

THE CARIBBEAN DIGITAL TRANSFORMATION INSTITUTE

**Empower
your journey**



Digital Transformation Series

Technology and Digital Skills

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Courseware Version: 4.0

Table of Contents

Part One: Course Overview	1
Course Overview	1
Learning Objectives.....	1
Part Two: Technology Trends and Impacts	2
Artificial Intelligence	2
E-commerce	3
Remote Work Tools	4
Part Three: Cybersecurity	6
Keeping Data Safe	6
Part Four: Digital Literacy	9
What is It?	9
Where To Get the Skills.....	10
Assignment Answer Key	11
Part Four: Digital Literacy.....	11

PART ONE: COURSE OVERVIEW

COURSE OVERVIEW

This course will introduce some technology trends and their impacts on MSMEs, as well as discuss the importance of a cybersecurity plan and digital literacy.

LEARNING OBJECTIVES

At the end of this workshop, participants should be able to:

- Name some emerging technology trends and how they can impact MSMEs
- Understand the importance of cybersecurity
- Define digital literacy and why it matters

Learning Objectives

PART TWO: TECHNOLOGY TRENDS AND IMPACTS

Knowing where to start when it comes to utilizing technology depends on the business. With that said, there are emerging trends MSMEs can consider to help meet their goals.

This section will look at how companies can use artificial intelligence, e-commerce, and remote work tools to support their business needs.

ARTIFICIAL INTELLIGENCE

One trend for businesses of all sizes, including MSMEs, is AI (Artificial Intelligence). This includes such things as chatbots on company websites, automating manual tasks, and data collection.

“The current utilization of AI across Caribbean industry is poised to expand and if done properly, the industry sector should see more efficiencies and new industry opportunities unfold by 2030 due to data efficiency and management. Automation and AI-assisted decision-making will enable businesses in the region to be more efficient and do more with less,” says a report from UNESCO regarding recommended policies in the Caribbean as AI technologies continue to grow in ability and societal significance.

A consultant for the Caribbean Council, an organization aimed at connecting businesses in the Caribbean and Central America, notes that AI already has the ability to assist the tourism industry to take data and use it to predict a potential customer’s preferences to sell them the vacation they desire.

“So sophisticated have AI algorithms become that they already enable a seller to follow a traveller from when they first vaguely explore the idea of a vacation, to their activities and location when in-country and what they feel when they return, to then creating a personalised on-line approach that will cause them to return,” writes David Jessop for the Caribbean Council.

As with any developing technology, there are potential negative impacts and ethical issues to keep in mind, including biases in algorithms, privacy, and human job loss. The UNESCO report stresses the importance of using AI to help people, instead of replacing them.

“AI education and development should be encouraged, and rewards put in place to build AI tools in service to humanity such as tools to reduce bias by testing algorithms before acquisition. The Caribbean is the perfect melting pot to ensure that this AI development can happen in this human-centric way,” says the Caribbean Artificial Intelligence Policy Roadmap.

E-COMMERCE

E-commerce is the process of selling goods and services online, and transmitting funds electronically for those transactions. This can include B2B (business-to-business) sales, and B2C (business-to-consumer) transactions.

A report for the Economic Commission for Latin America and the Caribbean explored what e-commerce looked like in the LAC (Latin America and the Caribbean) region from 2019 to 2021. The study titled *The landscape of B2C e-commerce marketplaces in Latin America and the Caribbean* found that online traffic grew nearly 30 per cent in that time frame, mostly for existing online marketplaces, with the highest growth in Caribbean countries.

One local business taking advantage of the growth in online sales is Massy Stores. In 2020, the supermarket chain, which has locations in Barbados, Guyana, St. Lucia, Trinidad and Tobago, and St. Vincent, began offering online ordering of grocery orders for delivery and curbside pick-up.

The potential reward of e-commerce is not without risk. Massy Stores have reported two cybersecurity incidents since the launch, one of which closed multiple stores in Trinidad and Tobago for one day in 2022. This underlies the importance for MSMEs to develop a cybersecurity plan, including a response in case an attack occurs.

In addition to monitoring the security of the systems already in place, it appears there are still areas for further development when it comes to e-commerce in the Caribbean region.

“A consistent feature of the marketplace landscape in the LAC region is the prevalence of websites that do not allow users to finalize transactions digitally. Most likely, this reflects gaps in the development and adoption of electronic payments solutions and integration of marketplaces with logistics solutions. These two dimensions are key to fully develop e-

commerce ecosystems,” writes Estefanía Lotitto and Bernardo Díaz de Astarloa in the earlier mentioned study.

REMOTE WORK TOOLS

The COVID-19 pandemic pushed many businesses to allow their employees to work from home, and while workers from some companies have returned to the office, there are others who have continued to embrace remote work or have adopted hybrid models. The tech industry, for example, is the most flexible when it comes to remote work, according to the *Flex Report: Tech Industry Deep Dive*, published in June 2023 by Scoop Technologies.

Vox reported on the *Flex Report*, and interviewed employees from tech companies about the benefits of remote work. Remote work means employers are not tied to hiring people from the local area, and can also mean attracting more diverse talent, in addition to saving money on office costs.

Many digital tools have been developed to help both large companies and MSMEs with the shift. Let’s look at some of the types.

Communication platforms

Emails and phone calls may be efficient for some things, but for conversations and meetings that involve multiple employees, there may be better solutions. Programs such as Slack offer the ability to create various channels for employees to communicate about particular topics or projects. Zoom and other similar applications give businesses the opportunity to video call with one or more team members or to hold online conferences. Programs such as Microsoft Teams do both of these things and offer other benefits such as cloud storage.

Scheduling

For businesses that hold a lot of team meetings, emails to schedule them could become tedious. There are platforms that can take away that step by setting up meetings and sharing calendars so it is easy to see when team members are available. Some examples include HubSpot Meetings, Setmore, and Sign In Scheduling.

Project management

These platforms allow teams to set goals and for managers to track progress on projects. Some examples of these applications are Trello, Basecamp, and Asana.

File-sharing and storage

Cloud-based storage and file sharing tools are helpful both in-office, and remotely. Programs such as Dropbox and Google Drive allow users to easily edit and share files without bogging down email inboxes.

Time tracking

Companies that have contractors or pay hourly wages may benefit from programs that allow users to input their time spent on a project. Some examples include Time Doctor, Clockify, and Toggl.

With all of these tools, there is no one single perfect program to use. There are many more than those listed here, and which ones to use depend on specific business needs. These are simply examples of popular applications.

Technology Trends: E-commerce

Lockdowns and the unknowns in the early days of the pandemic pushed many people to do their shopping online, furthering the need for businesses to use e-commerce to their advantage.

Has the pandemic changed your online shopping behaviors?

PART THREE: CYBERSECURITY

Introducing technology into a business can increase the risk for sensitive information to be stolen.

This session will discuss what to do to try to prevent cyberattacks, and how to respond if one occurs.

KEEPING DATA SAFE

If a business has any information transmitted digitally, cybersecurity is critical to consider. This likely means hatching a plan for how to keep employee, customer, and company information safe – and how to minimize damage if an attack occurs. What that plan looks like is going to depend on the individual business, but there are a few things any business can examine.

Cybersecurity expert Nick Morpus provided tips for Digital.com, a review and resource website aimed at helping small businesses.

“How you respond to a cyberattack determines whether your business takes a little beating in fines or sinks entirely under the pressure of an out-of-control security breach. Not only can a cyberattack sink your business’ value, but it can also affect the confidence your customers have in your ability to keep their sensitive information safe,” writes Morpus.

He suggests using these five steps to create a plan:

1. Identifying all potential threat vectors

Your threat vectors are the ways your business could be attacked. This could be:

- “malicious insiders,” such as a disgruntled employee
- not enough encryption for sensitive information being transmitted digitally, which could include employee addresses and banking information
- network misconfigurations or poor application security
- outdated software

- weak passwords
- and careless, unaware, or untrained team members, who need to know about risks and internet best practices in order for a plan to be effective

The U.S. Small Business Administration suggests ensuring employees are fully trained in safe online activity, including how to detect phishing emails, how to determine when something is safe to download, and the importance of a strong password or multi-factor authentication.

Identifying all the possible ways a business could be vulnerable to a cyberattack may be something a business does themselves, but could also mean hiring a third party to evaluate.

2. Figuring out your legal obligations

All businesses must obey laws and regulations, so it is necessary to identify what applies as it relates to security, such as data protection or privacy laws, before moving forward in creating a plan.

3. Assessing assets and risks

This next step requires a business to look at their assets, such as their web server where data is stored, ranking the risk level to each asset, and figuring out potential solutions.

"Essentially, you're going to determine what are the most important aspects of your business while simultaneously evaluating the level of risk posed to them," writes Morpus.

The potential solutions could include encryption for sensitive information, antivirus software, and data backup.

4. Make a plan

If the worst happens, businesses need a documented action plan for every possible threat.

"Developing a reaction plan is a very involved process that's unique to the needs of your business and isn't easily summed up in a summary guide like this," writes Morpus, adding that this is another area where hiring a third party could be helpful.

However, Morpus notes any company's plan should map out four things: how to identify the type of threat and impact, a procedure for limiting exposure, how to remove the threat, and how to recover and return to normal business operations.

5. Test the plan

It is a good idea to bring in an outside source to try to access sensitive information in order to find out any spots where actual hackers could get past your security.

How Safe is Your Business?

What safety precautions do you take online?

PART FOUR: DIGITAL LITERACY

Digital literacy is crucial to stay current in this constantly evolving, technological world.

This session will explore what it means to have digital literacy, how it impacts the economy, and where to obtain the necessary skills.

WHAT IS IT?

Digital literacy is the ability to use and adapt to information and communication technology. In workplaces, it means having the skills to use the business' current digital tools – communication platforms, software, point-of-sale systems, etc. – while also being able and willing to adopt new technology. With some companies, this might mean familiarity with a particular program, but often, it means the ability to understand and use new digital programs and tools, plus an eagerness to learn. It also means learning how to use digital products safely.

The McKinsey Global Institute (MGI) predicts automation could impact 50 per cent of the world's economy in the next 15 years or so. Although this is a staggering number, it does not mean there will be a catastrophic loss of jobs. MGI notes that many jobs created in the past few decades did not exist previously, such as positions in the development and management of information technology.

The World Economic Forum reiterates that the adoption of automated technology will change the workplace, not eliminate positions for human workers.

“Rather than being replaced by computers, most workers will instead work alongside rapidly evolving machines. The future of work will see a shift in demand away from office support positions, machine operators, and other low-skill professions – and towards technology professionals such as computer engineers and information communication technology (ICT) specialists,” writes Robbert van Eerd and Jean Guo for the World Economic Forum.

They stress the importance of digital upskilling, and suggest that vulnerable populations are disproportionately impacted by a lack of learning opportunities to gain those skills.

WHERE TO GET THE SKILLS

Locally, there are initiatives underway to improve digital literacy. Flow Foundation, the philanthropic arm of telecommunications company Flow Jamaica, offers a free program aiming to improve digital skills in the region. The 12-week course is a partnership with the Mona School of Business and Management, and the Caribbean School of Data.

The Caribbean School of Data (CSOD) is an initiative of the Caribbean Open Institute (COI) that aims to build a digital literacy program for underserved populations in the area. The project’s goal is to bring about “a stronger data culture across the region” and help people develop crucial employment skills.

“With the rapid evolution of the digital economy, digital literacy/data skills have become an imperative and a right, no longer a privilege,” a concept note from COI says about why CSOD exists.

The topics covered in their program include cyber safety and security, social media, word processing and spreadsheet basics, effectively using search engines, and working with data.

In addition to their partners in Jamaica, the CSOD’s program is offered by educational and training facilities in Dominican Republic, Guyana, Puerto Rico, and St. Lucia.

Digital Literacy

Share what digital literacy looks like in your everyday life. How does it impact your life?

ASSIGNMENT ANSWER KEY

PART FOUR: DIGITAL LITERACY

Where to Get the Skills: Digital Literacy

Share what digital literacy looks like in your everyday life. How does it impact your life?

Examples could include:

- The ability to use social networking websites to connect with friends and family they cannot see every day, allowing them to stay in touch
- The ability to use online banking tools in order to make it easier to pay bills and stay on top of finances
- Understanding programs such as Zoom in order to be able to attend virtual sessions like this one

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