HOW DIGITAL IS
TRANSFORMING THE LIVES OF YOUNG PEOPLE
IN SMALL ISLAND DEVELOPING STATES

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Q Small Island Digital States

ACKNOWLEDGEMENTS

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FOREWORD

There once was a frog, an elephant, and a pig.

Legend has it that the three challenged one another, to see who could swim the fastest from Singapore to the offshore island of Pulau Ubin - on the condition that those unable to make it by midday would turn to stone. All three failed the challenge, and today, stand as rock formations on the island's southeastern coast.

Small Island Developing States, or SIDS, comprise 39 countries in the Caribbean; the Pacific; and the Atlantic, Indian Ocean, and South China Sea. Yet across continents and cultures, a common thread binding SIDS can be found in folklore. Each tells stories about the ocean - from the fearsome Lusca in Caribbean waters, to Polynesian migration guided by the lights of Te Lapa. SIDS are located in some of the most remote geographies in the world, and the reality of our isolation has been reflected time and again in the narrative of our histories.

People residing in SIDS have overcome the odds time and again to remain connected with the wider world. In this effort, going digital has been a game changer - in the way we live, work, and play - reflecting the agility of our communities to adapt to new mediums. Going digital has allowed us to connect with people all over the world, from oceans away, overcoming physical barriers through digital means. It has enabled us to plug into international marketplaces, discourses, and resources. Though challenges to becoming Small Island Digital States remain - including affordability of ICT infrastructure, the difficulty of developing whole-of-society digital skills, and the comparatively higher cost of connectivity resulting from geographic distance - we are committed to embracing digital possibilities.

With the potential that interconnectivity and the global economy represent - young people from SIDS do not want to be left behind in the digital future. *"How Digital is Transforming the Lives of Young People in Small Island Developing States"* is a groundbreaking report, for how it shares the voices of 5,000 young people from SIDS. While it is not an exhaustive representation of all young people from SIDS, the findings are important to reflect on and discuss further. Young people from SIDS are excited about the opportunities that digital technologies can have in bettering their lives. Young people from SIDS are enthused about the chance to plug into the rest of the world. Most of all, young people are convinced that digital is an integral part of their futures.

Today, we already see young people from SIDS serving as digital leaders and advocates in their own right. They are building custom software solutions for the world from Samoa; they are drafting national digital legislation in Kiribati; they are building data science capacities in the Maldives; they are using gamification to improve financial literacy in Trinidad and Tobago. Young people from SIDS are already at the forefront of the digital transition - and we should support them.

An ambitious and forward-looking agenda on the adoption of digital technologies and how they can support access to quality education and employment opportunities for youth can be an important enabler for SIDS. This report show us that young people from SIDS are excited about the digital future, and this is just the beginning.

Unlike the frog, the elephant, and the pig - today, we have the means to cross shores through digital technologies, without fear of being turned to stone. Young people from SIDS recognise that digital is a substantial part of our present, and will be a significant part of our futures. And we will do what it takes to preserve our part in this digital future.

Mock Yi Jun

Generation17 Young Leader

< 5 >

KEY TAKEAWAYS

Digital tools and technologies are transforming the lives and livelihoods of young people in Small Island Developing States (SIDS). Young people are positive about the impacts of digital for themselves, and for their countries. The vast majority of young people see digital as important for their lives, their jobs, and for the development of SIDS. Women are slightly more positive about the role of digital technologies in their lives, compared to men, but also recognise the potential for digital to have good and bad effects. For many young people, digital is making their lives easier, better, and more successful.

Digital is driving new ways of living, working and playing in SIDS. It is providing young people with new opportunities, careers, ways of learning, and connection. Many young people in SIDS are building digital businesses, leveraging global digital marketplaces to sell their products or services, sharing their unique culture and insights with audiences around the globe, or learning new skills and ideas from the online and digital worlds.

Digital is having a very wide and exciting impact on young people. It is affecting all aspects of their lives – from improvements in public service delivery, to increasing the accessibility of key products and services such as finance, healthcare, and education. Digital is a tool that many young people – and others – are using to support social, economic, cultural, and professional development. And the increasing accessibility of digital tools – from drones, to artificial intelligence– offers exciting possibilities.

PHOTO: **MINISTRY OF DIGITAL TRANSFORMATION REPUBLIC OF TRINIDAD AND TOBAGO**

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Digital is also redefining geographies, borders, and distance. SIDS remain some of the most remote countries on Earth, but digital is improving their connection and connectivity to the rest of the world. Digital offers young people options to develop partnerships with like-minded people and peers around the world. Online networking has become easier, while technologies such as cloud computing, cross-border data flow and continued advances in connectivity are bringing more people online. Young women in SIDS are particularly keen to collaborate with their international counterparts.

And young people in SIDS do not want to be left behind by the potential of digital. For many, digital skills development is a real priority. More than three-quarters of young people in SIDS recognize that digital skills are going to be important for their future careers. This applies across men and women, with young people over the age of 22 and respondents in the Caribbean particularly alert to this need. Young people are also embracing new ways of learning enabled by digital, including online courses and 'micro-credentials'. Those with higher levels of education also see digital technologies as being especially important for their future job opportunities.

However, digital is a double-edged sword. Young people in SIDS are alert to – and experiencing – very real digital divides, and other challenges. From lacking access to digital devices, to issues of data affordability and poor connectivity, and regular online experiences of harassment, bullying, scams, and other negative behaviours. Young people are keen to build their skills to engage with these realities, but also want regulation and other support to mitigate and tackle them in a more systemic way.

PHOTO: **UNDP MAURITIUS AND SEYCHELLES COMMUNICATIONS TEAM**

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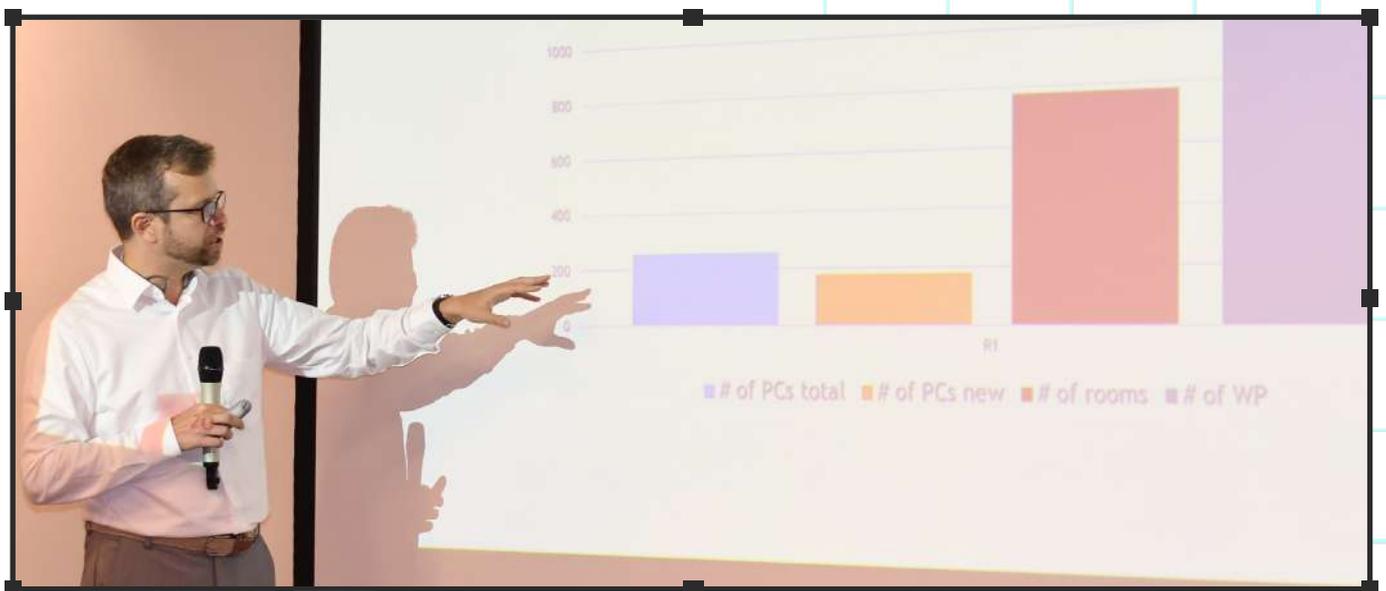
Similarly, the digital economy remains vulnerable in many SIDS. Although many young people are using digital tools and technologies to build businesses, more structural barriers remain that could constrain the growth and dynamism of the digital economy across the SIDS community. From outdated regulation and processes, to challenges in securing funding and financing for digital entrepreneurship, and lower levels of research and development and nascent innovation ecosystems. As highlighted by one entrepreneur interviewed in one Small Island Developing State:

> "The laws in [my country] are too antiquated to facilitate digital learning...To be certified as a [digital school] – for us to get official school registration, status and the benefits that come with that: we have to have a physical space, we have to have a fire evacuation plan, we have to keep physical records – we have to print student records and store them in this physical space…"

And, digital is posing specific challenges and considerations for SIDS cultures and communities. Many young people are concerned that digital could lead to the loss of traditional values and cultures – and also distract and distance them from their families and friends. They highlight concerns of digital addiction and alienation, and eroding of personal and national identity. Others see digital creating distance and isolation, even as digital tools increase the global presence of SIDS.

Despite these challenges, young people are going digital. And SIDS governments and other actors need to support and empower them on this journey. From ensuring crucial digital foundations such as high-quality connectivity, to building the digital skills of the present and the future, and ensuring that no one is left behind or excluded from the potential that digital can offer for SIDS. This is a whole-of-society effort – from regulation and policy, to education and lifelong learning, and shaping and developing local digital products and services, and making digital real and relevant for young people in SIDS.

And part of this journey is ensuring that young people in SIDS are heard – and that their thoughts, hopes, aspirations, and concerns inform decision-making on digital (and on all other matters in SIDS). Digital provides opportunities here, too. This study was founded on a survey delivered via Facebook Messenger, WhatsApp, and Telegram – key channels for young people in many SIDS. It provided an opportunity to connect directly with young people, and to hear from them – in their own words. These tools can offer exciting potential for building engagement, and feedback loops, with young people. But such channels are not a panacea - recognising the considerable amount of young people offline or disconnected, who must not be excluded from these conversations and discussions.

Young people in SIDS can be digital advocates, ambassadors, and leaders. As highlighted in the more than 5,000 responses received from young people, the experts and entrepreneurs interviewed across the SIDS community, and the case studies explored in this report, young people are pushing the limits of digital – from a growing community of female data scientists in the Maldives, to educators lowering the barriers to the Fourth Industrial Revolution in Timor-Leste, and using approaches such as gamification to improve financial literacy in Trinidad and Tobago. The potential is exciting, and the digital future in SIDS is only just beginning.

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INTRODUCTION

Young people drive the technological age. They are uniquely positioned, with a plethora of skills and high levels of motivation, to leverage digital technologies for the benefit of their lives, livelihoods and countries. This is particularly the case in Small Island Developing States (SIDS), where young people comprise over a fifth of the population in most countries—and in many, almost a quarter. If they were a country themselves, the population aged 15 to 24 years old in SIDS would comprise one of the largest island States.[1]

For young people in SIDS, digital tools and technologies are more than just tools; they are gateways to new horizons. These technologies are creating fresh opportunities, opening doors to unconventional careers, and redefining the way knowledge is acquired and shared. This is not a simple story, however. Many young people in SIDS are excited by and actively engaging with the benefits of technology. They are starting new businesses, exploring new opportunities, learning new knowledge and skills, and building global connections. But sustainable and accessible digital infrastructure does not reach all communities and population groups or even exist in some countries. Online harassment and cybercrime are mounting concerns. Further, a significant proportion of young people do not think that they have the necessary skills to meaningfully participate in the digital economy, compounding the complexities of high youth unemployment rates in a number of SIDS.

Opportunities to enhance employability, promote socioeconomic development, improve education and transform communities lie at the centre of a digital transformation that leverages these tools and approaches. To maximize and sustain these benefits, young people need skills, access and support. This report, based largely on insights provided by young people themselves, highlights the wide-ranging potential of digital in offering:

`Advancement`—providing knowledge, communication and opportunities to support development and innovation in their countries and for themselves.

`Connectivity`—creating new ways to connect with friends, family and opportunities around the world, which is particularly valued in the context of island living.

`Efficiency`—increasing the speed and success of carrying out daily tasks on personal and professional levels.

Young people know that digital can improve the quality of their lives.

1. UN World Population Prospects, 2019.

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Graph 1

TOTAL POPULATION OF SMALL ISLAND DEVELOPING STATES

by age-range (UN World Population Prospects, 2021 estimates)

Guinea-Bissau

Vanuatu

Timor-Leste

Solomon Islands

Sao Tome and Principe

Nauru

Comoros

Papua New Guinea

Kiribati

Samoa

Haiti

Tonga

Micronesia (Fed. States of)

Belize

Tuvalu

Cabo Verde

Guyana

Marshall Islands

Fiji

Dominican Republic

Tokelau

Maldives

Suriname

Grenada

Jamaica

Dominica

Bahrain

Seychelles

Bahamas

Saint Lucia

Saint Vincent and the Grenadines

Cook Islands

Saint Kitts and Nevis

Antigua and Barbuda

Palau

Curaçao

Niue

Trinidad and Tobago

Mauritius

Anguilla

Turks and Caicos Islands

Cayman Islands

Barbados

British Virgin Islands

Cuba

Sint Maarten (Dutch part)

Aruba

Montserrat

Singapore

Bermuda

0%   100%   0%   100%

| 0-34 | 35-49 | 50+ |

< 11 >

SIDS are a unique development story. They cover the entire globe. The United Nations recognizes a total of 57 SIDS, of which 39 are United Nations Member States.[2] SIDS are located in three geographical regions: the Caribbean, Pacific, and the Atlantic, Indian Ocean and South China Sea (AIS). They face shared challenges encompassing smaller populations, limited natural resources, geographic and broader remoteness, and vulnerability to climate change, natural disasters and economic shocks. They also possess shared opportunities, many driven by digital and technology. These include lower levels of legacy infrastructure that might otherwise impede digital development, and more agile and increasingly data-driven governance structures.[3] Their younger populations could also prove to be an asset – supporting the exploration of new technologies and innovations for sustainable development.

The rapidly accelerating pace of digital transformation and the development of digital tools can be a source of empowerment for young people in SIDS.

Young people said they are excited to use digital tools to support social, economic, cultural and professional development. They want to develop local expertise to drive change within their communities and gain the ability to advocate for broader sustainable development based on their unique cultural and broader heritage.

A number of young people emphasized that digital 'interconnection' could transcend physical distance, offering a new avenue into global discussions and mitigating the negative effects of their physical isolation and remoteness. Digital is connecting young people across the world and facilitating productive discussions of contemporary issues.

Digital technology is also fostering a more diverse and inclusive development policy, research and implementation community, including through sharing SIDS' experiences and knowledge. Interestingly, almost half of all respondents prioritized 'collaboration' as amongst their top digital skills priorities. This was especially emphasized by young people in the AIS and Pacific regions, and underscores the importance of fostering cooperative partnerships and shared learning experiences as SIDS navigate their digital journeys toward sustainable development.

Many SIDS are also exploring digital as a key tool for survival. For example, Tuvalu, hovering just two metres above sea level, may be among the first countries to experience the most profound impacts of climate change, including the loss of its territory. Tuvalu's government recently launched its 'Digital Nation' initiative[4] to deploy digital tools, from cloud technologies to emerging concepts such as the 'metaverse', to protect the country's identity, culture, sovereignty—and future.

Young people play crucial parts in such developments. This study is an attempt to hear from this next generation—the builders, future leaders and citizens of these emerging digital nations.

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2. United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States https://www.un.org/ohrlls/content/list-sids

3. UNDP: Small Island Digital States – https://www.undp.org/publications/small-island-digital-states-how-digital-can-catalyse-sids-development

4. Tuvalu: the first Digital Nation https://www.tuvalu.tv/

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METHODOLOGY

This report is based on extensive primary and secondary research. The UNDP Global SIDS team and UNDP Country Offices, launched a digital youth survey in July 2022. It ran until February 2023, aimed at identifying the digital hopes, concerns and aspirations of young people—aged 18 to 35 years old—in SIDS around the world.

The survey combined quantitative and qualitative questions through a chatbot interface that ran on RapidPro. It was accessible via Facebook Messenger, WhatsApp and Telegram. These channels were selected as those most used by SIDS youth. A global advertising campaign, implemented through Facebook, Instagram and Twitter, promoted the survey. It was available in seven languages: Dutch, English, French, Haitian Creole, Papiamentu, Portuguese and Spanish.

In total, the survey received more than 5,000 responses from youth in over 30 SIDS. This makes it likely one of the most comprehensive engagements of youth in these countries. Respondents represented a range of sociodemographic characteristics: 45 percent identified as female while 38 percent were aged between 24 and 30 years old. All levels of education were represented, from high-school graduates to respondents who have completed postgraduate studies.

Graph 2

Age

Age group	Percentage
18–19	14%
20–21	14%
22–23	13%
24–30	38%
31–35	20%

Education

Level	Percentage
Some education	12%
High School	40%
Bachelors	33%
Post-grad	16%

Gender

Gender	Percentage
Female	45%
Male	53%
Prefer not to say	2%

Digital expertise

Level	Percentage
Learner	24%
Explorer	39%
Expert	37%

Region

Region	Percentage
Pacific	33%
AIS	29%
Caribbean	37%

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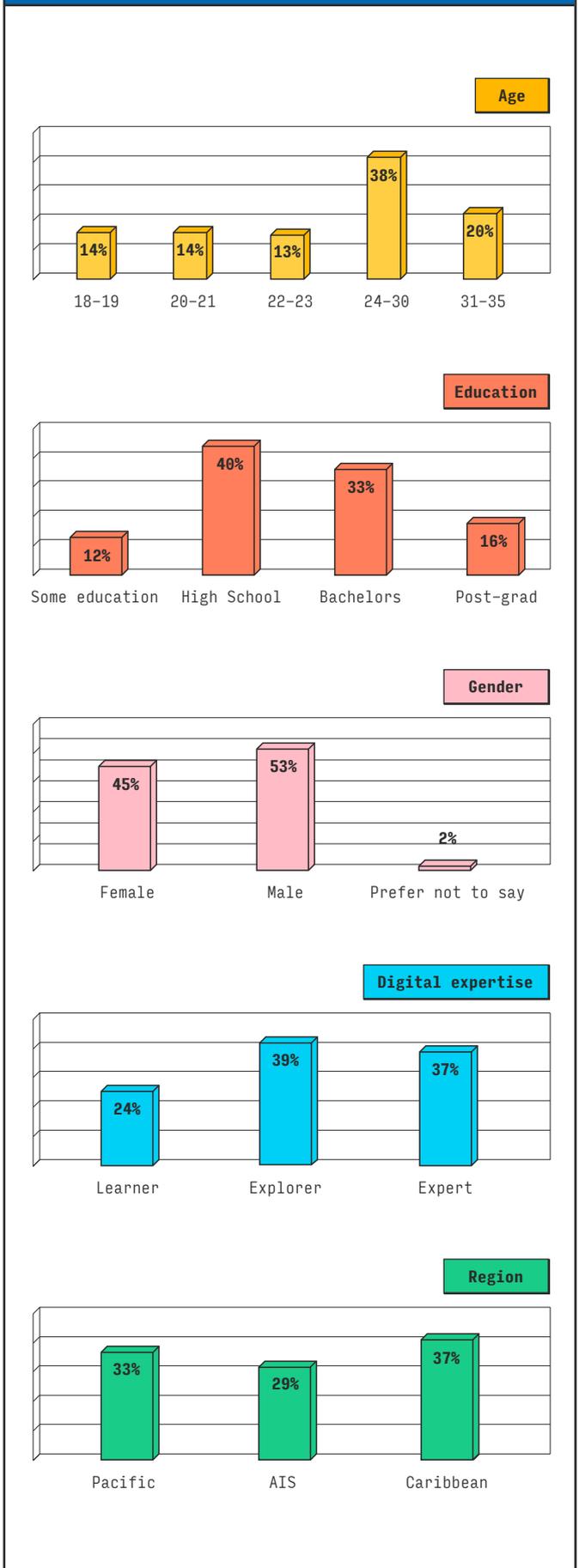
The study employed a mixed methods approach. It combined the survey data with academic and 'grey' literature, interviews with expert stakeholders from across the SIDS community and secondary quantitative analysis. These additional sources strengthened the validity of the study.

The study does not seek to represent the views of all young people in SIDS. Most importantly, it does not feature the perspectives of the considerable proportion of young people in SIDS who remain offline or lack meaningful access to digital. It strives to demonstrate the potential of digital tools and channels in engaging with a population whose thoughts and perspectives are not consistently heard. It brings to the forefront the ambitions and concerns of a diverse range of digital young people, with the hope that their voices will inform global conversations and facilitate their involvement in local and national decisions and policymaking. However, this research also reaffirms the importance and necessity of concerted efforts to hear from those without access to digital, as well as the need to get this population online and digitally-included.

This report uses research findings and insights to split the digital journey of young people in SIDS into three categories: '**live**', which delves into how young people use digital tools and technologies to support their day-to-day life; '**work**', which explores the role of digital in building new skills and opportunities; and '**play**', which looks at how digital is driving entertainment, culture and creativity. This breakdown allows a deeper dive into the potential of digital in all facets of life for young people. The report concludes with policy recommendations founded on the above perspectives of young people in SIDS – and this broader analysis.

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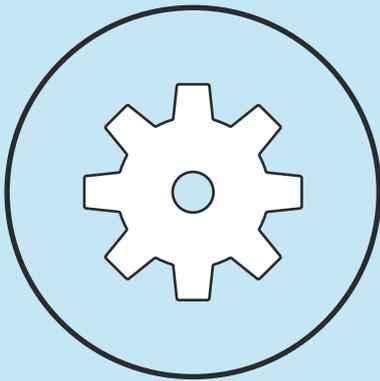
LIVE:
DIGITAL TECHNOLOGIES ARE DISRUPTING HOW YOUNG PEOPLE LIVE

The COVID-19 pandemic highlighted the centrality of digital in our lives, as reaffirmed by young people in SIDS who were using digital to work and study from home - and to stay connected. From education to employment, communications and innovation, digital tools and technologies are essential components of economies and societies. In SIDS, they can ease the constraints of remoteness and geographical distance, play an important role in mitigating the effects and impacts of climate change, slow the 'brain drain' caused by the migration of young and talented populations, and improve the effectiveness and inclusiveness of governments.

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YOUNG PEOPLE ARE OVERWHELMINGLY POSITIVE ABOUT DIGITAL

Many young people in SIDS have grown up with digital technologies being present if not always accessible. These 'digital natives' are keen to explore digital's potential and recognize it as key for their success. Digital can help them to become creators, innovators, entrepreneurs, community leaders, friends and civic participants. It has the potential to transform their lives.

Survey respondents generally took a positive attitude towards technology, with over 80 percent perceiving it as a tool that positively impacts their daily lives. As illustrated by the infographic, just over half (51 percent) of total respondents used the strongest positive indicator to describe their relationship with digital. Those who self-reported higher levels of digital skills were more positive about digital; and respondents from the Caribbean were especially positive. Marginally, more women than men rated digital as having a positive impact on their life (83 percent of women compared to 78 percent of men). Broader UNDP research reaffirms these findings, with a more focused digital public survey across several SIDS undertaking 'Digital Readiness Assessments'[5] reported that many populations in these States embrace the potential of technology.

YOUNG PEOPLE WERE ASKED:
'WHAT EMOJI BEST DESCRIBES HOW DIGITAL TECHNOLOGIES IMPACT YOUR LIFE?

51%
of respondents think digital positively impacts their lives

34%

7%

4%

4%
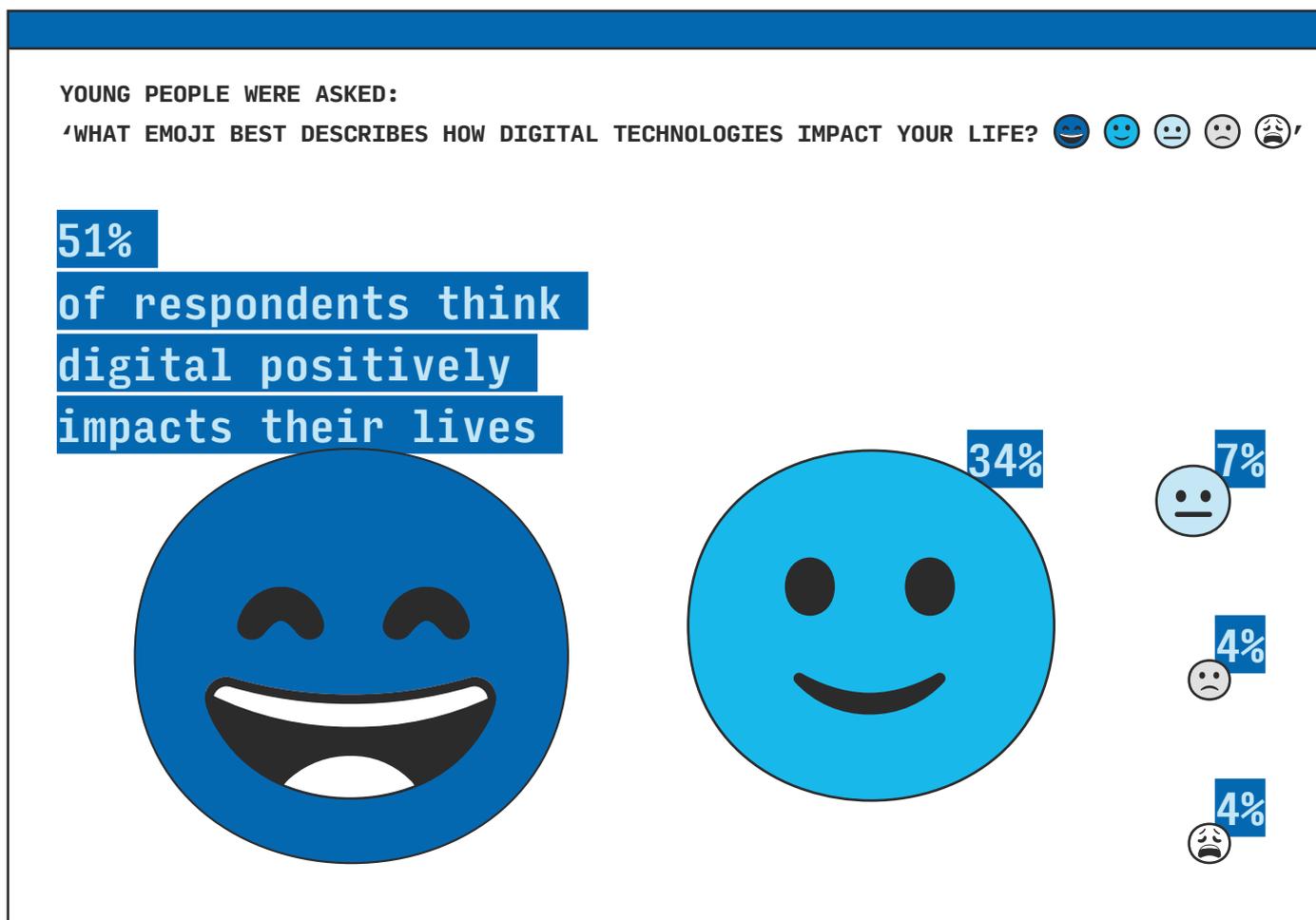
5. The UNDP Digital Readiness Assessment is a mixed-methods digital 'diagnostic' to identify the digital context, opportunities, priorities, and challenges facing a country. Although separate to this study, the report features a number of insights drawn from Digital Readiness Assessments conducted across SIDS.

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Graph 3

YOUNG PEOPLE FROM THE CARIBBEAN SEE DIGITAL AS HAVING A PARTICULARLY POSITIVE IMPACT ON THEIR LIVES

Caribbean

61%	29%	5%	2%	3%

Pacifc

43%	43%	6%	4%	4%

AIS

49%	32%	10%	5%	4%
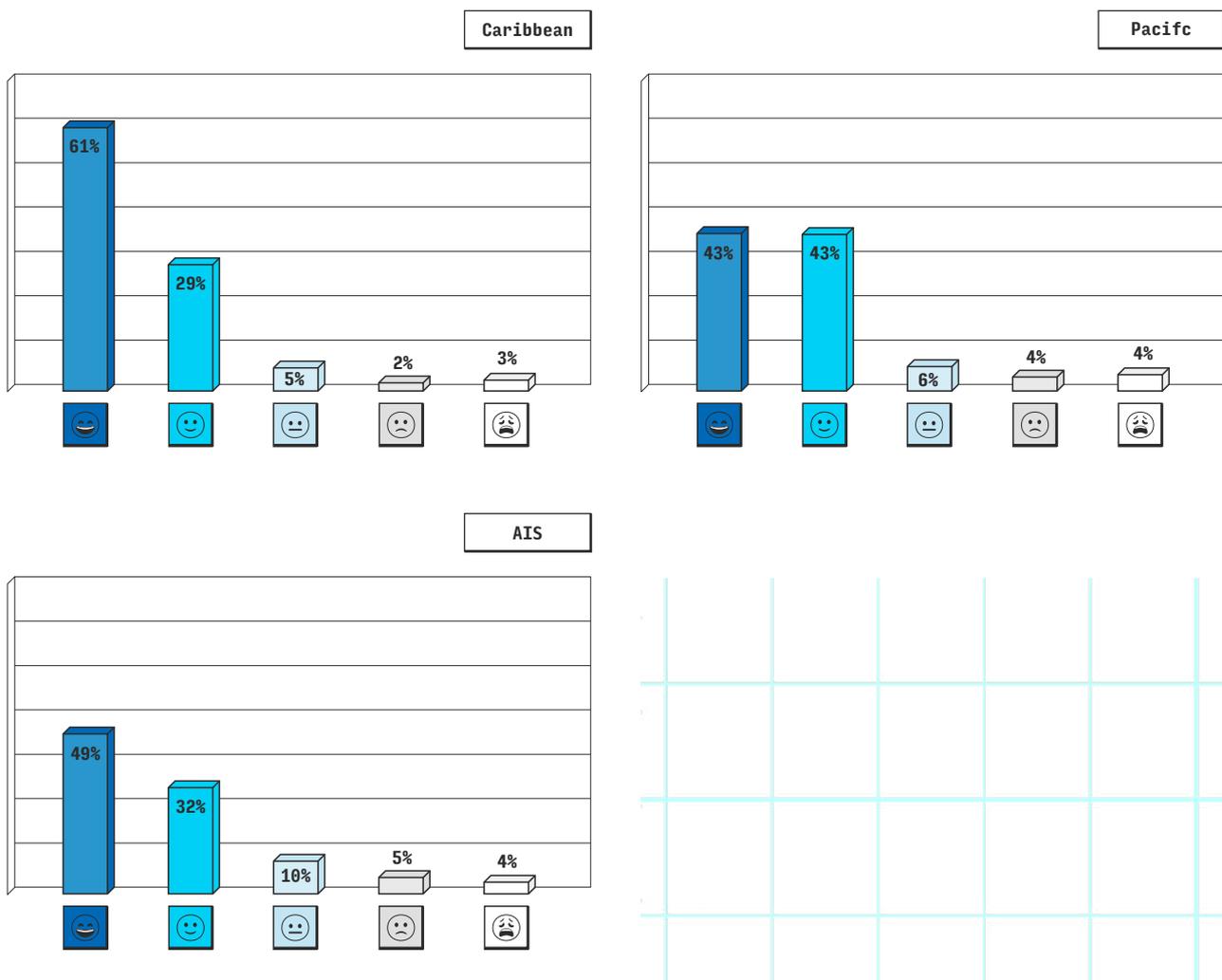
Young people are especially engaged with the potential of digital for advancement, connectivity and efficiency in their countries—the top three positive trends identified through qualitative analysis. The relative prioritization of these aspects varied, however. Women in particular prioritized the benefits of connectivity while men focused more on how digital can drive national advancement. Respondents in the Pacific especially valued connectivity and efficiency. Across all regions, those rating themselves as digital 'learners'—the lowest level of digital competence—were slightly more likely to see 'connectivity' as a particular priority for their countries.

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Young people see digital transformation as driving fundamental improvements in the quality of life. They noted potential benefits for the natural environment, stronger connections among loved ones, enhanced transparency in government and public services, and greater learning opportunities These positive attitudes indicate a digital mindset that could play a significant role in further adoption and usage.

Respondents also see digital as an empowering force, and providing new solutions to existing and new challenges in their countries and communities - and a tool for improving global equity. Digital technologies can advance personal and professional growth through knowledge acquisition and capacity-building. From digital libraries to social media, digital has evolved into a multidisciplinary tool enabling individuals from around the world to communicate, exchange information and create content.

Digital is also making the global community smaller and bringing SIDS further into the world, helping to overcome barriers related to remote locations. New dialogues and channels of communication are stirring changes for individuals, local communities and nations, and shaping social, cultural and economic landscapes at an unprecedented pace. These tools enhance the distribution of information to young people and can strengthen their voices in global discussions. Digital tools and technologies have immense development potential, and are being explored in the context of transforming agri-food systems,[6] enabling financial literacy,[7] and building networks and links to global markets.[8]

Young people in SIDS are acutely aware of the barriers that constrain national and individual digital journeys. They note national and individual unpreparedness as a particular challenge. Poor digital infrastructure and variable network quality, lack of digital funding and gaps in digital skills are all concerns. Survey respondents and broader analysis described inequities and inequalities across the digital value-chain. These include a lack of digital devices outside education, the absence of safe and productive spaces to work or study,[9] and struggles in certain communities to access digital public services and resources. The pace of digital will only aggravate these challenges.[10]

Among the concerns more broadly highlighted by all respondents, which are explored in more detail later in this report, were issues around misuse of digital tools and technologies, cybercrime and ensuring data privacy—as well as the risks of online spaces (including their impact on offline mental health). Young people in the Pacific and people aged 20 to 21 across all SIDS were especially concerned about the role of digital in driving social alienation. People aged 22 to 23, particularly in the Caribbean, were also worried about the impact of artificial intelligence (AI) on their lives.

Despite these challenges and concerns, young people are overwhelmingly positive about digital, and SIDS are uniquely positioned to leverage digital opportunities.

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6. Enabling digitalisation for food and agriculture in the Commonwealth – https://thecommonwealth.org/news/enabling-digitalisation-food-and-agriculture-commonwealth

7. Trinidad and Tobago's Digital Finance Odyssey: Charting the Course to a Cashless Society – https://www.uncdf.org/article/8236/trinidad-and-tobagos-digital-finance-odyssey-charting-the-course-to-a-cashless-society

8. FAO calls for renewed digital push in Small Island Developing States battered by COVID-19 – https://www.fao.org/newsroom/detail/fao-calls-for-renewed-digital-push-in-sids-battered-by-covid-19/en

9. Including the 'homework gap' – https://www.nea.org/nea-today/all-news-articles/homework-gap-cruelest-part-digital-divide

10. For example, the UNCTAD Frontier Technology Readiness Index highlights the varying capacities of SIDS in being able to take advantage of emerging technologies.

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YOUNG PEOPLE SEE DIGITAL AS CRUCIAL FOR THEIR COUNTRY'S FUTURE

Young people see digital as a key aspect of national and sustainable development. This echoes broader analysis that identifies the need for 'whole-of-society' digital transformation in SIDS.[11] Seventy-two percent of young people consider digital technologies to be good for smaller countries, with a further 23 percent noting that digital can be both good and bad. Those aged 22 to 23 were particularly positive about the role that digital can play. Men were more positive overall. Interestingly, those with some digital skills – who classified themselves as digital 'explorers' - were slightly more reticent about the potential of technology

SIDS face real challenges due to their unique geographic characteristics, vulnerability to climate change, and reliance on a small number of resources, industries and sectors. Many respondents acknowledged the potential of digital in addressing these and other challenges specific to their small island countries, an attitude that was consistent across all levels of education. In particular, analysis highlighted that older youth respondents (those aged 30 and over) recognized the role of digital technologies in improving local agricultural production, supporting disaster risk reduction efforts, and improving preparedness and protection against climate change. Overall, digital has wide-ranging potential in SIDS.

Graph 4

MEN ARE MORE POSITIVE OVERALL ABOUT THE POTENTIAL OF DIGITAL FOR SMALLER AND ISLAND COUNTRIES


11. UNDP: Small Island Digital States – https://www.undp.org/publications/small-island-digital-states-how-digital-can-catalyse-sids-development

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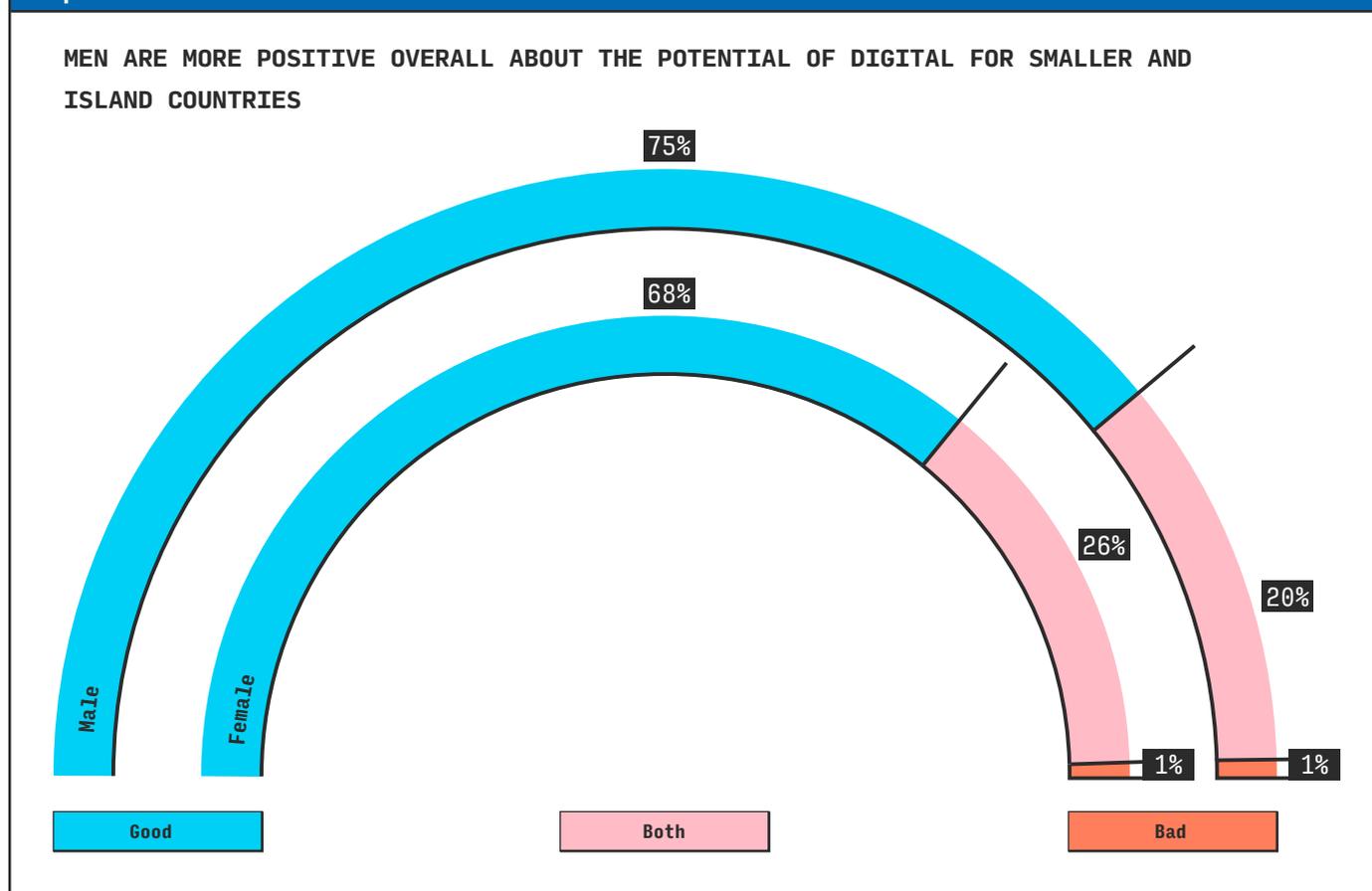
More modern tools, driven by digital and data components, can also play a role - as highlighted by one expert interviewed for this study:

"We know that small islands are naturally prone to disasters caused by earthquakes and severe weather events and are being affected by climate change, resulting in increased tropical cyclones, hurricanes, floods and landslides, to name a few. Connectivity can help address these events by providing remote communities with access to early warning systems, real-time weather information, remote sensing and geographic information systems."

Exploring respondents' interest and confidence in technology does hint at a slight divide, however. When focusing on their country in particular, older respondents and those with higher levels of education were slightly more positive about the role of digital for their country's future. Young people in the Caribbean considered digital an important tool for this national direction – with 84 percent of young people seeing digital as being 'very important' for their country. This compares to around 73 percent of young people in

Graph 5

YOUNG PEOPLE IN THE CARIBBEAN SEE DIGITAL AS PARTICULARLY IMPORTANT FOR THEIR COUNTRY

Legend: Not important, Somewhat important, Important, Very important
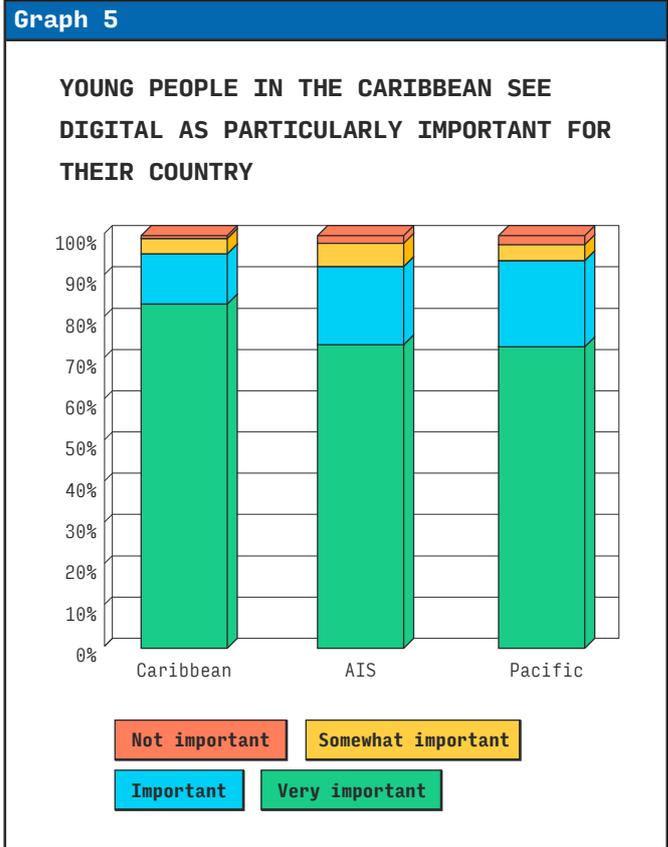
the other regions. Breaking this down further, particular groups and demographics saw particular technologies as having important potential.

Just under half of respondents highlighted that **Big Data**—datasets that require specialist software and processes for analysis—would be especially important for their country's future. This interest was slightly stronger among respondents in the Pacific. The speed and frequency at which data are produced and collected has accelerated rapidly, and this is only predicted to grow, with the volume of data projected to increase significantly in coming years. The potential of Big Data is enormous as mobile penetration rates continue to increase, particularly in the Pacific and AIS regions, where 4G and 5G adoption is growing.[12] As highlighted by Trinidad and Tobago's Minister of Public Administration and Digital Transformation: *"Big Data can improve governance and accountability."*[13]

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12. GSMA: The Mobile Economy Asia Pacific, 2023 – https://www.gsma.com/mobileeconomy/asiapacific/

13. Roadmap for A 'Smarter' Future – Trinidad and Tobago Poised to Tap Into 'Big Data' – https://trinidadandtobago.un.org/en/105695-roadmap-%E2%80%98smarter%E2%80%99-future-trinidad-and-tobago-poised-tap-%E2%80%98big-data%E2%80%99

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Perhaps recognizing the growing accessibility of `AI` and associated machine learning approaches such as Generative AI and Large Language Models,[14] over a third of young people see AI as an important tool for national development. Those rating themselves as 'digital experts', however, were slightly more engaged with the potential of AI compared to younger people with less digital experience. The increasing accessibility of these tools may drive greater interest in their usage across different expertise levels, in combination with how they become incorporated in educational curricula and other settings. Several SIDS are already exploring AI applications, and there is an exciting opportunity for SIDS to integrate indigenous knowledge and value systems into the AI discourse and contribute to shaping emerging technological standards.[15]

Related to this, survey respondents articulated the importance of democratizing new technologies and making them more accessible to SIDS populations. As well as the need to build tailored, and locally responsive tools, drawing on local data and meeting the specific needs of island countries.

Though young people are eager to explore the potential of AI, they also expressed concerns regarding its use and integration into society, including in terms of national readiness. For instance, almost 20 percent of young people identified AI when asked about their digital worries, considerably more than those concerned about other technologies, such as Big Data or the Metaverse (and slightly more women than men). Respondents were particularly concerned about the displacement effect of AI and its potential to diminish the role and agency of humans. These included concerns about job losses due to automation and other aspects of AI tools and technologies.

Similarly, young people are increasingly interested in distributed-ledger technologies such as **blockchain**. Blockchain was of particular interest to slightly older respondents (those aged 24 to 35), a segment keen to learn new technologies. Blockchain is being explored in a number of SIDS to improve the provenance of agricultural produce (while digital is also having a broader impact in agriculture in SIDS).[16] By integrating blockchain into supply chains, farmers could reduce costs while improving the transparency and traceability of their products.[17] Blockchain could also help farmers and others access new and innovative types of financing.[18,19]

14. Thinking DEEP to ensure AI delivers the greatest impact – https://www.undp.org/blog/thinking-deep-ensure-ai-delivers-greatest-impact

15. Caribbean Artificial Intelligence Policy Roadmap – https://ai4caribbean.com/wp-content/uploads/2021/07/Caribbean-Artificial-Intelligence-Policy-Roadmap.pdf

16. FAO: Gender, women and youth: Implications for innovation and digitalization in the Pacific – https://www.fao.org/3/cb5760en/cb5760en.pdf

17. UNDP: Blockchain for Agri-Food Traceability – https://www.undp.org/publications/blockchain-agri-food-traceability

18. How blockchain can help smallholder farmers – https://www.fao.org/e-agriculture/blog/how-blockchain-can-help-smallholder-farmers

19. An innovative blockchain approach enables Haitian farmers to access export markets and improve incomes – https://www.worldbank.org/en/results/2022/04/20/an-innovative-blockchain-approach-enables-haitian-farmers-to-access-export-markets-and-improve-incomes

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DIGITAL CAN HAVE A WIDE-RANGING IMPACT ON YOUNG PEOPLE

Young people in SIDS see the promise of digital solutions applied in a number of areas, from environmental protection, to health care, public service delivery, transport and education. Respondents in some regions prioritized particular sectors; 57 percent of respondents in the Caribbean, for example, highlighted 'transport' as a key digital priority. Transport is a particularly important component in SIDS, crucial for the movement of goods and people and for collaboration in business and learning.

Transport infrastructure is also highly vulnerable in these nations due to roads and other infrastructure located in high-risk locations in close proximity to the sea. Damage can be costly. For example, transport infrastructure in Dominica is valued at 82 percent of GDP.[20] Older respondents, perhaps those using transport for commuting or professional purposes, are particularly intent on leveraging digital in this area, including to reduce the need for travel and to make the travel and transport process smoother:

Graph 6

YOUNG PEOPLE SEE DIGITAL AS HAVING WIDE-RANGING POTENTIAL IN THEIR COUNTRIES
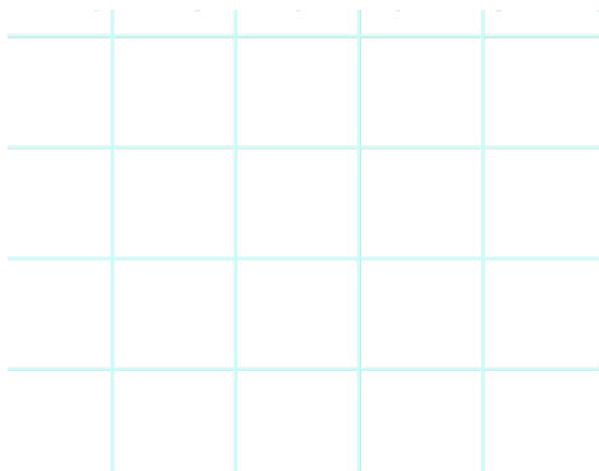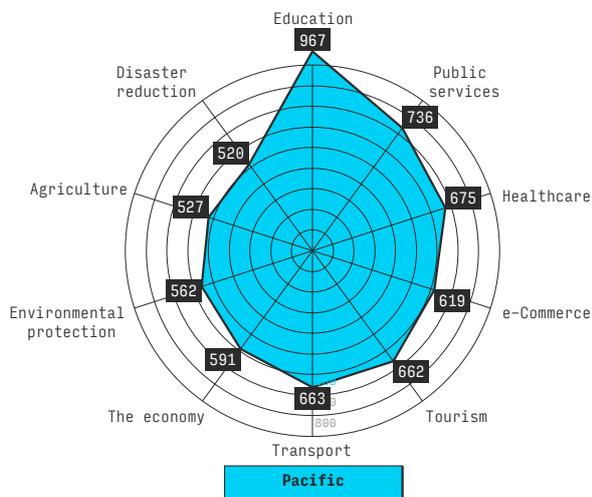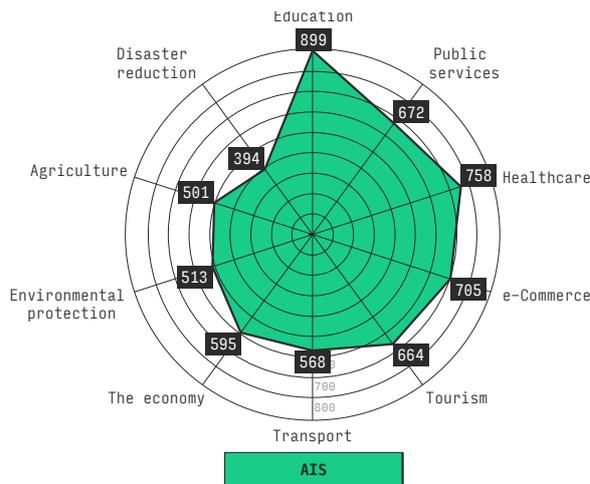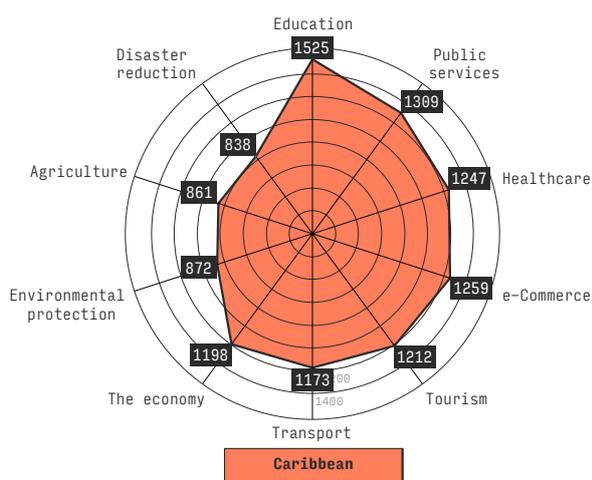
20. In Small Island States, Resilient Transport is Providing a Lifeline Against Disasters – https://www.worldbank.org/en/news/feature/2019/06/11/in-small-island-states-resilient-transport-is-providing-a-lifeline-against-disasters

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Digital provides an opportunity to make public services more available and to improve decision-making through leveraging data.[21] A United Nations e-government survey highlights the considerable range among SIDS in this area. In particular, the Online Services Index component of the survey, which measures how governments use digital to deliver national public services, ranges from a high of 0.9620 (Singapore) to 0.0326 (Comoros), with a global average across all countries of 0.6102. Developing digital public services can be complex and is explored in more detail in broader UNDP research.[22] It includes cultivating a digital culture within the government, shaping digital skills across the public sector and collaborating with citizens to ensure that digital services respond to their needs. Many SIDS are making strides, however, such as Mauritius. It launched its Citizen Support Portal in 2017, allowing citizens to communicate their ideas and feedback directly to public officials, including offline via Citizens Advice centres.

PHOTO: UNDP MAURITIUS AND SEYCHELLES COMMUNICATIONS TEAM
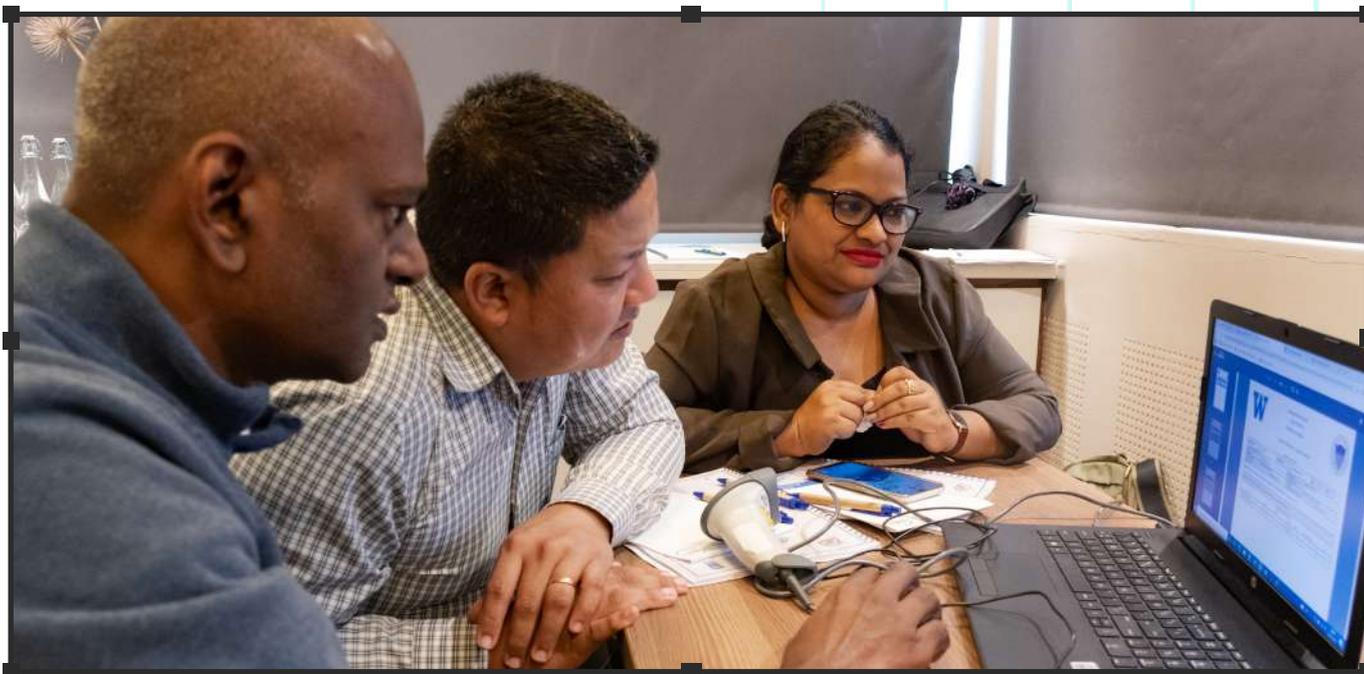
21. UNDP SIDS Data Platform – https://data.undp.org/sids/
22. UNDP: Small Island Digital States – https://www.undp.org/publications/small-island-digital-states-how-digital-can-catalyse-sids-development

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Graph 7

ONLINE SERVICES INDEX SCORE (UNDESA)

0.6102	Average

Singapore
Mauritius
Bahamas
Dominican Republic
Grenada
Barbados
Cabo Verde
Jamaica
Trinidad and Tobago
Maldives
Fiji
Saint Vincent and the Grenadines
Guyana
Belize
Seychelles
Antigua and Barbuda
Vanuatu
Saint Lucia
Timor-Leste
Kiribati
Solomon Islands
Samoa
Suriname
Saint Kitts and Nevis
Tonga
Papua New Guinea
Marshall Islands
Dominica
Nauru
Cuba
Micronesia (Federated States of)
Sao Tome and Principe
Palau
Tuvalu
Haiti
Guinea-Bissau
Comoros

0.0	0.2	0.4	0.6	0.9	1.0

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Young people in SIDS are keen to see digital used more extensively across governments and for the delivery of public services. Digital services were of particular interest to young people aged 20 to 29, perhaps reflecting their efforts as entrepreneurs and the difficulties of navigating business registration and reporting requirements. Women are especially focused on improvements in this area.

Young people are also positive about the potential of digital technologies to cut costs for poorer governments, fight corruption, reduce bureaucracy and facilitate increased participation by citizens, even in remote and underserved areas.

Young people also see the promise of digital in tackling a key issue facing many communities in SIDS: financial exclusion. Many SIDS are heavily dependent on cash-based economies, with limited digital payment availability or infrastructure.

Although digital technology per se can play a role, it requires broader efforts encompassing regulation, digital infrastructure, device access and digital literacy. As highlighted by an e-commerce developer interviewed in one SID:

"The ecosystem hadn't been properly built when [we] decided to introduce the app, meaning that we had to help implement the literacy ourselves... for instance [by] including intuitive behaviours in the apps structure, and helping people to learn through designing inclusive helpdesk answers."

PHOTO: **UNDP MAURITIUS AND SEYCHELLES COMMUNICATIONS TEAM**

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YOUNG PEOPLE RECOGNIZE THAT DIGITAL IS A DOUBLE-EDGED SWORD

Young people see digital as improving the quality of their lives, including in relation to accessing different services, improving their education and health-care outcomes, and driving improvements in other areas of life. Despite this optimism, young people are also alert to the downsides, risks and negative multiplier effects of digital: 23 percent acknowledge that digital is both a good and bad thing for smaller or island countries. This tension is evident throughout a wide range of perspectives expressed by young people.

The 'digital divide' remains a potent policy and practical concern. Youth Internet usage is particularly high in SIDS; with 81 percent of young people using the Internet compared to 63 percent of the general population (ITU). However, although young people in SIDS use the Internet more than other parts of the population, many highlight challenges in terms of the affordability of data and devices.

Digital exclusion is not a homogenous concept. It affects some populations more than others. Separate assessments undertaken in a number of SIDS highlighted gaps in Internet access between rural and urban regions. Women, the elderly, less-educated citizens and other vulnerable and marginalized populations were also at risk of being left behind. Women and girls are often particularly marginalized, with less access to digital tools and lower digital literacy.[23] Digital divides are also not just digital. Offline norms and stigma can also limit or constrain digital and online participation and engagement.

Broader gender divides also exist. Although data from the 2023 UNDP Gender Social Norms Index highlights a gender development score for all SIDS that is higher than the world average, this measure varies considerably among individual countries. Reflecting this, among young people surveyed, female respondents were broadly less confident in their digital skills than their male counterparts. Qualitative analysis as part of this current highlighted that female respondents were also more likely than men to note the impact of technologies on children. They were less likely to see digital as a wholly positive force and were less captivated by a range of technologies than male respondents.

These gaps need to be tackled. Globally, getting 600 million women and girls online could boost worldwide GDP by $18 billion.[24] Fiji alone loses 20 percent of national GDP due to the gender gap.[25]

In relation to broader challenges, young people also expressed fears that digital technologies could negatively impact individual mental health and community cohesion – and even have a negative environmental impact. Respondents highlighted concerns about digital addiction, being overly 'connected', the negative disruption caused by technologies in their daily lives, social alienation and technology adversely changing how we live and behave.

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23. UNDP: Small Island Digital States – https://www.undp.org/publications/small-island-digital-states-how-digital-can-catalyse-sids-development

24. FAO: Gender, women and youth: Implications for innovation and digitalization in the Pacific – https://www.fao.org/3/cb5760en/cb5760en.pdf

25. ADB: Women and Business in the Pacific – https://www.adb.org/sites/default/files/publication/445821/women-business-pacific.pdf

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This finding demonstrates a further tension. Digital tools and channels are increasingly delivering health and well-being services, improving access to mental health resources and health care more generally through telemedicine, and connecting young people with peer support or directly to medical professionals. Yet technology itself poses challenges. Young people are concerned about cyberbullying, harassment, the misuse of technologies and misinformation that can result, and issues with cybercrime and data security. Digital and cyber protections are a challenge for many SIDS, and the survey responses highlighted that regulation is also of growing interest among young people, including in terms of ensuring digital and cyber protections. This is a challenge for many SIDS, which vary considerably in ranking in the 2020 ITU Global Cybersecurity Index against key indicators such as legal, technical and organizational cybersecurity measures.

One common concern is that young people turn to social media as a leisure activity rather than for more productive uses. Young people are heavily involved with digital channels such as YouTube, Instagram and TikTok, taking on roles as digital creators. Yet even digital products and services focused on entertainment can be valuable resources in supporting the lives and livelihoods of young people in SIDS.

This nuance reaffirms the need to ensure the safe and effective integration of new technologies into daily life.

Regardless of region, age, gender or other sociodemographic variables, young people in SIDS are still more likely to identify as digital 'explorers' than as 'experts'. Young people must therefore be equipped, alongside the necessary technical skills discussed in the next section of the report, with broader capacities to leverage the benefits of digital while being able to mitigate and tackle its negative impacts. Most respondents wanted to improve their digital skills, including 59 percent of women and 52 percent of men. This interest, including in the availability of digital mentors and networking opportunities, was also particularly sizeable for older populations who may be facing greater pressures to not be left behind by the digital revolution.

"Even among groups like the youth, where there is high use of the internet and the adoption of online services, there is an urgent need to conduct sensitisation, especially around cybersecurity – as this segment of the population can be somewhat naïve about the risks and the 'dark side' of the internet." [26]

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26. The Commonwealth: Assessment of Digital Trade and E-commerce Readiness and Associated Capacity-building Needs in Six Member States of the Organisation of Eastern Caribbean States (OECS) – https://production-new-commonwealth-files.s3.eu-west-2.amazonaws.com/migrated/inline/OECS%20report_final.pdf

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Case study:

ÉRICO

USING DRONES TO TACKLE
DEFORESTATION IN CABO VERDE

Érico is a computer engineer from Cabo Verde, a country with unique topographical and geographical conditions that complicate installing and maintaining traditional transportation infrastructure. After successful participation in an entrepreneurship programme promoted by the Tony Elumelu Foundation, Érico founded PrimeBotics Soluções Robóticas, a start-up that provides versatile drone solutions for logistics and agricultural services. During the COVID-19 pandemic, Érico repurposed his fleet of PrimeBotics drones as public service tools. They helped transport medical resources, equipment and essential goods.

In 2020, Érico collaborated with the UNDP Accelerator Lab and the Ministry of Agriculture and Environment in Cabo Verde to use drones to tackle another national priority: deforestation. The partnership trained young technicians to distribute seeds, encased in clay, via drones. Local villagers supported these efforts by producing clay seed balls, preparing the soil to ensure seed germination and mapping priority areas for planting.

As co-architect of Cabo Verde's 'Green Islands' project, Érico has helped launch a new generation of smart agriculturalists and improved training and technical skills among drone pilots. His work has produced important insights to inform the use of future technologies in the agricultural sector, and beyond.

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Case study:

AGYEI

SUPPORTING SMALL BUSINESSES TO GO ONLINE IN TRINIDAD AND TOBAGO

Agyei began his career as a graphic designer and software developer in Trinidad and Tobago. Over time, he began working exclusively on the design and production of typefaces for clients like Google and Viacom, and the digitization and type design for indigenous and endangered languages across the global African diaspora. This work gave him a strong connection to his roots and community, and a drive to work on tech projects improving the lives of people around him. Trinidad and Tobago has over 12,000 registered businesses, many smaller in size, as well as many informal enterprises. Digital platforms offer great potential for its domestic market, a possibility underlined during the pandemic, when more consumers began spending money on locally made goods and services. With this in mind, Agyei began to explore how digital channels could help promote sustainable businesses and where he could add value to the local technology landscape.

His digital marketplace solution, Unqueue, now offers local entrepreneurs a platform to showcase and sell a broad range of unique products. As a community-driven software solution, Unqueue streamlines the delivery of goods to local communities. It offers a virtual space where small businesses can connect with customers in a more open and efficient way, providing order management, delivery route management and notification features.

With over 30,000 shoppers and microenterprises, Unqueue has opened access to new products and services at a lower cost. Digitizing the sale of fresh produce from local farmer's markets has reduced prices for consumers and cut food wastage, for example. New job opportunities have emerged for 70 local drivers who deliver goods.

Agyei has positioned Unqueue to improve customer shopping experiences while addressing productivity constraints, labour market shortages and limited payment infrastructure. The platform supports e-commerce by encouraging businesses to adopt digital in their business models. In bringing smaller businesses online, Unqueue benefits business owners, customers and the wider commercial ecosystem.

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Case study:

REYNIER AND ROBERTO
USING DIGITAL TO DRIVE THE FUTURE OF MOBILITY IN CUBA

Public transport in Cuba is facing challenges, given the limited availability of vehicles like buses. Private hire vehicles are unaffordable for many people. Air quality and pollution are also real concerns. In this context, Cuba's Neomovilidad Initiative, a collaboration between the General Directorate of Transport of Havana and UNDP, with funding from the Global Environment Fund, is exploring different sustainable urban mobility solutions. Women and young people are leading this crucial work.

Reynier is the coordinator of Neomovilidad and Director of Development at the General Directorate of the Government of La Habana. A career civil servant, he wants Havana to be a leader in inclusive and accessible low-carbon transport solutions. A big part of his work involves using data to measure air quality and inform decision-making. He and his team collect air quality data through the Aeroqual software, installed on portable equipment with sensors to measure pollutants. The software uses these insights to identify the most appropriate low-carbon mobility options.

This work has built the foundations for a Mobility Centre that is leveraging real-time data to improve the functioning of traffic and transport across the city. With a background in industrial engineering and a master's degree in the planning, operations and economics of urban and metropolitan transport, Reynier is a strong advocate for using digital to deliver better public services and to improve the environment. He sees Neomovilidad as the start of an exciting and important journey for the city.

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One recent Neomovilidad advance has been the new public bicycle system. Roberto, Director of Ha'Bici–Inteliforja, manages a fleet of 300 bicycles, providing low-carbon transport to marginalized communities across Havana. Ha'Bici serves locations long reliant on heavily-polluting transport alternatives. Roberto is particularly passionate about using transport to reduce inequalities and is working hard to ensure that disadvantaged groups have access to the bikes. He uses digital to optimize bike placement and allow remote management of rentals to improve the service for customers. A smart and user-friendly website helps design more efficient and effective services based on the needs expressed by communities.

The Neomovilidad team instinctively recognizes the importance of digital to manage public transport assets. But both Reynier and Roberto also see digital foremost as a tool of empowerment. It allows the design and implementation of services in collaboration with and for the benefit of communities, and enables young people and women to take part in rolling out products and services, as leaders and employees. They know that climate change and growing Smg urbanization demand new ways of thinking and working, and that digital is essential in tackling these challenges.

< 31 >
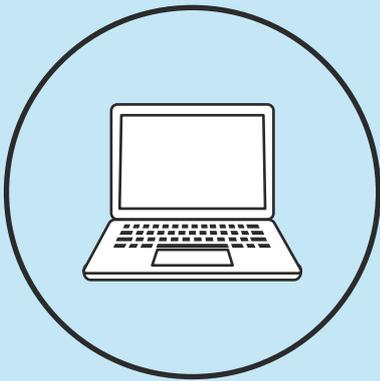
WORK: DIGITAL IS CREATING NEW OPPORTUNITIES FOR YOUNG PEOPLE AND CHANGING WAYS OF WORKING

Digital technologies are transforming work for young people. They are making professional tasks easier, creating new industries and sectors, and shaping global connections. With the increasing availability of digital tools and innovations, young people in SIDS are building exciting digital businesses and forging new opportunities – whilst social media and other online platforms are providing a global audience and market for these enterprises. Many young people are also actively exploring emerging technologies and embracing new ways of working to pursue these new opportunities in the global digital economy. However, these pathways are not available to all young people in SIDS – with those left online unable to explore the potential of the digital economy.

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YOUNG PEOPLE ARE BUILDING DIGITAL BUSINESSES

Young people are using digital technologies to build businesses, diversify their incomes and transform their livelihoods. E-commerce is also of growing interest, among both young women and men, and particularly across the Caribbean. Young people are operating businesses more efficiently and effectively, automating menial tasks and working remotely to reduce the costs and delays of commuting. Falling barriers to global commerce open prospects to strengthen economies, tackle youth unemployment and make better and more suitable products and services available to consumers within and beyond SIDS.

Overall, digital can be a powerful tool, including lowering the barriers to reaching new customers and markets. Although e-commerce is still emerging in many SIDS, entrepreneurs are exploring social media and other tools to sell their products and services. SIDS governments need to make broader efforts to catalyse the digital economy. From developing consumer and data regulation and protections to establishing payment gateways and digital payment mechanisms. As the digital economy evolves, young people are poised to leverage digital to increase markets for their creative and other businesses.

High levels of focus, lower risk aversion and the absence of dependents are all factors that support young people in becoming entrepreneurs. These efforts can have powerful multiplier effects for a country, generating additional employment and tax revenue, both of which are priorities in many SIDS still recovering from the COVID-19 pandemic and its economic impacts.[27] Governments need

PHOTO: **MINISTRY OF DIGITAL TRANSFORMATION REPUBLIC OF TRINIDAD AND TOBAGO**
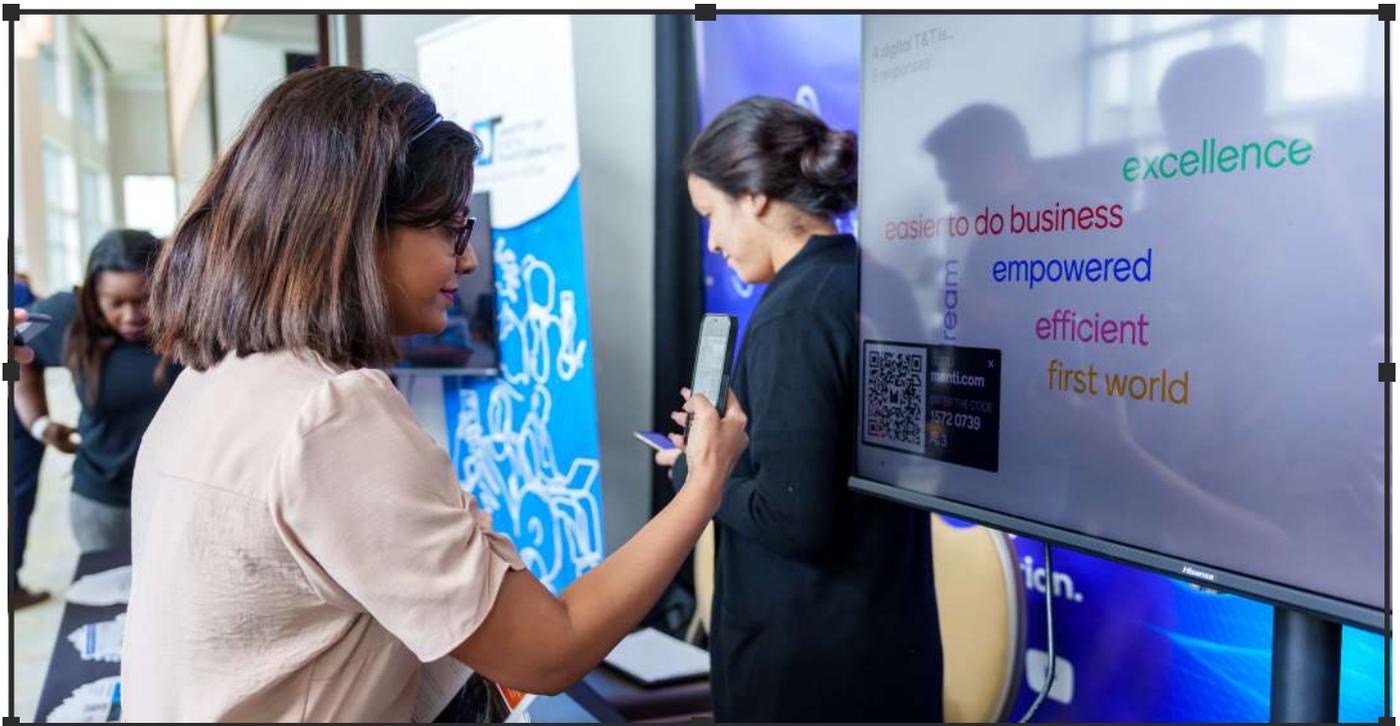
27. For example, in the Maldives, the COVID-19 pandemic led to a mass exodus of employees leaving the formal employment market for good. More broadly, 44,120 employees – or 37% of the total active employees in the country in 2021 – had not returned to the formal sector. https://www.undp.org/sites/g/files/zskgke326/files/2022-12/Labour%20Market%20Dynamics%20in%20Post%20Pandemic%20Times.pdf

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to support young innovators, including through catalytic regulatory frameworks, skills development, and training and incubation.[28] Young people also welcome financing, and mentorship and networking opportunities (including peer-to-peer connections, and mentorship platforms managed by government or other entities).

For many young people in SIDS, business is also not just about profit. Young entrepreneurs want to build businesses with impact and tackle key issues facing their countries. Digital solutions locally can have an important impact on resilience, a critical need given that the estimated cumulative economic cost of disasters to SIDS economies is as high as 90 percent of GDP.[29] With access to digital tools and technologies, young people can be activists and advocates as well as builders of solutions to protect their fellow citizens and communities. Women were slightly more likely to see the potential of digital to tackle priorities such as environmental protection and disaster reduction.

The interplay between digital and other SIDS priorities is also significant in relation to the 'blue economy', where oceans play a central role in economic development, and where young people are often working as fisherfolk or in allied sectors and industries. As custodians of 30 percent of the world's exclusive economic zones, or the area of ocean under their national control, SIDS are in a unique position to explore how to apply digital to diversify local economies and protect invaluable national and global marine ecosystems. Countries such as the Seychelles are actively exploring this area.[30]

Digital may also provide an opportunity to break down some barriers to gender equality in SIDS, through supporting women's empowerment as digital business leaders. A number of female survey respondents stressed leveraging digital to improve their prospects in employment and business.

PHOTO: **MINISTRY OF DIGITAL TRANSFORMATION REPUBLIC OF TRINIDAD AND TOBAGO**

28. ERC: Labour Market Dynamics in Post-Pandemic Times: https://www.erc.trade.gov.mv/_files/ugd/ae2928_12db072b783543d28835ffe33c5f2154.pdf

29. UNEP: OurPlanet – https://sustainabledevelopment.un.org/content/documents/1693UNEP.pdf

30. Including the role of digital tools to monitor coral reefs – https://www.undp.org/sites/g/files/zskgke326/files/2023-07/undp_annual_report_2022_sey_a4_fa_web_1.pdf

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THE DIGITAL ECONOMY IS VULNERABLE IN MANY SIDS

Although young people are leveraging digital to build digital and other businesses, a number of structural barriers remain, affirming the need for digital and broader transformation (including tackling offline challenges and hurdles). For example, setting up a business remains difficult in a number of SIDS due to gaps in digital public service delivery and challenges to establishing ownership or financial strength. Whilst in many SIDS, lenders are more comfortable providing funding to 'traditional' enterprises, including real estate. Digital businesses, especially those run by younger people without traditional physical capital or other assets, are seen as a risker proposition. Venture capital (and other digitally focused funding) is limited in many SIDS; markets remain in their infancy. The intensity of research and development, including patenting rates, is one indication of the strength of finance; it is strongest in higher-income countries.[31]

As highlighted by one SIDS entrepreneur interviewed as part of this study:

The extent of start-up and innovation funding varies considerably across the SIDS community. The Technology and Innovation Report of the United Nations Conference on Trade and Development (UNCTAD) ranks countries based on domestic credit available to their local private sectors. SIDS rank from 22 (Fiji, one point behind France) to 145 (Comoros). More SIDS are exploring new and innovative financing mechanisms. However, the concentration of digital development in the Global North also poses concerns to some young people – whilst others caution about the impact of digital on offline business communities.

The unavailability and inaccessibility of digital technologies also present barriers to some looking to setup digital businesses. Nearly 40 percent of young people want to see improvements in digital infrastructure, with survey respondents flagging gaps in signals and coverage and broader unreliability. Data costs remain high, dissuading entrepreneurs and potential customers from e-commerce. Skills gaps pose further challenges.

> "It would help if the ecosystem was more organised: for instance, 'term sheets' are bad, and venture capital systems are not sophisticated enough. There is opportunity to improve the knowledge base and equip people with relevant information."

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31. World Intellectual Property Organization: Global Innovation Index (2020) – https://www.wipo.int/global_innovation_index/en/2020/index.html

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And regulation has not kept pace in some countries, including in recognizing the distinction between online and offline settings. As one young SIDS entrepreneur noted in an interview discussing his education – or 'EdTech' - start-up:

"The laws in [my country] are too antiquated to facilitate digital learning... To be certified as a [digital school] – for us to get official school registration, status and the benefits that come with that: we have to have a physical space, we have to have a fire evacuation plan, we have to keep physical records – we have to print student records and store it in this physical space..."

Several countries also lack key digital foundations that could increase the speed and success in setting up a business - including the absence of digital identity solutions, data exchange platforms, and digital payment systems. Greater harmonisation of digital and other standards at a regional level could be an important way forward, alongside aligned incentive schemes to encourage investment and entrepreneurship.

Many challenges facing the digital economy in SIDS centre on access and inclusion. Stronger female leadership and participation in business requires improving access to education, advanced skills training, financing, and partnerships. Young women themselves highlighted broader skills training and digital education in schools as national priorities. These were mentioned by 59 percent and 54 percent of women, respectively. Work underway includes initiatives by the International Trade Centre (ITC) focused on women's economic empowerment in Papua New Guinea, Samoa and Vanuatu. Whilst the ITC 'SheTrades' initiative is improving digital skills amongst female entrepreneurs in Mauritius. Some countries are shaping broader initiatives, including in Samoa, where national legislation requires a proportion of government procurement to involve female-run businesses.

As discussed later in this report, many young people see transferable skills as critical amid developments such as automation, which could put up to 800 million jobs globally at risk.[32] The reliance of many SIDS on sectors such as professional services could be positively transformed by digital improvements that accelerate tasks. Alternatively, these sectors could be irreparably damaged by technological developments, leading to widespread job losses. Service exports contribute, on average, 25 percent of GDP in SIDS.[33]

32. Jobs lost, jobs gained: What the future of work will mean for jobs, skills, and wages – https://www.mckinsey.com/featured-insights/future-of-work/jobs-lost-jobs-gained-what-the-future-of-work-will-mean-for-jobs-skills-and-wages

33. Small island developing states face uphill battle in COVID-19 recovery – https://unctad.org/news/small-island-developing-states-face-uphill-battle-covid-19-recovery

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DIGITAL IS PROVIDING OPPORTUNITIES FOR GLOBAL NETWORKING AND CONNECTION

SIDS remain some of the most remote countries on Earth, spread across huge expanses of ocean, with many reliant on bilateral or regional trade or other connections. A number remain well below the average Liner Shipping Index Score, a metric that ranks countries based on their connection to global shipping networks and is a useful proxy for international connection and connectivity.[34] But digital technologies may be making distance increasingly irrelevant.

Digital offers young people options to develop partnerships with like-minded people and peers around the world. Online networking has become easier, while technologies such as cloud computing, cross-border data flow and continued advances in connectivity are bringing more people online. Young people noted new opportunities to conduct meetings, interviews and other professional interactions from anywhere as a key benefit to working in the digital age, increasing opportunities to collaborate, connect and exchange ideas. As explored in more detail in the next section of this report, young people are particularly keen to collaborate - an area of interest to all, but particularly among women (47 percent of female respondents compared to 36 percent of men).

Digital can also foster deeper regional integration, building communities within and across borders, and cultivating a shared sense of belonging as young people collaborate on identifying solutions to shared challenges.

Digital has the potential to improve young people's lives by building communities within and across borders – and can foster a shared sense of belonging. This is wide-ranging. Young people highlighted

opportunities for collaboration through e-learning, enabling them to access a wider variety of peers, discussions and learning opportunities. Digital also connects young people to provide comfort and support to others encountering similar challenges or experiences. In an interview as part of this study, one young SIDS entrepreneur underlined how regional collaboration and shared insights from across the SIDS community can be particularly useful:

> "I find that developing countries have a unique set of challenges surrounding digitalisation. It's easy to look to Silicon Valley for solutions, but it's actually to look at Africa and collaborate with African countries, because their reality is closer much to the realities of a developing country like Jamaica or Trinidad and Tobago..."

This increased connectivity and exchange can also lead to a positive multiplier effect through building a stronger evidence base to inform policymaking and decision-making. Digital tools and technologies are facilitating discussion, feedback and statistics collection via online surveys, discussion forums and videoconferencing. These components are providing

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34. See: https://unctadstat.unctad.org/datacentre/dataviewer/US.LSCI

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a growing platform for data-driven decision-making. As highlighted by one SIDS expert, this could tackle a key challenge in many countries:

> "[It's] difficult to get data and feedback from the community, response rates from surveys often are not high enough for you to make right or reliable inferences."

Young people's voices can also be amplified, providing the potential for them to become important partners in national and broader development and to influence decisions affecting them and their communities. However, allowing young people to be 'heard' is not sufficient in itself: their thoughts, perspectives, and input need to be recognised and incorporated into the decision-making process. By leveraging this broader and more varied set of ideas and perspectives, SIDS may be able to unite around shared priorities and direction.

DIGITAL SKILLS ARE A GROWING PRIORITY FOR YOUNG PEOPLE

Young people's willingness to readily embrace digital tools and technologies and develop digital skills are critical as the pace of change accelerates. Over 1 billion people will need to be re-skilled by 2030, with 40 percent of core skills requirements potentially changing by 2025.[35] And digital skills can even lead to much broader outcomes – including ameliorating crisis and conflict.[36]

More than three-quarters of young people in SIDS recognize that digital is going to be important for their future careers. This applies across men and women, with young people over age 22 and respondents in the Caribbean particularly alert to this need. Those

with higher levels of education also see digital technologies as being especially important for their future job opportunities.

Young people highlighted a number of priority skills opportunities, from technical skills such as data analysis and coding, to business and life skills, including digital marketing and content creation, and important 'soft' skills, like learning and collaboration. In fact, across all age groups, young people expressed strong interest in collaboration, recognizing that digital is not just about hardware or software, but about connection, community and engagement.

35. These are the top 10 job skills of tomorrow – and how long it takes to learn them – https://www.weforum.org/agenda/2020/10/top-10-work-skills-of-tomorrow-how-long-it-takes-to-learn-them/

36. Including how digital skills can even contribute to peace: https://www.sustainingpeace-select.org/enabling-democratic-practice-civic-engagement-and-promoting-peace-by-using-digital-technologies-five-young-leaders-advice-to-policymakers/

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Graph 8

DIGITAL SKILLS OF INTEREST TO YOUNG PEOPLE IN SIDS

Coding

Content creation

Digital marketing

Digital finance

Collaboration

Data analysis

Learning

Male

Female
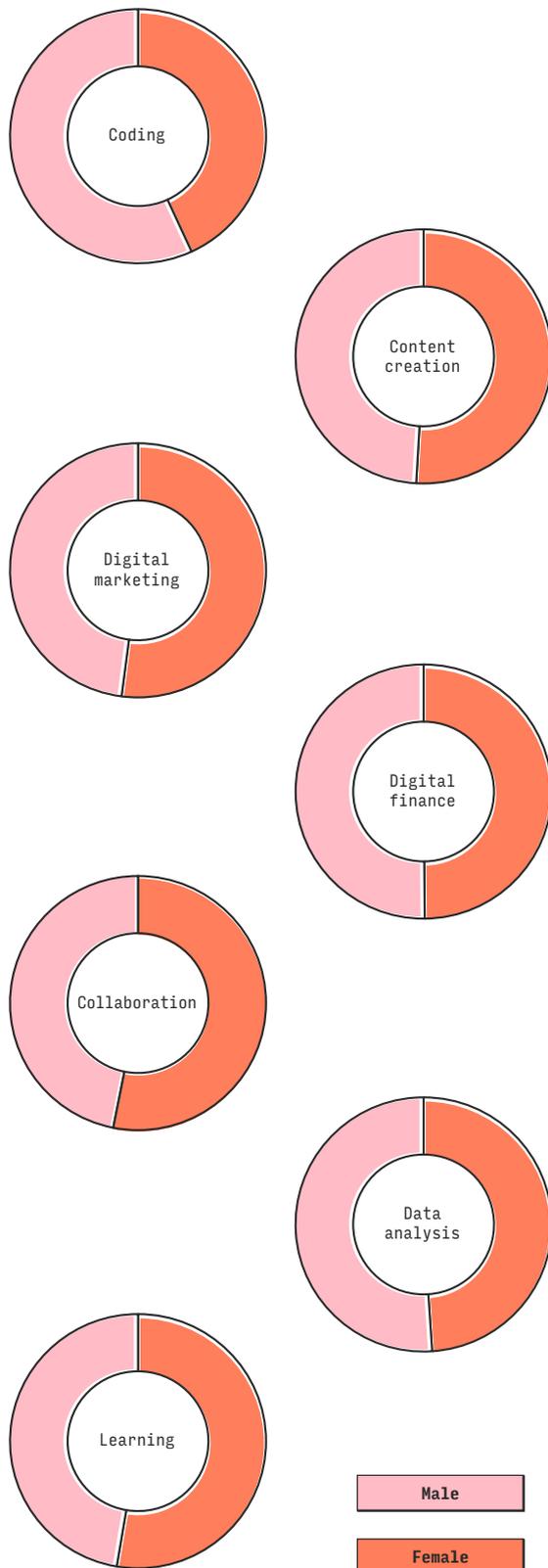
Educational curricula are being updated in response to the changing landscape of digital skills. Digital provides exciting opportunities for new types of learning, including 'micro-credentials' or shorter courses, often of around 20 to 30 hours of learning, focused on a particular skill, topic or tool. They are increasingly delivered by digital learning or 'MOOC'[37] platforms but may also be offered by offline education or training institutes. These courses may improve engagement in secondary and tertiary education due to their accessibility and shorter form, especially for groups such as women and girls who often need to balance education with caring and family responsibilities, or who may find it difficult to travel to traditional learning institutions. Such courses also connect SIDS learners with the best of global learning.

Survey respondents with higher levels of education were particularly interested in areas such as data analysis and coding, perhaps due to greater exposure to some of the opportunities and challenges posed by digital. For example, respondents with tertiary education were more concerned about the threat of technologies such as AI to their jobs compared to young people with other qualifications. Whilst those focused on digital job opportunities were particularly keen to engage with digital services and Big Data.

Important gaps in digital skills also exist across SIDS. Young people of all ages were still more likely to identify as digital 'learners' or 'explorers' rather than 'experts'. Compared to women, men overall were more likely to consider themselves experts. Almost 50 percent of young people emphasized increased digital learning in formal curriculums. Women were particularly interested in broader digital learning opportunities. A sizeable proportion of 'older' young people, those over 30, spotlighted digital learning opportunities, underlining the importance of a lifelong approach to building digital literacy and engagement with the digital economy.

37. Massively-Open Online Courses – including those found on platforms such as EdX, Coursera, and FutureLearn.
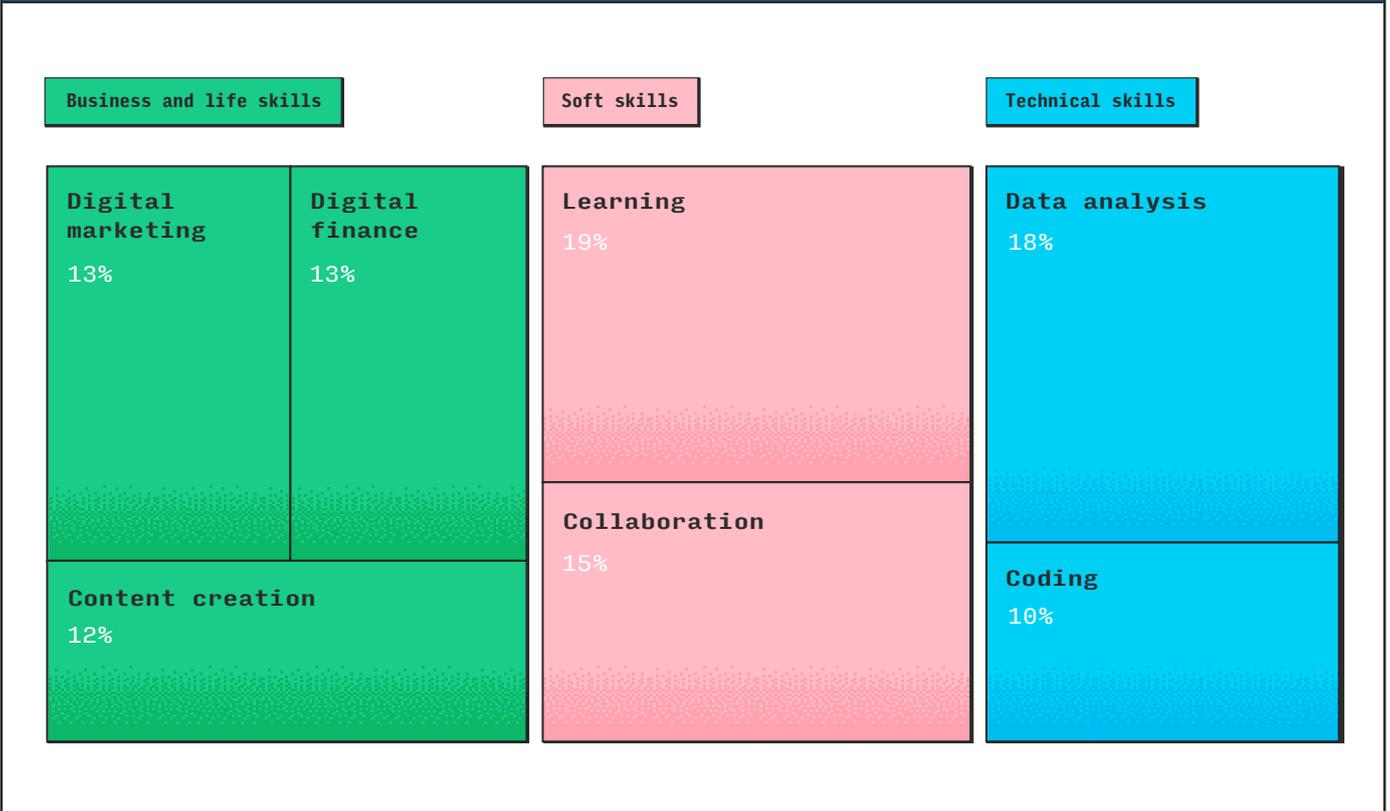
< 39 >

Graph 9

Business and life skills

| Digital marketing | Digital finance |
| 13% | 13% |

Content creation
12%

Soft skills

Learning
19%

Collaboration
15%

Technical skills

Data analysis
18%

Coding
10%

PHOTO: MINISTRY OF DIGITAL TRANSFORMATION REPUBLIC OF TRINIDAD AND TOBAGO

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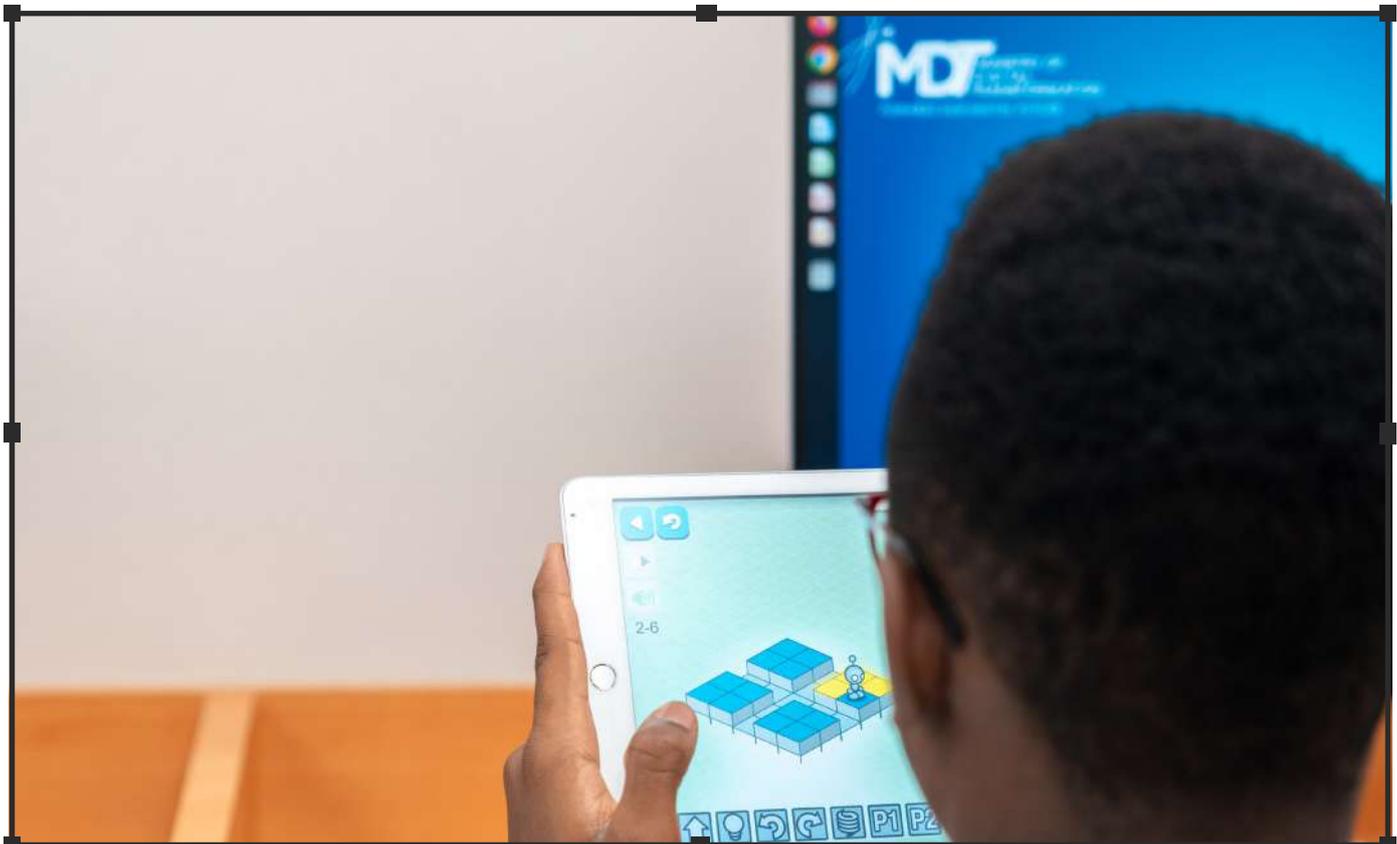
There is also scope to deepen skills development in particular areas. In many SIDS, entrepreneurs and smaller enterprises are increasing their digital presence but largely through social media platforms such as Facebook or Instagram. Greater digital skills could allow them to increase their online footprint and explore important innovations in digital payments and e-commerce. Young people are also interested in developing other applied digital skills, with a number of respondents also looking to strengthen their understanding of professional business tools such as the Microsoft and Google business suites.

A broader concern entails recognizing that digital is not a panacea. Digitalization needs to be pursued thoughtfully and appropriately. Further, many skills required to build and sustain digital businesses and other digitally-driven opportunities are not solely about digital tools or technologies. They encompass foundational business skills, such as marketing, product and problem definition, and financial management. As noted by one expert interviewed during this study:

"Sometimes [small businesses] don't have a high-level strategy for the digitalisation of their company, and therefore try to involve digital without considering employees or the applicability of the technology to company structure."

Digital may also be driving more extensive change in education and skills development. As highlighted by an EdTech innovator from one island:

"[We need] courage and adaptability - as due to the capabilities of AI, Machine Learning and [tools such as] ChatGPT - humans may not need to retain information as we used to, we need to know how to properly leverage these tools instead. There should be a shift within schools' examination structure - away from rote learning."

Broader challenges to address in developing the digital literacy of young people comprise building traditional and foundational digital skills. Among young people who want to improve their digital literacy and other capabilities, staying safe online was a particular consideration, given multiple risks in digital spaces. Ultimately, the benefits, or challenges, of digital will be driven by how technologies are used and implemented.

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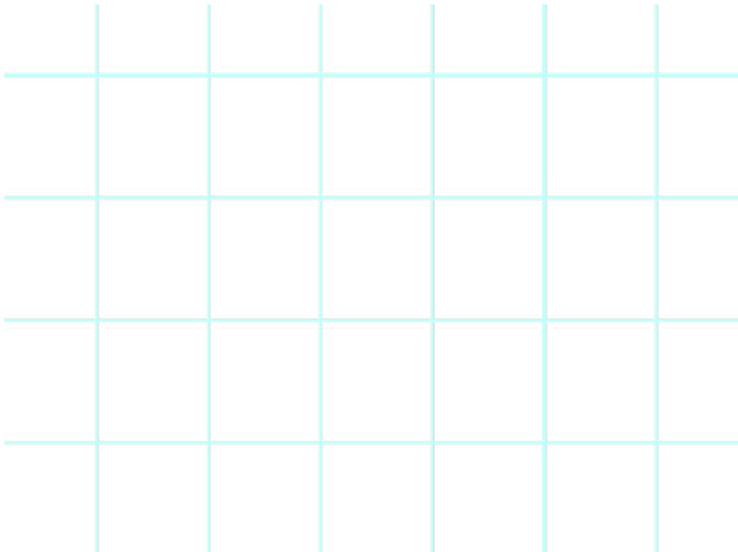
Case study:

MIHNA

INSPIRING FEMALE DATA SCIENTISTS
TO SHAPE THE FUTURE OF THE MALDIVES

Globally, as few as 15 percent of data scientists are women. This leads to bias in data collection and the policies and products created from data. Mihna, a data scientist from the Maldives, is among the very few women in the field locally. She works with companies and other organizations to shape how they use data to improve their work— and to enhance lives and livelihoods.

To inspire more girls and women to embark on careers in data science, Mihna also volunteers for programmes at a local tech non-governmental organization (NGO), Women In Tech Maldives. The non-profit joined the UNDP Maldives Accelerator Lab in experimenting with the Social Innovation Platform, designed to listen to community narratives and co-create a portfolio of interventions with community members. Mihna drew on her own experiences and insights to help platform participants co-design local solutions supporting the future of work for young people and women. She opened their eyes to the value of data in developing solutions, and showed how women can navigate the challenges associated with non-traditional careers, such as those in the technology space.

Mihna sees data scientists as storytellers who use data to share insights and trends to support data-driven decisions. Her varied skillset has led to work across diverse sectors, including health care, agriculture, banking, sports and the automotive industry. She performs data modelling, designs data-driven solutions, builds machine learning models and develops data visualization dashboards. As data increasingly shape institutions, policies, industries and daily lives, Mihna believes that women must be among the architects in this journey, collecting, analyzing, applying and turning data into insightful knowledge so the future works for everyone.

Although she has felt supported throughout her career, Mihna is concerned about the challenges that future female data scientists and other female technology professionals may face. She underlines that women are vastly underrepresented in the technology workforce, both globally and locally, and especially in the fields of data and AI. But she has also seen how the tech industry offers a dynamic atmosphere and a diverse job field where women can pursue numerous opportunities. As a result of digital transformation and local demographic change, within the next couple of years, demand for highly qualified specialists will soar. Mihna believes that these positions need to be filled by women and men to reach gender equality in STEM careers, and inform better policies and decisions.

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Case study:

IDAROUSSI

HOW DIGITAL COULD IMPROVE ACCESS TO MEDICINE IN COMOROS

The childhood best friend of Computer Engineering student Idaroussi sadly lost his mother to illness. During this incredibly difficult time, Idaroussi's friend and his family had to navigate the complicated and under resourced pharmacy system to secure her medication. This is a global challenge faced by millions of people. In some lower-income countries, there is less than one pharmacist for every 10,000 people - with many SIDS struggling with gaps in the healthcare workforce due to migration, and weaker healthcare systems more broadly.

Based on this painful experience, Idaroussi developed an idea for a virtual pharmacy application. Accessed via smartphone, it would allow patients to check the availability of medicines, find their local pharmacy and learn more about the pharmacist on duty, receive guidance on any side effects and purchase medicines directly. The platform could improve access to medication and provide more personalized and efficient service while reducing pressures faced by pharmacies.

The UNDP Hack4Inclusion initiative supported Idaroussi to develop his idea. The initiative encourages young entrepreneurs to develop innovative ideas with strong community impact and economic potential. Idaroussi participated in the Comoros Hackathon in 2021, joining 130 other young people in developing technical and business skills, and showcasing their innovations on a national platform. Idaroussi is now developing a 'digital notebook' feature for his app that would allow clinicians to see the medical histories of patients.

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Case study:

FERNANDO

LEVERAGING DIGITAL TO IMPROVE EMPLOYMENT OPPORTUNITIES FOR YOUNG PEOPLE IN CUBA

Nearly three quarters of young people around the world struggle to acquire skills for employment. In Cuba, the PROFET project, led by the Directorate of Technical and Vocational Education of the Ministry of Education in collaboration with UNDP, is addressing this tension by using digital tools and channels to build teaching and content-creation skills among technical and vocational educational leaders.

Fernando, a teacher and civil servant in the Ministry of Education, came up with the innovative idea in the context of the PROFET project and is now leading one of the development axes of the project. He knows the importance of high-quality teaching for building skills. But Cuba offers a particularly complex technical and vocational education system. It has more than 100 specializations, making it difficult to produce digital content that meets the needs of all topics and professions.

The PROFET initiative, tackles this issue by expanding the use of digital tools in content design and delivery. It empowers educators and students to shape content based on their needs. Teachers and students are learning about content production and about identifying and using content, such as by developing skills to search for and filter information online, and to assess its quality. Fernando hopes that through the active role of students in the design and delivery of technical and vocational education, PROFET can build the skills of the future.

PROFET is also teaching educators to organize vast amounts of new content and to customize it for their students and institutions. Fernando has a vision of schools designing their own digital resource ecosystems, adapted to each technical and vocational specialization. He wants to make learning more accessible and engaging, including by using mobile learning to allow students to access knowledge at any time and from any device. The Ministry of Education is supporting institutions to provide access to devices for individuals who may lack them.

Seeing digital as playing a key role in education only if no one is left behind, Fernando has positioned inclusion as a central priority for PROFET. This entails supporting female students and teachers in gaining the same skills development opportunities as male counterparts, and tapping into global knowledge to deliver the highest-quality learning to young people.

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Case study:

KEMUEL
CREATING DIGITAL FREELANCE OPPORTUNITIES
### AND ACCESS TO MARKETS IN DOMINICA

The socioeconomic consequences of the COVID-19 pandemic were devastating in the Eastern Caribbean, given its dependence on tourism, local business and imports. This left communities vulnerable and skilled workers without reliable revenue streams. Inspired by talent within his local community in Dominica, Kemuel, a software developer, devised a software solution to make freelance work more accessible to young people across the region.

His 'TradeBook' platform emerged from the 2020 Island Hack, 'Jobs and Lives after COVID-19 Initiative', launched by the UNDP Accelerator Lab in Barbados and the Eastern Caribbean. TradeBook allows local entrepreneurs to list their skills online to find employment opportunities as well as to post jobs available for hire. Individuals can create profiles to advertise skills and list items for sale. Additional features comprise an in-app chat function, inventory management and a favorites list.

As the first-place finalist in the Hackathon, Kemuel was awarded $10,000 and provided with mentorship to support the launch of his prototype. The app is now available in Anguilla, Antigua and Barbuda, Barbados, the British Virgin Islands, Dominica, Grenada, Montserrat, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines. TradeBook is helping to incentivize entrepreneurship by encouraging local workers to capitalize on and exchange their skills. It supports livelihoods by providing local workers with more flexible, accessible and alternative ways of working. Kemuel's achievement highlights the potential of digital as a tool for professional empowerment, helping to create new and exciting opportunities for young people.

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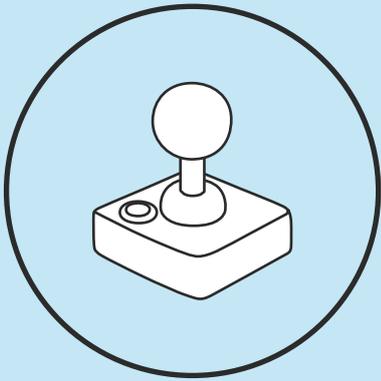
PLAY:
DIGITAL IS DRIVING CREATIVITY, CULTURE AND ENTERTAINMENT — AND ISOLATION

Digital is not just about work and business. It's about entertainment, learning, exploration and experimentation, and fun. In many SIDS, creativity is a powerful force for development — and an important sector in its own right.[38] The creative and cultural sectors have long been a significant component of SIDS economies and societies, often concentrated in micro-, small and medium enterprises and individual creators. Opportunities ahead include cutting-edge explorations of digital technology (such as the 'metaverse'), learning more about how young people are reconstructing culture through a digital lens, and efforts to share generations of cultural and indigenous heritage with a new and international audience.

PHOTO: MINISTRY OF DIGITAL TRANSFORMATION REPUBLIC OF TRINIDAD AND TOBAGO
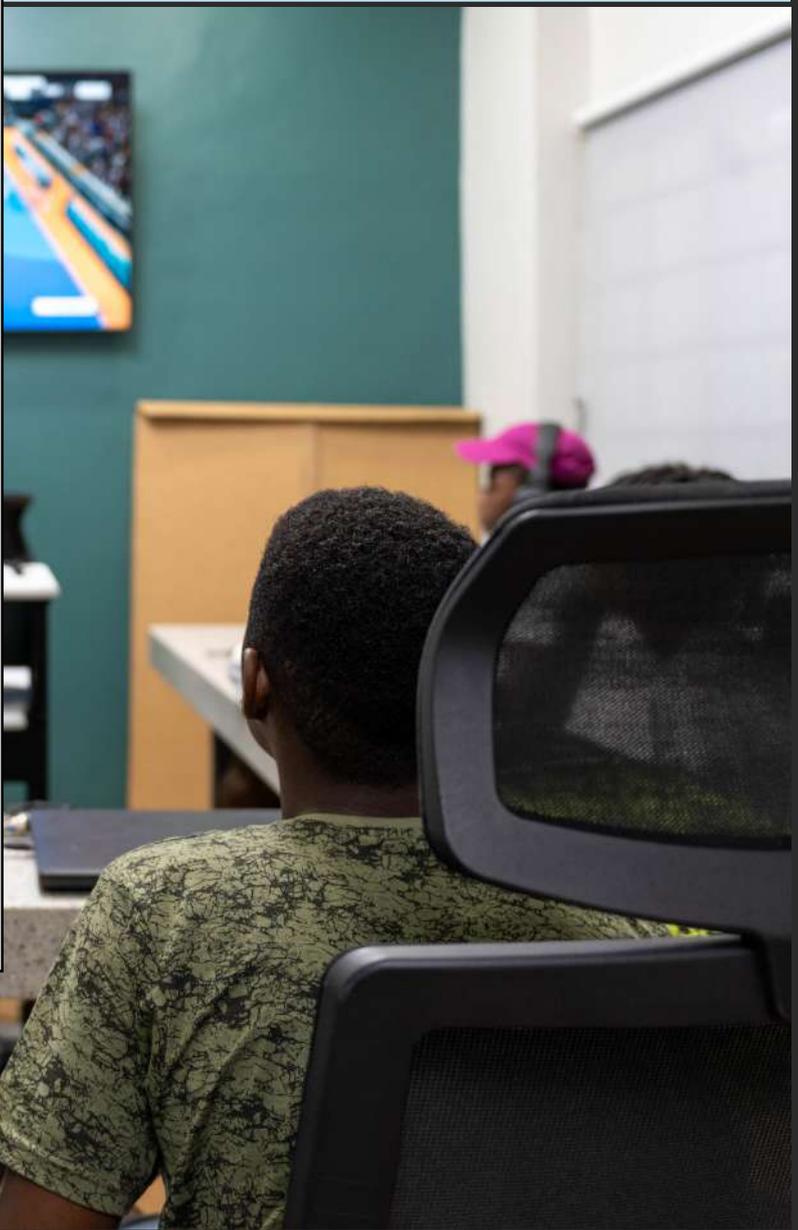
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38. How creative industries could boost the economies of small islands crippled by COVID – See: https://theconversation.com/how-creative-industries-could-boost-the-economies-of-small-islands-crippled-by-covid-168502

< 46 >

DIGITAL HAS LOWERED BARRIERS TO CREATIVITY

The growing affordability of digital devices and increasing availability of digital products and tools has catalysed creativity among young people, a trend set to continue with the increasing availability of higher-tech tools such as 'generative' artificial intelligence and free or low-cost online creative platforms with extensive functionality.

The COVID-19 pandemic required creative entrepreneurs around the world to pivot and embrace digital technologies to maintain connections with their audiences and develop new and supplementary revenue streams. And, as highlighted in the Caribbean, digital was also an important tool in keeping traditions such as Carnival going in the context of movement restrictions during the pandemic[39]. Many artists also launched new products and services such as online music lessons and merchandise.[40]

Digital tools are driving international creativity and connection, further reducing the geographic distance between SIDS and other countries and communities, and 'globalizing'[41] opportunities for innovation.[42] Local development and ownership have important implications; the availability of local content and services drives digital usage and broader adoption.[43] The following heatmap (Graph 11) shows that relevant digital content and services require development in many SIDS. This is the second-greatest digital challenge in many of these countries, after improving

the affordability of data and devices. At the same time, opportunities for innovation are evident in digital behaviours among young people. For example:

> "In some [SIDS] markets – Google search and Facebook search have become synonymous: that is changing how users behave online and driving behaviour. [We're] seeing things like Twitter and TikTok become pseudo-search engines."

SIDS governments and development partners are well versed in the blue economy, tourism and other traditional industries — but the creative and cultural sectors are less familiar. Despite this, many governments are interested in further developing these areas. The Caribbean Development Bank's Creative and Cultural Industries Investment Fund is a promising step, awarding US$2.6 million in grant-based funding to creative enterprises across the region. Further and sustained efforts will be crucial in ensuring that creative industries can leverage digital potential and engage youth in powering artistic and cultural entrepreneurialism.

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39. The Commonwealth: Assessment of Digital Trade and E-commerce Readiness and Associated Capacity-building Needs in Six Member States of the Organisation of Eastern Caribbean States (OECS) – https://production-new-commonwealth-files.s3.eu-west-2.amazonaws.com/migrated/inline/OECS%20report_final.pdf

40. The Commonwealth: Assessment of Digital Trade and E-commerce Readiness and Associated Capacity-building Needs in Six Member States of the Organisation of Eastern Caribbean States (OECS) – https://production-new-commonwealth-files.s3.eu-west-2.amazonaws.com/migrated/inline/OECS%20report_final.pdf

41. For example, South African professional cyclist Ashleigh Moolman Pasio has noted that digital technologies – via eSports – have 'globalised' cycling: https://olympics.com/en/news/ashleigh-moolman-pasio-rise-esports-globalising-cycling

42. In the Dominican Republic, Esports Offers Social Mobility – https://www.globalsports.org/post/esports-offers-social-mobility

43. GSMA: Locally Relevant Content – https://www.gsma.com/mobilefordevelopment/connected-society/local-content/

< 47 >

"[What] the digital-creative industries can do is set the educational and innovation foundations that SIDS can use to build skills and talent and then crucially retain that talent. They offer the most effective way of engaging an often-disengaged youth whose lack of opportunity beyond the hospitality or public sectors leads to disaffection and social problems. The Fourth Industrial Revolution and the Second Creative Revolution offer the opportunity to build an economy based on digital, creative, technological skills, innovation, entrepreneurialism and sustainable growth."[44]

Supporting policymakers in understanding the development potential of creative industries is crucial. Young people see digital learning not only as a tool for academic study but also to unleash personal empowerment and creative inspiration. SIDS need to build spaces for digital expression and play into their innovation ecosystems, and nurture originality and imagination to grow creative economies, including through potentially reshaping education systems around a central strand of creativity woven through multiple subjects.

More broadly, shaping a digital and innovation ecosystem that can catalyse the creative sector would include supporting traditional financial institutions to recognize the investment potential of creative industries and assisting entrepreneurs in developing business skills to mobilize finance and cultivate creative enterprises. Other priorities include providing access to digital tools and technologies to build the digital familiarity that can generate creative activities. As highlighted by one youth entrepreneur interviewed during the course of this study:

"My wife grew up poor, and she didn't get the chance to start using computers until she went to university. Versus me: I grew up in a better off situation, I've been using computers from Windows 95…. So I have over 15-17 years of experience just navigating computers and software. But I don't take for granted my exposure to the internet. I don't take for granted all of the skills that I've developed over the years that have empowered me to leverage technology and leverage the internet in a beneficial way."

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44. Peter Rudge, Beyond the Blue Economy: Creative Industries and Sustainable Development in Small Island Developing States (2021)

< 48 >

And, as highlighted by one expert interviewed, there is also a need to support young people if they want to apply these creative skills in a digital business context:

"It is often the case that digital skills are present, but people need help monetising things. There needs to be a push to try to hone all of the engagement here and develop it into a useful economic service. By tapping into the financial benefits of digital skills and trying to make business sense of it, [we can] build a digital ecosystem which provides young people with broader opportunities."

The increasing accessibility of digital tools may also undermine creative offerings. Recent debates regarding AI-generated 'art' underscore the complexity of these tools. These discussions have raised contentious questions around intellectual property, provenance, authorship, and credit and categorization as well as the ethical use of data. More broadly, the integration of AI into the artistic space has led many to question conceptual definitions of 'creativity' and the role of technology in the creative process.

Young people across SIDS noted concerns about AI displacing human talent or ingenuity, reaffirming the need to apply such tools in inclusive ways, accompanied by education, training, protections and regulation. This includes shaping regulatory and enabling environments to ensure that AI complements and augments human efforts.

Graph 10

YOUNG PEOPLE SELF-REPORTING HIGHER DIGITAL CONFIDENCE ARE MORE INTERESTED IN THE POTENTIAL OF EMERGING TECHNOLOGIES

Big Data

AI

Robotics

Digital Services

Metaverse

Blockchain

0%   100%

| Expert | Explorer | Learner |

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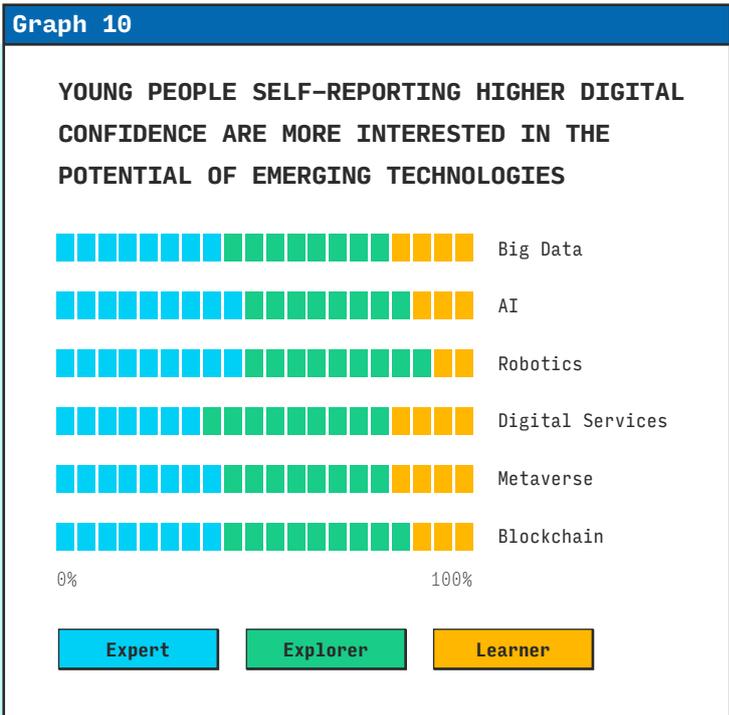
DIGITAL PROVIDES A GLOBAL MARKET AND AUDIENCE FOR CREATIVE AND CULTURAL INDUSTRIES IN SIDS

As technology opens creative and innovation options for entrepreneurs and creators in SIDS, it also provides global audiences and accompanying worldwide distribution channels and marketplaces. SIDS have opportunities to build on their existing foundations as global hubs of traditional trade, which accounted for more than 71 percent of their GDP in 2020.[45] Digital is creating new business models, communities and types of audience engagement and interaction.

Exciting digital opportunities are now arising to share SIDS cultures with the world. Young people increasingly have mechanisms, tools and platforms to exchange their own stories rather than importing or remaking the heritage of other countries. They are taking ownership of sharing and preserving their culture, language and heritage.

There is scope to support young people in building creative careers in SIDS as opposed to having to relocate to creative hubs around the world. Creative connections and inspiration can come via digital, including by providing creators in SIDS with a library of global ideas and guidance. Young people in SIDS want to build their content creation skills, and this is particularly important in ensuring that underrepresented aspects of SIDS culture can be shared and all voices heard.

PHOTO: **MINISTRY OF DIGITAL TRANSFORMATION REPUBLIC OF TRINIDAD AND TOBAGO**

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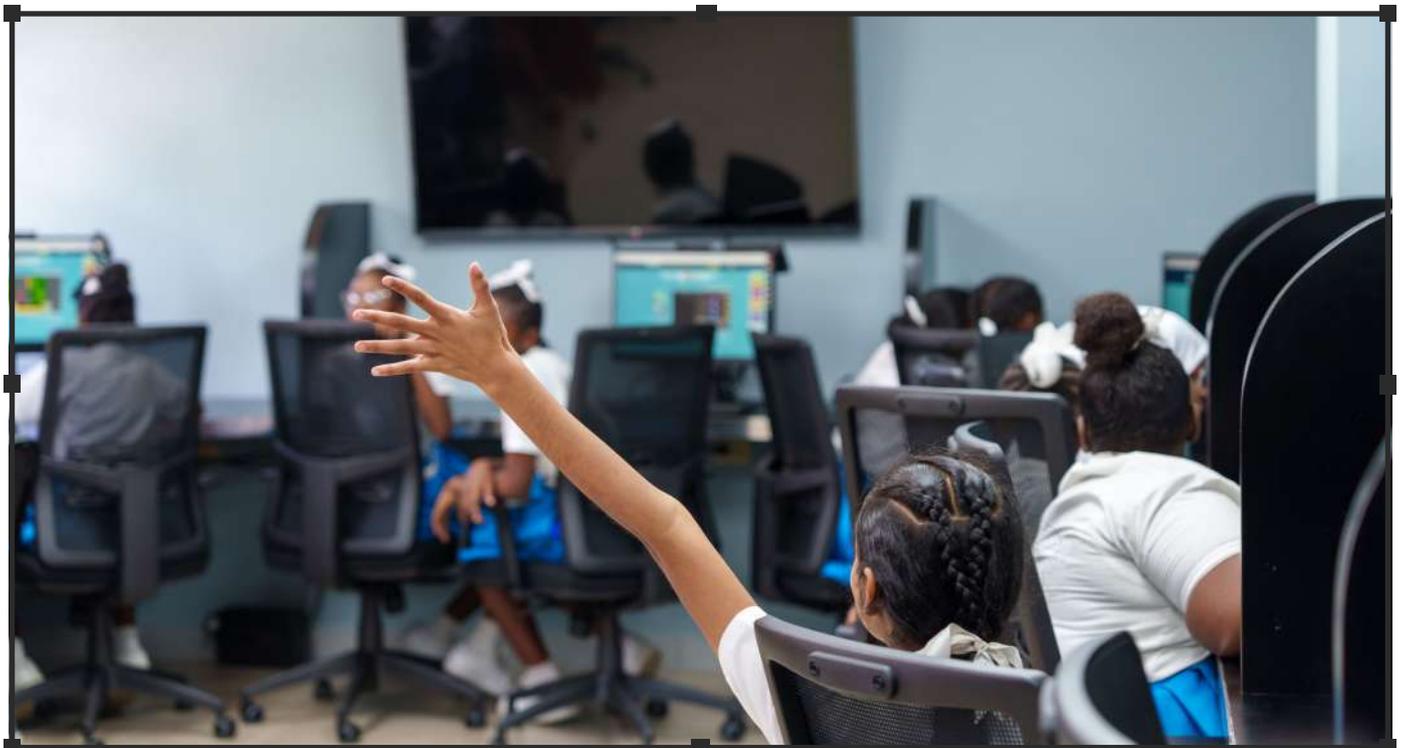
45. UN DESA Policy Brief #64: The COVID-19 pandemic puts Small Island Developing economies in dire straits – https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/PB_64.pdf

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Graph 11

	Infrastructure	Affordability	Consumer readiness	Content and services
Bahamas	58.5	70	85	53.2
Bahrain	90	66	85	70.8
Barbados	60.9	38.9	86.4	52.8
Belize	56.6	48.3	78.5	61.6
Cabo Verde	48.8	46.8	75.9	49.1
Comoros	44.8	20.2	36.6	19.4
Dominican Republic	60.3	43.7	84.8	72.8
Fiji	65.6	46.3	88.2	47.1
Guinea-Bissau	48	34.8	32.6	18.4
Guyana	43	63.4	74.2	47.2
Haiti	38	41	53.4	30.1
Jamaica	59.2	29,6	79.9	49.8
Maldives	69.4	43.1	77.1	45.6
Mauritius	57.4	58.2	81.9	73.4
Papua New Guinea	51.9	52.1	47	27.8
Saint Lucia	53.2	45.8	78.4	49.9
Saint Vincent and the Grenadines	57.1	37	78.9	57.1
Samoa	57.8	42.3	79.8	64.2
Singapore	90.9	99.1	93.6	89
Solomon Islands	40.3	33.7	62.2	27.1
Suriname	56.3	50,1	78.9	47.9
Timor-Leste	53	53	59.7	30.4
Tonga	41.9	50.2	79.5	56.8
Trinidad and Tobago	64.3	54.8	80	63
Vanuatu	53.9	45	71.2	39.6

GSMA Mobile Connectivity Index

However, reduced barriers to global markets also create challenges for creative entrepreneurs in SIDS. Lowered production and distribution costs have created an enormous volume of content. While young people are excited about the freedom to create from anywhere, monetization and building a creative career can be difficult.

One way that young people in SIDS can add value and differentiate themselves from the saturated creative markets in Asia, Europe and the United States is by expressing their unique local heritages and cultures. This could provide an opportunity to connect to audiences seeking new stories and inspiration.

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A particular example is 'Street Boy', a Jamaican video game on social issues such as gang crime, environmental protection and colonial history. Young creatives in Barbados also launched the *WOAH!* digital cultural magazine in 2020. It features articles written by local students on Barbadian entertainment, cuisine and religion, offering a platform to export Barbadian culture to international audiences. Digital tools can also give young people greater autonomy in presenting their traditions. For example, SIDS photographers are contributing to online initiatives such as 'Everyday Africa' or sharing work via hashtags such as #TheAfricaTheMediaNeverShowsYou in order to regain control of cultural and country narratives.

While digital distribution and production of creative products offer considerable potential, further protections of copyrights and intellectual property need to be in place in many countries. Counterfeiting of SIDS' cultural goods is widespread. At the same time, digital technologies can protect cultural offerings. Tools such as blockchain can authenticate and protect cultural assets, enabling buyers to track and trace the provenance and movement of cultural goods, and protecting the hard work and revenue of local creators. Australia launched a pilot programme in 2019 to investigate the potential of digital codes to label and track authentic aboriginal and Torres Straits Islander products.

Finally, young people can also explore digital creative opportunities in industries particularly relevant to their islands. For example, many SIDS are highly reliant on tourism. It is a major export industry and a crucial source of employment. Tourism revenues are key for building resilience and advancing development, proving essential in the recent graduation of Cabo Verde, the Maldives and Samoa from least developed country status.[46]

The creative skills of SIDS entrepreneurs will be crucial in reimagining the tourist experience, from using augmented or virtual reality to enhance the visitor experience, to digital outreach making experiences in SIDS available to a global audience without environmental impacts. Nearly 50 percent of young people in SIDS see digital playing an important role in the tourism sector. This area was of particular interest among young people with lower levels of education, with the sector often dominated by young people with fewer economic opportunities or networks. Tourism therefore provides an exciting opportunity to drive digital inclusion across the economy, and many SIDS are already exploring the potential of digital to support tourism, a move welcomed by young people.

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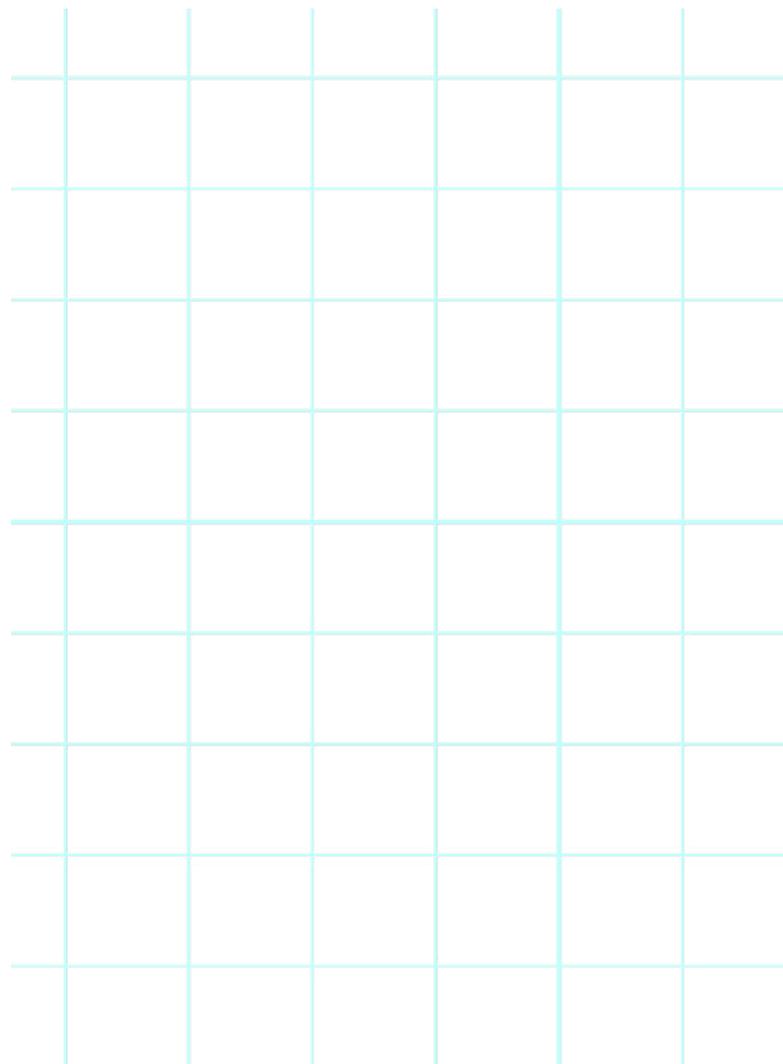
46.   UNWTO: Tourism in Small Island Developing States – https://www.e-unwto.org/doi/pdf/10.18111/9789284416257

< 52 >

DIGITAL RISKS DISTANCING YOUNG PEOPLE FROM THEIR CULTURE AND COMMUNITY

Although digital technologies provide an opportunity to champion and showcase the cultures and heritage of SIDS, young people are also concerned that digital will distract and distance them from their families, and lead to the loss of traditional values and cultures.

Some young people highlighted the complexities of navigating between digitally delivered global cultures and local or 'traditional' culture. This illustrates a broader issue with digitally driven globalization: It is not necessarily a neutral process. With much online content still produced by the Global North, young people's increased exposure to digital content could alter their cultural identification or even reduce cultural sovereignty.

Young people's digital worries include a fear of distancing younger generations from their cultural identity, values and traditions. This echoes broader research. For example, some studies have shown that young people in Jamaica may develop an orientation towards culture in the United States, even without having travelled abroad, through the consumption of mass media that has originated from there.[47] One SIDS expert highlighted how some music artists in Grenada are losing interest in producing regional 'soca' music in an attempt to focus on material that has more 'global' relevance. There is a need to support young people in navigating these hybridized digital identities.

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47. Youth and digital technology in Jamaica: Parenting for a Digital Future – https://blogs.lse.ac.uk/ parenting4digitalfuture/2016/03/09/youth-and-digital- technology-in-jamaica/

Graph 12

PRIORITY CONCERNS RELATING TO DIGITAL AMONGST YOUNG PEOPLE

Caribbean

Pacific

AIS

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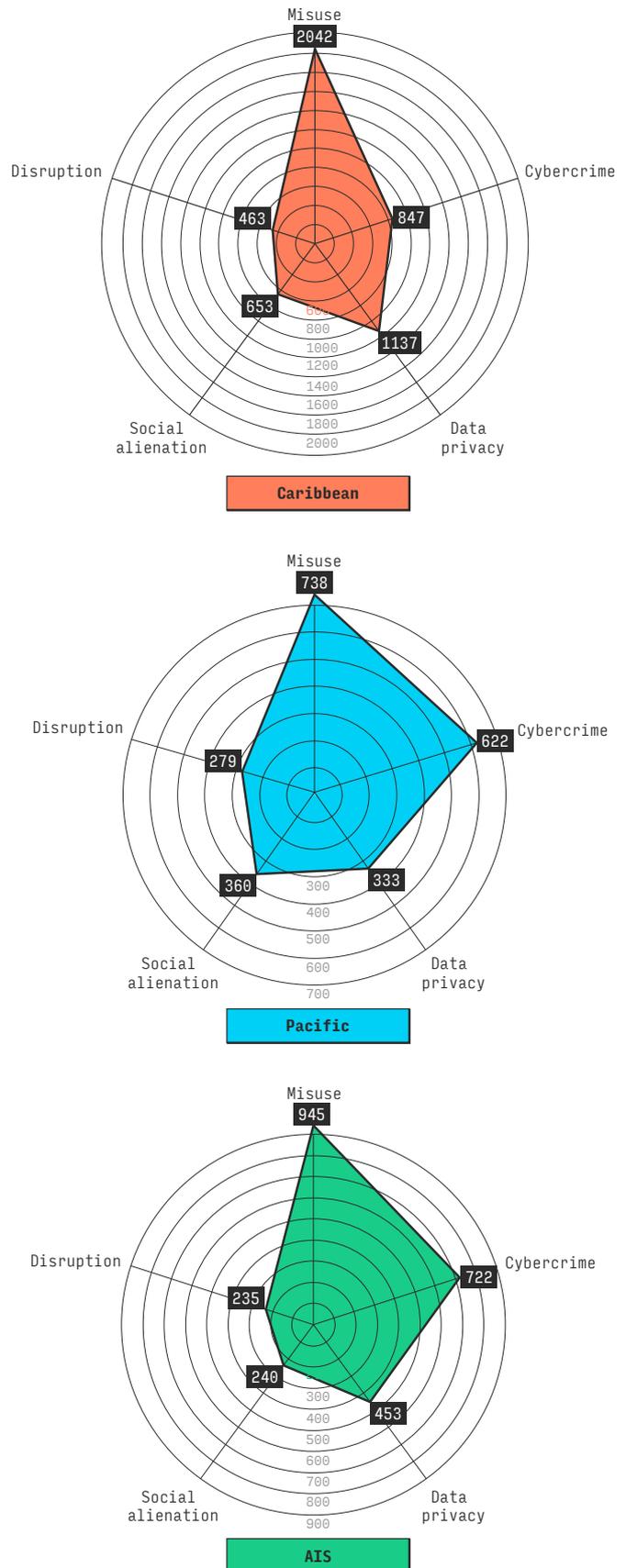
Young people are also concerned about the risk of digital creating isolation and distance, with respondents in the Pacific notably concerned about the impact of digital in disrupting lives and creating social alienation.

Respondents also described concerns about intergenerational digital divides, with parents and older family members, teachers and even politicians seen as disconnected from the potential of digital. In some cases, patterns of social interaction are undergoing significant changes. For example, young people may choose to interact by sharing memes with each other rather than talking when they meet.[48] For parents or other elders who are less familiar with digital technologies, these experiences can be disempowering. Concerns may manifest in the creation of false stigmas and stereotypes.

Further, parents may want to protect their children online but lack the knowledge to do so—or might feel ashamed to bring this up with their children.[49] Concerns about the older generation being excluded from digital echoed broader research that highlights digital exclusion and gaps in digital literacy among older populations.

In addition to the intergenerational digital divide, evidence suggests a growing intragenerational digital divide among youth in SIDS due to persistent inequalities in access. The discourse about 'digital natives' can be disempowering for some young people, especially if they are already experiencing other forms of social exclusion.[50] As digital culture in SIDS remains an emerging phenomenon, schools and parents will continue to play an important role in shaping young people's digital experiences. Without adequate support systems in place, those who cannot access and use technology will be increasingly disadvantaged and may even face exclusion by their peers. Researchers working with school-age children in Jamaica, for instance, noted that some children felt alienated if they were not engaged on Facebook or Instagram, and often felt peer pressure to be on social media platforms.[51]

Support systems are particularly important when building broader digital engagement and literacy. More extensive digital familiarity and skills require young people to have regular access to devices— and not fleeting access from borrowing devices from siblings or parents.[52] Female respondents highlighted challenges in accessing digital technologies. This reaffirms the importance of affordable data and devices, the importance of building online protections, and the reduction of social and other norms that constrain women and girls in particular from exploring and navigating digital spaces.

When these and other challenges are addressed, digital can strengthen new pathways to how culture and identity can be presented to the world. Considered and careful use of digital tools and platforms can provide new approaches that can bolster communities and foster deeper, more meaningful connections.

48. How Cuba is Getting a Crash Course in Internet Culture – https://www.digitaltrends.com/computing/cuba-internet-connectivity-digital-culture/

49. Youth and digital technology in Jamaica: Parenting for a Digital Future – https://blogs.lse.ac.uk/parenting4digitalfuture/2016/03/09/youth-and-digital-technology-in-jamaica/

50. The myth of the digital native: Why it persists and the harm it inflicts – https://www.oecd-ilibrary.org/sites/2dac420b-en/index.html?itemId=/content/component/2dac420b-en

51. Youth and digital technology in Jamaica: Parenting for a Digital Future – https://blogs.lse.ac.uk/parenting4digitalfuture/2016/03/09/youth-and-digital-technology-in-jamaica/

52. Girl Effect: Real girls, real lives, connected – https://www.girlsandmobile.org

< 54 >

Digital can also improve young people's sense of belonging by building and strengthening communities, including across borders. A number of survey respondents, when asked how technology is changing their day-to-day lives, stressed that digital brings people together. It can also empower young people to advocate for change through access to information and discussion platforms where people of all backgrounds discuss contemporary issues. Connecting youth-led initiatives across regions and nations can amplify young people's voices and enhance their engagement with local community issues.

A broader sentiment was that digital technologies have immense potential in addressing specific challenges in SIDS. Yet they must not disrupt or damage social and cultural structures. Building technologies that strengthen human-to-human interactions, mitigate the digital divide and help to strengthen the employment market are integral to reducing the negative aspects of this disruption.

PHOTO: **UNDP SAMOA MCO**

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Case study:

AMILCAR

SHAPING THE FOURTH INDUSTRIAL REVOLUTION IN TIMOR–LESTE

Technologies such as 3D-printing and the Internet-of-Things could transform ways of living and working. They are crucial components of the Fourth Industrial Revolution or '4IR', a blurring of boundaries between the online and offline worlds. As a teacher at the Technical Vocational School of Don Bosco Fatumaca in Baucau Municipality, Timor-Leste, Amilcar recognizes the potential of digital and technology to improve the careers and aspirations of young people in rural areas. Working with the UNDP Accelerator Lab, Amilcar designed a comprehensive innovation programme for twelfth-grade students.

The programme has two parts. The first focuses on 'hard' skills in technology and innovation, including exploring the Internet-of-Things and 3D-printing; undertaking basic coding, programming and computer modelling; and unpacking different innovation methodologies such as design thinking, experimentation and collective intelligence.[53] The second component comprises 'soft' skills to support digital and broader careers, such as digital literacy, leadership and public speaking, project pitching and entrepreneurship. The programme is combined with vocational courses, such as on mechanical production, carpentry, and electrical and electronic engineering.

4IR is driving exploration around the world, including in SIDS where it could redefine supply chains, trade and other sectors. Recognizing this, Amilcar focused on making the programme as practical and applied as possible. It included assignments to use technology to tackle a number of social and environmental challenges, such as flooding and waste management. Students created prototypes that included an early warning system. The programme also reaffirmed that equipping young people with relevant, high-quality skills is crucial in solving some of the hardest challenges in SIDS, and essential in positioning young people to be the digital leaders of the next generation.

53. Collective intelligence is about opening-up innovation processes to include new, under-heard, and other voices – https://www.undp.org/acceleratorlabs/collective-intelligence-sustainable-development-getting-smarter-together

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Case study:

CHARIELLE AND KATRINA
HOW GAMIFIED LEARNING IS IMPROVING
FINANCIAL LITERACY IN TRINIDAD AND TOBAGO

Charielle and Katrina are entrepreneurs from Trinidad and Tobago inspired to improve the financial literacy of young people in the country and across the region. They setup WizdomCRM, an EduTech company that subsequently launched the Caribbean Sustainable Virtual Stock Market Game Platform for secondary school students in Trinidad and Tobago and the Caribbean. The platform - approved and endorsed by the Ministries of Education in Guyana, Jamaica, and Trinidad and Tobago — uses artificial intelligence and gamified learning to empower young people to learn more about finance and investing at an earlier age. By 2024, the team aims to have helped over 5,000 young people across the three countries to develop financial skills and knowledge.

WizdomCRM teaches primary, secondary, and also university students core financial skills such as saving, budgeting, and investing. Students are given US$10,000 to US$25,000 in virtual money to buy and sell stocks from companies listed on the Barbadian, Jamaican, Trinbagonian and US stock exchanges. Participants are encouraged to conduct research and analyse evidence to make wise investments. All learning approaches are integrated through Isabella, the game's bespoke AI tool, which guides users through visual, written and auditory learning material. To date, 3,200 students have used the platform in its first year of operation. Students have even achieved significant theoretical portfolio growth: One 15-year-old saw their portfolio grow to $10 million, while a 13-year-old 'gained' $8 million over a three-month period.

The gamified learning platform equips young people with the skills, knowledge and incentives to make sound investments and strategic decisions with their money. By painting a vivid image of local business landscapes, the platform also helps to prepare young people for the employment market and teaches them about the businesses, employers and industries that they may interact with in the future. An in-person flagship award ceremony is held twice each year, at the end of each programme cycle, to celebrate student achievements. It also gives students a chance to connect with and learn from industry leaders.

The team at WizdomCRM are very familiar with the benefits of gamified learning and have designed the platform to develop financial awareness in an inclusive and engaging way. The application demonstrates the potential of digital play and entertainment as inclusive learning tools. By focusing on students from underprivileged schools, WizdomCRM helps to promote inclusivity in the business market. The game's accessible learning style — including featuring sign language, to support individuals with hearing impairment or hearing loss - enables a wide range of young people to gain financial empowerment.

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Case study:

BOB

HOW DIGITAL CREATIVITY IS PROTECTING CABO VERDE'S MARINE ENVIRONMENT

Bob is a photographer and videographer, constantly inspired by the rich biodiversity, natural resources and the vast exclusive ocean economic zone of Cabo Verde. This environment is under threat from climate change, pollution and unsustainable maritime practices, however. It's a particular concern in a country where fisheries, fish processing and aquaculture account for 80 percent of exports. Bob is exploring how digital channels and creativity can protect these valuable national assets.

Bob joined the 'Blue Hack' initiative in 2022, a hackathon launched by the UNDP Cabo Verde Accelerator Lab to identify innovative solutions to support the island's Blue Economy. It brought together more than 60 local entrepreneurs to develop solutions guided by the Accelerator Lab's innovation methodology. Bob drew on his creative skills to devise a news and media platform, the 'Blue Wax—Wave Verdian Mag'. It showcases digital material on ocean sustainability linked to education and sport, all aimed at increasing the engagement of local communities. Visual and digital storytelling raise awareness and stimulate conversations.

Blue Wax strives to support the local maritime economy by strengthening the relationship between people and the ocean, and empowering locals to take a more active role in ocean preservation. Bob's efforts demonstrate the potential of using digital tools and channels to tackle key national priorities. He continues to combine his creative and digital skills to tell important and impactful stories.

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RECOMMENDATIONS

Digital is transforming the lives and livelihoods of young people across SIDS. This transformation is ushering in fresh educational and entrepreneurial prospects, fostering novel connections, and influencing the way people live, work and play. But it is also exacerbating inequalities. In some cases, it poses risks of further marginalizing the voices and cultures of people in SIDS. It is crucial for young people to gain empowerment and support to leverage the potential of digital while remaining protected from the potential risks and harms that can accompany increased digitalization.

This study has identified a number of recommendations across the three areas of live, work and play. It has also generated four broader recommendations. In particular:

Young people's engagement with digital in SIDS needs to be further understood. This is amongst the first global studies on this topic. It has reaffirmed the potentials, opportunities and complexities of supporting the digital journeys of young people in SIDS. Further and deeper research on young people's interplay with digital will only become more important. The current evidence base in countries and across SIDS is still very much emerging. Even more importantly, surfacing the offline voices and perspectives should be a priority.

There is significant scope for wider use of digital channels as outreach and engagement tools. This study reached more than 5,000 young people through channels they use every day: WhatsApp, Facebook Messenger and Telegram. It leveraged an open-source and freely available chatbot tool, and provided young people with a safe and comfortable platform to share their thoughts and feelings. There is enormous potential to use these tools to further engage young people in policymaking and public service design and delivery, and to build a feedback loop that positions governments as advocates for the interests of young people.

Digital is not constrained by borders, presenting considerable opportunity. In addition to driving international connections and collaborations, SIDS can also leverage global talent and engagement. A key aspect of this for many SIDS, will be their global digital diaspora – many of whom have the skills and experience to support the national digital development of their home countries. SIDS governments should consider focused programmes to engage this international digital expertise, including in relation to mentorship and domestic skills development, international business collaborations, and Angel investment.

Digital monitoring and evaluation needs to be prioritised. Important digital metrics relating to the growth and development of SIDS digital economies and societies are not being captured in many SIDS. This is constraining opportunities to measure impact – and to direct investment and other important efforts. In addition to collecting disaggregated data relating to vulnerable and marginalised groups, mentioned in more detail in the below recommendations, broader monitoring, learning, and evaluation approaches are needed.

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Digital can be a catalytic force in SIDS. It can also play an important role in tackling broader SIDS development challenges – including mitigating the 'brain drain', by driving new and exciting opportunities that encourage young people to remain in their countries.

Governments and other actors must make digital relevant and tangible for SIDS and their populations, particularly young people. Too often, digital solutions are transplanted wholesale from larger or very different contexts. Young people in SIDS are avid consumers of global digital and tech platforms. It is important that they can also build local digital solutions, shaped by their cultures and indigenous knowledge and experiences. Digital technologies need to work for the benefit of SIDS and meet the specific needs and opportunities of their communities.

PHOTO: MAURITIUS AND SEYCHELLES COMMUNICATIONS TEAM

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LIVE

Ensure high-quality connectivity is available for the entire population

Wired and wireless connectivity is the literal foundation for digital economies and societies, from fixed-line broadband to mobile and satellite connectivity. Survey respondents and broader research and analysis, however, revealed meaningful gaps in connectivity within and among islands. These include a lack of network coverage and a struggle to afford data and devices. SIDS governments must continue to prioritize investments and efforts to close coverage and usage gaps within countries and communities. This may require exploring innovative connectivity solutions, and new business models and collaboration opportunities[54].

Accelerate adoption of digital but also address and mitigate its negative impacts.

Digital can be a tremendous force for good, providing young people with unrivalled opportunities. Governments and partners should continue to accelerate the roll-out and adoption of digital products and services. Young people responding to the global survey, however, noted their experiences of digital addiction and isolation, online harassment and misinformation and gaps in regulation, and the dangers of data loss, cybersecurity risks and exposure to inappropriate content. Robust protections, including enforcement and accountability, need to be in place to ensure young people benefit from digital and avoid its negative fallout. These should accompany efforts to improve digital literacy among all young people – including embedding cyber-skills throughout the curriculum.

Strengthen the digital foundations built during the COVID-19 pandemic

The pandemic was an enormous catalyst for digital transformation in a number of SIDS, and was a crucial tool in delivering social protection payments, public health messaging, and other key services. These foundations must be strengthened, and the importance of digital reflected in dedicated budget allocations and senior political and official sponsorship. SIDS have an important opportunity to build on the digital progress that they have made in recent years, including continuing to shape two-way digital connections with their populations.

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54. GSMA: Closing the Coverage Gap – How Innovation Can Drive Rural Connectivity – https://www.gsma.com/mobilefordevelopment/resources/closing-the-coverage-gap-how-innovation-can-drive-rural-connectivity/

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Ensure digital delivers benefits to women and girls and other marginalized populations

Numerous young people in the survey called for ensuring that digital does not leave anyone behind. In particular, female respondents to the survey were more likely to rate their digital skills at lower levels— and to flag issues of access to technology. Tackling inequality is a priority that may require a wide-range of interventions, such as developing gender- disaggregated data on digital inclusion and supporting digital skills-building for women and girls. The latter is particularly important in opening opportunities for female leaders in building digital products and services. In addition, enabling content and service development in local SIDS languages can also be an important driver of digital adoption.

Develop national digital strategies and recognize the role of digital in key vertical sectors

Many SIDS do not have a national digital strategy. Some continue to develop strategies focused on ICT and digital technologies, and not the outcomes or benefits that these can deliver. A coordinated and holistic vision for digital – including in the context of sustainable development - is important. It should be founded on robust and actionable activities and recommendations. The strategy should have senior leadership, clear targets and governance mechanisms, and buy-in from across government and society. Specific digital strategies for key vertical sectors, including health, the creative economy, e-commerce and disaster risk reduction, may also be required – as well as core digital service standards and principles (including a focus on human-centred design).

WORK

Improve business registration processes

Young people in SIDS want to use digital to create new businesses and improve their incomes and opportunities. They want to participate in regional and global markets, and support their countries and communities. Yet setting up businesses can see entrepreneurs encountering numerous difficulties in many SIDS, including opaque and offline processes, and sometimes costly and complex business registration. Governments need to focus on identifying and removing these obstacles and providing core business and digital business training to young people, including in collaboration with the private sector.

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Focus on building ecosystems

The digital landscape in many SIDS is incredibly dynamic, from small businesses going online to young innovators exploring emerging technologies. Many activities, however, are happening in siloes. Driving more coordinated approaches faces multiple challenges, including in communicating existing digital assets and efforts to entrepreneurs and citizens. Beyond establishing digital strategies, governments and other digital actors should focus on shaping digital ecosystems within SIDS. This involves building key pillars to support and sustain digital efforts, including business associations, incubators and mentorship opportunities, and cultivating a broader enabling environment. The latter includes regulation that protects individuals and communities, and supports and catalyses innovation. It also comprises digital public infrastructure, such as for digital identities, data exchange and payment solutions.

Build cross-sectoral collaborations and partnerships

Digital transformation in SIDS is not the domain of any single institution or actor – and cross-sectoral and cross-disciplinary collaborations and 'business' models are vital. As highlighted above, whole-of-society digital transformation requires a comprehensive effort across the public and private sectors as well as civil society. Identifying roles, responsibilities and the value add of each sector is crucial—as is determining how organizations can work together. This may include public-private collaborations for infrastructure and skills-building. Civil society plays a particularly important role in driving digital transformation. From addressing and providing solutions to potential digital harms, to shaping feedback loops with citizens to enable inclusive digital service design and delivery, as well as ensuring that the benefits of digital reach all people and communities.

Develop a twenty-first century skills strategy

Young people were overwhelmingly interested in strengthening their digital skills and building new ones. The pace of technological change—including recent developments in AI—may accelerate the need to redesign learning paths and education more broadly. Governments need to shape a future-proofed approach to developing digital literacy among young people, from foundational digital skills to technical and deeper expertise. Digital skills of particular importance to SIDS include those related to e-commerce and the blue economy, and technical skills including cybersecurity and digital product development. With digital lowering many barriers to new opportunities, governments should consider approaches such as microcredentials and collaborations with the private sector to build industry-specific skills and mitigate potential risks of automation and other negative effects. Governments should also engage with the 'long tail' of digital opportunities for young people. Digital careers are more than entrepreneurship and startups, and encompass all sectors, verticals, and skillsets.

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Recognize that digital skills are not just about digital technologies

Skills for the digital economy are broader than coding. Financial literacy, particularly as digital accelerates financial inclusion, is essential. Being able to identify disinformation and misinformation and having broader critical thinking skills are growing in importance as digital increases the reach and scale of inaccuracies and concerns such as 'deep fakes'. Working in a digital setting requires multitasking and strong project management skills. Building digital businesses calls for entrepreneurship skills and ideation, a knowledge of profit and loss, and awareness of financial concepts and financial discipline, in addition to understanding digital marketplaces, social media and other digital tools. 'Softer' skills such as communication and interpersonal skills will continue to be important and potentially even more so as face-to-face human interaction potentially declines. Similarly, digital innovators should be encouraged to broaden their metrics of success beyond financial indicators and to also engage with social impact.

PLAY

Recognize the role of the creative sector in SIDS

The creative and cultural sectors are growing in many SIDS and present an opportunity for economic diversification. This is also an area that is often not reliant on natural resources (which many SIDS lack). The barriers to entry in this area are reducing because of digital technologies, and many SIDS have enviable creative talent as well as incredible heritage and cultural assets to share with the world. Digital initiatives such as e-Sports also allow SIDS to compete on the global stage, if foundational connectivity is sufficient. The creative sector is often side-lined, however, in favour of areas such as fintech and e-commerce. Governments need to recognize the importance of the creative sector in shaping, supporting and accelerating digital adoption in SIDS, particularly among young creators; whilst the private sector should explore the income-generating potential of the creative sector as it has with fintech and other areas.

Develop key assets to support the creative industries

Beyond recognizing the importance of the creative sector, SIDS governments need to shape key policies, regulations and other structures to support and catalyse prospects for young people and other creatives. Priorities include intellectual property and copyright legislation, and identifying and strengthening monetization routes. These components are also important across the digital economy, particularly in developing e-commerce foundations and broader innovation-driven economies.

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Ensure digital augments culture in SIDS

Young people noted the potential for digital to amplify the unique cultural and heritage assets of SIDS. Many were also concerned that digital could distance them from their culture and communities, or risk homogenizing their histories and narratives.

Young people were eager to explore how digital can complement and augment the unrivalled cultures of SIDS, including the role of technologies in preserving and protecting these tangible and intangible assets for future generations.

Recognize that digital is about living, working and playing

Digital is often seen as a tool for productivity, efficiency and income. These are valuable attributes, particularly for SIDS communities seeking to strengthen their livelihoods. Digital is also a key tool for entertainment, identity building, socializing and fun. Government policies, digital literacy initiatives and civil society efforts need to recognize and use this aspect to drive further positive engagement with digital, towards ensuring that digital is not solely the preserve of entrepreneurs or judged against purely financial and income-generating metrics - and that no one is left behind.

Build safe spaces for experimentation and failure

In many settings, including SIDS, failure is still an outcome to avoid. Early and meaningful access to digital can provide an opportunity to embrace failure as part of shaping a culture of experimentation, creativity and innovation. A culture where failure is acceptable and encouraged to explore new ideas and innovations is an exciting by-product of the digital revolution and offers particular benefits to young people. Governments should build and support safe spaces to pursue innovations, such as through incubators, testbeds and sandboxes but also embed this way of working and thinking throughout education and society. This can shift mindsets towards welcoming iteration, experimentation and play.

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