

Introducing the

# Open Banking Standard

Helping customers, banks  
and regulators take banking  
into a truly 21st-century,  
connected digital economy

**In September 2015, the Open Banking Working Group (OBWG) was set up at the request of HM Treasury. Its aim? To explore how data could be used to help people to transact, save, borrow, lend and invest their money.**

**Making it possible to share data that banks have historically held will improve people's banking experience. When securely shared or published openly using open APIs, the data can be used to build useful applications and resources to help people find what they need. **Customers** can look for a mortgage more easily, **banks** can find customers matched to a new product, and **businesses** can share data with their accountants. This, in turn, will improve efficiency and stimulate innovation.**

**The OBWG has set out an Open Banking Standard to guide how open banking data should be created, shared and used by its owners and those who access it.**



# Definitions

## Open API

An application programming interface (API) is a proven technology that can help provide access to open data (such as a list of products that a bank provides) and secure shared access to private data (such as a list of the transactions in an individual's bank statements). Data accessed via an open API may be closed, shared or open. Open APIs, for the applications described herein, need to be supported by robust security, legal and governance frameworks.

## Open data

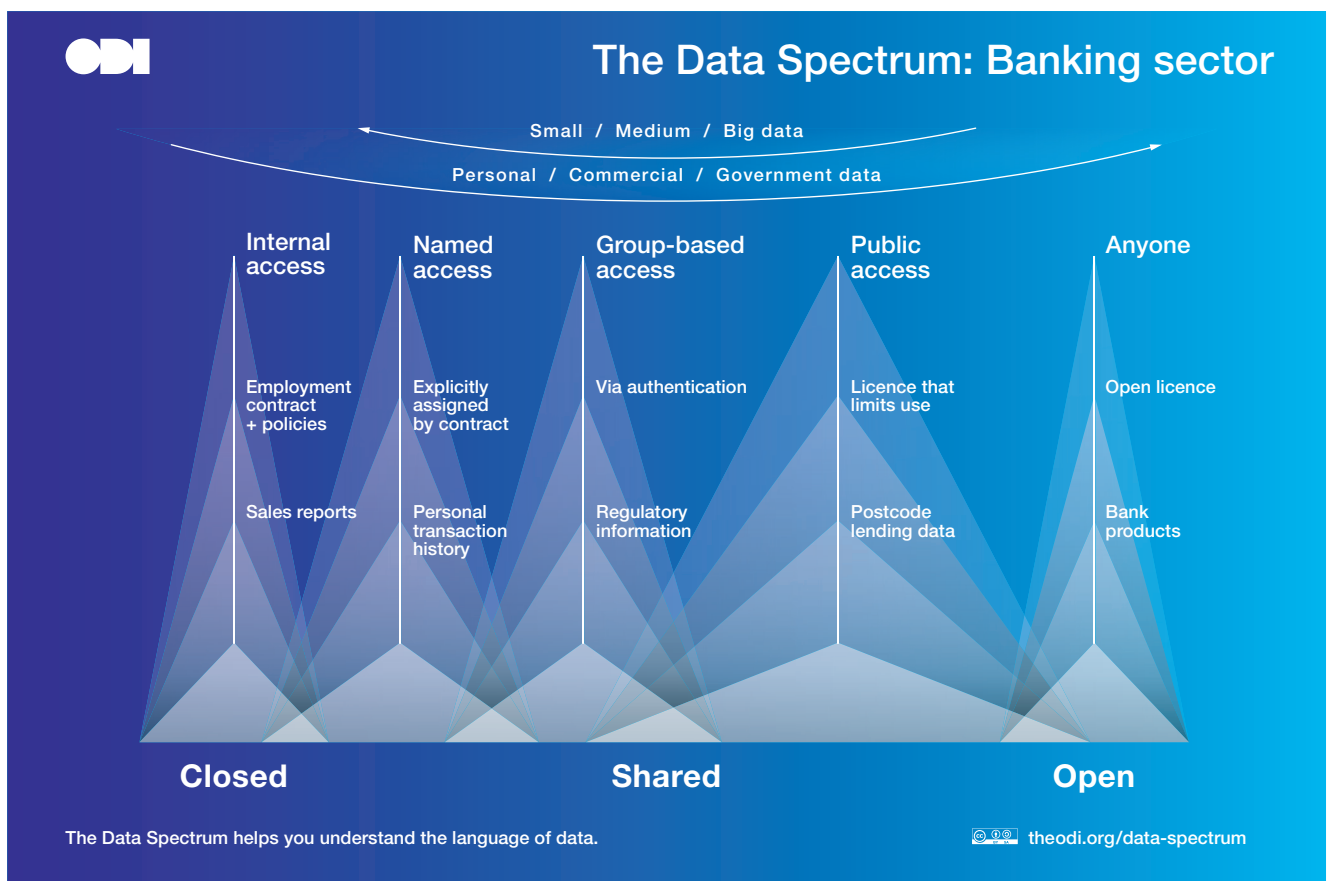
Data exists on a spectrum, from closed to shared to open. Open data is data that anyone can access, use or share.

## The Open Banking Standard

A guide for how banking data should be created, shared and used. The open standard is developed and maintained collaboratively and transparently, and can be accessed and used by anyone.

## The Open Banking Working Group

Industry experts from banking, data, and consumer and business communities, who convened in 2015 to create the first Open Banking Standard framework.



The Data Spectrum for banking helps you to understand the language of data within the banking sector. Download The Data Spectrum: Banking sector at [theodi.org/finance](http://theodi.org/finance).

# Setting an Open Banking Standard: how and why?

The Open Banking Standard framework sets out how to develop an openly accessible set of standards, tools, techniques and processes that will help **improve competition and efficiency, and stimulate innovation** in the banking sector. It guides how **open banking data** should be created and used, and can be implemented by recommendations set out by the Open Banking Working Group

(see Recommendations for implementing the Open Banking Standard, p.9).

## Background

Changes in EU law mean that within the next two years UK banks will have to open up access to their payments capabilities, and provide services that will enable their customers to receive their data over the internet and **easily, safely and securely** share it with third parties.

## Why set a standard for open banking?

Consumers are becoming more comfortable with new models for data sharing. Where once their trust depended on rigid command-and-control structures, they are now familiar with sharing data quickly online through a model that is federated. However, both models still need a set of standards to guide them, **protect privacy** and **keep data secure**. As global pioneers in standard-setting in related fields, we want to put the foundations in place for an Open Banking Standard now, before the laws change.

## How is banking data shared now?

Banking data – such as details of personal or business bank account transactions – is currently not easy to share. People can access and download their bank statements from their providers, but sharing them with any third party in machine-readable formats (that computers can understand) is not as easy. Bank product information may be published on a bank’s website, but gaining access to well-structured data for anyone wishing to use this information to create a service – like businesses in the FinTech community – is cumbersome. Many price comparison sites have to “screen scrape” data from websites, requiring a programme to transform unstructured content (usually HTML) into structured data, which they can store in a spreadsheet or database, before they can use it to help people find a better deal.

## What does ‘open’ really mean?

The Open Banking Standard recommends that open APIs need to exist for banking, to help provide open access to open data and shared access to private data. An ‘open API’ doesn’t make the data it is delivering open, but makes its technology and the standard itself open. Access to private data through open APIs can only be given by permission of the data owner (whether individual or business) only, subject to approved security and technical standards.

## Who owns banking data? Will this change if it’s opened or shared?

Data produced during financial transactions is often owned by many parties, and both banks and customers will have to give explicit permission for their data to be used by third parties.

Banks own data about their products, services and operations, which they can provide access to via open APIs (as either open or shared data) within the Open Banking Standard framework.

While the ownership of data may not change if it is published openly or shared, the mechanism under which it is licensed might, and this will represent a substantial cultural shift for many organisations. For example, the Open Banking Standard proposes an **open licence** be applied to bank product information (eg a Creative Commons CC-BY licence, which enables free distribution, instead of © copyright, which requires permission from the copyright holder every time the data is used). This will ensure that **customers and developers can easily access information**, and that **banks are able to reach as many potential customers as possible**.

# How will the Open Banking Standard benefit customers and industry?

By guiding how banking data can be better opened, accessed and shared, the Open Banking Standard will help developers to build services that are more targeted to meet the needs of customers, suppliers and other innovators in finance.

For **customers**, having access to their own banking data will mean better options for choosing and using financial products, and better ways to manage their finances.

For **challengers in industry**, having access to open bank data, and clear, secure ways to integrate it with shared customer data, will mean they can quickly develop new, or better, products and services. For **banks**, being able to make their interactions with customers smoother and simpler will help them to find efficiencies, improve customer service and deepen their customer base.

## Individual and business benefits

There are specific, real-life benefits that could come from making it easier to share and open banking data.

### Customers could compare and save on current accounts

Comparing bank accounts is not easy for customers. If they could give a price comparison service explicit and limited permission to access their bank account data across an open API, it could suggest the best options for them.

Consumers can save up to £70 a year by switching to the current account best suited to their needs.<sup>1</sup> Switching overdraft facilities could save consumers an average of £140 a year.<sup>2</sup> This type of service could also apply to financial products such as credit cards and mortgages.

### Lenders could offer borrowers better terms for loans

Lenders use historic transactional data to determine someone's risk level for paying off a loan. This data is only available to a customer's account provider, which means third-party lenders may not be able to offer the best terms to people looking for a loan. If customers could securely share their transaction data with third parties through an open API, potential credit providers could use it to better target their loans.

### Small businesses could save time on their online accounting

Many small businesses use cloud-based platforms for bookkeeping but generally have to input their transaction data manually. An API from their current account provider would make it easier to reconcile payments – all a business owner would need to do is log into their accounting platform, select relevant bank accounts and give their permission for the data to be shared.

### Fraud detectors could monitor multiple accounts

Fraud costs the UK economy over £570m a year, according to the National Fraud Authority, and people have come to rely on their bank to notify them of fraudulent activity on their accounts. With securely shared transaction data, third party fraud detectors could offer customers better monitoring and notification services.

With sophisticated tools, they could aggregate data across multiple accounts or products to spot patterns that a single product provider wouldn't see.

<sup>1</sup> <http://www.theguardian.com/business/2015/oct/22/high-street-banks-survive-competition-inquiry>

<sup>2</sup> CMA (2015) Retail banking market investigation

# How will the Open Banking Standard benefit the UK?

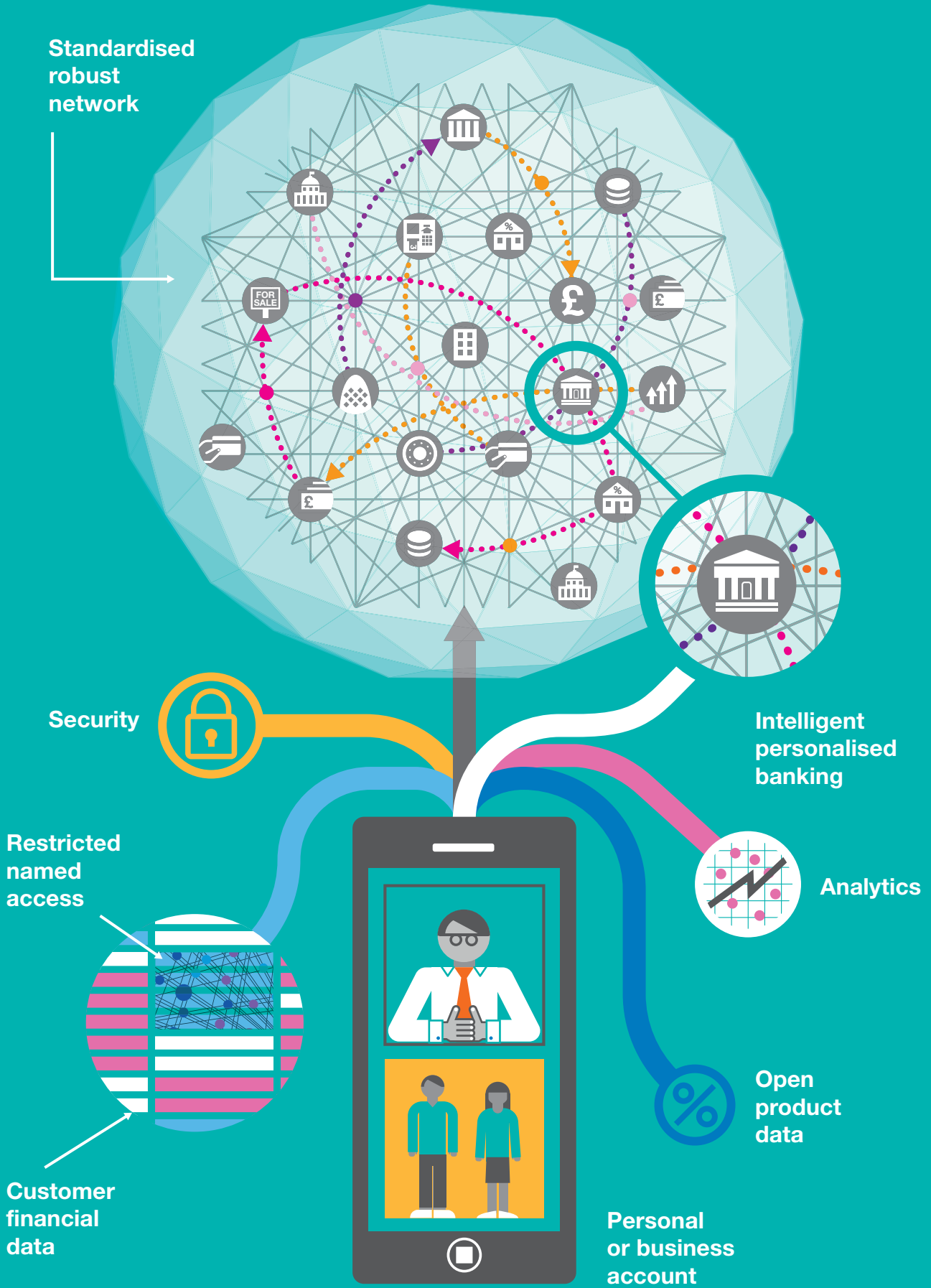


Implemented effectively, the UK will benefit from the proposed Open Banking Standard by **unlocking innovation** that will transform and improve the customer banking experience.

The Web has helped **boost the UK** economy by making vast amounts of public information more freely available. Given its connected nature, it has allowed for new categories of products and services to emerge, and for people to make more informed and relevant decisions.

The Open Banking Standard defines the framework for more data being linked and accessible – some open, some shared – along with the technology to integrate it. This is what we see as the opportunity of a **truly connected, digital economy**.

In adopting and developing the Open Banking Standard framework, we will **set precedents for other sectors**. Specifically, the Open Banking Standard will pave the way for similar frameworks to be established and stimulate open innovation in other industries. In so doing, the UK has the opportunity to become a global pioneer in open banking, strengthening its financial sector and giving it a continued advantage over other countries.





# Recommendations for implementing the Open Banking Standard

The Open Banking Working Group has set out recommendations for how to implement the Open Banking Standard, and evolving and rolling out the framework over the next five years. These recommendations will be carried out by a purpose-built Open Banking Implementation Entity, which will also plan, design and deliver future phases of the Open Banking Standard, with input from industry through consultation.

## Technical steps

There are significant technical considerations involved in defining and implementing the Open Banking Standard.

## Developing open APIs

The Open Banking Standard proposes open APIs be built as **open, federated and networked solutions**, rather than as a centralised system. This echoes the design of the Web and will allow wide scope for innovation. Open APIs will be available under a licence that enables free use, reuse and distribution.

Open APIs will encourage existing standards, datasets and structures to be reused. Barriers to participation will be kept deliberately low to cultivate an **engaged developer community**.

Documentation, development code and reference implementations, and an implementation register that lists API providers that have implemented the Open Banking Standard will be published on the Web for anyone to use. The information will help people understand the data and services exposed, help developers engage in building upon it, and enable people to connect with each other in the development of services (eg sandbox environments for secure testing).

We expect to attract developers ranging from individuals who are building their own apps, and FinTech developers, to agencies that build solutions for other challenger banks and large companies from financial services. We also expect groups from other sectors will engage, who want to partner with an API provider to develop their own solutions.

## Broader actions for industry, government and consumers

The bulk of the work in implementing and promoting the Open Banking Standard is not technical. The critical issues that must be faced, if consumers are to take up the opportunities offered by open banking data, are around **governance, security, liability, standards, communications, regulation and legal**.

### Governing the Open Banking Standard

An **independent authority** should be established to ensure standards and obligations between participants are upheld. This authority would govern how data is secured once shared and the security, usability, reliability and scalability of APIs. It would also vet third parties, accredit solutions, maintain a whitelist of approved firms and create frameworks for handling complaints and redress.

### Improving data literacy and addressing security concerns

Individuals, businesses and governments must have an awareness of their **rights and responsibilities** when sharing or handling data. We need to be clear on what informed consent means in our ubiquitously connected world, and the responsibility for this falls on everyone.

Customers should give explicit consent each and every time they share specific data (and be able to revoke access at least as easily as they grant it). Platforms must be transparent and proactive in how they use and store customer data (for example, to not hold data for longer than they need to).

Two of the biggest challenges in encouraging consumers to share data are (1) helping them to fully understand what is happening and (2) helping them to feel confident that their data is secure. Financial data, like health data, is extremely sensitive and to create informed consent we must invest in both data literacy and security.

People must be helped to understand the value of their own data, and what responsibilities they take on when they share it with third parties. Responsibility for educating people must fall on many parties including banks, the FinTech community, government, consumer and business groups.

### Addressing regulation, law and liability

Anyone supplying or accessing data already has obligations under existing **legal and regulatory frameworks**, such as the Data Protection regime. The Open Banking Standard would not alter that. Where customers grant consent for the use of their data, provided that consent is in a format easily understood and verifiable by the all parties, there should be no ambiguity under law as to what data was supplied and what it was to be used for. The role of any authority would be to set minimum clear standards for what that consent might look like.

### Meeting standards

It is crucial that we protect data that needs to be kept private, just as it is crucial that we openly publish data that should be open for everyone to use. Because both privacy and openness help create trust.

Open APIs provide a means of accessing private data, so it is important to embed best practices in the security field to protect customers, in particular from so-called cyber criminals. Research indicates that 40% of consumers already react positively to the concept of sharing financial data, but 30% are wary of the idea – and 30% are uncertain.<sup>3</sup>

Two of the main sources of consumer concern or uncertainty are security and redress. Generally, consumers expect what they regard as “bank-grade” security around their financial data and some means of compensation for security breaches that are not their fault.

Along with security standards, the Open Banking Standard should include both **API and data standards**, thereby addressing both the underlying data and the mechanisms through which data is accessed. The Open Banking Standard should reuse and align with existing open standards, datasets, structures and semantics wherever possible.

### Communicating the benefits of open banking

Key audiences – such as political stakeholders, the banking sector, FinTech community, consumers and businesses – will need to be **educated and mobilised** to make the best of the Open Banking Standard. The Open Banking Standard Implementation Entity, trade groups and government should promote this with events, forums and press outreach.

<sup>3</sup>Ipsos MORI for Barclays (2015) Retail banking market investigation



# What next?

The Open Banking Implementation Entity, with input from and consultation with industry bodies, should plan, design and deliver future phases of the Open Banking Framework. A minimum viable product for an Open Banking API, based on open data is intended to be launched towards the end of 2016, and personal customer transaction data included on a read-only basis, starting from the beginning of 2017. The Open Banking Standard's full scope, including business, customer and transactional data, should be reached by 2019.

Our aim is to ensure that the Open Banking Standard provides the highest quality of service for individuals and businesses, increases competitiveness, improves efficiency and stimulates innovation. To achieve all that and be successful will require trust among all participants, and especially with customers, whether businesses or individuals.

*“Banking as a service has long sat at the heart of our economy. In our digitally enabled world, the need to seamlessly and efficiently connect different economic agents who are buying and selling goods and services is critical.”*

— **Matt Hammerstein, OBWG Co-chair**

*“Leadership in this area will set UK banking apart. It will also set precedents across many sectors: a strong data infrastructure will be as important to the UK's economy today as roads have been to our success in the industrial economy for over a century.”*

— **Gavin Starks, OBWG Co-chair**

We hope that this framework can contribute to the UK taking a leadership position and look forward to building on it in the near future.

## About this paper

This paper is a summary of **The Open Banking Standard**, a paper written by members of the **Open Banking Working Group**. Find out more about the working group and its members at <http://theodi.org/open-banking-standard>.

The Open Banking Working Group would like to thank those groups that have made significant contributions to this report by allowing individuals from their organisations to play a leading role as members of its Steering Committee.



## The Open Banking Working Group

Steering Committee

*Chairs:* Matt Hammerstein (Barclays), Gavin Starks (ODI)

Claire Calmejane (Lloyds Banking Group), Christophe Chazot (HSBC),  
Kate Frankish (Tesco Bank), Imran Gulamhuseinwala (EY), Paul Hollands (RBS),  
Guy Levin (CoadeC), Andy Maciver (Financial Data and Technology Association),  
John MacLeod (Santander UK), Patrick Mang (HSBC),  
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Chris Taggart (OpenCorporates), Cameron Yorston (HMT).