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Empower People

**Digital Currency -
Caribbean Competitive
Landscape**

Prepared by Bitt Inc.
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INTRODUCTION

Differences in economic growth and inter-country income inequality can be attributed to technological variations among different countries. Through this lens, efficient use of technological innovation and science can be used to: reduce costs, improve productivity, allow for cheaper production, capital accumulation, increase international competitiveness and enhance scientific research capabilities.

Efficiency in growth rate of an economy is just as important as its size.

DIRECT JOB CREATION

Around the world, the ICT sector has proven to be, and is expected to remain as one of the largest job producers.

- USA: 22% growth in computer and information technology jobs by 2020 → 758,800 new jobs
- Australia: 25,000 jobs will be produced through the maintenance of the new super-fast National Broadband Network

Unevenness is expected in the different segments:

- USA: 1 new job in the high tech industry created leads to 5 additional new jobs in other sectors
- 2013 experienced 8% growth rate in the global tech market which led to increased jobs, and enhancing the range of services and products available.

CONTRIBUTION TO GDP GROWTH

- Emerging markets have experienced a 10% increase in broadband penetration, 1.4% increase in GDP growth.
- Globally, GDP per capita growth increased by 0.5% because of the doubling of mobile data created by the increase in 3G connections.
- 3.4% of the overall GDP in some countries is accounted for by the Internet.
- E-commerce- the advertising of goods online drives this effect.

EMERGENCE OF NEW SERVICES AND INDUSTRIES

- One key trend for modernization: transition to cloud computing
- Government of Moldova one of the first in Eastern Europe & Central Asia to shift government IT infrastructure into the cloud & launch mobile e-services for citizens and business
- Completely new sector in ICT: the app industry
- In 2011 182,000 jobs created by Facebook apps
- Aggregate value of Facebook app economy exceeds \$12 billion

WORKFORCE TRANSFORMATION

- “Microwork” platform (created by oDesk, Amazon and Samasource) allows tasks to be outsourced to contractors by dividing them into smaller factors
 - Most contractors are from emerging economies.
 - Microwork platform reduces costs, and allows access to highly qualified workers.
 - In 2012, oDesk had 3 million registered contractors.
- Developments in the ICT sector enable the rise in entrepreneurship and digital based roles. This stems from the easy access to best practices, a wealth of information and marketing investment

BUSINESS INNOVATION

The Internet provides merchants and vendors with new ways of reaching out to customers and competing for market share. Over the past few years, social media has established itself as a powerful marketing tool. ICT tools employed within companies help to streamline business processes and improve efficiency. The unprecedented explosion of connected devices throughout the world has created new ways for businesses to serve their customers.

HOW CAN FINANCIAL TECHNOLOGY SOLVE THE PROBLEMS IN THE REGION?

We have seen the five areas in which technology has made a positive contribution to the economy.

Let's focus on drilling into one aspect of technology that can directly increase economic growth: Financial Technology.

Now, let's look at the issues plaguing the caribbean.

CARIBBEAN SYSTEMIC FINANCIAL PROBLEMS



High Settlement Times



Financial Inclusion and Unbanked Citizens



Lack of Banking Infrastructure



Fragmented Currencies



Restrictive Barriers to Ecommerce and Innovation in Payments



High Remittance Cost



No Open Gateways and Open Payment Standards



De-Risking

THE ANSWER IS BLOCKCHAIN

Blockchain and Distributed Ledger

Technology is the only real solution to a problems of this magnitude because it suspends the need for complicated correspondent linkages and makes all transactions transparent and traceable.

BLOCKCHAIN TECHNOLOGY

A blockchain is an append-only database of transactions that cannot be tampered with. It consists of two key elements:

- A shared, replicable ledger
- A distributed database-synchronizing mechanism known as a consensus algorithm
- Triple ledger entry bookkeeping
- Publicly verifiable and immutable ledger

BLOCKCHAIN AND DISTRIBUTED LEDGER TECHNOLOGY

A blockchain is an append-only database of transactions that cannot be tampered with. It consists of two key elements:

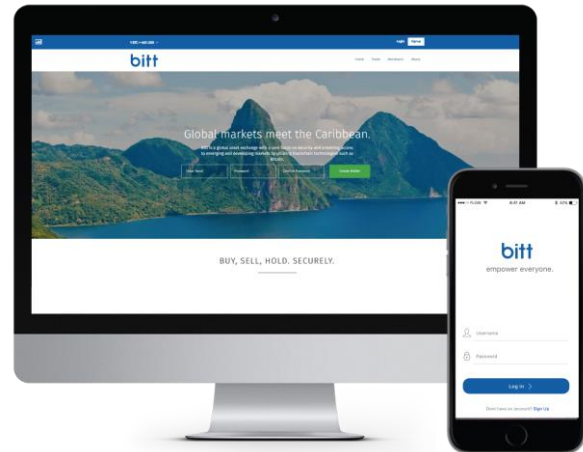
- A shared, openly accessible, replicable ledger
- A distributed database synchronizing mechanism known as a consensus algorithm
- Triple ledger entry bookkeeping where every transaction that takes place on a distributed ledger has a mathematical receipt
- Publicly verifiable
- Immutable ledger

BENEFITS OF A BLOCKCHAIN

- It is '**trustless**' and allows for 'trust and verification' for all transactions committed to the ledger.
- It operates through consensus and cannot be tampered with by an individual or entity.
- Immutable public records of transactions which add to transparency and compliance measures
- It removes the risk of forgery that fiat currency carries and eliminates the 'double-spend' problem.
- It enables an interconnected financial ecosystems.

A BIT ABOUT BITT

Bitt is a Financial Technology company utilising the Bitcoin and other blockchain technologies to bring the world of digital currency to the Caribbean basin. We facilitate secure peer-to-peer transactions with frictionless mobile money across a suite of Bitt Software and Mobile Applications at 3 Layers of the Money Base. Our services allow all financial transactions to become digital, affordable and openly available to everyone.



BITT: LAYERS OF OUR SOFTWARE

LAYER 1

Asset Issuance

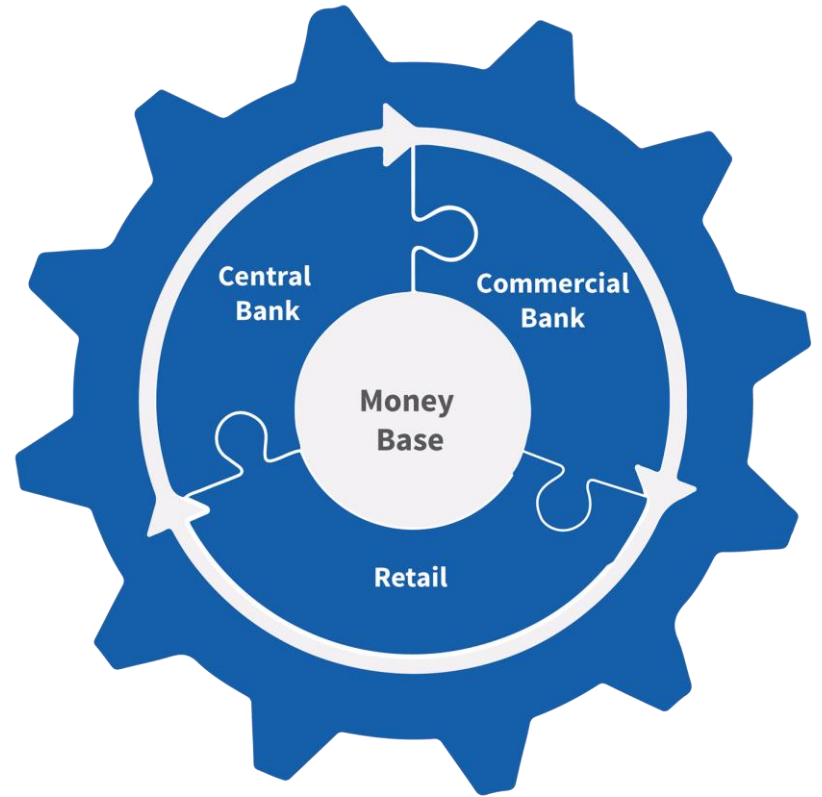
LAYER 2

Asset Distribution

LAYER 3

Asset Interface

AN INTRO TO THE DIGITIZATION OF THE MONEY BASE SUPPLY CHAIN



BUILDING BLOCKS: DIGITAL MONEY

- Digital assets are cryptographically-secured tokens that hold value and can be transferred between two parties without the need of a central counterparty.
- Bitcoin is an example of one such digital asset but the technology can be built upon.
- Utilize blockchain technology such as Bitcoin, Ethereum, side-chains and micropayment channels to accomplish a **digital fiat currency**.
- With blockchain-backed cash **the transaction is the settlement**.
- These Digital Assets open the door to Smart Economies

MOBILE MONEY IMPACT ON A GLOBAL ECONOMY

- A study published by McKinsey & Company predicts that mobile digital payments could boost the GDP of emerging economies across the world by \$3.7 trillion by 2025.
- Nearly two thirds of this forecasted increase would stem from increased productivity of financial and non-financial businesses, and governments, as a result of digital payments.
- The remaining third would be aligned to financial inclusion of the unbanked and Micro, Small and Medium Enterprises.
- Bank of England research shows that a Central Bank Digital Currency issuance of 30% of GDP, against government bonds, could permanently raise the UK's GDP by as much as 3%..

THE CARIBBEAN SETTLEMENT AND PAYMENTS SYSTEM FRAMEWORK

- Bitt is building a payments ecosystem to achieve a cashless society (Barbados)
- Facilitating the digitization of base physical cash (Central Bank of Barbados)
- Building a network of trust: creating a compliant environment that can protect users. (Bitt.com)
- Empowering a Caribbean settlement network through the facilitation of Bitt Technology
- Engaging every Caribbean citizen through software solutions **designed** for the region

TOWARDS THAT FUTURE

- ✓ Lack of regulatory frameworks - Collaborating with regulators and officials by advising and providing counsel.
- ✓ Slow pace of business - Foster an international culture in the company through value added partnerships and international best practices.
- ✓ Jurisdictions with different laws - target regional leaders and address amendments to laws to enable a payment network.
- ✓ Large compliance cost - aid in the creation of industry-leading compliance and legal frameworks for the good of all Caribbean users.
- ✓ Correspondent bank pressures - international regulatory licensing.
- ✓ Cash dominant remittance market - internet and mobile penetration levels.
- ✓ Cash digitization - removing the Caribbean's crippling dependency on cash.
- ✓ No network - create a network of gateways based on blockchain technology at all three layers of the monetary base
- ✓ Strained regional relationships - harmonization of regional bodies through a unified network

1% change in financial development increases growth in real per capita GDP by 3.6%

*E.g. per GDP/capita of 1,000 growing at 1% p.a. will be increased to 1,010.36 Based on Beck, Demirgüç-Kunt, and Levine (2004): "Finance, Inequality and Poverty: Cross-Country Evidence" and King and Levine (1993): "Finance, entrepreneurship, and growth"
Source: EIU; World Bank; BCG experience*

With all the innovation occurring in the FinTech industry driving economic growth, it is of the utmost importance to have the support of the Caribbean region as a whole.

Moreover, it is crucial for Caribbean businesses to get involved in the innovation themselves, so that we can all work together to drive technological innovation, improving efficiency and increasing economic growth in the region.

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