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INCLUSIVE DIGITAL ECONOMY SCORECARD REPORT TONGA 2022

NOVEMBER 2023

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INTRODUCTION

TO THE INCLUSIVE DIGITAL ECONOMY SCORECARD IN TONGA

The inclusive digital economy scorecard (IDES) is a policy tool to help governments set the priorities for their countries' digital transformation. It identifies the key market constraints hindering the development of an inclusive digital economy and helps to set the right priorities with public and private stakeholders, to foster a digital economy that leaves no one behind.

This aspiration further aims to mainstream technology as an agent of change that should unlock opportunities to support smaller island communities of Tonga, thereby resulting in efficiencies and cost-effective ways to motivate participatory and inclusive development across key sectors. Such opportunities include e-learning, e-health services, scale up of energy solutions to reach all Tongans, and improved linkages between the population living in dispersed islands across the nation.

More specifically, the Government of Tonga launched the [Tonga Digital Government Strategic Framework \(2019-2024\)](#)¹, a strategic plan that articulates and visions a digitally enabled government where government ministries and agencies adopt and use information communication and technologies (ICT) to promote inter-governmental collaboration, transition away from a paper-based government, and promote efficient government service delivery to citizens of Tonga.

1 https://digitaltransformation.gov.to/?page_id=154

Whereas digital technologies have been identified as significant enablers to a digitally connected Tonga, digital transformation can even potentially play a leading role to achieve developmental outcomes such as;

- i. Improving Financial Inclusion, with mobile money in remote areas to transact and engage in online transactions, thereby reducing the cost of doing business and travel. Enabling e-Commerce platform to support trade within the Informal sector, to even allow transmission of financial literacy materials online to even the remotest of communities in Tonga.
- ii. Strengthening social protection systems, bringing efficiencies in remittance transfers whilst reducing transactional costs, and enhancing access to quality, equitable and inclusive financial products and services
- iii. Promoting Micro, Small and Medium Enterprises development, while uplifting entrepreneurship skills training and development; to improving women and youth economic empowerment; to tackling climate change effects, aided by digital tools and solutions.

At the Pacific regional level, adoption and use of digital technologies is growing at fast pace, by both governments and businesses enterprises. The digital transformation agenda and the inclination to transit into the 4th industrial revolution is buzzing. The term 'digital transformation,' will refer to the integration of digital technology into government processes, businesses, and economies, resulting in improved efficiency, value, innovation, and service delivery, among other end goals. The digital transformation process not only identifies the ICT sector's significant role towards contributing to job creation and economic development, but further outlines approaches of digitally unlocking potential of other sectors such as tourism, trade, transport, agriculture, education, health, MSMEs amongst others. In this regard, the government of Tonga created the Digital Transformation Department (DTD) to support the country's digital transformation journey.

The Digital Transformation Department (DTD) is housed within the Prime Minister's Office, with a mandate of coordinating all government initiatives related to e-Government. It assists ministries and departments to transition and automate internal business processes and enable delivery of public services through digital means. To supplement DTD, the Reform Taskforce (RF) was established to lead government's efforts to achieve five goals of the DGCF, namely; a) strengthen and build governance through change management; b) implement digital government across all government agencies and activities; c) advance digital inclusion for all; d) promote data sharing and a service oriented information system architecture; e) enhance public engagement. Both the DTD and RF have since made significant strides to achieve their mandate and terms of reference.

However, the question of measuring, monitoring, and evaluating progress of these digital transformation goals remained silent. Therefore, the government of Tonga and UNCDF partnered to implement the Inclusive Digital Economy Scorecard (IDES) toolkit to measure and track Tonga's digital transformation, and identify the key market constraints and "low hanging fruit" areas for government intervention to accelerate and meet their digital transformation agenda. This report will provide the digital landscape of Tonga, with data sets collected and analysed in the year 2023.

OVERVIEW

OF THE INCLUSIVE DIGITAL ECONOMY SCORECARD

The Inclusive Digital Economy Scorecard (IDES) was first successfully piloted in four countries back in 2020, namely Burkina Faso, Uganda, Nepal and Solomon Islands, and currently actively deployed and used by 26+ countries in Africa, Asia and Pacific region, including Tonga.

It is a strategic performance tool developed by the United Nations Capital Development Fund (UNCDF), supported by a reference group of like-minded organizations (GSMA, EU, UNDP, UNCTAD, UN-DESA and ADB). As a policy tool, it supports countries in better understanding and monitoring the status of their digital transformation activities and objectives, helps them to identify key market constraints hindering the development of an inclusive digital economy and further helps them to set the right priorities with public and private stakeholders to foster a digital economy that leaves no one behind.

IDES provides an overall score for the development of a digital economy based on various indicators for the main components of a digital economy (Policy & Regulation, Infrastructure, Innovation and Skills). It also provides a score for the inclusiveness of the digital economy for marginalized segments (rural population, women, youths, MSMEs, migrants, refugees, elderly, people with disabilities). The inclusiveness of the digital economy is primarily measured through qualitative assessment of the efforts made by the public and the private sector to include specific segments in the expansion of the digital economy.

And finally, the IDES tool identifies key focus areas for the building of an inclusive digital economy and enables governments to set both quantitative and qualitative targets and track progress in the development of a nation's digital economy. While the IDES is a global policy tool, it calls for locally relevant and a pragmatic approach in its implementation. Populating and implementing the IDES tool involves incorporating high quality local data sources in consultation with a wide group of public and private sector stakeholders. The IDES takes into consideration four building blocks relevant to the development of a digital economy:

- i. In the **Policy and Regulation** block, the scorecard captures the extent to which the government actively promotes the development of an inclusive digital economy, along with the policies and regulations in place that support digital finance and the digital economy.
- ii. In the **Infrastructure** block, the scorecard quantifies the level of development of the digital infrastructure (e.g., ID infrastructure, access to electricity, phone ownership, and network coverage), the status of the digital payment ecosystem, including the level of interoperability, and the openness of the digital infrastructure.
- iii. In the **Skills** block, the scorecard tracks the active population of the public and private sectors in digital and financial skills development and usage of digital channels for skills development.
- iv. In the **Innovation** block, the scorecard quantifies the status of the country's innovation ecosystem. Key elements are the level of development and the synergies within the innovation community, the level of skills in the ecosystem, the presence of supporting infrastructure, and the availability of financing for innovation. D

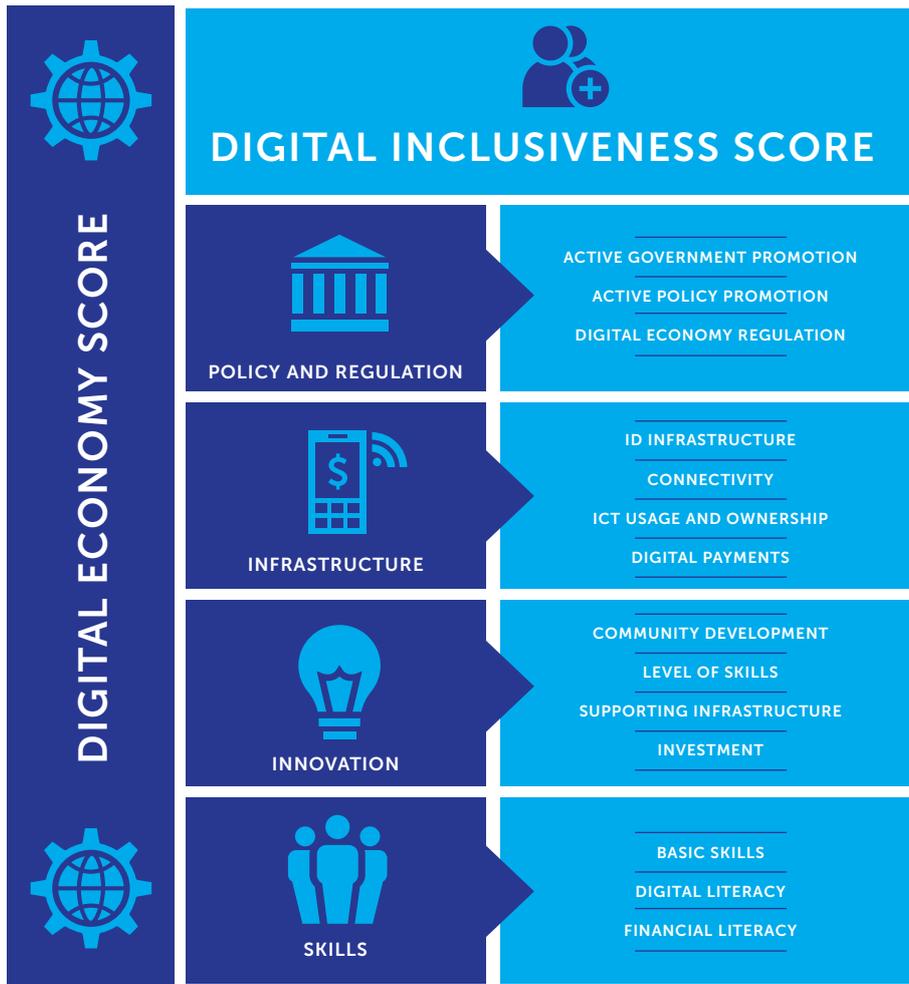


Figure 1. Foundations of the inclusive digital economy scorecard

THE DIGITAL ECONOMIES SCORECARD (IDES) IN TONGA

In 2021, UNCDF commenced its first IDES data collection in Tonga and is the second country in the Pacific to do so. Similar to the methodologies used in other countries, the government of Tonga, through the DTD leadership, coupled with technical and facilitatory support role from UNCDF completed the data collection, measurement, analysis, and evaluation of the digital landscape of Tonga through use of the IDES toolkit in the last quarter of 2022.

This process was government-led, right from stakeholder consultations, deliberations in workshops and validations of global and local data sets with relevant government ministries/agencies and selected private sector partners. Through this government-led process, immediate and medium-term recommendations and a set of activity plan have been proposed to support an accelerated and digitally connected economy that leaves no Tongan behind in this digital era.

TONGA'S DIGITAL ECONOMIES SCORE OVERVIEW

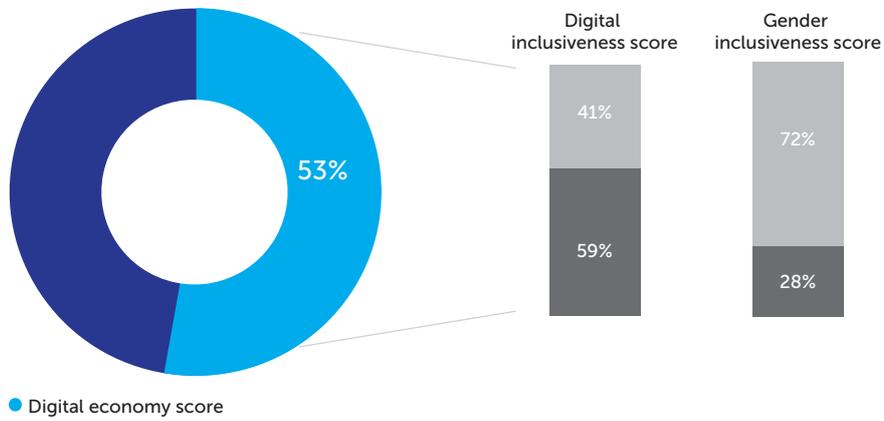
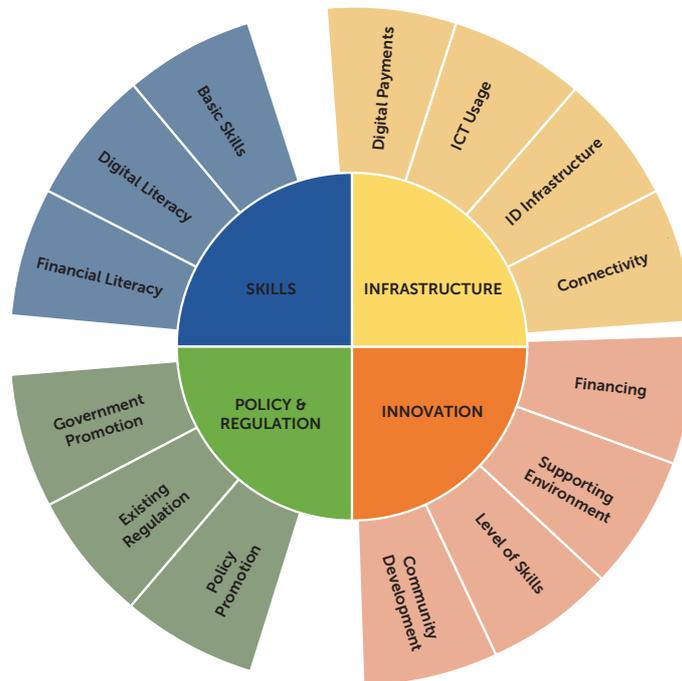


Figure 2. IDES score for Tonga, 2020



SCORES BY BUILDING BLOCK OF A DIGITAL ECONOMY

Hover over the pie chart to see the scores for each component. Click on one component to enlarge it.

Table 1: IDES Score for Tonga

Inception	Start-up	Expansion	Consolidation
0-25%	26-50%	51-75%	76-100%

Tonga’s digital score stands at 53 percent as of end of 2022. This positions the country firmly in the expansion stage of a digital economy. The country’s efforts to grow its digital economy are currently grounded on a strengthened enabling policy and regulatory environment, supported by the private sector’s efforts of expansion of their digital services to mass-market, and heightened by a continuous strengthening of the necessary telecom and digital financial infrastructure. These efforts are premised on building the prerequisite foundations for the innovation sector to grow in the future.

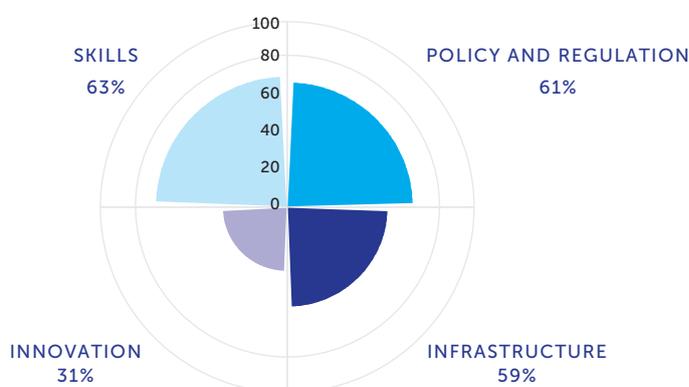


Figure 3: Chart of Digital Economy Score of Tonga

Tonga continues to build the foundational digital rails (policy and regulation, infrastructure; skills) for citizens to access and use basic digital services, mainly in the telecommunications and Government Ministries. The score on Policy & Regulation of 61 percent shows the strong commitment from the government to build the rails of the digital economy under the TDGS (2019-2024), with a number of other fundamental policy initiatives being in existence, such as the cyber security and data protection frameworks, legislations allowing for use of secure cloud based data services, available regulations covering non-bank e-money licensing to permit for stored value accounts, amongst others.

The score of 59 percent on Infrastructure reflects the country's significant investment in internet connectivity scoring at 100% coverage powered by the fibre optic and satellite connections from international private sector companies such as Starlink. Other significant incentives range from the available national ID system that allows citizens to identify themselves to access services from public and private sector. The wide-spread phone penetration amongst the population has also contributed to a fair infrastructure score.

The country stands at 31 percent on Innovation, signifying the limited development within the innovation ecosystem, perhaps where efforts must be directed towards. Evidently, Tonga has few innovation incubators or start-ups who are launching digital services. However, they often work in silos, notably, yet operating within limited entrepreneurial skills and capacity to raise capital.

Tonga's score of 63 percent on the Skills component highlights the government's strong commitment to educate its citizens especially with free education for the first 12 years of a child's life, coupled with appropriate curriculums at primary and secondary schooling levels.

A DETAILED ANALYSIS OF KEY COMPONENTS AND SUB- COMPONENTS OF TONGA'S DIGITAL ECONOMY

ENABLING POLICY AND REGULATION

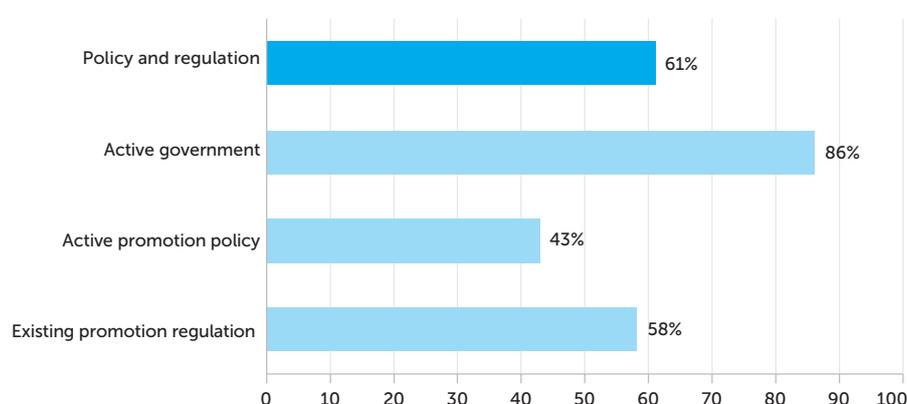


Figure 4: Breakdown of the policy and regulation score, 2020

The TDGS (2019-2024) in Tonga provides the basic foundation for establishing an enabling environment for the development of the digital economy.

Through the TDGS 2019-2024, Tonga's overarching policy and regulatory space is supporting a relatively positive foundation for establishing the pre-requisite enabling environment for the growth of the digital economy. With leadership from the Prime Minister's Office, several government agencies, and public administrations such as the Ministry of Trade and Economic Development, Statistics Department, Ministry of Education and The Central Bank, Telecom Regulator, amongst others, are observed to be actively promoting the development of the digital economy. However, key, yet significant sector ministries are also observed to have remained passive to adoption and promotion of digital transformation, at least not even within their internal structures at bare

minimum. These include but not limited to Ministries of Agriculture, Energy, Transportations, amongst others.

The Digital Transformation Department (DTD) Initiative under the Prime Minister's office is an effort towards the right direction, purposely with digitising government processes with the aim of improving service delivery. The DTD crowds in a multi-sectoral and multi-ministerial enterprise to advance the use of digital tools within government spaces and programmes. For example, it has developed initiatives that are transiting government operations away from the analogue paper-based operations, to incorporating digital that is helping reduce operational costs, integrating and promoting inter-governmental corporations and thus resulting to efficiencies through improve communication.

Further, progressive policies and regulatory efforts are observed within the financial sector. The Reserve Bank of Tonga is observed to have developed and made operational legislative pieces, especially those promoting use of digital financial services. For example, the Bank has permitted non-bank e-money institutions to offer digital wallet services for stored value, further allowing agent networks and merchant services to operationalize and permeate at national levels.

Also observed is the recently launched Tonga E-commerce Strategy and Roadmap, a policy direction towards accelerating digitization of the MSME sector, providing a plan, and set of activities for these enterprises to digitize their operations, transactions, internal processes, and build market linkages with their stakeholders. Interestingly, through the Data Residency law, the Tongan government has permitted and encouraged for use of localized secure cloud-based data services, this in addition to developing a broadband policy that has enabled competition within the telecommunication sector. The government also launched a framework, providing an environment for fair access to communication and data channels, ensuring that all providers have access to bulk data/ communication services such as Unstructured Supplementary Service Data (USSD).

Digital tools can be “a double-edged sword” if not well regulated.² Remarkably, it is observed that the government of Tonga has developed and made public policies aimed at protection to its citizens from possible misuse of digital platforms. For example, the government of Tonga has in existence the Data protection framework that addresses individual privacy and system security. It also developed and launched a cyber-security framework, both in place to protect government, citizens, and business against digital misuse³.

Whereas on a positive trajectory, there are pieces of policy and regulations that are observed to be missing, yet relevant to progress a digitally enabled and connected Tonga. For example, an overarching ICT policy is not in place to provide the policy foundation and long-term vision for ICT development. Notably, there is an also absence of a National Digital Transformation strategy that could provide a coordinated short and mid-term approach, a set of deliberate activities, a period, and actors to engage (from government, private sector, and development partners) in developing Tonga’s digital economy. Also, not currently available is the National Financial Inclusion strategy, a key policy component especially to propel coordination and growth of the digital financial services sector in the country.

Recommendation: Therefore, from the IDES observation, its recommended for the government of Tonga to convene a regulatory gap and priority analysis exercise through a wider public-private dialogue on the digital economy to make sure the current policies and regulations have the expected impact in the market. The findings from these policy dialogues should help the government learn more about the impact of policy actions, continuously improve current frameworks and to develop new regulations that respond to the dynamic development of the digital sector.

2 Digitalisation: A double-edged sword | The OECD Forum Network (oecd-forum.org)

3 https://digitaltransformation.gov.to/?page_id=154

High on the agenda of this public-private sector dialogue should be the assessing designing, and developing the country's 10-year ICT policy, accompanied by the 5-year National Digital Transformation Strategy (NDES) and the National Financial Inclusion strategy (NFIS). Building on the existence of the DTD, taskforces and working groups should be created to operationalize the ICT policy, NDES and NFIS. To consolidate these policy pieces and considering the fast-paced growth of digital evolutions world-wide, requisite digital skills training programs for civil servants should be considered, these must be commensurate to meet government's vision, goals and objectives coined in the ICT policy, NDES and NFIS.

To further consolidate the ICT policy and the NDES implementation, its recommended for government of Tonga to encourage ministries to develop and launch own digital action plans and sets of activities and objectives for the digital transformation within their sector control, but open for synergies and collaboration with other ministries. Examples of such specific sector plans may include the e-agriculture, e-transport, e-health, e-education, amongst others. These sector specific digital plans and activities should look to foster innovation in governance and leverage digital technologies to improve public service delivery, especially in rural areas.

In this digital era, substantial amounts of big data are generated and can be filtered, analysed, and used for decision making. The government of Tonga is encouraged to develop a government led approach and develop frameworks to enable the collection, access to and use of such big data sets, with special attention towards gender-disaggregated data.

INFRASTRUCTURE

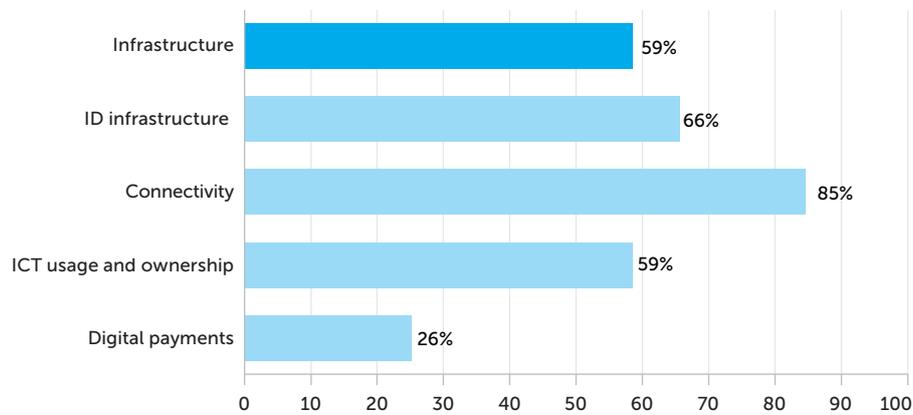


Figure 5: Breakdown of the infrastructure score, 2020

The 59% infrastructure score for Tonga was driven by connectivity, ICT usage & phone ownership components. The Government of Tonga has always prioritized this sector in the past. However, the efforts and investment only increased after the tsunami disaster in 2022 where the fibre optic connection was severed. Given the 100% telecommunication coverage, Tongans can easily access the internet. This coverage is predominantly through wireless networks mobile platforms, and this has accelerated social media usage. However, despite the significant mobile phone penetration rate, the active mobile money transactions are still low.

Encouraging observation on digital infrastructure includes the presence of a national identity card (ID) system. Even though not yet digitized, 97% of the adult population in Tonga have access to a national ID that can be presented to access services from both the public and private sector. Penetration of smartphone devices is at 62%, this provides the prerequisite basic infrastructure to access digital solutions, products, and services. Energy is key to powering digital infrastructure such as computers, smartphones, telecom equipment, data centers, amongst others; and on a positive note, IDES observed that 80% of Tongans have quality supply of electricity coverage.

On the other side regarding ownership of phones, IDES observed the cost of devices, especially smart phones remain relatively high compared to incomes of Tongans. Interestingly, the increasing penetration and permeation of mobile phone ownership is largely driven by the generousities of families and friends overseas, who do this to ease their communication with families back home.

Similarly, despite having two Telecom providers, the cost of internet and data packages is observed to be high, this amidst connectivity quality. The majority of telecommunication is of 2G-3G in the rural area, with intermittent 4G in the CBD area. Tonga scores 45% on network quality index, it is possible to conclude that the costs of internet services may not be commensurate to the quality offered. It should also be noted that the existing 2G and 3G infrastructure is not adequate to support emerging technologies such as Internet of Things (IoT), nor can it leverage collection, analysis, and use of big data.

IDES also observed that within the financial sector, interoperability remains far-fetched. Tonga lacks an interoperable payment system and gateway that is necessary for cross payments between different financial Institutions and mobile money providers, not even single bilateral interoperable payment system is operational, with domestic clearance done through cheques. Even with the presence of mobile money services, only 54% of the population have a digital money account, it is not surprising that less than only 25% of these digital accounts made or received money digitally through these accounts/wallets.

Recommendation: Therefore, from IDES observation and through the public-private dialogue, government should commence discussions and activities towards transitioning the current ID system into a national digital ID that provisions a platform for access and uptake of services digitally.

With a combination of policy intervention and motivation, for example through taxation amongst other means, the Tongan government could consider Incentivising the private sector to lower cost and increase access and usage of smartphones and internet, particularly for marginalized segments of the population (women, rural households, micro entrepreneurs). Government may also consider dialogue with the telecom partners on enhancing universal network access, leveraging the opportunities and collaborative approaches such as co-location and shared infrastructure.

Although considerable efforts have been done towards digital finance, more still requires attention, and the Reserve Bank should motivate financial and non-financial offering digital wallets deepen the spread and improve quality of agent and merchant networks that will intensify increased use of digital payment platforms. There should be coordinated efforts with Government to set up a National Payment system to promote and enable interoperability including motivating the private sector to build digital platforms that digitize the remittance corridors, taking advantage of the money flows from Tongans living abroad and are sending money back home to support families.

INCLUSIVE INNOVATION

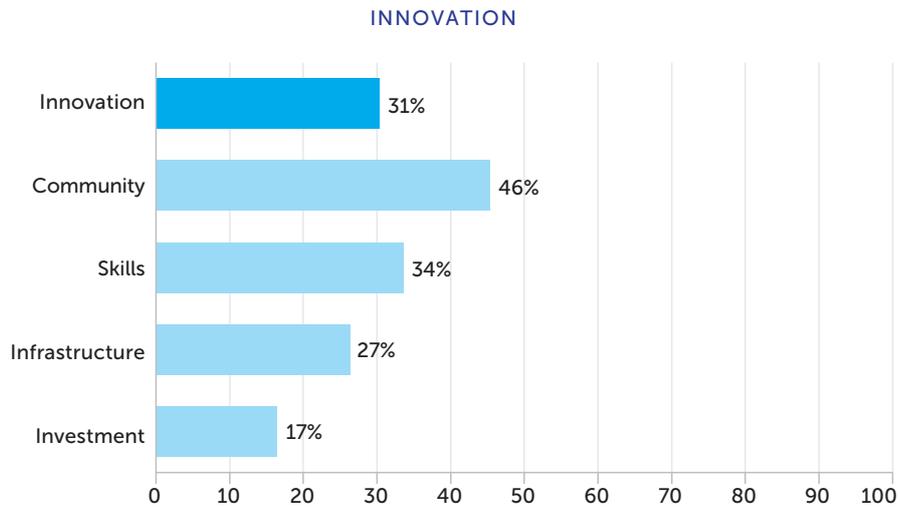


Figure 6: Breakdown of the innovation score, 2020

At only 31 percent, the innovation score within the IDES is the lowest of the four components for Tonga. Evidently the innovation ecosystem has been growing in recent years, however it remains struggling in the early phases of growth and development. With exceptions of a few innovations happening in the financial sector, IDES did not observe significant efforts in innovations in areas such as smart agriculture, climate smart solutions, smart transportation, telemedicine, and e-education, amongst others.

IDES took note of the limited levels of skillset development and training opportunities to feed the innovators space of Tonga, scoring at 33%. No clear university or education learning institute can be called the center and conveyor belt responsible for innovators and developers of digital solutions. Therefore, it is possible that the innovation space is deprived of digital expertise qualified and ready to the innovation market and further meet the innovation needs of Tonga. Unfortunately, this is compounded by an absence of not even a single digital innovation hub or something similar in the country, to offer on the job or attachment training.

IDES also observed that the Tongan market has less than five fintech companies' existent yet operating with limited or no collaboration with universities/schools. This could tell the reason for only a handful of Apps and online tools are available and operational within the country. It is also possible that existing Fintechs are struggling to develop mutually

beneficial long-term partnerships with industry incumbents such as banks and mobile money providers.

IDES further observed that limited financing is going towards the innovation space, scoring at a mere 17%. This could be attributed to the general lack of appetite by financial institutions to finance the MSME sector, a cohort that consists of the majority innovators and entrepreneurs. However, besides the financing issue, there is a limited pool of entrepreneurs focusing on innovations outside the financial sector, which is more of their comfort zone.

Recommendations: Therefore, from IDES observation, the digital ecosystem, particularly the innovation space, could benefit from a cohesive re-organization and linkages of all stakeholders (incubators, entrepreneurs, mentors, investors, etc.) to benefit from more synergies and visibility. Government could consider conducting a comprehensive mapping of fintech and start-up ecosystem and landscape to provide a starting point and a baseline, but further consider developing guiding principles for innovation, including developing and operationalization of experimental Sandboxes across different sectors. These coordinated efforts would provide a great foundation, prior to set up/ establishment of an innovation hub for Tonga.

Financing is key, government of Tonga could consider setting up an entrepreneurship revolving funds specific for innovators. This could be strengthened with mechanisms that can incentivize financial institutions within the private sector to support innovation, for example through offering guarantee facility lines. While at this, government should work on mechanisms that motivate and drive Tongans to use technologies solutions and services, specifically those developed locally within the Tongan innovation market, by Tongan innovators.

However, while strengthening the investment environment to provide access to affordable financing, government should pay particular attention for flow of financing to go towards promising startups that are leveraging digital in critical sectors such as education, energy, health, and agriculture.

EMPOWERED CUSTOMERS

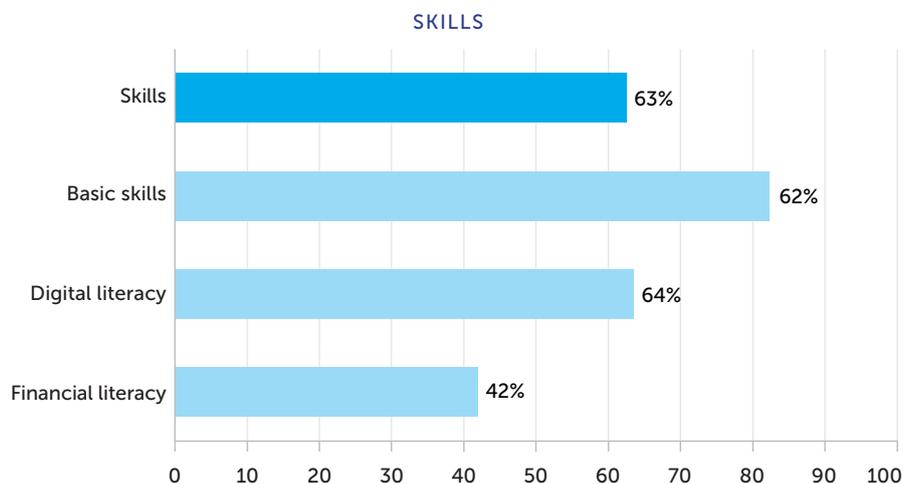


Figure 7: Breakdown of the skills score, 2020

The Skills component scores for Tonga stands at 63%, however, the largest contributing factor is coming from basic skills score which is high at 83 percent. This provides for a foundation and “low hanging fruit” for success of any well-designed and executed digital or financial literacy strategy campaign. Interestingly, IDES identified that 72% of schools have a connection to the internet services, and that financial literacy materials are available for schools at all educational levels. These provide incentives to leapfrog through the digital transformation agenda.

On the flip side, the levels of digital skills within the population remains low, sitting at 33%, potentially meaning that Tongans, especially digital technology developers, are not adequately equipped to respond to specific digital industry needs and challenges of the country. However, these gaps have not clearly been identified by IDES. This will require conducting a detailed digital literacy assessment and gap analysis study.

IDES further observed that financial literacy levels score at 50%, the large population that remain unserved with financial literacy campaigns pose a challenge with the possibility that several Tongans are not aware and

may not be able to adopt and use digital financial services and products. It is possible that the lack of the NFIS and literacy plans are a major contributor to this challenge.

IDES recommends to government of Tonga to re- strategize its approach to improving literacy skills. For example, while it continues to increase basic skills, a key priority should be tailored towards setting up dedicated digital literacy within institutions of learning, and scale them to national levels.

The Government should develop a National Campaign to promote basic Financial and Digital Literacy, so Tongans could understand its difference from basic education courses. In addition to that, a more coordinated efforts with Private sectors and donor partners should be established to develop a hybrid of financial literacy training modules combined with a short learning videos, or educational apps to promote this space.

THE DIGITAL INCLUSIVENESS SCORE/ DIGITAL DIVIDE IN TONGA

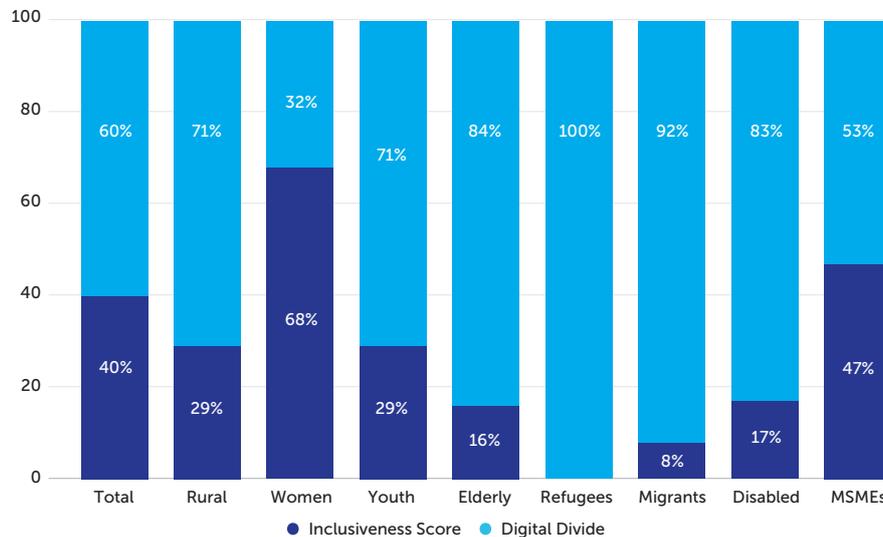


Figure 8: Digital Inclusiveness by Segment in Tonga

The digital inclusiveness score for the country stands at 40 percent, indicating that over 60% of marginalised segments are not participating in the digital economy – this is what UNCDF terms as the “digital divide” – the percentage of the population that is currently left behind. While the country is strongly engaged and investing in the development of its digital economy, emphasis remains towards including all segments of the population, in particular those often left behind, to ensure that everyone benefits proportionately from the expansion of a digital economy. Tonga’s government therefore has significant effort and room to engage both public and private sectors to include marginalized segments (rural population, women, youth, MSME, elderly, migrants, and persons with disabilities) in the development of the digital economy.

Women digital divide: Whereas Tonga’s digital inclusiveness score stands at 40%, the gender inclusiveness score is higher, currently at 68%. However, this indicates that 32% of women are not engaged in digital economy activities. They are at risk of being entirely excluded and not benefitting from the development of the digital economy in Tonga – if existing inclusiveness barriers in the four dimensions of the IDES are not addressed by public and private sectors in the years ahead. The

high gender inclusiveness scores of 68 percent responds to the efforts made by government to increase financial inclusion for both women and men equally which results in a lower gender gap ratio. This is further narrowed by the efforts to reduce the gender gap ratio in years in basic schooling.

However, the low financial and digital literacy skills significantly contribute to the women digital divide. This can be partly attributed to the patriarchal cultural norms in Tonga, a culture that is not encouraging women to take up leadership, where their voices and opinion can be heard to influence decision making for women's inclusion. It is observed that women in Tonga are economically more dependent on their spouses for decision making for issues such as owning a bank account, owning a mobile phone or digital tool, amongst others. This potentially has a net effect towards a high the digital divide score for women and young girls in Tonga.

MSME digital divide: The digital inclusiveness score for MSMEs stands at 47%, indicating that 53% are not participating in the digital economy. According to the Tonga Informal Business Survey, only 35% of MSMEs exports their goods overseas, while 80% sells to local customers. Since cash is dominant in Tonga, payments are completed in cash and through manual processes. However, Tonga has recently seen an introduction, development, and growth of a few online e-commerce platform into trade and commerce. Unfortunately, the level of adoption is quite slow, majorly because of low financial literacy. Interestingly, several MSMEs use smart phones and the internet to market and advertise their businesses, but not for payments. IDES observed that core business payment infrastructures are missing in Tonga, if available, these could have provided a foundation for the potential acceleration of payment. It is also important to note that there are no MSME related policy and regulations in Tonga, specifically to the agenda of access to finance and financial literacy development.

Youth digital divide: The digital inclusiveness score for youth stands at 29%, indicating that 71% are not participating in the digital economy. Worth noting, Tonga has a considerable proportion of young people, about 32% of the population are youth. Also, to note, 44.5% of female and 34.5% male youth are not in employment. It could be higher for

women, as they are more likely than men as women are engaged in unpaid work of running family homes and caring for children.

IDES observes the high digital divide amongst youth is majorly resulting from a lower score on financial competencies. Interestingly, the same youths are scoring highest around digital adoption, especially with access to smartphones and using these devices to engage on social media platforms such as Facebook. This revelation is key to government, that youth have access to and are using digital tools (smartphones), but they lack the financial competencies to harness the full potential of digital, specifically digital financial services.

Globally, youthful populations are known to be digitally savvy, they embrace and use modern technologies more swiftly than adults. Also because of their increased spending power, youths are a target market for online advertisers and content developers. Such has spurred the innovation space with development of digital products, services, and web sites, specifically designed for youths. However, this may not be the situation in Tonga, with an innovation space scoring just 31%, it is possible that this subtle innovation space is not fully engaging, taking advantage, and leveraging the benefits that comes with youth and rapid adoption of digital tools.

Rural population digital divide: Similar to youth, the digital inclusiveness score for rural population also stands at 29%, indicating that 71% of rural people are not participating in the digital economy. Even with internet coverage at 100% of Tonga, thanks to fibre cable connectivity, and the alternative connection to the Starlink infrastructure, the level of digital development, adoption and usage is more pronounced in the urban and CBD areas. It's observed that the quality of internet connectivity is even poor in the rural area, further discouraging usage of internet. Key to note, prevailing cost of internet and smartphone is observed to be high in Tonga, yet the country's rural populations is poor, reliant on subsistence and low paying informal jobs, therefore making it even harder to close the rural digital divide.

CONCLUSION

Since Tonga is already at the expansion stage of a digital economy the focus should be geared towards developing the innovation ecosystem since the digital rails (Policy and Regulation, Infrastructure, Skills) are well established, but ofcourse continous support is still required to strengthen and to foster an enabling environment.

It is critical that the Policy and Regulations remains agile, to ensure innovations is not stifled. As reflected in the IDES 2022 score, the relevant legislations for the financial market is at the nascent stage. The Government ought to prioritize the digital financial literacy aspects or mandate one of the Ministries or Government Agencies to champion this sector given the importance of empowering the Tongan citizens to embrace and use digital tools and services to ensure no one is left behind in this digital era. With regards to low levels of digital inclusiveness currently sitting at 40%, there is a pressing need for the government to mainstream marginalized segments (rural, youth and MSMEs) in the development of the economy.

As mentioned above, Tonga has to-date demonstrated the capacity to develop policies and create the supportive legal and regulatory environments, relevant infrastructures as well as the basic skills required, however, to take the country to even higher level, interventions will in some cases require an overhaul, rethinking and/or re-strategizing in the following areas:

- **Policy and Regulation:** expanding on policy and regulation to accelerate effective implementation, with partnership and collaboration with the private sector, and in some cases, the academia. This will close the current gap between policy/regulation development visa-vie achievement of development outcomes.
- **Infrastructure:** government to consider prioritizing relevant critical infrastructure to enable interoperable payments in the market, for example set up a national payment gateway/switch, at least to open

interoperability for domestic payments and transfers. Most prerequisite digital infrastructure are large ticket size investments; it is prudent for government partners and engages with the development partners for support.

- **Innovation:** the weak link currently, requiring a rethink of strategy and deep collaboration with the private sector to take center stage, it cannot afford to function on “business as usual” approach. In several instances, it will require leapfrogging, by learning, borrowing, and adopting relevant innovations from markets that are ahead of the curve.
- **Skills:** The major challenge is clarity with identifiable and responsible line Ministry or agency for growing digital skills. It potentially could fall under the purview of the Ministry of Education and Training, but this will require immediate re-aligning and developing a comprehensive plan to meet the digital literacy need.

The Digital divide: In response to the digital inclusiveness scores for women (68%), MSME (47%), youth (29%), rural population (29%), the government of Tonga and the private sector should develop strategies and action plans to focus on these important segments. Despite representing a lower percentage of the population, elderly, migrants, and people with disabilities must not be excluded from access to digital technologies or the benefits of the digital transformation of Tonga. During policy development, specifically if Tonga government opts to proceed with developing the ICT policy, National digital transformation strategy and National financial inclusion strategy, specific action and targets for marginalized groups must be considered, including monitoring and evaluation plans that should be supported by sex disaggregated datasets.

ANNEX: MEMBERSHIP OF THE IDES WORKING GROUP

Prime Minister's Office	Director
National Planning	Deputy CEO
MEIDECC	Deputy CEO
Ministry of Trade and Economic Development	Deputy CEO
Ministry of Education and Training	Deputy CEO
Tonga Statistics Department	Statistician
National Reserve Bank of Tonga	Deputy Governor
Digicel Tonga Ltd	CEO
Tonga Communications Cooperations	CEO
Tokowireless	CEO
Tonga Cable Ltd	CEO
Tonga Development Bank	CEO
Bank of South Pacific	CEO
Australia New Zealand Bank	CEO
Capital Insurance	Manager
Tower Insurance	Manager
SPBD	Manager
Global Green Growth Institute	Manager
Skyeye Ltd	Manager
TEL Tonga	Manager
Tonga Chamber of Commerce	President
Balance of Power	Coordinator
Tonga Women in ICT	Coordinator
USP	Director
TTI	Director
United Nations Capital Development Fund	Country Coordinator



LEAVING NO ONE BEHIND IN THE DIGITAL ERA

The UNCDF strategy of leaving no one behind in the digital era is based on over a decade of experience in digital finance in Africa, Asia and the Pacific. UNCDF recognizes that reaching the full potential of digital financial inclusion in support of the Sustainable Development Goals (SDGs) aligns with the vision of promoting digital economies that leave no one behind. The vision of UNCDF is to empower millions of people by 2024 to use services daily that leverage innovation and technology and contribute to the SDGs. UNCDF will apply a market development approach and continually seek to address underlying market dysfunctions.

THE UNITED NATIONS CAPITAL DEVELOPMENT FUND

The United Nations Capital Development Fund (UNCDF) is the United Nations' flagship catalytic financing entity for the world's 46 Least Developed Countries (LDCs). With its unique capital mandate and focus on the LDCs, UNCDF works to invest and catalyse capital to support these countries in achieving the sustainable growth and inclusiveness envisioned by the 2030 Agenda for Sustainable Development and the Doha Programme of Action for the least developed countries, 2022–2031.



 www.ides.uncdf.org

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