



DIGITAL TRANSFORMATION SERIES

Data and Analytics

Agenda

5 Minutes	Part One: Course Overview
15 minutes	Part Two: Data Collection
15 minutes	Part Three: Data Analytics and Visualisation
20 Minutes	Part Four: Data Privacy
5 Minutes	Workshop Wrap-Up

Lesson One: Course Overview

This course will look at ways businesses can ethically collect data, how to analyse that data to drive decision-making as organisations embrace digital transformation, and the obligation to protect data.



Part One: Course Overview

Learning Objectives



List principles of data ethics and several collection methods



Define data analytics and describe how this can help small and medium-sized businesses



Understand the importance of data protection and privacy

Part Two: Data Collection

This section will review types of collection methods, as well as the principles of data ethics.



Part Two: Data Collection

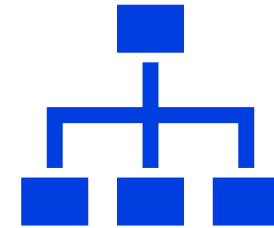
Ethical Data Collection



Businesses must ensure the data they are collecting is obtained legally and ethically.



Data ethics encompasses the moral obligations of gathering, protecting, and using personally identifiable information and how it affects individuals.



Everyone within an organisation should be well-versed in data ethics, no matter their role, because that enables more people to detect any unethical data collection, use, or storage practices.

Part Two: Data Collection

Ethical Data Collection

Ownership

Transparency

Privacy

Intention

Outcomes

Part Two: Data Collection

Collection Methods



Surveys



Transactional tracking



Interviews and focus groups



Observation



Online tracking



Forms



Social media monitoring

Part Two: Data Collection

Collection Methods

What different collection methods are used in your own organization?



Part Three:

Data Analytics and Visualizations

In this section, data analytics will be defined, and then types of data analysis and techniques will be explored. Next, how to turn those numbers into something organisations can digest and use will be looked at.



Part Three: Data Analytics and Visualisations

Introduction to Data Analytics



Descriptive



Diagnostic



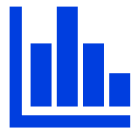
Predictive



Prescriptive

Part Three: Data Analytics and Visualisations

Introduction to Data Analytics



Regression
analysis



Factor
analysis



Cohort
analysis



Monte Carlo
simulations



Time series
analysis

Part Three: Data Analytics and Visualisations

Data Visualisation


Data visualisation involves taking the numbers and using them to create a graphic that is easier to understand and from which to draw meaning.

- Pie chart
- Bar graph
- Histogram
- Heat map

Part Three: Data Analytics and Visualisations

Turning Data Analysis and Insights into Actions

 One key part of gaining insights from data means collecting it with a question in mind.

 After organising, and creating visualisation of that data, businesses may then start to interpret it, draw conclusions, and make predictions in order to answer their initial problem or question.

 Data analysts should ask what they can learn from the results, and how it either reinforces or negates assumptions they held beforehand.

 Every analysis should be a feedback loop that deepens your learning.

Part Three: Data Analytics and Visualisations

Case Study: Point Defiance Zoo

Read the section about Point Defiance Zoo.

How did data collection help Point Defiance Zoo?



Part Four: Data Privacy

In this section, topics include data privacy for businesses, the obligations organisations have to uphold it, and how to create a privacy policy.



Part Four: Data Privacy

Understanding Data Privacy

Data privacy is about managing who has authorised access to the information an organisation holds.



Part Four: Data Privacy

Understanding Data Privacy

What is personal information?

- Name
- Email address
- Phone number
- Banking information, credit/debit card data, purchases, loan reports
- Identification numbers
- Race, ethnic origin, religion, education or income level
- Age, height, blood type, medical records

Part Four: Data Privacy

Understanding Data Privacy

What is data privacy so important anyway?

- Customer service and experience
- Legislation

Part Four: Data Privacy

Data Protection in the Caribbean



Jamaica, Barbados, and the Cayman Islands have laws that closely align with the European Union's General Data Protection Regulation, which sets a high standard for protection and considers the privacy of data to be a human right.



Even though the GDPR is a regulation for the European Union, its scope includes any business that processes the personal data of citizens of the European Union, even if they do not physically operate in the EU.

Part Four: Data Privacy

Data Protection in the Caribbean



Processed lawfully, fairly, and transparently.



Adequate, relevant, and limited to what is necessary for processing.



Accurate and kept up-to-date.



Kept in a form such that the data subject can be identified only as long as is necessary for processing.



Processed in a manner that ensures its security.



And, can only be collected for specified, explicit, and legitimate purposes.

Part Four: Data Privacy

Data Protection in the Caribbean

The right to be informed

The right of access

The right to rectification

The right to erasure

The right to restrict processing

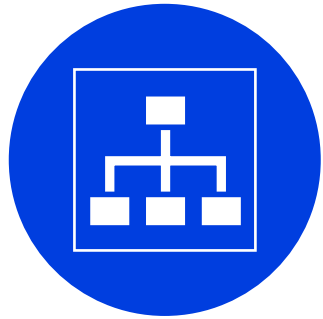
The right to data portability

The right to object

Rights in relation to automated decision making and profiling

Part Four: Data Privacy

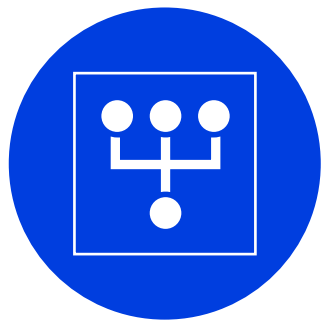
Establishing Data Privacy Policies



A Data Security Policy outlines the overall security management framework for an organisation.



A good data security policy will help protect the personal information organisations hold, and will help prevent a data breach.



Proper data security relies on good practices on both an organisational level, and on a day-to-day operational level.



The policy should cover both levels.

Part Four: Data Privacy

Establishing Data Privacy Policies

Who has responsibility for data security in the organisation: is it the IT manager, or Operational Officer, etc.

Guidelines on the staff usage of computers or information storage tools, including use of work computers, control and monitoring, usage restrictions, and consequences for non-compliance.

Where the organisation backs up its online data, and how often this is done.

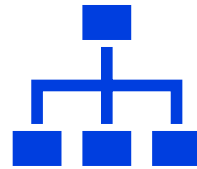
The security measures that are in place in the organisation, including any encryption, firewalls, anti-virus, secured servers, etc.

Part Four: Data Privacy

Establishing Data Privacy Policies



The cornerstone document of the data privacy plan is the **Personal Data Protection Policy**.



This overarching policy describes how personal data is collected, handled, and stored to meet both the internal standard of the organisation, as well as the rules of privacy laws.



The successful implementation of a personal data protection policy goes a long way towards advancing good privacy practices in an organisation.



The policy should include an overview, a defined purpose, a summary of applicable data privacy laws, and a specific scope in relation to the organisation.

Contents of the Personal Data Protection Policy

General staff guidelines – rules that should be followed by all employees in the course of their work:

- How data should be handled
- How data should be properly disposed of
- Training requirements

Contents of the Personal Data Protection Policy

Proper data storage expectations:

- Where physical documents should be stored
- Where electronic documents should be stored
- How often, and in what way, data should be backed up
- Other data security features that are in place

Part Four: Data Privacy

Responsibilities for Privacy

Everyone in the company has responsibilities for privacy.



Certain key roles (such as CEO, IT Manager, Privacy Officer, etc.) will have more specific responsibilities, but all employees have a responsibility to ensure and uphold the privacy of the personal data they work with, and should report any concerns to the appropriate members of the organisation.



The specification of responsibility should be reflected in the personal data protection policy.

Part Four: Data Privacy

Case Study: How Well do Caribbean Data Protection Laws Align With the GDPR?

Review the chart on page 5 of the January-March 2020 issue of FOCUS where Amelia Bleeker of ECLAC charts how legislation in different countries matches up with the EU laws.



