



JAMPRO
TRADE & INVESTMENT JAMAICA

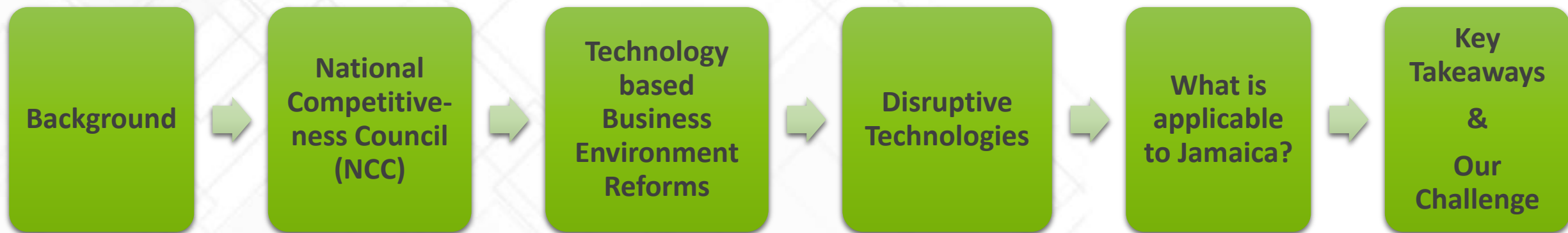
How Technological Disruptions Can Support Growth

Impact of the implementation of technological innovations on Jamaica's Competitiveness/ Business Environment

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Presentation Outline



Background – Historical context of innovation/technology

In the 1500s, China's economy was the **strongest in the world**.



By the 19th century, the U.S., Western Europe, and Japan had leapfrogged over China by churning out goods and services in vast quantities while the former superpower stalled.

Main reasons why?

Background – The context of innovation/technology

Innovation & Business Environment made the difference:

Steam Engine Trains



But not just innovations in technology; modern economic growth also came from **organizational innovations** – free markets that improved competitiveness.

National Competitiveness Council (NCC)

Jamaica Business Reforms

Powered by the



Jamaica Business Environment Reforms Agenda (BERA) is driven by the National Competitiveness Council (NCC), which is a public-private partnership body established in 2010 to **drive changes in policy and research.**

The NCC also generates **awareness** of reforms that enable an efficient and advanced business environment in Jamaica.

NCC is managed by JAMPRO | Website: Jamaicabusinessreforms.com

Business Environment Reforms Agenda (BERA)

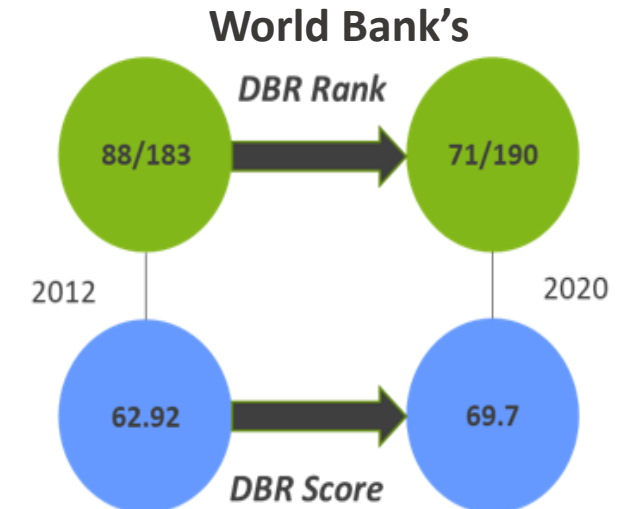
1. Matrix of **over 30 reforms** that is updated quarterly
2. Includes reforms that address the entire life cycle of a company
3. Main means of monitoring & tracking progress of reform projects

National Competitiveness Council (NCC)

- Private Sector Support
- Committed Membership – public private partnership
- Private Sector Support
- Strong Governance Structure
- Strategic Funding Partners – GOJ & World Bank

A country's private investment flows is directly impacted by the **ease of doing business and the countries competitiveness**

Jamaica has traditionally used the **World Bank's Doing Business Report (DBR)** as a proxy to rank & score its performance



National Competitiveness Council (NCC)

Ten Main Business Environment Reforms

1. Starting a Business
2. Getting Electricity
3. Registering Property
4. Getting Credit
5. Protecting Minority Investors
6. Paying Taxes
7. Trading Across Borders
8. Dealing with Construction Permits
9. Enforcing Contracts
10. Resolving Insolvency



Very important to get the fundamentals addressed first

National Competitiveness Council (NCC)

Implemented reforms that leveraged technology

Starting a Business

Electronic Business Registration Form - (Companies Office)

Paying Taxes

Tax payments via NCB platform

Tax Compliance Certificate (TCC) System - (TAJ)

TCC Auto renewal the week of Feb
12th - 53

Trading Across Borders

Port Community System (Tracking of cargo)

Integrated with:

- *Jamaica Single Window for Trade (JSWIFT)*
- *Automated Systems for Customs Data (ASYCUDA) which includes ExportJa Online*

Exporters Registered online as of
August 2020 – over 200

National Competitiveness Council (NCC)

Implemented reforms that leveraged technology

Getting Electricity

MyJPS Mobile App launched to request services

Dealing with construction permits

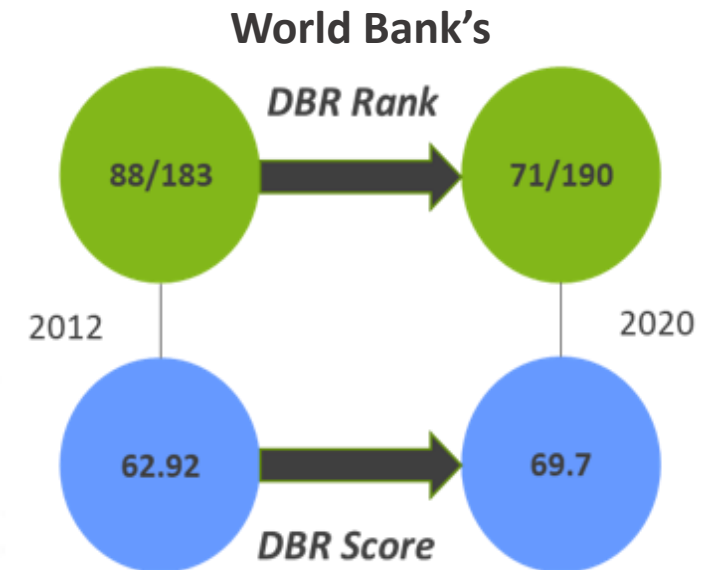
Jamaica Development Application Portal

- Apply for permits, check status

Impact of Business Environment Reforms

Tech-based reforms have a significant impact on Jamaica's competitiveness, investments and economic growth

Technology improves access, convenience & efficiency



Question

What technology-based business environment reforms can enable Jamaica to leapfrog our competitiveness globally?

Enabling use of
a Digital
Currency



Improvements in
national banking
payment system

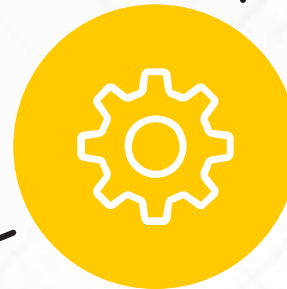


Future
reforms?

Utilisation of
Blockchain



Digital Transformation of
Government Services



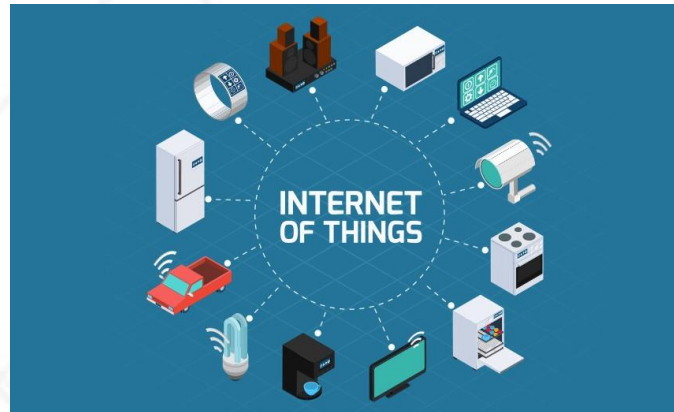
10 Globally emerging or disruptive technologies

Renewable Energy/Energy Storage



The purpose of energy storage is to capture energy and effectively deliver it for future use. ... There are several methods for storing energy such as mechanical, electrical, chemical, electrochemical, and thermal.

Internet of Things (IoT)



The Internet of things describes the network of physical objects—“things”—that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the Internet. **RFIDs**

Space Colonisation



Space colonization (also called space settlement or extraterrestrial colonization) is the hypothetical permanent habitation and exploitation of natural resources from outside planet Earth. **Example SPACEX**

10 Globally emerging or disruptive technologies

Agtech



Agricultural technology or agrotechnology is the use of technology in agriculture, horticulture, and aquaculture with the aim of improving yield, efficiency, and profitability. Vertical farming, green house farming

Automation of Knowledge work/Advanced Robotics



Knowledge Work Automation, as stated by McKinsey & Company is, “the use of computers to perform tasks that rely on complex analyses, subtle judgments, and creative problem solving”

Blockchain Technology

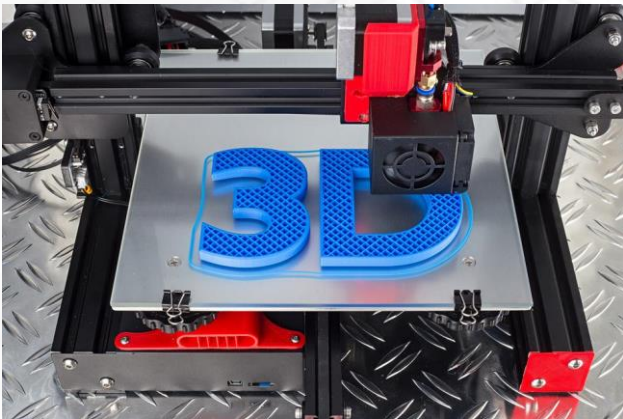


Blockchain is a system of recording information in a way that makes it difficult or impossible to change, hack, or cheat the system. A blockchain is essentially a digital ledger of transactions that is duplicated and distributed across the entire network of computer systems on the blockchain.



10 Globally emerging or disruptive technologies

3D Printing



3D printing, or additive manufacturing, is the construction of a three-dimensional object from a CAD model or a digital 3D model.

Medical Innovations



Medical innovation also means increasing knowledge and transforming existing process and business models to better serve changing needs and expectations. Big data, artificial intelligence, and other technologies are fueling a wave of health innovations around the world. CRISPR/Genetic Engineering

High Speed Travel/Trains



High-speed trains form the core of high-speed railway systems, which are a means of transport directly serving passengers. In order to achieve stable and safe operation quality at high speeds, the train system combines high-speed wheel-rail technology, high-efficiency traction technology, and high-reliability brake technology. Hyperloop and high-speed trains project reaching speeds of up to 600mph

Globally emerging or disruptive technologies

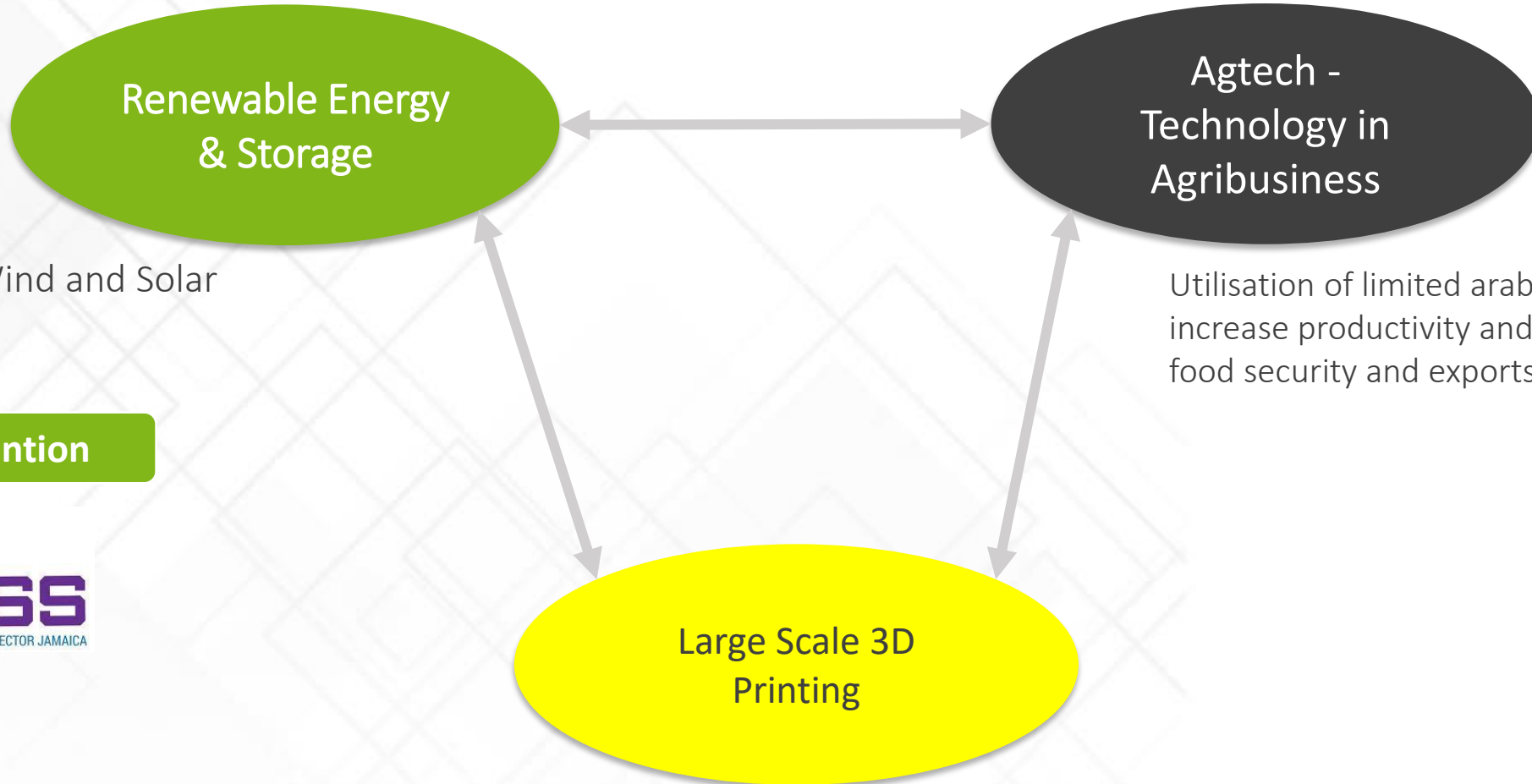
Disruptive Outsourcing



Disruptive outsourcing is outsourcing that involves the use of certain technological advancements. These technological advancements may include robotic process automation and cloud computing. Disruptive outsourcing solutions have an ever-growing presence in today's outsourcing market and have been beginning to compete with traditional outsourcing solutions.

Source: <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Process-and-Operations/gx-2018-global-outsourcing-survey-executive-summary.pdf>

Disruptive Technologies applicable to Jamaica ecosystem



Wind and Solar

Agtech -
Technology in
Agribusiness

Utilisation of limited arable landspace to increase productivity and consistency – food security and exports

Large Scale 3D
Printing

Manufacturing plants in SEZs

Special mention



Agribusiness Case Study – Netherlands

The Netherlands is not only food secure, but also can claim the moniker of feeding the world with three quarters of output being exported across the globe. **As the second largest exporter of food globally**, the Dutch produce and trade a variety of products from flowers and food crops to agricultural machinery.

Indicator	Jamaica	Netherlands
Value of Production 2018 (US\$000s)	1,905,195	15,689,693
Arable Land (hectares)	444,000	1,815,000
Average Farm Size	85% producing or less than 5 hectares	26 hectares
Employed Labour Force 2018	189,450	166,767
Output Per Worker (US\$)	10,056.45	94,081.52
Leading Products (Crops)	Sugar cane, yams, coconuts	Sugar beet, potatoes, onions
Intensity of Production	62%	32%
Fisheries (Tonnes)	15,346	411,714
Exports of products 2019	331,691	102,411,270
Leading Products	Alcohol, tubers, beer	Live Plants, flowers and cheese
Imports of products 2019	1,054,133	68,444,957
Fiscal Incentives	Productive Input Relief	R&D and Innovation Incentive
Tax Rate	25%	Standard rate - 25%

Jamaica's export of products vs Netherlands

- **0.32%**

Agribusiness Case Study – Netherlands

Jamaica's Core Agriculture Exports vs Netherlands

Country Comparison of Product Group Yield in 2018

Country	Cereals	Citrus Fruits	Fruits	Pulses	Roots and Tuber	Vegetables
Jamaica	11,482	124,178	125,025	11,183	169,890	159,448
Netherlands	79,051	Not available	366,874	40,496	366,061	543,226

For consideration:

- Should Jamaica consider pivoting to other crops which have more potential for larger global demand?
- Focus more on value added export agriculture products?

Key Takeaway

There are numerous emerging and disruptive technologies currently at play; there is a need to make a comprehensive assessment of which is the best fit to drive and recover our economy.

Recommendations:

- Agtech or Technology in Agribusiness
- Renewable Energy/Energy Storage
- Global Services Sector

Our Challenge

While economic and social challenges as well as the pandemic has Jamaica in survival and recovery mode; it is important to shift the mindset towards recognizing our innate capabilities of being global innovators/disruptors and to implement programmes designed to develop the younger generation.

Thank You