

**Regulatory  
Sandboxes  
Digital ID's**

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What is the Core of Our Business?

**Security:**  
**Data Oracles with Proof of Authenticity**

1. Mathematically prove where data came from
2. Mathematically prove authenticity of data

# BYOB: BE YOUR OWN BANK

I want to make prompt, low cost, secure payments



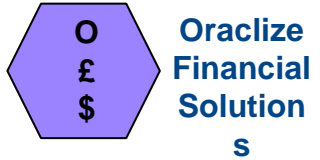
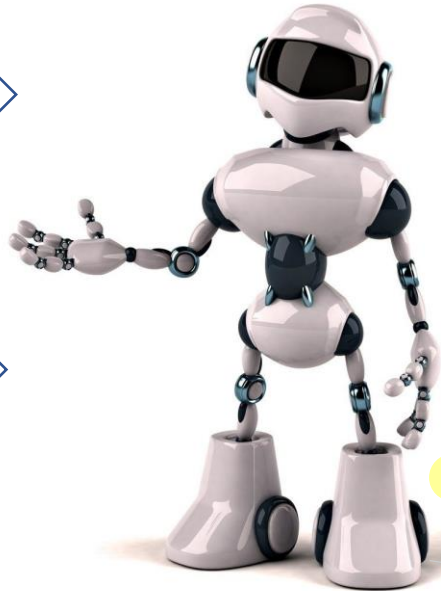
1 Here is my eID

2 eID verified

3 Please pay XYZ

4 DONE!

I am a smart contract. I live on the blockchain



## Forms of eID



What is my future role?



Ethereum public blockchain (distributed record-keeping, almost real-time settlement)

Why do you want to do this?

**To build a business and make a profit**

**BUT ALSO...**  
**(The Economist's Explanation)**

**Innovation = Increase in Productivity = GDP  
Growth**

**Innovation is vital for the growth of an Economy**

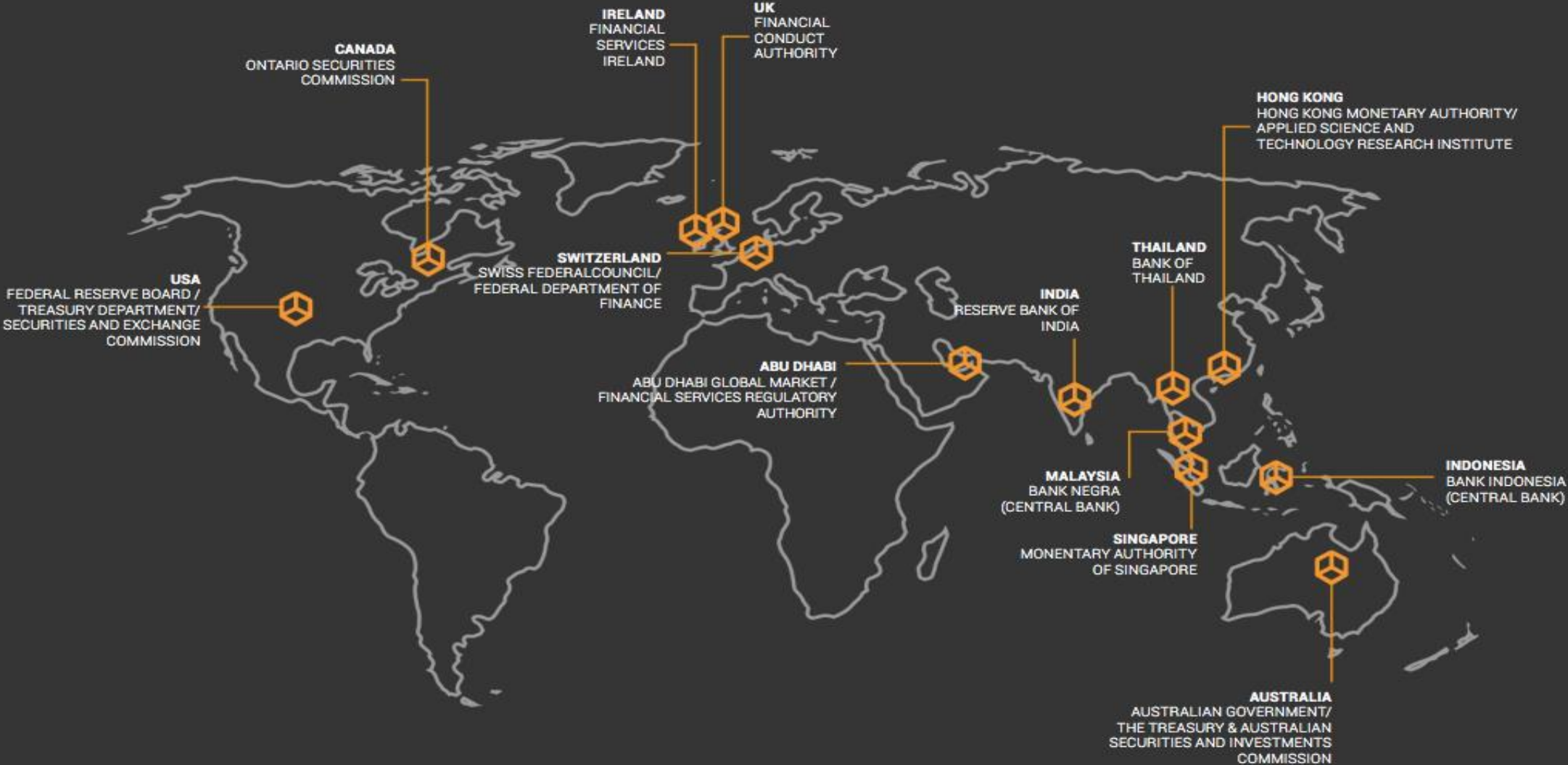
How to do this in the real world?



# Enter Another Innovation: The Regulatory Sandbox



# MAP OF EMERGING AND ESTABLISHED REGULATORY SANDBOXES



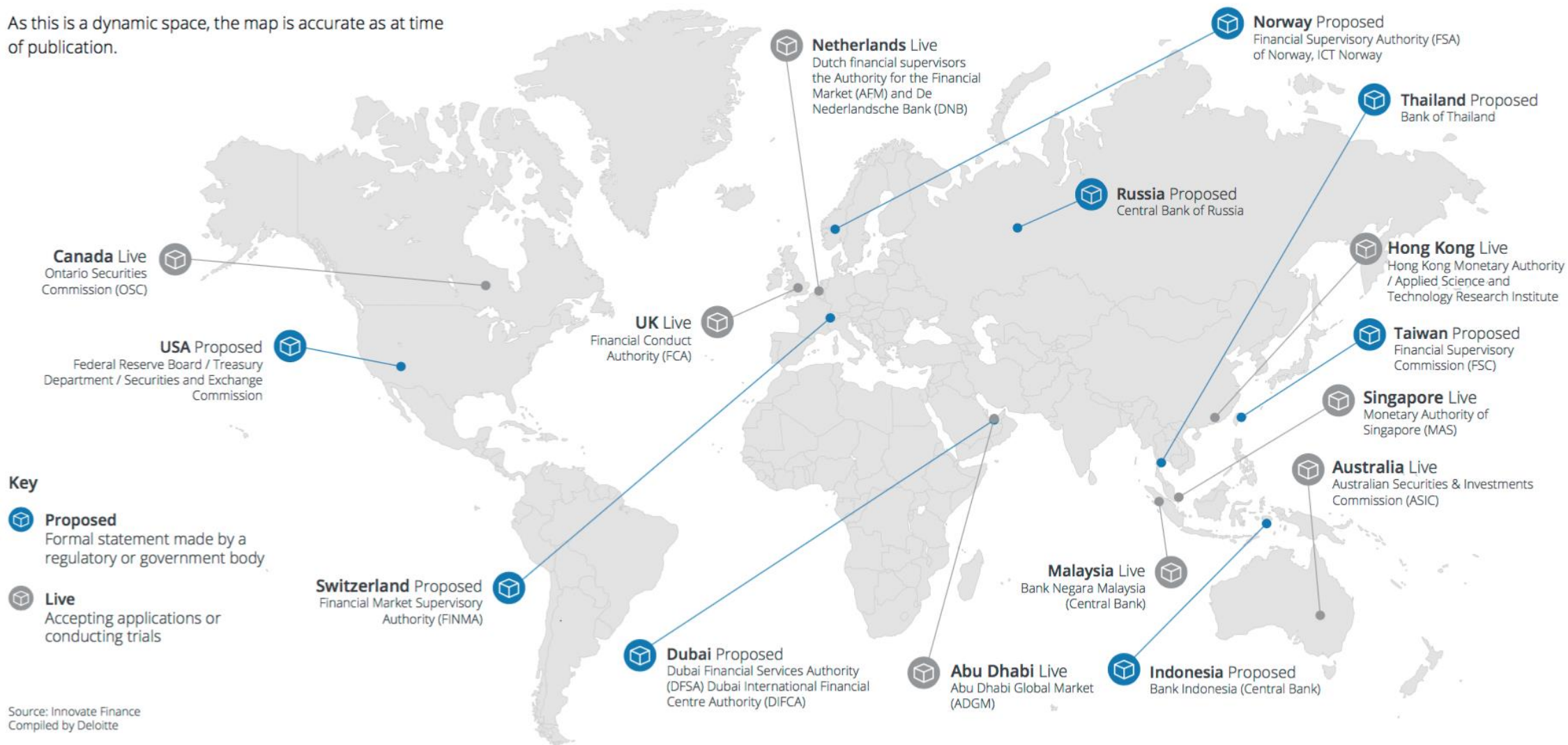
Source: Innovate Finance Analysis, accurate as at November 2016

# Map of regulatory sandboxes

A regulatory sandbox is a regulator-driven initiative which allows businesses to test innovative products, services, business models and delivery mechanisms in a live environment. Typically, some regulatory requirements are amended to create a bespoke framework for the duration of an on-market trial.

The map below shows all live and proposed regulatory sandboxes (and similar regulatory initiatives). Proposed sandboxes are ones on which a formal statement has been made by a regulatory or government body. Live sandboxes are ones which have already begun accepting applications or conducting trials.

As this is a dynamic space, the map is accurate as at time of publication.



# Experience with the Financial Conduct Authority

**“The regulatory sandbox allows businesses to test innovative products, services, business models and delivery mechanisms in a live environment.”**

**Some of the Tools in the Sandbox:**

- Restricted authorization
- Individual guidance
- Waivers or modifications to our rules
- No enforcement action letters

# FCA Regulatory Sandbox Cohort 1

- Applications closed 8 July 2016
- Received 69 applications
- Accepted 24 companies
- Both multinational players and early stage start-ups
  
- 6 out of the 24 not ready to start and postponed
- Remaining 18 expected to complete testing by end of April 2017

# FCA Regulatory Sandbox Cohort 1

	Description	Number of companies
Non-blockchain	Various (see next slide)	9
Blockchain	<b>Blockchain subtotal</b>	<b>9</b>
	<i>Money transfer via bitcoin</i>	2
	<i>Payment using smart contracts</i>	2
	<i>Other payments</i>	2
	<i>Non-payments (voting, etc.)</i>	3
<b>TOTAL</b>		<b>18</b>



# FCA Regulatory Sandbox Cohort 1 (non-blockchain)

- Robo-advisory for comparing debt solutions
- Single-dashboard for managing multiple financial products from multiple providers
- IPO distribution platform
- Aligning in-branch banking experience with online and phone experience
- Travel and property insurance products
- Micro-savings apps



# FCA Cohort 1: Lesson 1

**Now we know how to do sandboxes!**

## FCA Cohort 1: Lesson 2

**Is new regulation necessary for financial products that use distributed ledgers (i.e. blockchains)?**

Consultations started recently

**Current Indication:**

**No Need for New Regulation**

## **FCA Regulatory Sandbox Cohort 2**

- Applications closed 19 January 2017
- Received 77 applications
- Accepted 31 companies
- Companies to be announced after UK parliamentary elections (after 8 June 2017)

## Initial Lessons from Cohort 2

- **Application process was more rigorous than Cohort 1**
- **Quality of applications higher than Cohort 1**

# FCA Regulatory Sandbox Cohort 3

- “Cohort 3 of the sandbox will open for applications in June, and remain open until late July.” 2017

Moving on to Digital ID...

What is a digital ID?



# International digital ID

## Estonian E-residency



**“qualifies as an e-signature under EU Directive 1999/93/EC, E-SIGN law (15 USC 96) in the US and similar laws in other countries.”**

**Source: <https://e-estonia.com/e-residents/services-and-benefits/>**

# National ID

## UK VERIFY ID



## German eID (NFC enabled)



## Belgian eID



## Singapore



# Other forms of digital ID

**Social Media  
Accounts**



**Aadhaar or other  
biometric  
databases**



**Phone Number  
and USSD**



Thank you for your attention!