

Digital Identity is complicated



What should a digital identity do? (Can banks deliver this?)

David G.W. Birch

Dutch Payments Association (Amsterdam, November 2017)

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David G.W. Birch

author, advisor and commentator

Global top 15 favourite sources of business information (Wired Magazine);

London FinTech Top 10 most influential commentators (City A.M.);

Top 20 Fintech Influencer (JAX London);

Top five Leader in IDentity (Rise);

Top 10 Twitter account followed by innovators, alongside Bill Gates and Richard Branson (PR Daily);

Top 10 most influential voices in banking (Financial Brand);

Top 50 blockchain insider (Richtopia);

Europe's most influential commentator on emerging payments (Total Payments).



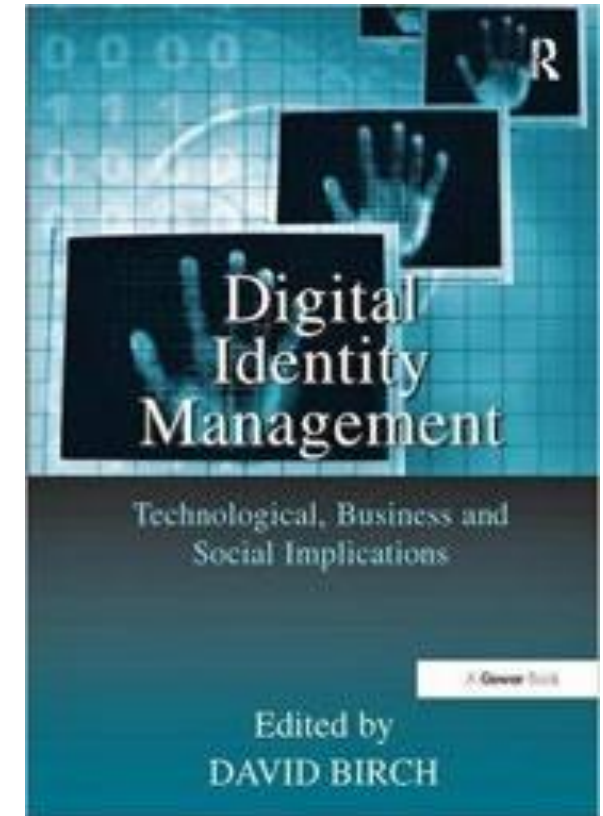
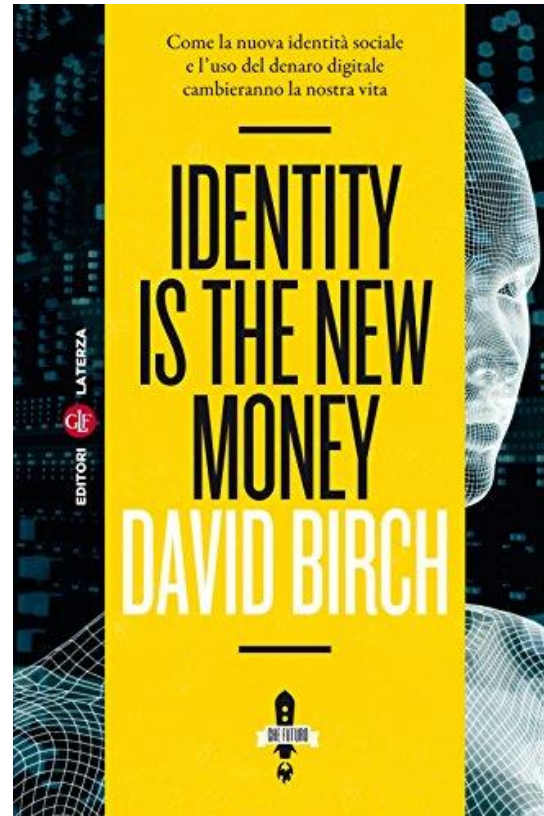
Available at all good bookshops...



BEFORE BABYLON, BEYOND BITCOIN

From Money That We Understand
To Money That Understands Us

DAVID BIRCH



And I dare say some of the bad ones too...

Banking

I know how much everyone hates speakers who start off with stuff like “well, first we need to ask what banking is really about” and that sort of thing.

But...

Well OK, I don't want to be the first one to say that identity is the new money, so...



TECHNOLOGY | Company News

Oct 16, 2017

RBC CEO Dave McKay: Battleground for banks is data

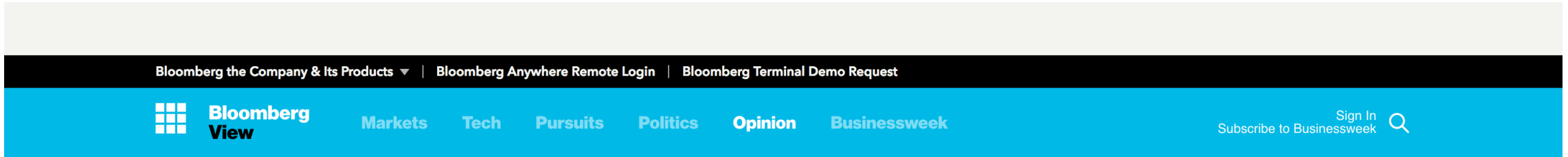
The Canadian Press



Royal Bank president David McKay speaks at the Royal Bank of Canada annual meeting in Toronto on Thursday, April 6, 2017. The Canadian Press/Frank Gunn

TORONTO — Royal Bank of Canada's chief executive says data is the battleground for banks that will determine the future success of financial institutions.

Banking is a Battleground



OPINION | FINANCE

Debating Where Tech Is Going to Take Finance

Yes, the ATM was a breakthrough, but a lot has happened since then.

By [Tyler Cowen](#) And [Matt Levine](#)

6 October 31, 2017, 10:00 PM GMT+11



Tyler Cowen is a Bloomberg View columnist. He is a professor of economics at George Mason University and writes for the blog Marginal Revolution. His books include "The Complacent Class: The Self-Defeating Quest for the American Dream."

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Matt Levine is a Bloomberg View columnist. He was an editor of Dealbreaker, an investment banker at Goldman Sachs, a mergers and acquisitions lawyer at Wechtall, Linton, Rosen

"One thing that we might see in the next 20 years is a fight between financial institutions and social networks"

Case Study: Itsme



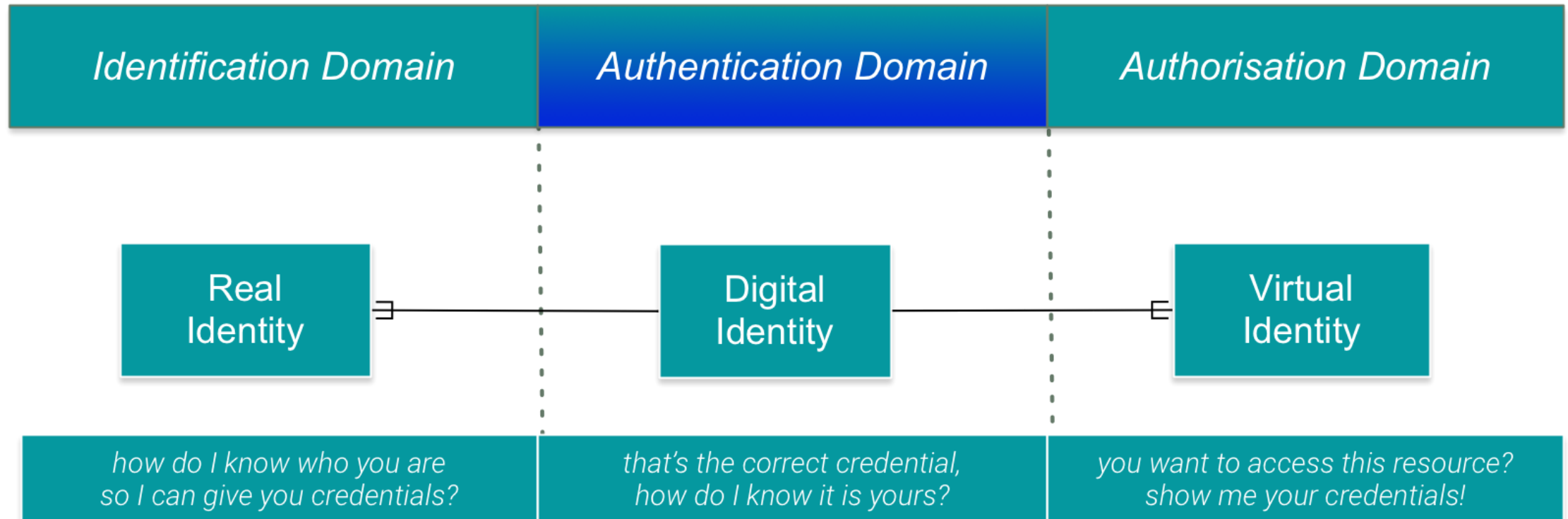
A case study of banks doing something about identity and it's really good stuff. But is it enough?



Time for some new thinking around digital identity

Let's create a model to help us formulate a solution

The Three Domain Model



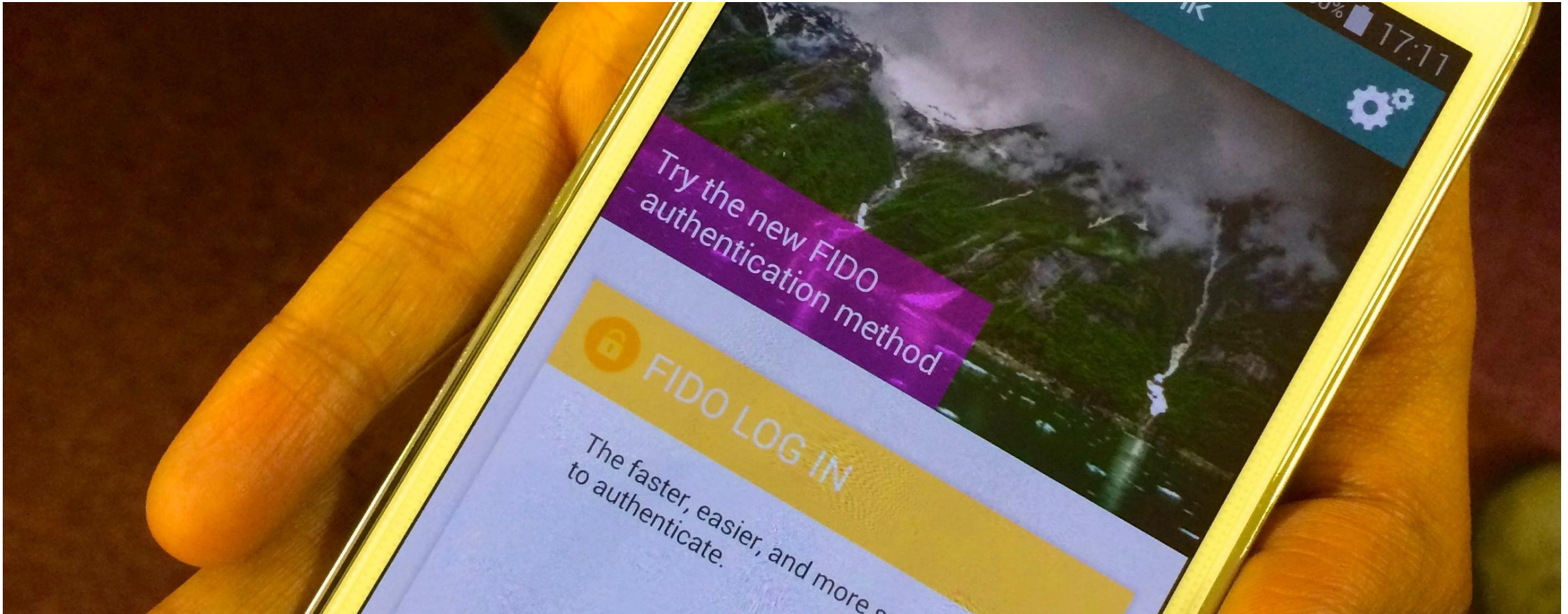
Time for “digital identity” – but what is it? Time for some clear thinking.

Identification Domain



Binding a digital identity to a mundane identity is expensive

Authentication Domain



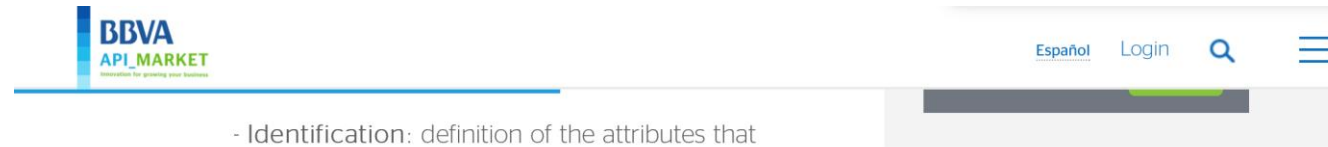
For the foreseeable future, mobile the mass market

Authorisation Domain



Allow me to... do stuff

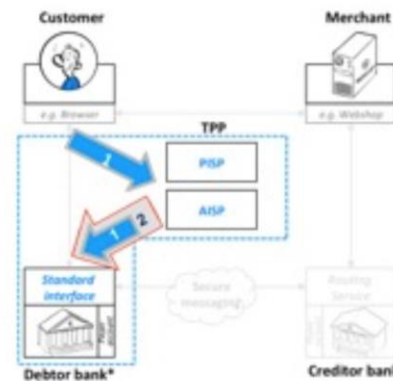
Case Study: BBVA



- Identification: definition of the attributes that confirm, beyond any shadow of a doubt, that the user is who they say they are and not someone different pretending to be them.

- Authentication: verification through credentials that the user is the customer they say they are (username and password, OTP, digital certificates and others).

- Authorization: the financial service providers (TPP) with a license to operate must be given authorization by the customers before they can access their accounts. They need to have proof of consent, which can be obtained through access tokens.



Two important relationships:

1. **Consumer vs TPP:** consumer identification, consumer authentication + transaction authorization
2. **TPP vs AS PSP:** consumer identification, consumer authentication + transaction authorization + TPP authorization

Essential security components:

- **Identification:** this is consumer *x* (attribute *y* defines *x* in more detail), this is TPP *z*
- **Authentication:** verify identity of consumer *x* and TPP *z* based on credentials (username/password/OTP/certificate)
- **Authorization:** consumer *x* provides consent to TPP to initiate payment or retrieve information on his/her behalf, TPP *z* has a license, TPP *z* provides prove of consent (e.g. token), AS PSP approves access/transaction

In Europe, PSD2 and Open Banking are trigger for banks to build identity services



Identity is Complicated

Four examples

Multiple Identities

Partitioning between multiple digital identities prevents correlations without consent and the overwhelming majority of transactions do not need “real” identity, nor do they need any Personally Identifiable Information (PII).



Witness Protection



Witness protection means issuing a new digital identity, bound to the same physical identity

Adult Services



FULL HD, NO ADS

Create your account

Already a Pornhub member? Log In.

Username has already been taken. Please Log In above

satoshinakamoto



Itsnotme is worth more money

Whistleblowers



"All the News
That's Fit to Print"

The New York Times

LATE CITY EDITION

Weather: Partly cloudy today; cool tonight. Fair, pleasant tomorrow. Temp. range: today 65-78; Thursday 64-85. Highest Temp.-Hum. Index yesterday: 75. Details on Page 66.

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NIXON RESIGNS

*HE URGES A TIME OF 'HEALING';
FORD WILL TAKE OFFICE TODAY*

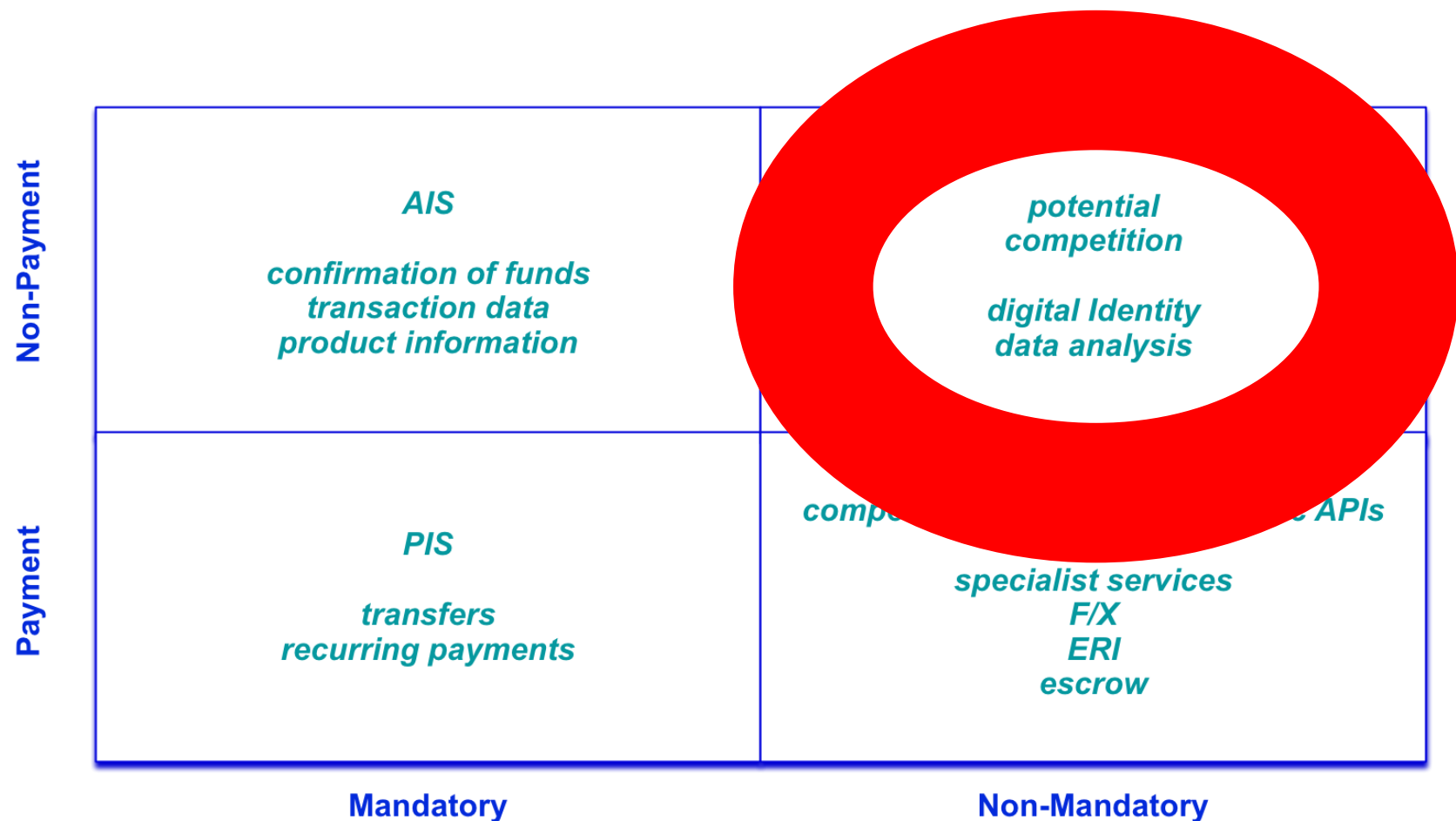
To allow whistleblowers, we must provide for cryptographic blinding of virtual identities



Who will create the infrastructure?

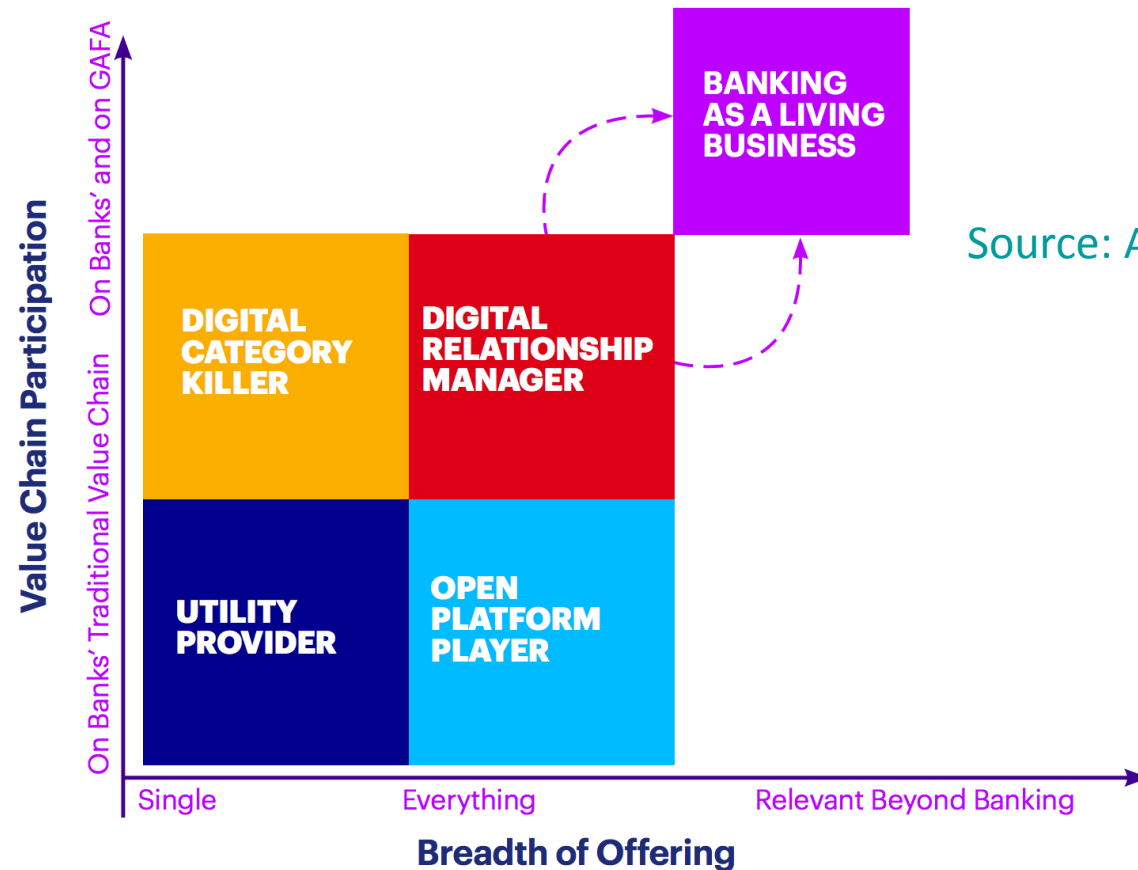
Right now, there is an opportunity for banks to seize the day

The Key Financial Services Opportunity



Digital identity is the crucial platform for the emerging financial services sector

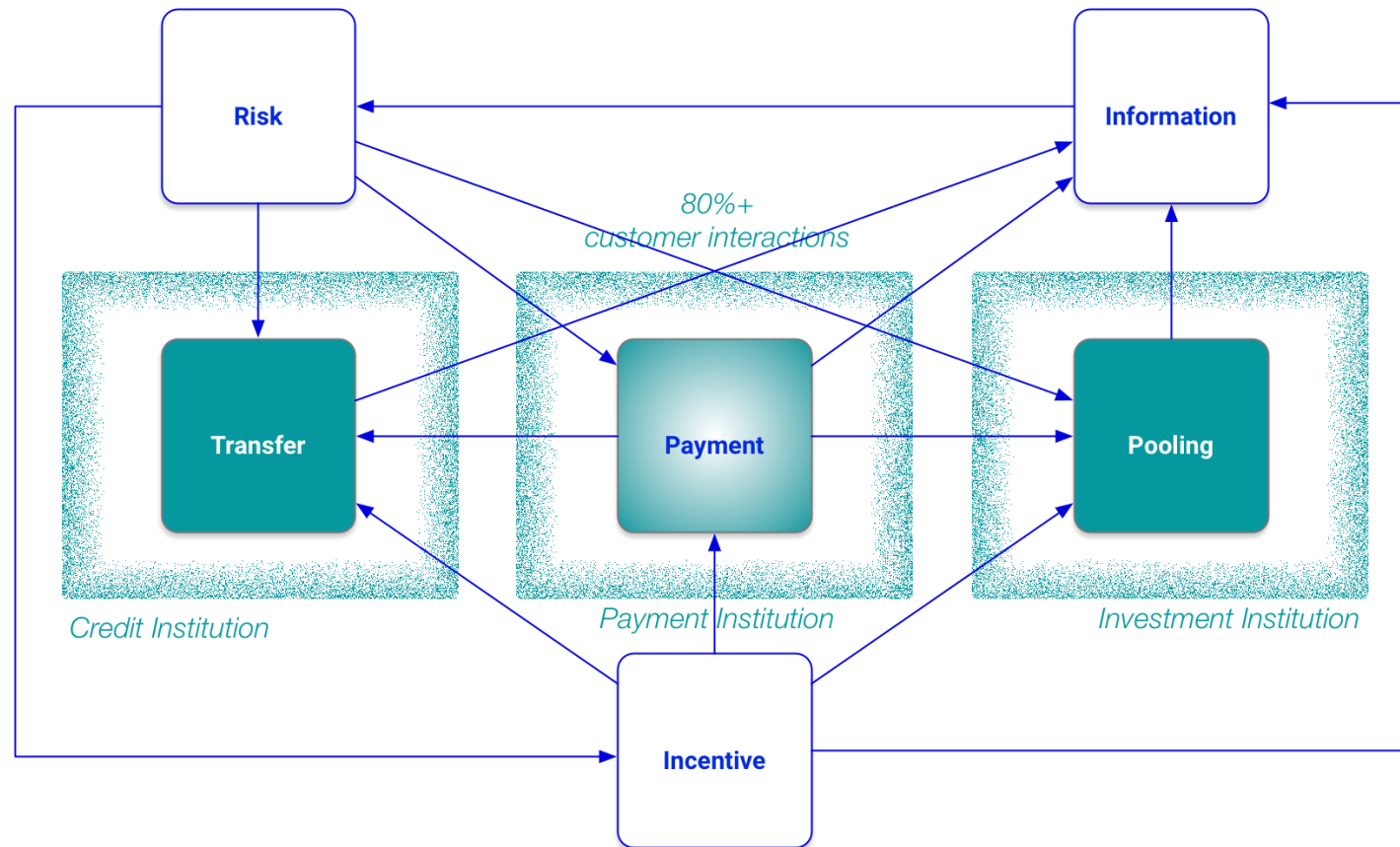
Why Focus on Identity?



Source: Accenture (July 2017)

Digital identity is the core of the new banking relationship

Identity and Data



It's all about risk – if banks lose transaction data, then where do they go?

Case Study: Commonwealth Bank

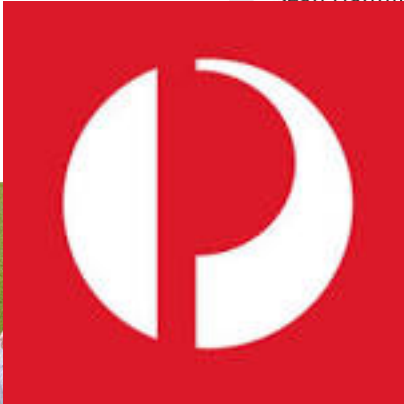


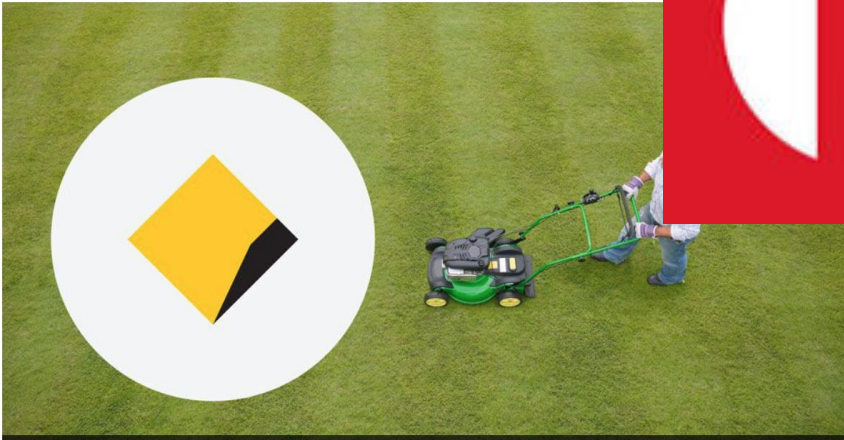
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This top bank will supply you with a 'trust passport' for the gig economy

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Airtasker and the Commonwealth Bank are teaming up.

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The “gig economy” needs global recognition, relationship and reputation infrastructure



in the future, everyone will be famous for fifteen megabytes

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