Mona School of Business & Management
MSBM The University of the West Indies, Mona

Digital Inclusion

Building Caribbean Resilience in the Data-driven Knowledge Economy

MonCom Seminar, November 1 - 2, 2023

My Remarks…

1

Digital Economy Challenges

VUCA

Covid-19 lessons learned

Business Resilience / Sustainability

2

Data-driven Economy

Disruptive Digital Technologies

DATA as an Asset

Data Skills are invaluable

3

Digital / Data Capacity Building

Pursuit of Digital Transformation

Digital literacy - A National / Regional Imperative

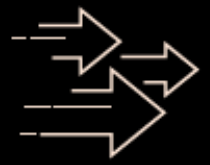
Systematic measurement of National Digital Literacy

VUCA – Today's Business Environment

Volatility	• Leadership	Vision
Uncertainty	• Knowledge	Understanding
Complexity	• Information	Clarity
Ambiguity	• Data / Algorithms	Agility

Covid-induced: Re-inventing the organisation for warp speed agility

Unleashing sustainable speed is a process.



Rethink ways of working

1. Speed up and delegate decision making
2. Step up execution excellence
3. Cultivate extraordinary partnerships

Reimagine structure

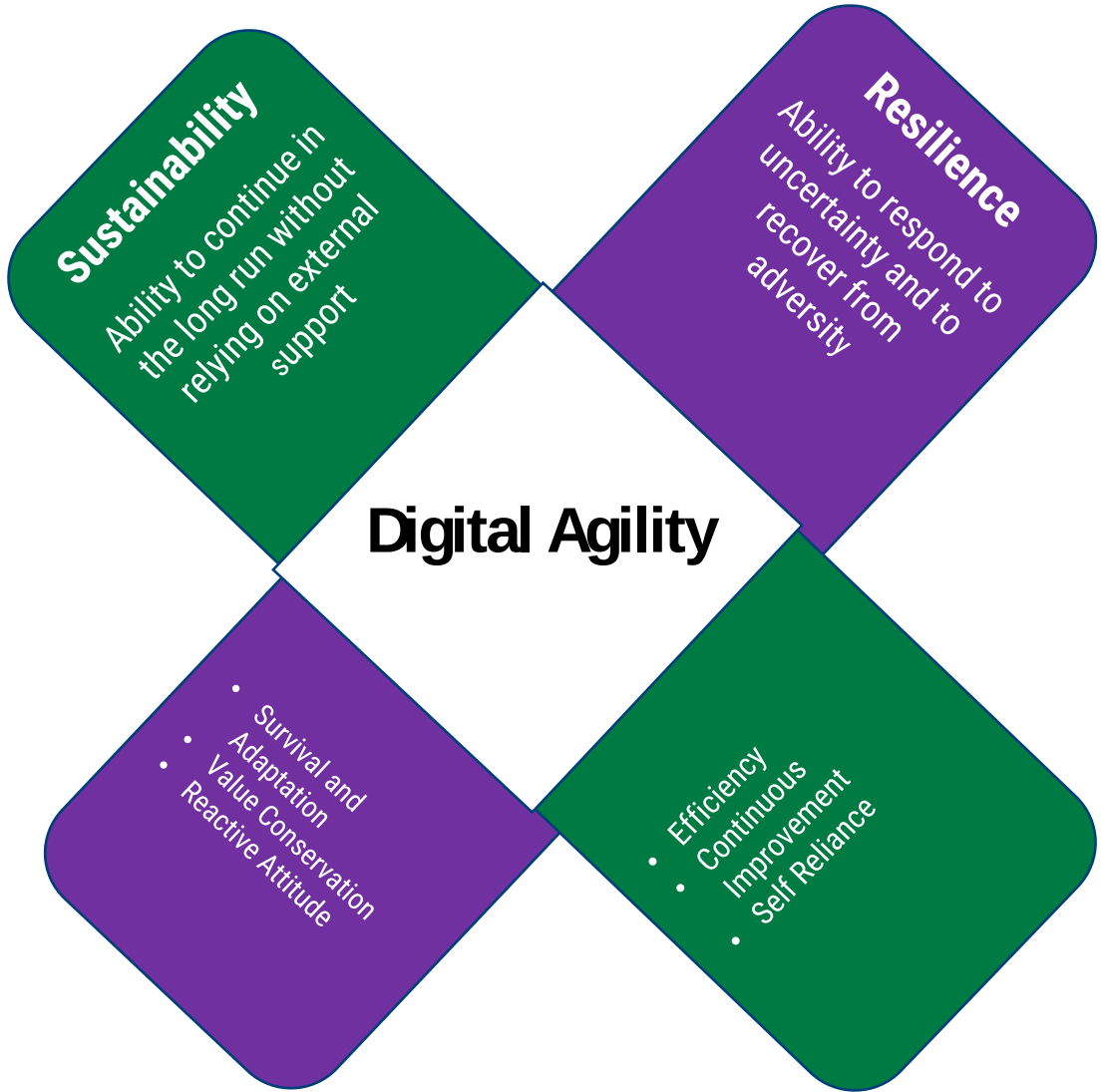
4. Flatten the structure
5. Unleash nimble, empowered teams
6. Make hybrid work, work

Reshape talent

7. Field tomorrow's leaders today
8. Learn how to learn
9. Rethink the role of CEOs and leaders

McKinsey 2020 Ready-set-go-Reinventing-the-organization-for-speed-in-the-post-COVID-19-era

Sustainability, Resilience & Agility



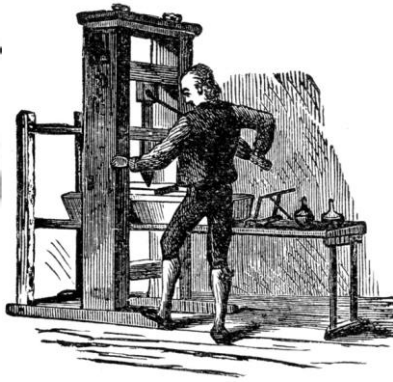
In the new world, it is not the big fish which eats the small fish, it's the fast fish which eats the slow fish

--Klaus Schwab

Navigating the next industrial revolution

WORLD ECONOMIC FORUM
COMMITTED TO IMPROVING THE STATE OF THE WORLD

Revolution	Year	Information
1	1784	Steam, water, mechanical production equipmen
2	1870	Division of labour, electricity, mass pro
3	1969	Electronics, IT, automated production
4	?	~~Cyber-physical systems~~ Digital Transformation, Big Data & AI



We are already in the Digital Economy

- DIGITAL is rapidly becoming the dominant mode of interaction for commercial, social and economic activity
- DIGITAL CAPABILITIES have become a Key Enabler of Business Agility
- DATA is the oil that fuels the Digital economy
- DATA LITERACY and the ability to *collect, organise, manage, evaluate and apply* Data to various business scenarios and activities is rapidly becoming an essential in-demand employability skill

Digital Skills Poverty…

- lacking the ability to possess and manage *digital information capital*
- leads to *reduced digital and social inclusion*, which could lead to the loss of rights and opportunities offered by society
- unable to generate digital information capital, because the lack of digital skills restricts them to the *role of information consumers*
- *vulnerable* to distracting or misleading campaigns, fake news, cyber-bullying, breach of personal privacy etc.

Disruptive Digital Technologies

Cloud / Mobile Computing

Access to scalable, cost-effective computing and storage capacity; Rapid deployment capability and enhanced business agility; Embracing mobility in the way we design and deliver products and services

Big Data / Open Data

Data is the new Oil; Data as exhaust from eCommerce, Social Media, IoT, mobile and sensors; platform for enhanced business intelligence

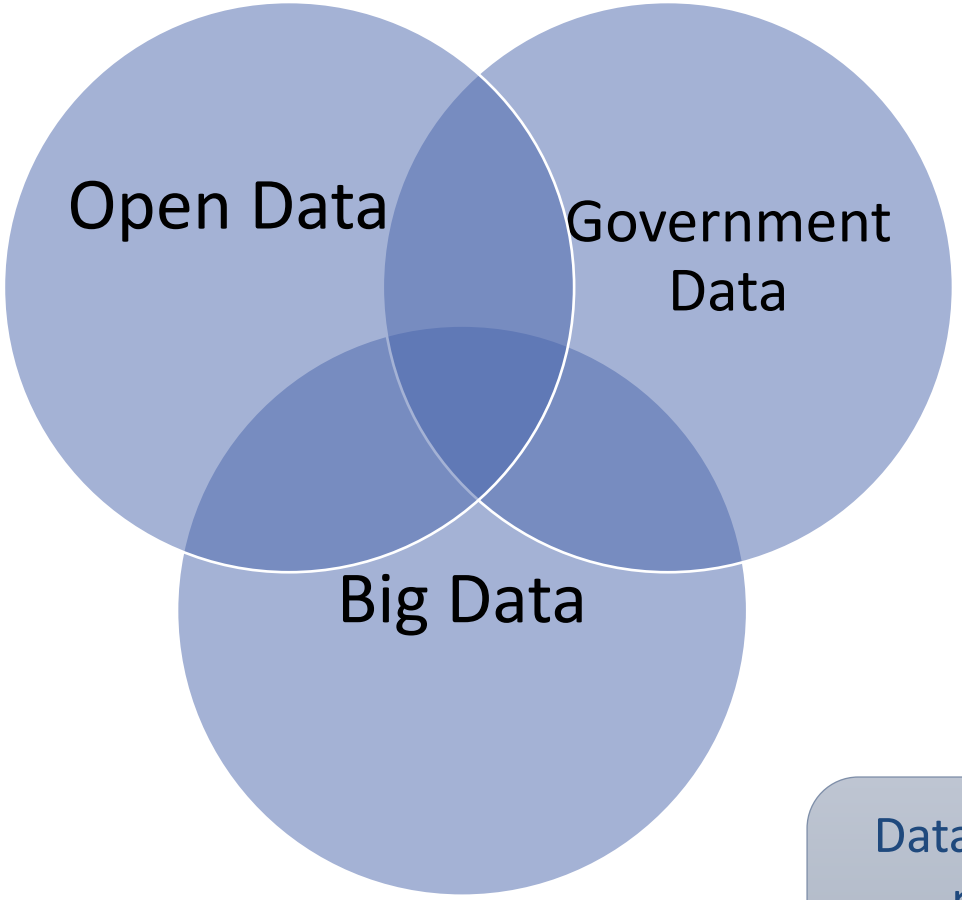
Advanced Analytics / Artificial Intelligence

Digitization and automation of knowledge work; advances in machine learning & AI; Enhanced algorithms from big data analytics; Advanced Robotics & autonomous systems

Social Media

Digital channels of engagement, information and interaction with customers and consumers; Where public sentiment, opinions and consensus are shaped and influenced; Ignore at your peril

The Global Data Economy



The data space combines several trends – each with significant commercial potential

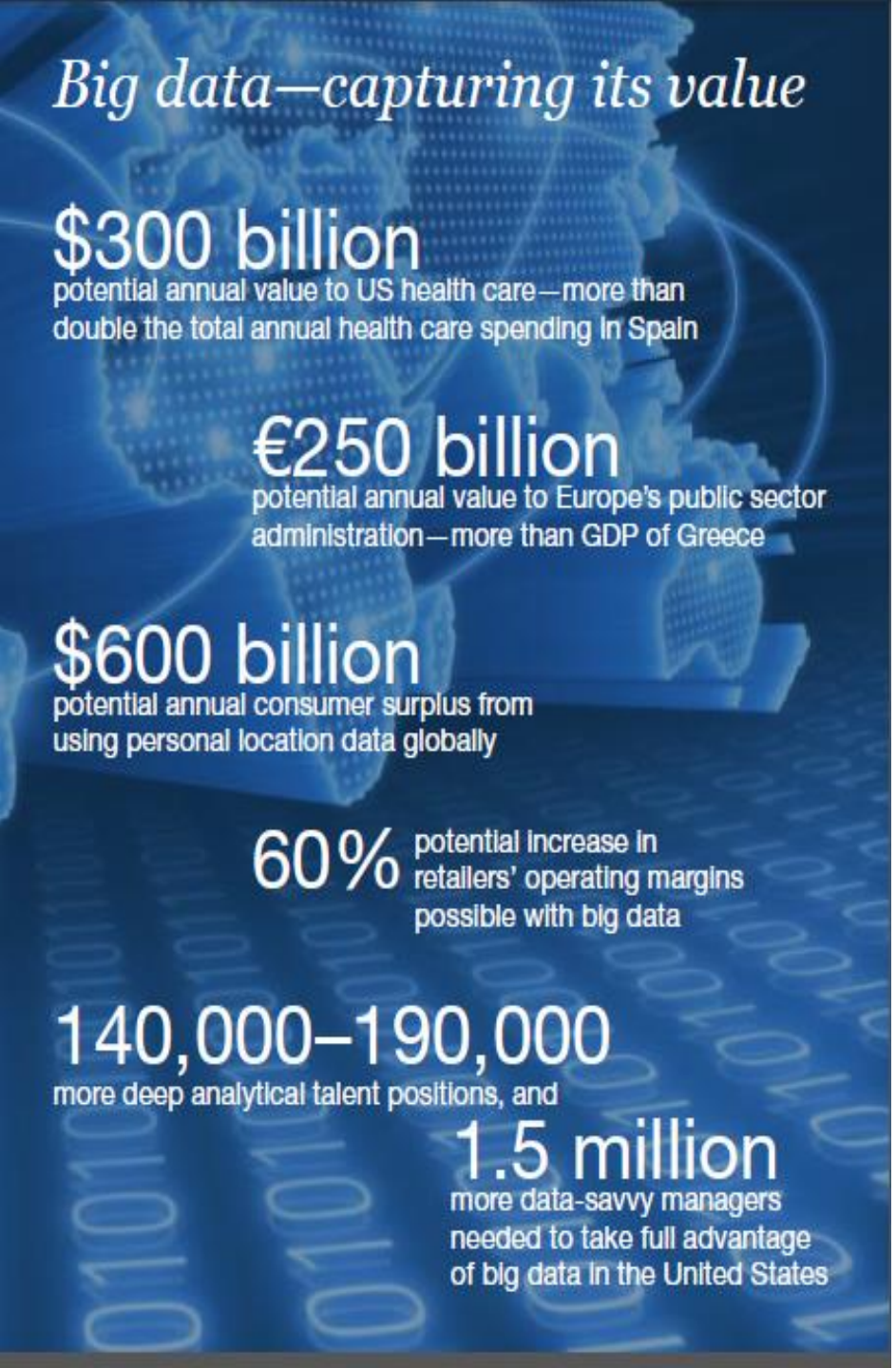
$3 trillion	$X trillion	$7 trillion	$15 trillion
Open Data	Big Data	Internet of Things	Digitization

The data space is transforming all major sectors of the economy

Government	Health	Energy	Education	Transport	Agriculture	Finance	Tourism	Media

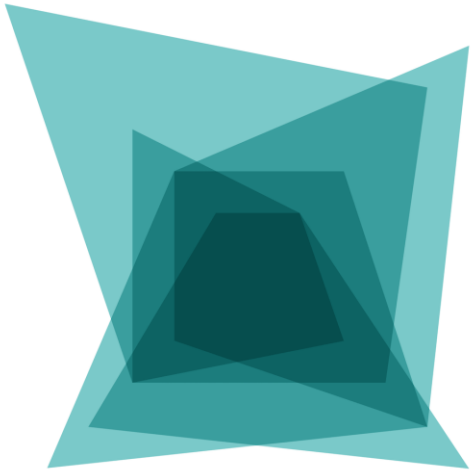
Data sits at the heart of a global movement, the practice of openly publishing key datasets for anyone to analyse and reuse, by leveraging new technologies has a great potential to generate social and economic impact all over the world

Velocity of Big Data



[Organizations] most valuable asset, although not shown in the financial statements, is data

-- PwC



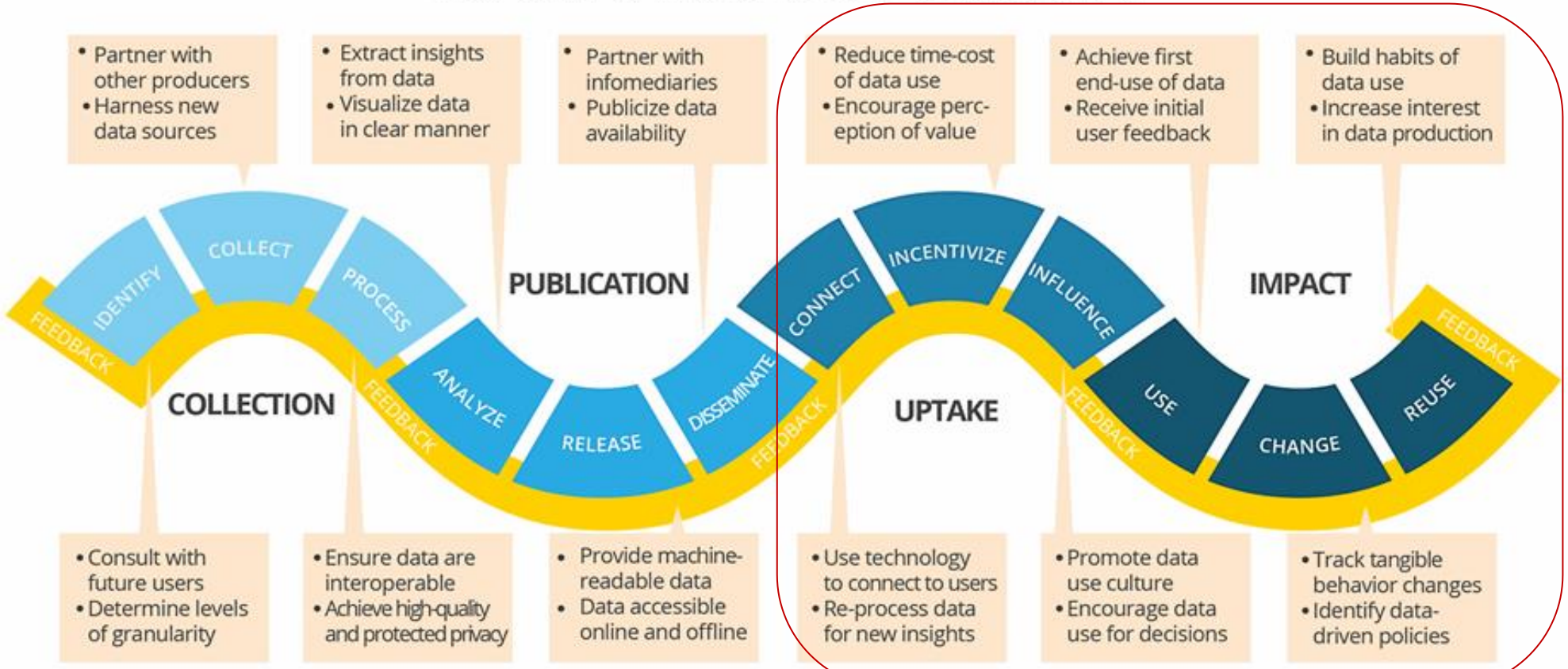
*"**Data is a source of power.** It can be exploited for private gain, and used to limit freedom, or **it can be deployed and governed for the public good**: a resource for tackling health, social and environmental challenges, enabling collaboration, driving innovation and improving accountability."*

GDB Research Framework 2020

"We are drowning in information, while starving for wisdom. The world henceforth will be run by synthesizers, people able to put together the right information at the right time, think critically about it, and make important choices wisely."

E. Wilson, 1998, Consilience

DATA VALUE CHAIN



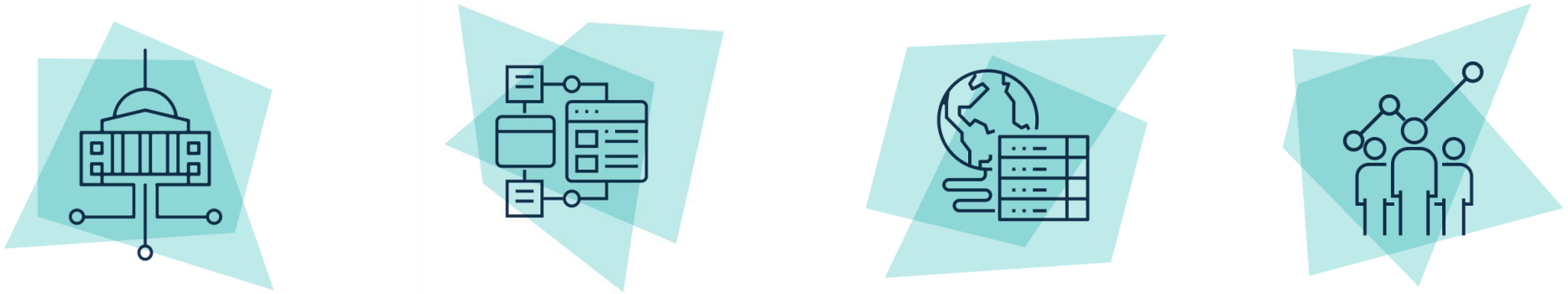
PRODUCTION **USE**

increasing value of data

Roadblocks for **production** include lack of financial, human, and technological resources; low data literacy; lack of trust between users and data collectors; blind-spots in data gaps; lack of country ownership; and lack of government desire for transparency.

Roadblocks for **use** include low political support; lack of data relevance to decisions; poor quality; lack of trust in government data use; no rewards or results of data use; financial constraints; corruption; data silos; and lack of partnerships between infomediaries.

Components of the National Data Ecosystem



GOVERNANCE | CAPABILITY | DATA AVAILABILITY | USE AND IMPACT

Data Capacity Building is a cross-cutting Imperative

- The precondition for the widespread use and reuse of data is greater data literacy among the citizenry at large and government decision-makers
- A well-functioning integrated national data system requires robust data literacy within data institutions, government ministries, the private sector, and the general population

– World Development Report 2021: Data for Better Lives

Systematic Data Capacity Building in Public-Private-Academia-Civil Society

1

Awareness – Cultural - Attitudinal

Conduct executive seminars to begin to develop the requisite cultural orientation and mindset at all levels of the organization

"DATA as an Asset"

2

Build Specialized Skills and Experts

Higher Education programs and hands-on Technical Workshops to develop the requisite advanced analytics capabilities

"Cultivating our own DATA SCIENTISTS"

3

Broad-based Data literacy

Embed Digital / Data literacy competences at every level of education ~ primary, secondary and vocational.

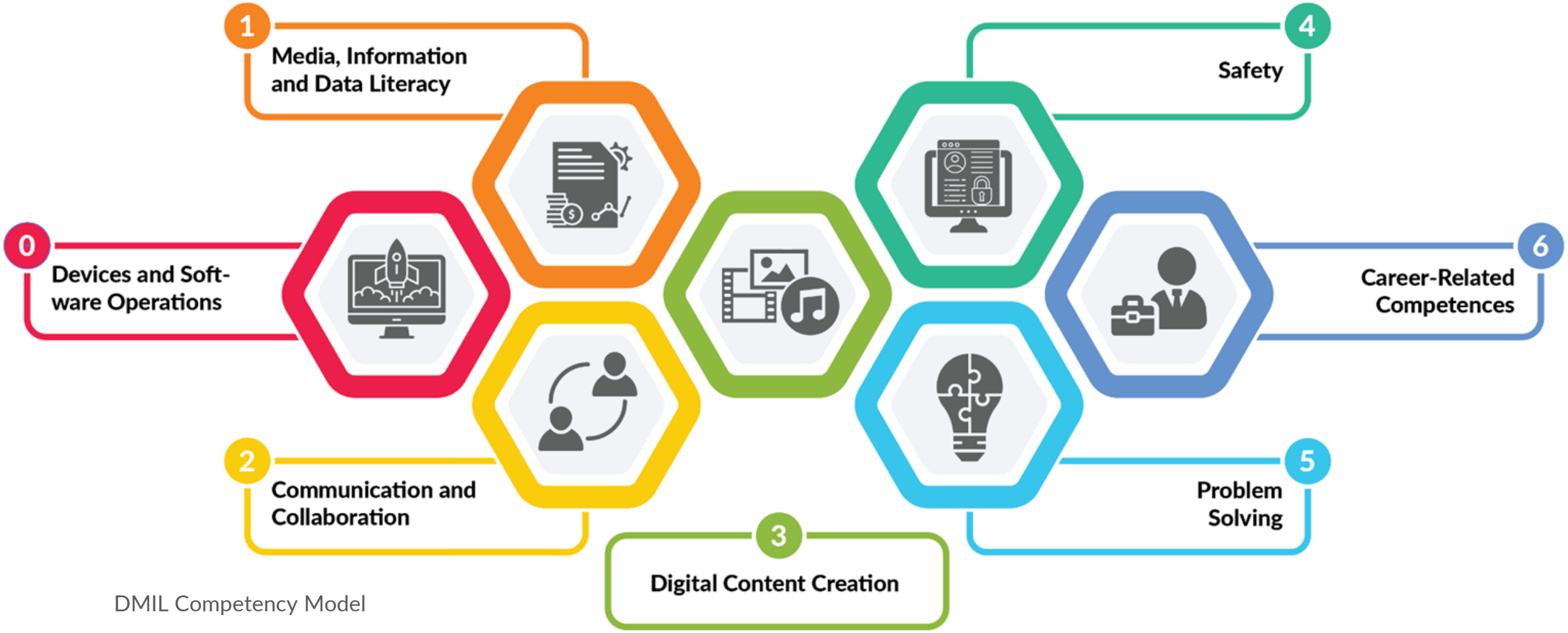
"Measurable societal progress towards SDG4 – future skills"

What is DMIL - Digital, Media and Information Literacy?

A Convergence of Essential Literacies for Today's Digital Economy

Term	Objects of interest
Media literacy	"the ability to understand, select, evaluate and use **media** as a leading purveyor and processor, if not producer, of **information**"
Information literacy	"the importance of access to information, the evaluation, creation and sharing of **information and knowledge**, using various tools, formats and channels"
ICT / Technology literacy	"the ability to use particular digital **devices, software, and infrastructure**"
Digital literacy	"an ability to effectively and critically access and evaluate **information** in multiple formats, particularly digital, and from a range of sources, in order to create **new knowledge**, using a range of tools and resources, in particular **digital technologies**"

Components of Digital Literacy



DMIL Competency Model

DATA SKILLS ARE INVALUABLE

4

Data Evaluation

The knowledge and skills required to ask and answer a range of questions by analyzing data including developing an analytical plan; selecting and using appropriate statistical techniques and tools; and interpreting, evaluating, comparing and presenting results

5

Data Application

The ability to use data to help in the decision-making and policy making process. This includes thinking critically when working with data; formulating appropriate business questions; identifying appropriate datasets; converting data into actionable information; and weighing the merit and impact of solutions and decisions.

3

Data Management

The knowledge and skills required to navigate internal and external systems to locate, access, organize, protect and store data related to the organization's needs.

6

Crime mapping and analysis

Understand Mapping concepts and collect Geospatial data using mobile devices. Operate GIS software to identify and map high crimes areas to support deployment of personnel

2

Data Collection

The knowledge and skills to gather data in simple and more complex forms to support the gatherer's needs. This could involve the planning, development and execution of surveys or gathering data from other sources such as administrative data, satellite or social media data.

1

Data Concepts

Awareness and understanding of data; Knowledge and understanding of the uses and applications of data

7

Data for Policing

To operate specialized digital technologies and to understand, analyse and evaluate specialised data, information, media and digital content for Policing; and specifically applications and technologies currently being used by Belize interagency partners

Why should DMIL Matter?

- Changing work landscape for the digital economy
- Digital literacy / Data Skills are becoming essential in-demand employability skills
- Assessment mechanisms for Employability
- Help to inform Occupational Competency-based Training
- Benchmarking / Development of a more digitally-literate workforce / labor market
- Digitally-literate consumers increase demand for digital products and services

Policy Brief – Key Recommendations

- Create a national unified standard for DMIL which has industry-specific sub-standards
- **Facilitate a more effective integration of DMIL into primary and secondary schools**
- **Enable a whole of society transformation by beginning training with the public sector and private sector workforce**
- Establish Open Assessment tools to be made available for adoption and re-use by public, private-sector and civil society
- Encourage and collaborate with a variety of Digital Literacy training initiatives to ensure consistency of standards

Measuring National Digital Literacy

Median Persona

Demographics

Name:	Marsha Smith
Gender:	Female
Age:	25-34
Education:	Grade 10/11 (or NCTVET L1 or L2)
Employment:	Full-Time
SEL:	Lower to Lower Middle
Household Income:	<= JMD $100,000 p/m
Grocery Spend	JMD $31,000

Measuring National Digital Literacy

Median Persona

Device Ownership/Access

Owns a smartphone and accesses the Internet from that device

Usage Style

Her consumption patterns favor lifestyle (social and entertainment) activities rather than “office-oriented” ones, so much so that she is unlikely to have used word-processing or spreadsheet applications within the last three months.

Thank You !!!