APIs would go a long way to enable DF innovations to thrive.

2.4.3 Ecosystem analysis across key dimensions

2.4.3.1 Market demand and access

Market demand is reported as one of the top challenges for innovation in Namibia. A confluence of factors contributes to this:

- <https://neweralive.na/posts/unfpa-ncrst-to-innovatively-reach-young-people>
- <https://www.nust.na/?q=news/https-here>
- <https://www.namibian.com.na/6212982/archive-read/Sanlam-awards-five-business-initiatives>
- <https://www.namibian.com.na/164927/archive-read/Total-Namibia-start-up-challenge-winners-graduate>
- <https://www.standardbank.com/sbg/standard-bank-group/whats-happening/newsroom/standard-bank-partners-with-mit-on-innovative-housing-and-food-project-in-namibia>
- <http://www.nampapr.com.na/?p=5195>

- a) A small market size. With a population of 2.5 million, most innovators find it hard to attain sustainability and scale.
- b) A strong reliance on imported innovations especially from South Africa. With a corporate sector that is very allied to the South African market,

most innovations especially in ICT and fintech are from South Africa.

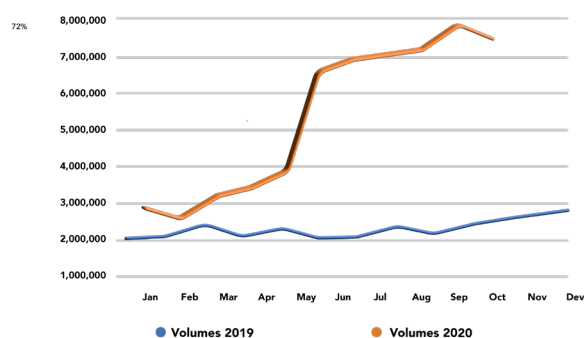
- c) A culture that is low on adopting new innovations. Both within public and private sector, there is reluctance to try out and adopt new ways of doing things – especially if users think the status quo is okay.

The Covid-19 situation has shown some positive effects on demand for digital innovation in Namibia. Government, the corporate sector and consumers have been pushed to find different ways of delivering and acquiring services – thus opening up to new innovations. NUST, for example, reports engagements from government seeking to identify solutions that can be useful in the face of lockdowns and remote working. The UNDP Accelerator Lab reports engagement from the Ministry of Home Affairs to partner in their agenda to innovate service delivery – in areas like civil registration, identification documents, visa services, welfare services, etc.

Fintech, specifically digital payments and e-commerce, have seen growth during the Covid-19 period. For example, government used e-money payments to deliver Covid-19 relief grants and UNDP worked with e-commerce start-up TAMBULA to pilot e-commerce during the Covid-19 lockdown. The data on e-money transactions clearly show the spike in volume of transactions during the Covid-19 period. The figure below shows the monthly e-money transactions, for the pre- Covid-19 (2019) period compared to the Covid-19 (2020) period.



Trend of e-money transactions



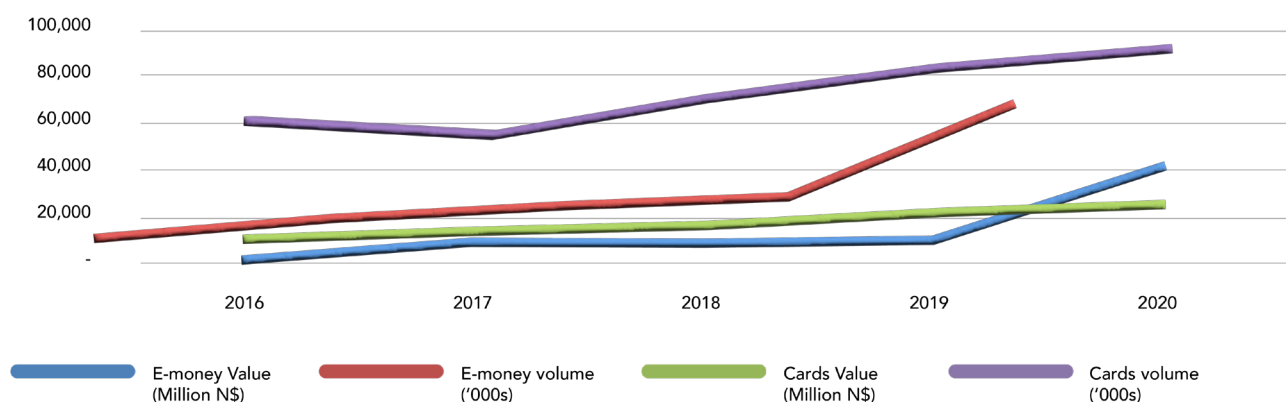
Source: BoN Annual Report 2020

Further assessment of the trends of digital payments in Namibia– cards compared to e-money – gives more insight as presented by the table and figure below.

	E-money transactions		Cards transactions		Average Transaction amounts	
	Value (Million N\$)	volume ('000s)	Value (Million N\$)	volume ('000s)	cards	e-money
2016	880	9,773	9,698	58,739	165	90
2017	10,609	17,845	13,293	55,998	237	595
2018	14,038	23,916	17,913	67,856	264	587
2019	14,833	28,403	22,967	81,818	281	522
2020	41,210	65,905	25,973	88,307	294	625

Source: BoN Annual Report 2020

Trend in Digital payments in Namibia



We observe much higher volumes of card transactions compared to e-money transactions. However, we observe the sharp growth in volume of e-money transactions in 2020, while card transaction value and volume remained steady. E-money transaction volumes and values have followed a similar growth trend from 2016 to 2019, followed by a spike in 2020 – associated to the Covid-19 period. Card transactions have grown at an annual rate of 28% and 11% in value and volume respectively between 2016 and 2020. E-money transactions on the other hand have seen a stronger growth over last five years - at an average of 330% and 67% in value and volume respectively between 2016 and 2020.

A comparison of average transaction amounts for both cards and e-money also reveals more insight into how both digital tools are used. The high volume low value card transactions suggest that cards are mainly linked to everyday purchases (e.g., grocery store purchases). E-money, on the other hand, has high average transaction amounts (more than two times the cards) which suggests that it is mainly used for money transfers (person to person). The above use cases were also confirmed from our primary research.

2.4.3.2 Skills and human capital development

Skills are assessed both from the demand side, in terms of the capabilities of the population to uptake and use DF services,

and the supply side, in terms of the ability of local innovators / developers to design innovative solutions that suit the market.

On the demand side, overall Namibia has high literacy levels compared to the rest of the African continent, with an adult literacy level at 92 percent, 7 mean years of schooling, 12.6 expected years of schooling, and all this with 100 percent gender parity^{xxxiv}. Digital / ICT skills and literacy on the other hand are regarded as inadequate. Digital skills within the active population are estimated at 44 percent.^{xxxv} Stakeholders report the lack of appropriate curricula within schools and only 40 percent of schools have access to the internet. Beyond schools, there is also little evidence of significant digital literacy training programmes by stakeholders to their customers. This lack of digital skills / literacy among consumers is reported by market actors as a strong barrier to uptake of digital solutions and innovations.

Financial literacy is also important when it comes to the use of DFS. The need to improve financial literacy is underscored in most sector strategic documents, and the same has been reiterated by a cross section of stakeholders interviewed. The need is especially among the low-income rural populations. Government has acted on this need through the Financial Literacy Initiative (FLI) led by the Ministry of Finance in partnership with public, private and civil society stakeholders. FLI is a notable effort to improve the financial capability of Namibians. Usage of financial services,



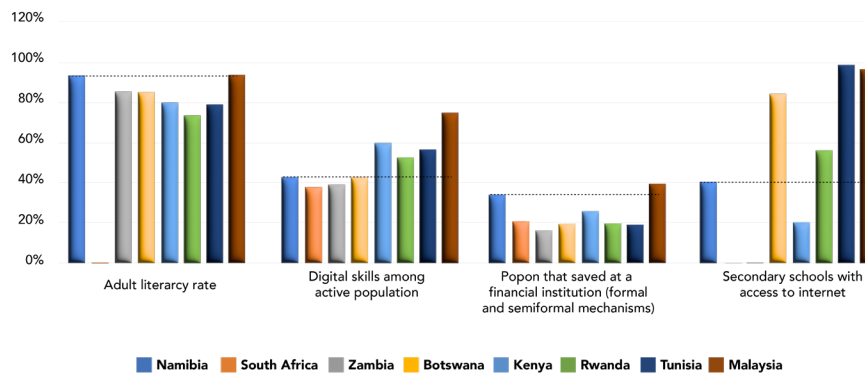
beyond payments, however, remains low, reflecting the need for sustained financial literacy to the population, coupled with the roll out of relevant product offerings for the specific underserved segments.

A comparative analysis of Namibia against select countries on skills, as shown in the

figure below, points to areas of improvement in digital skills and financial literacy of the consumers.

Population saving at a formal financial institution is used as a proxy for the level of financial literacy, while the access to internet among schools is used as an indicator for learning of digital skills in schools.

Benchmarking Namibia - Skills



Adult literacy rate	Very Good	High
Digital skills among active population	Weak	Comparatively lower than benchmark countries
Pop'n that saved at a financial institution (formal and semiformal mechanisms)	Fair	Comparatively okay. But a lot of room to grow
Secondary schools with access to internet	Weak	Comparatively lower than benchmark countries

On the supply side of digital skills, a baseline study on the broadband policy (2019-2029) reports the lack of training in technical skills at certificate and diploma level, whilst there is limited graduation of IT students at degree level. Further, the available ICT skills are not equitably distributed throughout Namibia.

The ICT skills are largely limited to the capital of Namibia, Windhoek. NUST produces most of the ICT skills in the country. It confirmed that only 20-30 students graduate in software engineering annually.

2.4.3.3 Investment / Access to Capital

Namibia is recognized for a well-developed and well-functioning financial system compared to the rest of the continent, with a sound, profitable and adequately capitalized banking sector, and a large NBFIs sector. However, there is generally limited allocation of capital to support innovation and entrepreneurship in Namibia.



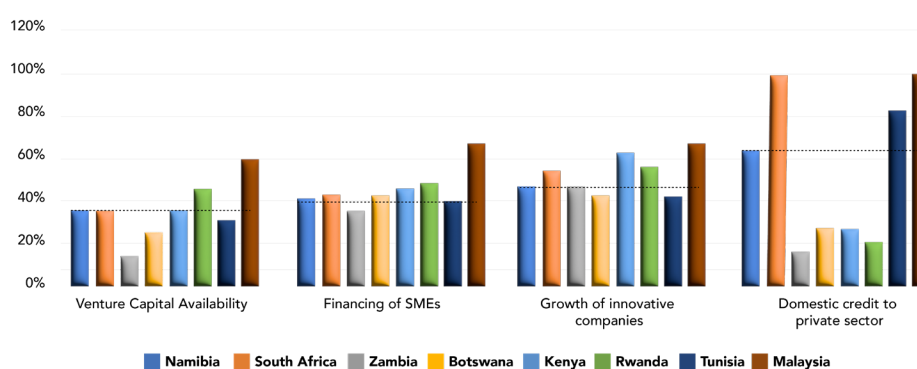
Traditional financing mechanisms, like bank loans and capital from public equity markets and bond markets, only serve mature companies. As in most countries on the continent, entrepreneurial finance for start-ups and new (early stage) business models is lacking on the Namibian market.

SME financing remains particularly low on the market - notwithstanding various ongoing efforts by government to address this priority area. The WEF

Global Competitiveness Report 2019 xxxvi indicates quite low levels of venture capital availability and financing towards SMEs, respectively scoring 33 percent and 42 percent. Domestic credit to the private sector is quite high at 68 percent, while the growth of innovative companies is at 48 percent.

A comparative analysis of Namibia against select countries on investment in entrepreneurship further points to the need for improvement as highlighted below.

Benchmarking Namibia: Key Indicators on Investment in Entrepreneurship



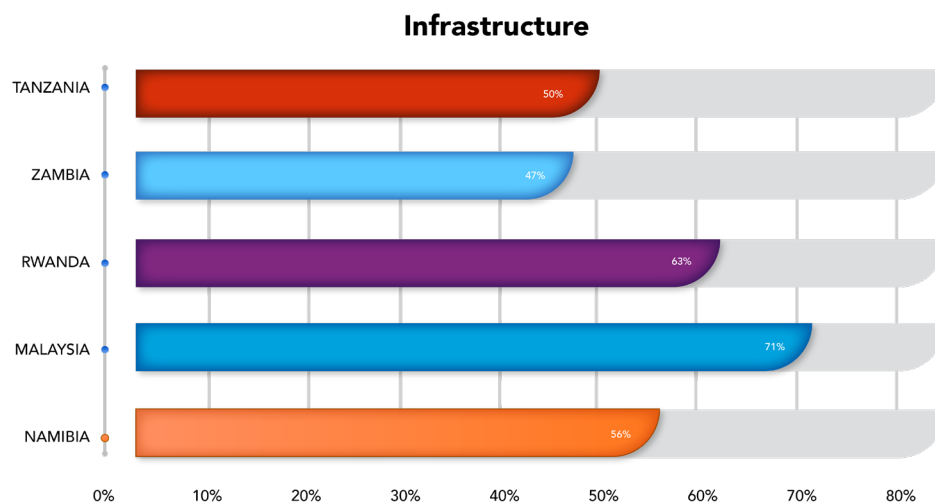
Venture capital	Fair	Comparatively okay. But a lot of room to grow
Financing SMEs	Weak	Comparatively low- given score of benchmarked countries
Growth of Innovative Companies		
Companies	Weak	Comparatively low- given score of benchmarked countries
Credit to Private Sector	Good	Good, but room to grow given levels of comparable S.A, Tunisia

Namibia scores low and is comparatively weak when it comes to financing SMEs and the growth of innovative companies. Whereas the score on venture capital is not high, in comparison to the benchmark countries, Namibia is faring well.

Country benchmarking using the IDES tool further corroborates and complements

the above picture. Looking at aspects of (i) development and synergies of the innovation community, (ii) skills of innovators, (iii) support infrastructure for innovation and (iv) investment in innovation.





One can observe from the figure above that Malaysia is a case for Namibia to emulate in the quest for improving the state of the innovation ecosystem in the country.

2.4.4 Gaps and Opportunities

The above assessment of the digital innovation ecosystem points to a number of areas that need particular attention. Overall, Namibia fares well compared to its peers, yet the scores for skills, infrastructure and investment are low in absolute terms.

A number of gaps and opportunities worth attention include:

Gaps/opportunities

1. Low demand for local innovations

- What role can government play?
- What role can the private /corporate sector play?

2. Low digital skills and literacy, digital entrepreneurship

- What role for the education system?
- What role for innovation hubs /incubators /accelerators?
- Might importation of key digital skills be a solution?

3. Lack of funding options for start-ups and innovation

- What role for government and DBN?
- What role for the Namibian corporate sector?

4. ICT innovations struggling to achieve scale

- What role for government in driving uptake?
- The option of expanding beyond borders to the region?

5. Supportive institutional and policy and regulatory framework for start-ups

- Look into the ease of setting up and doing business
- Do high growth start-ups deserve special incentives?

2.5 Overview of the Namibian digital finance market

In this section, we take stock of the current status of Namibia's DF market, looking at (a) the players in the market, (b) services and products provided in the market, and (c) overall state of financial inclusion.

The DF / fintech market in Namibia is dominated by banks offering account access and payment services digitally. The four major banks (FNB, Windhoek, Nedbank, Standard Bank) offer the classic mobile and online banking channels and have also launched e-wallets – mainly serving their existing customers but allowing them to send money to non-customers without an account. NBFIs like microlenders and insurance companies have not yet embraced DFS.

2.5.1 Market Players

PAN reports to have 14 registered payment service providers, while BoN has eight licensed e- money providers. These are a mix of banks and fintech providers.

The DF/fintech market in Namibia is dominated by banks, mainly the top four – FNB, Standard Bank, Bank Windhoek and Nedbank. The banks offer the classic transaction and bank account information services through mobile and web banking to serve the payment and transaction needs of their banked customers. FNB and Standard Bank are quite ahead with introducing e-wallets.

For non-bank e-money providers / payment service providers (fintechs), the market has over 14 registered players. Few of these fintechs have gained recognizable traction on the market, including PayToday, and Mobipay. Both offer e-wallets and some value-added services. The market domination of banks in the fintech space is also seen in the need for (non-bank) fintechs to partner with banks to be able to reach reasonable scale. This is the case for PayToday, and Mobipay, both of which have strong partnerships with banks, with the latter holding a stake in the fintechs. Market perception is that the fintechs are affiliated to the banks. For some, this is seen as a way for the banks to keep their market dominance and determine what DF innovations can gain market traction.

"... entrenched incumbents – like the banks, drive the pace of innovation as they control the payments system (through the association). Innovation in fintech depends on the appetite of the banks, insurance companies. If banks want it...(a fintech innovation), it will work, if they don't it will fail."

"...You would rather partner and serve the banks than be seen to compete with them. Banks are however slow to take up new innovations in digital finance, which slows down market growth."

"...A few local innovations are coming up in e-commerce, transport, retail, although the market size is quite small"

The fintech market is also reported to still be dominated by South African providers, because a significant number of corporate sector players are from South Africa. Most South African fintech players set up satellite offices in Namibia and offer imported solutions, making it hard to have fully customized solutions to some of the specific needs of Namibia.



2.5.2 The Market offerings – the products and services

The table below captures the major DF/fintech products and services offered on the market by the different players and delivery channels used.

	Digital Financial Services offerings				Access channels				
	Pay /purchase	Save	Borrow	Manage risk	Online	Mobile App	USSD	Card	E-wallet
Banks									
Bank Windhoek	✓	X	X	X	✓	✓	✓	✓	✓
FNB	✓	X	X	X	✓	✓	✓	✓	✓
Nedbank	✓	X	X	X	✓	✓	✓	✓	✓
Standard bank	✓	X	X	X	✓	✓	✓	✓	✓
Trusco bank	✓	X	X	X	✓	✓	X	✓	X
Bank BIC	✓	X	X	X	✓	✓	X	✓	X
Letshego	X	X	X	X	X	X	X	X	X
Banco Atlantico	X	X	X	X	X	X	X	X	X
NamPost	X	X	X	X	X	X	X	X	X
Fintechs									
MobiPay	✓	X	X	X	✓	✓	✓	✓	✓
Nam-mic payment solutions	TBD	X	X	X	X	X	X	X	X
PayToday	✓	X	X	X	✓	✓	✓	✓	✓
RealPay	✓	X	X	X	✓	X	X	X	X
Collexia	✓	X	X	X	✓	X	X	X	X
DPO	✓	X	X	X	✓		X	✓	✓
Magnet Payment solutions	TBD	X	X	X	X	X	X	X	X
Vivo energy	✓	X	X	X	X	X	X	✓	X
Mobile Network Operators									
MTN Namibia	X	X	X	X	X	X	X	X	X
MTC	X	X	X	X	X	X	X	X	X

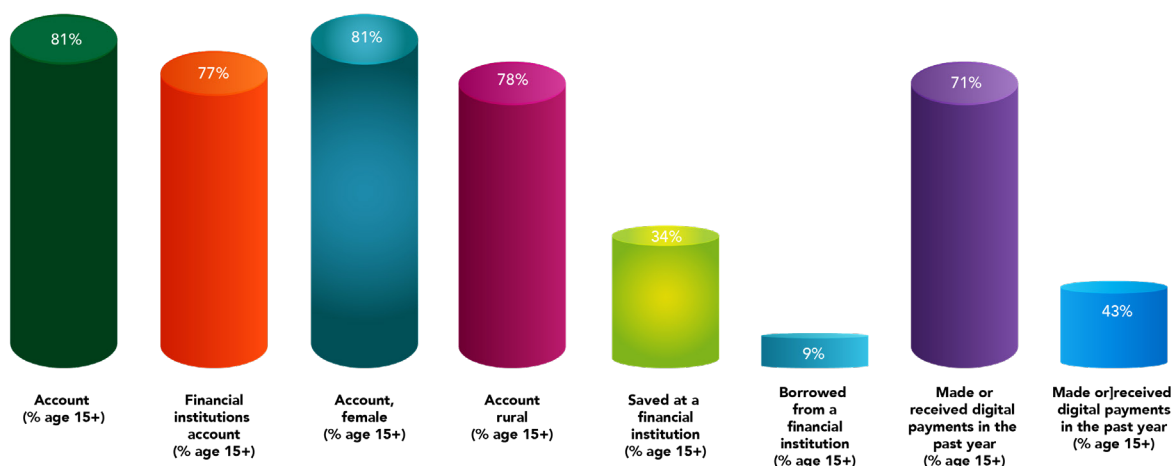
Source: compilation by the consultant using XXXX (do we have sources?)

The table above shows the lack of service offerings beyond digital payments on the Namibian market. Both the banks and fintech providers are mainly offering means for people to pay for and purchase goods and services.

The lack of digital innovations / services for savings, lending or risk management solutions on the market could also explain the financial inclusion data from the World Bank's Findex report 2017.



Namibia - Key Financial Inclusion Indicators



Source: World Bank, Findex Report 2017

The Findex 2017 data shows that Namibia has a high level of access to financial services (81 percent own an account and 77 percent own one at a financial institution). The level of usage, however, tells a different story.

Digital payments are widely used at 71 percent, while saving and borrowing in a financial institution is very low, at 34 percent and 9 percent respectively.

This suggests that accounts are mainly opened to send and receive payments. Insights from primary research suggest that most accounts opened by low income segments in the informal sector are mainly to receive social grants from government.

This usage gap – as far as saving and borrowing is concerned - is worth looking into and addressing for deeper financial

inclusion and financial health. If experience from across the continent might serve as a lesson, this will require DF innovations, beyond payments, that are customized to the needs and livelihoods of those segments currently underserved.

"...There is need for a low cost bank account, digital and mobile first, easy to use and understand, for low income market segment."

that the utility of the "...Namibia's market size is fairly well served but charged highly and served inefficiently."

"... the opportunity on the market today is not about number people owning an account or wallet. It's also not about P2P payments – but more about allied services / value added services / second generation products."



Box 1: Financing of MSMEs in Namibia

GRN clearly recognizes the economic impact of MSMEs and the need to improve their financing. This is portrayed in national and sectoral strategy documents, and is evidenced by past and current attempts to address this challenge. A SME bank was established in 2012 but unfortunately closed doors in 2017. A new SME financing strategy was launched in 2019 with a number of facilities managed through the Development Bank of Namibia (DBN).

The facilities include: a Credit Guarantee Scheme, a Venture Capital Fund, a Mentorship and Coaching Program. DBN also runs a Youth Skills Finance Facility launched in 2019.

A SME division has also been created within the Namibia Investment Promotion and Development Board, working under the Office of the President. The division is in charge of coordinating and overseeing SME operations with the ambition to create and stimulate new ventures that can meaningfully contribute to Namibia's economic development.

Notwithstanding the above efforts within DBN, a look at its financing portfolio (2019/20) reveals that SME financing represents 24.5 percent of total financing, which is not insignificant. However, of this 24.5 percent, 94.8 percent are urban projects, while only 3 percent were rural projects, and the remaining 2.2 percent mixed (urban, rural).

"...The challenge with most applications from MSME's is that they are not bankable, with inadequate documents and are high risk."... there is a challenge of appraising and follow up on MSME projects. Adoption of digital solutions would help with record keeping, cash flow management, tracking performance and risk management"

While the above efforts by GRN have been geared mainly towards creating special funding facilities to address the challenge, they do not seem to include changes or reforms to address the factors within the mainstream banks and NBFIs that lead to low financing of MSMEs and the non-formal sector.

This observation is in-line with the recommendation from a study commissioned by BoN to assess the viability of creating second tier (micro-finance) banks in Namibia . While the study did not find it viable to setup a second tier bank, it recommended to rather look at ways of working within the current banking system and build on existing capacity of commercial banks, postal services, or larger microlenders to serve the lower market segments.

The study further proposed to incentivise existing banks to extend banking services and credit to low income sectors and SMEs, for example, by looking at ways to assist SMEs to become more creditworthy.



The microlending industry of Namibia, which could be regarded as a natural option to serve the rural and informal sectors, lends mainly for consumption purposes and rarely for productive purposes. With over 420 registered micro lenders, serving over 230,300 borrowers, with a deep reach into rural Namibia, there is an opportunity to leverage the potential of microlending to channel more funds towards micro-enterprises and to boost the informal sector to drive rural incomes and employment. Adopting DF could be a strong enabler in this quest. Digitalization is already significantly impacting microfinance across countries, by improving operational efficiencies and creating linkages with the banking sector and other value chain actors.

3 Alignment of the digital finance market to Namibia’s development priorities

3.1 Introduction

The previous sections have so far assessed Namibia’s DF ecosystem from the point of view of its key components of infrastructure, policy and regulatory environment, the innovation ecosystem and the DF market. In this section, we now look at how well aligned the DF market is to Namibia’s development priorities and the SDGs. For this, we (i) analyze the broader impact of market players and their offerings on sustainable development, (ii) assess the level of inclusivity (as a key aspect of sustainable development) of current market offerings (iii) assess the potential of and opportunities for DF to contribute to

Namibia's national development priorities. This section ends with a summary of DF use cases for the SDGs from the region and across the world. As highlighted in the limitations to the study, the level of analysis of the SDG alignment of the DF and fintech industry in Namibia is constrained by a lack of data about key areas of assessment. Data on aspects such as the flows and trends (transactions/amounts) within the fintech industry, financing of fintech, developments in the usage of various fintech and DF products are all lacking. Beyond the e-wallet transaction data published by the Central Bank, which has been presented earlier in section 2.4.3.1, there is no entity (public sector or private sector consortium) currently collecting, tracking and publishing data on the size, flows and impact of DF / fintech on the economy.

3.2 The impact of DF market players and offerings on sustainable development in Namibia

3.2.1 Understanding the impact pathways of digital finance offerings

From the customer point of view, DF offerings enable consumers in various ways (use cases) - depending on how they use the product or service. To assess the linkages between the use of DFS and sustainable development, we use the impact pathways tool developed by UNCDF^{xxxix} to identify the customer benefits resulting from DFS usage and thereby the development outcomes derived.



The tool, as depicted in the figure below, identifies six use cases of DF highlighting the ways people might adopt DFS to manage their money and, therefore their lives. These include how to stretch money during the short-term - (MANAGE), retain a sum of money or have the opportunity to receive a usefully large lump sum - (PROTECT), make bill payments, send money to another

person, make a purchase - (PAY), check a balance, access customer support to help use this instrument to oversee finances (Inform), receive a payment (i.e. salary, remittance, government payment, insurance payout) -(GET) and lastly increase assets by having the capability to save up or pay down - (GROW).

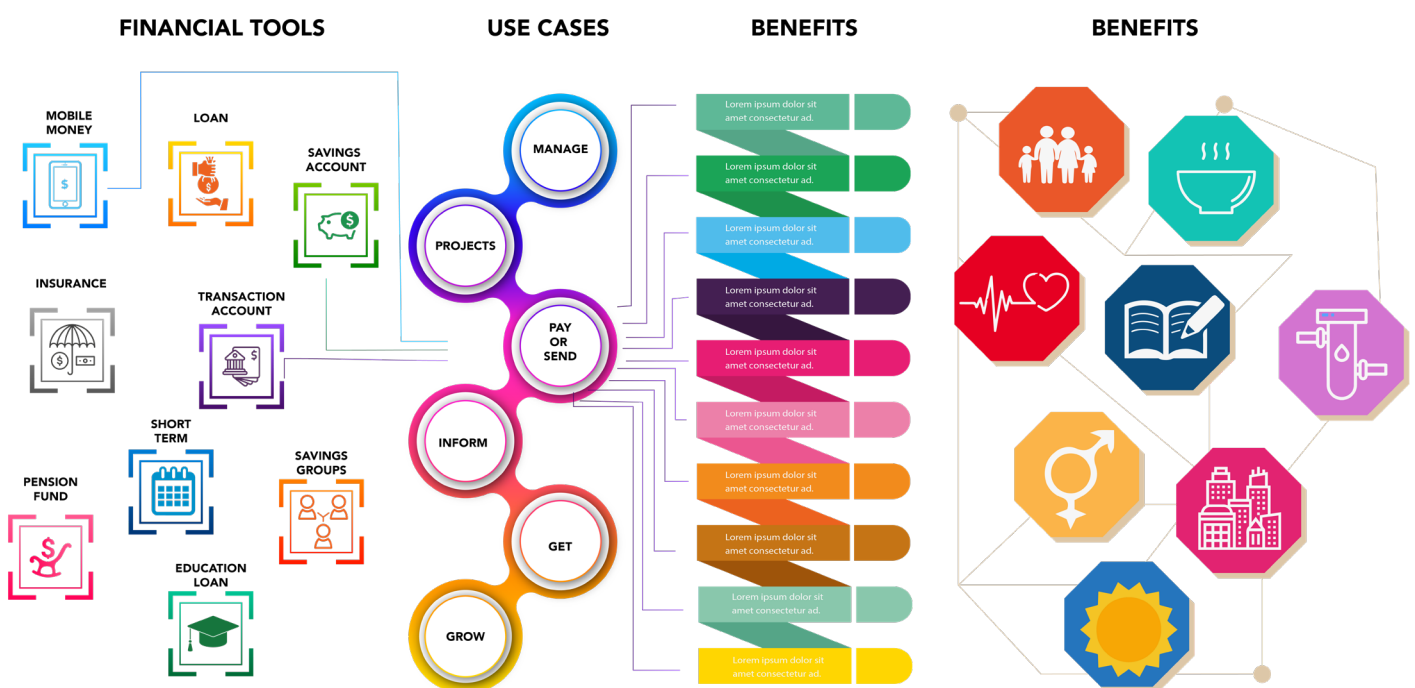


Figure 6: (Digital) Financial Services Impact Pathways Tool (UNCDF, 2019)

Figure 6 highlights a typical use case (for DF) of paying and sending money through either mobile money (e-wallet) or a transaction account or from a saving account. Depending on the intended use of the funds sent, the receiver will avail various services – which could include education, health care, nutrition, improved resilience, broader social networks, safety, increased income, etc. The various benefits are in turn seen to impact SDGs 1, 2, 3, 4, 5, 6, 7 and 11. While the above tool provides a way

to assess the development impact of DF offerings on the Namibian market, available data does not allow us to take this customer centric analysis further. Published data on digital payments (both cards and e-money) does not include details on the purpose of the payment. A specific consumer survey on this could be an alternative way to ascertain this. To mitigate this, in the following section, we take a more business centric view to gain insights into the SDG alignment of fintech providers in the market.



3.2.2 Alignment of Namibia’s Fintechs and digital innovators to the national development priorities.

Taking a business centric view, the below analysis seeks to understand how the various DFS offered on the Namibian market align to the sustainable development priorities of Namibia.

We map the various providers against the development priorities to which they are most aligned, based on our understanding of their business model and major business area or concentration.

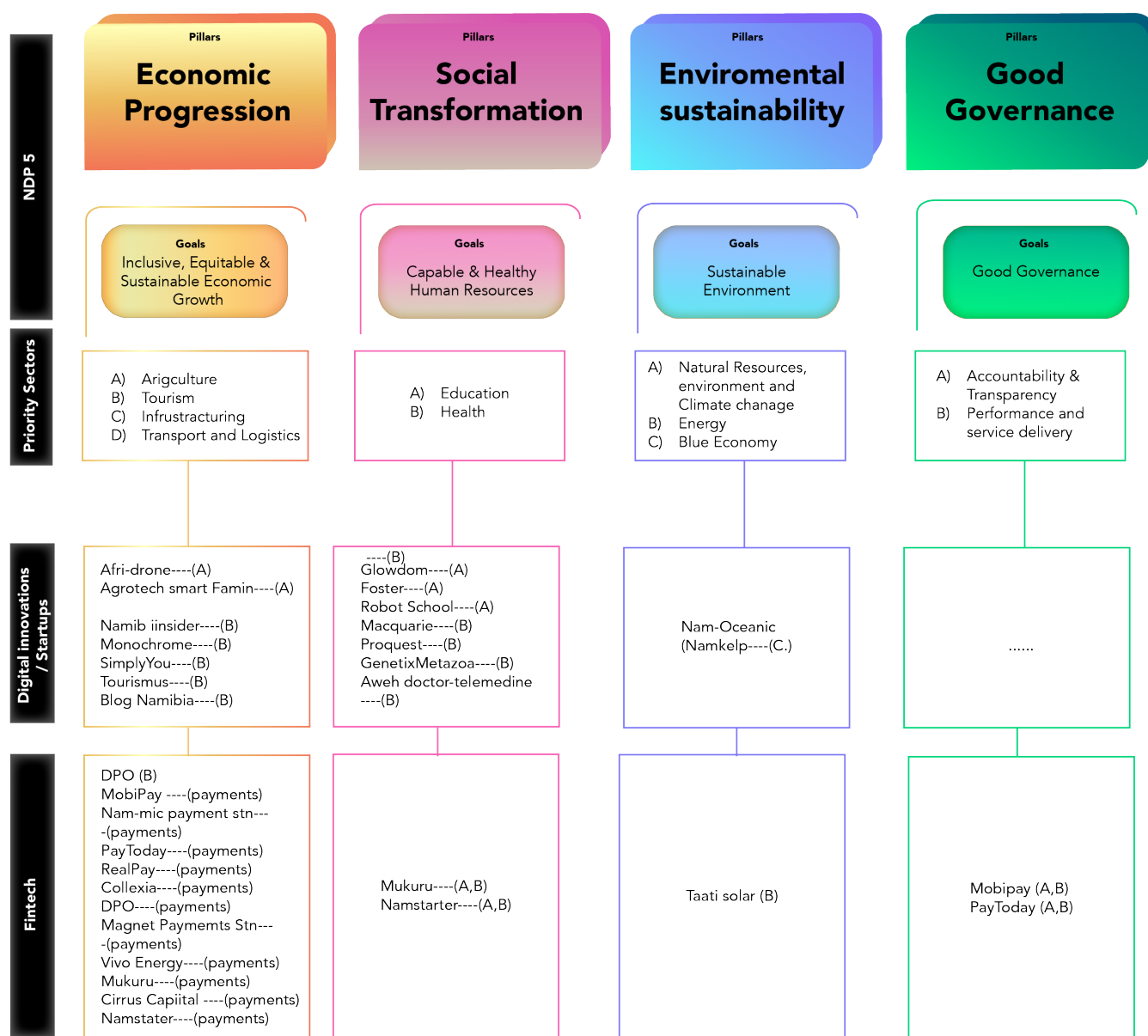


Figure 7: Mapping Fintechs and tech-innovators against Namibia’s development priorities



The above mapping shows that most digital innovators and start-ups fall under the economic progression pillar, mainly in the tourism sector. Under social transformation, there is a good mix of digital innovators in health and education. Only one digital innovator was identified in the environmental sustainability pillar, while none was identified in the good governance pillar.

When it comes to fintechs, the alignment to specific sectors is not evident, especially when the majority of Namibian fintechs work in the payments space. With a lack of data on the purpose of the payment, it is difficult to map a given fintech to a specific sector. Nonetheless, with information collected through key informant interviews about the niche focus areas, we are able to determine under which NDP5 pillar a few of the fintechs fall.

Fintechs are mainly focused on person to business and business to business payments and therefore contribute to the economic progression pillar. A few fintechs are seen to focus on a niche sector, such as BPO which is strong on the tourism sector and Makuru which is strong on education and health.

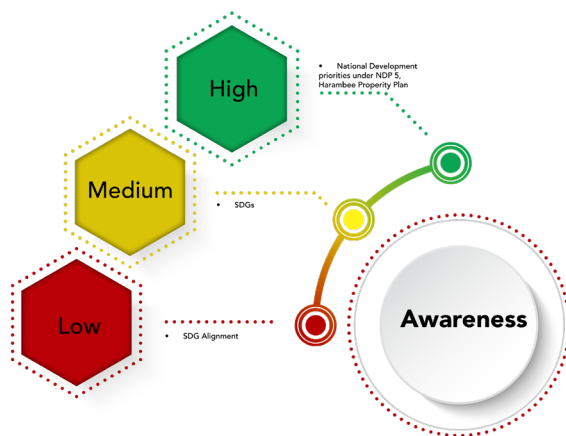
Mobipay is involved in delivering government social payments to vulnerable communities during the Covid-19 lockdown while Paytoday has gained good market traction enabling digital payments for

many businesses. As such, both Mobipay and Paytoday are seen to contribute to the good governance pillar. Taati solar on the other hand is enabling access to renewable energy through its PAYGO model and would be seen to contribute to the sustainable environment pillar. Namstarter, the first crowdfunding platform in Namibia, focuses mainly on supporting entrepreneurship (good business ideas), education, environment, community development, health and wellbeing, and promoting art and creativity.

Of the 40 campaigns they have so far implemented, a large majority are supporting entrepreneurship, and a few are focused on education and health projects. As such, Namstarter is seen to mostly impact the economic and social pillar. Nonetheless, Namstarter also has the potential to impact the environment pillar, if they crowdsource for environment related causes. Generally, what we observe on the Namibian DF / fintech market today is characteristic of an early stage fintech industry. As observed in other markets, initially fintechs are concentrated in the payments space and later on - as the ecosystem grows - diversify to new business models and products and begin to integrate into other economic sectors beyond finance. Alignment to the SDGs will become stronger once we start to see the new business models that transcend finance/payment into other sectors of the economy.

3.2.3 Awareness levels of national development priorities and the SDGs within the Fintech industry

Beyond the status quo in terms of market offerings, the assessment sought to understand the level of awareness among DF and fintech providers of the SDGs and national development priorities, and what SDG alignment meant to them.



National Development Priorities:

We found that all key informants had strong recognition of the key national development framework documents, and a good understanding of the priority areas. The fintech and financial services industry has a high (top of mind) awareness of NDP 5 and the Harambee Prosperity Plan.

SDGs:

A significant number of key informants from the private sector (fintech and financial services providers) required detailed explanation of the SDGs for them to recall what the SDGs are.

SDG Alignment:

The idea of alignment to SDGs was not understood by most key informants,

especially on how they apply to them. Nonetheless, with detailed explanation, most of those interviewed expressed strong interest in understanding the business opportunities there-in and how best to align.

Some of the views expressed by the industry players about SDG alignment:

Government needs to crowd in private sector through:

- Right policy framework
- De-risking opportunities for private sector
- Financing / Digitalization / innovation opportunities in Namibia
- Climate adaptation in the Agriculture sector. Namibia's ability to adapt to climate change in food systems
- Connecting industry with institutions of learning / research to provide information about opportunities at the nexus of business and development

State owned enterprises are already getting most of their financing from the banking sector. More can be done by private sector with proper project development – e.g., the water desalination project which was financed banks . The digitization agenda could also be co-financed with private sector.

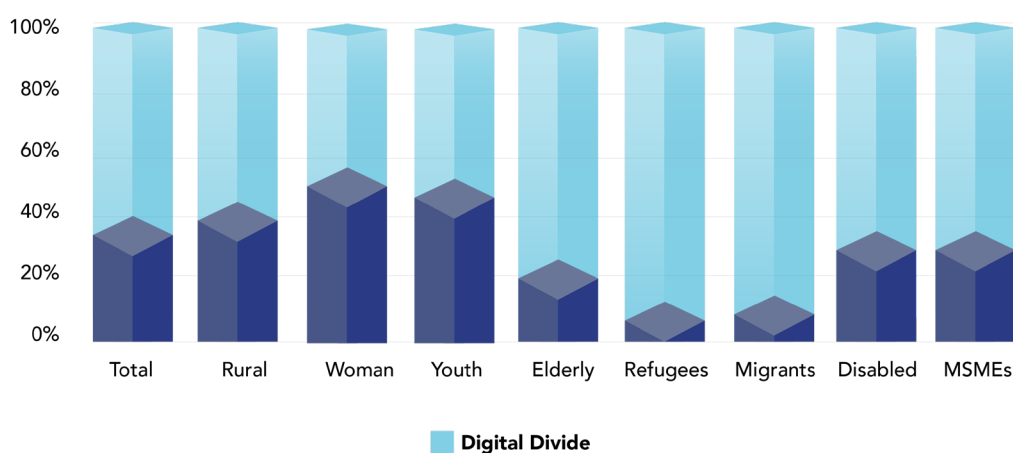


3.3 The Inclusiveness of the Digital Finance Market offerings on the Namibian Market.

Ensuring inclusiveness and equality is critical to realizing sustainable development. Leaving no one behind is a core principle of the SDGs. An assessment of the SDG alignment of the DF ecosystem therefore ought to look into matters of inclusiveness of the various components of the ecosystem.

Specifically, we look at inclusiveness of eight key customer segments which are usually excluded or underserved when it comes to access and usage of critical services in the economy: women, youth, rural people, the elderly, the disabled, refugees, migrants and MSMEs. We use the digital economy scores (from IDES) as proxies for the DF ecosystem, since the key components and indicators (infrastructure, policy, innovation, skills) of both align to a great extent

Digital Inclusiveness by segment



Source: UNCDF, IDES

The above results show that the specific segment of women performs relatively better than the others. Women inclusion is scored at 55 percent, signaling a digital divide of 45 percent. Next is the youth segment, which is included to the tune of 47 percent signaling a digital divide of 47 percent. The digital divide in Namibia is seen to be majorly driven by the elderly, the disabled, MSMEs, followed by rural citizens who respectively have lower scores.

Concerning refugees and migrants, it is worth noting that Namibia is not host to

a significant number of these vulnerable groups, and therefore the specific focus on these segments is expected to be low.

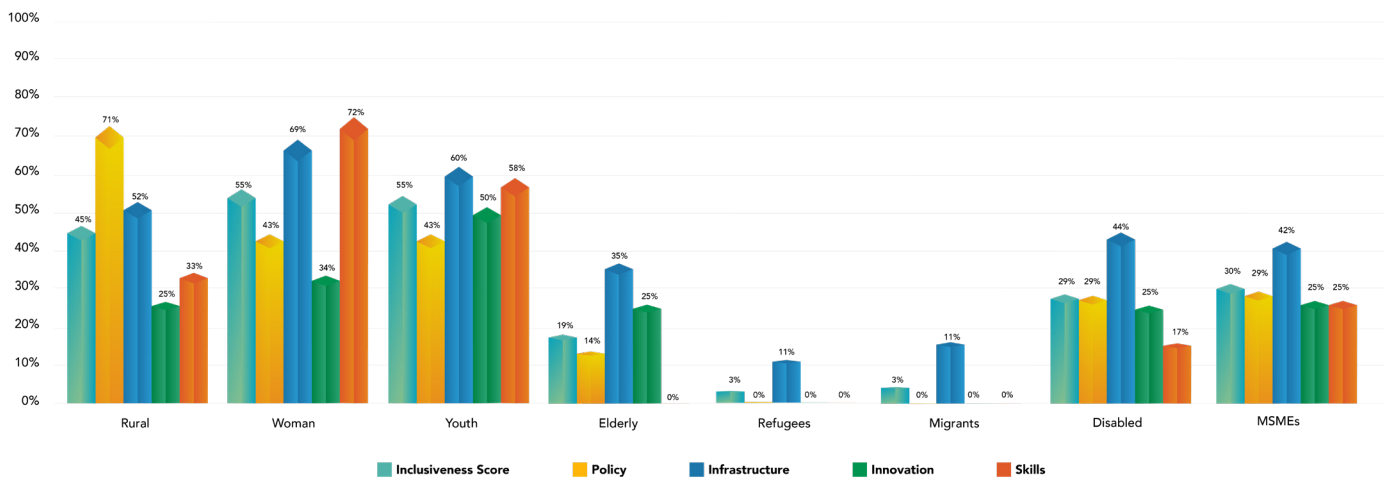
We take a step further to assess what contributes to the levels of inclusion/exclusion of the particular segments – with reference to the key dimensions of the digital economy. As shown in the figure below, for rural Namibia - with an inclusiveness score of 45 percent, the divide (exclusion) is driven by the level of innovation, skills, followed by infrastructure. Policies on the other hand are



seen to be inclusive with a high score of 71 percent. Indeed, the level of digital skills and financial literacy among rural populations is lower than the national level. When it comes to innovation, what we observe is that very few innovators have a specific focus on rural populations and their specific challenges

– rather offering or coming up with solutions to serve the entire market, usually skewed towards urban based Namibians. Infrastructure is another contributor to the digital divide of the rural area – pointing to the need to improve the level and quality of coverage for rural Namibia.

Inclusiveness by dimension



For the women segment, with an inclusiveness score of 55 percent, the divide is seen to be driven mainly by the level of innovation, followed by policies. Infrastructure and skills on the other hand score high for this segment – signaling equal access from a gender perspective. As far as innovation is concerned, our assessment indicates the need to pay more specific attention to the needs of women on the market. We were not able to identify any substantial digital (finance) solutions and innovations specifically targeting women. Generic products and services offered on the market tend to contribute to the exclusion of segments like women. For policy, the assessment reveals the

need to mainstream gender aspects in digital related policies. For the youth, with an inclusiveness score of 53 percent, the assessment shows room for improvement across the dimensions of policy, innovation and skills. Infrastructure scores higher – signaling that the youth can access available infrastructure without need for specific customizations.

For MSMEs and the disabled, our assessment shows low inclusivity for all the components. With a digital divide of 70 percent for MSMEs, a significant effort by all stakeholders will need to be made to reverse this level of digital exclusion.



3.4 The potential and opportunities for Digital Finance to contribute to Namibia’s sustainable development Agenda.

This section provides a broad overview of opportunities that emerge from the assessment on how DF could contribute more to the sustainable development agenda of Namibia.

Deeper consideration and elaboration of these opportunities are presented in Part 2 of this report, the DF Strategy. From the assessment, strong potential and opportunities are identified for DF to contribute and align better to financing

Namibia's development agenda. As highlighted in the introduction, we look at the potential from the point of view of how DF can enable government, businesses, and individuals to better mobilize / collect / access financing, improve the deployment and allocation of resources (including risk management), and lastly improve spending/consumption and procurement processes for the sake of sustainable development.

The table below highlights the key opportunity areas as identified from the assessment.

Opportunities for digital financing for sustainable development			
	Mobilization / collection of finances	Deployment / Allocation / risk management	Spending/ Consumption
Government	<ul style="list-style-type: none"> Digitizing government collection of taxes, levies and fees (people / business to Government payments – P2G, B2G) Electronic fiscal receipting and invoicing system Digital bonds [infrastructure, green, ...] Micro pension funds 	<ul style="list-style-type: none"> Digitizing procurement processes Data driven decision making, budgeting. Digitizing service provision for efficiency 	<ul style="list-style-type: none"> Digitizing government payments (social protection payments, allowances)
Businesses	<ul style="list-style-type: none"> Digital merchant Payments / e-commerce Crowd funding (equity, loans, grants) 	<ul style="list-style-type: none"> ESG considerations in allocation of financing for projects by financial sector Supply chain tracking, traceability solutions E-sourcing for supplies MSME financing (data driven loan decision making) Digital loans (working capital) 	<ul style="list-style-type: none"> Climate resilient financing Carbon markets and driving greener production choices
Individuals	<ul style="list-style-type: none"> Digital / Mobile payments Remittances Mobile savings / pension contributions Digital loans (emergency loans) Crowd funding 	<ul style="list-style-type: none"> Parametric index insurance products Micro insurance (Health, agriculture...) Investment in micro bonds 	<ul style="list-style-type: none"> Enabling a sharing economy Pay as you Go models for acquisition of productive equipment/ assets



From the broad range of opportunity areas presented above, some specific areas were singled out by the key informants as strongly aligned with governments priority projects - under NDP 5 and HPP II). These are summarized below:

<p>Key opportunity area 1: Digital finance and digitalization can improve the ease of doing business, simplify cross border trade and payments and strengthen Namibia’s ambition of becoming a regional logistics hub.</p>	
<p>Views from key informants:</p> <p>“The Africa Continental Free Trade Area (ACFTA) presents a great opportunity for digitalization and digital finance. The current processes for Custom clearing for import and export are manual and inefficient.</p> <p>Cross border payments with neighboring countries currently go through cumbersome and time consuming bank processes. This will support Namibia’s ambition of becoming a regional logistics hub.”</p> <p>“The ‘Single window model’ powered by e-payments, digital tax payments, process digitization will go a long way in improving the ease of doing business in Namibia.”</p>	<p>Development Priorities contributed to:</p> <p>Economic progression pillar:</p> <ul style="list-style-type: none"> • Strengthening Namibia’s position as a transport and logistics hub • Enhance productivity for priority economic sectors • Good governance pillar • Improved performance and service delivery



Key opportunity area 2:

Digitizing government payments and collections for efficiencies, better service delivery, and increased transparency and accountability with public finances.

Major steps have already been made with regard to government collections - with the introduction of the Integrated Tax Administration System (ITAS) – although still in its introductory phase.

ITAS currently allows for online filing of tax returns, namely for corporate tax, custom duties and indirect tax (VAT) – which are managed by NAMRA.

All other levies collected by other government agencies are still paid by cash or EFT (all types of licenses, royalties, fees). Also ITAS is yet to fully integrate instant payment recognition and multiple payment options.

Currently, payments are done by EFT and take four days to be recognized by URA and for issuance of receipt. This, according to NAMRA officials, still drives more of direct cash / POS payment at NAMRA offices.

“Government payments are still made by cash or through expensive and inefficient banking channels. Most fees paid to government are currently cash based (car licenses, passport fees, hospital fees, etc). Only large amounts get paid in the bank. Cash payments are prone to leakages.”

“Most government collecting agencies have challenges in receiving payments and making reconciliations –to know who paid for what. The process is still very manual and prone to errors. E.g. it takes BIPA (Business and Intellectual Property Authority) between 3-4 days to allocate payments received. Same applies to the social security fund, license renewal, VAT payments – where taxpayers still need to take proof of payment to the tax office.” “The post office is a government institution with a banking license, currently distributing most of the government grants and pension money. Huge opportunity to digitize.”

Development Priorities contributed to:

Economic progression pillar:

- Strengthening Namibia’s position as a transport and logistics hub
- Enhance productivity for priority economic sectors
- Good governance pillar
- Improved performance and service delivery.
- Economic progression pillar
- Increased financing for priority economic sectors



<p>Key opportunity area 3:</p> <p>Digital payments and process digitization within government can provide an opportunity for the public sector to reduce paper work (receipts, certificates, ...) issued through manual processes – thus sending a message of sustainability consciousness.</p>	
<p>Views from key informants:</p> <p><i>“Digitizing government payments and processes will enable government to go green, cut waste and also trigger the private sector to follow suit.”</i></p>	<p>Development Priorities contributed to: Environmental sustainability</p> <ul style="list-style-type: none"> • Better management of natural resources and the environment
<p>Key opportunity area 4:</p> <p>DF and digitalization can enable businesses and service providers to better serve the informal, rural sector and solve community needs.</p>	
<p>Views from key informants:</p> <p><i>“There is an opportunity to innovate on top of e-wallets. They have proven to be popular among the masses. Mobile phone penetration is high. Can therefore be used to deliver other services beyond payments to this population.”</i></p> <p><i>“Digital payments can provide an opportunity to track how people use their money and then be able to provide them with financial advisory/literacy, appropriate services including loans, etc.</i></p>	<p>Development Priorities contributed to:</p> <ul style="list-style-type: none"> • Economic progression pillar • Inclusive, equitable and sustainable growth • Enhance citizen participation and engagement • Enhanced productivity of priority economic sectors
<p>Key opportunity area 5:</p> <p>Strong opportunities around the formalization of MSMEs to enable them to access markets and finance.</p>	
<p>Views from key informants:</p> <p><i>“There is an opportunity for MSMEs to have their products on the shelves of the large stores, take advantage of e-commerce and the ACFTA.</i></p> <p><i>Digitalization will enable data collection, analytics to improve business management, credit decision making and enable access to finance for MSMEs.</i></p>	<p>Economic progression pillar</p> <ul style="list-style-type: none"> • Development Priorities contributed to: • Inclusive, equitable and sustainable growth • Enhanced productivity of priority economic sectors

3.5 Learning from the rest of the world: Uses cases of digital finance for sustainable development

Adoption of DF and innovation across countries – by governments, businesses and citizens - is growing exponentially. Some countries are ahead of others, and some solutions have gained more market traction than others. In the section below, we provide a few notable use cases of DF that contribute to sustainable development and highlight some of the dividends that have been reaped by the countries that have implemented these projects.



Digitising Government Collections (P2G, B2G) SDG1, SDG 16]

Kenya's e-citizen platform: Over 90 percent of payments on Kenya's centralised e-government platform (eCitizen) are made using mobile money. Government agencies in Kenya have reported both increased revenue collections and citizen compliance as well as reduced costs, especially in the long run when less maintenance is required and as technology evolves. More about the Kenya case is available [here](#).

Rwanda's Irembo e-government portal: Is the gateway for all government services towards citizens and businesses. Established through a public-private partnership in 2014, to-date an estimated 100 government services are accessible through the portal. The Rwanda Development Board (as reported by CGAP) estimated that the cost of collecting payments through cash and paper processing was around 31 percent of total cost of service delivery – hence the shift to the online portal and digital payments including internet banking, mobile banking and mobile money.

e-Estonia: Estonia is one of the countries with the highest e-government development index globally. 99 percent of government services are accessible online. The Estonia case might provide a moon-shot case study for Namibia.

Digitising Social /welfare cash transfers (G2P)[SDG1, SDG 10] Kenya's Inua Jamii programme: Reaches over 1.2 million

beneficiaries (as of the end of December 2019) across four programs targeting vulnerable groups in Kenya. Inua Jamii's journey towards full digitisation of payments, while providing beneficiaries with choice, convenience, and ultimately, greater dignity in how they access and use their safety net payments and other financial services – is an interesting case to reference. More about this case is available [here](#)

Some other large cash transfer programmes that have adopted digital payment systems include:

- Mexico - Oportunidades conditional cash transfer (CCT) programme (card payments)
- South Africa's Social Security Agency (SASSA) (prepaid cards linked to a bank account)
- Colombia's Familias en Acción (savings accounts with interest, mobile money, mobile banking)
- Brazil's Bolsa Familia (current accounts with card)
- India's National Rural Employment Guarantee Act (NREGA)

Each of the above cases presents lessons on how the national social protection programmes have evolved from cash transfer programmes to digital payments in response to various challenges of inefficiencies, corruption, payments to fake beneficiaries and significant delays in payments. The adoption of digital payments also comes with a focus on financial inclusion of the beneficiaries.



Digitising Tax administration [SDG1, SDG 16] Technologies and new data sources are enabling tax authorities to better manage compliance, protect and enlarge the tax base, reduce administrative burdens, and increase cross border / international cooperation through electronic filing, e-invoicing, e-payments, real time reporting.

Tajikstan and e-filing: A World Bank study examined the impact of e-filing on compliance costs, tax payments, and bribe payments in Tajikstan. Results showed that firms that e-file exhibited lower compliance costs, spending five fewer hours each month on fulfilling tax obligations.

E-filing doubled tax payments among firms previously more likely to evade- by disrupting collusion with officials. These firms also paid fewer bribes, as e-filing reduces opportunity for extortion. In all, the results indicate that e-filing reduces compliance costs and makes the distribution of tax payments across firms arguably more equitable.

Ethiopia with the introduction of electronic sales registration machines (SRMs):

Also called Electronic Billing Machines (EBMs), these enable revenue authorities to monitor formal business transactions and thus offer the potential to improve VAT compliance. SRMs have been recently introduced in countries like Ethiopia, Rwanda and Malawi. Reports on the effectiveness of SRMs in Rwanda and

Ethiopia show that they led to significant increases in VAT revenue. In Ethiopia, a recent study reports significant increases in tax revenue for both income taxes (12%) and VAT (48%)

Remittances [SDG 1, SDG 10, SDG 17]. The G20 and Bank for International Settlements Committee on Payments and Market Infrastructures cross-border payments initiatives are addressing barriers to cheaper, faster, more accessible and transparent cross border payments including remittances.

India's UPI, Singapore's PayNow offer instant online transfers India and Singapore have partnered to link their fast-payment systems to step up cross-border payments and remittance flows, which currently amount to more than US\$1 billion each year.

Users of India's Unified Payments Interface and Singapore's PayNow will be able to make instant, low-cost fund transfers while staying on their own systems. This is meant to further boost trade, travel and remittance flows between the two countries. PayGo resource utilities / Pay per use models [SDG 1, SDG 7, SDG 9, SDG 11, SDG 12, SDG 13]

Pay as you Go (PayGo) - a consumer financing model, enabled by digital payments and technology. Allows customers to acquire productive assets / appliances and drives financial inclusion. The largest use case so far has been the



renewable energy space with Solar PV and lately with Micro-Grid solutions for rural electrification.

The model is quite mature in East Africa, West Africa, Asia and Latin America. Popular deployments include companies like Mkopa and Green light Planet in Kenya, Tanzania and Uganda, Fenix International in Uganda and Zambia, Kingo Energy in south Africa, PEG Africa and Lumos in West Africa. Pre-Paid metering / billing system for electricity and water.

Prepaid billing system is a “pay as you use” system of buying/selling electricity before use. Customers purchase tokens for pre-paid metering through mobile payments. In Kenya and Uganda, this system is credited for increasing cash flow and reduced bad debt for the utility companies, while being convenient and accessible for customers.

Sharing Economy models [SDG 1, SDG 8, SDG 9, SDG 10, SDG 11, SDG 12, SDG 13, SDG 17] The sharing economy as an economic model is defined as a peer-to-peer (P2P) based activity of acquiring, providing, or sharing access to goods and services that is often facilitated by an on-line platform. The model essentially allows individuals / businesses to borrow or rent assets owned by someone else in a marketplace.

The IMF identifies the main components of the sharing economy as peer-to-peer short-term property rentals (e.g Airbnb), peer-to-peer labor services (e.g., Uber),

collaborative finance (e.g., peer-to-peer lending), the gig economy / crowdsourcing platforms (e.g., Freelancer, and Upwork).

The main value proposition that is driving market appeal for shared economy business models is affordability, convenience, and efficiency. Sharing of assets and infrastructure are also being leveraged in health with shared labs, in financial services with shared last mile distribution points (agents, ATM's), and in telecom services with shared connectivity infrastructure (optic fibre networks, towers). Some sharing economy businesses are gaining traction on the African market in areas like:

- Mobility / Ride sharing: (e.g Safeboda in Uganda & Kenya, Gokada in Nigeria, Little ride in Kenya, Tem-Tem in Algeria, Zayride in Ethiopia, Leefa in Namibia,). This is in addition to international players that are on the African market including: Uber, Taxify/Bolt, Didi.
- Human resources: Platforms to connect freelance workers with employers: Upwork (International), Okazi (South Africa), Jolancer (Nigeria) and Itask1job (Cameroon).
- Equipment sharing services: Hello-tractor, Equipment share

Platform cooperatives mainly taking shape in Europe and North America include:

- Fairmondo - a co-operative version of eBay from Germany



- [Modo](#) - a carsharing co-op in Canada
- [Peerby](#) - a benefit corporation in the Netherlands
- [Loconomics](#) - freelance employment platform that is worker owned
- Peer to Peer Lending. [SDG 1, SDG 9, SDG 17]
- Upstart (US)
- iwoca (UK)
- Farmcrowdy (Nigeria) - financing small holder farmers
- PEZESHA in Kenya – digital lending to SMEs

MSME financing [SDG1, SDG 2, SDG 8, SDG 9, SDG 10] Digital is enabling alternative lending models that rely on data for credit scoring and unsecured loans for SMEs.

Some models from across the world include:

In China, [MYbank](#) is using Alipay's technology to perform cost-effective, real-time credit assessments of millions of MSMEs. Ant Finance Group also partnered with over 100 banks to launch the Contactless Loans initiative to support 10 million SMEs to recover from Covid-19. Details – [here](#).

In Bangladesh, [TallyKhata](#) is offering collateral-free credit lines based on the digitization of MSMEs' ledgers in Uganda, following the impact of Covid-19, Standard Bank (Stanbic) in partnership with the United Nations, launched the [Economic Enterprise Restart Fund \(EERF\)](#) to provide low-cost financing for informal sector businesses – including SMEs, savings and credit cooperatives (SACCOs) as well

as village savings and loan associations (VSLAs) to assist in their recovery from the impact of the COVID-19 pandemic. The fund provides three components as a package to the SMEs: financing, digitisation in partnership with fintechs to ensure SMEs and rural organisations digitize their processes and financial records and lastly capacity building (business incubation, financial literacy).

Zimbabwe's leading payments platform, EcoCash, designed and piloted a world-first stock exchange that draws on payments data to provide robust due diligence and credit ratings for prospective listings. [Kopo Kopo](#) in Kenya offers merchants cash advances, based on digital transaction records. [DigiFarm](#) in Kenya and [AgriBuddy](#) in India provide finance in addition to agricultural inputs, farming information and product markets.

Crowdfunding [SDG1, SDG 8, SDG 9, SDG 10]

- [GoFundMe](#) to allow businesses affected by the Covid-19 pandemic to launch fundraisers and accept donations
- Equity crowdfunding - [Seedrs](#), [Kikia](#) (Nigeria), [Rainfin](#) (South Africa), [ThriveAgi](#) (Nigeria)
- [Ketto](#) and [GivelIndia](#) – crowdfunding for health expenses in India
- [Feenix](#) – crowdfunding for education in South Africa

Insurance [SDG1, SDG 2, SDG 3, SDG 9, SDG 11, SDG 13] Technology is enabling new micro-insurance business models



across sectors. In 2019, the GSMA reported around 102 mobile-enabled insurance services in 27 countries with over 14 million policies.

Some case studies include:

- WeSure, the insurance arm of Tencent, developed insurance products including free Covid-19 insurance for Chinese citizens under 65
- FijiCare: Microinsurance in the Pacific - provides total coverage of US\$5,000 for risks such as death, funeral expenses, fire and personal accident for a premium of US\$0.45 a week. Leverages technology to optimise the insurance value chain to become more efficient, affordable and to reach the last mile underserved segments
- Riziki cover – by Equitel Kenya
- Parametric index insurance - Fijicare
- BIMA, a leading insurtech player using mobile technology to provide insurance and health services to emerging markets, works in 14 countries across Africa, Latin America and Asia Pacific and has reached 25 million active users and 800,000 teledoctor consultations a year.

Climate [SDG1, SDG 8, SDG 9, SDG 10, SDG 13]

- Big data allowing climate risks to be factored into investment decisions
- Green bonds –to raise investment funds for green projects
- Crowdfunding for green energy investments
- Index insurance products pay-out based on simple triggers such as wind velocity or rainfall, removing the cost of expert assessment are already being piloted

across Africa and Asia

- Kilimo Salama model by Syngenta in Kenya, an insurance program designed specifically for smallholders, helping farmers cope with climate change and devastating weather shocks.
- Traditional crop insurance relies on expensive farm visits to verify claims. Kilimo Salama did not visit the farms, but instead used automated weather stations and mobile payments. These dramatically reduced administrative costs, finally enabling a premium price that millions of farmers could afford.
- Traceability in global supply chains from sourcing of materials, to manufacturing and distribution -to promote sustainable sourcing/consumption decisions. Some examples include e-livestock global launched in Zimbabwe, Tru-trade Africa.
- **Savings mobilisation, enabled by digital** [SDG 1, SDG 8, SDG 11, SDG 17]
- Kenya's M-Akiba Bond is a Retail Bond issued by the government to raise money to fund infrastructure projects. The product was fairly successful in bringing a new broad-based retail investor group into the market for government paper: 85 percent of customers had never bought a bond before and buyers were distributed across virtually all of Kenya's 47 counties. M-Akiba still stands as the first mobile treasury instrument to be sold in Africa.
- The Solomon Islands National Provident Fund's "You Save" account enables people to pay money into their



retirement savings accounts using a simple three-digit code to transfer airtime credit

- Rwanda's "Ejo heza" long term savings scheme provides all citizens and mainly the informal sector with the opportunity and incentives to save voluntarily and to mitigate against the risk of old age poverty.

Water and sanitation. [SDG 6] City taps –clean water for urban poor

Sarvajal - in India serves over 7.2 million people with franchised water ATMs; automated water dispensing units where people can pay per use. Customers purchase prepaid cards, then top them up by paying agents in cash or via mobile payments. With over 620 water ATMs in 20 Indian states, Sarvajal is using DF tools to sustainably serve poor communities with

Box 2: Financing Digital Inclusion: The Option of “Digital Inclusion Bonds”xlvi

safe, convenient water. The need to invest in digital inclusion cannot be overstated. The Covid-19 pandemic made it even more crucial. Investing in digital inclusion projects however requires mobilizing significant resources, and for some countries this competes with several critical priority needs in other social and economic sectors.

Sustainable financing frameworks (green, social, sustainability bonds) that have been successfully used to-date across the world could be used to meet the challenge of digital inclusion, potentially unlocking significant investment capital. The UN reports 84 % of asset owners are either pursuing or actively considering sustainable investments.

Namibia already has an example in this regard. Bank Windhoek (under the Capricorn group) successfully issued Namibia's first Green Bond, currently listed on Namibia's Stock exchange. Following its first successful green bond, Capricorn group reports their key take away - that there

is a lot of funding out there that can be leveraged. “We have consequently positioned ourselves to connect global funding with project needs in Namibia - to be the channel to mobilize funding from the rest of the world and bring it to Namibia.” Through digital inclusion bond financing, companies, governments and multilateral organizations can raise funds through international capital markets, while supporting digital inclusion efforts by either designating a bond's use of proceeds to specific digital inclusion projects or tying the bond's coupon to the achievement of digital inclusion key performance indicators. Investments can be in broadband infrastructure and affordable access, digital skills training, financial inclusion, and access to quality healthcare and education, among other priorities.

Some early adopters in issuing digital inclusion bonds include Mastercard, Bank of America, African Development Bank, the Government of Mexico, and Wells Fargo.



4 Key takeaways from the assessment

Digital technologies and innovations have and continue to transform the financial services sector – and therefore have a strong role to play in impacting how well governments, businesses and individuals can mobilize, allocate and spend finances, with alignment to sustainable development.

The DF ecosystem assessment for Namibia seeks to understand how best DF / innovations can be leveraged to harness the financial system and align financing with Namibia's sustainable development priorities. Looking at the key components of the DF ecosystem in Namibia and case studies from across the world, the assessment identifies gaps, opportunities and potential pathways for Namibia to leverage DF for sustainable development financing.

The assessment reveals a strong potential for DF innovations to contribute to financing sustainable development in Namibia. The potential lies in how such innovations can improve how government mobilizes, allocates and spends finances; and how businesses and individuals access financing, allocate the financing, manage financial risk and the consumption choices they make.

Various case studies from comparable countries provide evidence of what can be achieved but also provide good case

studies for Namibia as it embarks on similar projects. The assessment points to the need to improve the foundations of the DF ecosystem for Namibia to be able to unlock the potential and fully reap the benefits of digital financing.

The assessment also points to the need for Namibia to prioritize some catalytic projects and initiatives. Indeed, while the potential is high, the effort and investment needed is not negligible, including the need to improve DF infrastructure, innovate in DFS, and where needed, disrupt existing business models.

Select catalytic projects and policy initiatives need to be identified and implemented successfully to set the pace for further investment in DF and innovation, specifically those aligned with sustainable development.

In Part 2 of this report, we use the findings from the assessment to recommend a strategy for how Namibia might leverage DF for financing its sustainable development priorities.





PART 2:

DIGITAL FINANCING STRATEGY FOR NAMIBIA



5 Introduction

This strategy was developed from in-depth understanding of the gaps and opportunities identified in the SDFE assessment. It proposes some catalytic initiatives that will unlock the potential for DF to contribute to Namibia's sustainable development priorities. Both the assessment and this strategy constitute the digital financing component of the INFF.

The aim is to support the GRN in developing and harnessing its DF ecosystem to deliver financing for its national priorities and support the socio-economic recovery of the country from the COVID-19 pandemic.

The strategy starts by portraying the institutional setup within which the strategy should be implemented. It then addresses the key initiatives that need to be undertaken to improve the foundations of the DF ecosystem, and there after delves into the key catalytic opportunities for digital financing in Namibia. Lastly, the strategy provides a high level roadmap for implementing the strategic recommendations herein.

5.1 Institutional arrangements

The digital financing strategy is a subset of the overall INFF-defined integrated national financing strategy. It aims to identify digital financing opportunities that can catalyze financing towards SDG-related national development priorities as articulated in Namibia's medium and long-term development plans - the country's

vision 2030, the Harambee Prosperity Plan II (HPP II) and the National Development Plan (NDP5). The overall INFF process aims to facilitate the mobilization of required resources more effectively from public and private sources for strengthening Namibia's financing architecture to enhance the quality and scale of financing of national development priorities and the SDGs.

The INFF was commissioned by the GRN, with support from the United Nations in Namibia. The process is overseen by the INFF oversight committee under the leadership of the Ministry of Finance and the National Planning Commission.



- Ministry of Finance (MoF)
- National Planning Commission

- Ministry of Finance (MoF)
- National Planning Commission (NPC)
- Development partners

- Ministry of Finance (MoF)
- National Planning Commission
- Ministry of ICT (MoI CT)
- Bank of Namibia (BoN)
- Development partners



As depicted above, the digital financing strategy sits within the institutional framework of the INFF, led by the Ministry of Finance (MoF) and the National Planning Commission (NPC) with the participation of development partners. The digital financing strategy is spearheaded by members of the INFF financing strategy committee (MoF, NPC) together with the lead stakeholders in the financial sector (BoN) and digital sector (MoICT).

The implementation of the strategy will require the participation of additional government ministries and agencies, such as those that oversee the innovation, trade, and infrastructure sectors. The detailed action plan and roadmap sections of this strategy will specify the various institutions of government that need to be involved in the implementation of the strategy.

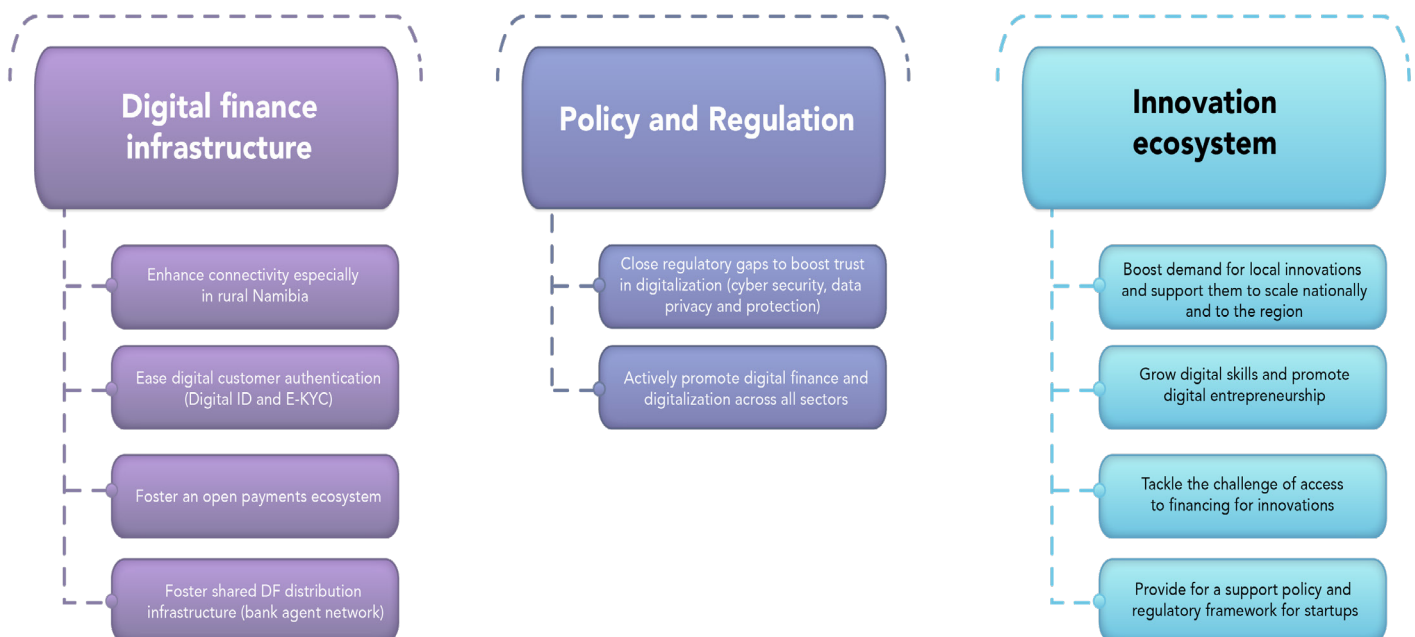
6 Harnessing digital financing for Namibia’s development priorities

6.1 The digital finance foundations

Harnessing the DF ecosystem to deliver financing for Namibia’s national sustainable development priorities requires that key DF foundations are in place. For DF to benefit the country and its citizens equally, some gaps in the foundations of the ecosystem need to be addressed.

The figure below summarizes the key foundational aspects of the DF ecosystem that need to be attended to for the dividends of DF to be fully reaped in Namibia.

In what follows, we spell out the main interventions needed by each ecosystem component.



6.1.1 Digital Finance Infrastructure

The following foundational DF infrastructure interventions or investments need to be implemented or fast tracked given their impact on the economy, the opportunities they will unlock and the sense of urgency for digital transformation as brought about by the Covid-19 situation.

Enhance digital connectivity, especially for rural Namibia

The broadband policy already clearly identifies the main infrastructure gaps for digitization. Fast tracking the implementation of the critical infrastructure as summarized below is required.

Improve broadband connectivity:

- Incentivize telecommunications providers to invest in upgrading to 4G network.
- Promote infrastructure sharing especially for rural sparsely populated areas to bring about efficiencies in cost of delivery and therefore return on investment. This can be done through policy to ensure adoption and compliance and to avert any anti-competitive behavior among providers.

Improve access to electricity:

- Promote use of off-grid solar systems for powering sparse rural homes in Namibia.
- Leverage PayGo solar model (powered by DF) to enable affordability for rural households.

Improve access to and ownership of mobile devices:

- **At policy level:** Regard mobile devices

as essential tools for access to basic services and for leading active economic lives. Provide policy incentives for lower income populations to acquire them. Using universal service and access funds (USAF) to increase access to devices -example of Costa Rica ; and subsidies to deserving low income populations- example of the “Smart device subsidy in Malaysia.

- **At market level:** Foster business models that drive device affordability for rural low income Namibians. Asset financing models that allow the purchaser to stagger the payment over a few months. This model is already working in Namibia for acquiring smart phones – but only for those employed in the formal sector. There is need to extend the same to the informal rural sector. A case to reference is that of Copia , a Kenyan based company that uses the agent model to reach the base of the pyramid consumers for smart phone acquisition.

Ease digital customer authentication.

Digital ID and E-KYC: Provide access to the national digital identity system as a KYC utility to various digital financial service providers to ease customer due diligence (e-KYC). A prominent example in this regard is India and their Adhaar system which, according to the World Bank , is estimated to have reduced the cost of verifying customers from US\$23 to US\$0.15, while reducing the time taken from 5-7 days for manual authentication to a few seconds for e-KYC.



Foster an open payment ecosystem

Fast track the implementation and enforcement of an open payments ecosystem as envisaged in the NPS vision – including interoperability, open APIs and Data, stakeholder collaboration, access, transparency and inclusivity. This will power open innovation and enable new innovative players to leverage existing payments infrastructure to offer more value added services.

Build a shared DF distribution network

Consider a shared agent network for efficiently serving rural Namibia. Bank agents offer a better business case for serving rural sparse Namibia, compared to other distribution channels. However, proprietary agent points will hardly achieve the scale and efficiencies needed in rural sparsely populated areas. An approach that allows several financial service providers to share agent banking infrastructure and technology is a recommended solution.

Details on how the above recommendations can be implemented and the level of effort required are provided in annex 8.1.1

6.1.2 Policy and Regulation for Digital Finance

Namibia's policy and regulatory environment is generally deemed conducive for DF to grow. DF is well anchored in national and sectoral policy documents – including the NDP 5, the financial sector strategy, the MICT strategic

plan, the national broadband policy, and the national payments system vision and strategy. The regulator - Bank of Namibia - is seen to play an enabling role in fostering a modern payments system to serve the evolving needs of the sector and economy. Namibia has passed key enabling legal provisions for DF to thrive, including the e-money guidelines of 2019 and the electronic transactions act of 2019.

That said, there are some policy and regulatory interventions needed to foster a more enabling environment for Namibia's DF ecosystem to better contribute to sustainable development. The proposed policy and regulatory interventions include:

Fostering increased trust in digitalization and digital finance through closing some existing regulatory gaps, through:

Cyber security: Fast Track the passing of the cyber security act. Growth of digital transactions calls for a robust cyber security framework. Namibian banks are already prone to cyber-attacks. Data privacy and protection: Fast track the passing of the Data privacy and protection Act. Whereas the information technology policy (2008) advocates for information security and privacy, the lack of a specific legal framework for the same is a significant gap. A bill is said to be in place. There is need to fast track its enactment. Active promotion of digital finance and digitalization in sectoral policies and by policy makers. Mainstream DF and digitalization across all sectors of the economy.



The full dividends of digitalization can only be reaped when various sectors diffuse this into their strategies and action plans and think strategically about how digitalization can contribute to solving the challenges in their sectors.

Promote test and learn approaches: Digital transformation is a journey that is perfected through testing, learning, iterating and scaling. The promotion of approaches that allow for such to happen – including sandbox environments and incubation hubs will foster innovation and adoption of DF innovations. Promote proportionate KYC requirements and documentation for accessing financial services by the informal sector.

Policy and regulatory, and incentives for inclusivity - to specifically promote the inclusion of women, youths, the elderly, the disabled and MSMEs. Details on how the above recommendations can be implemented and the level of effort required is provided in annex 8.1.2

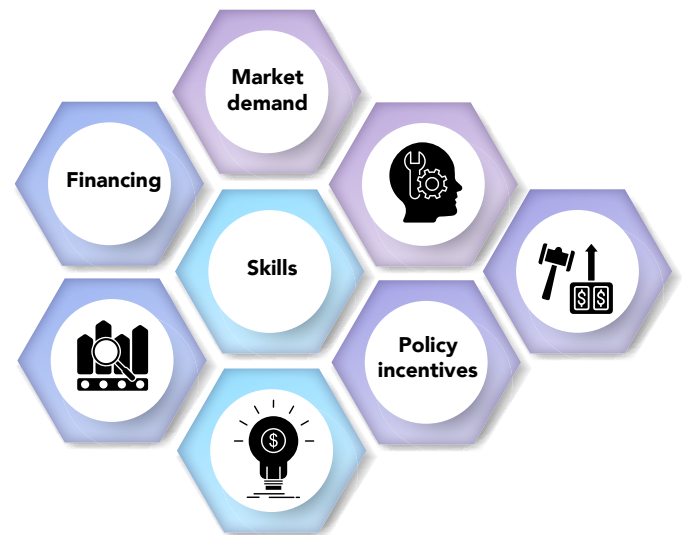
6.1.3 Innovation ecosystem

Namibia’s innovation ecosystem, while still in quite an early stage, has a growing level of vibrancy. The fintech sector, however small, is relatively more mature with a few players having attained recognizable traction on the market. Various initiatives and projects

on the part of government, development partners and private sector are contributing to the growth of the innovation ecosystem.

The Covid-19 pandemic has attracted more attention to innovation as a source for solutions to operational and livelihood challenges for government, businesses and the people of Namibia.

That said the ecosystem presents significant gaps and opportunities for growth and contribution to the development ambitions of the country. Below we provide a summary of the interventions needed address the various gaps and opportunities in the innovation ecosystem.



There is need for:

Market demand: Boosting demand for local innovations and support them to scale nationally and into the region. This effort could include, incentives for consuming local solutions, promoting open innovation within public sector to crowd in local private innovators, and tackling digital literacy among users.

Skills: Growing digital skills on the demand and supply side of digital services and promote digital entrepreneurship. This effort could include strengthening innovation hubs and incentivizing skilled Namibians to get involved in innovation.

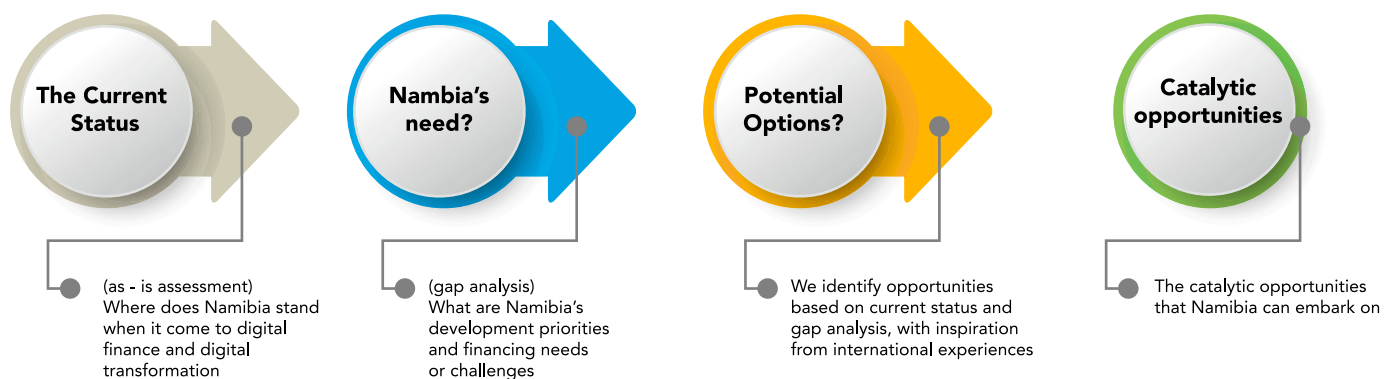
Financing: Tackling the challenge of access to financing for innovations. This effort could include incentivizing Namibia’s corporate sector and private investors to invest in local innovators. Providing for a supportive policy and regulatory framework for start-ups, including a streamlined regulatory

process e.g through one-stop center for formalization of startups and enacting a “Start-up Act” for Namibia.

Detailed recommendations on growing the digital innovation ecosystem, how they can be implemented and the level of effort required are provided in Annex 8.1.3

6.2 Catalytic digital financing opportunities for Namibia

This section provides a selection of catalytic opportunities identified as most relevant for Namibia today. Whereas a host of opportunity areas were identified in Part 1 and ensuing recommendations presented, some choices need to be made on what opportunities ought to be embarked upon to catalyze growth of the DF ecosystem and impact Namibia’s development agenda.



The analytical process and selection decision on the catalytic opportunities is depicted in the figure to the above.



To arrive at a select catalytic opportunity, we start by assessing what the current state (as-is assessment), then look at what Namibia's needs are (gap analysis), then identify potential options by looking at where we start from, what the needs are, where the opportunities lie, drawing inspiration from int'l experiences in the process etc, then we recommend a strategy and roadmap.

The outcome of this analysis led to the catalytic opportunities discussed in the sections that follow. The SDFE assessment pointed towards strong potential for innovations in DF to contribute to financing sustainable development for Namibia. The potential lies in improving how government mobilizes, allocates and spends finances; and impacting how businesses and individuals access financing, allocate it, and manage financial risk.

The catalytic opportunities and pathways on how DF innovations can help align financing with sustainable development outcomes for Namibia can be grouped into four key broad areas.

- a Deepening financial inclusion and decentralization of the financial system,
- b Improving transparency, accountability, efficiency and service delivery in the public sector and collaboration with private sector,
- c Mobilizing domestic retail savings for

- d impactful projects and businesses, and
- d Re-thinking the provision of financial protection, risk management, risk transfer and risk diversification.

The table below provides a snapshot of these catalytic opportunities and how they link to / impact the development priorities of Namibia. The table is followed by a detailed discussion of each opportunity.



Figure 7: Catalytic Digital Financing Opportunities and linkages to Namibia’s development priorities

Digital financing Catalytic opportunities for Namibia		Linkages to Namibia's development priorities (NDP 5, HPP2)			
		Economic progression pillar	Good governance pillar	Social transformation pillar	Environmental sustainability pillar
1	Deepening financial inclusion and decentralizing the financial system for those currently un(der) served				
1.1	Digital finance innovations can deliver deeper and more inclusive access to finance for Namibians	<ul style="list-style-type: none"> • Inclusive, equitable and sustainable growth • Enhanced productivity of priority economic sectors • Improve access to financing for entrepreneurs • Employment creation 		<ul style="list-style-type: none"> • Enhanced citizen participation and engagement • Reduced inequalities • Economic integration of marginalized communities 	
1.2	Financing of Micro, Small and Medium Enterprises (MSMEs) through alternative digital lending models			<ul style="list-style-type: none"> • Reduced inequalities • Economic integration of marginalized communities 	
1.3	Digital finance can enable the microfinance industry to serve rural informal Namibia better			<ul style="list-style-type: none"> • Economic integration of marginalized communities 	
2	Improving transparency, accountability, efficiency and service delivery in the public sector and collaboration with private sector				

2.1	Enhancing Namibia's public finance management	<ul style="list-style-type: none"> Increased financing available for priority economic sectors 	<ul style="list-style-type: none"> Improved accountability and transparency Strengthening anti-corruption mechanisms Improved performance and service delivery Strengthened monitoring and evaluation system 	<ul style="list-style-type: none"> Enhanced citizen participation and engagement Reduced inequalities Economic integration of marginalized communities 	
2.2	Enhancing public service delivery and ease of doing business. [e-government portal with e-payments, single window model for ease of doing business]	<ul style="list-style-type: none"> Strengthening Namibia's position as a transport and logistics hub Enhance productivity for priority economic sectors 	<ul style="list-style-type: none"> Key information about public services is available online Improved performance and service delivery Improved public sector integration and coordination 	<ul style="list-style-type: none"> Reduced inequalities Economic integration of marginalized communities 	
3	Mobilize domestic retail savings for impactful projects and businesses				
3.1	Mobilizing domestic savings from many small scale savers in the informal sector	<ul style="list-style-type: none"> Increased financing available for priority economic sectors 		<ul style="list-style-type: none"> Inclusion / economic integration of marginalized communities 	
3.2	Crowdfunding platforms for mobilizing financing for impactful projects and businesses	<ul style="list-style-type: none"> Increased financing available for priority economic projects 		<ul style="list-style-type: none"> Increased financing available for priority social projects 	<ul style="list-style-type: none"> Increased financing available for or priority environmental projects
4	Enabling new ways to provide financial protection, risk management, risk transfer and risk diversification				
4.1	Enabling new insurance models				
4.2	Enabling sharing economy models				
5	Leveraging fintech to embed ESG / SDG considerations into Namibia's financial system				
	Leveraging fintech to embed ESG / SDG considerations into Namibia's financial system				<ul style="list-style-type: none"> Enhance disaster risk governance Promote environmentally- sound investments and production systems Enable carbon markets and drive greener production choices

6.2.1 Deepening financial inclusion and decentralizing the financial system.

An inclusive and healthy financial system benefits all participants; all population segments can access financial tools that are appropriate, flexible, convenient, quick and affordable; entrepreneurship is encouraged; banks are enabled to diversify their customer base and their portfolios of services/ products.

Namibia has a commendable level of financial sector development on the African continent. A significant share of the population (77 percent) has access to bank accounts with high usage of digital payments (71 percent). However, usage of savings and borrowing is very low at 9 and 34 percent respectively.

The large informal sector in Namibia is either un-served or underserved to a significant extent. This is seen to be linked to the limits of current business models by financial services providers in terms of how viably they are able to serve lower income, last mile population segments at both the distribution level (product, pricing, placement) and customer engagement/promotion level.

DF innovations have the potential to close this gap. 6.2.1.1 Deeper and more inclusive access to finance for Namibians DF innovations provide for an opportunity to catalyze Namibia towards deeper financial inclusion and financial health for its underserved citizens. As has been observed from other countries, leveraging digital innovations

has enabled providers (old and new) to deliver low cost, easy to access and use, customized products and services. This includes last mile distribution channels (mobile money, agent banking) that enable efficient delivery of services in remote and sparsely populated regions; and fintech products like mobile savings, digital lending, micro-insurance.

Innovation in DFS in Namibia is currently driven by banks, sometimes in partnership with fintech players. Banks have played a strong role in the financial development achievements in the country to date and command a lot of public trust. That said, innovation and adoption of DFS is seen to be moving at the pace and liking of the incumbents.

There is need to stimulate the market and open up for innovation and competition from new players through: Enabling new players to affordably leverage existing financial infrastructure (payments, data, etc.).

Fostering partnerships between incumbent banks and new players for purposes of better serving the currently underserved population. Identifying new digital solutions and business models that can be supported to go to scale. This can be done through well-crafted innovation challenges that bring together this innovative power of new players and the institutional and market capabilities of incumbent players. Innovating last mile delivery business models like shared agent banking networks.

6.2.1.2 Financing of Micro, Small and Medium Enterprises (MSMEs)

The challenge of access to finance for MSMEs in Namibia is one that is long recognized and has attracted various notable interventions, present and past. The Covid-19 situation has stressed, even more, the need to support MSMEs - as the lifeline for a large part of the low income population - to be resilient and build back stronger.

The low level of financing flowing to MSMEs remains a concern in Namibia. The challenge of MSME financing is mainly associated with the high cost of customer acquisition and due diligence, insufficient data to make accurate credit assessments, uncertain customer lifetime value and high costs of distribution and servicing.

New finance-led models are however providing the means to viably serve MSMEs with cost efficient and effective ways of leveraging digital to do loan origination, risk assessment, make loan disbursements and monitor repayments.

An opportunity for Namibia lies in digitizing MSME business operations in order to collect sufficient data that can be used to build alternative credit scoring models. Cash flow data on sales and inventory, for example, has been found to have high predictive power as traditional credit scoring techniques – yet the former are more efficient and inclusive at scale.

Simple and affordable applications for digitizing MSMEs are becoming common place on the continent providing services such as accounting, monitoring business operations, and business analytics. Such digital applications help MSMEs manage their businesses better, while providing lenders with accurate information on the health of the business and repayment rates.

The DBN, which currently runs the national SME fund, affirms that they face a significant challenge of most SMEs not being bankable. Most SME's applying to the fund are said to not have enough documentation, lack business records and therefore are hard to appraise for credit. Even further monitoring of their businesses after the credit is disbursed is said to be problematic for DBN.

This makes SMEs very risky to lend to. DBN contends that adoption of digital solutions for MSMEs' record keeping, cash flow management, tracking performance and risk management would be a significant step in improving financing flows to these businesses.

An interesting case of leveraging digitalization to finance SMEs can be found at Standard Bank (Stanbic) in Uganda. Following the impact of Covid-19, the bank, in partnership with the United Nations, launched the Economic Enterprise Restart Fund (EERF), to provide low-cost financing for informal sector businesses – including SMEs, SACCOs as well as VSLAs.



The financing comes with a requirement for the SMEs to adopt digitization of their business transactions and financial records – to enable subsequent monitoring by the bank and become the basis for follow on lending. The initiative also includes a capacity building (business incubation, financial literacy) component.

With the above in mind, a deliberate effort on the part of government, financial service providers, and development partners to encourage MSMEs to adopt digital solutions for their businesses will be a good medium-term solution towards increasing access to financing, while improving business management of MSMEs for resilience and sustainability. Digitalization will also help in formalizing MSMEs and linking them to markets – both local and international.

6.2.1.3 Enabling the micro-lending industry to better serve rural informal Namibia

With over 420 registered micro lenders, serving over 230,300 borrowers, and a deep reach into rural Namibia, there is an opportunity to leverage the potential of microlending to channel more funds towards micro-enterprises and to boost the informal sector. Microlenders mainly lend for consumption purposes and rarely for productive purposes.

Digitalization and DF solutions can improve the management and operational efficiency of micro-lenders, while improving their

ability to assess and make better credit decisions for income generating and livelihood enhancing projects in rural, informal Namibia.

6.2.2 Improving transparency, accountability, efficiency and service delivery in the public sector.

Digitalization is generally credited for reducing asymmetries of information. securitizing of information on transactions amongst large numbers of small, widely dispersed players and thereby improving transparency and accountability in management and governance. This applies to both public sector and private sector business.

For the government of Namibia, we see an opportunity for DF and digitalization to play a catalytic role in public finance management - in efforts to better mobilize / collect finances, improve the deployment and allocation of resources, and lastly improve its spending and procurement processes to impact sustainable development. We also see a strong opportunity for digitalization to contribute significantly to enhancing service delivery to citizens and the business environment.

6.2.2.1 Enhancing Namibia’s public finance management

Namibia has already taken commendable steps in digitizing government collections - with the introduction of the Integrated



Tax Administration System (ITAS). The ITAS which is still at an introductory stage, currently allows for online filing of tax returns, those managed by the Namibia Revenue Authority (NAMRA) - namely corporate tax, custom duties and indirect tax (VAT).

All other levies collected by other government agencies (all types of licenses, royalties, fees) are still paid by cash or bank transfers. Also, ITAS is yet to fully integrate instant payment recognition and multiple payment options. Currently, payments by bank transfer take on average four days to be recognized by URA and for issuance of receipt. This, according to NAMRA officials, still drives more direct cash / POS payment at NAMRA offices.

Full digitalization of the Namibia’s tax and levy collections (filing and collection / payment) has potential to:

- Increase tax compliance through:
- An easier process for the tax payer which leads to more people complying.
- A more automated process, freeing up time for NAMRA staff to invest in tax sensitization and compliance monitoring.
- Create efficiencies in the cost of tax administration
- It is currently costly and might not be economically viable for NAMRA to try to scale current tax administration processes to rural / informal Namibia. The informal sector is reported to employ approximately 51 percent of

total employed population, but with low levels of business formalization. It is estimated that only 1.62 per cent of informal businesses are registered for tax and social security registration 0.69 per cent have social security registration.

There is empirical evidence to confirm the impact of digitalization on tax administration. Results from a World Bank study on the impact of e-filing in Tajikistan showed significant achievements in terms of lower compliance costs for firms that adopted e-filing; a doubling of tax payments among firms previously more likely to evade paying taxes by disrupting collusion with officials.

These firms also paid fewer bribes, as e-filing reduces opportunity for extortion. In Ethiopia, the introduction of electronic sales registration machines (SRMs) enabled revenue authorities to monitor formal business transactions leading to significant increases in tax revenue for both income taxes (12%) and VAT (48%) . SRMs have also been introduced in Rwanda and Malawi.

6.2.2.2 Enhancing public service delivery and ease of doing business

Digitalization and DF present strong potential to improve government service delivery. Namibia’s NDP 5 is also clear on the need to leverage ICT to improve service delivery for citizens and the business community.



Implement an e-government portal with e-payments capability: Providing a single portal for citizens and businesses to access government information and services in a timely, transparent, and efficient manner has the potential to yield significant benefits for Namibia. Examples from Rwanda and Kenya provide empirical evidence of the dividends of digitalization of government services and aggregating the access into a single access portal. Rwanda's [Irembo e-government portal](#) is the gateway for all government services for citizens and businesses. Established through a public-private partnership in 2014, to-date an estimated 100 government services are accessible through the portal. The Rwanda Development Board (as reported by CGAP) estimated that the cost of collecting payments through cash and paper processing was around 31 percent of total cost of service delivery – hence the shift to the online portal and digital payments including internet banking, mobile banking and mobile money.

Kenya's [e-citizen platform](#) processes over 90 percent of payments using mobile money. Government agencies in Kenya have reported both increased revenue collections and citizen compliance as well as reduced costs, especially in the long run when less maintenance is required and as technology evolves.

Implement the single window model and one-stop border posts for ease of doing business. There is strong opportunity for DF and digitalization to improve the

ease of doing business and strengthen Namibia's ambition of becoming a regional logistics hub. A single window model and one stop border arrangements - with digitized processes, including clearance formalities, logistics coordination, business to business transactions and payments has the potential to improve transparency and accountability and simplify cross border trade and payments. With the advent of the ACFTA, the dividends for Namibia as an efficient gateway to the region could be significant.

6.2.3 Mobilizing retail savings for impactful projects and businesses

6.2.3.1 Mobilizing domestic savings from many small-scale savers in the informal sector

There are emerging examples of how DF is enabling financial services providers and governments to efficiently mobilize funds from lower income segments in the informal economy. Namibia's informal sector is too large (in terms of number of people) to ignore – employing 51 percent of the labor force.

More so, with 77 percent of Namibia's population owning a bank account, yet only 34 percent saving, there could be an opportunity to tap into the savings potential of this segment. Beyond the amount of savings mobilized, there is a strong



motivation in providing the informal sector with an opportunity to invest their savings in financing key development projects that directly impact them.

Case studies in this regard include examples of Kenya, Solomon Islands and Rwanda. In Kenya's, the M-Akiba Bond issued by government to raise money to fund infrastructure projects was credited for being fairly successful in bringing a new broad-based retail investor group into the market for government paper. 85 percent of customers had never bought a bond before and buyers were distributed across virtually all of Kenya's 47 counties. M-Akiba still stands as the first mobile treasury instrument sold in Africa.

The Solomon Islands has a National provident fund, the "You Save" account, that enables people to use airtime to save into their retirement savings accounts using a simple three-digit code. In Rwanda "Ejo heza" is a long term savings scheme providing all citizens with the opportunity and incentives to save voluntarily for retirement. Opening the account and saving is all done on a simple mobile phone.

6.2.3.2 Crowdfunding platforms for mobilizing financing for impactful projects and businesses

Crowdfunding is seen as a potential solution to Namibia's challenge of financing

innovators and early-stage entrepreneurs. While some Government and development partners have set up innovation funds, these are not sufficient – pointing to the need to tap into the private sector.

Angel investing in Namibia, as in most other countries on the continent, has not increased, while options like private equity and venture capital shy away from early-stage startups. Powered by digital platforms, crowdfunding is growing - globally and in Africa - as an alternative mechanism for entrepreneurs, startups, and non-profits to raise capital. Beyond the capital, crowdfunding also comes with non-monetary benefits – whereby an entrepreneur taps into larger social networks to pitch an idea.

In this manner, the entrepreneur begins to create mindshare and market share within a virtual community. This community then becomes a critical resource for the entrepreneur, not only for the funds they are investing in the project or business, but for the ideas they are sharing.

The latter benefit is specifically relevant for innovations in Namibia that seek to attract a larger market beyond the domestic market.



Crowd funding models		Relevance for Namibia
Donation based model	Funds for a cause with a social purpose	For innovations that tackle some of the social and environmental challenges, innovators in Namibia can tap into the mid and upper class Namibians to attract financing. This gives the latter an opportunity to directly contribute to community projects / innovative solutions that benefit the nation. e.g., Namstarter in Namibia
Reward based model	Similar to a pre-purchase agreement for a product or service	For Namibian innovators building unique products and services that can be potentially exported, crowdfunding is both a fundraising and marketing opportunity – allowing them to begin building market awareness and market anticipation for their final product. For Namibia's unique tourism sector, this model might be suitable for entrepreneurs coming up with innovative tourism services / packages –but need financing to take their ideas to market.
Lending based model	Peer to peer lending	Given the inadequate financing flowing from the formal financial institutions to the large informal sector, this model could be a good alternative – since peers in the informal sector understand each other and the risks involved in their businesses. Platforms that can seamlessly and securely connect surplus funds to those in need of funding, could potentially unlock financing flows to this sector.
Equity based model	Investors receive an equity share in the business in return for their investments	Suitable for funding early stage startups with high growth potential. This model offers middle class and high net worth individuals an opportunity to invest, with a potential return, into ideas /businesses in which they have a personal interest /concern, see a social utility or are passionate. The crowdfunding platforms become a good avenue to expose ideas / projects to the market



6.2.4 Enabling new ways to provide financial protection, risk management, risk transfer and diversification

The Covid-19 pandemic has highlighted the importance of risk management and the need for financial protection for workers, businesses, and households. Insurance coverage, especially among the lower income segments, is low - a factor of low awareness, low incomes but also lack of appropriate products to suit the needs of this target population.

6.2.4.1 Enabling new insurance models

Technology is enabling new micro-insurance business models across sectors, and the same could work for Namibia. Namibia is today prone to effects of climate change with frequent dry spells and unpredictable rainfall. Mitigating such risks for the low income earners involved in informal agricultural businesses is vital.

In 2019, the GSMA reported around 102 mobile enabled insurance services in 27 countries with over 14 million policies. Some case studies include: WeSure, the insurance arm of Tencent in China, developed insurance products including free Covid-19 insurance for Chinese citizens under 65. FijiCare, in the Pacific provides total insurance coverage of US\$5,000 for risks such as death, funeral expenses, fire and personal accident for a premium of US\$0.45 a week. It has leveraged technology to optimize the insurance value chain to

become more efficient, affordable and to reach the last mile underserved segments. FijiCare has also launched parametric index insurance to cover against the impact of natural hazards like cyclones and flooding in the Pacific region. BIMA is a leading insurtech player using mobile technology to provide insurance and health services to emerging markets in 14 countries across Africa, Latin America and Asia Pacific and has reached 25 million active users and 800,000 tele-doctor consultations a year.

6.2.5 Leveraging fintech to embed ESG / SDG considerations into Namibia's financial system

The financial system plays the vital role of reallocating resources from savers to investors, monitoring corporate control, facilitating trade, hedging and diversifying risk. There is a growing push for the financial system to embed the SDGs and specifically environmental, social and governance (ESG) criteria into their strategies and business models.

Financial institutions are seeing a stronger push from both investors and the community they serve to pursue responsible growth in the face of the growing risks of climate change, financial crises and lately the Covid-19 pandemic.

The Namibian financial system has a strong stake in taking SDG / ESG considerations seriously. With its large desert cover, Namibia is a very arid country and is prone



to issues of climate change, with persistent droughts, unpredictable rainfall pattern and scarcity of water. In terms of social welfare, while being an upper-middle income country, Namibia has high levels of socio-economic inequalities and challenges with job creation.

These aspects are increasingly of relevance to the financial sector in terms of how best it can contribute to the sustainability agenda through its financing and risk management capabilities. Reporting on sustainability aspects is also becoming a major requirement, with the International Financial Reporting Standards set to standardize and mandate this .

A major challenge for financial service providers (banks, wealth managers, insurance companies, capital markets) to embed sustainability aspects into their business models and financing decision making is that of assessing, accounting, and pricing such new ESG aspects without adequate data and data analytics tools. Fintechs and digitalization can play a strong role in enabling the financial sector players in Namibia to price ESG aspects.

Alternative data and associated analytics, powered by new technologies like artificial intelligence and distributed ledger technologies can enable financial products that take into consideration the sustainability agenda. Fintech platforms providing services like data collection and relaying, rating engines and measurement

tools are starting to gain traction. The table that follows delves into the implementation aspects of the catalytic opportunities discussed above.

For the various interventions, the level of implementation effort and expected impact are ranked as high, medium or low, the time it would take to implement these interventions is also estimated as either short, medium or long term. For each intervention, the implementing champions and key stakeholders are also presented.



6.2.5.1 Implementing the catalytic opportunities: Level of effort required and expected impact

Digital financing Catalytic opportunities for Namibia	Interventions	Who		Level of effort			Expected Impact	Implementable			
		Champion(s)	Implementers	Complexity	Already in plan	Cost		ST [< 1yr]	MT [2-3yrs]	LT [>4yrs]	
1	Deepening financial inclusion and decentralizing the financial system for those currently un(der) served										
1.1	Digital finance innovations can deliver deeper and more inclusive access to finance for Namibians	Enabling new players to leverage existing financial infrastructure (payments, data, etc) affordably. [Policy, promotion and stakeholder engagement]	Bank of Namibia	Payments Association of Namibia (PAN).	Low	Partially	Low	High	✓		
		Fostering partnerships between incumbent banks and new players for purposes of serving better the currently underserved population. [Policy, promotion and stakeholder engagement]	Bank of Namibia PAN	Members of PAN	medium	partially	Low	Medium	✓	✓	
		Identify new digital solutions and business models and support them to scale - through well-crafted innovation challenges [project design and implementation]	Bank of Namibia PAN	Payments Association of Namibia (PAN), Members of PAN Members of PAN Innovation hubs Universities	Low	No	Low	Medium	✓		
		A shared agent network for serving rural last mile Namibia (open to all members of PAN) [project design and implementation]	Bank of Namibia PAN	Members of PAN	Medium	No	Medium	High		✓	

Digital financing Catalytic opportunities for Namibia		Interventions	Who		Level of effort			Expected Impact	Implementable		
			Champion(s)	Implementers	Complexity	Already in plan	Cost		ST [< 1yr]	MT [2-3yrs]	LT [>4yrs]
1.2	Financing of Micro, Small and Medium Enterprises (MSMEs) through alternative digital lending models	Launch a phased SME digitalisation programme across the country. Make SME digitalization a prerequisite for accessing funding from DBN and banks [project design and implementation]	Ministry of Finance, Development Bank of Namibia (DBN) SME division, Namibia Investment Promotion Board (NIPDB)	DBN Commercial banks	Medium	No	Medium	High	✓	✓	
		Identify relevant, easy to use and affordable SME digitalization solutions on the market that can be recommended to SMEs for adoption [Market assessment]	DBN SME division (NIPDB)	SMEs Commercial banks	Low	No	Low	Medium	✓		
1.3	Digital finance can enable the micro-lending industry to better serve rural informal Namibia	Spearhead / Incentivize digitalization of micro lenders - to improve their management, efficiencies, product development and service delivery. Consider shared technology/ infrastructure platforms to make it affordable for micro-lenders to digitize [Policy, promotion and stakeholder engagement]	NAMFISA Micro-Lenders Association of Namibia	Micro-Lenders Association of Namibia Micro-lending companies	Medium	No	Medium	Medium	✓	✓	
		Incentivize micro-lenders to develop and deliver financing solutions for productive use to entrepreneurs / MSMEs in the rural informal sector [Policy, promotion and stakeholder engagement]	NAMFISA Micro-Lenders Association of Namibia	Micro-Lenders Association of Namibia Micro-lending companies	Medium	No	Low	Medium	✓	✓	

Digital financing Catalytic opportunities for Namibia	Interventions	Who		Level of effort			Expected Impact	Implementable			
		Champion(s)	Implementers	Complexity	Already in plan	Cost		ST	MT	LT	
								[< 1yr]	[2-3yrs]	[>4yrs]	
2	Improving transparency, accountability, efficiency and service delivery in the public sector and collaboration with private sector										
2.1	Enhancing Namibia's public finance management	Fully digitalize Namibia's tax and levy collections (integrate e-payments, introduction of electronic sales registration machines) [Policy, project design and implementation]	Ministry of Finance NAMRA	NAMRA	Medium	Yes	High	High	√	√	
		Digitize government's procurement process [Policy, project design and implementation]	Ministry of Finance	Central procurement board of Namibia	Medium	No	High	High	√	√	
		Digitize government payments (government to persons) - e.g social payments [Policy, project design and implementation]	Ministry of Finance	NAMPOST PAN members	Medium	Partially	Medium	High	√	√	
2.2	Enhancing public service delivery and ease of doing business. [e-government portal with e-payments, single window model for ease of doing business]	Implement e-government portal through which government services can be accessed and paid for [Policy, project design and implementation]	Office of the Prime Minister, Ministry of Finance	Ministry of ICT Ministry of Home Affairs and Immigration Various government agencies	Medium	No	High	High		√	
		Implement / fast track the single-window model for ease of doing business and one stop border posts [Policy, project design and implementation]	Office of the Prime Minister Ministry of Trade	BIPA (Business and Intellectual Property Authority) NAMRA	Medium	Partially	Medium	High		√	

Digital financing Catalytic opportunities for Namibia	Interventions	Who		Level of effort			Expected Impact	Implementable			
		Champion(s)	Implementers	Complexity	Already in plan	Cost		ST [< 1yr]	MT [2-3yrs]	LT [>4yrs]	
3	Mobilize retail savings for impactful projects and businesses										
3.1	Mobilising domestic savings from many small scale savers in the informal sector	Conceive and launch national savings initiatives that target the informal sector [Policy, product development, promotion and stakeholder engagement]	Ministry of Finance	Financial services providers	Medium	No	Low	Medium	✓	✓	
3.2	Crowdfunding platforms for mobilising financing for impactful projects and businesses	Foster the use of crowdfunding platforms (local and international) as an alternative financing mechanism. Incentivize local mid and high-income citizens and corporates to fund innovation and entrepreneurship through such platforms [promotion and stakeholder engagement]	Ministry of Finance Ministry of Trade	Platform providers	Low	No	Low	Medium	✓	✓	
4	Enabling new ways to provide financial protection, risk management, risk transfer and risk diversification / sharing										
4.1	Enabling new insurance models	Promote digital enabled innovation in the insurance industry. Introduce a sandbox environment for new players / services in priority sectors like agriculture, climate change, health. [Policy, product development, promotion and stakeholder engagement]	NAMFISA	Insurance providers	Medium	No	Low	Medium		✓	
4.2	Sharing economy models	Incentivize models that promote the sharing of infrastructure, equipment, assets to maximize economies of scale / efficiency in the priority sectors of the economy [Policy, promotion and stakeholder engagement]	Office of the Prime Minister (innovation office) Ministry of Trade	Various ministries and agencies Private sector players	Low	No	Low	Medium	✓	✓	

Digital financing Catalytic opportunities for Namibia	Interventions	Who		Level of effort			Expected Impact	Implementable			
		Champion(s)	Implementers	Complexity	Already in plan	Cost		ST [< 1yr]	MT [2-3yrs]	LT [>4yrs]	
5	Leveraging fintech to embed ESG / SDG considerations into Namibia's financial system										
3.1	Embed ESG / SDG considerations into project financing decision making by both public and private sector	Conceive and launch national savings initiatives that target the informal sector [Policy, product development, promotion and stakeholder engagement]	Office of the Prime Minister Ministry of Finance	Government ministries and agencies	Medium	No	Low	High		✓	
		Institute ESG considerations into the financing models / appraisals of Namibian financial institutions [Policy, promotion and stakeholder engagement]	Bank of Namibia NAMFISA	Financial institutions	Medium	No	Low	High		✓	

6.3 Other key considerations to unlock the development impact of Digital Finance in Namibia

As highlighted in earlier sections, DF and fintech have strong potential to contribute to the sustainable development ambitions of Namibia through unleashing innovation and competition in the financial services sector to serve the currently un(der)served. Beyond the foundational aspects of the DF ecosystem as tackled in the previous section, there are other essential ingredients needed to see growth of this industry in Namibia.

6.3.1 Building a vibrant fintech ecosystem that is SDG aligned.

A vibrant fintech ecosystem can yield strong dividends for Namibia's financial sector and the economy at large. This will require strong involvement of the sector leadership - supervisory and policy authorities – to send a strong signal of their commitment towards innovation for Namibia's development needs.

6.3.1.1 Foster partnerships and synergies among stakeholders

Deliberate efforts to build relationships among and between fintech startups, accelerators and incubators, academics, and incumbent players, providing them with a forum for constructive dialogue between market players and regulators to drive innovation and test new solutions is what will allow the financial sector to reap the full dividends of fintech.

There are already some efforts in this direction, for example with the establishment of the e-money forum under the Payments Association of Namibia (PAN), which is meant to enhance access, inclusiveness and interoperability in the NPS, especially for new non-bank players. However, the main focus of this forum is on payments and payments providers, thus limiting its significance on broader fintech capabilities and the ability to crowd in other ecosystem players. The forum, though, could be used as a launch pad for a broader fintech ecosystem platform whose aim is to foster innovation and partnerships that bring impact to the market.

6.3.1.2 Initiate thematic fintech innovation challenges

The fintech ecosystem can be strengthened by initiatives such as thematic innovation challenges that attend to specific national development goals. We see a strong role to be played by the BoN and the PAN in fostering such initiatives. Below are examples of how sector regulators have actioned their commitment towards innovation in the financial sector. In Kenya for example, the Central Bank organized a fintech hackathon in 2020, in the midst of the Covid-19 pandemic.

The “Virtual Africa Hackathon ” focused on innovative solutions in healthcare, digital payments, economic recovery and other categories and attracted fintechs from numerous African countries.



The solutions presented included financing of MSMEs, cash transfers to vulnerable groups, enhancing agriculture value chains and COVID-19 contact-tracing, among others. The Monetary Authority of Singapore also provides a good example, with the initiation of the Singapore Fintech Festival (SFF) which reached its sixth edition in 2021. The SFF has grown to be an internationally acclaimed and highly anticipated event. The 2020 edition convened over 60,000 participants from 160 countries. SFF is organized in partnership with the Association of Banks in Singapore.

6.3.2 Providing for a regulatory sandbox to foster innovation

As stated in earlier sections and in Part 1 (the assessment), Namibia needs innovation in financial services that can close the access and usage gaps, mainly in the informal sector. Specifically, there is ample potential for innovation beyond payments into areas that have a strong SDG alignment. Particular factors on the Namibian market, and the financial sector specifically, can make it hard for new fintech products and services especially from new players to make it to scale. These factors include the small market size, an already well-established banking sector, and the increasingly stringent regulatory requirements.

Regulatory sandboxes provide a space for new and existing financial service providers to conduct controlled market tests of new

fintech products and services under less stringent regulatory requirements. This enables innovators to quickly create proofs of concept, which can guide regulators in adjusting the financial sector infrastructure and rules as required. The sandbox will enable innovations in new fintech business models and technologies.

6.3.3 A national data framework to harness the power of data for innovation and development

The use of digital technologies is producing a lot of data across sectors. Data is increasingly a vital resource for innovation and for creating new value in key socio-economic areas such as the healthcare systems, financial services, education, governance and public safety.

Data is a key resource for innovation in DF and fintech – with the use of emerging technologies like big data analytics, algorithms and artificial intelligence – enabling new business models in lending, insurance, risk management, etc. How data and information is collected, analyzed, used and distributed within the economy is therefore becoming of paramount importance.

The ability for governments, businesses, organizations and public services to share vital information quickly, efficiently and ethically is becoming a competitive advantage. National data frameworks and strategies are meant to exactly provide for

this. They seek to harness the power of data to boost productivity, innovation, create new businesses and jobs, and improve service.

In Namibia, national data is collected and published by the statistics agency, while data on the financial sector is published by the Bank of Namibia. Nonetheless, a lot of the available data still focuses on traditional sectors and industries. Data from emerging industries like fintech are still not captured.

During the SDFE assessment, for example, we were not able to find data on aspects of the size (density, flows, trends) and impact of the fintech industry in Namibia.

The new digital era comes with new sources and new ways of collecting data, but also calls for providing for new ways of data management, sharing and ultimately data monetization. While various industries and sectors will have specific needs and use cases for data, there is need to develop a national framework around harnessing the power of data as a resource that can be tapped into by both public and private sector players.

Working with specific sector / industry formations or associations will help in defining and designing industry specific data management strategies which can then feed into a national data framework. Harnessing the potential for data to develop DF and the digital economy at large is therefore required in Namibia.

6.3.4 Investing in mindset change and consumer literacy

Resistance to change and sticking to what is known best among public and private sector is seen as a strong barrier towards adoption of new innovative technologies and business models in digital finance and beyond. Low digital and financial literacy within the segments currently un(der) served is also a strong barrier to adoption.

Some government initiatives have been kicked off to attend to these issues, including government's innovation policy and a coordination office that is championing innovation in the public sector, and the Financial Literacy Initiative led by the Ministry of Finance in partnership with public, private and civil society stakeholders.

These and more efforts to drive mindset change across various sectors and industry actors will be crucial in driving the digital transformation needed.



6.3.5 Implementing other key interventions: Level of effort required

Other key considerations		Required Action	by Who		Level of effort			Expected Impact	Implementable		
			Champion(s)	Implementers	Complexity	Already in plan	Cost		ST [< 1yr]	MT [2-3yrs]	LT [>4yrs]
1	Building a vibrant fintech ecosystem that is SDG aligned.	Foster partnerships and synergies among stakeholders	BON PAN	PAN members	Low	Yes	Low	Medium	✓		
		Form a fintech association of Namibia to drive fintech promotion	BON PAN	PAN members	Low	Partially	Low	Medium	✓		
		Initiate thematic fintech innovation challenges	BON PAN	PAN members	Low	No	Low	Medium	✓		
2	Providing for a regulatory sandbox to foster innovation	Build regulatory sanbox	BON PAN	PAN members Innovators	Medium	No	low	High	✓	✓	
3	A national data framework to harness the power of data for innovation and development	Develop national data framework	MoICT BoN	PAN members Innovators	Medium	No	Low	Medium	✓	✓	
4	Investing in mindset change and consumer literacy	Nationwide initiatives (campaigns) towards mindset change	President's office Office of the prime minister	Industry associations and players Government ministries & agencies	Low	Partially	Low	High	✓	✓	
		Boost the Financial / digital literacy initiative	Ministry of Finance MoICT	Industry associations and players	wLow	Partially	Low	High	✓	✓	

7 Implementing the Strategy: A proposed Roadmap

Interventions		Responsibility		Prioritization	TIMELINE		
Catalytic Digital Financing Opportunities					Yr1	Yr 2	Yr 3
1. Deepening financial inclusion and decentralizing the financial system for those currently un(der) served	1.1 Digital finance innovations can deliver deeper and more inclusive access to finance for Namibians	1.1.1 Enabling new players to affordably leverage existing financial infrastructure (payments, data, etc).	<ul style="list-style-type: none"> BON 	High	✓		
		1.1.2 Fostering partnerships between incumbent banks and new players for purposes of better serving the currently under-served population.	<ul style="list-style-type: none"> BON PAN 	Medium	✓	✓	✓
		1.1.3 Identify new digital solutions and business models and support them to scale - through well-crafted innovation challenges	<ul style="list-style-type: none"> BON PAN 	Medium	✓		
		1.1.4 Implement a shared agent network for serving rural last mile Namibia (open to all members of PAN)	<ul style="list-style-type: none"> BON PAN 	High		✓	✓
	1.2 Financing of MMSMEs through alternative digital lending model	1.2.1 Launch a phased MSME digitalization programme across the country. Make MSME digitalization a pre-requisite for accessing funding from DBN and banks	<ul style="list-style-type: none"> Ministry of Finance DBN SME division - Namibia Investment Promotion Board (NIPDB) 	High	✓	✓	✓
	1.3 Digital finance can enable the micro-Lending industry to serve rural informal Namibia better	1.2.2 Identify relevant, easy to use and affordable SME digitalization solutions on the market that can be recommended to SMEs for adoption	<ul style="list-style-type: none"> DBN SME division (NIPDB) 	Medium	✓		
		1.3.1 Spearhead / Incentivize digitalization of micro lenders - to improve their management, efficiencies, product development and service delivery. Consider shared technology/ infrastructure platforms to make it affordable for micro-lenders to digitize	<ul style="list-style-type: none"> NAMFISA Micro-Lenders Association of Namibia 	Medium	✓		
		1.3.2 Incentivize micro-lenders to develop and deliver financing solutions for productive use to entrepreneurs / MSMEs in the rural informal sector	<ul style="list-style-type: none"> NAMFISA Micro-Lenders Association of Namibia 	Medium	✓	✓	✓

Interventions		Responsibility		Prioritization	TIMELINE		
Catalytic Digital Financing Opportunities					Yr1	Yr 2	Yr 3
2. Improving transparency, accountability, efficiency and service delivery in the public sector and collaboration with private sector	2.1 Enhancing Namibia's public finance managements	2.1.1 Fully digitalize Namibia's tax and levy collections (integrate e-payments, introduction of electronic sales registration machines)	<ul style="list-style-type: none"> Ministry of Finance NAMRA 	High	✓	✓	✓
		2.1.2 Digitize government's procurement process	<ul style="list-style-type: none"> Ministry of Finance 	High	✓	✓	✓
	2.2 Enhancing public service delivery and ease of doing business. [e-government portal with e-payments, single window model for ease of doing business]	2.1.3 Digitize government payments (government to persons) - e.g social payments	<ul style="list-style-type: none"> Ministry of Finance 	High	✓	✓	✓
		2.2.1 Implement a e-government portal through which government services can be accessed and paid for	<ul style="list-style-type: none"> Office of the Prime Minister Ministry of Finance 	High		✓	✓
		2.2.2 Implement / fast track the single-window model for ease of doing business and one stop border posts	<ul style="list-style-type: none"> Office of the Prime Minister Ministry of Trade 	High		✓	✓
3. Mobilize retail savings for impactful projects and businesses	.1 Mobilizing domestic savings from many small scale savers in the informal sector	3.1.1 Conceive and launch national savings initiatives that target the informal sector	<ul style="list-style-type: none"> Ministry of Finance 	High	✓	✓	✓
	3.2 Crowdfunding platforms for mobilizing financing for impactful projects and businesses	3.2.1 Foster the use of crowdfunding platforms (local and international) as an alternative financing mechanism. Incentivize local mid and high income citizens and corporates to fund innovation and entrepreneurship through such platforms	<ul style="list-style-type: none"> Ministry of Finance Ministry of trade 	Medium	✓	✓	✓
4. Enabling new ways to provide financial protection, risk management, risk transfer and risk diversification / sharing	4.1 Enabling new insurance models	4.1.1 Promote digital enabled innovation in the insurance industry. Introduce a sandbox environment for new players / services in priority sectors like agriculture, climate change, health	<ul style="list-style-type: none"> NAMFISA 	Medium		✓	✓
	4.2 Promote sharing economy models	4.2.1 Incentivize models that promote the sharing of infrastructure, equipment, assets to maximize economies of scale / efficiency in the priority sectors of the economy	<ul style="list-style-type: none"> Office of the Prime Minister (innovation office) Ministry of Trade 	Medium	✓	✓	✓
5. Leveraging fintech to embed ESG / SDG considerations into Namibia's financial system	5.1 Embed ESG / SDG considerations into project financing decision making by both public and private sector	5.1.1 Institute ESG considerations into appraisals for public sector projects	<ul style="list-style-type: none"> Office of the Prime Minister Ministry of Finance 	Low		✓	✓
		5.1.2 Institute ESG considerations into the financing models / appraisals of Namibian financial institutions	<ul style="list-style-type: none"> BON NAMFISA 	Medium		✓	✓

Digital Foundations					Yr1	Yr 2	Yr 3
1. Digital Finance Infrastructure	1.1 Broadband connectivity	1.1.1 Incentivize telecommunications providers to invest in upgrading fully to 4G network.	<ul style="list-style-type: none"> • MICT 	Medium	✓	✓	✓
		1.1.2 Promote infrastructure sharing especially for rural sparsely populated areas – to bring about efficiencies in cost of delivery and therefore return on investment.	<ul style="list-style-type: none"> • MICT • CRAN 	High	✓	✓	
	1.2 Access to electricity	1.2.1 Promote use of off-grid solar systems for powering rural homes in Namibia. Leverage PayGo solar model	<ul style="list-style-type: none"> • Ministry of Energy • Ministry of Finance 	High	✓	✓	✓
		1.3 Access to and ownership of mobile devices	<ul style="list-style-type: none"> • MICT • Ministry of Finance 	High		✓	
		1.3.2 Promote asset financing models, devise payment plan options for rural Namibians in the informal sector.	<ul style="list-style-type: none"> • CRAN 	Medium	✓	✓	✓
	1.4 Digital ID and E-KYC	1.4.1 Provide access to the national digital identity system as a KYC utility to various digital financial service providers to ease customer due diligence (e-KYC).	<ul style="list-style-type: none"> • Office of Prime Minister • Ministry of Home Affairs & Immigration • BON 	High	✓	✓	
	1.5 Open, affordable access to the payments infrastructure for all players	1.5.1 Fast track the implementation and enforcement of an open payments ecosystem as envisaged in the NPS vision – interoperability, open APIs and Data, stakeholder collaboration, access, transparency and inclusivity.	<ul style="list-style-type: none"> • BON • PAN 	High	✓	✓	✓
	1.6 A shared agent distribution network for digital financial services	1.6.1 Foster the set-up of a shared agent distribution network to serve rural Namibia	<ul style="list-style-type: none"> • BON • PAN 	High		✓	✓
2. Policy and Regulation	2.1 Close existing gaps to foster trust in digitalization	2.1.1 Cyber security: Fast track the passing of the Act.	<ul style="list-style-type: none"> • MoICT 	Medium			
		2.1.2 Data privacy and protection: Fast tract the passing of the Act	<ul style="list-style-type: none"> • MoICT 	Medium			
	2.2. Active promotion of DF and digitalization	2.2.1 Mainstream DF and digitalization across all sectors of the economy.	<ul style="list-style-type: none"> • Office of the Prime Minister • Ministry of Finance • National Planning commission 	High			
		2.2.2 Promote test and learn approaches including sandbox environments and incubation hubs to foster innovation and adoption of digital finance innovations.	<ul style="list-style-type: none"> • MoICT • BON • Public sector innovation and reform office (OPM) 	Medium			
		2.2.3 Promote proportionate KYC requirements and documentation for accessing financial services by the informal sector.	<ul style="list-style-type: none"> • BON • Financial Intelligence Authority 	Low			

Digital Foundations					Yr1	Yr 2	Yr 3
3.1 Boosting demand for local innovations to reach scale	3.1.1 Incentivize consumption of local digital solutions by public and private sector institutions and citizens.	3.1.1 Incentivize consumption of local digital solutions by public and private sector institutions and citizens.	<ul style="list-style-type: none"> Office of Prime Minister 	Medium	✓	✓	✓
		3.1.2 Promote open innovation within public and private sector –to involve local innovators in solving real business challenges / community problems, to build trust in local innovation capacity, and unlock market demand.	<ul style="list-style-type: none"> Office of Prime Minister 	Medium	✓	✓	✓
		3.1.3 Support promising Namibian innovations to expand nationally and regionally, key for commercial viability and economies of scale.	<ul style="list-style-type: none"> MolCT Ministry of Trade 	Low		✓	✓
		3.1.4 Tackle digital literacy challenges - embed digital literacy into school curriculum, adult learning and community engagement programmes.	<ul style="list-style-type: none"> MolCT Ministry of Education 	High	✓	✓	✓
	3.2 Growing digital skills and promote digital entrepreneurship	3.2.1 Strengthen the capacity of innovation hubs to be able to deliver strong mentorship / incubation/acceleration programmes.	<ul style="list-style-type: none"> MolCT 	Low		✓	✓
		3.2.2 Promote (digital) entrepreneurship as a strong source of growth and employment for Youths. Explore incentivizing experienced professionals in the private /public sector to get involved in mentorship and incubation of innovators.	<ul style="list-style-type: none"> MolCT Ministry of Trade Ministry of Labor, Industrial Relation, Employment creation 	Low		✓	✓
	3.3 Tackling the challenge of access to financing for innovations	3.3.1 Digital innovations as part of the list of priority sectors that can receive affordable financing from DBN	<ul style="list-style-type: none"> Ministry of Finance DBN 	Medium	✓	✓	✓
		3.3.2 Incentivize the Namibian private (corporate) sector and foreign venture capital to invest in local innovations / start-ups.	<ul style="list-style-type: none"> MolCT Ministry of Trade Ministry of Labor, Industrial Relation, Employment creation 	Medium	✓	✓	✓
	3.4 Providing for a supportive policy and regulatory framework for start-up	3.4.1 Streamline the regulatory and support process for start-ups through concepts like a one stop center for ICT start-up registration, certification, tax compliance. Align sector policies for the digital era (trade policy, industrial policy, tax policy, intellectual property).	<ul style="list-style-type: none"> MolCT Ministry of Trade 	Low		✓	✓
		3.4.2 Enact a start-up act - Provide digital (high growth) start-ups with special category support and incentive programmes – separate from other businesses / SMEs.	<ul style="list-style-type: none"> MolCT Ministry of Trade 	High		✓	✓

8 Annexes



8.1 Implementing the strategic recommendations: Level of effort required

8.1.1 DF Infrastructure

Interventions		Required Action	Who		Level of effort			Implementable		
			Champion(s)	Implementers	Complexity	Already in plan	Cost	ST [< 1yr]	MT [2-3yrs]	LT [>4yrs]
Broadband connectivity	Incentivize telecommunications providers to invest in upgrading to 4G network.	> Policy > Stakeholder engagement, promotion	MICT	CRAN	Low	Yes	High	✓	✓	
	Promote infrastructure sharing especially for rural sparsely populated areas – to bring about efficiencies in cost of delivery and therefore return on investment.	> Policy > Stakeholder engagement, promotion	MICT CRAN	CRAN Telecom providers	Low	Yes	Low	✓	✓	
Access to electricity	Promote use of off-grid solar systems for powering rural homes in Namibia. Leverage PayGo solar model.	> Pricing / tax incentives to manufacturers / importers / distributors	Ministry of Energy Ministry of Finance	Private sector providers	Low	Yes	Low	✓	✓	
Access to and ownership of mobile devices	Regard mobile devices as essential tools for access to basic services and for leading active economic lives. Provide policy incentives for lower income populations to acquire them. (USAF, subsidies).	Policy	MICT Ministry of Finance	NAMRA	Low	No	Medium		✓	
	Promote asset financing models, devise payment plan options for rural Namibians in the informal sector.	> Stakeholder engagement, promotion > Partnerships between device providers, lenders and telecom providers to enforce repayment	CRAN	Telecom providers, lenders, device suppliers,	Low	No	Low	✓	✓	
Digital ID and E-KYC	Provide access to the national digital identity system as a KYC utility to various digital financial service providers to ease customer due diligence (e-KYC).	> Policy / regulation	Office of Prime Minister / Ministry of Home Affairs and Immigration BON	PAN	Low	No	Low		✓	
Open, affordable access to the payments infrastructure for all players	Fast track the implementation and enforcement of an open payments ecosystem as envisaged in the NPS vision – interoperability, open APIs and Data, stakeholder collaboration, access, transparency and inclusivity.	Implementation of NPS vision	BON, PAN	PAN members	Low	Yes	Low	✓	✓	
A shared agent distribution network for digital financial services	Foster the set up of a shared agent distribution network to serve rural Namibia.	> Project design and implementation >> Stakeholder engagement, promotion	BON, PAN	PAN members	Low	No	Low		✓	

8.1.2 Policy and regulation

Policy and Regulation		Required Action	Who		Level of effort			Implementable		
			Champion(s)	Implementers	Complexity	Already in plan	Cost	ST [< 1yr]	MT [2-3yrs]	LT [>4yrs]
Close existing gaps to foster trust in digitalisation	Cyber security: Fast track the passing of the Act.	Enact Law	MolCT	CRAN	Low	Yes	Low	✓		
	Data privacy and protection: Fast tract the passing of the Act	Enact Law	MolCT	CRAN	Low	Yes	Low	✓		
Active promotion of DF and digitalization	Mainstream DF and digitalization across all sectors of the economy.	> Sector coordination > Whole of government approach	Office of the Prime Minister Ministry of Finance National Planning commission	All ministries, departments and agencies	Low	No	Low	✓	✓	
	Promote test and learn approaches including sandbox environments and incubation hubs to foster innovation and adoption of digital finance innovations	> Policy > Stakeholder engagement, promotion	MolCT BON Public sector innovation office	Universities Innovation hubs PAN	Low	No	Low	✓	✓	
	Promote proportionate KYC requirements and documentation for accessing financial services by the informal sector	> Policy > Stakeholder engagement, promotion	BON Financial Intelligence Authority	Financial services providers	Low	No	Low		✓	

8.1.3 Innovation Ecosystem

Interventions		Required Action	Who		Level of effort			Implementable		
			Champion(s)	Implementers	Complexity	Already in plan	Cost	ST [<1yr]	MT [2-3yrs]	LT [>4yrs]
Boosting demand for local innovations to reach scale	Incentivize consumption of local digital solutions by public and private sector institutions, and citizens.	> Policy incentives > Stakeholder engagement, promotion	Office of Prime Minister	Whole of government	Low	Partially	Low	✓	✓	
	Promote open innovation within public and private sector –to involve local innovators in solving real business challenges / community problems, to build trust in local innovation capacity, and unlock market demand.	Policy > Stakeholder engagement, promotion	Office of Prime Minister	Public service innovation office Innovation hubs	Low	Partially	Medium	✓	✓	
	Support promising Namibian innovations to expand nationally and regionally, key for commercial viability and economies of scale.	> Policy > A startup act	MoICT Ministry of Trade	Ministry of Higher Education, Training and Innovation Innovation hubs	Medium	No	Low		✓	
	Tackle digital literacy challenges - embed digital literacy into school curriculum, adult learning and community engagement programmes.	> Policy > Stakeholder engagement, promotion	MoICT Ministry of Education	Ministry of Education Providers of digital services	Medium	Partially	Medium	✓	✓	
	Strengthen the capacity of innovation hubs to be able to deliver strong mentorship / incubation/acceleration programmes.	> Training programmes > Monitoring and evaluation mechanisms > Partnerships and learning from abroad	MoICT	MoICT Innovation hubs	Low	No	Low		✓	

Interventions		Required Action	Who		Level of effort			Implementable		
			Champion(s)	Implementers	Complexity	Already in plan	Cost	ST [< 1yr]	MT [2-3yrs]	LT [>4yrs]
Growing digital skills and promote digital entrepreneurship	Strengthen the capacity of innovation hubs to be able to deliver strong mentorship / incubation/acceleration programmes.	> Training programmes > Monitoring and evaluation mechanisms > Partnerships and learning from abroad	MoICT	MoICT Innovation hubs	Low	No	Low		✓	
	Promote (digital) entrepreneurship as a strong source of growth and employment for Youths. Explore incentivizing experienced professionals in the private /public sector to get involved in mentorship and incubation of innovators.	> Policy > a startup act > Stakeholder engagement, promotion	MoICT Ministry of Trade Ministry of Labor, Industrial Relation, Employment Creation	MoICT Ministry of Trade Ministry of Labor, Industrial Relation, Employment Creation Corporate sector institutions	Medium	No	Low		✓	
Tackling the challenge of access to financing for innovations	Include digital innovations as part of the list of priority sectors that can receive affordable financing from DBN.	> Policy	Ministry of Finance DBN	DBN	Low	partially	Low	✓	✓	
	Incentivize the Namibian private (corporate) sector and foreign venture capital to invest in local innovations / start-ups.	> Policy	Ministry of Finance MoICT BON	Financial sector players	Medium	No	Low		✓	
Providing for a supportive policy and regulatory framework for startup	Streamline the regulatory and support process for start-ups through concepts like a one stop center for ICT start-up registration, certification, tax compliance. Align sector policies for the digital era (trade policy, industrial policy, tax policy, intellectual property)	> Policy > a startup act	MoICT Ministry of Trade	Whole of government Namibia investment promotion - SME division	Medium	No	Medium		✓	
	Enact a startup act - Provide digital (high growth) start-ups with special category support and incentive programmes – separate from other businesses / SMEs.	> Legislative process (to enact new law)	MoICT Ministry of Trade	MoICT Ministry of Trade Ministry of Labor, Industrial Relation, Employment Creation	Medium	No	Medium		✓	

8.2 IDES Report

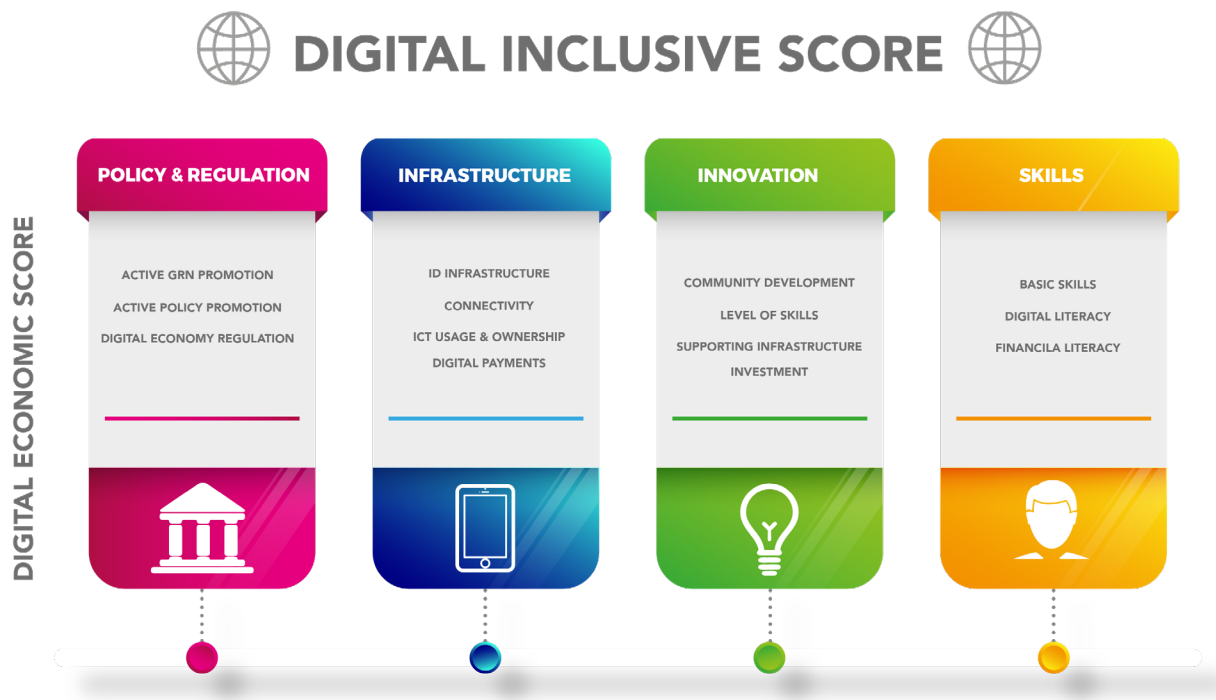
Assessment of Namibia’s Digital Economy

The Assessment of the state of Namibia’s digital economy is done using the “Inclusive Digital Economy Scorecard” (IDES) tool developed by the United Nations, Development Fund (UNCDF).

The IDES tool helps to easily track the development of inclusive digital economies at country level, to identify key markets constraints hindering the development of an inclusive digital economy and to work with public and private stakeholders to remove these constraints to foster digital economies that leave no one

behind. The IDES measures on one hand the development of the national digital economy, and on the other hand measures the inclusiveness of the digital economy based on specific segments of interest.

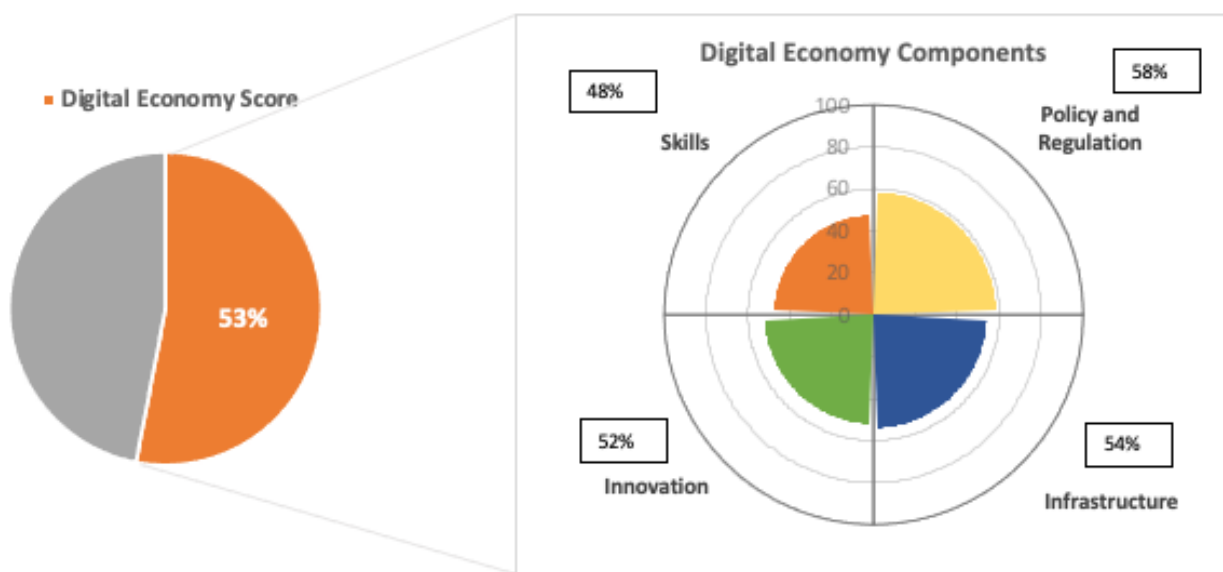
The IDES identifies the key market constraints and, together with public and private stakeholders, helps to set the priorities for an inclusive digital transformation in the country.



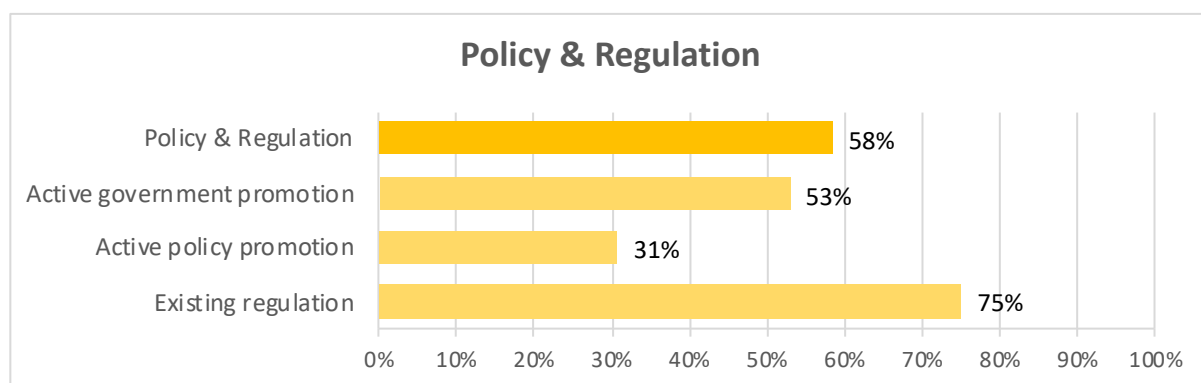
1.1. Namibia’s Digital Economy Score: 53%

Here we measure the development of Namibia’s national digital economy and its main components (enabling policy environment, digital infrastructure and payments, innovation ecosystem and skills).



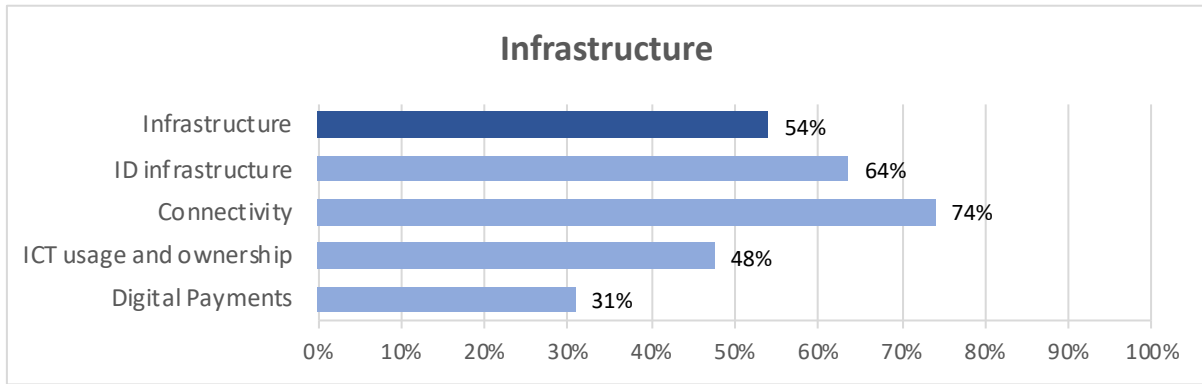


A detailed look into the Components of the Digital Economy Score

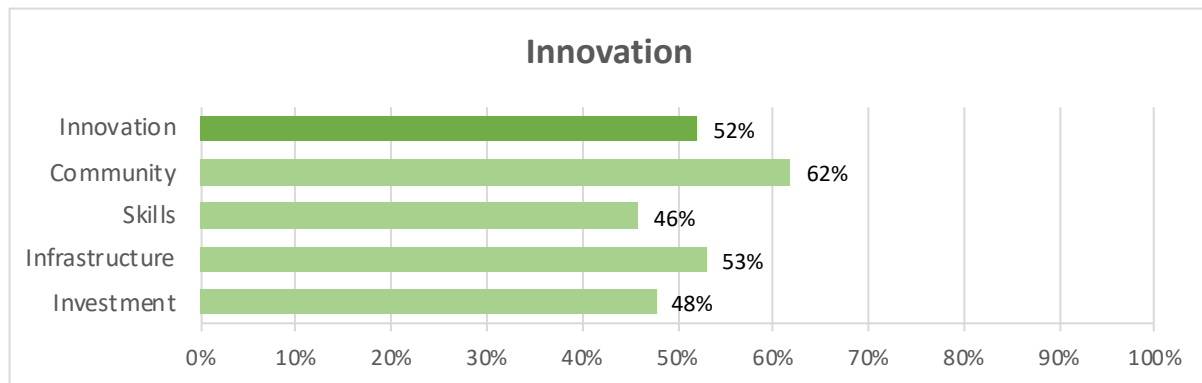


The overall policy and regulation score for Namibia stands at 58 percent. This score is composed of three components. First is the existence of adequate policies, laws and regulations that address market conditions that impact the digital economy and digital finance, an area where Namibia scores quite high – 75 percent. Second is the extent to which government promotes the digital

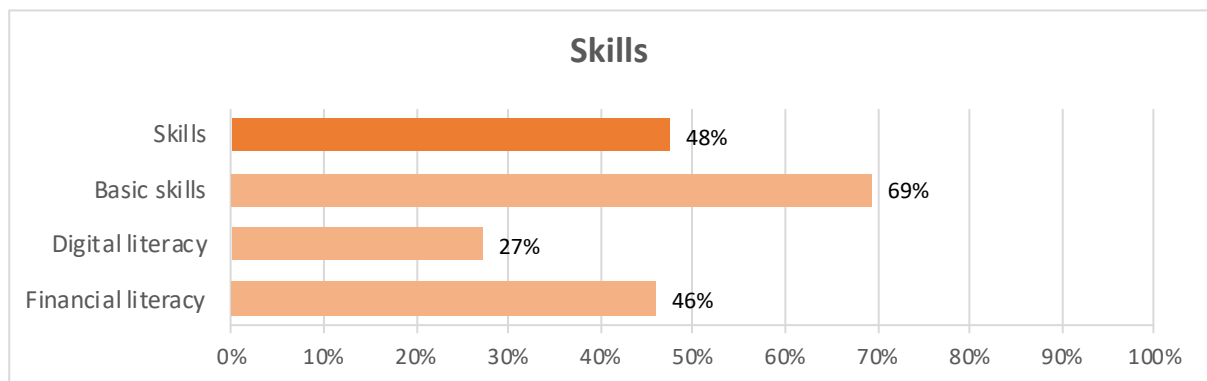
economy and digital finance, where Namibia scores fairly at 53 percent - based on national and sectoral development plans, strategies and statements. Third is how well and actively the policies promote the digital economy and digital finance, where Namibia scores low, at 31 percent.



Overall, infrastructure scores 54 percent, with connectivity scoring quite well (high 3G connectivity), while ICT usage/ownership and digital payments are quite low



The 2 indicators of “community” and “infrastructure” might be scoring higher than expected because they are calculated based on the population size of Namibia compared to the leading country in the region.

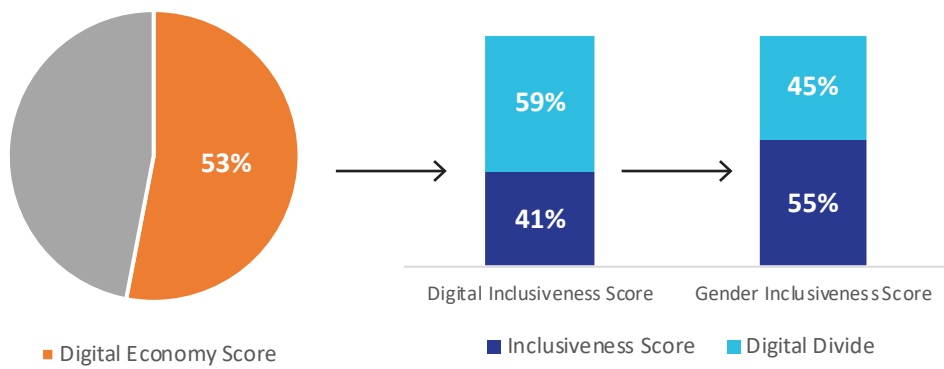


Overall skills are at 48 percent. Whereas basic skills (literacy) are high, digital literacy and financial literacy are still low.



1.2. Namibia's Digital Inclusiveness Score: 45%

The Digital Inclusiveness Score measures the level of inclusion in the digital economy for key customers segments (rural, women, youths, elderly, refugees, migrants, disabled, MSMEs).



Whereas the national overall score is 53%. The inclusion of the specific segments mentioned is lower at 41%, hence a digital divide of 59%.

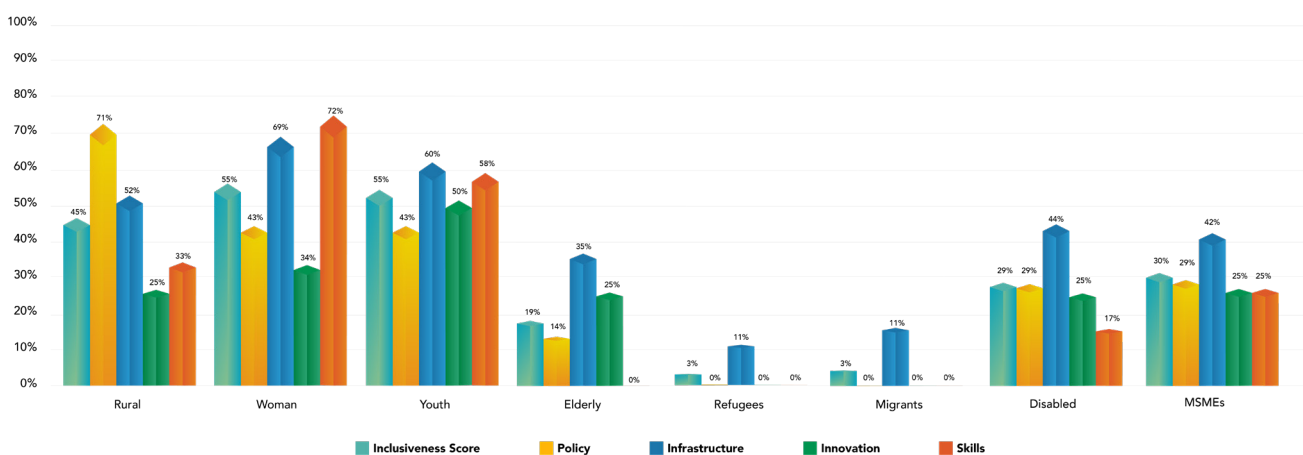
The specific segment of women has a lesser digital divide at 45%

A Detailed look into the components of the inclusiveness score

The digital divide in Namibia is seen to be majorly driven by the Elderly, the disabled, MSME's, followed by rural citizens then the youths.

Namibia not being host to a significant number of refugees and migrants, the specific focus on these segments is low. This has been corrected for in the weighting of their contribution to the overall score, to avoid them skewing the score.

Inclusiveness by dimension



For Rural Namibia, the inclusiveness score is 45%, leaving a digital divide of 55% - which is quite significant. Whereas policies are seen to be inclusive with a high score of 71%, there is a significant divide when it comes skills, innovation and infrastructure – with the latter being low in rural areas compared to urban.



For the Women segment, the inclusiveness score is 55%, leaving a digital divide of 45%. The divide is seen to be driven by policies and innovation– thus pointing to the need specific attention to mainstreaming gender aspects in digital related policies, and for innovations to take into consideration the specific needs of women.

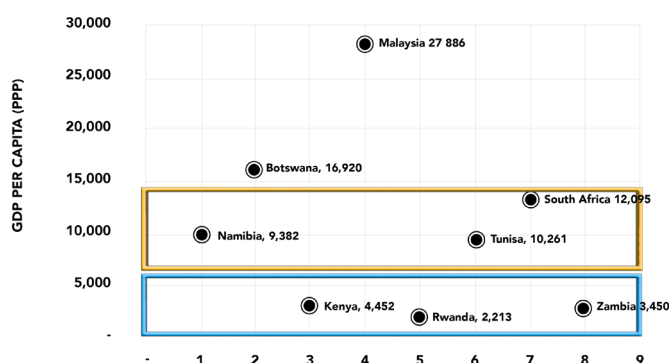
When it comes to access to infrastructure and skills – there doesn't seem to be a significant divide specific to women.

For the youth, the digital divide is seen to be high – majorly driven by aspects of policy, innovation and skills. What this emphasises is the need to pay particular attention to this segment in the components mentioned. For MSME's and the disabled, there seems to need to pay attention to these segments

when it comes to all the components of digital economy.

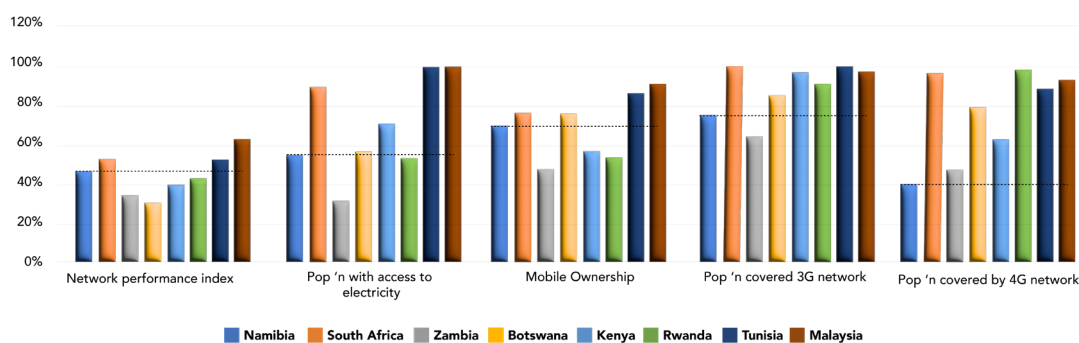
2. Benchmarking Namibia against select countries on Key indicators

To situate Namibia when it comes to the state of its digital economy and digital finance ecosystem, we benchmark it against a set of countries selected purposively to allow for a comparative analysis on key indicators. A total of 7 countries are selected and categorised based on their income levels (GDP per Capita, PPP 2020). 2 countries regarded to be in a relatively same income category as Namibia, 2 regarded to be in a higher income category and 3 in a lower income category than Namibia, as shown in the figure below.



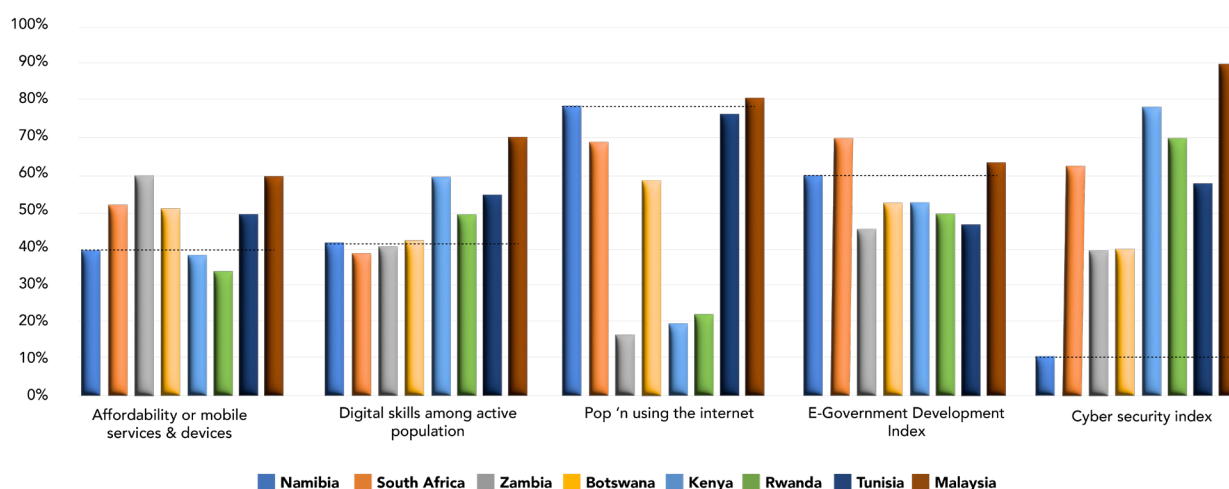
Source: <https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD>. The categorisation is by the consultant

Benchmarking Namibia: Key Digital Connectivity Indicators



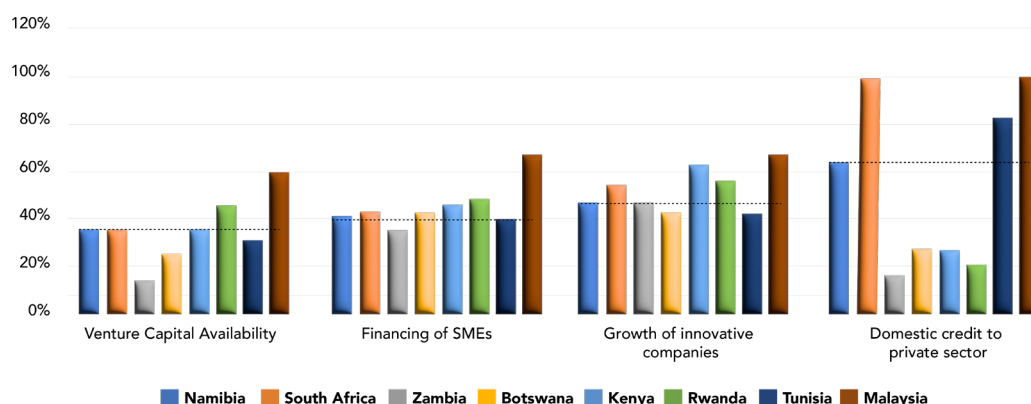
Network performance	Fair	Okay, but could improve given score of comparable countries
Access to Electricity	Weak	Relatively low, Much below comparable S.A and Tunisia and below Kenya.
Mobile ownership	Good	Good, although relatively lower than comparable countries (S.A, Tunisia)
3G Network	Very Good	High, although relatively lower than comparable countries (S.A, Tunisia)
4G Network	Weak	Comparatively lower than all benchmark countries

Benchmarking Namibia: Key Digital Usage Indicators



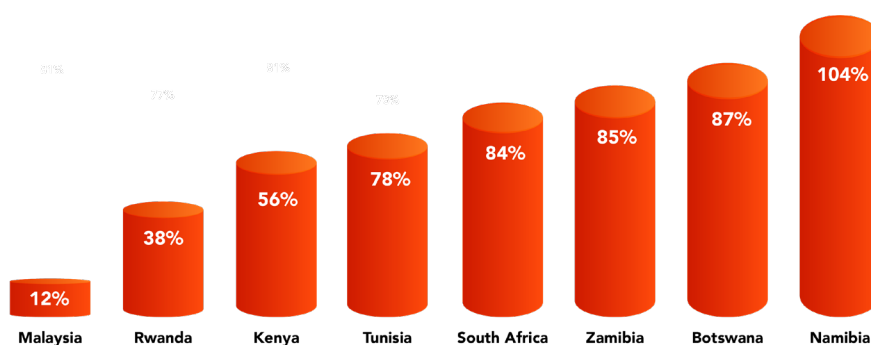
Affordability	Weak	Relatively low- given score of comparable countries
Digital skills	Weak	Relatively low- given score of comparable and even lower income countries
Internet usage	Very Good	High
EGDI	Very Good	High - comparatively
Cyber security index	Weak	Very low

Benchmarking Namibia: Key Indicators on Investment in Entrepreneurship



Venture capital	Fair	Comparatively okay. But a lot of room to grow
Financing SME's	Fair	Comparatively okay. But a lot of room to grow
Growth of Innovative Companies	Fair	Comparatively okay. But a lot of room to grow
Credit to Private Sector	Good	Good, but room to grow given levels of comparable S.A, Tunisia n levels of comparable S.A, Tunisia

Benchmarking Namibia: Ease of Doing Ranking (2020)



Source: World Bank, Ease of Doing Business Rankings (2020)

Ease of doing business Weak The lower the score the better. Namibia ranks below all the other compared countries

Conclusion

The above provide a snapshot of the Namibian digital economy. The key indicators highlighted above and the comparative analysis provide an indication of areas that need particular attention, to be able to unlock the growth potential of digital finance in Namibia. Further analysis and interpretation of the data are be provided in the final assessment report.

Main sources used for the indicators in the above assessment:

- GSMA Mobile Connectivity Index 2020- <https://www.mobileconnectivityindex.com/#year=2019&dataSet=enabler>
- WEF - Global Competitiveness Index 2020 (survey data) – http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2020.pdf
- ITU ICT data 2019: <https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>
- Global Innovation Index 2020
- EGDI 2020 [https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2020-Survey/2020%20UN%20E-Government%20Survey%20\(Full%20Report\).pdf](https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2020-Survey/2020%20UN%20E-Government%20Survey%20(Full%20Report).pdf)
- Briter Bridges - <https://briterbridges.com/innovation-maps>
- UNESCO Institute for Statistics (UIS): <http://tcg.uis.unesco.org/data-resources/>
- UNDP Human Development Index (HDI): <http://hdr.undp.org/en/countries/profiles/NAM>
- World Bank (2020), Ease of Doing Business Rankings 2020. https://www.doingbusiness.org/content/dam/doingBusiness/pdf/db2020/Doing-Business-2020_rankings.pdf
- Namibia National Broadband Policy



8.3 Key Informants Interviewed

Capricorn Group [Bank Windhoek]	Nico Van Der Merwe	Executive Officer Enterprise Risk Management
Development Bank of Namibia (DBN)	Heike Scholtz	Head Business Strategy:
Development Bank of Namibia (DBN)	Hanri Jacobs	Chief Finance Officer
Development Bank of Namibia (DBN)	Tonata Nghifitikeko	Manager: Information and Communication Technology
FNB Namibia	Sergio De Sousa	Head: Data and Digital Transformation
Nedbank - Namibia	Victor Ashikoto	Chief Operating Officer
Nedbank - Namibia	Richard Meeks	Executive: Retail and Business Banking
Nedbank - Namibia	Gernot de Klerk	Head of Marketing and Communications
Nedbank - Namibia	Biniam Ghirmatsion	Executive: Private Wealth and Bankassurance
Standard Bank - Namibia	Joyce Swartz	Head of Innovation and Digital Transformation
UNDP - Namibia	Omagano Kankondi	Head of Solutions Mapping
UNICEF Namibia	Jecob Nyamadzawo	Social Policy Manager
Fintech Consultant	Hafeni Tulongeni Hamukoto	Fintech Enthusiast, Researcher, Consultant
Fintech - MobiPay	Claus Deckenbrock	CEO
Fintech - PayToday	Naudé Muller	Managing Director (Co-founder)
Fintech - PayToday	Chris Botha	CFO (co-founder)
Fintech - SciData	Robert Shipanga	Founder and CEO
Fintech - DPO group	Eli Ilonga	Senior Sales Executive
Start-up Namibia (incubator / accelerator)	Jesaya Hano-Oshike	Head of Business Development at Start-up Namibia
Office of the Prime Minister – Public Innovation Policy and Reform		
Licius Mbaindjikua	Deputy Director: Public Service Innovation & Reform	
Ministry of Finance	Immanuel Nashivela	Deputy Director, Fiscal monetary policy
Ministry of Finance	Ndilimeke Ipinge	Economist
Namibia investment Promotion and Development Board		
– SME division		
Dino Ballotti		



Executive manager for SME development, innovation and acceleration		
Namibia investment Promotion and Development Board		
– SME division		
Chaze Nalisa		
Manager, Acceleration, Incubation and Market Access		
Namibia investment Promotion and Development Board		
– SME division	Claudia Boamah	
in charge of Policy reforms and funding		
Namibia Revenue Authority - NAM-RA	Idi Itope	Head of domestic taxes
Namibia Revenue Authority - NAM-RA	Sirkka Masilo	Project Manager – Integrated Tax Administration System – ITAS
Namibia University of Science and Technology (NUST)	Dr. Colin Stanley	Acting Dean, Faculty of Computing and Informatics
National Planning Commission (NPC)	Sylvester Mbangi	Chief National Development Advisor
Namibia Financial Institutions Supervisory Authority [NAMFISA]		
Kenneth Simataa Matomola		
CEO		
Payment Association of Namibia (PAN)	Saima Herman	Manager - Regulatory and Compliance
Payment Association of Namibia (PAN)	Mbapeua Kauuova	Payments Analyst
Communications Regulatory Authority of Namibia	Jochen Traut	Chief operating Officer
MTN Namibia	Paulus Shigwedha –	Head of Mobile Financial Services (MFS)
Ministry of ICT	Linda Aipinge	Director of Information and Communication Technology Development
Ministry of ICT	Saara Imbili	Chief Policy Analyst
Ministry of ICT	Lovisa Isak	Policy Officer



8.4 References

- i United Nations (2020). People's Money: Harnessing digitalization to Finance a sustainable Future. Report by Task Force on Digital Financing for the SDGs. <https://digitalfinancingtaskforce.org/downloads/>
- ii United National Environment Programme (2016). Fintech and Sustainable Development. Assessing the Implications. <https://www.unep.org/resources/report/fintech-and-sustainable-development- assessing-implications>
- iii United Nations Capital Development Fund-UNCDF (2021). Inclusive Digital Economies for the SDGs. <https://www.uncdf.org/ide4sdg>
- iv European Commission (2020). https://ec.europa.eu/info/business-economy-euro/banking-and- finance/digital-finance_en
- v GSMA (2020). GSMA Connectivity Index 2020. <https://www.mobileconnectivityindex.com/#year=2019&dataSet=indexScore>
- vi United Nations (2021). <https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2020>
- vii World Bank (2019). Digital ID, A Critical Enabler for Financial Inclusion. <https://blogs.worldbank.org/psd/digital-id-critical-enabler-financial-inclusion>
- viii World Bank (2016). Namibia Identity Management System Analysis Report. <https://documents1.worldbank.org/curated/en/184451466711154296/Namibia-Identity-Management-System-Analysis-Report.pdf>
- ix Bank of Namibia (2020). Overview of the NPS. A presentation by the Payments and Settlement Systems Department to UNDP/NUST. <https://ictechhub.com/wp-content/uploads/2020/09/BoN-UNDP-Presentation-15-September-2020-1.pdf>
- x Bank of Namibia (2021). Annual Report 2020. <https://www.bon.com.na/CMSTemplates/Bon/Files/bon.com.na/79/7923760d-1805-4265-906a-b424abafdef8.pdf>
- xi International Monetary Fund (2020). Financial Access Survey. Accessed through the World bank data bank. <https://data.worldbank.org/indicator/FB.CBK.BRCH.P5?end=2019&locations=NA&start=2010&view= chart>
- xii Namibia Statistics Agency (2017). National Financial Inclusion Survey 2017. https://d3rp5jat0m3eyn.cloudfront.net/cms/assets/documents/NFIS_2017_Report.pdf
- xiii Office of the President (2004). Namibia Vision 2030. https://www.npc.gov.na/vision- 2030/?wpfb_dl=36
- xiv The Republic of Namibia (2021). Harambee Prosperity Plan- HPP- II. <https://hpii.gov.na/>
- xv Republic of Namibia (2017). Namibia's 5th National Development Plan (NDP 5). <https://www.npc.gov.na/national-plans-ndp-5/>
- xvi Ministry of Finance (2011). Namibia Financial Sector Strategy 2011-2021. <https://www.bon.com.na/CMSTemplates/Bon/Files/bon.com.na/e7/e7e69c6d-b02b-4109-8d3d- 5b41a79f9d89.pdf>
- xvii Ministry of Information and Communication Technology (2017). Strategic Plan 2017-2022. <https://mict.gov.na/documents/32978/266786/MICT+STRATEGIC+PLAN+2017-2022/3596bd32- 0aa5-498a-b4c9-b396af9e8c1a>
- xviii Ministry of Information and Communication Technology (2020). National Broadband Policy. <https://gazettes.africa/archive/na/2020/na-government-gazette-dated-2020-08-14-no-7308.pdf>
- xix Bank of Namibia (2021). Namibia National Payment System Vision and Strategy 2021- 2025. <https://www.bon.com.na/CMSTemplates/Bon/Files/bon.com.na/9d/9d223e59-9e94-4f94-8c20- 44b11ce4bb2b.pdf>



- xx Republic of Namibia (2003). Payment Systems Management Act 2003. <https://www.bon.com.na/CMSTemplates/Bon/Files/bon.com.na/ce/cec38755-bb96-4bec-b2a7-8dab988a1037.pdf>
- xxi Bank of Namibia (2019). Understanding the Namibian Payments System. <https://www.bon.com.na/CMSTemplates/Bon/Files/bon.com.na/c6/c699843c-2f0a-4ac1-a1b6-deba247ee42f.pdf>
- xxii Bank of Namibia (2018). Payment System Determinations. <https://www.bon.com.na/Bank/Payments-and-Settlements/Legal-Framework/Determinations.aspx>
- xxiii Bank of Namibia (2018). Position Paper on Interoperability in the National Payments System. <https://www.bon.com.na/Bank/Payments-and-Settlements/Publications/Position-Papers.aspx>
- xxiv Bank of Namibia (2019). Determination on Issuing of Electronic Money in Namibia- PSD3. <https://www.bon.com.na/CMSTemplates/Bon/Files/bon.com.na/3f/3fb28958-580d-4aa1-9b66-ef7abf50bdf.pdf>
- xxv GSMA (2019). Overcoming-the-KYC-hurdle-Innovative-solutions-for-the-mobile-money-sector. <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/02/Overcoming-the-KYC-hurdle-Innovative-solutions-for-the-mobile-money-sector.pdf>
- xxvi Republic of Namibia (2012). Financial Intelligence Act and Regulations. <http://www.lac.org.na/laws/annoREG/Financial%20Intelligence%20Act%2013%20of%202012%20-%20Regulations%202015-003.pdf>
- xxvii Republic of Namibia (2019). Electronic Transactions Act. <https://www.lac.org.na/laws/annoSTAT/Electronic%20Transactions%20Act%204%20of%202019.pdf>
- xxviii Republic of Namibia (2008). Information Technology Policy-2008. https://www.researchictafrica.net/countries/namibia/NMICT_IT_Policy_2008.pdf
- xxix Republic of Namibia, Office of the Prime Minister (2014). E-Government Strategic Action Plan 2014-2018. http://www.nied.edu.na/assets/documents/08Governments/14e-Gov_Strategic_Plan_for_the_Public_Service_2014_to_2018.pdf
- xxx International Telecommunications Union (2017). Social and Economic Impact of Digital Transformation on the Economy. https://www.itu.int/en/ITU-D/Conferences/GSR/Documents/GSR2017/Soc_Eco_impact_Digital_transformation_finalGSR.pdf
- xxxi Start-up Namibia (2021). Mapping of the Namibia Start-up Ecosystem. <https://draft.start-upnam.org/wp-content/uploads/2021/04/Ecosystem.pdf>
- xxxii Ministry of Information and Communication Technology (2020). National Broadband Policy. <https://gazettes.africa/archive/na/2020/na-government-gazette-dated-2020-08-14-no-7308.pdf>
- xxxiii Republic of Namibia, Office of the Prime Minister (2020). Public Sector Innovation Policy. <https://opm.gov.na/documents/97540/476394/2020++NATIONAL+PUBLIC+SECTOR+INNOVATION.pdf/e23050fd-b697-50d0-e013-c88c45d44ebf>
- xxxiv United Nations Development Programme (2020). Human Development Indicators –Namibia. <http://hdr.undp.org/en/countries/profiles/NAM>
- xxxv World Economic Forum (2020). The Global Competitiveness Report, 2019. http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
- xxxvi World Economic Forum (2020). The Global Competitiveness Report, 2019. http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
- xxxvii Development Bank of Namibia



(2020). Annual Report 2019/20. <https://www.dbn.com.na/phocadownload/annual-report-dbn-2019-20-b.pdf>

xxxviii Bank of Namibia (2005). Viability of Second Tier Banks in Namibia. [https://www.firstinitiative.org/sites/default/files/files/NAMIBIA_FEASIBILITY%20FOR%20DEVELOPMENT%20OF%20A%20SECOND%20TIER%20BANKING%20SYSTEM_ProjectLessons-VIABILITY%20OF%20SECOND%20TIER%20BANKS%20IN%20NAMIBIA_BON%27s%20final%20report%20\(1\).pdf](https://www.firstinitiative.org/sites/default/files/files/NAMIBIA_FEASIBILITY%20FOR%20DEVELOPMENT%20OF%20A%20SECOND%20TIER%20BANKING%20SYSTEM_ProjectLessons-VIABILITY%20OF%20SECOND%20TIER%20BANKS%20IN%20NAMIBIA_BON%27s%20final%20report%20(1).pdf)

xxxix UNCDF (2019). Impact Pathways: A tool to measure the intricate role of Digital Finance in reaching the Sustainable Development Goals. <https://www.uncdf.org/impact-pathways/home>

xl CGAP (2016). Global Landscape Study on P2G Payments. <https://www.cgap.org/sites/default/files/publications/slidedeck/cgap-karandaz-rwandaresearchfindings-161227161336.pdf>

xli Helpage International (2012). Electronic Payment for Cash Transfer Programmes. <https://www.calpnetwork.org/wp-content/uploads/2020/01/Pension-watch-briefing-no-8-FINAL.pdf>

xlii World Bank (2019). Introducing of Electronic Tax Filing in Tajikistan. <https://www.worldbank.org/en/programs/competitiveness-policy-impact-evaluation-lab/brief/tajikistan-impact-evaluation-of-e-filing-and-in-depth-study-of-risk-based-audits>

xliii Mascagni, G., Mengistu, A.T., Woldeyes, F.B., (2021). Can ICTs Increase Tax Compliance? Evidence on Taxpayer Responses to Technological Innovation in Ethiopia. *Journal of Economic Behaviour and Organisation*. <https://www.sciencedirect.com/science/article/pii/S0167268121002407>

xliv CGAP (2018). Strange Beasts: Making Sense of PayGo Solar Business Models. <https://www.cgap.org/research/publication/strange-beasts-making-sense-paygo-solar-business-models>

xlv International Monetary Fund (2018). Measuring the Digital Economy. <https://www.imf.org/en/Publications/Policy-Papers/Issues/2018/04/03/O22818-measuring-the-digital-economy>

xlvi GSMA (2018). Spotlight on Mobile Enabled Insurance Services. World Economic Forum (2021) Guidebook to Digital Inclusion Bond Financing. http://www3.weforum.org/docs/WEF_Guideboo_to_Digital_Inclusion_Bond_Financing.pdf
<https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2018/09/2017-SOTIR-Spotlight-on-mobile-enabled-insurance-services.pdf>

xlvii World Economic Forum (2021) Guidebook to Digital Inclusion Bond Financing. http://www3.weforum.org/docs/WEF_Guideboo_to_Digital_Inclusion_Bond_Financing.pdf

International Monetary Fund (2020). Financial Access Survey. Accessed through the World bank data bank. <https://data.worldbank.org/indicator/FB.CBK.BRCH.P5?end=2019&locations=NA&start=2010&view=chart>

Development Bank of Namibia (2020). Annual Report 2019/20. <https://www.dbn.com.na/phocadownload/annual-report-dbn-2019-20-b.pdf>

Bank of Namibia (2005). Viability of Second Tier Banks in Namibia. [https://www.firstinitiative.org/sites/default/files/files/NAMIBIA_FEASIBILITY%20FOR%20DEVELOPMENT%20OF%20A%20SECOND%20TIER%20BANKING%20SYSTEM_ProjectLessons-VIABILITY%20OF%20SECOND%20TIER%20BANKS%20IN%20NAMIBIA_BON%27s%20final%20report%20\(1\).pdf](https://www.firstinitiative.org/sites/default/files/files/NAMIBIA_FEASIBILITY%20FOR%20DEVELOPMENT%20OF%20A%20SECOND%20TIER%20BANKING%20SYSTEM_ProjectLessons-VIABILITY%20OF%20SECOND%20TIER%20BANKS%20IN%20NAMIBIA_BON%27s%20final%20report%20(1).pdf)

CGAP (2016). Global Landscape Study on P2G Payments. <https://www.cgap.org/sites/default/files/publications/slidedeck/cgap-karandaz-rwandaresearchfindings-161227161336.pdf>

Helpage International (2012). Electronic Payment for Cash Transfer Programmes. <https://www.calpnetwork.org/wp-content/uploads/2020/01/Pension-watch-briefing-no-8-FINAL.pdf>

World Bank (2019). Introducing of Electronic Tax Filing in Tajikistan. <https://www.worldbank.org/en/programs/>



competitiveness-policy-impact-evaluation-lab/brief/tajikistan-impact-evaluation-of-e-filing-and-in-depth-study-of-risk-based-audits

Mascagni, G., Mengistu, A.T., Woldeyes, F.B., (2021). Can ICTs Increase Tax Compliance? Evidence on Taxpayer Responses to Technological Innovation in Ethiopia. *Journal of Economic Behaviour and Organisation*. <https://www.sciencedirect.com/science/article/pii/S0167268121002407>

CGAP (2018). *Strange Beasts: Making Sense of PayGo Solar Business Models*. <https://www.cgap.org/research/publication/strange-beasts-making-sense-paygo-solar-business-models>

International Monetary Fund (2018). *Measuring the Digital Economy*. <https://www.imf.org/en/Publications/Policy-Papers/Issues/2018/04/03/022818-measuring-the-digital-economy>

GSMA (2018). *Spotlight on Mobile Enabled Insurance Services*. World Economic Forum (2021) *Guidebook to Digital Inclusion Bond Financing*. http://www3.weforum.org/docs/WEF_Guideboo_to_Digital_Inclusion_Bond_Financing.pdf
<https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2018/09/2017-SOTIR-Spotlight-on-mobile-enabled-insurance-services.pdf>





United Nations Development Programme
One United Nations Plaza
New York, NY 10017 USA

www.undp.org

