





# Meet EVA

**Your Enlightened Virtual Assistant and  
the future face of the Invisible Bank**

October 2016





**It is often said that the average human has 70,000 thoughts per day. Few, if any of these, involve a bank. Banking today is hidden from view, obscured behind our day-to-day trials.**

**It surfaces at pivotal moments in our lives: getting a job, moving home, retirement. And even in those key moments, the banks often fail to meet expectations. For example, more than one in three people are unhappy with their mortgage experience<sup>1</sup>. Banking is an enabling service; few of those that bought PPI wanted it, they thought it would help them secure their dream home.**

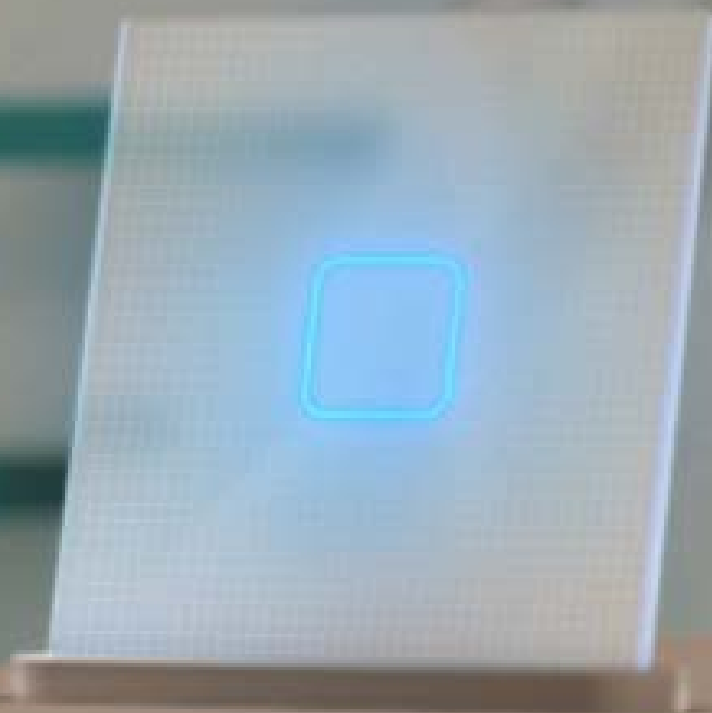
**By 2030, technology will drive a fundamental shift in banking. It can move from being hidden to completely invisible. This Invisible Bank will be buried within a broader, more digital, connected way of life. Consumers will interact with a personal digital assistant (perhaps the granddaughter of Cortana or the great-nephew of Siri)<sup>2</sup>. We've called ours EVA, Enlightened Virtual Assistant.**

**Experience how banking might evolve in 15 years, watch the Meet EVA video [here](https://www.kpmg.com/uk/meetEVA), or type <https://www.kpmg.com/uk/meetEVA> into your browser.**

<sup>1</sup> <http://www.thisismoney.co.uk/money/saving/article-3444024/RBS-bottom-bank-satisfaction-league-Customers-complain-axed-rewards-Direct-tops-table.html>

<sup>2</sup> Trademarks of Microsoft and Apple

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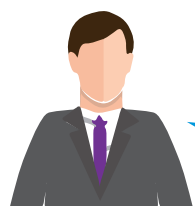
## The future of banking: a day with EVA

EVA is made possible by the following technologies; advanced data analytics, voice authentication, artificial intelligence, connected devices, application programming interface (API) and cloud technology. All of these technologies are available today and merely need to be combined and enhanced to make EVA a reality.



Yes, go ahead  
**EVA**

**Hi Luca,**  
I noticed you had  
a few minutes,  
can we chat?



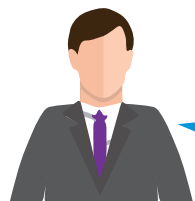
*I've just been busy at work.  
Any suggestions?*

Well, you've been buying more  
junk food recently, you haven't  
been for a run in over a week  
and you seem stressed.



Let's do it ...

How about a yoga class at your local sport  
centre? They have space on Tuesday, you are  
free. I can arrange an introductory session.



No that's OK. I prefer for them not to see  
me in the downward dog. On another  
topic, how are my finances looking?

All sorted and paid for. Would you like to invite  
anyone? Dave and Sam both enjoy yoga and  
look to be free then.



You are on track. I shifted some savings around to get you a  
better interest rate and there was an unexpected charge from  
the USA which I have arranged a refund for.



EVA has correlated my free diary, my resting heart rate (via a wearable) and the lack of operating connected devices (I'm not listening to music or using my VR terminal) to guess the best time to contact me.

EVA is enabled by voice recognition, automatically authenticating me as the proper user.

EVA has accessed my payments data for nutritional information and has matched this with health data from my wearable device.

EVA matches my preferences and availability with relevant merchant offers.

EVA continues to look for ways to enhance the offer.

EVA connects to the booking systems and arranges payment. The diary is updated.

EVA accesses shared social media data.

EVA learns and stores this information for later interactions so that no two users will have the same experience.

EVA is constantly checking the best way to manage short term cash and fix financial issues.



# The structural change in retail banking

For Luca, there is no 'banking app' – access to money is interwoven with health, time management, leisure and friendship. Visiting a bank will be as alien a concept as picking up the landline ("What's that?" my five-year-old son said recently). Banks will be just as invisible, but just as vital, as the manufacturers of 4G base stations are today.

Our vision for retail banking in 2030 is one of a disaggregated industry – with three distinct components. The first layer, the EVA example above, is the Platform Layer. Together with Product and Process layers, the banking industry is set for a period of significant structural reform.

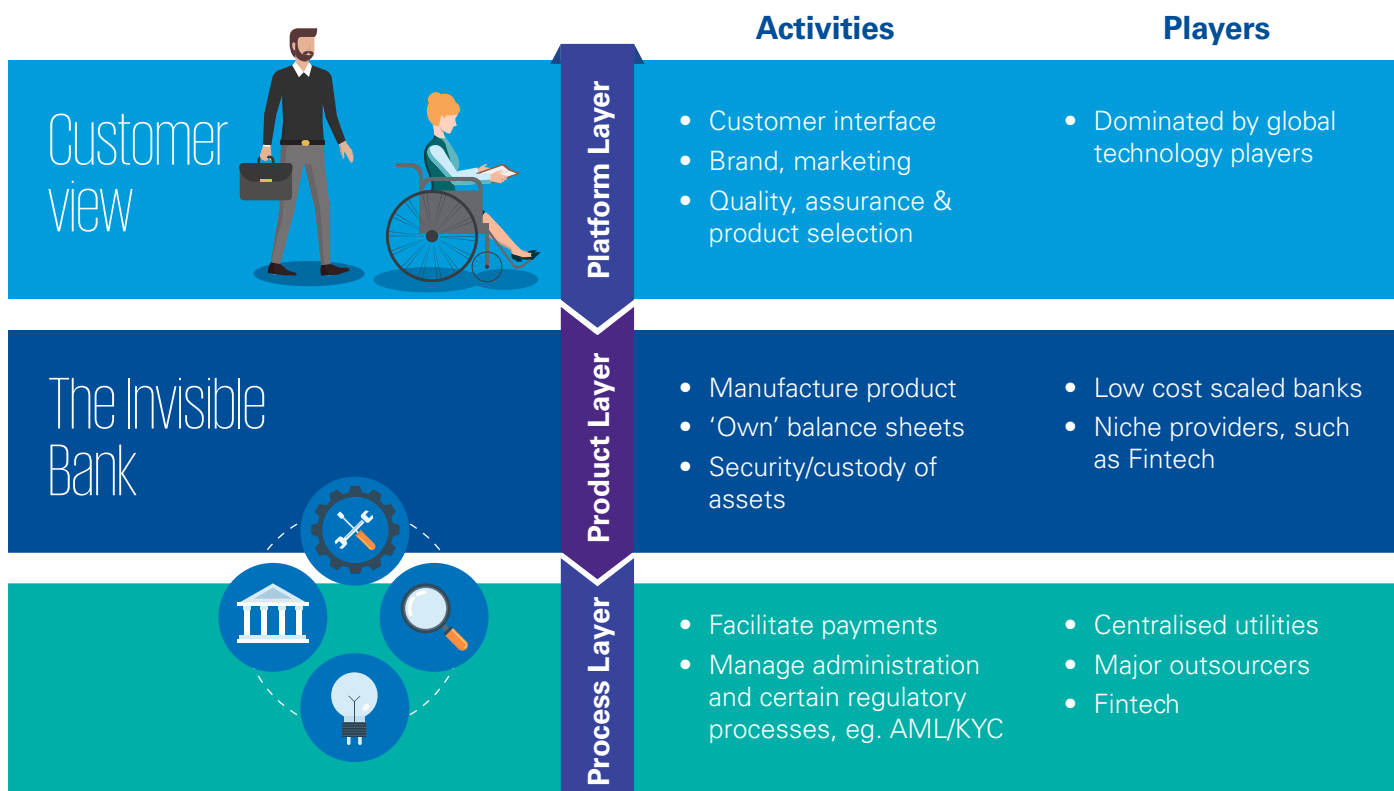
## Tech firms will dominate the Platform Layer

Right now, customer inertia is a boon to the most established banks. In 2015 only one million customers moved current accounts – that's 2%, compared with 32% in car insurance.<sup>3</sup> Whether the changes announced in the recent CMA report into banking (such as open banking using API technology) will make a difference remains to be seen. The banks are seeking to improve customer engagement through new mobile apps and marginal

innovation. By this, I mean incremental improvements in customer experience such as contactless payments, faster onboarding processes etc. Genuine, transformational innovation is rare.

But customers are increasingly using other channels to fulfil functions previously dominated by banks. The arrival of services such as Apple Pay – to which most banks have signed up – hints at a future where financial brands are hidden behind devices and services that manage more than financial services. PayPal offers loans and credit; Amazon offers inventory finance and login and pay services. Let's not forget MyBank – launched by Ant Financial (Alibaba) – or that Uber is now offering car finance.

Bank brands remain highly trusted. Some would argue they could develop lifestyle layers to compete in this Platform space. This is one possible scenario, and one that players such as Fidor Bank are relying on. But in a world where Amazon already has Echo – a small speaker that sits in your living room and responds to voice commands – can they catch up? Technology hardware is hardly the core business of banks today who are focused on maintaining costly and outdated legacy infrastructure.



<sup>3</sup> <http://www.smf.co.uk/press-release-government-should-back-a-new-active-consumer-week/>

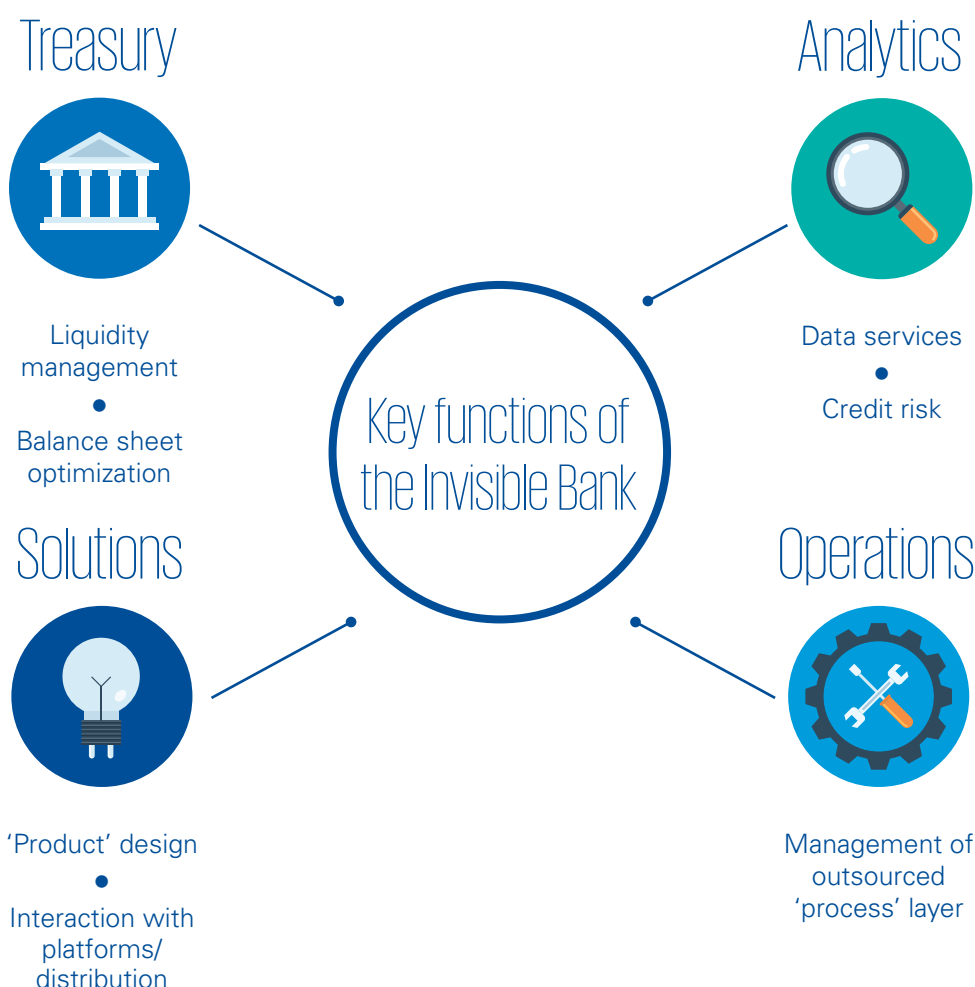
Technology hardware is a global business whereas banks are becoming increasingly national. Technology firms invest 10-20% of revenues into research and development (R&D)<sup>4</sup>, for banks it's just 1-2%<sup>5</sup>. With banks' return on equity (RoE) under 5% this is unlikely to change in the short to medium term<sup>6</sup>. And as for branches? By 2030 there might be some providers catering to people who value (and will pay for) face to face interaction. But it is unlikely that this will be of sufficient scale to rely on as a mechanism to own the Platform Layer of banking.

### Banks can own the Product Layer, but need to change

Banks fulfil three vital economic functions: they 'create' money through making loans, they give people a safe place to store cash and they facilitate maturity transformation. Put simply, they take on demand deposits but lend this money on over longer periods.

These functions are possible because of a strong regulatory and risk management environment, access to government support (for example in the UK through the financial services compensation scheme) and an understanding of credit risk. Banks are well placed to build on these core strengths in the new landscape of 2030.

Perhaps of most interest in such a model is the disappearance of large parts of the traditional bank. Customer service call centres, branches, sales force, IT, swathes of the back office – gone. This transition would be painful and costly, to say the least. It is odd that most banks today offer three-month-term deposits. Customers who need to get their cash back in 85 days are not well served in such a world. And why are customers forced to choose between an overdraft, a bank loan and a credit card when each one of us has bespoke financing needs?



<sup>4</sup> Annual reports of Microsoft, Google, Intel and Roche

<sup>5</sup> Annual reports of HSBC, Santander, RBS and Lloyds

<sup>6</sup> Annual reports of RBS, Barclays, HSBC and Lloyds



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### **The Process Layer – a new wave of utilities will emerge to serve the industry**

The biggest banks might well retain an element of transactional infrastructure, but that will be opened up to competitors as a distinct utility business. Competition in this space will be intense – led by a range of industry-wide solutions in payments, settlements, core platforms, client onboarding, know your customer (KYC) etc. By 2030 some of this might well be fuelled by Blockchain, but let's not complicate the debate by pre-judging the underlying technology. A rich ecosystem of new Fintechs, major outsourcers and existing industry players such as VocaLink, Visa, the Bank of England and stock exchanges will serve the banks. In payments, these utilities may well interact directly with the Platform Layer.

### **If banking becomes fundamentally different, so too must the regulatory context**

For financial services regulators, this future is challenging. It does not fit or comply with much of the current regulatory requirements.

In the Platform Layer (EVA, in our example) there is massive systemic risk. If the algorithms driving the decision-making are wrong we could end up with a mis-selling issue even bigger than PPI. To date, regulators have been reluctant to give even informal comfort on the use of artificial intelligence. The FCA's sandbox might be a way to take a step in this direction. And the blending of banking with other aspects of day-to-day life blurs the lines of consumer protection regulation. If EVA books and pays for a yoga appointment that Luca didn't want, is that grounds for complaint? And who is responsible for the error? The platform? The payment agent? The hardware provider?

In the Process Layer there is a wave of new entrants, some of whom would not be directly captured by existing regulation, but who, it could be argued, are of such systemic importance that they should be.

And in a world where technology underpins banking more than ever before, cyber risk becomes even more acute. Banking regulation will need to become real time and potentially even present at the point of sale. Behavioural economics will be a vital regulatory tool.

But a future that is demanded by the consumer will be one that is hard to put the brakes on. If it can be proven that the customer outcomes are better, of a lower cost and more accessible then regulators will need to keep step with the industry to ensure that these risks are managed.

### **Building an invisible future**

Technology is an unstoppable driving force in society. Banking is only 10% through its journey of change. In reality we can only guess what that change will look like by 2030. The Invisible Bank is one such possible future – but there are other equally probable and alternative scenarios.

The Invisible Bank has its roots in technology which is already in the labs of banks today. Some is even live – APIs, cloud-based services, artificial intelligence and mass personalisation are the building blocks of tomorrow. But these technologies are being used in the peripheral systems rather than the core. A real shift in banking would require building out core platforms from scratch – and few banking CEOs have the risk appetite for that.

In the meantime, dear bank, could you stop asking me to write down my address on every paper application process you put me through? Wouldn't that be a good start?

“The winners will be those with a low-cost environment and advanced data/credit science. Those with 'products' capable of mass personalisation will also thrive.”



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