The Caribbean is undergoing a digital transformation: More people than ever have access to digital technologies and the internet, and both businesses and government entities are increasingly providing online services. While significant disparities remain both within and among Caribbean countries in terms of access to digital technologies and infrastructure, the influence of digital technologies on the subregion has increased significantly in recent years, particularly in response to the public health measures implemented to mitigate the impacts of the COVID-19 pandemic.

National development plans across the subregion acknowledge the transformative potential of digital technologies, and envision the way that ICTs could contribute to the achievement of their sustainable development aspirations. However, it is well-established that the adoption of digital technology is not a panacea for societal ills. In fact, the adoption of digital technologies can exacerbate existing challenges, increase social inequality and further the marginalization of already marginalized groups. This became evident during the early stages of the COVID-19 pandemic, when the digital divides within Caribbean countries came into stark focus.

People who did not have access to an internet connection, an appropriate device, or the skills to access online content, were excluded from schooling, work, healthcare services and social services, among others. In addition, low-income populations, and unbanked or underbanked people were more limited in their ability to take advantage of the opportunities offered by the internet, as access to online services frequently required payment.

According to the World Bank, in 2021, only 73 per cent of the population of Latin America and the Caribbean aged 15 and over, was reported to have held an account at a bank or financial institution or used a mobile money service. Among Caribbean countries, 2021 figures are only available for two countries: the Dominican Republic, where account ownership stands at 51 per cent; and Jamaica, where it stands at 73 per cent. These figures hint at the possibility of large segments of the Caribbean population being excluded from access to paid online services, and highlights the link between social and digital exclusion.

To fully reap the benefits of the digital transformation while also minimizing the potential for harm, the development and deployment of new technologies needs to have a solid foundation in human rights. However, achieving this goal will require digital technologies to be designed specifically for Caribbean circumstances, and to respond to Caribbean needs. It will not be sufficient for Caribbean countries to wait for digital technologies to “trickle down” from more industrialized countries. As such, there is a need to grow indigenous, flourishing innovation ecosystems within the Caribbean, that are adapted to the Caribbean social, political and economic environment.

Innovation ecosystems cannot be directly imported or transposed from other regions, as they are complex systems resulting from decades of dedicated planning, policymaking and public investments in education and technical development. Governments that have tried to do so have failed, expensively. Bringing inclusive innovation to the top of the development agenda could support the development of strong, self-sustaining indigenous enterprises that create their own technologies and intellectual capital. Facilitating this will require bold decisions at several levels, including related to investment.

In the longer term, Caribbean governments must invest in strengthening critical infrastructure and in increasing relevant human resource capacity. Private and public sector stakeholders must participate in this process of digital upgrading, and governments, telecommunications operators and technology companies must join forces to create a robust digital ecosystem. However, the lack of accessible funding remains a major impediment to such efforts.

In particular, funding is needed to:

1. Expand access to network infrastructure and upgrade it as network technology advances.
2. Encourage the adoption of digital technologies through dedicated programmes and initiatives on the benefits of connectivity.
3. Support the development of local content, including local platforms and services.

4. Develop digital skills, including skills related to cybersecurity and mitigating online risks and harms.

A main challenge for policymakers is to weave policy imperatives into financing decisions, as digital investment frameworks need to be supported by bold and visionary public policy. While good policy will provide the enabling environment necessary for increased private sector investment, funding priorities should be derived from the set policy priorities and address identified gaps in a country's development agenda. This will require careful, dedicated planning, to ensure that the national policy and institutional frameworks always inform the mobilization of public funding instruments in the country.

IN FUNDING DIGITAL TRANSFORMATION EFFORTS, GOVERNMENTS SHOULD ENSURE THAT THE INTERVENTION:

- Provides leverage, meaning that the use of funds should be structured to attract additional private capital;
- Seeks impact, i.e., to drive progress towards sustainable development aspirations, meet national targets and close universal access and SDG gaps; and
- Provides financial returns for private investors in line with market expectations, based on real and perceived risks.

Given the broad range of potential sources of financing, and the many gaps that remain as regards connectivity, adoption, innovation and inclusion, it is imperative that strategic ways are found to increase available funding to close these gaps. While infrastructure deployment remains important, the COVID-19 pandemic highlighted the need to facilitate digital inclusion and the digital transformation of Caribbean economies.

THIS WILL NECESSARILY INVOLVE THE PRIORITIZATION OF:

1. Demand-side investment to facilitate digital adoption, with a focus on motivation and usage, support for micro-, small, and medium-sized enterprises, the development of local content and services and digital skills.

2. Research, development and innovation to facilitate the development of innovative local digital applications and technologies, prioritizing those that can have a clear developmental impact.

3. Mainstreaming digital inclusion in all programmes and projects, by making the involvement of marginalized and underrepresented communities a priority, and addressing their needs as a condition for access to funding.

4. The development of tools that will facilitate investment, such as shared research, baseline data or infrastructure maps.

One financial tool that has been used at national and regional levels in various parts of the world to close gaps and reduce disparities is structural funds. Universal Service Funds (USFs) are commonly used structural funds that aim to increase access to telecommunication services, through projects funded by legally mandated contributions from telecommunication providers.

At least 10 countries across the Caribbean have USFs in place. Traditionally, USFs have been used to expand telephone and broadband networks into geographical areas, that private telecommunication companies would otherwise view as unattractive for investment. The use of USFs has also been discussed within the context of providing access to ICTs for people with disabilities.

However, one challenge that has been identified is that USFs have focused on universal service (i.e., connectivity) at the expense of universal access (i.e., accessible services through the provision of skills, equipment, and support). This example highlights the need for structural funds to be designed specifically to advance digital inclusion. The use of structural funds also requires a delicate balance between the use of public money in areas where market failure has been identified. The types of funding sought would depend on the nature of the initiative or project to be funded. These include state ownership, regulation, in-kind support, and incentives, including subsidies, grants and loans issued through structured funds, sovereign funds, and partnerships with private companies and bilateral or multilateral development agencies.

An appropriate and effective financing toolbox should, therefore, contain a mix of funding mechanisms and financial solutions, as well as non-financial incentives. Funding should be transparent and accountable, with annual audit reports published for public review. The eligibility requirements should be clear and available for all to consider, and target...
projects should be developed within the context of pre-defined strategies and programmes. Some established financial solutions include bonds and notes, infrastructure bonds, loans, microfinance, financing for small- and medium-sized enterprises and private equity funds. This can be supplemented by newer solutions, such as digital bonds, impact investing bonds, venture capital funds, crowdfunding, and a fund of funds.

 Altogether, there are many options available for financing the inclusive digital transformation of the Caribbean. The challenge, however, lies in identifying which solutions would be appropriate for the regional, subregional, and national contexts of each government. In reviewing their funding and financing options, Caribbean governments must therefore expend considerable effort on mapping current policies, goals and priorities, the current financing and funding environment, applicable regulations, and the institutional landscape.

 **The following steps will assist governments in setting targets against which various digital inclusion gaps can be measured:**

- Prioritizing activities.
- Achieving cost-effectiveness.
- Identifying key actors.
- Addressing cost and risk challenges that are associated with the financing of these projects.
- Promoting private-sector investment.
- Supporting coordination and cooperation in the achievement of the digital transformation, digital inclusion, and sustainable development objectives of Caribbean countries.

It may also reveal which existing funds have outlived their relevance and which do contribute to an improved distribution of resources. Most importantly, this mapping exercise would provide ample opportunity for the involvement of marginalized communities, and the prioritization of their needs, in line with the principles of the 2030 Agenda to “leave no one behind” and “reach the furthest behind first”. Ultimately, this will help to ensure the relevance and effectiveness of the programmes and initiatives to these groups, further digital inclusion, and support the social inclusion of and reduction of inequality in relation to these groups.