

# A Regulator's View of FinTech: The Balancing Act



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**Cairo, Jan 2019**

# Agenda



1

Overview of Financial Technology

2

The Bali Fintech Agenda

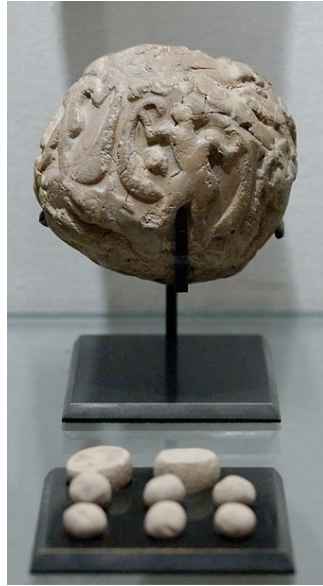
3

Regulatory Approaches and Instruments to  
FinTech Innovation

4

Recommendations for Regulators on FinTech  
Innovation

# Best available technology has always been used for money: to validate and record balances...





...provide safekeeping,...





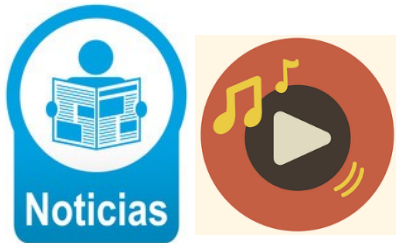
...and facilitate transfers



# Technology is transforming every industry



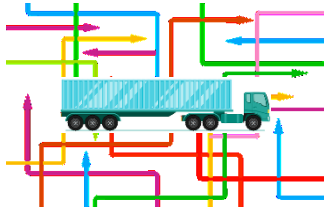
Always available



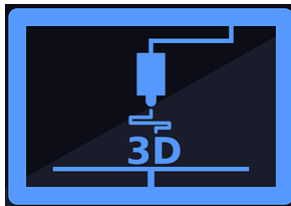
Where you want it

Buy only what you want

Contextualization



Asset-light business



On-demand delivery

Tailored product

## Banking has lagged

### NEW HOURS EFFECTIVE SEPTEMBER 1, 2017

#### MAIN BANK

##### LOBBY HOURS

Mon-Fri: 8:30am - 5:30pm

Sat: Closed

##### DRIVE UP HOURS

Mon-Fri: 7:30am - 6:00pm

Sat: 9:00am - 1:00pm

#### HAMBURG

##### LOBBY HOURS

Mon-Fri: 8:30am - 5:30pm

Sat: Closed

##### DRIVE UP HOURS

Mon-Fri: 8:00am - 6:00pm

Sat: 9:00am - 1:00pm

#### NORTH CROSSETT

##### LOBBY HOURS

Mon-Fri: 8:30am - 5:30pm

Sat: Closed

##### DRIVE UP HOURS

Mon-Fri: 8:00am - 6:00pm

Sat: Closed

#### FOUNTAIN HILL

##### DRIVE UP HOURS

Mon: 10:00am - 1:00pm

Tue: Closed

Wed: 10:00am - 1:00pm

Thu: 10:00am - 1:00pm

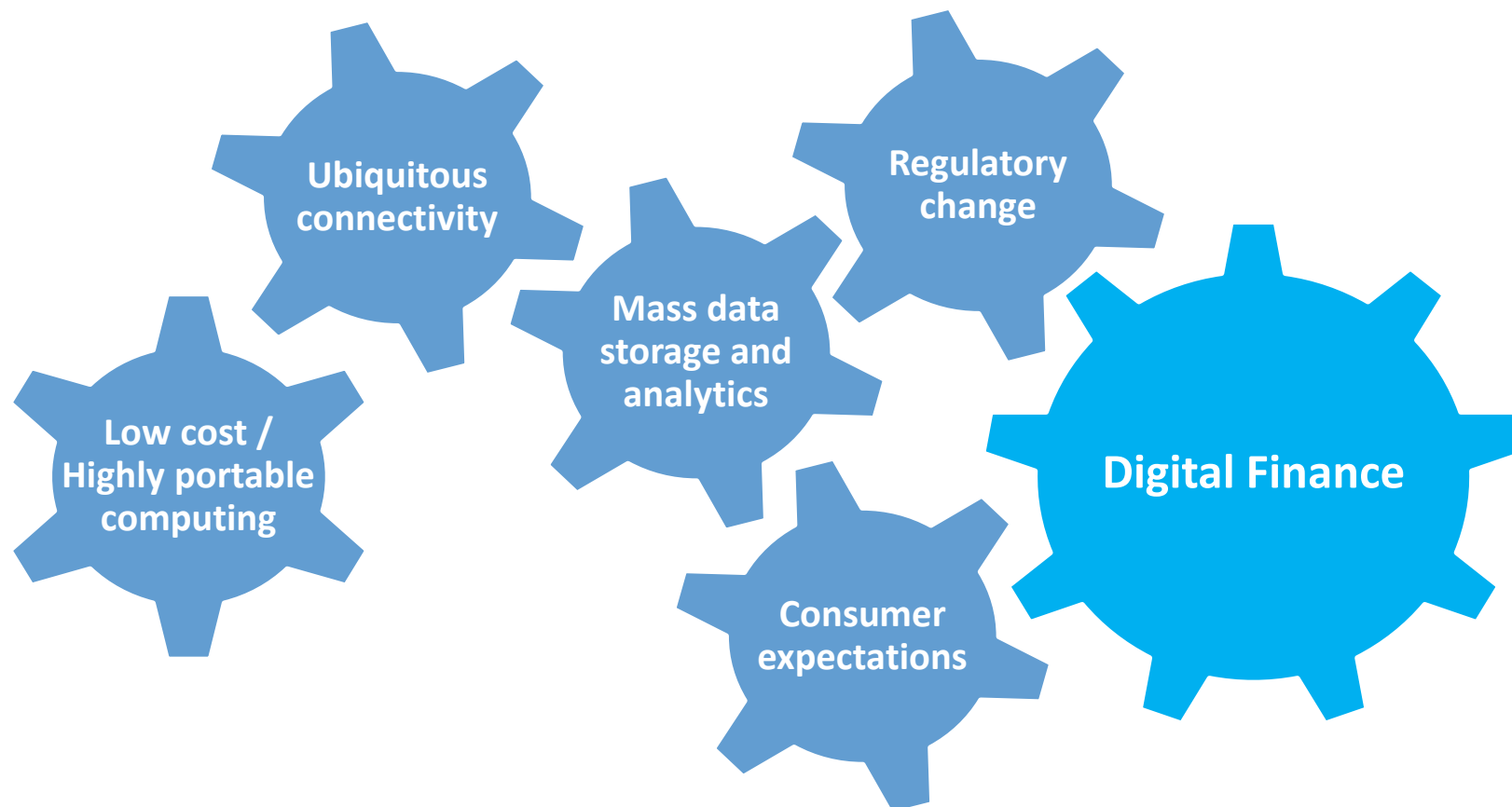
Fri: 9:00am - 4:00pm

Sat: Closed









LOCALLY  
GROUNDED

# Drivers of digital transformation in financial services



# Digital solutions are transforming the delivery of products and services across sectors

		Traditional solutions	Digital solutions	
Private Sector	Health	<ul style="list-style-type: none"> <li>Traditional healthcare is doctor/hospital-centric and difficult/slow to scale</li> </ul>	<ul style="list-style-type: none"> <li>Digital solutions are transforming access/affordability and, together with AI, showing growing potential for diagnosis &amp; preventive care</li> </ul>	
	SMEs	<ul style="list-style-type: none"> <li>Small/informal enterprises lack access to markets / credit</li> </ul>	<ul style="list-style-type: none"> <li>Online platforms and market places are accelerating access to markets/credit (Taobao serves over 4.5 million SMEs in China)</li> </ul>	
	Agri-business	<ul style="list-style-type: none"> <li>Isolated farmers work in a traditional and inefficient manner</li> </ul>	<ul style="list-style-type: none"> <li>Access to information helps farmers improve yield/connect with supply chains (mKrishi increased farmer profitability by 45% in India)</li> </ul>	
	Power	<ul style="list-style-type: none"> <li>Due to limited grid coverage, rural populations are left without electricity</li> </ul>	<ul style="list-style-type: none"> <li>Off-grid energy solutions linked to e-payments give access to remote populations (50M users so far, out of 1.2B lacking access to energy)</li> </ul>	
Government	Tax	<ul style="list-style-type: none"> <li>Informality and lack of enforcement lead to significant tax avoidance and leakage</li> </ul>	<ul style="list-style-type: none"> <li>Digital payments allow governments to increase tax revenue (Tanzania's VAT digitization efforts expected to increase tax revenue by \$477M)</li> </ul>	
	Government payments	<ul style="list-style-type: none"> <li>Corruption and overpayment (e.g., ghost workers, duplicate social transfer recipients)</li> </ul>	<ul style="list-style-type: none"> <li>Digital ID and payments ensures direct transfer of payments to confirmed recipients (reduce government leakage by \$110B)</li> </ul>	

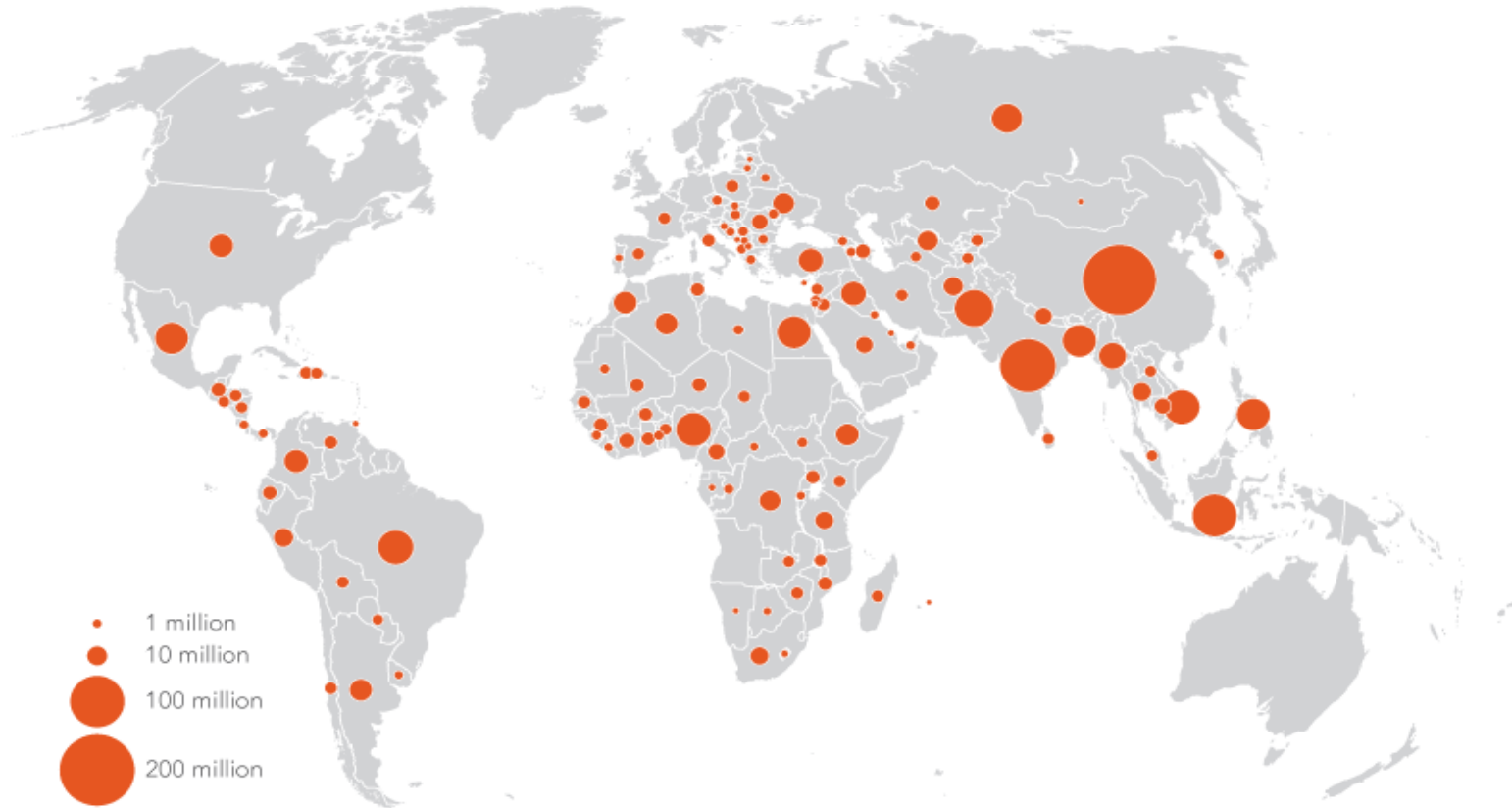




# Advances in Financial Technology hold the key to achieving the World Bank goal of Universal Financial Access by 2020

## Two-thirds of unbanked adults have a mobile phone

Adults without an account owning a mobile phone, 2017

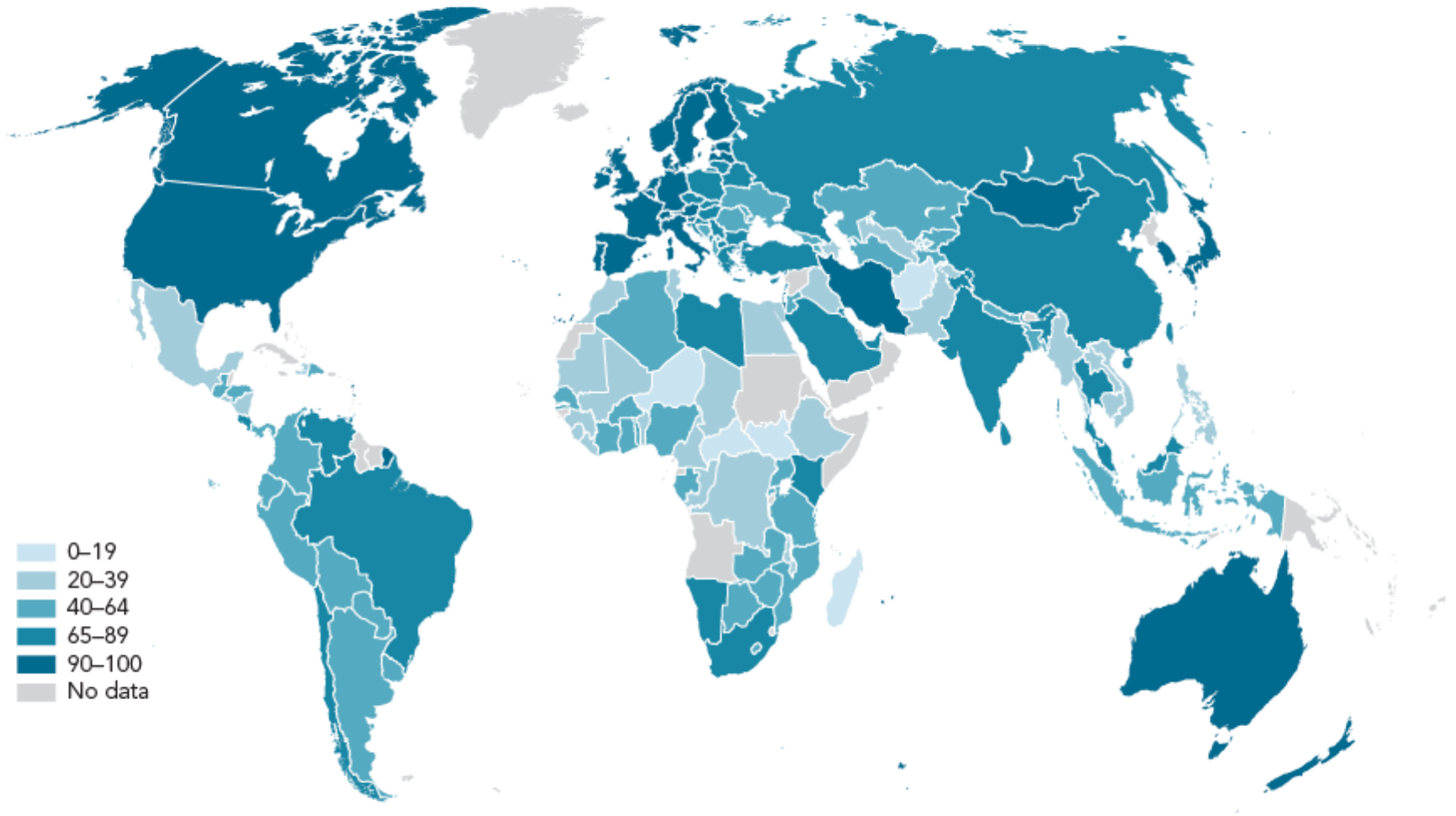


Sources: Global Findex database; Gallup World Poll 2017.

Note: Data are not displayed for economies where the share of adults without an account is 5 percent or less.

# Globally, 69 percent of adults have an account, up from 51 percent in 2011

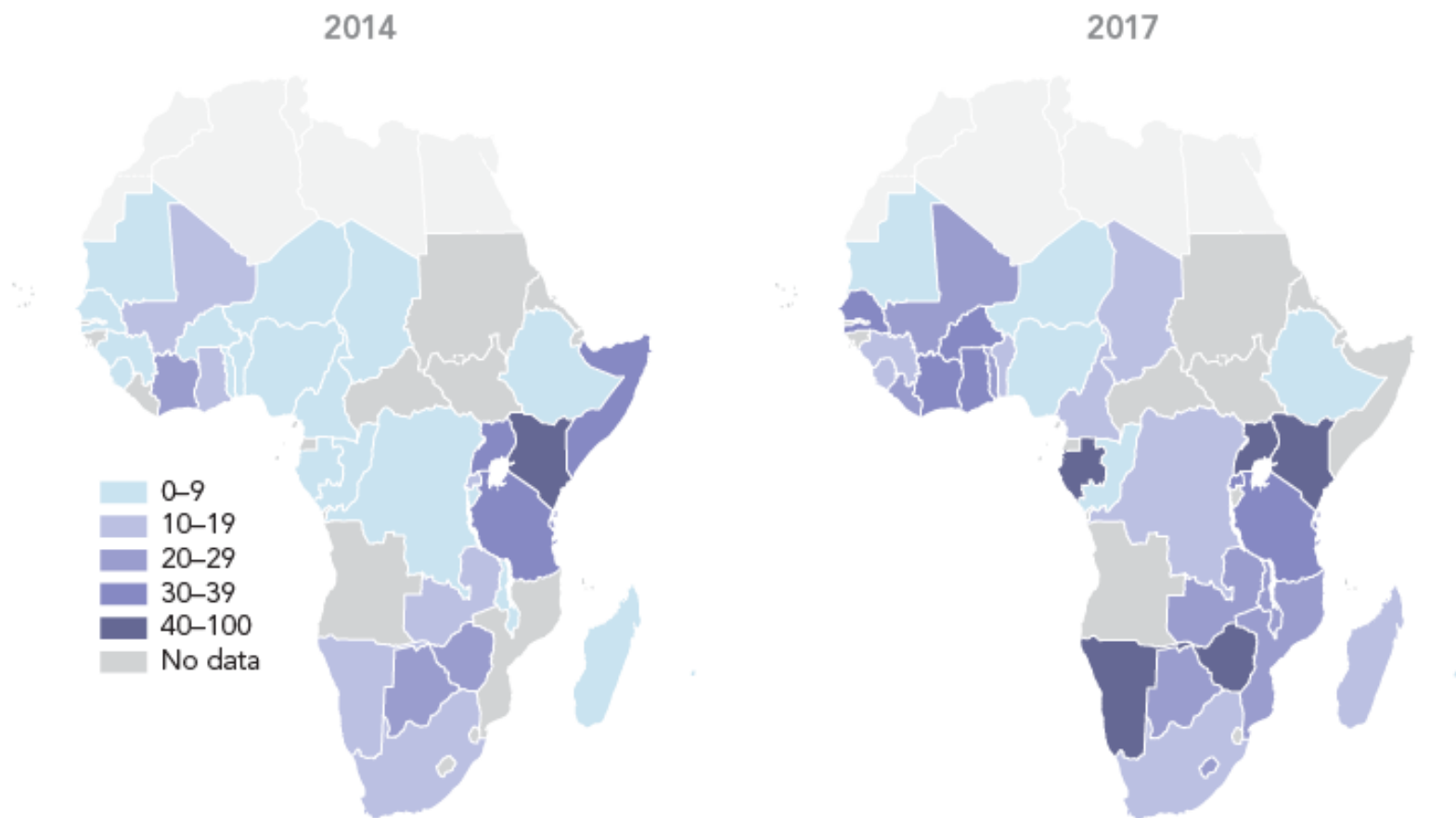
Adults with an account (%), 2017



Source: Global Findex database.

# In Africa in particular, access has been driven by mobile money

Adults with a mobile money account (%)



Source: Global Findex database.

Note: Data are displayed only for economies in Sub-Saharan Africa.



# FinTech is helping address broader inclusion, which remains a challenge even for those with access

## Inclusion Challenges

1. High cost to serve small borrowers and savers, relative to revenue potential
2. Risk due to lack of credit history and collateral
3. Lack of skills, financial literacy, and bankability



Improved access, and automation of services, to reduce cost-to-serve



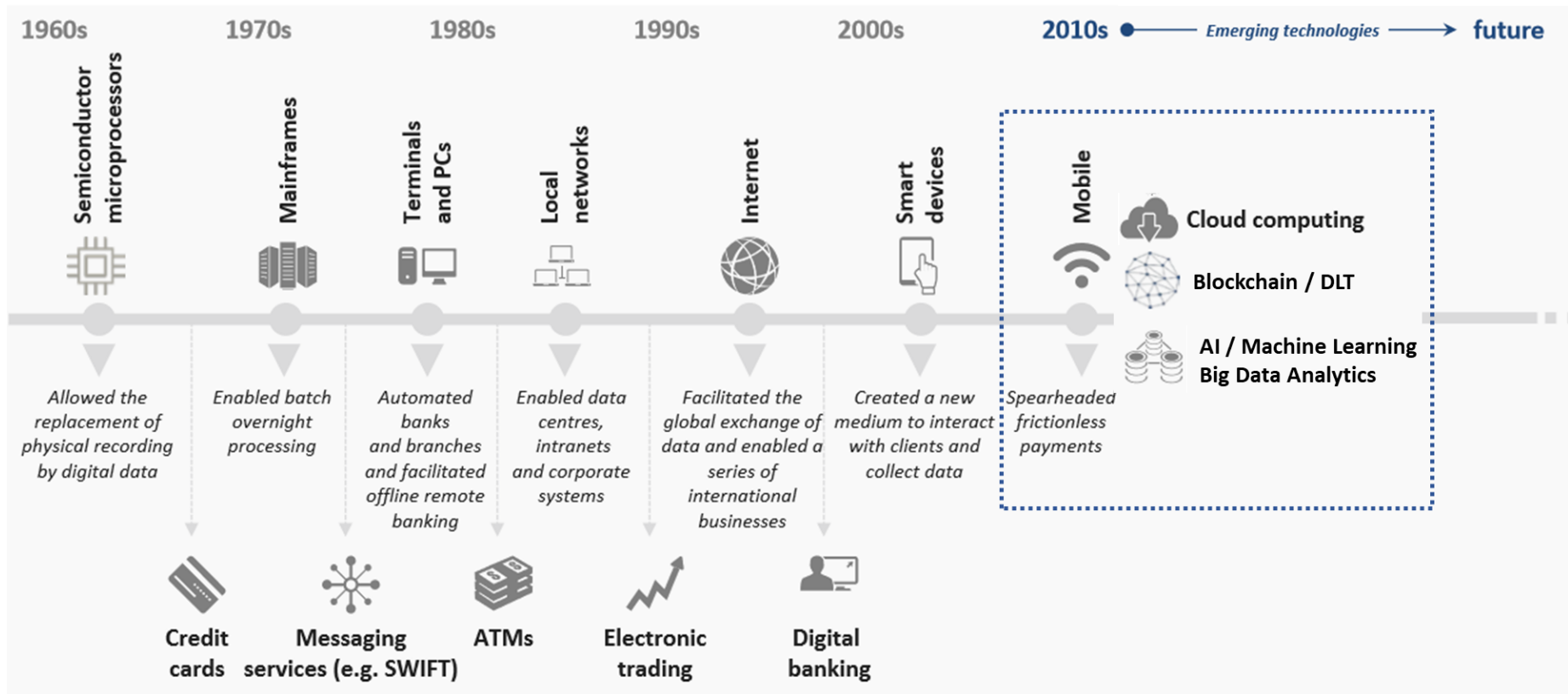
Leveraging data and connectivity of people and assets to assess and manage risks



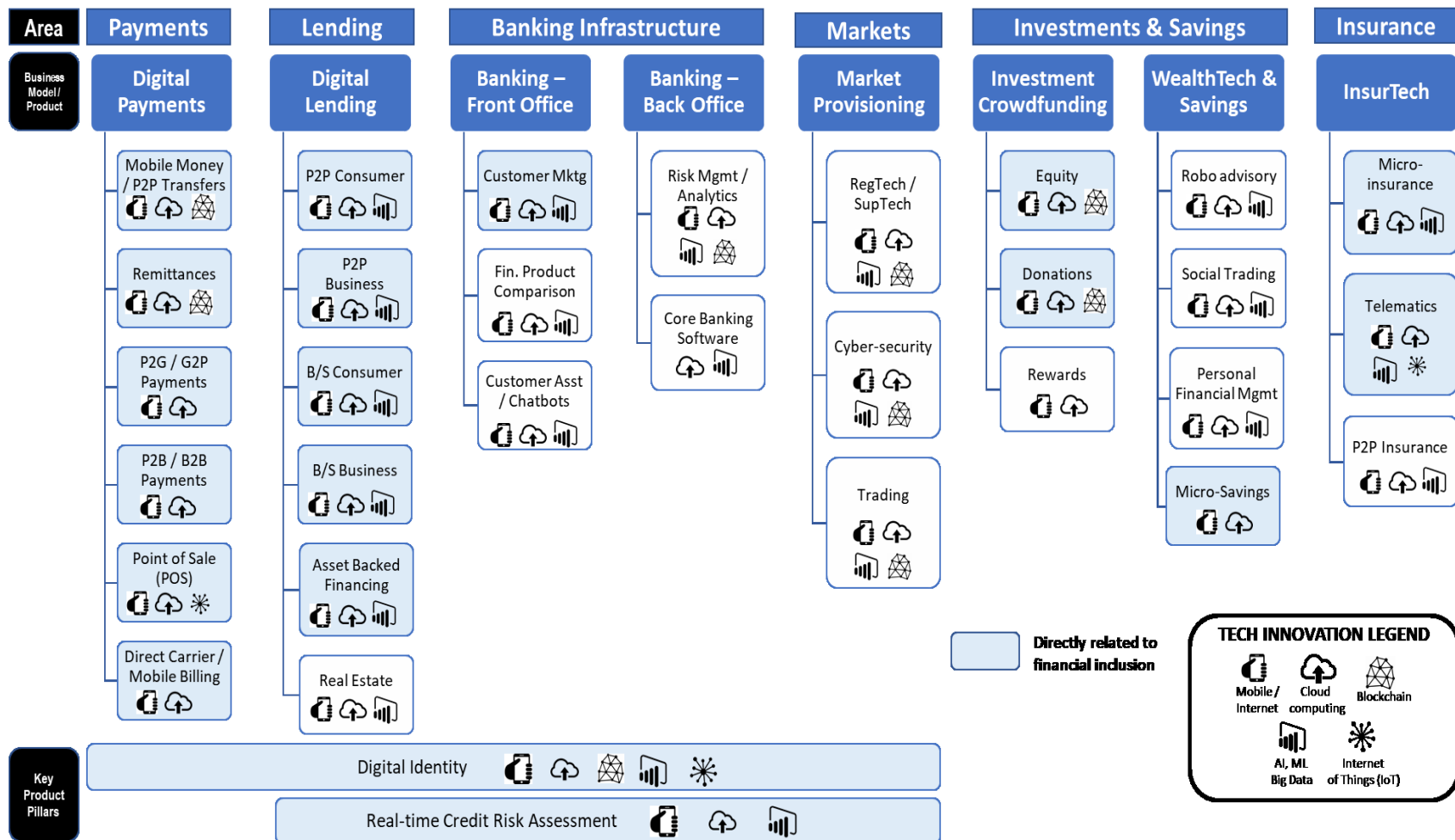
Tailored products and non-financial services appropriate to each segment

Potential Fintech-enabled Solutions

# The pace of technology adoption is accelerating

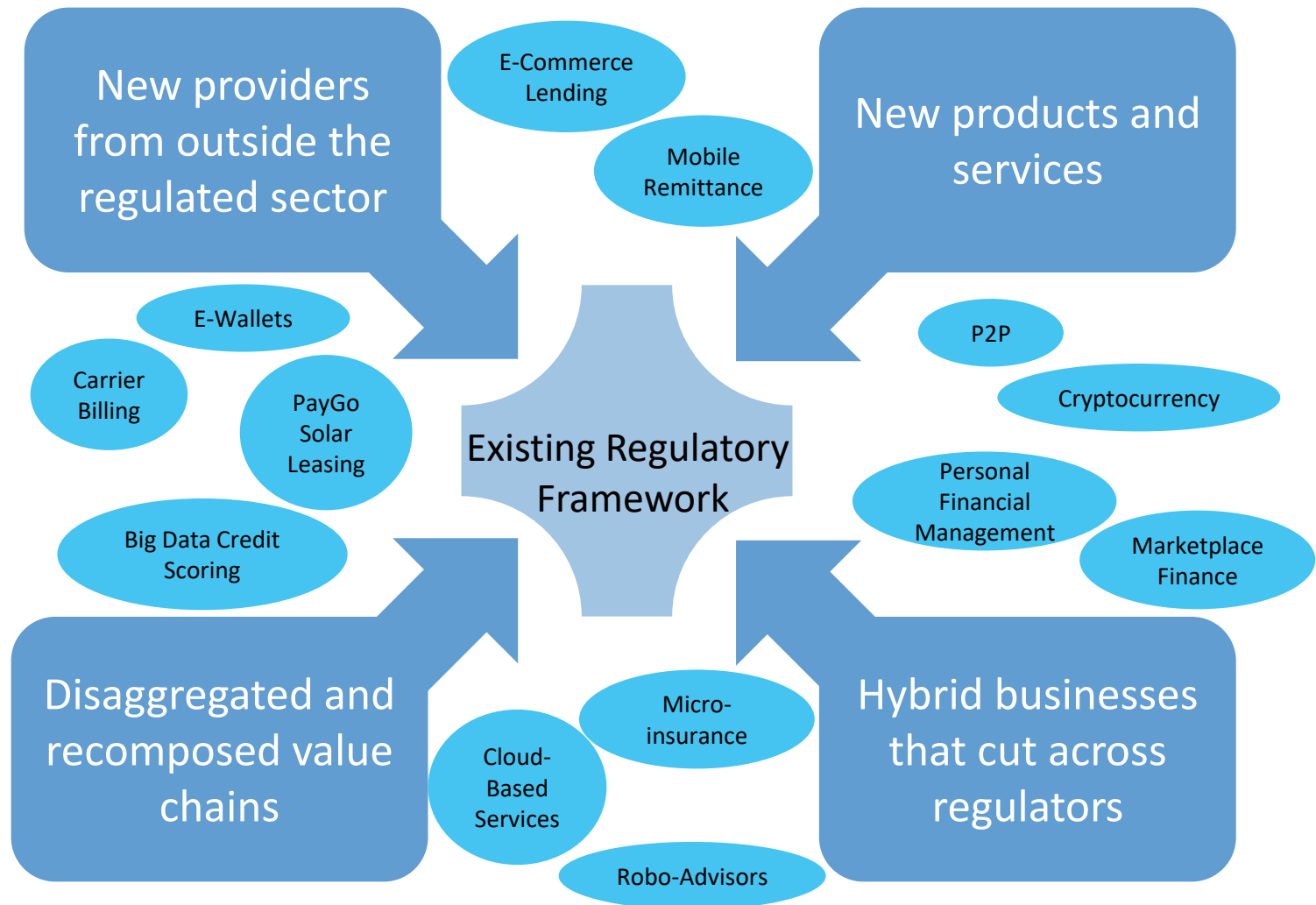


# FinTech is impacting a wide range of financial services..





# ...and re-configuring business models in ways that challenge existing regulatory approaches



# Impact of FinTech on Regulatory Objectives

## Regulatory Objectives (I – SIP Framework)

### Key Benefits

### Key Risks

#### Financial Inclusion

- **Lower costs and more efficient** than traditional and/or informal systems
- **Access to credit via alternative data sources** for unbanked and underbanked
- **Simple, more reliable, and significantly faster** than informal methods

- **Micro-segmentation of risk** through use of Big Data analytics may lead to financial exclusion
- **High borrowing rates on digital loans**, which make it difficult to fully repay
- **Gender bias and/or income inequality** from the use of AI, ML and Big Data analytics

#### Financial Stability

- **Increased diversification of deposit base and loan portfolios** can reduce concentration among systemic financial institutions
- **Improved data quality and risk data aggregation** can increase systemic resilience

- **Increased financial interconnectedness** may result in expedited adverse financial shocks
- **Increased operational risks**, such as cyber risks, may increase systemic risk

#### Financial Integrity

- **Promote traceability of transactions**, supporting CFT
- **Facilitate easier verification for KYC process**, thereby reducing compliance costs
- **Regulators' use of technology** to support financial integrity

- **Virtual currencies may facilitate anonymous funding sources or payments** rendering AML/CFT checks to be difficult
- **Decentralized nature of blockchain/DLT may render AML/CFT enforcement unclear** if operating outside of country

#### Consumer Protection

- **Increased transparency, more and better information** to consumers, reducing information asymmetries
- **Comparison of financial products and services** more quickly and easily

- **Limited transparency of fees and charges**, which can mislead consumers
- **Over-indebtedness** due to lack of visibility of multiple digital loans of each borrower, push loan tactics
- **Lack of data protection**, leading to misuse of customer data

# Regulators must balance the risks and benefits of financial innovation

Leveraging the digital opportunity does not come without challenges

- Potential Risks to **financial stability, integrity** and **consumer protection**
- **Trade-off between policy objectives:** How to reach the appropriate balance?

Challenges

Ensuring  
control of  
potential risks

Financial  
Inclusion

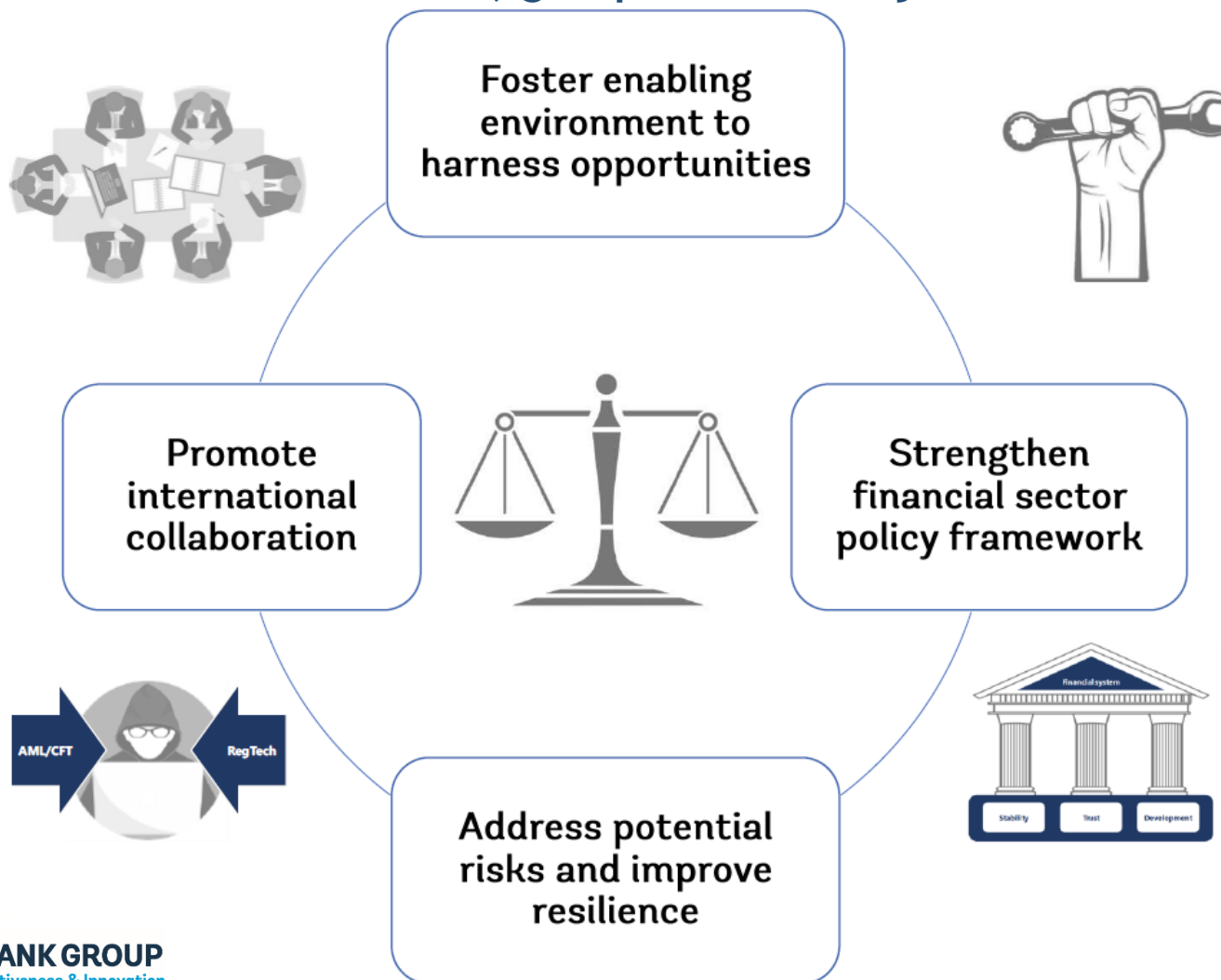
(new better and  
more affordable  
Financial  
Services)

- **Game-changer:** exponential technologies (internet connectivity, mobile, cloud)
- **Expand and enhance offerings**
- **Reduce the cost** of serving the bottom of the pyramid
- **Improve convenience:** collection and analysis of data for enhanced customization.



# World Bank – IMF Bali Fintech Agenda

High level considerations for Policy makers and the international community  
12 Elements, grouped into 4 Objectives




# WHY?

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Rapid transformation of financial sector via advances in technology




Given fintech's global nature, country authorities' requests to facilitate information sharing and cooperation



Outline high-level considerations for policy makers and the international community – still at early stages of information gathering



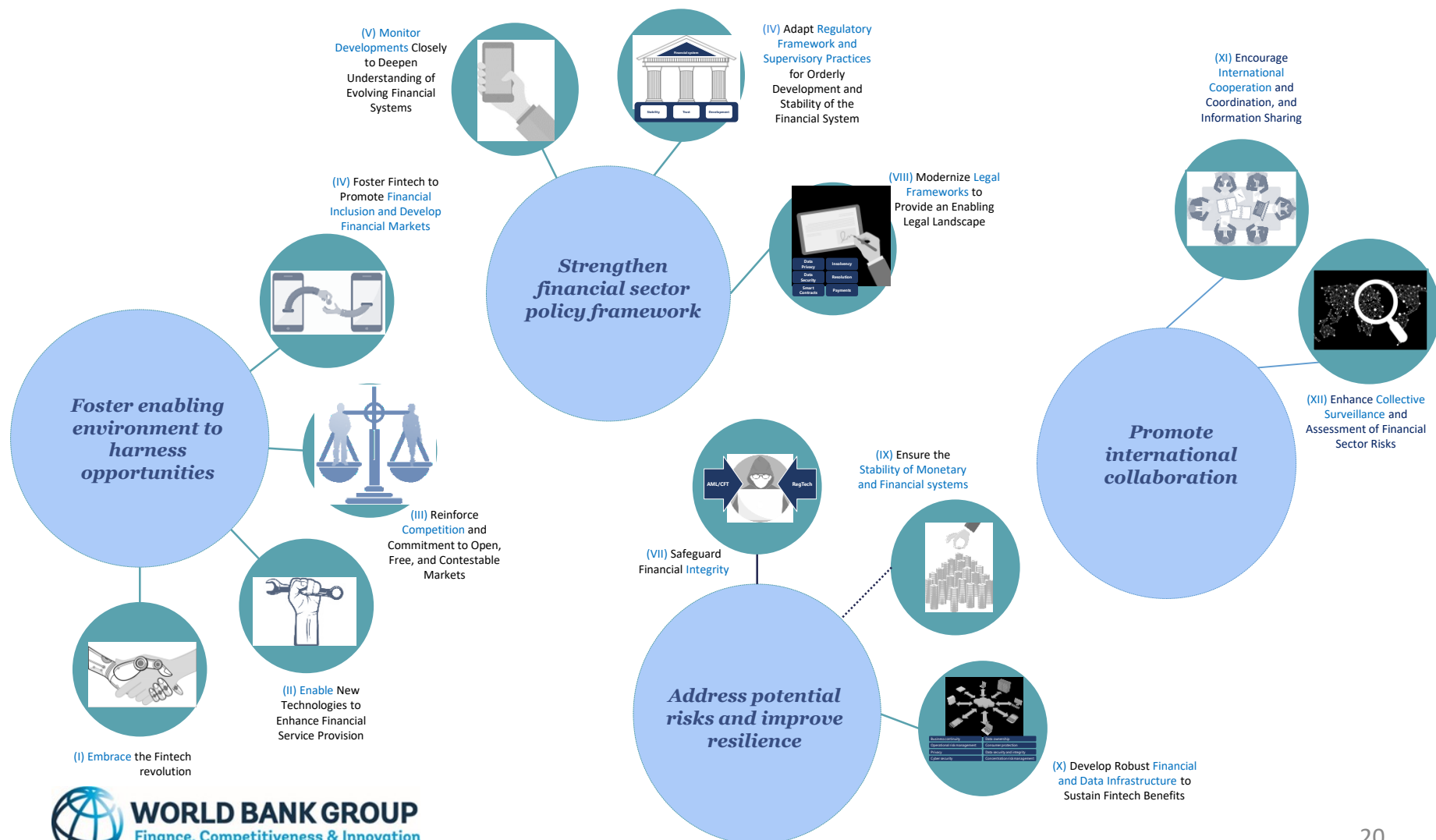
Engagement with Standard Setters



IMF-World Bank interest reflects our universal membership, focused on respective areas of expertise and mandate

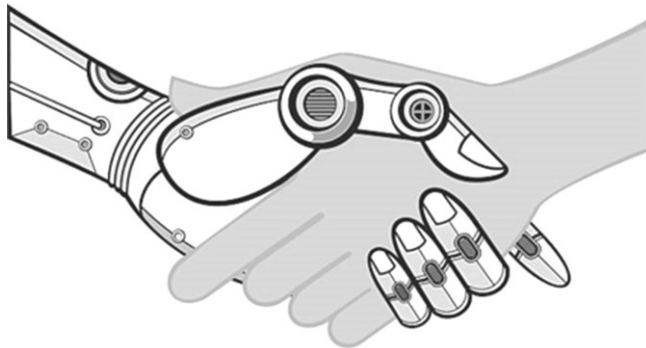


# 12 elements of The Bali Fintech Agenda



# Fostering enabling environment to harness opportunities

## (I) Embrace the Fintech revolution



**Key issues:** strengthen institutional capacity; improve communication with stakeholders and across agencies; and expand consumer education

## (II) Enable New Technologies to Enhance Financial Service Provision



**Key issues:** facilitate development of and fair access to telecom and internet infra; financial infrastructure, digital IDs; digitize Government data repositories; and leverage technology to make cross-border payments efficient.



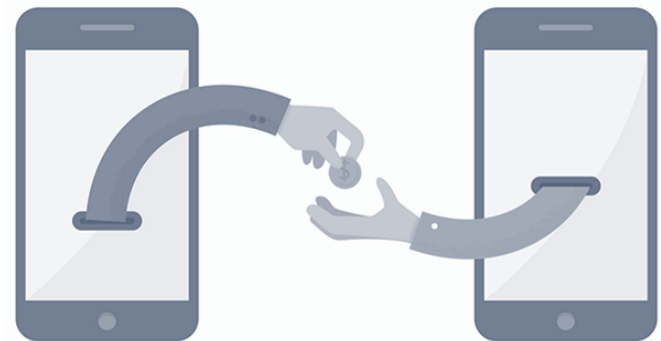
# Fostering enabling environment to harness opportunities

## (III) Reinforce Competition and Commitment to Open, Free, and Contestable Markets



**Key issues:** treat similar risks equally, apply laws and regulations proportionately; avoid market concentration and abuse; foster standardization and interoperability

## (IV) Foster Fintech to Promote Financial Inclusion and Develop Financial Markets



**Key issues:** embed fintech in national financial inclusion and literacy strategies; foster knowledge exchange; digitize government payments; leverage fintech to advance financial sector development

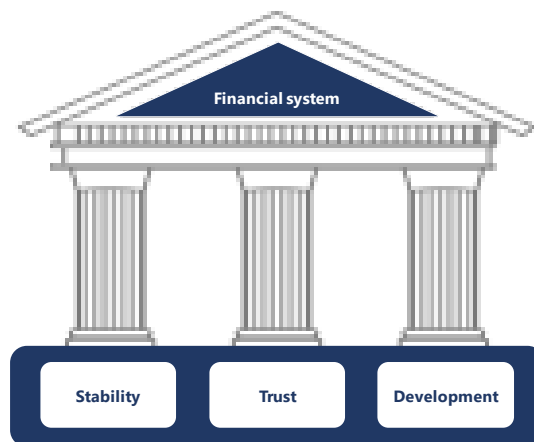
# Strengthen financial sector **policy framework**...

## (V) Monitor Developments Closely to Deepen Understanding of Evolving Financial Systems



**Key issues:** enable flexible data gathering frameworks to identify obstacles to innovation and new risks

## (VI) Adapt Regulatory Framework and Supervisory Practices for Orderly Development and Stability of the Financial System



**Key issues:** ensure regulation remains adaptable and conducive to development, inclusion, and competition; consider new approaches like regulatory sandbox; address new risks and (cross-border) arbitrage

## (VIII) Modernize Legal Frameworks to Provide an Enabling Legal



**Key issues:** legal predictability to spur investment; legal basis for smart contracts and electronic signatures; address legal gaps

# Address potential risks and improve resilience...

## (VII) Safeguard Financial Integrity



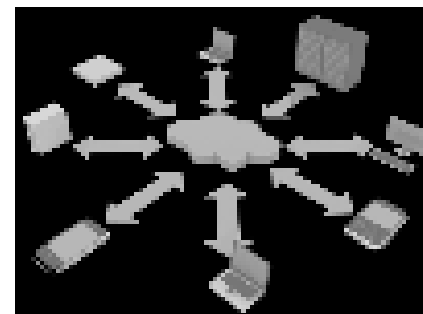
**Key issues:** mitigate AML/CFT risks that crypto-assets and other Fintech developments may pose, potential of Regtech to strengthen AML/CFT compliance

## (IX) Ensure the Stability of Monetary and Financial systems



**Key issues:** Digital currencies, distributed ledger applications to payments, lender of Last Resort and other safety net arrangements

## (X) Develop Robust Financial and Data Infrastructure to Sustain Fintech Benefits



Business continuity	Data ownership
Operational risk management	Consumer protection
Privacy	Data security and integrity
Cyber security	Concentration risk management

**Key issues:** Cyber security and operational risk management, risk of concentration in third-party service providers, data governance frameworks

# Promote international collaboration

## (XI) Encourage International Cooperation and Coordination, and Information Sharing



**Key issues:** to avoid regulatory arbitrage and a “race to the bottom”, to monitor global risks, to facilitate a global enabling regulatory and legal environment for fintech, and to stimulate sharing of opportunities

## (XII) Enhance Collective Surveillance and Assessment of Financial Sector Risks

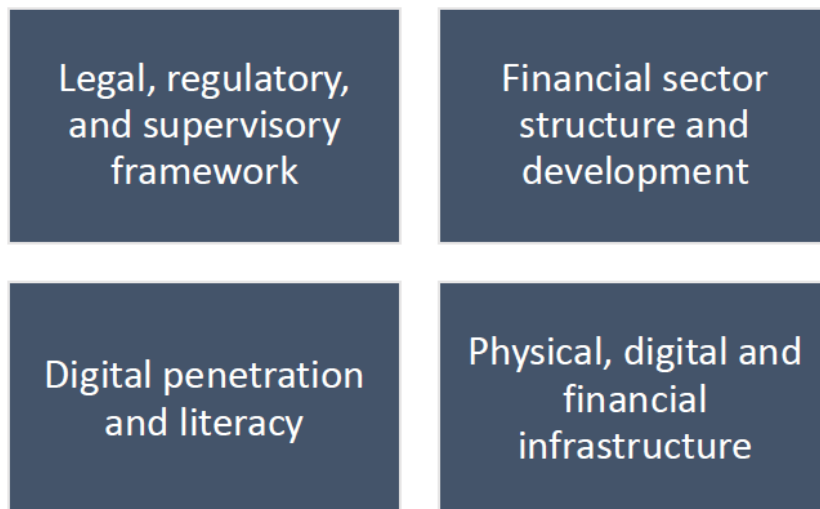


**IMF and World Bank can provide capacity development in the areas of financial inclusion, consumer protection, statistics gaps, financial integrity, regulatory and legal frameworks, and cyber security**

# Fintech Policy levers and objectives

## Selected Fintech adoption drivers and policy levers

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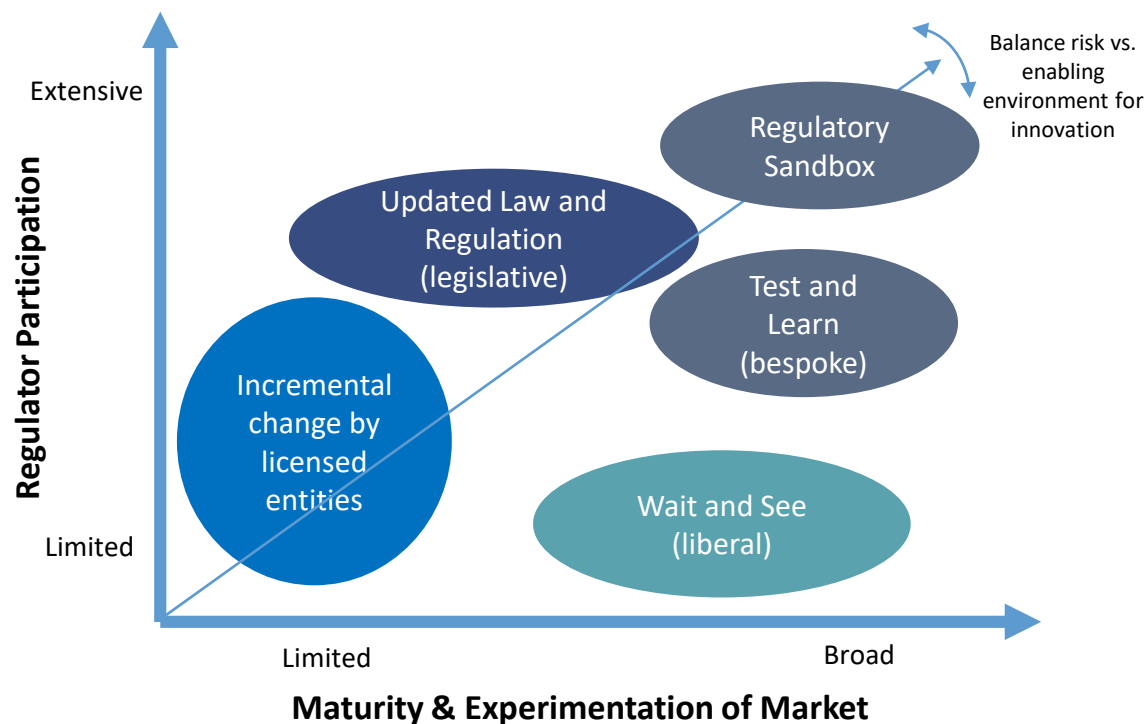
## Common policy objectives

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# Regulatory Tools to Enable innovation



**Wait-and-See:** Monitoring a Trend to understand it better before any intervention

**Test-and-learn:** Custom framework to test a new idea in a live environment

**Regulatory Sandbox:** live, time-bound testing of innovations under a regulator's oversight.

**Regulatory Reform:** Reform Existing policy and regulation to allow for new licensing of innovations

# Regulatory Tools & Frameworks to Enable Innovation

## Wait & See

Monitoring of a trend to understand it better before any intervention

## Test & Learn

Custom framework to test a new idea in a live environment

## Regulatory Reforms

Reform existing policy and regulation to consider new innovations

## Regulatory Sandbox

Framework issued by regulator to allow live testing of innovations in a supervised environment

## Infrastructure Development

Development of digital infrastructure

## RegTech for Regulators (SupTech)

Use of innovative technology solutions to help make the financial regulatory process more efficient and effective

## Innovation Offices

Focused on engaging with, and providing regulatory clarification to, financial services providers seeking to offer innovative products and services

## International Coordination / Cooperation

Regional / International coordination on regulation of innovations

# ...depending on country circumstance

## Legal & Regulatory Framework

- How well established is the regulatory and legal framework?
- What is the level of complexity?

## FinTech and Stakeholder Ecosystem

- How many regulators oversee financial supervision?
- How well developed is the FinTech ecosystem?

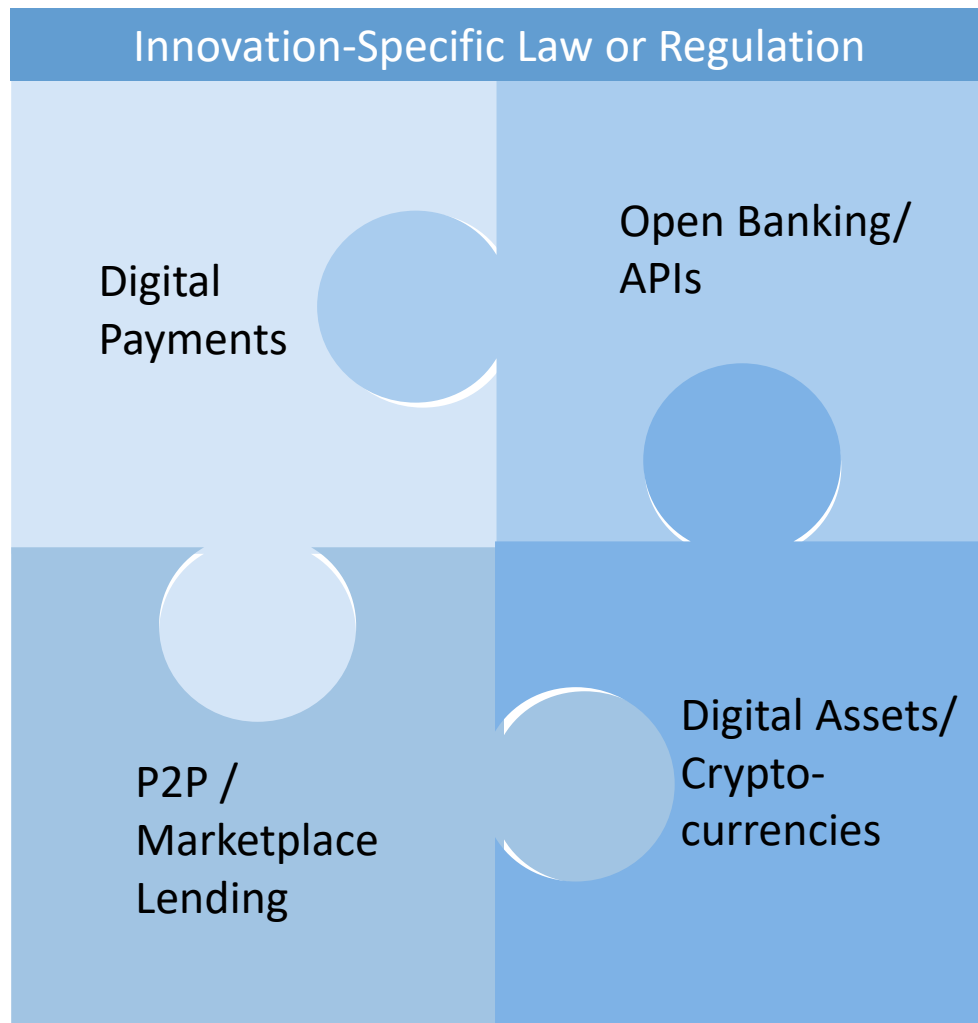
## Capacity & Resources

- How much resources does the regulator have available?

## Market Conditions

- How competitive is the market?
- Number of excluded / underserved?
- Number and types of financial institutions?

# Approaches to Regulatory & Policy Reforms / Laws



## Comprehensive FinTech Law

- Overall scope and definition
- Specific known innovations
- Scope to cover further innovations

# Comprehensive FinTech Law – Mexico

## Overview

- Enacted into law in March 2018, the FinTech Law aims to make financial products and services more accessible to the public at large through technology
- It is the **first regulation in Latin America** that attempts to cover **all sectors related to FinTech** under one initiative
- Meets the regulator's public policy objectives: **consumer protection, competition, financial integrity and financial safety and stability**
- Initial legislation which **provides overarching principles**; secondary regulations will be drafted

## Key Aspects

1. **Regulation of Financial Technology Institutions and their Activities**
  - Crowdfunding
  - Electronic Payment Funds Institutions
  - Innovative Companies – all others
2. **Regulation of Virtual Assets (crypto-assets)**
3. **Open banking APIs**
  - Financial institutions to **share their customers' data** with 3<sup>rd</sup> parties (and FinTechs) in a secure, standardized manner
  - Covers **all financial products and financial institutions**





# Thailand – Product-specific laws and regulator engagement with innovators

## Digital Currency for Interbank Settlements

BoT is exploring the issuance of **its own cryptocurrency to conduct interbank settlement**, since it can reduce transaction and validation time at a lower cost

*“The Bank of Thailand is also undergoing regulatory reform to review outdated rules and regulations, to facilitate ease of doing business and ensure that our regulations do not impede competition and innovation and contribute to high costs of financial services.”*

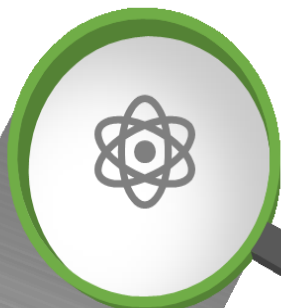
### Sources:

<https://cointelegraph.com/news/thailand-s-central-bank-eyes-creating-its-own-digital-currency-for-interbank-settlements>

<https://cointelegraph.com/news/thai-regulator-confirms-july-start-date-for-regulated-icos>

<https://cointelegraph.com/news/bank-of-thailand-considers-blockchain-for-cross-border-payments-fraud-reduction>

## Bank of Thailand



## Blockchain for Cross-border Payments, Fraud Reduction

BoT is reviewing the use of **blockchain technology for cross-border payments, supply chain financing, reduction of fraud and protection of financial information**

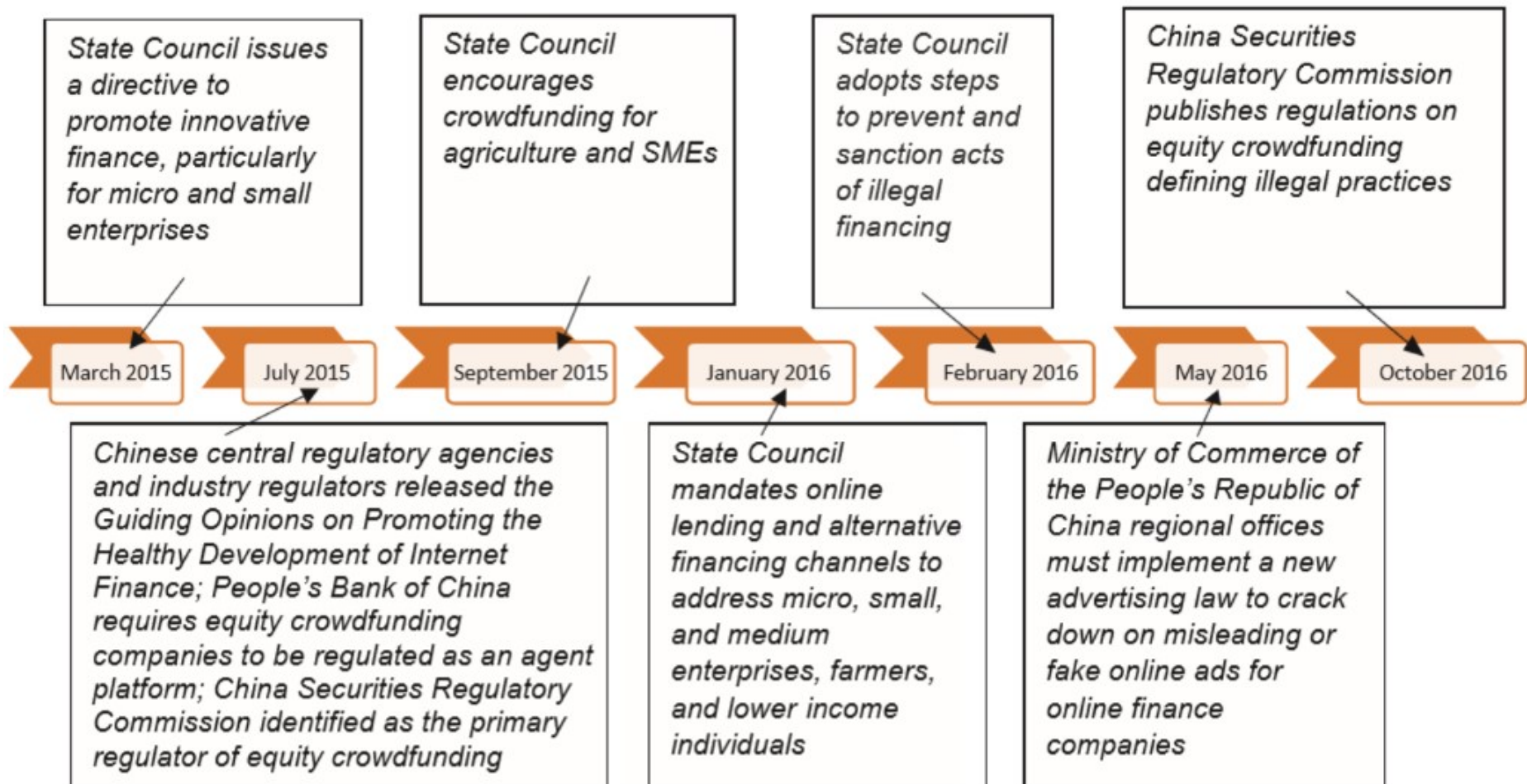
## Digital Asset Law

Enacted in July 16, Thailand is **one of the first jurisdictions in the world to permit ICOs to function in a fully-regulated environment**. ICO operators must comply with minimum capital requirements and fully disclose aspects of technical functionality

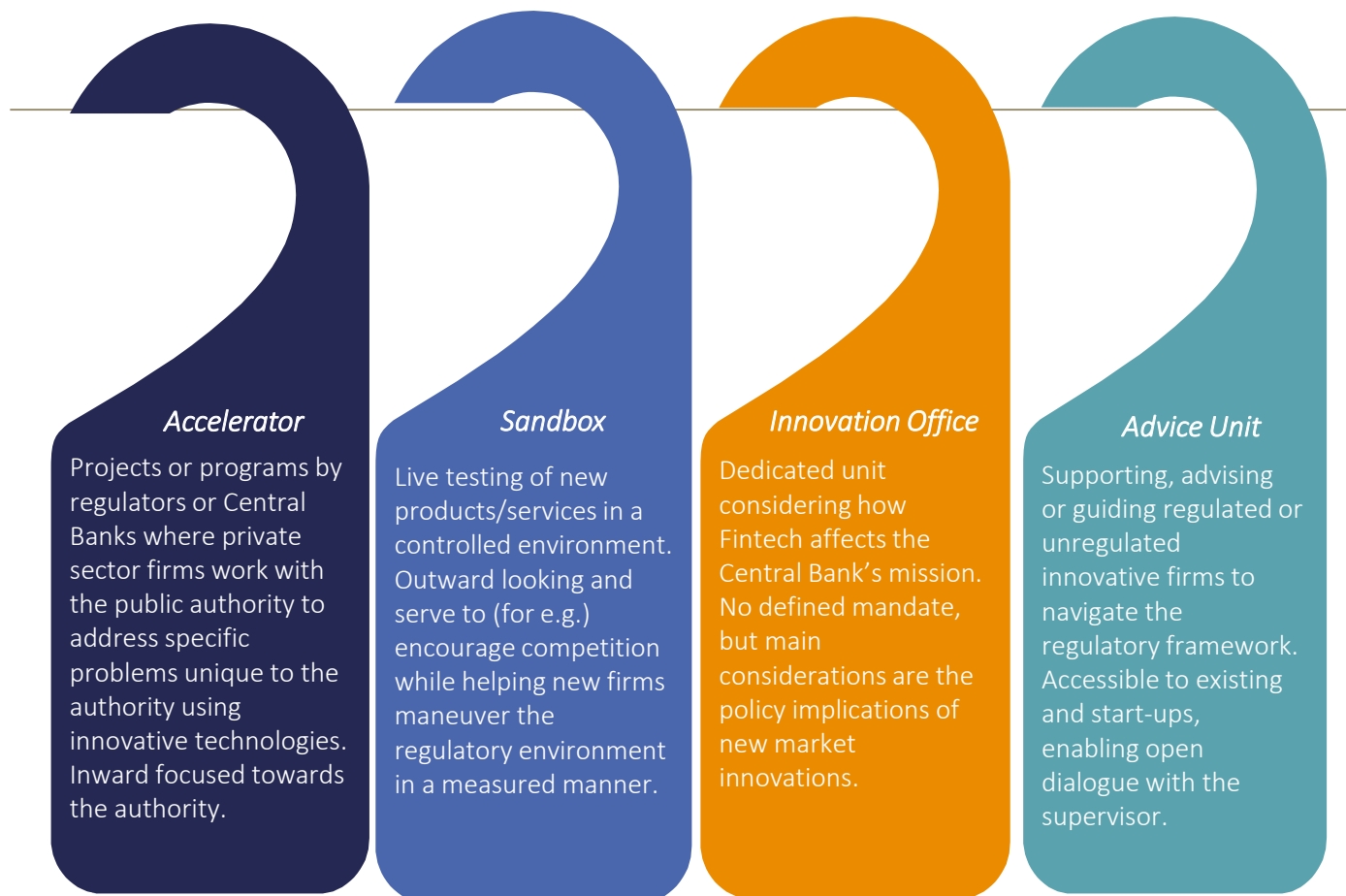
# Wait and See Approach

Monitoring a trend to understand it better before intervention..

## P2P lending in China – Policy interventions

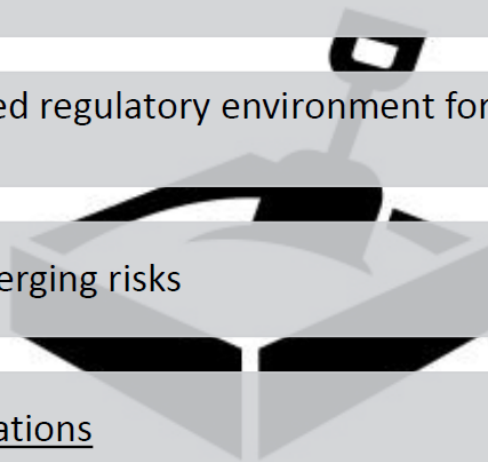


# Different approaches to encourage innovation



# What is a Regulatory Sandbox?

- Virtual environment for innovators (existing and start-ups) to **test new ideas** with **real customers**
- Can be open to **authorized** and **unauthorized** businesses and technology providers as based on specific '**Eligibility Criteria**'
- Allows the regulator to **oversee trials** using a customized regulatory environment for each pilot
- Provides **intelligence** on developments, trends and emerging risks
- It is NOT about exemptions from extant laws and regulations



# Requisites

Objectives and  
definition of success

Eligibility criteria

Governance

Safeguards and limits

Proportionality

Exit

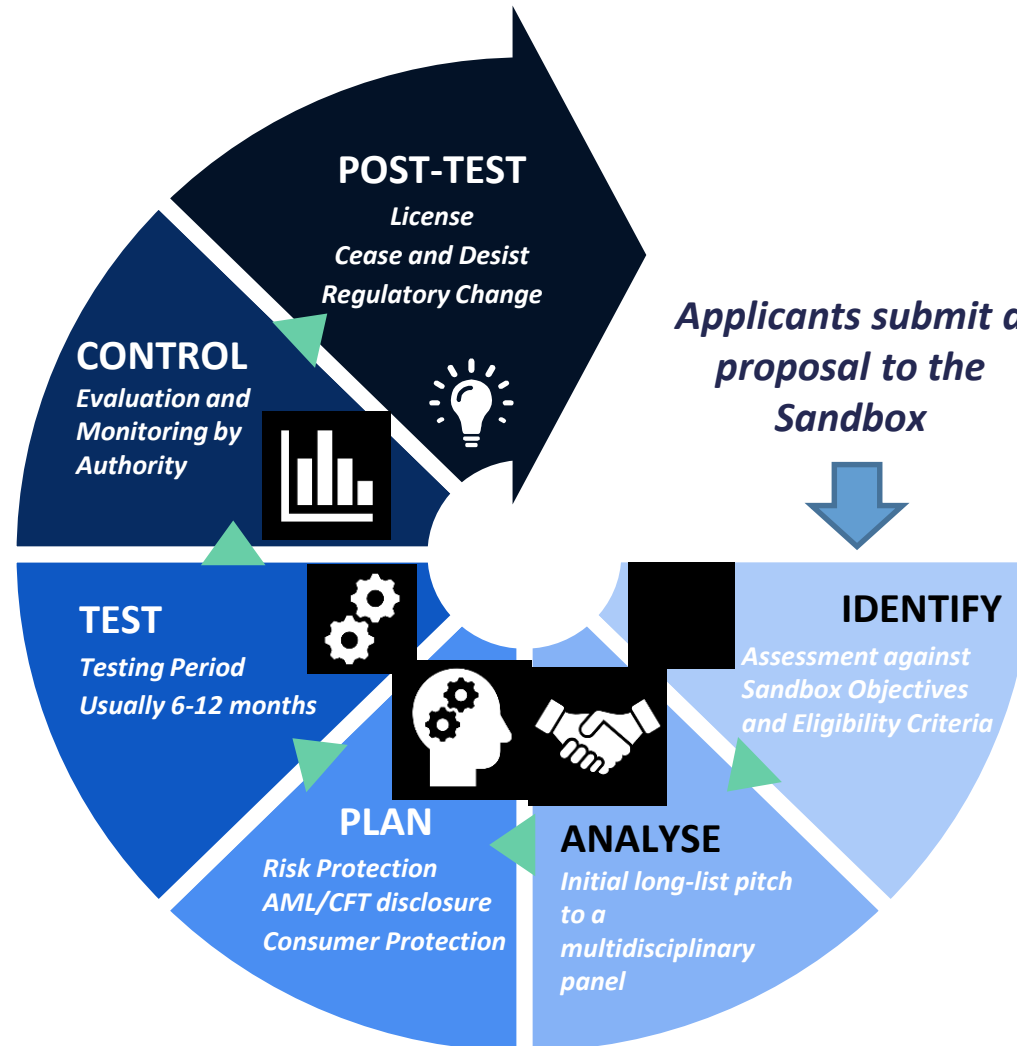


# Important to define the *Objective*

It is vital that countries can actively define the objective for why they want to create a sandbox. e.g.:

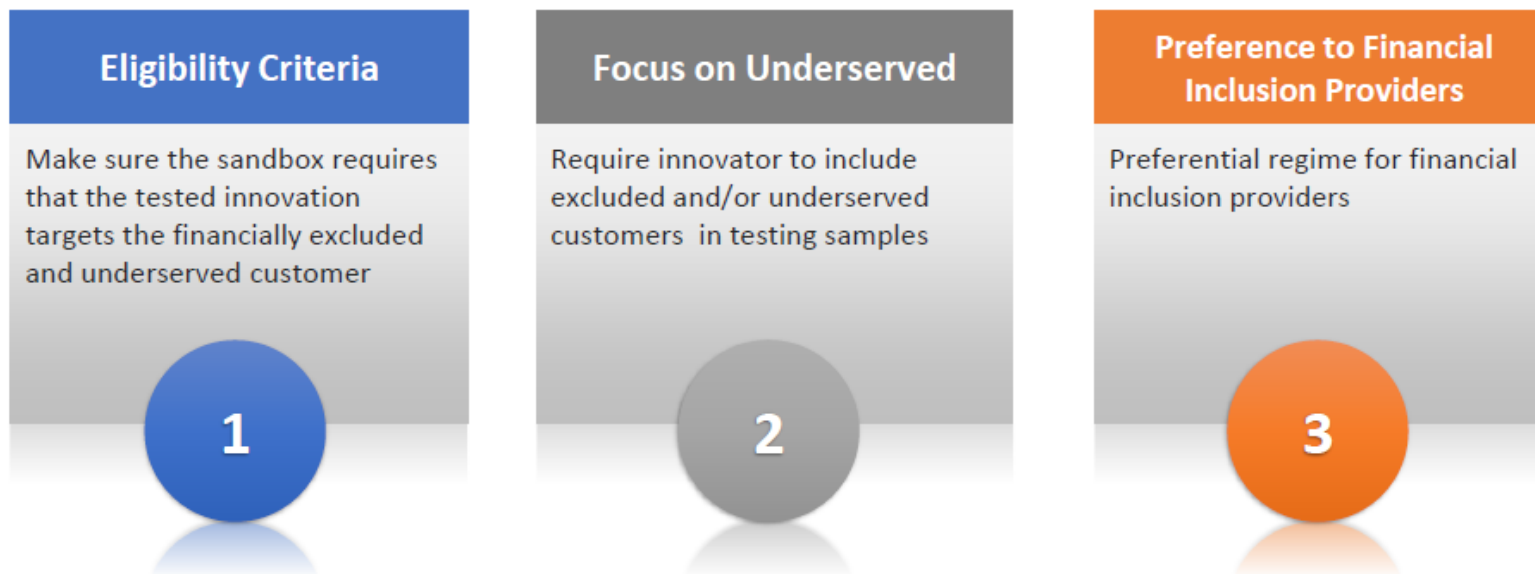
- Is it to improve their supervisory or other (technical) capabilities?
- It could even be used to review their regulatory framework?
- Or maybe, like the FCA, they want to stimulate competition in the market;
- Another reason could be bridging a gap in the current financial services provisions of the country;
- Or there could be an overarching objective to enhance financial inclusion or increasing financial stability (*implemented by attracting solutions directly relevant to these objectives only*)
- Sometimes, the objective could also be to attract talent and investment from sources outside the country.

# Typical Sandbox Lifecycle



# Leveraging Sandboxes for Inclusion

## Three ways to make financial inclusion an integral part of the sandbox

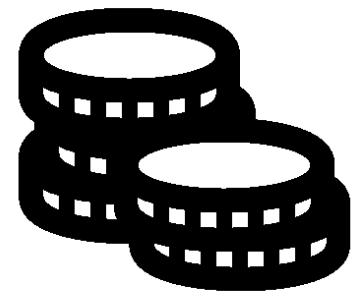


To date, only very few regulatory sandboxes have stated financial inclusion objectives: e.g.: Malaysia and Bahrain.

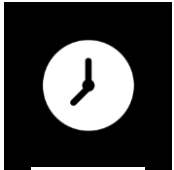
# Malaysia Case study: Remittances Firm

- World Remit, a UK-based FinTech remittance company mainly serving emerging markets, was admitted in Bank Negara Malaysia (BNM)'s regulatory sandbox
- As part of the sandbox, World Remit was interested in testing its online KYC process, even though Malaysian law required conducting KYC checks in person
- The sandbox allowed WorldRemit to work in a controlled environment and show BNM how it works so that they could get confidence in the online KYC process. The testing was successful and well received by customers
- As a result of the tests performed by World Remit in the sandbox, ***Bank Negara Malaysia is currently working on draft regulation to allow online KYC checks***

**Provides a good example of a regulatory sandbox facilitating innovation and benefiting financial inclusion**



# Benefits



Reducing the time and cost of getting innovative ideas to market

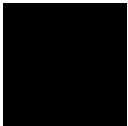


Improve **communication** between regulators and Fintechs

**Facilitating greater access** to finance for innovators



Enabling a formal framework for products to be **tested**



Working to ensure **appropriate consumer protection safeguards** are built in



Introducing **greater competition** to the market

Lowers uncertainty on the need to be regulated

# Potential Risks of Implementing Regulatory Sandboxes



## Capacity

- **Limited regulatory capacity** – Resources, staff, expertise
- May require institutional assistance / support from multi-lateral development banks



## Coordination

- Coordination Issues where there are **different authorities with financial supervisory powers**

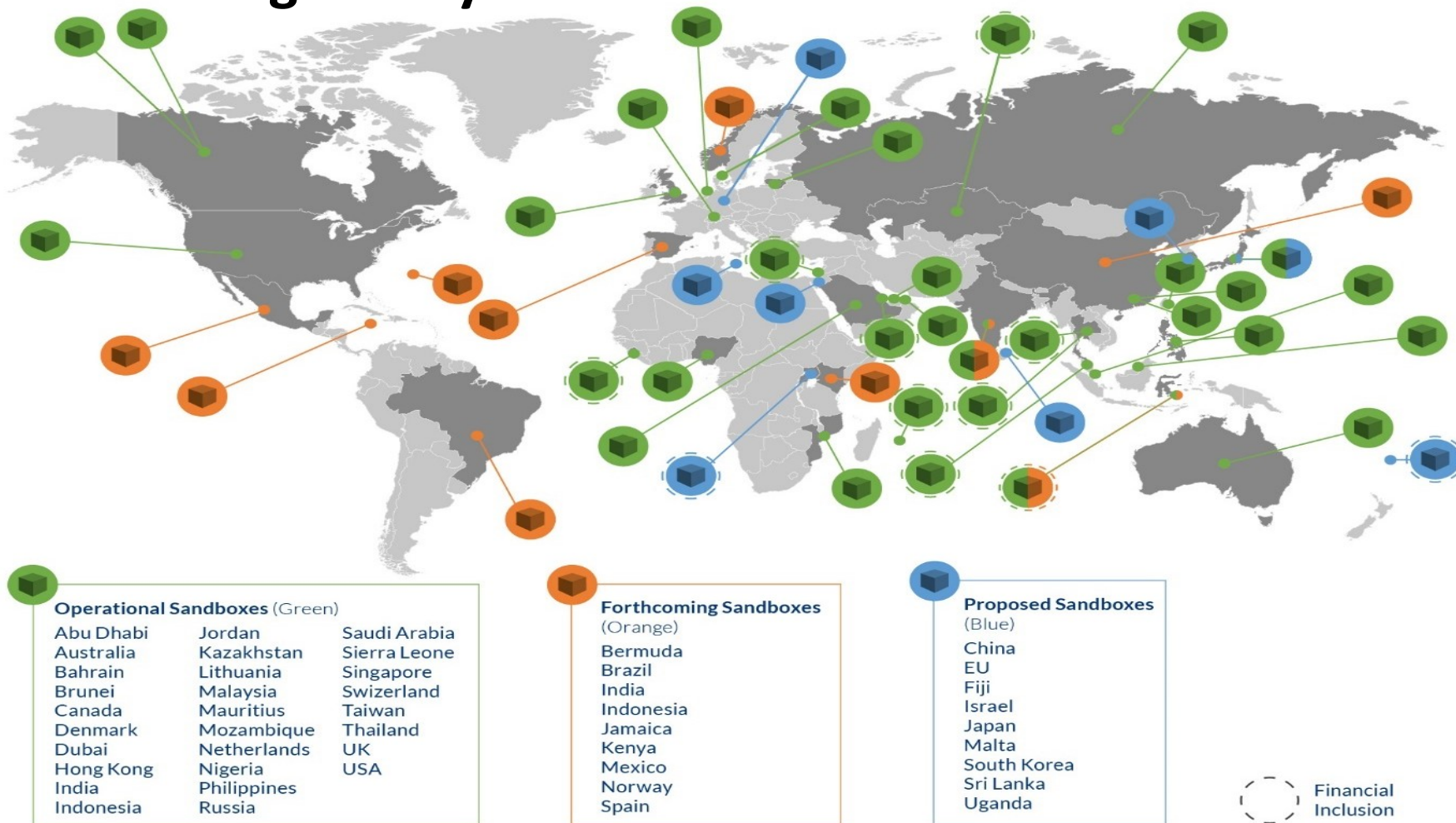


## Competition

- Potential issues that innovators accepted into the sandbox may receive **preferential treatment**, creating an **uneven playing field**

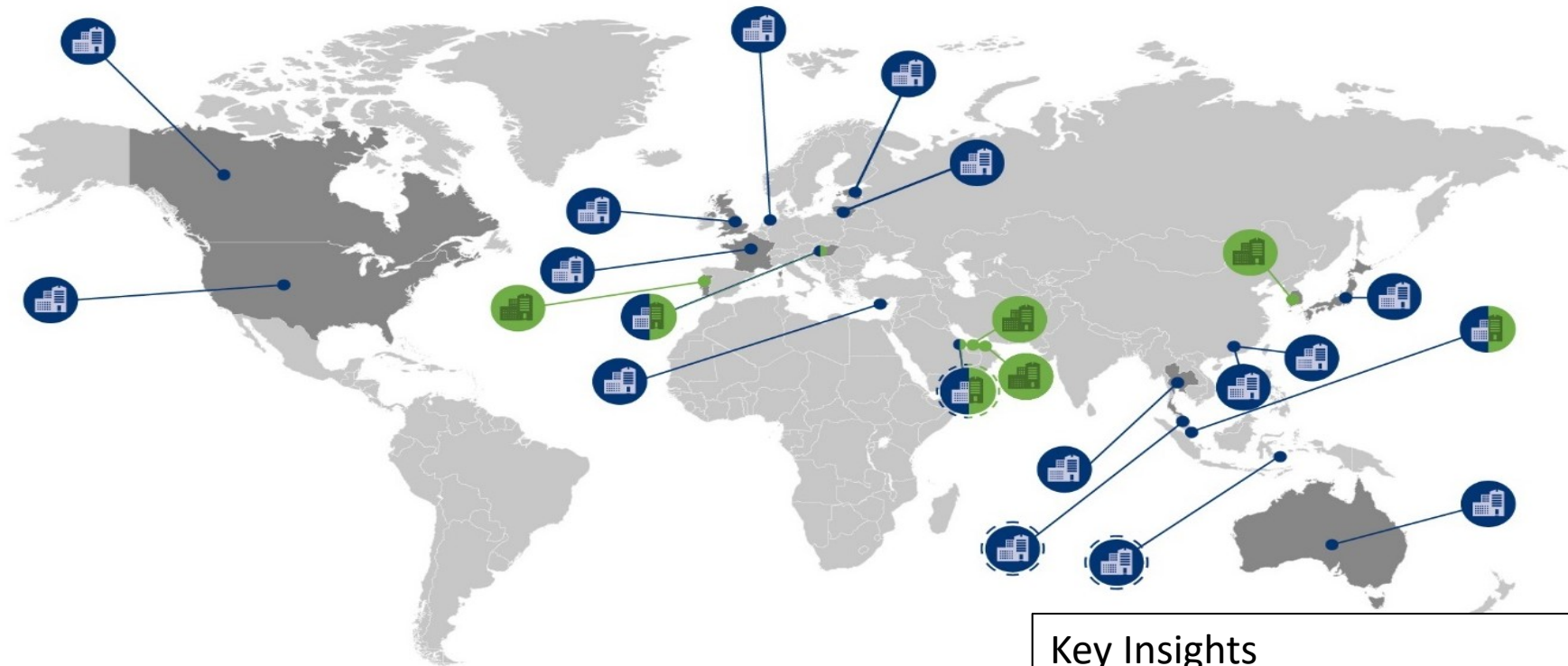


# Regulatory Sandboxes Around the World



Sources: Jenik and Lauer (2017), Mueller et al. (2018), DFS Observatory (2018) and UNSGSA FinTech Working Group and CCAF (2018)

# Innovation Offices Around the World



## Innovation Offices (Blue)

Australia	Hungary	UK
Bahrain	Indonesia	USA
Canada	Japan	
Cyprus	Lithuania	
Estonia	Netherlands	
France	Singapore	
Hong Kong	Thailand	



## Regulator/central bank linked accelerators (Green)

Abu Dhabi  
Bahrain  
Dubai  
Hungary  
Portugal  
Singapore  
South Korea

## Key Insights

- Good option for capacity constrained regulators
- Facilitates engagement with FinTechs
- Allows regulators to identify emerging issues
- Requires no changes in legislation

Source: UNSGSA FinTech Working Group and CCAF (2018)

# Key Implementation Guidelines for Regulatory Approaches to Innovation

**Conduct a feasibility assessment focusing on capacity and objectives**

**Engage with a wide range of relevant stakeholders; consult to identify challenges and crowdsource solutions**

**Start small, experiment often and get quick wins**

**Sequence and combine a variety of approaches for regulatory innovation**

**Ensure executive buy-in and institutional support, focusing on mindset and culture**

**Be adaptable, flexible and open to refining the approach**

**Facilitate inter-agency coordination and collaboration**

**Develop a theory of impact and metrics of success**

**Ensure proportionality**

# Developing an Innovation-Supportive Regulatory Strategy

## Key Challenges

- New entrants providing financial services but don't fit an entity-based regulatory structure
- New products don't clearly map to rules/regulators
- Regulated institutions seeking to adopt new technologies that regulations don't cover or supervisors are not equipped to assess and monitor

## Goals

- Ensure financial stability and integrity
- Encourage and accommodate innovation (for efficiency, inclusion)
- Protect Consumers
- Foster competition

## Emerging Regulatory Principles

1. No one size fits all;
2. There are a number of regulatory approaches to enabling fintech, depending on the appetite of the regulator and the maturity of the market;
3. Apply existing structures first; distill to the essential activities and strive for definitional clarity to determine which regulator covers the hybrids and new combinations
4. Activity based, entity neutral (same opportunity to innovate as a bank or as a fintech)
5. Principles based approach, applied at the granular level of fundamental basis for regulation
6. Tech neutral: As long as it meets standards for security, privacy, robustness, we shouldn't care what specific technology is used underneath

# *Questions?*

