



NATIONAL E-COMMERCE STRATEGY

Ministry of Tourism, Industry and Commerce
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1. EXECUTIVE SUMMARY

Guyana has an unprecedented opportunity with the discovery of offshore oil and gas reserves.

This resource's windfall will generate much economic growth and income - offering the possibility to transform the nation. At the same time, Guyana is faced with the global digital revolution that is transforming every aspect of global and national economies, work, civic society, and personal engagement.

The digital revolution is also creating dramatic new growth opportunities.

This strategy recommends a path forward for Guyana to invest in a diversified economy by developing broad-based eCommerce activity. With an enabling policy environment and commitment from the relevant stakeholders, including the Government and private sector, eCommerce can become one of the major drivers of economic development for Guyana. Through the establishment of a holistic ECommerce Strategy, the country will be able to harness the maximum potential of eCommerce for sustainable economic development.

Achieving these goals will require significant changes within Guyana. This strategy proposes a set of action items that will ultimately facilitate these requisite changes:

1. Establish senior-level accountability to implement and manage this National eCommerce Strategy on an ongoing basis. This recognizes that eCommerce has many facilitators that cross-government departments and industry sectors. Implementation of this Strategy will require a structured approach and sustained senior-level support to succeed.
2. Complete the Regulatory and Governance Framework. This objective is to complete the regulatory framework that supports eCommerce. This includes the passing of key legislation in progress, developing new legislation to fill identified gaps and ensuring the successful implementation, ongoing operation, and evolution of the regulatory environment.

1. Build network and internet access to support eCommerce. This is to ensure that robust wired and wireless network coverage is available throughout the country and importantly, is being used by the broadest possible number of citizens and businesses. It is recognized that a National ICT Strategy is in development and therefore objectives are proposed rather than specific action items. While not specifically ICT, enhancement of transportation and electricity access is an eCommerce requirement and thus included in this area.
2. Build ePayment capabilities. This is to improve the ability of customers to make digital payments and for businesses to receive them. Customers need to be able to pay for an eCommerce purchase with ease and confidence that does not yet exist within Guyana.
3. Development of eCommerce Skills. This is to ensure that the consumers and businesses have the skills and knowledge to facilitate the growth of eCommerce. These actions must be created via a partnership between Government and Industry.
4. Grow Private-sector participation in eCommerce. This is to drive eCommerce ubiquity by businesses of all sizes. The key tenets are creating an understanding of the potential benefits of eCommerce to the business and providing tangible support for expenses incurred to establish eCommerce.

2. THE NEED FOR AN E-COMMERCE STRATEGY: A CONVERGENCE OF OPPORTUNITIES

Guyana has the fortuity of being a small yet rich country in natural resources including mineral resources, gold and bauxite, as well as offshore oil, water, arable land, and rainforest. Despite these resources, Guyana has had limited success in harnessing these advantages to create a strong and equitable national economy. The discovery of offshore oil and gas reserves in 2015 offers an adventitious opportunity to change this trajectory with the injection of significant economic activity and government revenue. Diversification to a digital economy through eCommerce is essential to gaining maximum long-term benefits from the Oil and Gas windfall.

A second opportunity for new growth exists in the global digital revolution which is changing every aspect of global and national economies, work, civic society, personal engagement, and the digital revolution.

The convergence of the Digital Revolution and windfall oil and gas revenues creates the possibility for Guyana to harness the benefits that will accrue from the oil and gas discovery into long-lasting and broad-based economic well-being.

Technological innovations play a catalytic role in fostering the development of an economy, especially in light of the COVID-19 pandemic which has rendered the rapid uptake of ICT and eCommerce necessities for inclusive economic growth and competitiveness in developing countries. The digital economy proffers many opportunities as it enables businesses to extend their markets by making it easier to trade, encouraging competition and market transparency, and helping connect suppliers and buyers via electronic marketplaces. ECommerce provides the mechanism for improving competitiveness and growth prospects of businesses and economies by fostering collaboration and trade.

Notwithstanding, ECommerce also presents new challenges especially for countries that are in the infant stages of transitioning to an electronically commercial economy. Specifically for Guyana, the main challenges to the digitization of the economy include a deficient and unreliable telecommunications infrastructure, lack of internet penetration, unreliable and expensive electricity, limited eGovernance implementation, poor transportation and logistics infrastructure, underdeveloped electronic payment systems, and inadequate regulatory and legal frameworks.

There are, however, immense benefits to be gained if Guyana can balance these challenges and opportunities. The United Nations Conference in Trade and Development (UNCTAD) has demonstrated that the digital economy is delivering significant benefits to national economies: With an enabling policy environment for electronic transactions and commitment from the relevant stakeholders, including the Government and private sector, eCommerce can become one of the major drivers of economic development for Guyana. Through the development and execution of a holistic ECommerce Strategy, it is expected that the country can harness the maximum potential of eCommerce for sustainable economic development while avoiding the possible distortions that could arise as a result of uncontrolled and unregulated eCommerce proliferation.

Guyana's vision in this regard is to fully leverage the potential of eCommerce to boost domestic trade, promote exports, provide a more efficient channel for consumers and producers to interlink, create employment opportunities and innovation within an eCommerce ecosystem, thereby producing eCommerce products, processes, and services.



It is helping smaller businesses and entrepreneurs in developing countries to connect with global markets faster and opens up new ways of generating income. Information and communication technologies (ICTs), eCommerce and other digital applications are being leveraged to promote entrepreneurship, including the empowerment of women as entrepreneurs and traders, and to support productive activities, decent job creation, creativity, and innovation. Furthermore, mobile and digital solutions are contributing to facilitating greater financial inclusion. And small firms in developing countries with sufficient connectivity may be able to access various cloud services and obtain crowd finance in online platforms.

3.THE OIL AND GAS OPPORTUNITY

The discovery of offshore oil and gas reserves in 2015 presents an opportunity that is significantly greater than any Guyana has experienced in the past. Economic growth will increase dramatically, as will government revenues. The World Bank estimates that by 2030, per capita income will reach US \$16,900, moving Guyana closer to high-income country status .

This unprecedented opportunity also comes with significant challenges that could inhibit its conversion into equitable and sustainable growth. International experience shows that the discovery and exploitation of large extractive resources do not always deliver sustained growth and nationwide increases in living standards.

Guyana has a high cognizance of the opportunities and constraints presented by the oil and gas discovery. Important policies and actions have been implemented to date to address them. The Senior Minister for Finance in the Office of the President, Dr. Ashni Singh published statements in January 2021 that underline the government's commitments

It is important to recognize that the current opportunity to exploit the oil and gas reserves is time-limited. Global efforts to address global climate change through reduced consumption of hydrocarbons will put shorter time horizons on Guyana versus similar past discoveries in other nations. Guyana's efforts to utilize the benefits created by these discoveries through diversification will need to be urgently pursued.



4. CAPTURING THE BENEFITS OF THE OIL AND GAS WINDFALL: ECONOMIC DIVERSIFICATION THROUGH CREATION OF A DIGITAL ECONOMY



Many international organizations have proposed wide-ranging prescriptions to address the opportunities and risks of windfall resources discovery and development (see Further Reading in Appendix 3). These playbooks include many areas for actions that are beyond the scope of this strategy, however, common to all and central to this strategy, is the need to include diversification of the economy as a key initiative. For example, the UNCTAD framework for addressing the risks from windfall resource discoveries and avoiding the Dutch Disease highlights diversification of the economy as vital, with an emphasis on digital technologies .

Guyana is not precisely a monocultural economy, but its successive reliance on a small range of primary products —some mineral and some agricultural— has made it vulnerable to price swings and the “Dutch disease.” The interests of the country as a whole will be best served by greater diversification of the economy, including more value-added in primary industries and the development of other sectors that are not directly associated with these primary products.

The potential benefits of Guyana moving to a digital economy as a key part of economic diversification are high. Digital technologies are transforming economic and civil society activities around the world - affecting global value chains, production, trade, skill requirements, and creating new digital products and services. New ways to deliver government services, health care, and education have been enabled by digital technologies. The risk of not moving the country firmly into the digital age is also high.

Within Guyana, the priority already placed on creating a digital economy and specifically fostering eCommerce is already evidenced by important initiatives that are currently underway. These include ending the telecom monopoly with competition driving improved networks and services, changes to banking systems to broaden access to financial services and ePayments, digitizing trade processes through the Customs and Trade Single Window System Act (No. 15 of 2019), and developing digital eGovernment service delivery. These initiatives will create important capabilities for Guyana, and they demonstrate tangibly, the government's commitment to move into the digital age.

Fulfilling Guyana's vision to fully leverage the potential of eCommerce will make major contributions to the economic wellbeing of Guyana. Adoption of eCommerce and building out the underlying capabilities that facilitate it will boost domestic commerce, promote exports, provide a more efficient channel for consumers and producers to interlink, create employment opportunities and innovation within an eCommerce ecosystem, thereby producing eCommerce products, business, and government processes and services. Thoughtful implementation can also help address existing inequities in economic development between the coastal and interior regions, spreading the benefits of Oil and Gas revenues throughout Guyana's society.

It is important to note that the key facilitators of eCommerce are also facilitators of a broader establishment of a digital economy and society and therefore support attainment of greater benefits including building overall digital literacy within the country and moving society forward to a new digital economy.

Achieving these benefits will require a considerable investment of time, money, and willpower by Guyana's government and industry.

5. THE E-COMMERCE VISION

With an enabling policy environment for electronic transactions and commitment from the relevant stakeholders, including the Government and private sector, eCommerce can become one of the major drivers of economic development for Guyana. Through the development of a holistic ECommerce Strategy, it is hoped that the country can harness the maximum potential of eCommerce for sustainable economic development while at the same time, avoid the possible distortions that could arise as a result of uncontrolled and unregulated eCommerce infiltration and deepening

Guyana's vision in this regard is therefore to fully leverage the potential of eCommerce to boost domestic trade, promote exports, provide a more efficient channel for consumers and producers to interlink, create employment opportunities and innovation within an eCommerce ecosystem, thereby producing eCommerce products, processes, and services.



6.E-COMMERCE STRATEGY OUTCOMES: TERM OF REFERENCE

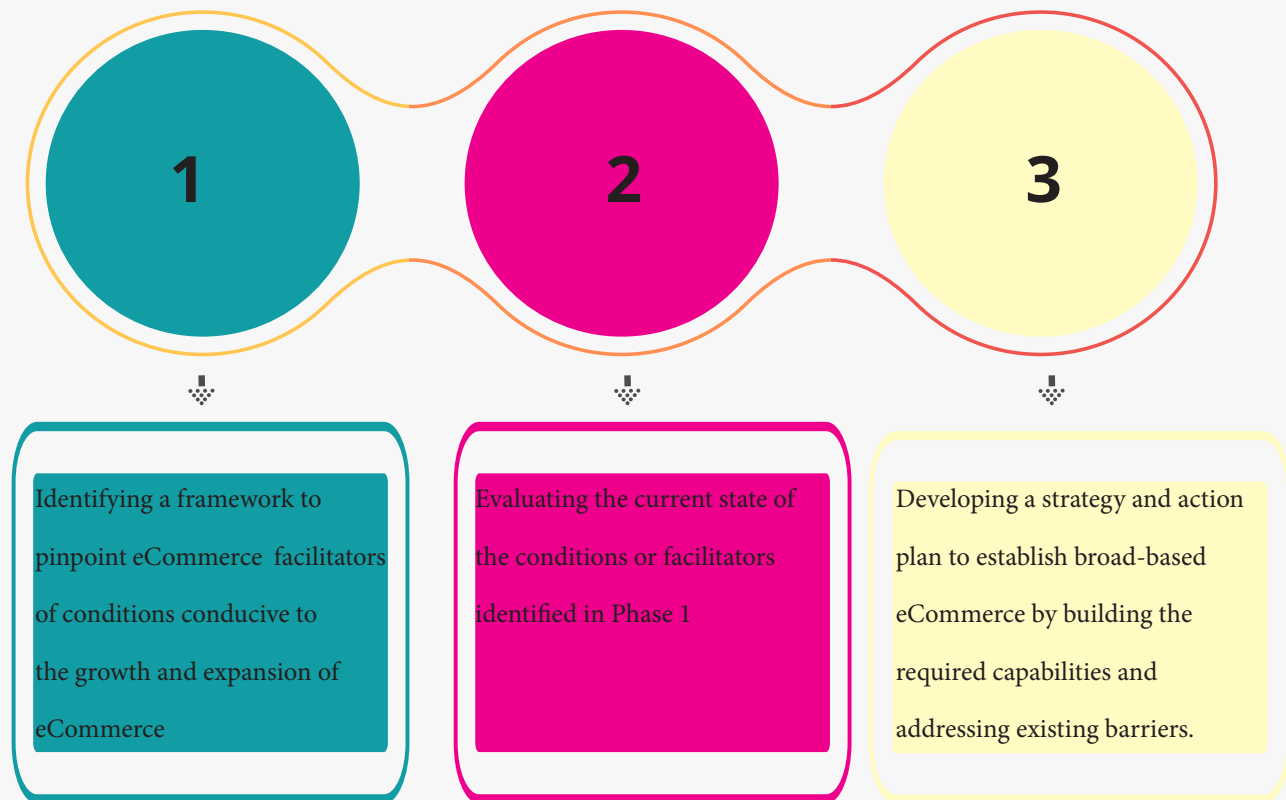
Following are the Key Outcomes identified in the Terms of Reference for a consultancy for the development of a national eCommerce strategy for Guyana. It should be noted that the resources for the project have been limited and not all objectives have been completely met. Nevertheless, this strategy document does provide a solid roadmap for eCommerce development in Guyana.

The overall strategic objective of the consultancy is to develop a plan of action aimed at increasing the wealth of the nation and of Guyanese people by helping to realize the country's productive capacity through eCommerce. The other specific objectives include:

- 1.To develop an eCommerce strategy and identify the sectors in which Guyana can participate in eCommerce value chains and expand its market share of global eCommerce trade;
- 2.Identify and recommend appropriate mechanisms to facilitate digital trade and protect consumers and businesses while allowing the government enough leverage to review and monitor electronic transactions;
- 3.The strategy is expected to be closely aligned with the relevant legislation and the national development plans and policy instruments of the Government including but not limited to the National Trade Policy, National Industrialization Plan, the National Competitiveness Strategy, the Sustainable Development Goals, and other government efforts to diversify the economy, create employment, reduce poverty and expand trade;
- 4.The strategy should also identify priority areas for Regional and International integration and cooperation with other CARICOM countries, the Joint Statement Initiative of the WTO, inter alia; and
- 5.Develop feasible incentives to encourage domestic firms to have an online presence and conduct transactions online.

7. THE STRATEGY CREATION PROCESS

The process undertaken to create an eCommerce strategy for Guyana has included 3 major phases:



Phase 1 focused on creating a framework for developing eCommerce within Guyana. It included the identification of a framework to inform the strategy creation as well as the development of an eCommerce transaction path to illustrate the needs for both customers and vendors in an eCommerce transaction. A literature review was undertaken to provide key statistics and other background information. An eCommerce development framework based on the UNCTAD eCommerce Rapid Assessment Program was adapted for Guyana's situation as the key output from this Phase.

Phase 2 focused on illuminating the current state of eCommerce facilitators within Guyana. It included a series of eight focus groups with participants from industry and government. A further literature review was undertaken and a report summarizing the findings was developed as the key output. A report on Phase 2 findings can be found in Appendix 1.

Phase 3 includes the development of a draft strategy and undertaking a multi-stakeholder conference to create a final strategic plan to stimulate eCommerce within Guyana.

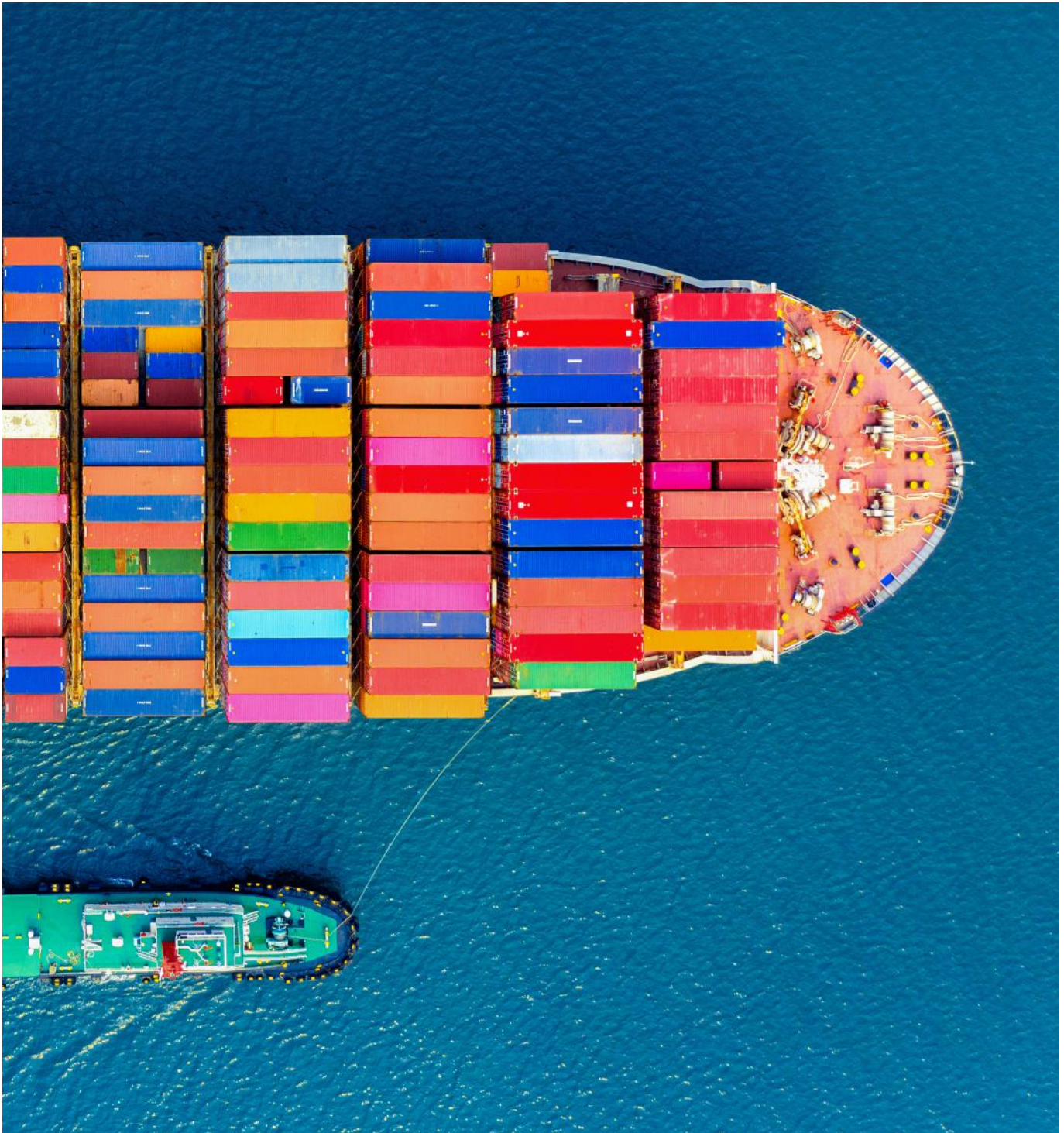
8. IDENTIFYING A FRAMEWORK OF E-COMMERCE GROWTH: THE UNCTAD FRAMEWORK

In its work to support the development of eCommerce within developing nations, UNCTAD devised a framework and strategy creation process called 'eCommerce Rapid Assessment'. This process has been used by over 16 nations to identify the key facilitators of eCommerce and as a framework to develop and implement an eCommerce strategy.

These processes have been adapted for this strategy creation project. The UNCTAD framework includes seven key facilitator areas. An eighth key facilitator has been added to this framework which focuses on the collection and use of data. The key facilitator areas are:

1. **Information Technology and Communications Infrastructure and Services (ITC):** This facilitator highlights that the presence of and access to robust networks and the internet is foundational for Businesses, Consumers, and Government to engage in eCommerce.
2. **Legal and Regulatory Framework:** This facilitator highlights the core requirement that a complete legal framework must exist to enable eCommerce activities and build trust in eCommerce by consumers and industry.
3. **Payment Solutions:** This facilitator highlights the core requirement that the online transaction process within eCommerce channels must be user-friendly, secure, and perceived as trustworthy.
4. **Trade Logistics and Trade Facilitation:** This facilitator accents that a clear set of easy-to-follow regulations and processes that are compliant with international obligations/sine qua non exist to facilitate trade-related eCommerce.
5. **ECommerce Skills Development:** This facilitator underscores that there must be an availability of skills and knowledge to facilitate all aspects of eCommerce for businesses, consumers, and government to allow for the generation of demand for eCommerce and businesses to profitably engage in eCommerce.
6. **Access to Financing:** This facilitator emphasizes that creating new eCommerce capabilities within a business requires investment in capital and people and that resources to facilitate these investments are crucial.
7. **Logistics:** This facilitator highlights the requirement that infrastructure and logistics capabilities meet the logistic needs of eCommerce activities.

8. **Data management and Use:** This facilitator stresses that eCommerce is powered by the collection, analysis, and use of data. The availability of ITC infrastructure and technical and business skills to manage and use data is required to fully deploy eCommerce. This facilitator is not identified separately within the UNCTAD framework, however, its central role in eCommerce is recognized in our work as an additional key facilitator.



9. SUMMARY OF THE CURRENT STATE OF THE KEY E-COMMERCE FACILITATORS

Overall, within Guyana, there are initiatives in place that are contributing to the creation of an eCommerce environment. There is, however, significant work to be done. The primary actions that are advancing eCommerce growth include new legislative and regulatory regimens, new systems developed to support trade logistics and electronic payments, and the introduction of competition into the telecommunications industry. While these are advantageous, they are not sufficient to create robust eCommerce activity.

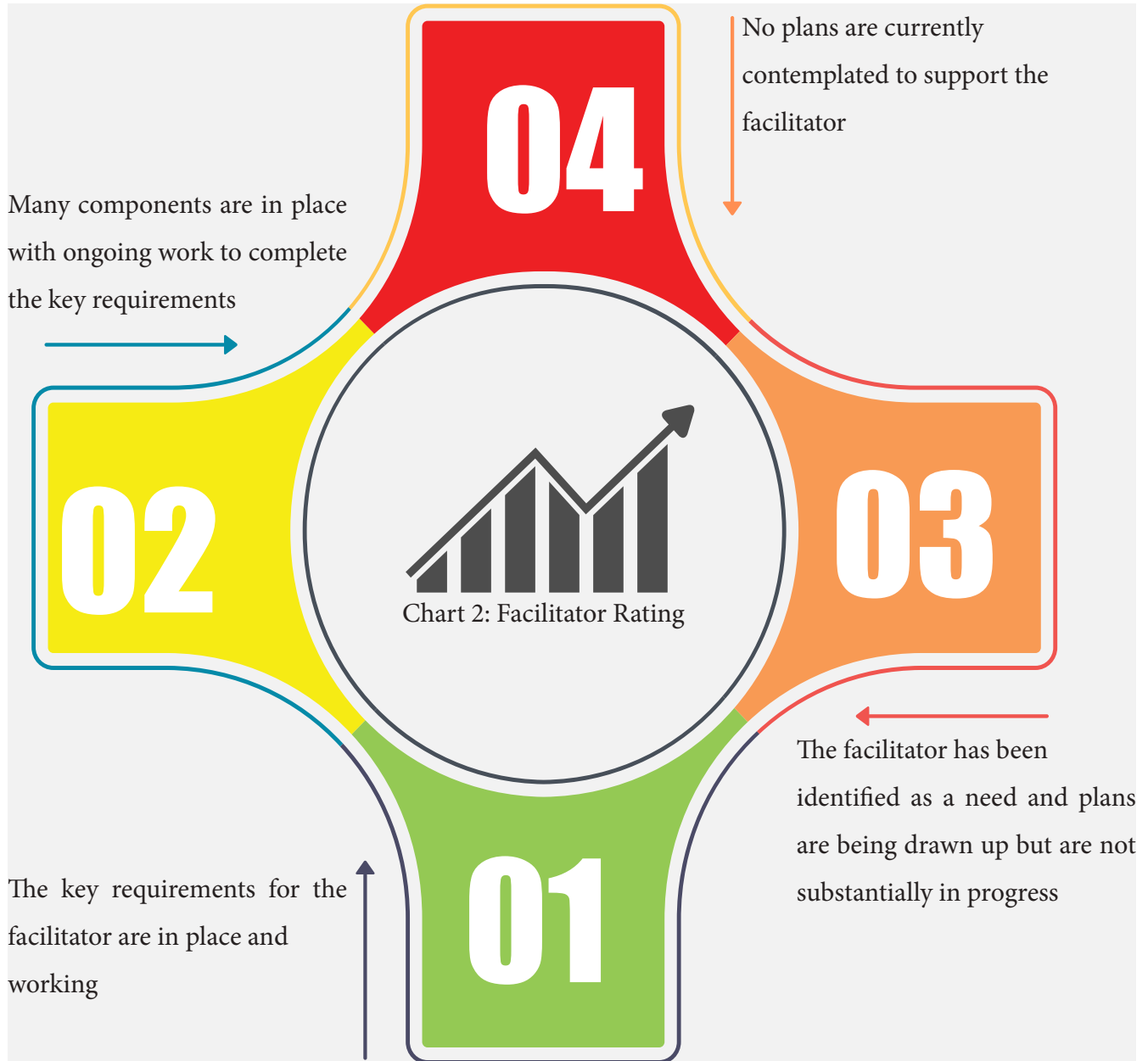
Basic eCommerce requirements

For consumers, the rudiments of eCommerce are seeing some value or benefit from shopping digitally, accessing a robust data network/internet to take advantage of eCommerce opportunities, and having a trusted secure way to pay for a purchase. These basic requirements to stimulate demand for and use of eCommerce are deficient in Guyana, hindering the ubiquity of eCommerce in the consumer market. Despite high mobile network coverage, internet penetration in the population is low, likely reflecting the high relative cost of mobile data subscriptions. Digital payment by credit card is cumbersome at best and mobile money payment use is limited. There appears to be low trust by consumers in ePayment and this is reinforced by onerous controls put in place on ePayment by card issuers. Finally, there is a significant gap in the state of readiness in populated coastal areas versus the less populated interior of the country.

For business, the most basic requirements to engage in eCommerce are having sufficient customer demand, robust network/internet access, and having a complete regulatory regimen that facilitates eCommerce. Additionally, eCommerce is more than a series of transactions. It is a set of business processes that require the investment of capital to create, and the internal skills and capabilities to develop and manage eCommerce. These basic requirements are not sufficiently strong within Guyana to facilitate broad-based, thriving engagement with eCommerce.

Finally, for both businesses and consumers, there needs to be an environment of trust associated with eCommerce. Areas of trust include payment, fulfillment, cybersecurity, and data and privacy protection. These are presently too inadequate to engender the required trust.

Our findings on the state of the UNCTAD key facilitators are presented below for each of the eCommerce facilitators identified in the UNCTAD framework. In this, the key facilitators are rated in a colour coding system as follows:



The following chart provides an overview of our findings. Overall, the current state of the key eCommerce facilitators in Guyana is in the early stages of development. While there are initiatives that are in place or development, work is required to establish an environment where eCommerce can flourish.

Key Facilitator	Current state
ICT	There is significant progress being made to provide network access with the introduction of telecom competition. Mobile phone networks provide coverage for 97% of the population and wired network buildouts are progressing for domestic and international connectivity. Programs are in progress to increase network access in the lower populated non-costal area. Despite this, internet use remains low at between 37 – 53% of the population. This is a significant barrier to facilitating the use of eCommerce. Low internet usage is seen to reflect affordability and quality of service issues.
ICT Regulatory Framework	There has been positive progress in this area of eCommerce facilitation, however, core parts of the regulatory framework have yet to be completed. The Draft Electronic Communications and Transaction Act (2019), provides a significant part of the regulatory regimen for eCommerce but it is not yet enacted. The core trust-building and protection legislation for personal data and privacy, IP protection, and consumer protection are not sufficiently codified in law for a digital economy and updates are not in sight to date. Finally, resources to address cybercrime are exiguous and competency is still growing with law enforcement. There is an urgent need to address these gaps.
ePayment	Solid progress has been made in the legislating framework and modernization of the banking system which will support eCommerce development. Nevertheless, trusted, easy-to-use electronic payment still obstructs a robust eCommerce environment. It is cumbersome for consumers who want to do transactions via eCommerce; managing real or potential fraud by consumers is seen as challenging and the banks appear very risk-averse in stimulating online payment. Trust-building is a critical unmet need. This area had a high engagement in the focus groups and virtually all focus groups agreed that trust-building, completing the regulatory frameworks, and motivating banks to better support digital payment are critical needs.
Trade	There is legislation supporting trade in place and being implemented including the recent Customs and Trade Single Window Act (2019) and National Payment Systems Act (2019). There are also numerous trade

	<p>agreements in place and others under consideration. There remain gaps in the legislative framework such as the enacting of the Electronic Commerce and Transactions Act (2019), completing the implementation of the new Customs and Trade Single Window System Act (No. 15 of 2019) for Trade and National Payments Systems, and supporting government staff and business to be trade ready, particularly for digital processes. Focus group participants indicated a demand for further work to fully implement the above initiatives and to motivate both industry and consumers to trust in and engage with electronic payments for trade purposes and overall, for eCommerce.</p>
Logistics	<p>Generally, there was little engagement with any issues regarding logistics as a facilitator of eCommerce within focus groups. Nevertheless, outside the populated coastal areas, transportation infrastructure is weak and will require improvement to allow for greater eCommerce participation. The World Bank indicates that Guyana's logistics sector is underdeveloped, ranking at number 185 in their 2018 Logistics Performance Index, and recommends major improvements to enhance its overall economic competitiveness</p>
eCommerce Skills Development	<p>Capacity building encompasses government, industry, and consumers. For industry, there is positive work in this area including training at the university and technical college level to build skills that support eCommerce activities. There is also the Customs and Trade Single Window System Act (No. 15 of 2019) project training for government and Industry. However, there appears to be few eCommerce supporting degree or diploma programs. The level of competency within industry, and particularly small/medium business, was negligible. For consumers, trust-building programs that encourage eCommerce engagement and online security have not been pervasive. Building the capacity for businesses to engage with eCommerce, and for consumers to have that trust in the process is deemed one of the greatest roadblocks to eCommerce by Focus Group Participants.</p>

Financial support	There seems to be few incentives in place to stimulate businesses to engage in eCommerce or create the capabilities. In Industry focus groups, providing incentives to industry to increase engagement was not a high priority. It may be, however, that as more companies participate more deeply in eCommerce, the costs of capital investments, IT development, operations, and training will become better understood and incentives will be seen as more necessary.
Data	Overall, this was another area where there was little energy or engagement by stakeholders. This is unfortunate as data is at the core of both successful eCommerce development and the creation of a Digital Economy. The capture, storage, and analysis of data offer opportunities to build and operate businesses better and be a value-adding industry in its own right.



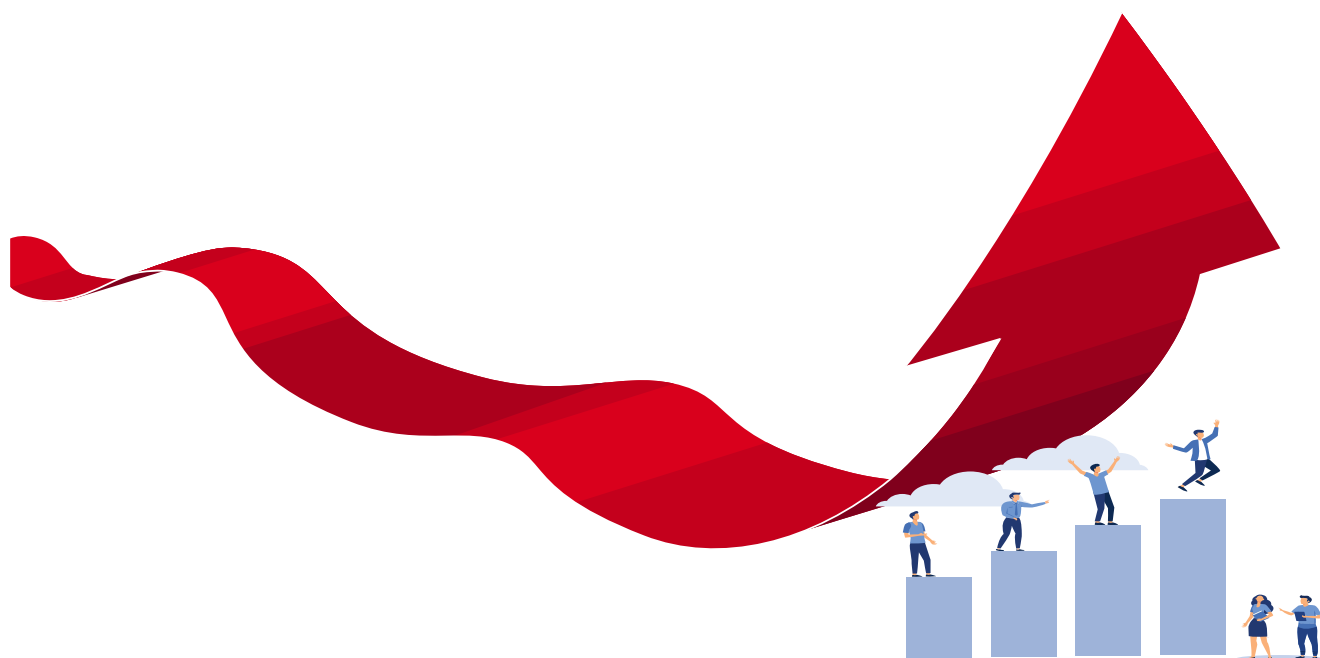
10. THE WAY FORWARD

The activities to support eCommerce that are presently underway within Guyana demonstrate that the government of Guyana is committed to supporting eCommerce. Growth. Input from industry participants in Focus Groups demonstrates strong support for eCommerce within the business community. To fulfill these intentions, Guyana must adopt a structured approach that creates an environment in which eCommerce can flourish.

The output of Phase 2 indicates that while there has been some progress, there are large gaps that must be filled to support and grow eCommerce. The key facilitators highlighted in the UNCTAD model provide a framework to understand and manage these gaps.

The most fundamental gaps are within the regulatory framework, internet access, eCommerce payment, and industry skills development. Most importantly, there is a gap in terms of trust in eCommerce payment and support. The following Action Plan items provide a roadmap of initiatives that should be implemented to fill the gaps and beyond.

This Strategy envisions seven areas of focus that have been informed by the work done to understand the current state. For each facilitator, a set of actions are prescribed to fill the basic requirements to generate a robust eCommerce environment. The action plan follows

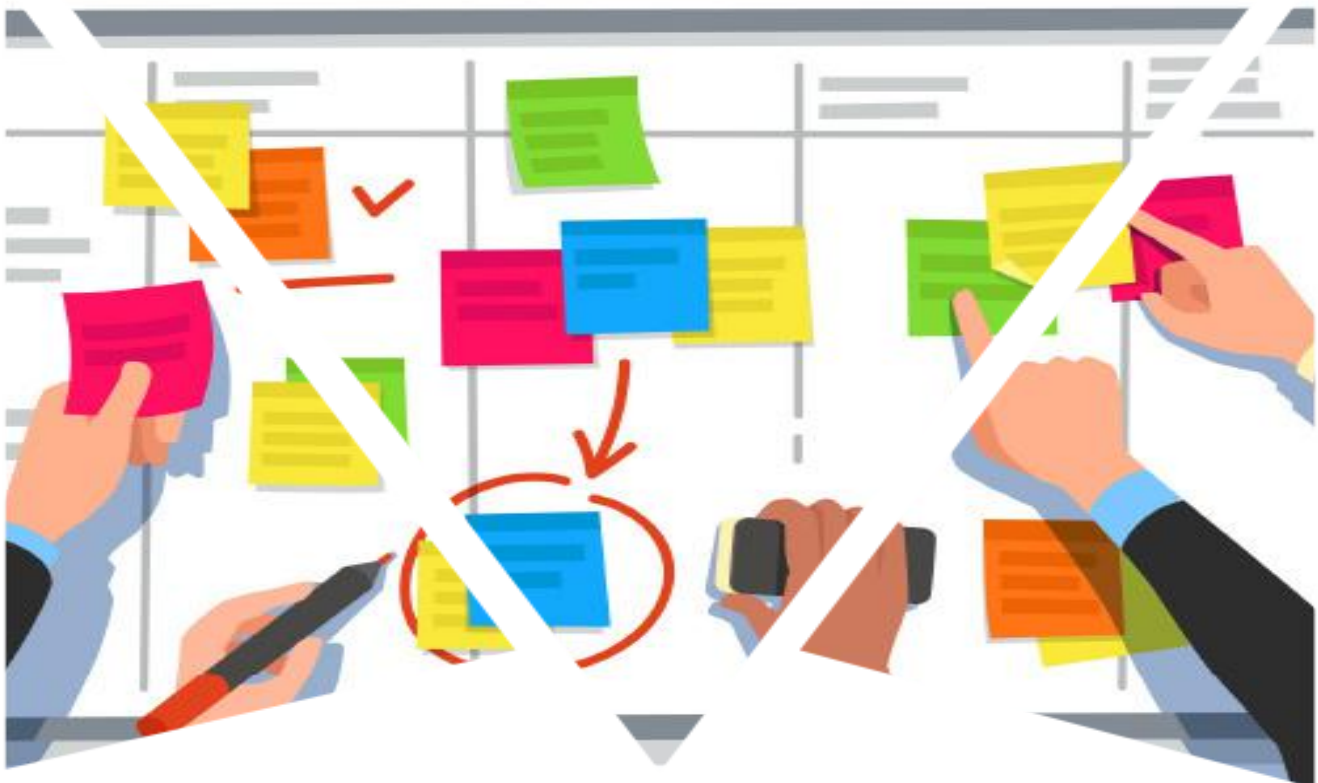


11.E-COMMERCE ACTION PLANS

1.Establish senior-level accountability to implement and manage this National eCommerce Strategy on an ongoing basis.

This objective recognizes that eCommerce has many facilitators across government departments and industry sectors. Further, the implementation of this Strategy will require a structured approach and sustained senior-level support to succeed. Establish a senior-level Cabinet Sub-Committee with clear responsibility for strategic leadership, senior operational delivery leadership, and industry representation with accountability to implement this strategy and develop, regulate, and motivate ongoing eCommerce growth.

- Identify the sectors in which Guyana can participate in eCommerce value chains and expand its market share of global eCommerce trade and focus implementation of this strategy toward these sectors.
- In conjunction with Boards of Trade, facilitate the creation of an ‘Association of eCommerce Companies’ or ‘Industry Association for eCommerce’, including an annual eCommerce Conference.
- Develop a coordination process for cross-cutting issues including ICT, Cybercrime and eGovernment strategies engaging all relevant actors, including different parts and levels of government, non-governmental stakeholders, and international partners.



2. Complete the Regulatory and Governance Framework

This objective is to complete the regulatory framework that supports eCommerce. This includes passing of key legislation in progress, developing new legislation to fill identified gaps and ensuring the successful implementation, ongoing operation, and evolution of the relevant regulatory environment.

- Expedite passage and implementation of the draft Electronic Communication and Transactions Act.
- Develop and implement Data Protection legislation to protect online and offline personal privacy as it relates to the collection and use of personal data. Additionally, establish the resources and processes necessary for ongoing management of this legislation, including a National Privacy Office. Models to be considered for this include The European Union's General Data Protection Regulation (GDPR), the Model Policy Guidelines and Legislative Text developed as part of the CARICOM Single ICT Space (by the Harmonization of ICT Policies, Legislation and Regulatory Procedures), and the E-Government for Regional Integration Project model legislations for the harmonization of legislative regimes.
- Complete creation and implementation of the National Cybersecurity Strategy and the establishment of resources required for its enforcement, ensuring that digital security risk is a strategic priority for government, industry, and individuals.
- Revise Consumer Protection legislative framework to ensure it applies to eCommerce and online consumers. Specifically:
 - Ensure that all provisions of the Consumer Affairs Act apply to online consumers
 - Strengthen and expand the capacity of the Competition and Consumer Affairs Commission to offer protection for digital consumers who face challenges related to eCommerce including online information disclosure, misleading and unfair commercial practices, confirmation and payment, fraud and identity theft, product safety, and dispute resolution and redress
 - Ensure that a redress mechanism is available for online consumers
- Develop a Data Localization Policy and any required legislative changes to regulate international data flow and comply with international standards
- Update existing regulatory framework covering intellectual property so that it aligns with international best practices, and enhance the efficiency of its administration and enforcement on account of widespread infringements around patents and trademarks.

3. Build network and internet access to support eCommerce

This objective ensures that robust wired and wireless network coverage is available throughout the country, and importantly, is being used by the broadest possible number of citizens and businesses. It is recognized that a National ICT Strategy is in development and therefore objectives are proposed rather than specific action items. While not specifically

ICT, enhancement of transportation and electricity access is an eCommerce requirement and so included in this area

- Create a National ICT strategy that incorporates the goals of expanding access to internet services across all communities and reducing the cost of data to individuals, households, and businesses by 2025. Specifically:
 - o 100% of the population having access to the internet
 - o 87% of the population using the internet regularly, in accordance with average use in developed countries
 - o 100% of industry having affordable, robust broadband network access
- Achieve access to a steady power supply at the lowest sustainable prices in all regions to satisfy the required 465MW and energy of 2,900 Gigawatts-hours (GHW) in 2025 per existing goals.
- Build road networks, bridges, and other infrastructure to more seamlessly connect the ten (10) administrative regions as well as to connect Guyana to its southern – Brazil and eastern neighbours - Suriname.

4. Build ePayment capabilities

This objective is to improve the ability of customers to make digital payments and for businesses to receive them. Customers need to be able to easily pay for an eCommerce purchase with confidence that does not yet exist within Guyana.

- Encourage key players in this sector to assume a leadership role in helping to operationalize less restrictive ePayment processes through open discussion among key players in the banking and payments sector on main factors constraining the use of ePayment
- Strengthen electronic payments by fostering the adoption of industry best practices relating to data security across eCommerce sites, payment gateways, payment system operators, and payment service providers.
- Develop a Program to build availability of electronic payment options including more mobile wallet providers and increased issuance and use of Debit and Credit cards from existing Financial Institutions for eCommerce purchases.

- Build trust in ePayment through a national awareness campaign on the usage of credit cards, debit cards, mWallets, and prepaid cards for e-payments in eCommerce, emphasizing the safety and convenience of these.

5. Development of eCommerce Skills

This objective is to ensure that the consumers and businesses have the skills and knowledge to facilitate the growth of eCommerce. These actions must be created in a partnership between Government and Industry. eCommerce skills development should incorporate formal education, skill upgrade and development for people within the workforce, and digital literacy for the public. The incorporation of distance learning should also be considered to ensure access to all citizens.

- Establish, in partnership with industry, post-secondary education programs to support the development of eCommerce skills including computer science, data and analytics, cybercrime and eCommerce business management, with consideration of a specific program granting eCommerce accreditation.
- Establish, in partnership with industry, post-secondary education programs that combine formal education with work placement in industry via a Co-operative Education (Co-op) model integrating academic education (classroom-based learning) with relevant, supervised, and paid work experience (work-based learning).
- Establish a program to develop digital skills for all students in secondary education.
- Establish a program for adult learning focused on building an individual's competencies to work in eCommerce-related roles and businesses.
- Implement a structured digital literacy program including public education programs that address eCommerce awareness, use, and risk management.

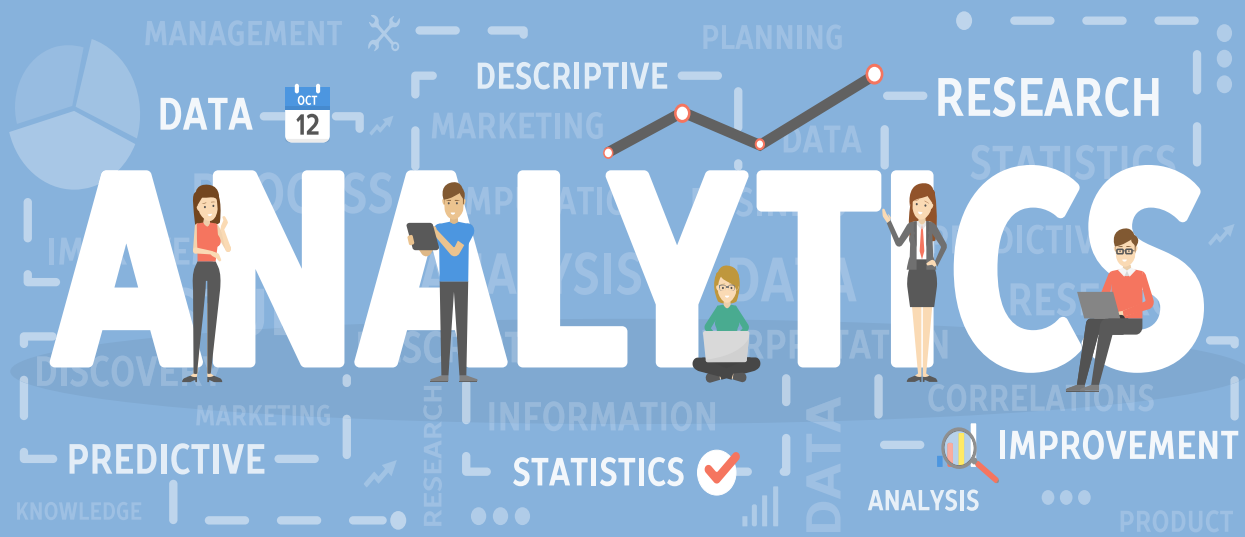
6. Grow Private-sector participation in eCommerce

This objective is to drive greater penetration of the use of eCommerce by businesses of all sizes. The key tenets are creating an understanding of the potential benefits of eCommerce to the business and providing tangible support to expenses incurred to establish eCommerce. These actions will work in tandem with actions within other facilitators including the Development of eCommerce Skills and Building ePayment capabilities.

- Develop targeted incentives based on a firm's size so that domestic firms can develop and operate an online presence that incorporates eCommerce. Consideration of grants or loans for training and tax incentives on expenditures incurred in the development of eCommerce should also be considered.
- Develop outreach to support eCommerce development for Small and Medium Enterprises (SME) via an introductory eCommerce self-learning package for offline businesses and service providers (such as payment processing, distribution, and logistics, etc.) interested in learning about eCommerce and its application to their businesses.
- Promote the development of eCommerce competency and services related to Call Centre and Business Process Outsourcing.
- Implement a communications campaign to increase awareness of and provide tools to better understand its benefits and manage eCommerce risks, targeting both consumer and business audiences.
- Conduct an annual survey to determine the number of businesses utilizing eCommerce

7. Data

eCommerce is in many ways driven by the data. External data is used to target eCommerce marketing activities. Internal data generated by eCommerce is used to hone all associated supportive business processes of eCommerce from manufacturing and logistics to marketing and sales. The data generated through eCommerce and a digital economy has intrinsic value and is a new source of economic growth. The specific actions to enable the use of data are primarily in the realm of education and gaining industry knowledge of eCommerce. These are covered above so no specific action items are proposed.



12. STRATEGY OVERVIEW

eCommerce Strategy				
Activity	Expected outcome	Priority	By whom	By When
Overall: Establish senior-level accountability to implement and manage this National eCommerce Strategy on an ongoing basis				
Identify the sectors in which Guyana can participate in eCommerce value chains			Ministry of Tourism, Industry and Commerce Go-Invest	2023
Create an industry association for eCommerce			Ministry of Tourism, Industry and Commerce	2023
Develop a process to coordinate cross-cutting issues between eCommerce, ICT, Cybercrime and eGovernment strategies			Office of the Prime Minister	2023
Regulatory Framework: complete the regulatory framework that supports eCommerce				
Expedite passage/ implementation of draft Electronic Communication and Transactions Act			Ministry of Legal Affairs	2022
Complete creation and implementation of the National Cybersecurity Strategy			Office of the Prime Minister – NDMA	2022

Develop a Data Localization Policy with required legislative changes			Office of the Prime Minister – NDMA Ministry of Legal Affairs	2022
Update existing regulatory framework for intellectual property			Office of the Prime Minister – NDMA Ministry of Legal Affairs	2023
Infrastructure / ICT: ensure that key infrastructure is in place including robust wired and wireless network coverage throughout the country, electricity supply, and transportation infrastructure				
Complete the National ICT strategy expanding internet access across all communities to achieve: <ul style="list-style-type: none"> o 100% of the population having access to the internet o 87% of the population using the internet regularly o 100% of industry having affordable, robust broadband network access 			Office of the Prime Minister – NDMA Ministry of Legal Affairs	2022

Achieve access to a steady power supply at the lowest sustainable prices through the implementation of the Gas-to-power project and Amaila Falls Hydro Project			Office of the Prime Minister	2023
<p>Build road networks, bridges, and other infrastructure to more seamlessly connect the ten (10) administrative regions as well as to connect Guyana to its southern (Brazil) and eastern (Suriname) neighbours.</p> <p>Key projects:</p> <ul style="list-style-type: none"> -Bartica to Timehri Project - New Demerara Harbour Bridge - Linden to Lethem Road - Guyana-Suriname Bridge 			Ministry of Public Works	2025-2030

ePayment: improve the ability of customers to make digital payments and businesses' reception of the same				
Encourage key players in the payment sector to assume a lead role to operationalize less restrictive ePayment processes			Bank of Guyana	2022
Strengthen electronic payments by fostering the adoption of industry best practices for data, security, payment gateways, and payment system			Bank of Guyana	2025-2030
Build availability of electronic payment options			Bank of Guyana	2022
ECommerce Skills Development: ensure that the consumers and businesses have the skills and knowledge to facilitate the growth of eCommerce				
Establish post-secondary education programs for eCommerce skills			Ministry of Education	2022
Establish post-secondary education programs that combine formal education with work placement in industry via a Co-operative Education (Co-op) model			Ministry of Education	2022

Implement public educational programs for digital literacy including eCommerce awareness, use, and risk management			Ministry of Education OPM – Industry and Innovation Unit	2022
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Implement a communications campaign, targeting consumer and business audiences to better understand eCommerce benefits and risks			MINTIC – Consumer Affairs Department	2024
Develop incentives, based on the size of the firm, for domestic firms to develop and operate eCommerce			Ministry of Finance, MINTIC – SBB Go-Invest	2023
Support eCommerce development for Small and Medium Enterprises (SME) via an introductory			Office of the Prime Minister Small Business Bureau	2023

eCommerce self-learning package				
Conduct an annual survey to determine the number of businesses utilizing eCommerce			Bureau of Statistics	2023
Data: enable the use of data primarily in the realm of education and gaining industry knowledge of eCommerce. These are covered above so no specific action items are proposed.				
			Office of the Prime Minister – NDMA	2023



“E-Commerce isn't the cherry on the cake, it's the new cake”

– Jean Paul Ago, CEO L'Oreal



Appendix 1 – Phase 2 Report

GUYANA BACKGROUND SUMMARY REPORT: FINDINGS FROM THE EIGHT KEY E-COMMERCE FACILITATORS REVIEW

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- Introduction
- Overview
- eCommerce Transaction Framework
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- Financing eCommerce Facilitators
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INTRODUCTION

In June of 2021, a project was initiated by the Ministry of Tourism, Industry and Commerce to create an eCommerce Strategy for Guyana. This project has 3 major phases with Phase 1 including the creation of a framework to understand what facilitators are needed to stimulate eCommerce at a national level and a preliminary assessment of these facilitators. Phase 2 was a review of the findings of Phase 1 with input from stakeholders in Government and Industry. Eight Focus Groups have been undertaken including participants from government and industry to provide input and validate the state of eCommerce Facilitators. The third phase is planned to be a strategy conference with key stakeholders to finalize the eCommerce strategy.

This work has been undertaken as a consulting project sponsored by the Canadian Executive Service Organization (CESO) as an unpaid consulting engagement. The primary consultant is an experienced Canadian business executive supported by three staff from Guyana's Ministry of Tourism, Industry and Commerce.

The framework used for this project in identifying and evaluating eCommerce facilitators is based on a program undertaken by the United Nations Conference on Trade and Development (UNCTAD).

In this program, UNCTAD has developed a framework including seven key eCommerce facilitators.

UNCTAD has successfully undertaken projects in over 16 countries to assess the state of these facilitators at the national level and use this as a framework to develop and implement eCommerce strategies within the target country. We have augmented this framework with the addition of Data as an eighth facilitator of eCommerce given its high importance in operating eCommerce and its potential value creation. For each of these major categories of facilitators, several individual factors have been identified.

- Information technology and communications (ITC)
- Regulatory Environment
- Trade and trade logistics
- ePayment
- People capacity
- Logistics
- Financial support for eCommerce

OVERVIEW

This report provides the findings of phase 2 of the eCommerce Strategy project.

E-Commerce promises to make major contributions to the economic wellbeing of Guyana bringing convenience and selection to consumers and access to new markets, both domestically and internationally, for Guyanese business. Achieving these benefits will require a considerable investment in time, money, and will-power by Guyana's government and industry.

Overall, within Guyana, there are already activities in place to create a vibrant eCommerce environment, and there is significant work yet to be done. There has been progress to create an environment to support eCommerce growth with highlights including new legislative and regulatory regimens, new systems developed to support trade logistics and electronic payments, and competition has been introduced into the telecommunications industry. The remaining gaps include allowance for broad use of eCommerce.

For consumers the most basic requirements for eCommerce are seeing value or benefit in shopping digitally, access to a robust data network/internet to access eCommerce opportunities, and having a trusted secure way to pay for a purchase. These basic requirements are currently not sufficiently strong within Guyana to support the broad use of eCommerce in the consumer market. Despite high mobile network coverage, internet penetration in the population is low, likely reflecting the high relative cost of mobile data subscriptions. Digital payment by credit card is cumbersome at best and mobile money payment use and possibilities are limited. There appears to be low trust by consumers in ePayment and this is reinforced by onerous controls put in place on ePayment by card issuers. Addressing these gaps needs to be at the top of the agenda to build out eCommerce use.

For business, the basic requirements to engage in eCommerce are having sufficient customer demand, having the internal capabilities to develop and manage an eCommerce, and having a regulatory regimen that supports eCommerce. Again, these basic requirements are not sufficiently strong to facilitate thriving eCommerce use. There is sufficient demand for trade-related eCommerce, however, without consumer demand, domestic eCommerce will be challenging.

SUMMARY OF THE CURRENT STATE OF THE KEY E-COMMERCE FACILITATORS

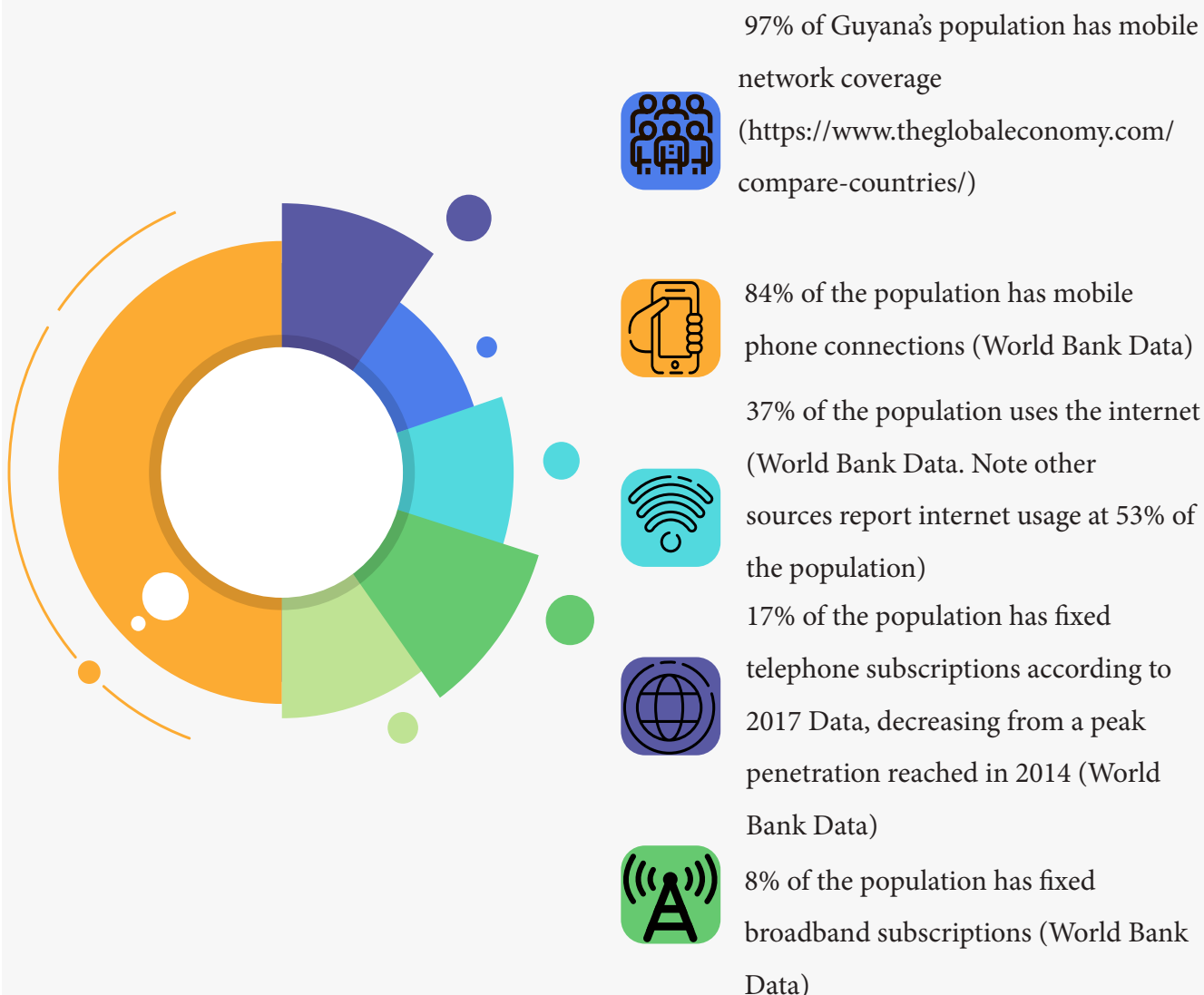
The findings of our work are presented through a summary of the current state and actions presently in place for each of the key eCommerce facilitators identified in the UNCAD framework. For each key facilitator, several individual components have been identified that support the overall need. The key facilitators and the individual components are rated in a colour coding system as follows:

Regulations	In the legislative framework in enacting the Electronic Commerce and Transactions Act (2019), completing the implementation of the new Single Window for Trade and National Payments Systems, and in supporting government staff and business to be trade ready -particularly for digital processes. Focus group participants identified a need for further work to fully implement the above initiatives and to motivate both industry and consumers to trust in and engage with electronic payments for trade purposes and eCommerce.
Logistics	Overall, there was little engagement with any issues regarding logistics as a facilitator of eCommerce. This is seen as a positive state for this facilitator. Nevertheless, outside the populated coastal areas, transportation infrastructure is seen to be weak and will require improvement to allow for greater eCommerce participation
Capacity building	Capacity building encompasses government, industry, and consumers. For industry, there is positive work in this area including training at the university and technical college level to build skills that support eCommerce activities, and Single Window project training for government and Industry, however, there appears to

	<p>ibe few eCommerce supporting degree or diploma programs. The level of competency within industry, especially for small/medium businesses, was seen as lacking. For consumers, programs to build trust in engaging in eCommerce and online security have not been pervasive. Building the capacity for businesses to engage with ECommerce, and for consumers to have trust in the process, is seen to be one of the greatest roadblocks to eCommerce by Focus Group Participants.</p>
Financial support	<p>There appears to be few incentives in place to stimulate businesses to engage in eCommerce or create the capabilities. In Industry focus groups, providing incentives to industry to increase engagement was not a high priority. It may be, however, that as more companies engage more deeply in eCommerce, the costs of capital investments, IT development, operations, and training will become better understood and incentives will be seen as indispensable.</p>
Data	<p>Largely, this was another area where there was little energy or engagement by stakeholders. This is unfortunate as data is at the core of successful eCommerce development and at the core of creating a Digital Economy. The capture, storage and analysis of data offer opportunities to build and operate better business operations and to be a value-adding industry in its own right.</p>

ICT: Access to network and E-Commerce sites

Key facts:



The ICT environment has undergone significant positive improvements over the past few years, and this bodes well for facilitating the adoption and growth of eCommerce. Driving recent ICT improvements is the opening of this sector to competition. The above key facts, though, portray a large shortfall in the coverage and usage necessary to enable significant eCommerce activity. There remains considerable work to be shouldered to fulfill the eCommerce prerequisite of having widescale internet access that is robust and affordable.

Current key initiatives to build internet access include:

1. The Telecommunications Act (2016) and the Public Utilities Commission Act (2016), enacted Oct 2020, allow for competition in this market, ending the 30-year monopoly in the telecommunications sector. It is important to note that while there is good take-up by competitors to Guyana Telephone and Telegraph Co. (GTT), the full realization of competition will take time.

This liberalization has stimulated increased competition with Digicel and E-Networks investing, along with smaller providers. Presently, the industry is primarily represented by GTT, Digicel, and E-Networks. Network buildouts are in progress including domestic wired and wireless networks, and international fibre connections.

2. A government initiative for a limited Internet universality plan is in progress for basic and government services via wireless networks, the focus of which surrounds Wi-Fi. This program may help with access to Government services access and achieve some digital literacy but will not contribute to eCommerce. Wi-Fi is an insecure solution and so this initiative is not a good medium for eCommerce.

3. ICT Strategy 2030 is under development with a draft expected by end of 2021.



Discussion:

At the core of all Digital Economy activities, including eCommerce, the most important prerequisite is access to affordable, high-quality internet for government, industry, and consumers. In focus groups with government and industry stakeholders, there was optimism that the recent introduction of competition is progressing to fulfill this need. Data connectivity for industry is progressing with network buildouts and mobile network coverage for consumers is high.

Despite this, internet access levels among the population are low and primarily focused on mobile networks. Increasing penetration and use were identified as a high priority barrier in both government and industry stakeholder focus groups. The issues highlighted reflect the perceived low quality of network service, lack of affordability for data plans, and low geographic coverage in the less populated non-coastal areas of the country. Addressing these issues will need to be a top priority within the eCommerce Strategy

Within each major eCommerce Facilitator, several individual facilitators contribute to the overall Pillar. Following are the individual facilitators for the ICT pillar.

Chart 2 – ICT Facilitators

FACILITATOR	CURRENT STATE	CURRENT INITIATIVES
Affordable access to mobile telephony	<ul style="list-style-type: none"> • Network access is high overall, subscriptions cover 97% of the population • Network coverage remains a work in progress in less populated areas • Mobile phone subscriptions cover the bulk of the population at 86% 	• Opening sector to competition is progressing
Affordable access to the internet	• Internet access availability via mobile networks is high, however, actual penetration is low (37 – 53% of the population) likely reflecting affordability	• Opening sector to competition is progressing

	<ul style="list-style-type: none"> Decreasing wireline phone connections may reduce the potential to provide wired data network access to homes 	
Affordable access to broadband	<ul style="list-style-type: none"> Broadband penetration by consumers is very low at 8% 	<ul style="list-style-type: none"> Opening sector to competition is progressing
Invest in broadband deployment in low population density areas	<ul style="list-style-type: none"> Programs are in place to build out networks and provide community-based access options 	<ul style="list-style-type: none"> Opening sector to competition is progressing Government investment to build out basic access and WIFI hubs
Invest to build mobile data access 5G	<ul style="list-style-type: none"> The current industry focus is the buildout of 4G networks with 5G being seen as an initiative in 3-4 years 	<ul style="list-style-type: none"> Opening sector to competition is progressing
Promote greater ISP competition	<ul style="list-style-type: none"> 3 major players now exist along with smaller ISP suppliers 	<ul style="list-style-type: none"> Opening sector to competition is progressing
Build knowledge of digital media	<ul style="list-style-type: none"> Low penetration of internet access inhibits digital literacy Trust in eCommerce use, particularly in payment, was seen as a major barrier in focus groups Programs to build digital literacy were seen to be inadequate in focus groups 	<ul style="list-style-type: none"> eGovernment training for industry and government staff is underway with small groups Change of the management program associated with Government within government ministries is underway
Build ITC capabilities within businesses and Not for Profit sectors	<ul style="list-style-type: none"> Formal education at the university and technical school level exists but is not intensive 	<ul style="list-style-type: none"> Industry training for ICT capabilities is in development via the Office of the Prime Minister

REGULATION: Clear set of regulations and processes that are compliant with international obligations/requirements

Key Facts:

Core pieces of regulation to support eCommerce that are currently in place include the National Payment System Act (2018), Cyber Crime Act (2018), Telecommunication Act (2016), and Consumer Protection Act (2011)

Major parts of the regulatory framework to enable eCommerce remain under development or are not yet in progress. Specifically:

- The Electronic Communication and Transactions Act (2018). This legislation is in development and has not yet been enacted. It is critical to a large number of eCommerce facilitators.
- Privacy and data protection. Guyana has no laws specific to the use and protection of personal data. Some components are included in various pieces of legislation; however, no single overarching legal framework exists. This issue is a cardinal one given the importance of trust-building for consumers and industry along with realizing the inherent value in data. Protection is needed to ensure trust in eCommerce by customers and vendors while allowing the economic value to be created by capture, storage, and use of data by industry. The EU General Data Protection Regulation (GDPR) was seen in focus groups as a potential model.
- Cyber Crime. The Cybercrime Act (2018) protects the identification of cybercrimes and provides for penalties, investigation, and prosecution for cybercrimes. It should be noted that Cyber Crime enforcement resources are seen to be low and expertise was seen by government focus group participants to be in the “capacity building” stage.
- Cyber Security. A Cyber Security Strategy is in motion by the National Data Management Authority (NDMA). While Guyana has adopted a Cybercrime Act in 2018, it is not sufficient to regulate eCommerce and the digital economy. Additionally, there appears to be limited education and awareness programs for businesses and consumers concerning protection from online fraud and other cybercrim

- Intellectual property regulation and protection. The current Copyrights Act (1956) was created well before the digital economy. A new regulation is required to protect and manage IP for the digital world. There does not appear to be action underway to update this area.
- Data storage location regulation. Guyana does not have a consumer data protection legislation or overarching regimen. Data location regulation is a critical component of international trade and consumer protection. The use of data to create economic value is also important. Consideration should be given to data that originates in Guyana and its use by international players and for international data that might be stored and used by the Guyanese industry to create new value-added enterprises.
- Regulation of Domain name registration and dispute resolution. This activity is currently managed by the University of Guyana, but as eCommerce grows, particularly with international transactions, more fulsome regulation and management will be required.
- Update the Consumer Affairs Act to delineate key provisions in the JSI on eCommerce that are currently unclear. These include: Confirming that all provisions in the Consumer Affairs Act also apply to online consumers, ensuring that a redress mechanism is available for online consumers; and reflecting the list of fair business principles set out in the JSI.
- Please note, the resources for this work are limited and it has not been possible to review in detail all relevant legislation. There may be further legislative work in the making or in the developmental stage that has not been identified.



Discussion:

A core requirement of eCommerce is the establishment of a legal framework that recognizes and supports all aspects of conducting business digitally. This encompasses the recognition of new forms of contracts, signatures, IP, payment, dispute resolutions, and other considerations. The legal framework also requires protecting the privacy of consumer and vendor data while still allowing the value available from data analytics to be realized. Finally, there is the need for resources to support and police these legal frameworks to ensure a viable eCommerce environment. Guyana has begun the process of establishing a solid regulatory framework with the creation of various pieces of legislation. There are significant gaps in this area of eCommerce facilitation with some key legislation in progress but not yet enacted and some areas where developments are not underway. The core protection areas of personal data and IP protection are not codified in law, resources to address cybercrime are small given the potential scope. These fissures in the regulatory framework were seen as a weighty issue by our stakeholder focus group participants. There is an urgent need to address these gaps to create a solid regulatory framework to stimulate confidence in eCommerce and facilitate its growth.

Please note, the resources for this work are limited and it has not been possible to review in detail all relevant legislation. This report considers input from stakeholder interviews and input from the strategy core team. There may be further legislative work in the planning or developmental stages that have not been identified



Within each Key eCommerce Facilitator, various facilitators add to the overall Facilitator. Following are the individual facilitators for the Regulatory pillar.

Chart 3 – ePayment Facilitators

FACILITATOR	CURRENT STATE	CURRENT INITIATIVES
Legally recognize eSignatures	•No legislation is currently in place	•Included in the Electronic Commerce and Transactions Act (2018) which has yet to be enacted
Legally recognize eContracts	•No legislation is currently in place	•Included in the Electronic Commerce and Transactions Act (2018) which has yet to be enacted
Protection of Personal data and privacy	<ul style="list-style-type: none"> •Appropriate data and privacy protection were seen by focus group participants as critical to generating trust that enables eCommerce. The lack of regulation was also seen as a significant issue •Some protection is provided in the Cybercrime Act (2018) creating offences for unlawful access to data. But it does not regulate how data is used •No legislation is currently in place that regulates data collection and use, and no plans have been identified to address this in the future. Some focus group participants identified the EU GDPR as a potential model. 	<ul style="list-style-type: none"> •Some protection will emerge through the Electronic Communication and Transactions Act (2018) which is yet to be enacted. •A complete set of regulations for the protection of personal data, privacy, and its use by government and industry is not presently on the agenda.

<p>Cybercrime and Fraud Protection</p>	<ul style="list-style-type: none"> •Cybercrime Act (2018) protects in terms of identifying cybercrimes and making provision for penalties, investigation, and prosecution of cybercrimes •The Cybercrime Act of Guyana does not contain any provisions to identify, protect against, detect, respond to or recover from any cybersecurity risks •Resources to police cybercrime, established in 2019, were described as in the capacity-building stage by Government focus group participants. The current resources are not seen as enough to protect with the burgeoning of eCommerce activities and the sophistication of modern cybercrimes 	<ul style="list-style-type: none"> •A cybercrime Strategy process is under development
<p>Regulation that protects Consumers online</p>	<ul style="list-style-type: none"> •The Cyber Crime Act (2018) outlines offences and penalties •Enforcement resources are limited •Consumer Protection Act (2011) provides protections 	<ul style="list-style-type: none"> •No further actions have been identified in our background gathering work

Regulation online content	<ul style="list-style-type: none"> •The Cyber Crime Act (2018) outlines offences and penalties •Resources to police this are limited 	•No further actions have been identified in our background gathering work
Domain name regulation and dispute management	<ul style="list-style-type: none"> •Domain name registration is handled by the University of Guyana •No complete Domain name regulatory process was identified beyond the registration of URLs by the U of G 	•Based on our background information gathering, there are no active developments in this area
Online Intellectual Property protection including international considerations	•Current Copyright Act (1958)	No plans have been identified to replace this old legislation
Manage data and content use by global social media and search providers (Facebook, Google, etc.)	No information has been identified on this topic by our team	•No plans have been identified
Regimen to regulate consumer imports via eChannel purchase	No information has been identified on this topic by our team	•No plans have been identified
Manage data and content use by global social media and search providers (Facebook, Google, etc.)	No information has been identified on this topic by our team	No plans have been identified

E-PAYMENT: the ability to facilitate payment for E-Commerce in a secure environment

Electronic payment is one of the core pillars of an eCommerce system. Among focus group participants, it was identified as a major issue at system and personal use levels. Virtually all groups had participants who highlighted the difficulty in making online payments. Credit Card use was challenging as the need to unlock them before use by the Issuer was cumbersome and reflected a lack of trust in ePayments by the banks. Slow rectification by banks of losses by consumers due to fraud was seen as a significant barrier and cost to consumers. GTT's Mobile Money service (MMB) is available but only for a small set of transactions. The fallback for industry to use Cash-on-Delivery payment was inconvenient and not cost-effective. Focus Group participants highlighted that all Government systems do not allow for full electronic payment options with MMB. Once again, this is an indication of a system gap-fostered the perception that the government also had some distrust of ePayment. Much more effective trust-building activities were seen as a requirement. Finally, the need to enact the Electronic Communications and Transactions Act (2018) to codify in law eCommerce supporting frameworks was seen as a high priority.

Significant work has been undertaken to modernize the banking system and implementation is well in progress.

Within each Key eCommerce Facilitator, many individual facilitators contribute to the overall Facilitator. Following are the individual facilitators for the ePayment pillar.

Chart 4 – ePayment Facilitators

FACILITATOR	CURRENT STATE	CURRENT INITIATIVES
Regulation to allow ePayment	•The National Payment Systems Act (2018) and its implementation, with support from the World Bank, provides a broad framework to support eCommerce	•Completion of the Electronic Commerce and Transactions Act (2018) is in progress

	<ul style="list-style-type: none"> •The ongoing Electronic Communications and transactions Act (2019) will provide a further framework for ePayment 	
Dedicated payment Solutions	<ul style="list-style-type: none"> •Implementation and integration of the Real-time Gross Settlement, Securities Depository, and automated Clearing House systems provide the basis for a modern payment system domestically. 	<ul style="list-style-type: none"> •Implementation activities are underway.
Greater interoperability of online, mobile, and offline payment modes	<ul style="list-style-type: none"> •The National Payment Systems Act (2018) provides a broad framework to support eCommerce 	<ul style="list-style-type: none"> •Implementation activities are underway
Awareness of international good practices in electronic mobile payment	<ul style="list-style-type: none"> •Focus group participants indicated there was solid awareness of these practices 	
Clear interoperable consumer protection regulation	<ul style="list-style-type: none"> •Several pieces of legislation provide consumer protection including Cyber Crime Act (2018), Consumer Protection Act (2011) •Lack of a cybercrime prevention strategy has been identified in Focus Groups as a significant gap 	

Education on security and trust-building	<ul style="list-style-type: none"> •The Bank of Guyana has undertaken a literacy program for ePayment. COVID restrictions have curtailed recent activities •Focus Group participants identified trust in ePayments as strongly lacking among consumers, businesses, and major banks. •Focus Group participants saw the need for more visible and consistent trust-building frameworks, and programs, particularly in dispute management and easing restrictions around the use of credit cards online. 	<ul style="list-style-type: none"> •Small initiatives are underway; however, no major countrywide programs were identified
Build consumer awareness and trust for ePayment	<ul style="list-style-type: none"> •This was seen in focus groups as a major barrier to eCommerce. • Concern was expressed regarding overly restrictive policies by credit card issuers requiring consumers to unlock their credit cards before transacting online. This 	

	<p>was seen to reflect a lack of trust in ePayments by the financial institutions</p> <ul style="list-style-type: none"> •Concern was also expressed in the processes in place to deal with the rectification of errors in ePayments. This was seen as contributing to a lack of consumer trust in using ePayments. •Some education and trust-building programs have been delivered 	
Integration of banking payment systems between banks	<ul style="list-style-type: none"> •It was identified in Focus Groups that there is no switch between banks for interoperability 	
Ability to facilitate payment process internationally in trade	<ul style="list-style-type: none"> •Payments facilitated through the use of SWIFT are in place and some credit card payments are available for international VISA transactions; establishing use by other credit card providers is in progress. •The National Payment System including SWIFT will allow for a fully integrated payment environment 	<ul style="list-style-type: none"> •Implementation of the National Payment System is ongoing with completion expected in 2021.

Investigate alternative payment frameworks: mobile micropayment, digital sovereign currency, and wallet

- Mobile money is available through GTT and its use is increasing at a high rate. Additional mobile money providers are in the process of gaining regulatory approval to operate.
- Online platforms for eCommerce are also available including Shopify and Magento.

- Initiatives are in place to move government transactions to electronic channels



Trade Logistics: a clear set of regulations and processes that are compliant with international obligations/requirements

Supporting trade and trade logistics is an area where significant resources have been applied and progress made. Several Trade Agreements are in place and continued work to expand them. Key regulatory supports include the established ASYCUDA Customs Management System, the Customs and Trade Single Window Act (2019), and National Payment Systems Act (2018). Full implementation of the Single Window and Payments legislation is in progress and is seen to be critical to facilitating eCommerce as it relates to trade. Legislative apertures do exist in completing the Electronic Communications and Transaction Act (2019). Progress has been made in the payments area with current implementations of the capabilities enabled by the National Payment Systems Act (2018) and the World Bank-funded National Payment Systems Project. Full implementation of these initiatives will be essential. Equally critical is motivating the major banks and consumers to use ePayments for trade and other activities. Data localization policy, updated IP legislation, and a change management program within government and industry were identified as areas requiring work.

Within each Key eCommerce Facilitator, there are a number of individual facilitators that contribute to the overall Facilitator. Following are the individual facilitators for the Trade Logistics pillar.

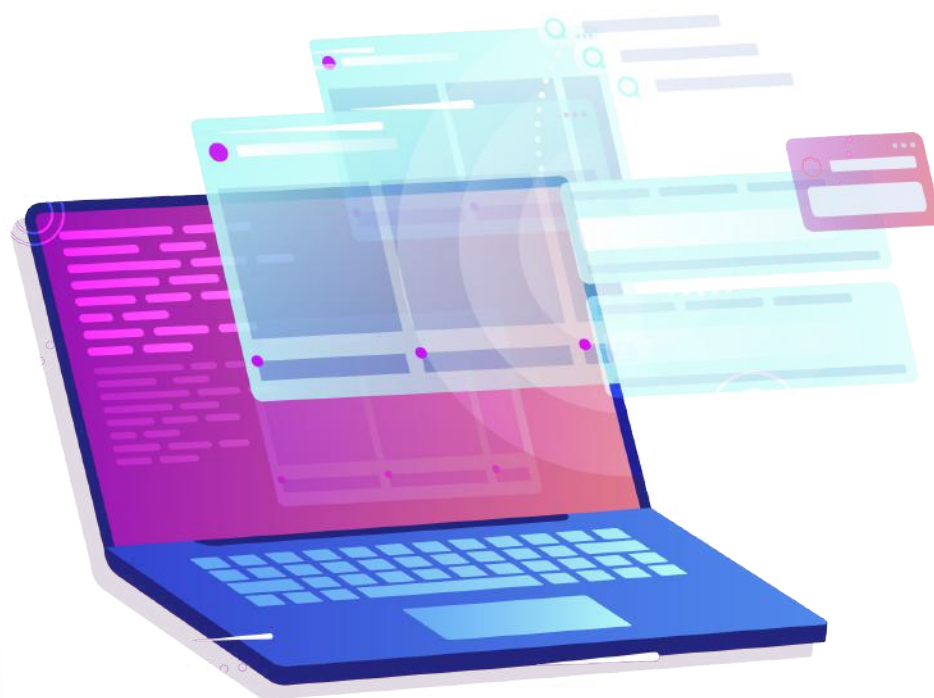
Chart 5 - Trade Logistics Facilitators

FACILITATOR	CURRENT STATE	CURRENT INITIATIVES
Compliance with International agreements and requirements	<ul style="list-style-type: none"> •Guyana revenue agency rates this Green •Several trade agreements are in place 	<ul style="list-style-type: none"> •In process of negotiating/ implementing GATT and WTO Trade Facilitation Agreements

Fully transparent and easy to navigate import/export regulation	<ul style="list-style-type: none"> •ASYCUDA provides an integrated customs management system for international trade and transport operations in a modern automated environment •The Single Window legislation and systems contribute to this facilitator •Portions of the process to manage import/export are primarily online but still need manual work due to signatures not being implemented 	<ul style="list-style-type: none"> •The process is primarily online but still needs manual work because signatures are not implemented. •Work is underway to digitize manual portions of the import/export process including implementing eSignatures. •Work is in progress to fully implement the Customs and Trade Single Window Act (2019)
Single window to submit regulatory documents	<ul style="list-style-type: none"> •Rated orange by GRA •Portions of the process outside the Single Window System are currently manual nevertheless work is underway to acquire funding to allow this. 	Work is in progress to fully implement the Customs and Trade Single Window Act (2019)
De minimus regime: minimal clearance procedures	<ul style="list-style-type: none"> •No initiatives on this facilitator have been identified 	<ul style="list-style-type: none"> •No action has been identified on this facilitator
No duty tax for import of low-value shipments	<ul style="list-style-type: none"> •No initiatives on this facilitator have been identified 	
Clear information about applicable taxes and duties	<ul style="list-style-type: none"> •There are considerable tools in place to support this including ASYCUDA, websites, and a dedicated government department 	<ul style="list-style-type: none"> •Work is in progress to fully implement the Customs and Trade Single Window Act (2019)

Fully electronic tracking of all shipments	<ul style="list-style-type: none"> •This is facilitated through ASYCUDA 	
Low shipping costs	<ul style="list-style-type: none"> •No information was identified on this facilitator •No concerns were raised in Focus groups 	
Secure logistics and fulfillment	<ul style="list-style-type: none"> •Some fraud exists but enforcement is in place and supported in part through ASYCUDA •Scanning operations are in place for shipping containers 	
No or minimal risk of online fraud	<ul style="list-style-type: none"> •The Customs and Trade Single Window Act (2019) and National Payment Systems Act (2018) regulatory framework •Major banks have not fully supported ePayments •Mobile Money is available for some payments associated with trade through GTT's MMB service 	
Availability of online payment methods for international trade	<ul style="list-style-type: none"> •The Customs and Trade Single Window Act (2019) and National Payment Systems Act (2018) regulatory framework •Major banks have not fully supported ePayments 	<ul style="list-style-type: none"> •Additional work is underway to motivate major banks to engage in broader ePayments •Additional players for the provision of Mobile Money are in development

	<ul style="list-style-type: none"> • Mobile Money is available for some payments associated with trade through GTT's MMB service 	
International trademark, patent, and other IP regulation	<ul style="list-style-type: none"> • There is legislation in place for these topics however they are dated 	<ul style="list-style-type: none"> • No initiatives were identified to address this
Data localization policy	<ul style="list-style-type: none"> • This is an active topic of debate concerning international trade agreement progressions 	



PEOPLE CAPACITY: Build skills and knowledge to facilitate all aspects of E-Commerce

Based on a review of post-secondary institution programs and discussions in focus groups, capacity building is seen to be an exigency, including further training in government, industry, and among consumers.

In formal education, there is some training at the technical college and university levels, however, these programs appear to be limited in their curriculum vis-à-vis building skills to support eCommerce and a digital economy. There does not appear to be degrees available in Information Technology, Telecommunications, Data and Analytics, and other disciplines that are salient to fostering eCommerce and a digital economy. University of Guyana (U of G) offers courses in logistics and marketing but does not appear to have a full business degree program. None of the programs include eCommerce or digital economy in their descriptions.

Additionally, focus group participants saw the level of competency of graduates to be too restricted to move directly into productive roles in industry. Concern was also expressed that many top graduates emigrate for international positions.

For consumers, there appears to be dissatisfaction with the efforts to train and build knowledge and trust in eCommerce. While there have been some initiatives to build computer literacy and trust for use of eCommerce for Government services, focus groups universally indicated that these activities would need to be significantly stronger to meet the perceived needs.

For Government and industry, there are many new pieces of legislation and systems related to their implementation. These all require socialization and training to be fully used. Further, overall competency training appears to be a desideratum as the focus group rated ITC competencies in business at a 50-60% level.

Within each Key eCommerce Facilitator, there are a number of individual facilitators that contribute to the overall Facilitator. Following are the individual facilitators for the Capacity / People pillar.

Chart 6 –people capacity building facilitators

FACILITATOR	CURRENT STATE	CURRENT INITIATIVES
Raising knowledge and capacity about existing opportunities for Micro and C2C businesses to engage in eCommerce	<ul style="list-style-type: none"> •No formal programs to stimulate eCommerce were identified •Focus group participants indicated that few companies use eSignatures and ePayment with most business processes being manual, while foreign companies doing business in Guyana were more digitally enabled 	
Capacity building for medium and large business	<ul style="list-style-type: none"> •No formal programs to stimulate eCommerce were identified •Focus group participants indicated that larger companies are more likely to use Ecommerce, however, most business processes were seen as being manual. Foreign companies doing business in Guyana were seen to be more digitally enabled •Focus group participants identified staff in industry for IT and eCommerce to be at a 50 -60 % level of competence 	

Capacity building for eCommerce for public Servants in relevant ministries	<ul style="list-style-type: none"> • Training is in progress on the Single Window for Trade program for industry and government staff • A change management program to digitize 3 government departments is underway led by the Guyana National Bureau of Statistics 	
Education on ICT and eCommerce in higher education	<p>ICT and Technical Colleges offer some relevant courses and degrees</p> <ul style="list-style-type: none"> • U of G does not appear to have specific degrees in IT, telecommunications, and digital business disciplines • Guyana's Government Technical Institute offers a diploma in computer science • U of G offers courses in Logistics and marketing but does not appear to have a full business degree program focused on eCommerce or the digital economy. None of the course descriptions include eCommerce or digital economy in their descriptions • Focus group participants observed that graduates of technical college and university do not have skill sets that allow them to begin working productively and require further training. No integrated COOP (work/study) programs were identified for relevant disciplines. 	

Capacity building for eCommerce for public Servants in relevant ministries	<ul style="list-style-type: none"> • Training is in progress on the Single Window for Trade program for industry and government staff • A change management program to digitize 3 government departments is underway led by the Guyana National Bureau of Statistics 	
Education on ICT and eCommerce in higher education	<p>ICT and Technical Colleges offer some relevant courses and degrees</p> <ul style="list-style-type: none"> • U of G does not appear to have specific degrees in IT, telecommunications, and digital business disciplines • Guyana's Government Technical Institute offers a diploma in computer science • U of G offers courses in Logistics and marketing but does not appear to have a full business degree program focused on eCommerce or the digital economy. None of the course descriptions include eCommerce or digital economy in their descriptions 	

	<ul style="list-style-type: none"> •Focus group participants observed that graduates of technical college and university do not have skill sets that allow them to begin working productively and require further training. No integrated COOP (work/study) programs were identified for relevant disciplines. •Focus group participants observed that many graduates leave Guyana for jobs internationally that offer a better experience and better pay •Continuing education was available for courses including web and mobile app development, and basic computer skills 	
Promote university and industry linkages to develop eCommerce	<ul style="list-style-type: none"> •The University of Guyana has an Institute of Research, Innovation and Entrepreneurship which provides a platform for researchers and innovators within the University of Guyana and allied institutions/ individual researchers to share new products and services with industry 	

Training for logistics at university and college	<ul style="list-style-type: none"> •U of G offers courses in Logistics and Marketing but does not appear to have a full business degree program. None of the course descriptions include eCommerce or digital economy 	
Integration of eCommerce in existing trade promotion activities	<ul style="list-style-type: none"> •No information was obtained in this process 	
Build advanced logistics capabilities for business	<ul style="list-style-type: none"> •No information was obtained in this process 	
Training for data management and analytics at universities, colleges, and within industry	<p>No full domestic programs were identified through this process</p> <ul style="list-style-type: none"> •A 3-month program in conjunction with Google and The Caribbean School of Data began in early 2021 	

LOGISTICS

Facilitate logistical needs of E-Commerce activities

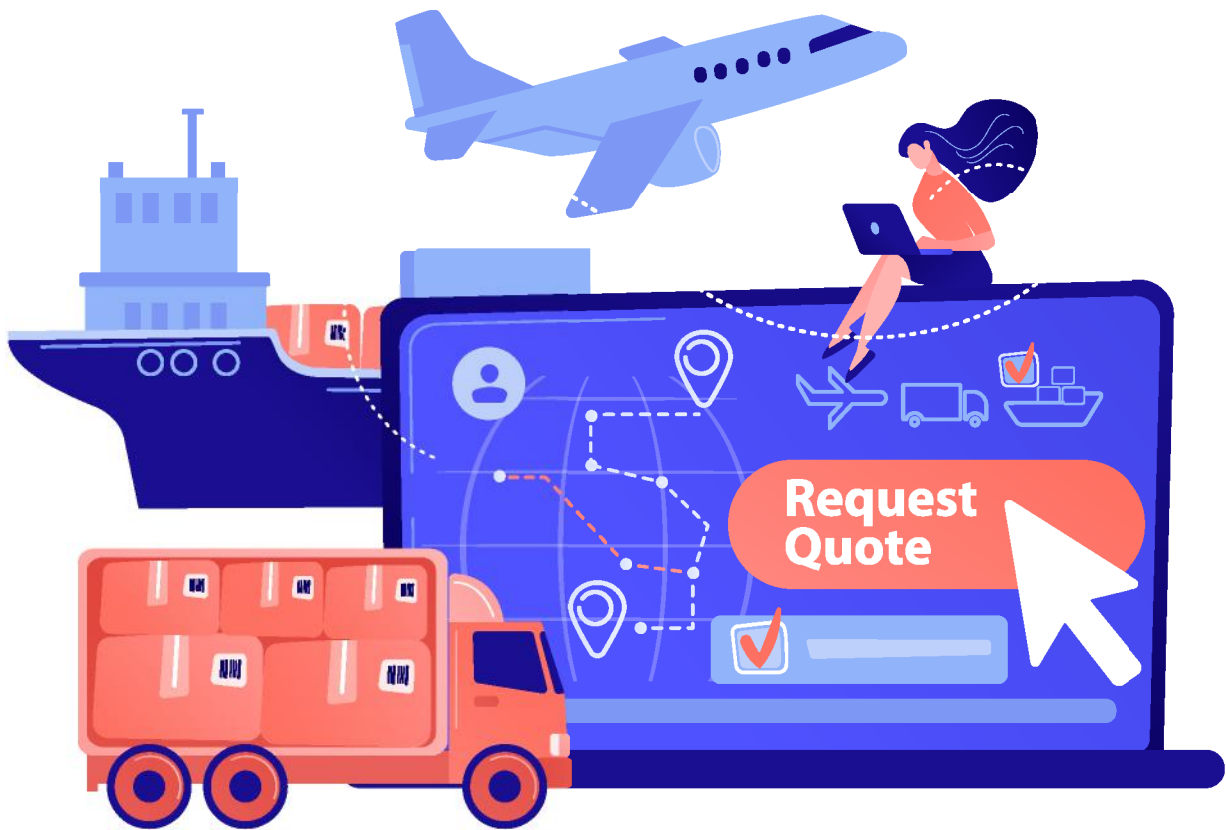
Overall, there was little engagement among focus group participants regarding needs in the logistics area to promote eCommerce. UNCAD identifies this as a key facilitator of eCommerce.

Within each Key eCommerce Facilitator, there are a number of individual facilitators that contribute to the overall Facilitator. Following are the individual facilitators for the Logistics pillar.

Chart 7 – logistics facilitators

FACILITATOR	CURRENT STATE	CURRENT INITIATIVES
Transportation Infrastructure	<ul style="list-style-type: none"> •Largely, there was little engagement with any issues regarding logistics as a facilitator of eCommerce within focus groups. Nevertheless, outside the populated coastal areas, transportation infrastructure is seen to be weak and will require improvement to allow for greater eCommerce participation. The World Bank indicates that Guyana's logistics sector is underdeveloped, ranking 185 in their 2018 Logistics Performance Index, and opined that major improvements will be necessary to enhance its overall economic competitiveness 	

Warehouse and fulfilment facilities	<ul style="list-style-type: none">	
Delivery capabilities including security	<ul style="list-style-type: none">	
Address directory that is complete, accurate, and accessible	<ul style="list-style-type: none">	



FINANCING E-COMMERCE

Facilitate funding the development of E-Commerce capabilities across all business types: Micro, SME, large.

Implementing successful eCommerce at any scale requires substantial investment by industry. Capital is required for IT equipment, development costs are incurred to build eCommerce applications (websites or mobile apps), and ongoing operational needs require additional staff. Taking full advantage of eCommerce and the data it creates requires engagement from all areas of a business including business planning, procurement, marketing sales, product/service development, accounting, and finance. Upskilling and additional staff resources are often vital. No material activities were identified in this process regarding existing incentives.

There was little engagement within our focus groups regarding a need for incentives to motivate businesses to engage in developing and running eCommerce. This reflects positively on the self-reliance of your industries. The UN has identified this as a critical facilitator of eCommerce and it is likely that as the industry moves toward intense engagement with eCommerce, support will be a requisite.

Within each Key eCommerce Facilitator, there are a number of individual facilitators that contribute to the overall Facilitator. Following are the individual facilitators for the Financing eCommerce pillar.

Chart 8 – Financing eCommerce facilitators

FACILITATOR	CURRENT STATE	CURRENT INITIATIVES
Enabling investment climate for eCommerce	The Government of Guyana has several incentives to attract investment in eCommerce.	10-year Tax holidays are available to investors (both local and foreign) in the ICT sector Zero-rated Value Added Tax on computers and hardware accessories, routers, switches, and hubs for networking computers.

Awareness of investment opportunities in the eCommerce ecosystem	There is an incognizance in relation to knowledge or access to knowledge of investment opportunities. Investors sometimes are unsure of which agency to contact.	The Guyana Office for Investment, in the last year, has compiled a list of investment incentives by sector. This information is shared through various means and available on their website.
Awareness of different types of financing	•	•
Identify different sources of finance and investment across the full value chain of investors	•	•
Promoting peer learning and experience sharing on issues related to access to financing for eCommerce	•	•
Promoting and facilitating access to finance for eCommerce startups	In this regard, financial support is limited to small and micro firms that need it most. The Small Business Bureau is the main facility for providing financing to small startups.	•A grant of \$500,000 is offered to these businesses regardless of sector, therefore eCommerce startups are eligible.

DATA: Gather, store, and use data to facilitate E-Commerce and improve success

Data was not identified as a separate eCommerce facilitator in the UNCAD framework, however, the collection, analysis, and application of learning from data created through eCommerce are at the nucleus of its success. There was little engagement in our focus groups around this topic. This is seen as a pressing need.

Analyzing and applying learning from data collected has deep value to the improvement of all aspects of a business. Without solid skills to do this work, the full potential of eCommerce cannot be realized. Additionally, the collection, storage and analysis of data is an industry in its own right.

Within each Key eCommerce Facilitator, there are a number of individual facilitators that contribute to the overall Facilitator. Following are the individual facilitators for the Data pillar.

Chart 9 – Data facilitators

FACILITATOR	CURRENT STATE	CURRENT INITIATIVES
Infrastructure and skillsets to collect and use data to run eCommerce operations, marketing, and logistics		
Data management and analytics as a business		

Appendix 2 – Phase 1 Report

Phase 1 Report

This provides a review of Phase 1 completion. The expected outcomes from this phase follow:

Output 1: Development of eCommerce value chains framework representing Consumer to Consumer (C2C), Business to Consumer (B2C) and Business to Business (B2B).

Baseline: Noteworthy work has been done as background and there is an extensive amount of external information that will be drawn upon for further context.

Indicators: A detailed framework to identify where enablers and capabilities are required to foster eCommerce in Guyana.

Targets: An easily understood document that will guide further work on this project.

Work has been completed to provide a review of an eCommerce Activity Chain and a review of the Enablers required to support this set of activities. These will be the core components that inform the overall eCommerce strategy. The Activity Chain describes the activities that Vendors and Customers need to undertake to complete eCommerce transactions. The Capabilities Framework identifies those enablers that need to be in place to create and support a robust eCommerce capability across the economy in Guyana.

E-COMMERCE:

eCommerce is a wide-ranging set of activities that are undertaken by both the Vendor and the Customer. The steps are largely the same regardless of whether it is a simple transaction between a local artisan and a local consumer or a more complex trade transaction. Additionally, with few anomalies, the enablers to support the eCommerce activity chain are common between the various types of transactions.

This report refers to eCommerce as a channel for both Vendors and consumers. eCommerce is a new venue to process and deliver transactions that could be placed in traditional channels like retail, in-person, or by-phone business-to-business transactions. eCommerce also allows the creation and delivery of new digital products and services.

ACTIVITY CHAIN:

For an eCommerce transaction to be completed, both the Vendor and Customer need to engage digitally. The following chart describes the activities that need to be undertaken.

For the Vendor, the need is to create a new, digital, channel. The new eChannel requires new capabilities to be developed by Vendors which will be supported by their existing capabilities and business processes.

There are additional steps in the Activity Chain for international transactions, which centre on managing the import/export regulatory processes as part of fulfilment.

For the Consumer, these steps follow the path of any transaction:

- Gain awareness of and intent to purchase a product or service
- Select the channel for the transaction
- Place the order and pay
- Receive the product and service
- Gain post-purchase service as required.

The basic outline of steps for an eCommerce transaction when compared to a traditional transaction is simple and similar. The core differences are the establishment and management of a new Channel, more complex fulfilment, and the generation of a notably larger volume of data for optimization.

Adding an eCommerce channel also adds complexity for Vendors in the overall management of their sales channels. Customers have grown to expect eCommerce and physical channels to operate as an integrated relationship: buy online, return, exchange or gain service in-store adding complexity to retail Vendors.

For both the Vendor and Customer, there needs to be trust in the channel and an understanding that eCommerce transactions provide benefits that cannot be had with traditional channels.

It should be evident from the activity chain that there is a need for new capabilities for Vendors (e.g., website or eChannel development, fulfilment logistics, data, etc.). For Customers, there needs to be a clear set of benefits, a willingness to engage with the eChannel, and confidence in the processes that support it.

Following is a chart that describes the activity chain:

Vendor							Customer				
Recognise eCommerce benefits and engage	Set up and maintain eCommerce capability	Build demand	Complete the sale	Fulfill	Post purchase service	Close loop analytics	Recognize benefit of eCommerce	Awareness and shopping	Purchase	Receive purchase	Post purchase service
see opportunity to build business through eChannels	establish eCommerce: channels: website social media marketplace international markets	Build demand	take the order	logistics management: order management inventory delivery	register for warranty	gather and store data	convenience secure greater selection price comparison	web search	order	delivery	returns
finance development of capabilities	payment: pay subscribe return/exchange	advertise to build awareness and demand	Payment: pay subscribe return exchange	communicate with customer	manage return, exchange	data protection and privacy		marketplace	payment: credit card debit cash on delivery other	pick-up	warranty
trust that customers will engage in ecommerce	logistics/fulfillment order management inventory delivery	maintain digital marketing properties: website social media marketplace search	trigger fulfillment		manage subscription	analytics and reporting to understand and improve successes: customer marketing logistics product/service		advertising on and offline	connect with vendor for support on order	virtual for digital product or service	repair
	data and analytics: collect store report, analysis privacy and protection	analysis and optimization	communicate with customer: inbound outbound		fraud/theft management			social media			exchange/replace
	customer relations: pre purchase in purchase post purchase ongoing connecting cyber security identify and start with out-of-the-box solutions				gain feedback, ratings and reviews			email			rate
	cybersecurity				build continuing relationship			sms			connect with vendor for support on order
	identify and start with out-of-the-box solutions										

CAPABILITIES FRAMEWORK:

The key is to create an environment that facilitates the establishment of eChannels, allows for the transaction to be completed, and ensures that the system provides a robust set of control to drive trust in this channel.

New capabilities or enablers need to be developed within Guyana to create the above environment that supports eCommerce activities. These capabilities span the overall commerce and trade regimen within Guyana, technical enablers like ICT, and logistics. They include enablers that would create overall trust in eCommerce for both Vendors and Consumers.

The following table highlights the key enablers to establish a robust environment to allow eCommerce to flourish. This set of enablers is based on work by the United Nations Conference on Trade and Development (UNCTAD). This body has a set of programs operated under the banner of “eTrade for all” which is dedicated to helping developing countries harness eCommerce and digital trade for development. One of their programs is a rapid assessment for eCommerce development.

The following table includes enablers that are part of the UNCTAD assessment with alteration to better meet the needs of this project. It includes a review of enablers across seven categories. The framework for this project adds an eighth category: data management. It should be noted that this is a work in progress and will likely be amended or enlarged as this project advances.

These enablers will form the core of the next phases of the project. They will be evaluated to establish the state of readiness for each enabler within Guyana and prioritized to guide the implementation plan of the overall eCommerce strategy. A number of these enablers are in place or are currently in active development. Others will need to be created. There is a broad cross-cutting of enablers across the economy and an overlap with already executed strategies. These will be reviewed in subsequent phases. Finally, successive stages will require the prioritization of implementation of these enablers as the list is extensive.

Rapid Assessment Framework							
ICT	Regulations	E-Payments	Capacity people	Trade logistics	Finance eCommerce	Logistics	Data
Access to network and eCommerce sites	Legally recognize/ facilitate eCommerce transactions and build trust in eCommerce	Facilitate payment in a secure environment	Build skills and knowledge to facilitate all aspects of eCommerce	Clear set of regulations and process that are compliant with international obligations/ requirements	Facilitate funding the development of eCommerce capabilities across all business types: Micro, SME, Large	facilitate logistical needs for eCommerce activities	Gather, store and use data to facilitate eCommerce and improve success
ICT1 affordable access to mobile telephone	R1 esignatures	EP1 regulation to allow ePayment	SK1 raising knowledge and capacity about existing opportunities for Micro and C2C businesses to engage in eCommerce	TL1 compliance with international agreements and requirements	F1 enabling investment climate for eCommerce	L1 transportation infrastructure	01 infrastructure and skill sets to collect and use data to run eCommerce operations, marketing and logistics.
ICT2 affordable access to internet	R2 legal eContract	EP2 regulation to allow mobile payment	SK2 capacity building for medium and large business	TL2 fully transparent and easy to navigate import/export regulation	F2 awareness of investment opportunities in eCommerce ecosystem	L2 warehouse and fulfillment facilities	02 data management and analytics as a business
ICT3 affordable access to broadband	R3 protection of personal data and privacy	EP3 dedicated payment solutions for eCommerce	SK3 capacity building for eCommerce for public servants in relevant ministries	TL3 single window to submit regulatory documents	F3 awareness of different types of financing	L3 delivery capabilities including security	
ICT4 invest in broadband deployment in low population density areas	R4 cybercrime and fraud protection	EP4 greater interoperability of online, mobile and offline payment modes	SK4 education on ICT and eCommerce in higher education	TL4 de minimus regime: minimal clearance procedures	F4 identify different sources of finance and investment across the full value chain of investors	L4 address directory that is complete, accurate and accessible	
ICT5 invest in broadband deployment in higher population density areas	R5 regulations that protect consumers online	EP5 awareness of international good practices in electronic mobile payment	SK5 promote university industry linkages to develop eCommerce	TL5 clear info about applicable taxes and duties	F5 promoting peer learning and experience sharing on issues related to access to financing for eCommerce		
ICT6 invest to build mobile data access 5G	R6 regulating online content	EP6 clear interoperable consumer protection regulation	SK6 customer awareness of eCommerce availability and benefits : marketing for vendors and awareness for eCommerce in general	TL6 no duty tax for import of low value shipments	F6 promoting and facilitating access to finance for eCommerce startups		
ICT7 promote greater mobile telecom competition	R7 domain name and dispute resolution	EP7 education on security and trust building	SK7 integration eCommerce in existing trade promotion activities	TL7 full electronic track-line of all shipments			
ICT8 promote greater ISP competition	R8 online intellectual property law	EP8 investigate alternative payment frameworks: mobile micropayment, digital sovereign currency and wallet	SK8 training for logistics at university and colleg	TL8 low shipping costs			
ICT9 build knowledge of digital media	R9 manage data and content use by global social media and search providers (Facebook, Google, etc)	EP9 build consumer awareness and trust for ePayment	SK9 build advanced logistics capabilities for business	TL9 secure logistics and fulfillment			
ICT10 build ITC capabilities within business and NFP sector	R10 regimen to regulate consumer import via eChannel purchase	EP10 integration of banking payment systems between banks		TL10 no or minimal risk of online fraud			
		EP11 ability to facilitate payment process internationally in trade		TL11 availability of online payment methods for international trade			
				TL12 international trademark, patent and other IP regulation			
				TL13 data localization			

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PRODUCT AND SERVICE
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E-COMMERCE**

