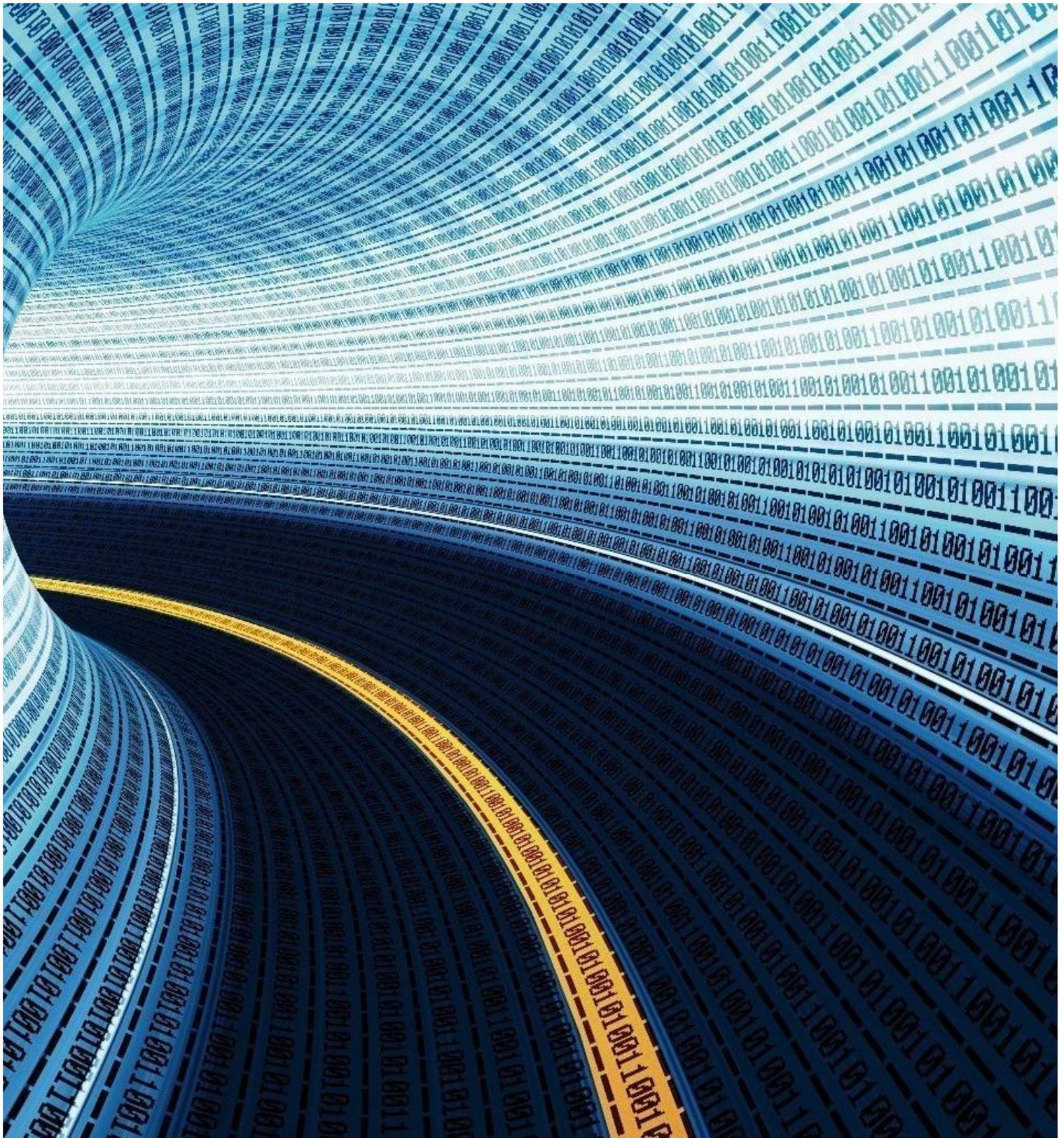


A Payments Strategy for the 21st Century

Putting the needs of users first

November 2016



“ I am committed to contributing to ensure our future national payment infrastructures and services are powerful, modern and provide access to all.

**Marion King - Group Director of Payments
- RBS**

“ We are uniquely positioned to achieve sustainable world-leading payments services for all users. The Financial Crime group aims to engender trust while removing friction, viewing the challenge through social rather than competitive eyes.

**Russell Saunders - Managing Director,
Global Payments - Lloyds Banking Group**

“ Customers want payments to be easy to use, secure, reliable, timely and good value. As a representative of a financial services organisation, which is committed to putting members first, I can really associate with the work of the Payment Systems Regulator, which is focused on making payment systems work well for all that use them.

**Neil Lover - Head of Payments & Financial
Crime MLRO - Coventry Building Society**

“ I am delighted to represent the interests of credit unions and other small PSPs in the work of the Forum. It's so important to increase competition and diversity by simplifying access to our payments systems.

Mark Lyonette - Chief Executive - ABCUL

“ Our customers and stakeholders demand 'Speed, Ease and certainty', our Strategy embodies that with certainty or resilience at the heart of all we do.

**John Hackett - Group Chief Operating
Officer, Financial Crime Risk - HSBC**

“ Users of all kinds – consumers, SMEs, corporates, third sector and government – all need responsive and transparent payments that give them control and confidence. We've put those needs at the heart of the Strategy, ensuring that the UK's payments industry delivers Solutions for users' current needs and has the flexibility to adapt to meet their changing needs in the future

**Sian Williams - Head of National Services -
Toynbee Hall**

“ We want to create a payments system that allows new entrants and established providers to respond to end-users' evolving needs.

**Carl Pheasey - Head of Policy - Money
Advice Service**

“ Technology and Competition are creating a dynamic market to make payments better for both consumers and merchants. It is a real privilege to be part of the Forum and help bring about these exciting changes.

**Philip McHugh - Chief Executive, Business
Solutions - Barclaycard**

“ We have an opportunity to radically simplify retail payments infrastructure in the UK; enabling new participants to take part in the UK payments systems with fewer barriers to entry, and to compete more effectively to provide excellent financial services products to end-users.

**Otto Benz - Director: Strategic Payments -
Virgin Money**

“ I'm passionate about incorporating emerging payments industry needs within key initiatives to be championed by the Forum in its critical role shaping UK payments' future.

**Mike Smith - Commercial Director -
Raphaels Bank**

“ I feel privileged to be part of the Forum with the opportunity to shape and innovate the Payment Industry improving it for all users.

**Becky Clements - Head of Industry
Engagement and Payment Change - Metro
Bank**

“ Benefits of Strategy; bringing all stakeholders together and coming out with a Strategy which is fit for purpose for the future – which puts the user at the centre. In particular, the Simplified Payments Platform, providing common governance for APIs that act as the glue holding the payments architecture together.

**Lisa Felton - Head of Consumer Policy -
Vodafone**

Foreword from the Chair

The Payments Strategy Forum is a unique group of 24 experts who have come together from across the payments sector to deliver a Strategy to unlock competition and innovation in payments.

Set up by the Payment Systems Regulator, it represents the first time that all the relevant stakeholders have been involved in planning the future of the UK's payments systems. Our work has been conducted through Working Groups, open to anyone with an interest in payments, involving over three hundred individuals from the Payments Community. Consumers, businesses, government, regulators, established banks, challenger banks and FinTechs have all come to the table with their particular knowledge, experience, resources and creativity to make this Strategy what it is.

The Forum recognises that payments in the UK are already some of the best in the world for their resilience and reliability, trusted by the industry and customers alike. However, we want to reinforce the position of the UK as a global leader, and address those weaknesses in payments that are holding us back. We were asked to develop a Strategy that facilitates innovation and encourages competition through stakeholder collaboration in order to address the challenges and needs of all UK end-users.

From the outset, the Forum has been committed to working in an open, transparent and evidence-based way. To this end, the Forum set up a dedicated website where all meeting papers and draft documents of the Working Groups are open to view. In this way, the Payments Community has been able to trace the Forum's journey from the start of our work, and participate at every stage in developing the Strategy.

In July we published a draft of this Strategy in order to conduct a wide-ranging consultation amongst all those that may be affected by the changes. The responses contained a high degree of consensus. This document incorporates the findings of our consultation. It also contains a high-level business case evaluation, and an implementation roadmap that demonstrates how this work will be taken forward without delay.

As a result of the Forum's broad constituency, we have delivered a Strategy that puts the interests of those who use our payments services centre stage: consumers, businesses, government, charities and others. Together, we have addressed their multiple concerns by challenging the status quo to provide an ambitious Vision for the future of UK payments. It is one that provides simpler access, greater innovation, increased adaptability and better security so that the payments system is ready to meet the needs of current and future generations of payment service users.

With the publication of this Strategy, the Forum will begin its next phase of work on detailed design and implementation. We shall maintain the momentum by overseeing the Implementation Roadmap described at the end of this document, and seeing through the take up of our Solutions to the end of 2017. At this point, a new Consolidated PSO will be in place to carry on the work of the Forum, leading the execution of the Strategy through 2018 and beyond. Our immediate priorities are to push ahead with the detailed design and implementation of specific Solutions to address unmet user needs, whilst also taking action to reduce financial crime. At the same time, we will drive forward initiatives that simplify access and promote competition. With our longer-term Vision in mind, we shall design the New Payments Architecture, and set out a course for the UK's future infrastructure.

I would like to thank everyone who has participated in this collective endeavour. It hasn't always been easy. Nor have stakeholders agreed at every stage on the priorities and Solutions proposed. But there has been comprehensive involvement by the Payments Community in every stage of our deliberations, and the result is a consensus Strategy that marks the start of an ambitious journey that will transform payments systems in the UK.

RUTH EVANS, November 2016.

Acknowledgements

This Strategy is the culmination of over 12 months of work undertaken by individuals from across the Payments Community.

As the Community has developed it has grown from 304 individuals representing 208 organisations in October 2015, to 534 individuals from 326 organisations today. This represents significant collaboration and commitment from the payments industry, and beyond, in support of developing this Strategy to address user needs.

These individuals have dedicated a significant amount of time alongside their full-time workloads at their respective organisations.

The Forum would like to express our sincere gratitude to these people. Without their valuable ideas, insights, challenges, consideration and hard work, this Strategy would not have been possible.

Thanks must also go to those who have driven the development of the Strategy, whether by leading Working Groups or as members of the Forum.

And finally, we would like to acknowledge those organisations who provided voluntary financial contributions to fund our independent evaluators:

- Barclays
- Clydesdale Bank
- HSBC Bank
- Lloyds Banking Group
- Metro Bank
- Payments UK
- Raphaels Bank
- Royal Bank of Scotland
- Virgin Money

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Executive Summary

Payments systems in the UK are some of the best in the world, performing a critical function for the economy. They underpin our day-to-day lives. However, they are no longer fit for purpose for the 21st century. Their age and complexity make it increasingly difficult for the industry to meet the changing needs of a diverse group of end-users – consumers, businesses and government.

Within the current payments landscape, end-users have the ability to make payments through a variety of methods, such as near real-time payments on the Faster Payments System, Direct Debit on the Bacs system, cheques via The Cheque & Credit Clearing Company (C&CCC), large value payments on CHAPS and card payments with the card schemes.

Across this complex environment, the gap between end-user needs and what is being delivered by our current payments infrastructure is growing and creating significant detriments for users who are demanding greater control, greater assurance, enhanced data and reduced financial crime.

The Payments Strategy Forum (the Forum) was established in October 2015 by the Payment Systems Regulator (PSR) to create a Strategy for payments in the UK with users at its heart. The Forum represents the first time in the history of the UK payments industry that all sectors have come together to deliver a Strategy to close the needs gap, address the detriments, and unlock competition and innovation in payments. It has been developed through a unique collaboration with hundreds of people from across the providers and users of payments services. It takes into account the responses to our industry consultation and is supported by the findings of our high-level Business Case Evaluation (BCE).

To guide the Strategy, we set out a Vision for the future of UK retail interbank payment systems that would:

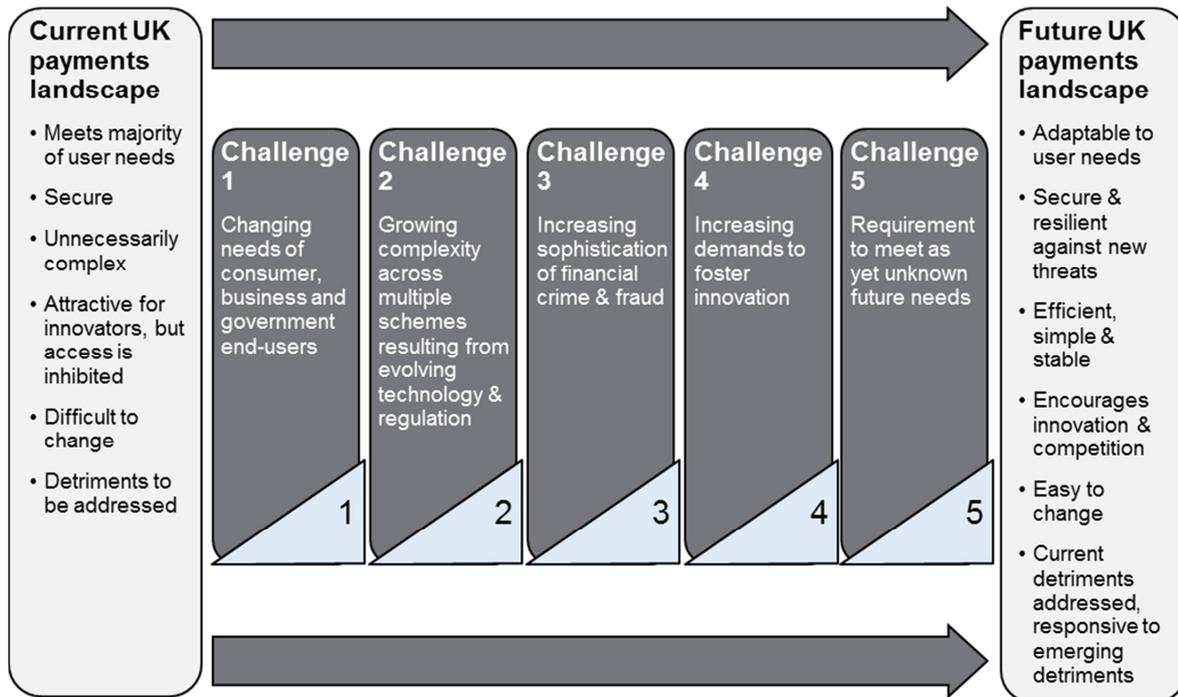
- Provide simpler access
- Ensure ongoing stability and resilience
- Encourage greater innovation and competition
- Enhance adaptability and security

to meet the needs of current and future generations of payments service users¹.

¹ Service Users are defined under Financial Services (Banking Reform) Act 2013 as those who use, or are likely to use, services provided by payment systems and is not limited to a specific group of users. Service users will include - banks who use payment services provided by other institutions; businesses ; retailers; charities; government and consumers

We have identified five key challenges that currently impede our Vision, illustrated in Figure 1.

Figure 1: Key challenges to the UK payments industry



Our Strategy, shown in Figure 2, addresses these challenges head on. It will:

- **Simplify** our current environment

We have multiple payment systems, governed in different ways, using different rules and standards, built on different technologies. Implementation of our Strategy will simplify the complexity of this environment, including:

- Simplification of access
- Simplification of governance
- Simplification of rules, and development of common standards
- Simplification of technology infrastructure

- **Leverage** industry knowledge and experience, as well as our current capabilities and the outcomes expected from known industry initiatives

Leveraging the knowledge and experience of the industry will be a vital element of our Strategy. Similarly, despite technical limitations, our current payment systems have capabilities that can be leveraged to move our Strategy forward. There are also a number of existing and planned industry activities which will deliver beneficial outcomes and that have the potential to deliver key aspects of our Strategy. For example, the work being done on Open Banking Application Programming Interfaces (APIs), the Image Clearing System (ICS) being deployed by C&CCC, and other projects to deliver new functionality, such as 'Paym' on Faster Payment Service (FPS).

We also note the importance of the work of the Bank of England (BoE) in its review of Real Time Gross Settlement (RTGS). Aligning with this work is a critical part of our Strategy, as it has implications in terms of timing and technology, for example with respect to deployment of ISO20022 standards.

In relation to our efforts to combat fraud and financial crime, there is positive activity being led by others in the industry, for example, Financial Fraud Action UK (FFAUK), the Joint Money Laundering Intelligence Taskforce (JMLIT), the National Crime Agency (NCA), and the Joint Fraud Taskforce (JFT).

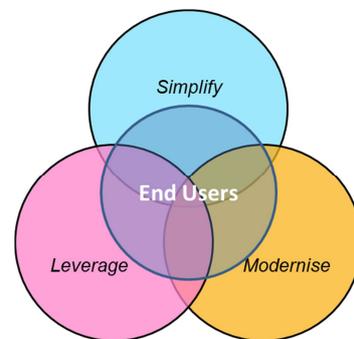
Our Strategy leverages these existing capabilities and coordinates with known initiatives, collaborating across the industry.

- **Modernise** through the assessment and deployment of the latest technology to deliver our New Payments Architecture (NPA)

Our current infrastructure has grown organically over several decades, and as a result it suffers from technical limitations. There are limits as to how far leveraging what we have today will take us. This is evident in the limited data that can be transferred on current systems, which in some cases use ageing technology. This ageing technology is unable to fully deliver our strategic objectives.

We need to modernise our technology if we are to fully achieve our strategic Vision. In this document, we set out a Vision for a new architecture for retail interbank payments. We call this the 'Simplified Payments Platform' (SPP). The SPP will support greater competition and more innovation at lower costs. It will provide simpler access for Payment Service Providers (PSPs), and it will be agile and respond quickly to the needs of consumers, businesses and government.

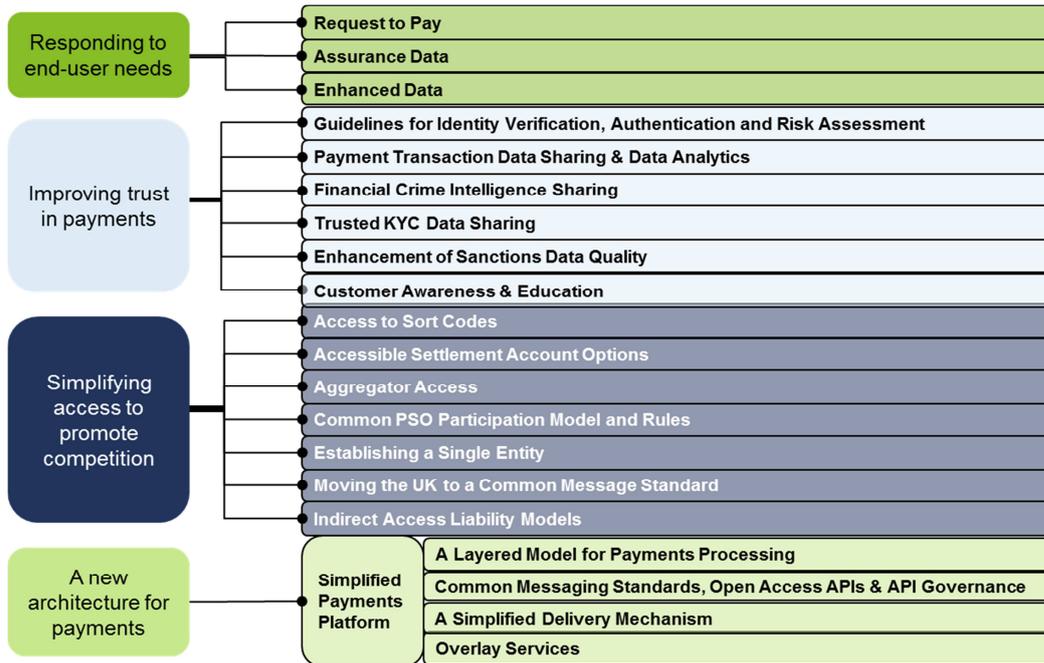
Figure 2: Our Strategy



To implement our Strategy, we defined Solutions across four areas, as shown in Figure 3. These are categorised as:

- **Responding to End-user Needs (EUN):** Solutions to address current and future end-user needs
- **Improving Trust in Payments:** Solutions to engender trust in the safety and certainty of payments
- **Simplifying Access to Promote Competition:** Solutions to simplify access and enable participation in the market for PSPs in order to foster competition and innovation
- **Building a New Architecture for Payments:** Solutions to enable the development of the future payments architecture

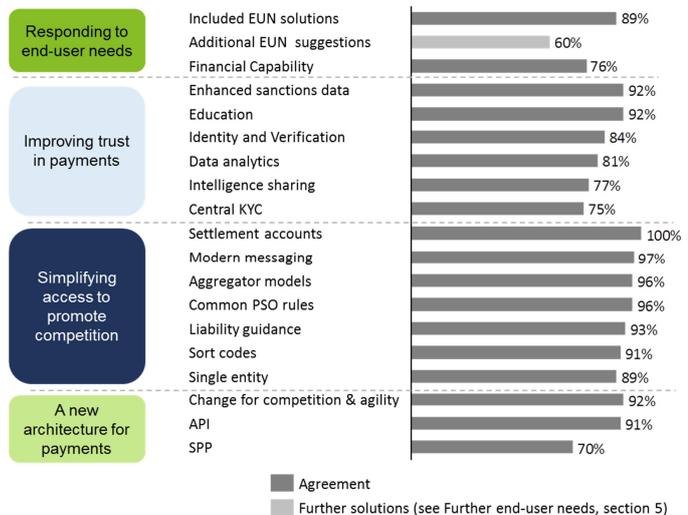
Figure 3: Our Solutions



These Solutions were proposed in the draft Strategy that was published in July for public consultation. We received sixty-eight responses to the consultation from Payment System Operators (PSOs), PSPs, trade bodies, consumer groups, software providers, consultants, end-users and infrastructure firms.

Responses to consultation questions showed broad support for the Solutions proposed across all four areas, as shown in Figure 4. This agreement was accompanied by a variety of questions, suggestions and comments which have been taken into account whilst finalising this Strategy.

Figure 4: Agreement to consultation questions



The Forum has considered three potential future payments infrastructure scenarios on which our Solutions could be delivered and our Strategy implemented. These are to evolve our current state, or to build on one of two New Payments Architectures; a centralised SPP or a distributed SPP. We agreed to continue with detailed design of the New Payment Architecture, developed on modern technology, which may use centralised or distributed approaches, learning from and leveraging ongoing technology developments and deployments where appropriate and run a 'proving pilot' by the end of 2017.

A high-level BCE² has been conducted to understand the estimated relative financial benefit of all of our Solutions, if deployed, on each of these infrastructure scenarios. The BCE found that the NPA infrastructure scenarios show a net financial benefit of £0.8~£1.5bn to the payments industry compared to evolving the current state, assuming a moderate take up of Solutions over a 10 year period. We believe that alongside the net financial benefit, the ability of our proposed NPA to adapt to future, as yet unknown needs of users, makes the case for a detailed design phase incontrovertible.

To this end, we have created a roadmap, illustrated in Figure 5, for the implementation of the Strategy and Solutions. This roadmap reflects our key objectives to Simplify, Leverage and Modernise.

Our roadmap delivers our Solutions, supporting our 'Simplify, Leverage, Modernise' Strategy

We have called the initial phase of activity of this roadmap 'Setting up for Success'. During this phase we will put in place the necessary governance and working structures that will deliver the implementation of the Strategy in collaboration with related industry initiatives, such as the Competition and Markets Authority (CMA) remedies on Open Banking APIs and the BoE RTGS review. In this way, the industry as a whole will be in a position to deliver the desired user outcomes of all programmes of work.

Figure 5: The delivery of our Strategy

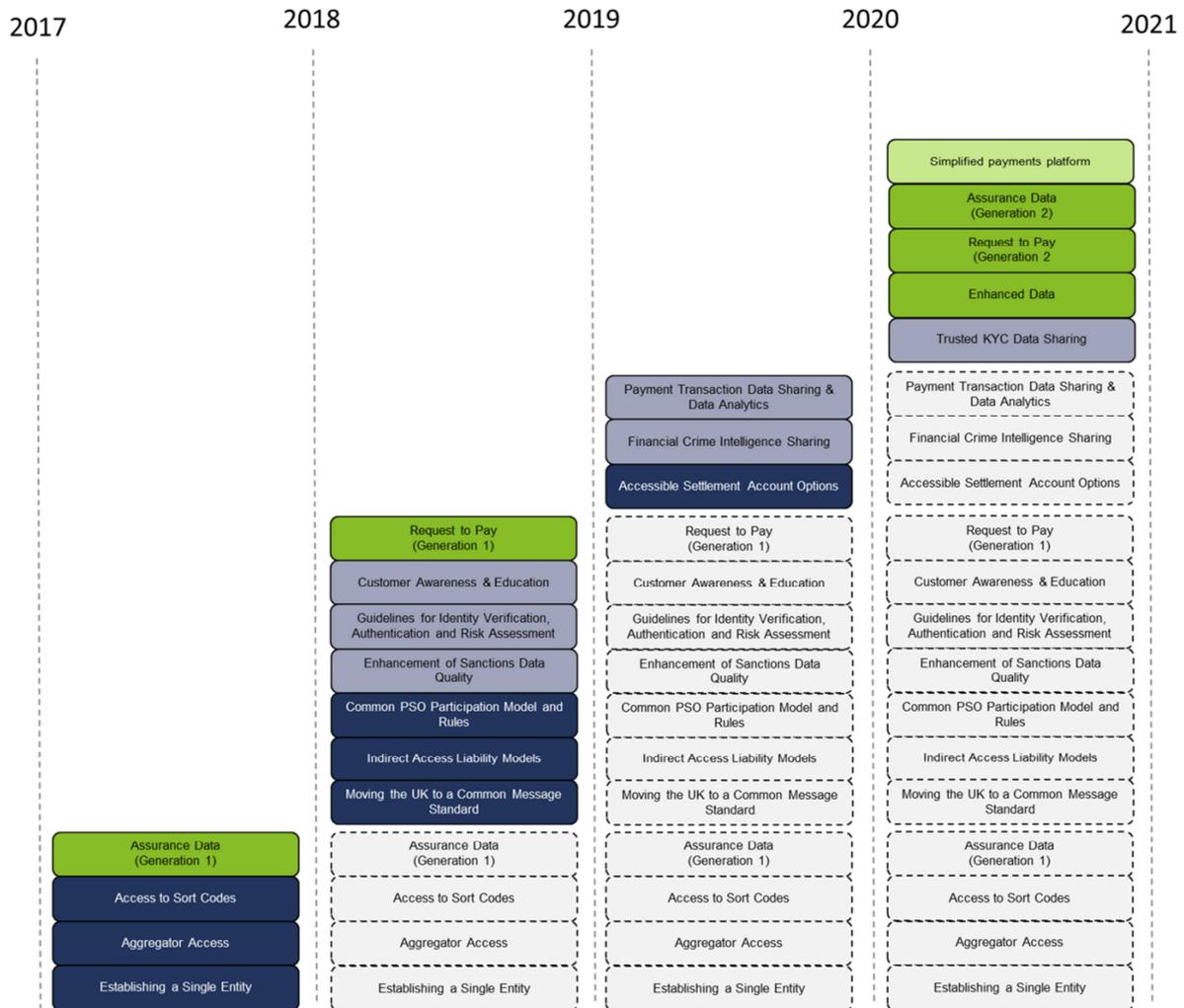


Our roadmap delivers our Solutions over several years, starting in 2017 (Figure 6). Each Solution will go through a detailed design and implementation planning phase. Much of the work during the design phase will be to develop standards for the capability delivered by our Solutions. This will enable elements of

² This Business Case Evaluation (BCE) exercise was based on the existing available information at this phase of our work. It will be revisited and refined into a full economic evaluation during the next phase of the Forum's work, once standards definition, detailed design and implementation planning are conducted, including impact on end-users. Therefore current BCE has been conducted in order to inform the decisions of the Forum at this stage, and should not be considered final.

delivery on our current systems where technically feasible, ensuring interoperability and supporting an easier transition to a future architecture if needed.

Figure 6: Solution enablement timeline³



We recognise that there is a significant amount of change already under way and planned across the industry. As a consequence, we are aware of the risk created by delivery capacity constraints across the industry, which need to be collectively managed. As we proceed with detailed design and implementation planning, we will continue to monitor this risk, collaborate with other major initiatives, and adjust our roadmap when needed, while delivering benefits and addressing detriments as soon as possible.

New capabilities are delivered each year creating a modern, resilient, flexible payments system designed to support the needs of all end-users

³ This Figure shows when the foundation of each solution will be delivered, enabling the competitive provision of services by the relevant parties from then onwards (for example PSPs, PSOs, third-party commercial providers, etc). Adoption of services would begin from that point.

Our view is that the establishment of a clearly mandated Consolidated PSO with the capacity and skills to procure the required infrastructure is critical to success. We see this as an opportunity to drive forward the implementation of our NPA. We also recognise that any new retail payments architecture will be required to settle in central bank money. In light of that, it is essential that our roadmap for the NPA aligns with current BoE plans for the new RTGS system. Specifically, the timeline for decisions on settlement options is mid-2017 and will therefore form an early part of design considerations.

Next Steps

Some of the proposed Solutions can be implemented relatively quickly. Others will take time. To maintain momentum following the publication of the Strategy, the Forum has defined specific next steps.

To progress our End-user Needs Solutions, we will prioritise and deliver the collaborative development of standards and rules, which are required for implementation of our Solutions, such as **'Request to Pay'** and **'Assurance Data'**, whether on existing systems or the **NPA**. These standards and rules will enable partial delivery on the current architecture, by aligning with other industry initiatives such as the revised Payment Services Directive (PSD2) and Open Banking.

The collaborative development of standards to enable deployment of interoperable solutions on existing and new infrastructure is a priority activity of our next phase

Based on these Standards, the competitive market will be able to develop products and services for end-users. Additionally, existing PSOs may wish to develop their own Solutions on their current payment systems. However, the implementation of our NPA, in the longer term, would be required to fully meet all end-user needs.

To increase momentum, we can build on the work already under way to help to simplify and open up access to new entrants to the existing payment systems. This Strategy supports the on-going work on **sort code and settlement account accessibility**; the **development of aggregator models** and **establishing of common participation models and rules**. These initiatives should deliver clear benefits to PSPs now and in the shorter term to close the gap between direct and indirect participants in the market.

The Strategy proposes consolidation of the interbank operator governance of Bacs, Cheque & Credit Clearing Company and FPS into a single **Consolidated PSO**. This work has already begun with the PSR and BoE forming a PSO Delivery Group (PSODG). The PSODG is responsible for the delivery of the Consolidated PSO by the end of 2017, with oversight from a Coordination Group of the BoE and PSR, and by the Forum.

We also want to increase trust in payment systems. To this end, we have defined a set of initiatives which encourage industry to work together to improve security and reduce financial crime. In the short term, the Strategy proposes the publication of agreed industry **guidelines on identity, verification, authentication and risk assessment** to standardise its approach and reduce some of the weaknesses in the system that criminals exploit. In addition, the Strategy sets out the need for a **co-ordinated campaign to give businesses and consumers the tools to help them reduce the threat of becoming victims of crime**.

In the medium term, we want to unlock the ability of new and existing technology providers to meet user needs for greater control, greater assurance and enhanced data. The Strategy proposes the universal **adoption of internationally recognised messaging standards ISO20022**, and the development of **common governance for the back-end APIs** that act as the glue holding together the payments architecture. This use of common standards is a central element of our Strategy and it will be a key component of our proposed **NPA**.⁴

In the longer term, the proposed **NPA** known as the **Simplified Payments Platform** will be designed and assessed, both technically and financially. We have defined a set of core principles which will underpin the detailed design phase. These are:

- A single set of standards and rules, with strong central governance
- End-to-end interoperability (including APIs and an ISO20022 common message standard)
- A ‘thin’ collaborative infrastructure, allowing multiple providers of overlay infrastructure services to compete in the market simultaneously
- The need to ensure our payments systems are secure and resilient, with financial stability a key principle

Based on these principles, we will continue with detailed design of the **NPA**, developed on modern technology, learning from and leveraging ongoing technology developments and deployments where appropriate (e.g. APIs, ICS). We will run a ‘proving pilot’ with clear outcomes, including the demonstration of interoperable standards and proving the proposed layered design, in 2017.

The Forum will be directly responsible for the next phase of delivery of Solutions to increase control, provide assurance and enhanced data. The Forum will also continue to drive forwards elements of Improving Trust in Payments including, **Payment Transaction Data Sharing and Data Analytics**, **Trusted Know Your Customer (KYC) Data Sharing**, and **Enhancement of Sanctions Data Quality**. We will also own activities to **move the UK to a Common Message Standard** and the development of the **NPA**.

For some Solutions, the Forum has identified bodies that it believes would be suitable to own delivery moving forwards, however, their role is yet to be confirmed. Examples of this are our ‘**Financial Crime Intelligence Sharing**’ and ‘**Indirect Access Liability Models**’ Solutions. The Forum will seek to confirm ownership and transition responsibility within the first six months of the next phase.

Some other Solutions will be delivered by others with oversight from the Forum; for example, the PSO DG will own delivery of the single Consolidated PSO. In addition, activity to deliver Accessible Settlement Account Options will be overseen by the BoE, and the development of aggregator models by the PSOs.

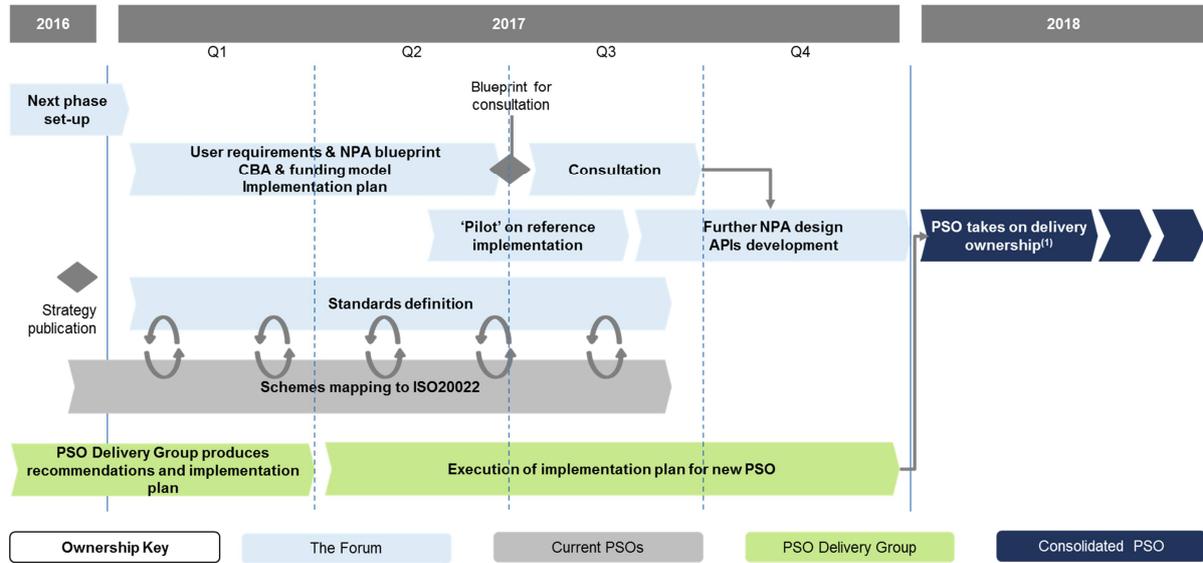
It is anticipated that at the end of 2017 the Consolidated PSO will take on delivery responsibility from the Forum⁵, as shown in Figure 7. This will include delivery of our New Architecture for Payments. Following the detailed design overseen by the Forum during 2017, we believe that NPA delivery would best be accomplished by going out to competitive tender. The Consolidated PSO will therefore need to have the necessary technical, legal and commercial capabilities to run such a process.

We now have an opportunity to build momentum from this Strategy, supported by the PSR, and continue with detailed design and implementation of our strategic solutions

⁴ It is important that progress is made towards adoption of ISO20022 with or without the adoption of the New Payments Architecture.

⁵ The (constituent parts of the) Consolidated PSO will be engaged in the design and development work undertaken throughout 2017, in order to have a smooth handover at the end of 2017.

Figure 7: Proposed high-level timelines for NPA



Note: (1) Including competitive procurement of any central infrastructure in the NPA

This Strategy represents a unique opportunity for the industry to deliver truly responsive, resilient, trustworthy and accessible payments which will benefit everyone. We are confident that the industry, together with all the key collaborators who made this Strategy possible, are ready to meet this challenge. We look forward to working together to deliver our next phase of activity, Setting Up for Success.

1. Introduction

- 1.1. From the Forum's inception our central focus has been on the needs of end-users, including individuals, businesses and government. So, for the first time, representatives from across end-user groups have worked with PSPs involved in developing the Strategy for the future of the UK's payment systems.
- 1.2. The creation of our Strategy has been an opportunity for stakeholders within the payments ecosystem to work together to drive collaborative change, support competition and foster innovation across the industry.
- 1.3. Over the last year we have developed this Strategy, consulted with the Payments Community and opened the draft Strategy to a wider consultation to:
 - Develop a long term strategic Vision for the retail interbank payments industry
 - Focus on areas that require collaboration
 - Recommend areas of priority action
 - Hold the industry to account
- 1.4. We have listened to and worked with the Payments Community. Our first priority was to identify the problems, or detriments, facing the Payments Community by asking them for their views. The problems presented to us were broadly clustered into three themes:
 - Problems that affect end-users
 - Problems that affect PSPs
 - Problems that are created by financial crime and fraud, and affect all
- 1.5. We want to emphasise that collaboration has been a key aspect of developing our Strategy. We recognise that our Strategy is a starting point - successful implementation will require continued commitment to collaboration between payments industry participants.
- 1.6. The PSR made it clear at the beginning of our journey that it expected the Forum to provide leadership and clarity of direction for the payments industry.
- 1.7. This paper presents our Vision and Strategy for the UK payments industry. In particular, it provides:
 - Our Vision for the UK payments industry
 - A clear articulation of our Strategy and supporting Solutions
 - The key findings of the high-level BCE of our Solutions
 - A high-level plan for the implementation of our Strategy, along with next steps for each Solution

2. Payments in the UK

- 2.1. Payments are the transfer of monetary value between end-users e.g. people, businesses and government. The systems that let us send and receive these payments have evolved to include a variety of different payment methods, from cash to Direct Debit and cards to electronic transfers between individuals.
- 2.2. Payment systems are essential to the UK economy and this is why making sure that they are stable and resilient is of utmost importance for all users.
- 2.3. The UK Payments landscape and infrastructure has developed into a 'market leader'. It supports a variety of products and services to support the needs of today's users.

Payment system participants
Users: All users of payments systems including; PSPs, PSOs and end-users
End-users: Consumer, Business and Government users

Figure 8: The UK payments landscape

The UK payments landscape
There are many participants in the payments ecosystem that enable us to make and receive payments, and protect consumers and businesses. The UK payments landscape is thus a complex web of relationships with an array of different bodies involved:

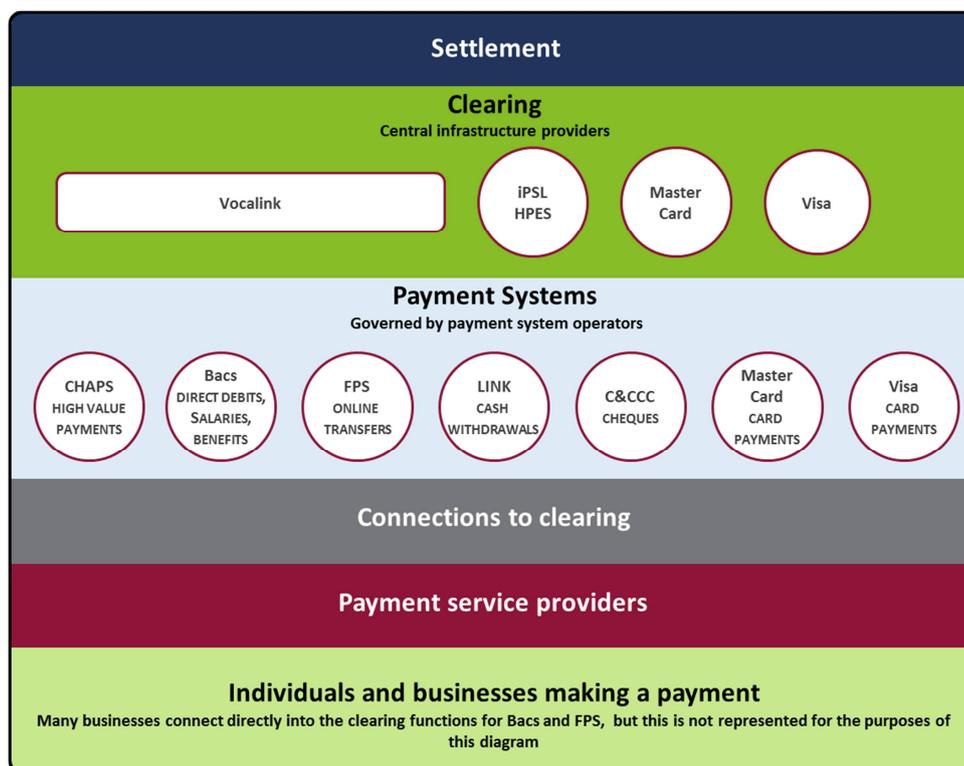
The Payment System Operators (PSOs) set the rules that govern the transfer of money between payer and payee. They are regulated by the Bank of England and/or the Payment Systems Regulator (PSR);
Infrastructure providers like VocaLink deliver the hardware, software, network and connectivity to make payments work. They are regulated by the PSR.

Payment Service Providers (PSPs) include the banks, building societies, credit unions and electronic money and payments institutions. They are regulated by a combination of the Prudential Regulation Authority, the Financial Conduct Authority (FCA) and HMRC depending on status. Independent ATM Operators are typically unregulated.



- 2.4. As shown in Figure 9, interactions between a variety of participants enable a payment, and protect end-users.

Figure 9: Participants in the UK payments industry⁶



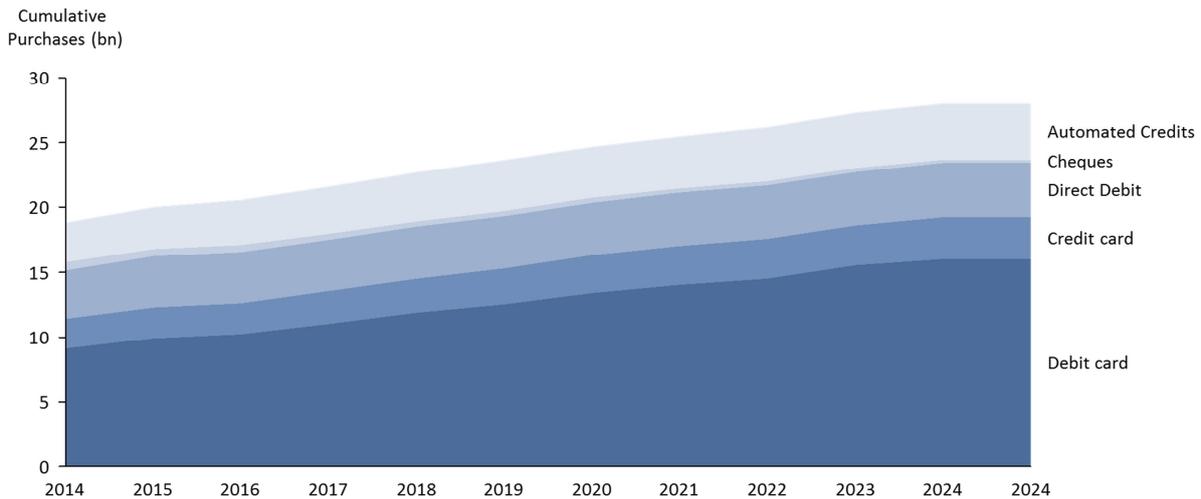
- 2.5. Across this landscape there are a number of critical initiatives which are changing and improving some areas of the payments industry. Some of these are driven by regulation to reduce risk, protect consumers, and/or to drive innovation and competition. Others are led by the industry, looking for better ways to serve customers.
- Domestic initiatives include the BoE’s review of its RTGS System and Her Majesty’s Treasury (HM Treasury) and the Competition and Markets Authority’s work on Open Banking. These are all seeking new functionality and technology to support access and competition, and to improve processing, clearing and settlement of payments
 - PSD2 will enable new services and participants in the industry, enhance security and improve transparency, providing the legislative framework for the work on Open Banking. The industry is committed to delivering these requirements. The impact of ‘Brexit’ is as yet unclear but we will continue to take developments into account as we implement our Strategy
- 2.6. Alongside the currently defined industry structure, a variety of financial technology companies (FinTechs) are also developing and deploying a range of innovative solutions to deliver end-user value.
- 2.7. As a result of this developing landscape, the way that customers use payments is changing, with a rise in electronic payments (e-payments⁷), an increasing demand for real time mechanisms and a reduction in the use of cash and cheques.

⁶ Central bank (BoE) settlement and commercial bank settlement

⁷ E-payments are a way of paying for a good or services electronically, instead of physical payments, such as by cash or by cheque. Examples of e-payments include cards payments, online purchases, Direct Debit and online bank transfers.

- 2.8. This trend towards digitisation means that the volume of e-payments has grown substantially. There were 7.4 billion transactions across Bacs, CHAPS and FPS in 2015 worth approximately £74 trillion and volumes for FPS grew by 13% compared with just 4% for Bacs and 3% for CHAPS (Payments UK, 2016).
- 2.9. As shown in Figure 10 this trend is expected to continue due to a variety of factors such as more online purchases and mobile payments.

Figure 10: UK payments mix (no. purchases bn)



Source: 2015 UK Payment Statistics - Payments UK

- 2.10. Emerging technologies are expected to further drive the growth in electronic payments, which may increase volumes beyond these estimates. Technological changes, such as the development of the Internet of Things (IoT), have the potential to significantly affect the way that consumers pay for products, services and utilities. Such developments will require fast and scalable payment systems that can accommodate new capabilities and growth without constraint.
- 2.11. The variety of products and functionality on offer provide end-users with a choice of payment methods that suit the needs of a large number of users in the current environment. However, as the demands made of payment systems change, ongoing development will be essential to support future end-user needs.
- 2.12. The changing nature of end-user requirements, expectations and other evolving challenges is at the heart of the case for change. In the next section, we set out the case for change by presenting challenges facing the industry and our view on how they can be addressed.

3. The Case for Change

- 3.1. The UK's underlying payment systems have been developed incrementally over time with different standards over different platforms. The complexity of the current structure means that the industry is not agile, and the pace of collaborative change is only as fast as the slowest participant. Any changes that need to be made are time consuming to agree and expensive to implement.
- 3.2. The cost and complexity of establishing and maintaining access to each of the schemes are deemed to be excessive as PSPs must conform to differing standards, protocols, and constraints. There is very little ability for PSPs to differentiate the retail interbank payment products they offer to consumers (for instance, Direct Debits are the same at every institution), but they can be at a disadvantage if they do not participate in all schemes. This heightens barriers to entry into the UK payments market, potentially hindering competition.
- 3.3. A lack of competition in the payments industry has a negative impact on end-users. Without competitive pressure, industry players have little incentive to innovate or seek to improve the quality of service to end-users. Over the past 15 years there have been a number of reviews into lack of industry competition, for example Cruickshank (2000), the Office of Fair Trading (OFT) Taskforce and Cave's internal review of the Payments Council⁸ (2012). Each underlined the same root problems, but none was able to effect significant change. Recognising these ongoing issues, HM Treasury established the PSR, which was formally launched in April 2015. One of its first priorities was to propose the establishment of the Forum. Competition and innovation in payments has, however, only been part of a much broader set of concerns about competition in the banking industry which formed the scope of the recent CMA investigation into retail banking.
- 3.4. End-users have the ability to conduct a variety of payment types, such as near real-time payments on the Faster Payments System, Direct Debit on the Bacs system, cheques via C&CCC, large value payments on CHAPS and card payments with the card schemes. More broadly, the industry is at the forefront of global innovation, with a large number of 'FinTechs' entering the payments space across the value chain.
- 3.5. However, due to changing expectations and the inherent complexity of existing payment systems, the current environment struggles to meet the evolving needs of a diverse group of users, which are outlined in Figure 11.

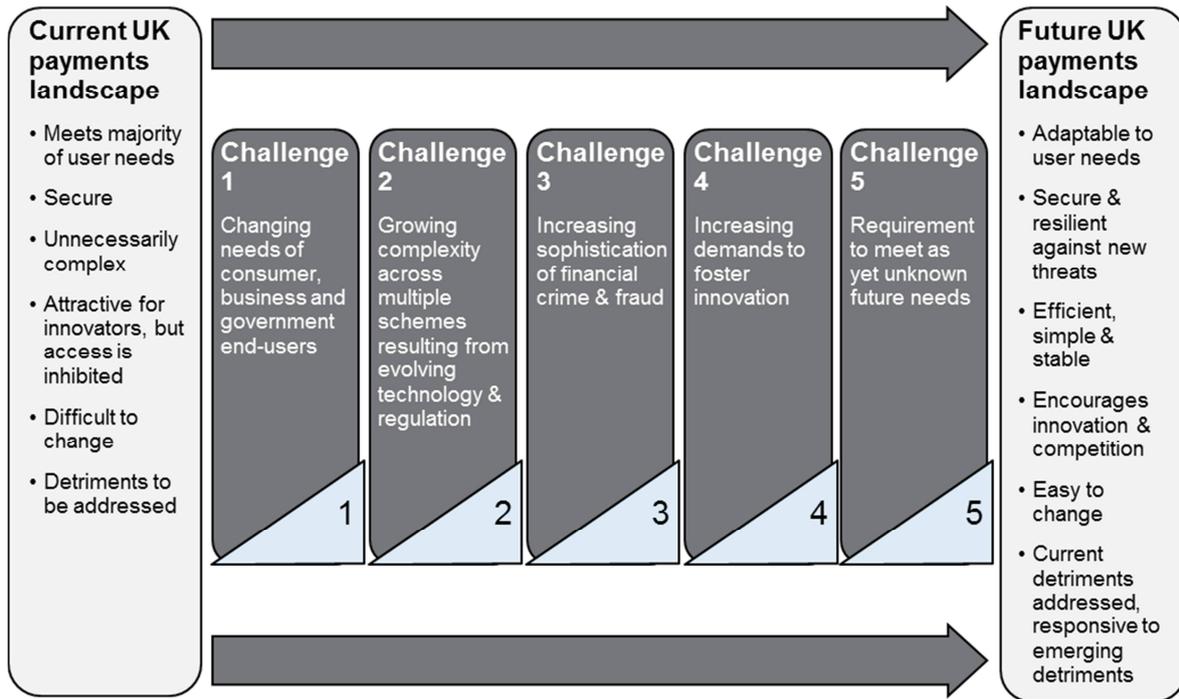
⁸ The Payments Council was succeeded by Payments UK in June 2015.

Figure 11: Key needs of payments industry stakeholders

 All Stakeholders	<ul style="list-style-type: none"> • A payment industry that is trustworthy, stable and secure • Ability to simply, quickly, safely and cost effectively deliver new services • An environment where criminals can be more easily identified, legitimate users are not wrongly excluded, and the costs of financial crime are minimised
 Consumers	<ul style="list-style-type: none"> • A choice of services to best suit individual needs • More control over automated payments • Greater assurance that their payment will reach the intended beneficiary • Greater visibility of the status of a payment once it has left their account
 Businesses	<ul style="list-style-type: none"> • Reduced cost, e.g. by increased use of electronic payments • Ability to reconcile and process payments more easily • Increased efficiency, e.g. through reduction in missed and bounced payments
 Government	<ul style="list-style-type: none"> • Reduced administration for making and receiving payments • A payment system that enables effective and efficient payments across all areas of government • Improved data sharing to reduce the opportunity for fraud • Faster settlement
 PSPs	<ul style="list-style-type: none"> • Reduced complexity, time, and cost of engaging across multiple PSOs • Easier access and the opportunity to compete on a level playing field • Payment systems that are simpler to engage with, and open access to enable competition and drive efficiencies

- 3.6. Technology exists which could help PSPs better serve end-users, tackle financial crime and increase access. However, current systems do not easily support the development of many innovative services that will work across payment types. For example, the structure and amount of data that can be transferred with payments is limited and differs from scheme to scheme.
- 3.7. The gap between end-user expectations and what is being delivered by our current payments infrastructure is growing. This is creating challenges for the industry. The Forum has undertaken a process of identifying the detriments that result from these challenges, shown in the supplementary documentation on our website. The need to alleviate these detriments further supports the case for change.
- 3.8. These challenges, as shown in Figure 12, must be address in order to continue to support all end-users and remain at the forefront of the payments industry:
- The need to meet the evolving needs of end-users
 - Effects on efficiency as a result of growing complexity due to technology and regulatory developments
 - Threats from increasingly sophisticated financial crime and fraud
 - The need for an infrastructure which actively fosters competition and innovation
 - The requirement to be adaptable to as yet unknown future needs

Figure 12: Key challenges to the UK payments industry as it moves towards the future



- 3.9. To address these challenges, the industry needs an infrastructure which is simple, secure, stable and resilient; versatile and responsive to user needs, and efficient to run and develop.
- 3.10. In order to reach this future state and address the challenges outlined above, we have set out a Strategy and defined a set of Solutions to enable delivery of that Strategy.

4. Our Vision & Strategy

Our Vision is for the future architecture of the UK retail interbank payment systems to enable simpler access, ongoing stability and resilience, greater innovation and competition, increased adaptability and better security, to meet the needs of current and future generations of payments service users

4.1. We have grounded this Vision in three strategic objectives, as illustrated Figure 13. These objectives must be satisfied as part of our long-term Strategy. Therefore, all strategic initiatives we define recognise that our payments environment must be:

- Secure, stable and resilient
- Versatile and responsive to end-user needs
- Efficient

Figure 13: Our Vision for the UK payments industry



4.2. To guide our efforts in setting out a Strategy to achieve our Vision, we identified seven Strategy-setting principles (Figure 14). These principles were chosen to ensure that our final Strategy supports our Vision for the future, as well as addressing known detriments⁹ identified by the Payments Community.

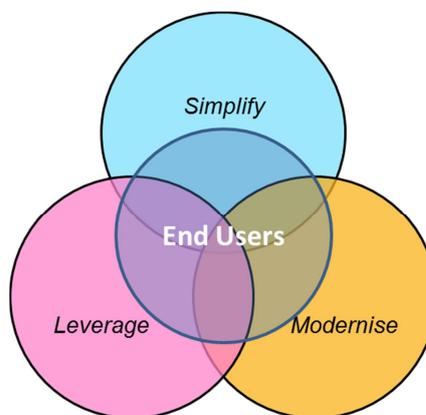
⁹ Please see the supplementary documentation on our website for more detail on the detriments.

Figure 14: Our seven Strategy-setting principles



- 4.3. Execution of our Strategy will deliver our Vision and achieve our objectives. It confronts the industry challenges that create a case for change, addressing detriments and the user-needs of today. At the same time it will deliver an environment that will be adaptable to the unknown needs of the future. It also allows for interoperability and standardisation with international payment systems.
- 4.4. Our Strategy is to:
- i. **Simplify** our current environment
 - ii. **Leverage** our existing capability and the outcomes expected from known industry initiatives
 - iii. **Modernise** through the assessment and deployment of the latest technology to deliver our new architecture for payments
- 4.5. Most importantly, our Strategy has the needs of end-users at its heart (Figure 15).

Figure 15: Our Strategy



Simplify

- 4.6. As set out in our case for change, the complexity of our current environment results in inefficiency, barriers to entry and increased costs. To address this, simplification is a core element of our Strategy. This includes:
- Simplification of access
 - Simplification of governance
 - Simplification of rules, and development of common standards
 - Simplification of technology infrastructure
- 4.7. Complex and divergent access requirements and governance across our existing systems only increase barriers to entry and result in inefficiencies. Therefore, simplification is needed to support competition and enable newer entrants to compete on a more level playing field.
- 4.8. We view the development of common standards to underpin new functionality and capability as critical to success; this is a view supported by our consultation process. This will ensure interoperability of services that may be delivered by different providers.
- 4.9. The development of common standards will also enable the industry to manage risk, for example by embedding necessary controls such as for security, into standards for new services such as 'Request to pay'. Further, clear standards will support transition of services from existing to new infrastructure, when required.
- 4.10. The UK has multiple systems built on different technologies. This complex environment must be simplified to deliver our Vision. Technology simplification is a core element of our proposal for a new payments architecture.

Leverage

- 4.11. The Forum recognises that, despite some technical limitations, our current payment systems do have capability that can be leveraged now to move our Strategy forward in some areas. It will be equally important to leverage the knowledge, experience and expertise of all members of the payments community to move our Strategy forward.
- 4.12. We are also mindful that the technology, procedures and experience developed by other industry activities can be leveraged to enable the delivery of our Strategy. Examples of these industry activities include the work being done by the CMA Implementation Entity to deliver Open APIs, the work being done by C&CCC to deliver the Image Clearing System (ICS), and the deployment of 'Paym' on FPS. Similarly, FPS activities to deliver Request to Pay and Confirmation of Payee functionality are seen as activities that have potential to accelerate parts of our Strategy.
- 4.13. The work of the BoE in their review of RTGS is also noted by the Forum. Aligning with this work is a critical part of our Strategy, as it has implications in terms of timing and technology, for example the BoE's deployment of ISO20022.
- 4.14. When considering how to move forward our initiatives to combat fraud and financial crime, there is positive activity being led by others in the industry, e.g. FFAUK, the JMLIT, the NCA and the JFT.
- 4.15. An important element of our Strategy is to leverage these existing capabilities and coordinate with known initiatives, collaborating across the industry and evolving our existing systems where it makes technical and financial sense to do so.

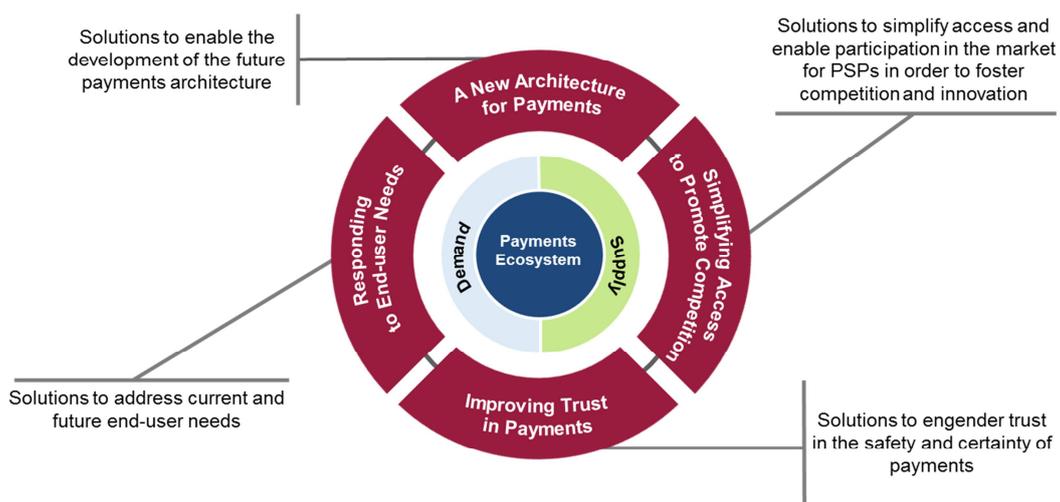
Modernise

- 4.16. Our current infrastructure has grown organically over several decades, and as a result it suffers from technical limitations. There are limits as to how far leveraging what we have today will take us. This is evident in the limited data that can be transferred on current systems, which in some cases use ageing technology. This ageing technology is unable to fully deliver our strategic objectives.
- 4.17. Customer needs are rapidly evolving and the current infrastructure doesn't provide a versatile, responsive foundation that can easily adapt to future user needs across all schemes. Delivery of new and innovative propositions can be inhibited by the cost and complexity of development on existing systems.
- 4.18. We need to modernise our technology if we are to fully deliver our strategic Vision. In this document, we set out a Vision for a new architecture for retail interbank payments. We call this the SPP. The SPP will deliver greater competition and more innovation at lower costs. It will be agile and respond quickly to the needs of consumers, businesses and government.

Solutions to support our Strategy

- 4.19. To deliver our Strategy we have developed a set of Solutions categorised as in Figure 16:
- **Responding to End-user Needs:** Solutions to address current and future end-user needs
 - **Improving Trust in Payments:** Solutions to engender trust in the safety and certainty of payments
 - **Simplifying Access to Promote Competition:** Solutions to simplify access and enable participation in the market for PSPs in order to foster competition and innovation
 - **A New Architecture for Payments:** Solutions to enable the development of the future payments architecture

Figure 16: Overview of the Solutions which support our Strategy

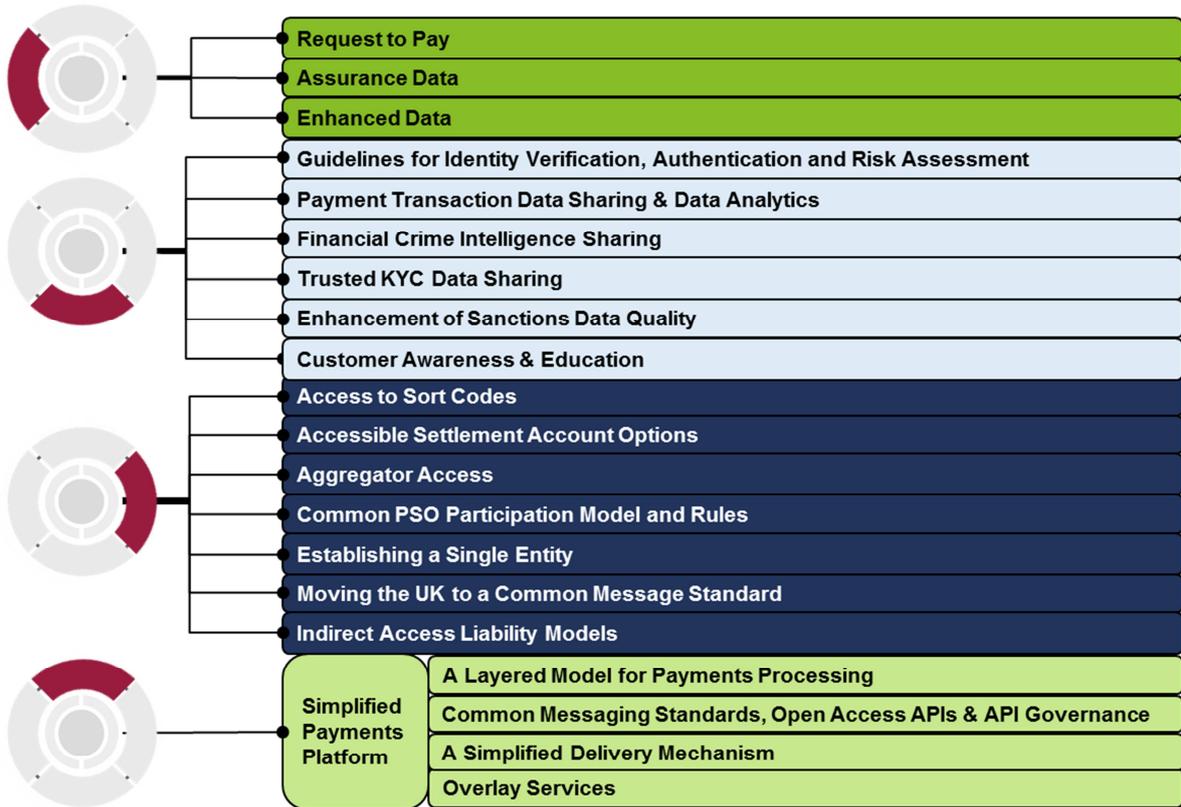


- 4.20. These Solutions were broadly supported by the response to our industry consultation. Our intent to 'Simplify', 'Leverage' and 'Modernise' underpins these Solutions. This will enable us to deliver our Vision, address the detriments and enable the industry to react quickly to evolving end-user needs
- 4.21. We describe these Solutions in more detail in the next section.

5. Our Solutions

5.1. This section provides an overview of each of the Forum’s recommended Solutions which will enable our Strategy, as illustrated in Figure 17.

Figure 17: Our Solutions



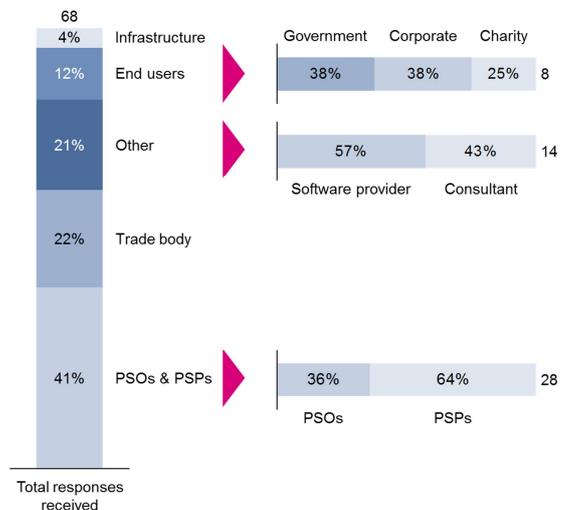
5.2. Each Solution overview sets out the:

- Problem definition
- Solution definition
- Potential risks to end-users
- Next steps

5.3. Our proposed Solutions were included in our draft Strategy that was published in July 2016 for industry consultation.

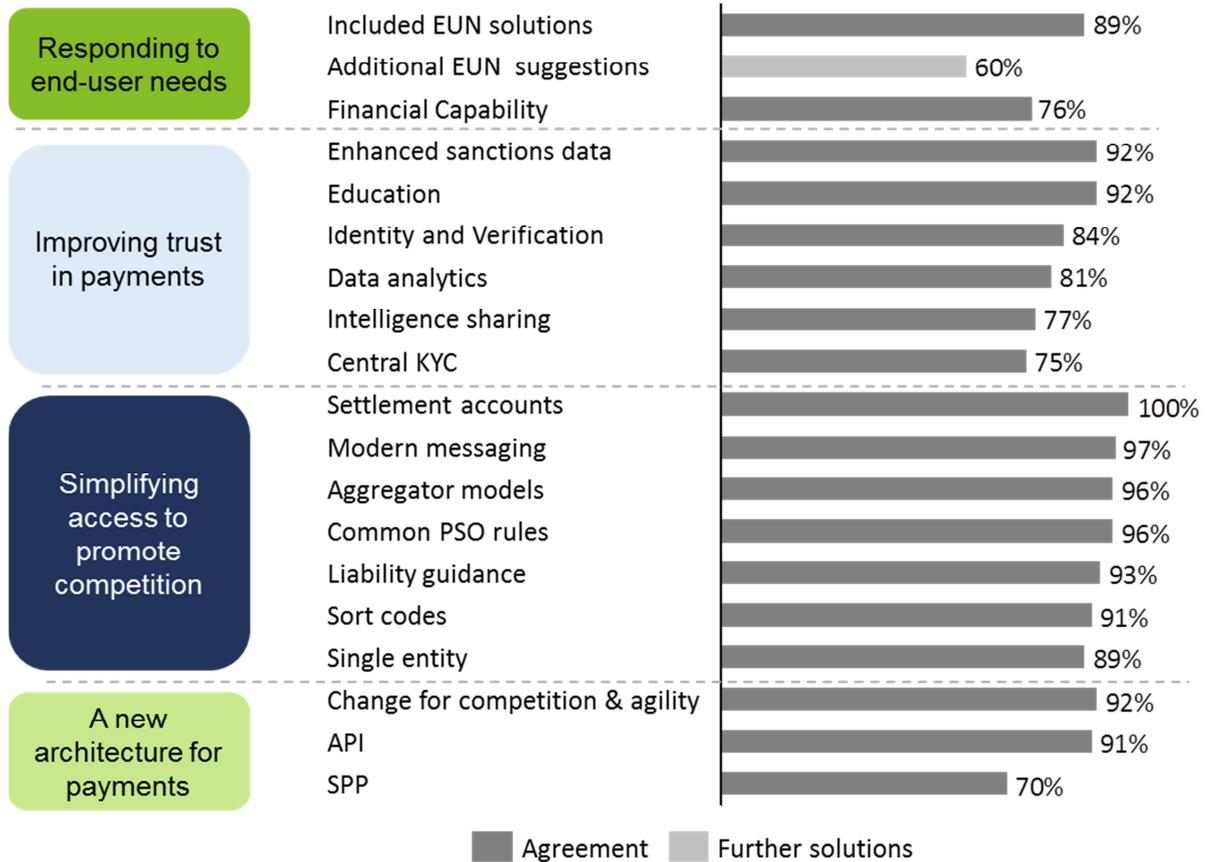
5.4. We received sixty-eight responses to the consultation, with a break down across PSOs, PSPs, trade bodies, software providers, consultants, end-users and infrastructure firms as shown in Figure 18. The responses provide a broader perspective to support the drafting of the final Strategy and provide representation of diverse perspectives from across the industry.

Figure 18: Categorisation of Responses



- 5.5. The trade bodies represent a variety of firms and end-users including technology providers, companies and vulnerable customers.
- 5.6. There was broad agreement with the Solutions proposed across all four Solution areas, as shown in Figure 19. This agreement was accompanied by a variety of questions, suggestions and comments which have been taken into account whilst finalising this Strategy.

Figure 19: Directional agreement with solutions



- 5.7. We have used the consultation comments, recommendations and suggestions as a key input to our final Strategy paper. They have helped shape the way forward for Solutions and have been an important input to Forum discussions on key decisions.
- 5.8. More detail on what we learned from the consultation responses and how they are being factored into our Strategy can be found in the supplementary documentation on our website.

Responding to end-user needs

“We need a new system, a new architecture for payment systems. One that can respond quickly and painlessly when innovators want to develop better products for us... We need the structures to make that happen...”

Ruth Evans, Chair



Overview

- 5.9. Payment products should reflect and respond to real people’s needs and not those of an idealised, ‘perfect’ customer that does not exist. They should meet the needs of an increasingly connected world. They should be inclusive of the least financially capable wherever possible and be intuitive so that **all** consumers can use them easily and safely. Payments should operate as efficiently as possible for individuals, businesses and government and reduce the time it takes to invoice, receive and reconcile payments.
- 5.10. We recognise that delivering responsive and versatile products and services goes deeper than how well an individual PSP delivers its product. There are challenges in the underlying payments systems that impede the ability of companies to innovate and be responsive.

What are the needs of end-users?

- 5.11. The Payments Community was asked to identify consumer and business concerns and to describe the key functionality that consumers, businesses and Government need. We prioritised these, and developed Solutions for this set of needs accordingly. As a consequence of this prioritisation, our work has focussed primarily on the retail interbank payment systems in the UK.
- 5.12. The feedback demonstrated that consumers and businesses want:
- **Greater control:** customers want greater control over automated payments so that they can choose when and how to pay, in the moment. The current systems are too rigid and inflexible to keep up with the pace of change in the way people live and work
 - **Greater assurance:** both consumers and businesses want a way to track payments once they are made so they can guarantee they reach the intended recipient and avoid fraud. They want real-time balance information to help them manage cash flow better
 - **Enhanced data:** businesses and government departments want to be able to access the data that allows them to fully understand what a payment relates to. Inability to access this data results in significant reconciliation work for business, government and small businesses, makes liquidity difficult to manage and causes problems for customers

- 5.13. **Reduced Financial Crime:** In addition improving understanding and responsiveness to financial crime across the whole of the system requires more and better use of data and would benefit all users.
- 5.14. In response to the consultation process on the draft Strategy, 60% of respondents noted additional user needs for consideration. A summary of these additional end-user needs and our response is included in the supplementary documents on our website.
- 5.15. In a number of cases we anticipate the highlighted additional needs will be addressed by the implementation of our currently defined Solutions and we will consider these during the collaborative development of the necessary standards and rules, and the related detailed design.
- 5.16. The government response to the consultation highlighted a number of desired capabilities to address their specific needs which are set out in the supporting documentation, on the Forum website, this also sets out the Forum's view on how they will be covered by the currently defined Solutions.
- 5.17. We also highlight where a desired capability does not wholly fall within the scope of payment systems. We recognise the importance of these capabilities, and will continue to consider them as detailed design of our Solutions continues. A mechanism for updating the principles and industry knowledge around user needs and emerging best practice will need to be developed in collaboration with the Financial Capability Strategy for the UK.
- 5.18. Card payment systems were also specifically referenced by some as being the cause of additional user detriment not identified at the start of our process, for example the non-transparency of pricing and a perceived lack of competition between acquirers. In the next phase of our work, we will coordinate with existing PSR programmes on cards, for example related to interchange fee regulation, to examine other detriments and also solution opportunities presented by the existing card payment processing systems.
- 5.19. When developing our draft Strategy, we considered Account Number Portability (ANP); the supporting analysis can be found on our website. We concluded that the arguments against implementing ANP are significant, whereas those for implementing ANP offered only intangible benefits. We therefore recommend that ANP is not proposed for implementation as part of our Strategy.

Financial Capability

- 5.20. We defined a set of financial capability principles for payments design and delivery that will support all users, including meeting the needs of the most vulnerable and excluded people (e.g. ensuring that services are designed to be inclusive of the least financially capable wherever possible). More detail on these principles can be found in the supplementary document our website.

Figure 20: What is a vulnerable consumer?



- 5.21. We recognise that there are already initiatives under way to improve the UKs financial capability, so the new principles will align with the interested of vulnerable and excluded people.
- 5.22. Providers of payment systems will need time to assess these principles and in some cases, they will need to be taken through formal governance. We expect that the industry will voluntarily adopt these principles to ensure that the interests of all users are protected in the design and delivery of future industry developments.

Solution 1: Request to Pay

The problem

5.23. The issues raised by the Payments Community, together with existing research¹⁰, show that although current payment options work well for the majority of end-users, lack of control over payments remains a major concern for some end-users, including both payers and payees. Current pull and push payments are not flexible or responsive enough to meet the needs of payers and payees - especially in a modern labour and small and medium enterprises (SME) market where variable income and trading receipt patterns are becoming increasingly common. So there is an opportunity for payees to offer alternatives to currently available forms of payments to better meet the needs of payers.

Our Solution

5.24. Request to pay is our Solution to this problem. It is a new industry service that would enable government, businesses, charities and consumers to create and send payment requests. Recipients of these requests would be able to decide if, how and when they want to respond. The response could be with a payment type of their choice.

5.25. This Solution will provide consumers and businesses, including the charity and voluntary sectors, with more control over the timing of their payments and will deliver increased choice by acting as a complementary service and alternative to other forms of payment request such as Direct Debits.

5.26. We note that some activity is already being conducted by existing providers to deliver Request to Pay capability, in particular the work being done by FPS. We are supportive of these efforts and encourage them to continue. In keeping with our intent to leverage known initiatives, we believe that there should be active engagement with these ongoing initiatives in the next phase of our work.

Potential risks to end-users

5.27. A lack of customer awareness may inhibit adoption by end-users, so this Solution must be accompanied by communications and awareness activity.

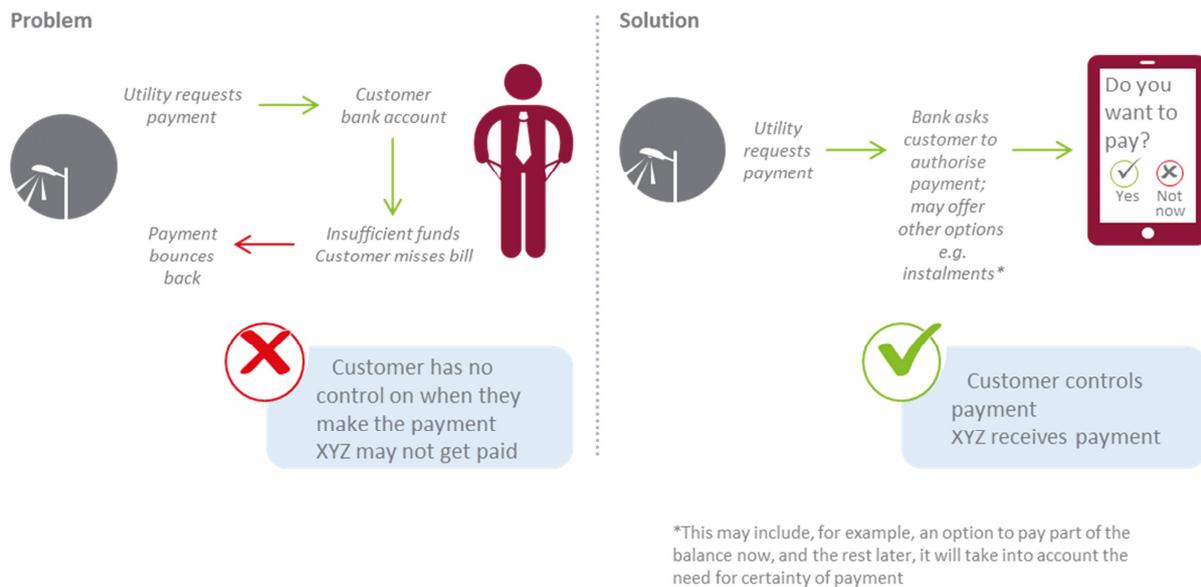
5.28. Request to pay could create risks for businesses by reducing certainty of payment. Facilitating the deferral of payments may make cash flow management more challenging and could increase non-payment. It could also increase individuals' debt problems if multiple payments were to be deferred for an extended period. So the desire for control must be balanced with the need for certainty of payment.

5.29. There is a risk that if standards are not agreed for the Solution, non-interoperable offerings will be taken to market, which will limit the overall benefits that can be achieved for end-users.

5.30. The Solution will need to ensure that the necessary customer protections are in place, e.g. anti-fraud.

¹⁰ Toynbee Hall (2014) *The Poverty Premium in Tower Hamlets*.

Figure 21: Request to pay problem and Solution



Next steps

- 5.31. The Forum will prioritise and deliver the collaborative development of the necessary standards and rules, which are required for implementation of this Solution, whether on existing architecture or the NPA. This will include consideration of legal and privacy risks and will take into account the needs of consumers, businesses and PSPs.
- 5.32. Once these standards and rules are in place, the competitive market will be in a position to develop products and services for end-users. The Forum recommends that these standards are adopted by those who bring services to market.
- 5.33. We support the work of FPS to deliver a solution on the current architecture, and in particular we recognise the potential of this activity to inform the development of the standards, and the detailed design process.
- 5.34. The industry should, where appropriate and consistent with the deliverables associated with the CMA Remedies and PSD2, take into account the Forum's requirements and the standards defined for the Request to Pay service when developing Open Banking APIs. This will ensure interoperability and ease transition to a new payments architecture in the future.
- 5.35. Our view is that to deliver a full Request to Pay service across payment types would require the implementation of a new payments architecture.

Solution 2: Assurance data

The problem

5.36. The issues raised by the Payments Community, together with existing evidence¹¹, show that end-users feel that they are not always in full control of their payments and also vulnerable to the risk of a payment being either misdirected or lost due to the lack of accurate information about the exact identity of the payee and the status of the payment. This reduces the incentives for end-users to take advantage of the benefits of paying electronically. The recent 'Which? super-complaint' to the PSR¹², on safeguards in the market for push payments, highlights some of these vulnerabilities.

Our Solution

5.37. To solve this problem, additional information must be provided to the payer. This includes real time balance information, the intended time of the transaction completion, 'Confirmation of Payee' and confirmation of receipt. Our Solution, Assurance Data, will deliver the capability to provide this information.

5.38. This Solution will give end-users assurance before (and after) a payment is sent, that their intentions in originating or requesting payments were followed through. This will avoid payments initiated when there are insufficient funds, misdirected payments and prevent any outcome other than that intended by either payer or payee.

Potential risks to end-users

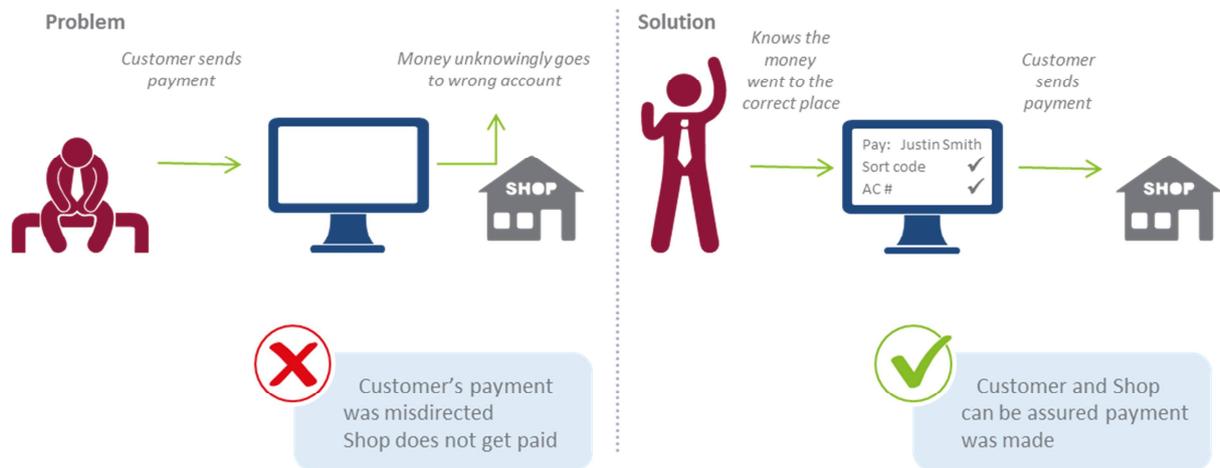
5.39. We have identified potential risks related to data privacy and security along with potential legal issues related to the Solution's use of personal data for confirming the recipient and receipt of a payment. Current propositions that deliver some of this functionality have developed risk mitigation, which can be learned from. These concerns will be addressed in the detailed design for this Solution.

5.40. Availability of funds, real time balances, is currently a competitive proposition, so consideration needs to be given to the benefit of setting industry-wide rules to ensure a consistent customer proposition and experience.

¹¹ Tooley Street Research (2015), *Towards World Class: The Consumer View of Current Accounts and Payments*.

¹² <https://www.psr.org.uk/sites/default/files/media/PDF/which-super-complaint-sep-2016.pdf>

Figure 22: Assurance data (Confirmation of Payee aspect) problem and Solution



Next steps

- 5.41. The Forum will prioritise and deliver the collaborative development of the necessary standards and rules, which are required for implementation of this Solution, whether on existing architecture or the NPA¹³. This will include consideration of legal and privacy risks and will take into account the needs of consumers, corporates and PSPs.
- 5.42. Once these standards and rules are in place, the competitive market will be in a position to develop products and services for end-users. The Forum recommends that individual PSOs adopt these standards when bringing services to market. This will ease transition to a new payments architecture in the future, and ensure interoperability.
- 5.43. We support the work of FPS to deliver 'Confirmation of Payee' capability on the current architecture¹⁴, and we recognise the potential of this activity to inform the development of the standards, and the design of the overall Assurance Data Solution.
- 5.44. The industry should, where appropriate and consistent with the deliverables associated with the CMA remedy and PSD2, take into account the Forum's requirements and the standards defined for the Assurance Data service when developing Open Banking APIs.
- 5.45. Our view is that to deliver a full Assurance Data service across payment types would require the implementation of a new payments architecture.

¹³ Developing and aligning standards will ensure that the delivery of solutions will be interoperable and suitable for future industry development on both an NPA and evolving current infrastructure

¹⁴ The Forum notes that agreement and application of standards would allow Paym to be delivered on current systems with potential to be more easily transitioned to the NPA.

Solution 3: Enhanced Data

The problem

- 5.47. The issues raised by the Payments Community and existing research¹⁵ shows that end-users would like to include more data with an electronic payment, rather than it being sent completely separately to the payment (for example by post or email) and then matched with the payment by the payee before it has a complete picture of what the payment relates to.

Our Solution

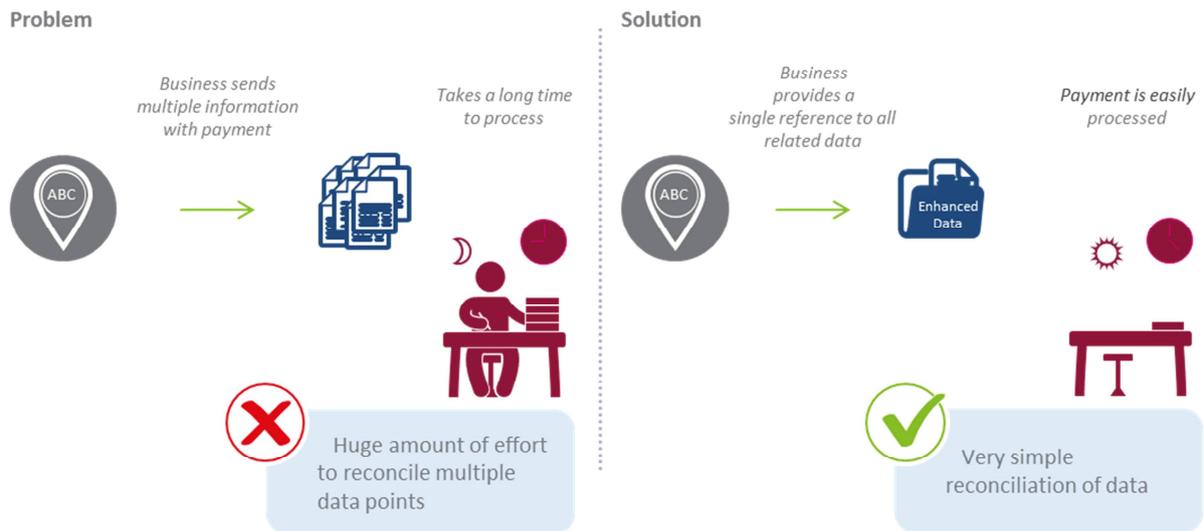
- 5.48. Enhanced Data is our Solution to this problem. It is the capacity to attach data to a payment to allow a recipient to easily identify what the payment relates to. This will enable an end-user, typically a business or a third party such as a government department, to reconcile the payment with their internal systems accurately and more efficiently.
- 5.49. Linking more and better information to a payment would deliver a significant improvement to the payments experience, while also unlocking the potential for additional benefits to be delivered. It also has the potential to address some of the control and assurance needs of end-users identified earlier in this section.
- 5.50. The ability to carry a standard single reference data set is also under consideration within Enhanced Data. A single reference for all the information relating to the payment simplifies the reconciliation of data and will allow end-users to easily process the payment.
- 5.51. In addition, the DWP, Cabinet Office and Her Majesty's Revenue & Customs (HMRC) have assessed the opportunities arising from change in the payments sector. One of these is supporting the provision of evidence and verification which in turn would help reducing errors in payments and make fraud prevention activities more efficient.
- 5.52. The DWP expects that enhanced payments data will provide to citizens who need to submit financial data to them, a quicker and more accurate channel for them to do so and would enable the Department to make better decisions on the basis of that data. This, in turn, will help to reduce the amount of fraud and error in the benefits system which is currently estimated to be around £3.1bn per annum. Until our proposals are more fully developed it has not been possible to make an accurate forecast of the amount of such a reduction, but the Department remains committed to working with the industry to ensure the opportunity is maximised.

Potential risks to end-users

- 5.53. There are many benefits associated with enabling more information to travel with payments. However, data privacy and data protection considerations are important. We will have a stream of work specifically focused on these considerations across Solutions doing detailed design.
- 5.54. Marrying this payment functionality with data analytics and real-time payments could cause harm to consumers or potentially undermine the ability of consumers, if payers, to control how payments are used (e.g. using payment information in lending decisions). The Forum has developed its financial capability principles, included in the supplementary documentation on our website, to mitigate these problems as the Solution is designed.

¹⁵ Payments UK (2015), *World Class Payments in the UK Enhancing the payment experience*

Figure 23: Enhanced data problem and Solution



Next steps

- 5.55. The Forum will prioritise and deliver the collaborative development of the necessary standards and rules, which are required for implementation of this Solution, whether on existing architecture or the NPA. This will include consideration of legal and privacy risks and will take into account the needs of consumers, businesses and PSPs.
- 5.56. Once these standards and rules are in place the competitive market will be in a position to develop products and services for end-users. The Forum recommends that individual PSOs adopt these standards if they choose to develop their own solutions on their current payment systems. This will ease transition to a new payments architecture in the future, and ensure interoperability.
- 5.57. The industry should, where appropriate and consistent with the deliverables associated with the CMA remedy and PSD2, take into account the Forum's requirements and the standards defined for the Enhanced Data service when developing Open Banking APIs.
- 5.58. However, we recognise that to deliver a full Enhanced Data Solution would require the implementation of a new payments architecture.

Improving trust in payments

“In this climate of increasing cyber-crime we need to make sure everyone is kept safe.”

Ruth Evans, Chair



- 5.59. The UK is a leader in payments with an excellent record on security and resilience, but the technology and methods criminals use to exploit any weaknesses in payment systems are becoming more sophisticated. Our Strategy proposes that the industry collaborates with others to fight crime and engender trust in payments.
- 5.60. Criminals exploit weaknesses in the payments system to obtain money, goods, and/or services illegally, and to transfer funds that in turn enable criminal activity. These activities harm all end-users of payments; individuals, businesses, charities, government, and public sector organisations. They also cause direct loss to PSPs.
- 5.61. To address these concerns, we propose six strategic initiatives. These initiatives are focused on more effectively preventing crime and reducing friction for ‘good’ users. The development of our initiatives will require the industry, users of payment systems and relevant authorities to collaborate. These are:
- Enhancing guidelines for managing identity verification and authentication
 - Establishing a capability for data analysis of payment transactions moving between PSPs, to better identify fraudulent and criminal payments activity
 - Sharing more financial crime intelligence data between payment providers
 - Establishing a shared utility for KYC background checks for business customers
 - Enhancing the quality of data on the industry’s sanctions lists
 - Supporting the delivery of a more joined-up approach to education and awareness for customers
- 5.62. We recognise that the industry, government and authorities are increasingly joining up their approach to dealing with fraud, risk management for money laundering and sanctions compliance. To deliver our initiatives we will need to take a similar approach, and work in concert with their related efforts.
- 5.63. You can find out more detail about our initiatives in the supplementary documents on the Forum website.

Solution 4: Guidelines for Identity Verification, Authentication and Risk Assessment

The problem

- 5.64. Criminals can assume the identities of individuals and businesses, allowing them to create payment accounts, to misuse third-party or their own payment accounts or to misdirect payments to accounts which they control. Inadequate identity management and verification is one of the primary reasons why society is exposed to financial crime. Specifically, Financial Fraud Action UK quantified the losses from fraud as £755 million for 2015 – the significant majority of which is estimated to be from misuse of identity.
- 5.65. Within the industry, primary causes of these problems are: inconsistent terminology for managing identity, limited consistency between different payment instruments, variable application of primary industry guidance regarding identity verification and authentication (e.g. Joint Money Laundering Steering Group (JMLSG) guidance), reliance on other PSPs' identity assurance, and no industry-wide identity assurance scheme for use with payments. These problems enable identity-led crime across the full customer lifecycle, for example in account opening, setting up payment mandates, initiating payments between payer and payee, and authenticating bank-led communications to customers.

Our Solution

- 5.66. The proposed Solution is to develop and implement a published, non-compulsory guideline as an assessable benchmark to determine how the identity of a payments service user is established, verified, used and subsequently relied upon by other PSPs. The proposal will consider new means of verification of identity. It will seek to better understand what can be accepted as the elements of identity, as a means to leverage consumer data that is collected when interacting with PSPs, and to facilitate financial inclusion, compensating for the inability to use traditional means of verification of identity online.
- 5.67. This Solution's aim is to put in place an enhanced overarching, end-to-end approach drawing on relevant existing pieces of legislation and regulation (e.g. 4th Anti-money laundering (AML) Directive (2015/849), PSD2 (2015/2366)) and making enhancements where beneficial. In doing so, consistent rules for identity encompassing many mainstream payment types will be established. Increased efficiency in verification of identity, and better means of authenticating users will result in reduced opportunities for fraud and greater trust in the procedures undertaken by different PSPs. This will reduce risk when transferring money using different payment mechanisms.
- 5.68. The proposal at this stage has not set out what the guideline should state; that is envisaged for the next phase in detailed design and development. We expect that the guideline would include requirements for improved identity assurance in a number of these areas: account opening, re-authentication of long-standing account holders, setting up payment mandates, confirming payer and payee when initiating payments, mutual authentication (e.g. bank identifying itself to customer), and incorporating identity assurance into existing risk assessment processes.
- 5.69. Operating to the proposed guideline should therefore be proportionate to the scope and size of the operations of the PSP, and relevant to the product, channel and jurisdiction in question. In other words a risk based approach would be maintained. By taking this approach the burden on smaller PSPs can be reduced.

- 5.70. The first phase of this Solution is to establish and implement the guideline. The second phase of the proposal is to collaborate in order to create or further develop key Solutions which exist in the competitive or non-financial services space. These Solutions include a digital identity scheme to facilitate identity verification for payment providers, where the industry should engage with the bodies, commercial and governmental, to develop a Strategy for digital identity in payments/financial services. A second required Solution capability is to confirm the identity associated with a payments account proposed to be used in a transaction, for which some solutions currently exist in the competitive/commercial space.

Potential risks to end-users

- 5.71. Careful management is necessary of why these proposals are required and how consumer's data will be protected. We will have a stream of work specifically focused on these considerations across Solutions doing detailed design.
- 5.72. Any changes need to be made with extreme care to avoid impact on financial inclusion. This will include managing exclusion risks for customers with non-standard documentation, who will need to be accommodated.

Next steps

- 5.73. The Forum will move implementation forwards initially, and will seek to confirm ownership and proceed with a handover within six months.
- 5.74. Legal considerations and outstanding issues will be addressed during the design phase, supervised by the body responsible for design and development.
- 5.75. We will align with current industry initiatives (e.g. Mobile Identity Authentication Standard (MIDAS) or Electronic Identification and Signature (eIDAS)) during the initial design phase.
- 5.76. Other digital identity initiatives currently being developed in financial services, or adjacent (OIX, TISA, gov.UK Verify, etc.), will also be reviewed to inform the design phase of the guidelines and understand how the Solution will align with these schemes in as implementation continues.

Solution 5: Payment Transaction Data Sharing & Data Analytics

The problem

- 5.77. Users face a range of financial crime and fraud-related problems in areas such as fund repatriation, 'money mule' account activities and issues related to confirmation of payer or payee. It will also be necessary in the future to rapidly and proactively tackle new forms of fraud and financial crime-related activity as they develop.

Our Solution

- 5.78. To solve the problem our Strategy proposes the introduction of transaction data sharing to support collaboration and data sharing between the PSOs and PSPs who own the data; and data analytics capabilities to apply to the data and extract insights relating to priority financial crime use cases.
- 5.79. The UK payments industry creates a very large, high quality dataset through the processing of payments. The emergence of more sophisticated ways of handling and querying large amounts of data has opened up the potential for the industry to better exploit this 'Big Data' set to determine trends, or actual financial crime being committed.
- 5.80. The Strategy proposes that the industry undertakes a detailed assessment of this capability and puts in place an implementation plan if appropriate. The Solution should be supplied commercially through a competitive bidding process or via services delivered from the competitive market place.
- 5.81. This could enable the identification of and reduction in 'mule accounts', increased ability to repatriate funds to the victims of crime, and the flexibility to respond to the fast-changing approaches taken by criminals.
- 5.82. We have considered different options to create and maintain data sharing and analytical capabilities. At this stage it is recommended that a central data repository and centralised analytical capability is adopted based on services to be delivered from the competitive market place. If the market is unable to deliver a solution, then an alternative, fall-back delivery approach could be the creation of central data repository and analytics capabilities as a public utility service

Potential risks to end-users

- 5.83. Creating a central repository of data creates new risks related to how secure the data storage facility is. The use of the data would also need to be protected for detecting financial crime only, and not used by firms for purposes beyond which it was intended, for instance marketing. There are also a number of legal issues, which would need to be addressed, for example data privacy and the Data Protection Act.

Next steps

- 5.84. The Forum will manage the next phase of delivery for this Solution, and propose an industry self-regulating body to be responsible for design. This body will be responsible for defining the high-level Solution requirements for relevant services to be delivered from the competitive market place. It is suggested that the design phase should be completed within 6 months.
- 5.85. Legal issues and considerations arising from sharing customer's personal data will be addressed in the early stage of design and factored into deployment.
- 5.86. The parameters of what data is shared and which parties will be obliged to share such transactional data will be agreed within the design.
- 5.87. We believe that this Solution is a strong candidate for competitive tender procurement or for services coming from the competitive market.

Solution 6: Financial Crime Intelligence¹⁶ Sharing

The problem

- 5.88. Currently financial crime data and intelligence sharing between PSPs is limited, incomplete and inconsistent. It is believed that the more intelligence that is shared, the higher the chance that PSPs can deter and prevent criminal activity in payments systems. More intelligence sharing will also reduce some of the friction affecting non-criminal consumers.
- 5.89. Several barriers constrain intelligence sharing for example, legislation, such as the Data Protection Act (DPA), Tipping-off risk and Proceeds of Crime Act, the variety of sources of data and the lack of interaction between suppliers of data.

Our Solution

- 5.90. The proposed Solution is to establish and operate a capability to share data and intelligence on financial crime, underpinned by the necessary processes and rules, legal permissions, and security. In other words, to set up an industry-operated multi-stakeholder, shared governance, shared funding intelligence capability. It will be underpinned by a formal, strict legal agreement, security code of conduct and appropriate data protection dispensations.
- 5.91. This Solution will include the ability to provide, near-real-time and real time, financial crime data records for confirmed, attempted, suspected or at-risk events relating to an identity, financial account or article of crime. This will be done for the purposes of data matching, data mining, trend analysis, and profiling.
- 5.92. This Solution will seek to leverage Government efforts to improve information sharing on financial crime, primarily focused on banks, in creating the JMLIT and the Joint Fraud Taskforce. The Criminal Finances Bill will legislate for clear powers to share such information, which will be taken into account as this Solution is designed.
- 5.93. Under the proposed model, the stakeholders jointly contribute to and extract benefit from the Solution as a single, highly secure, central industry data and intelligence sharing enabler. This ensures that the industry is in full control of the system, its evolution and the manner in which it operates.
- 5.94. The challenge is to provide access via a single source of data and intelligence without increasing workloads for PSPs, significantly changing working practices or increasing security risks.
- 5.95. The scope of this Solution is to include all financial crime data, encompassing AML, counter terrorist financing, bribery and corruption (and politically exposed persons, PEPs) as well as fraud, and including intelligence on attack methods used.

¹⁶ Financial crime intelligence is defined as the collection and analysis of PSP data to identify actual and potential instances of financial crime

Potential risks to end-users

- 5.96. There are risks to consumers from sharing this type of data. Labelling people wrongly can cause significant detriments for those who are wrongly the victims of forced account closure. Safeguards need to be put in place to prevent flagging of 'suspicious' accounts of people who have not been confirmed as undertaking criminal activity, as this would be considered unfair. While such profiling may improve inclusion, it also makes the decision to exclude more detrimental than might have otherwise been the case and challenges rights to privacy.
- 5.97. Careful governance, in particular for intelligence sharing, would need to be created to ensure that this process delivers the outcomes anticipated, without creating additional risk. The establishment of this governance will need to involve expert groups, such as the new banking trade body, National Crime Authority, City of London Police, and be subject to a legally robust framework.

Next steps

- 5.98. The Forum will own the next steps and handover during 2017 to an appropriate industry body. We will collaborate with existing bodies (e.g. JFT, FFAUK and JMLIT) to agree appropriate future ownership. The agreed industry body will be responsible for design and delivery with oversight from the Forum.
- 5.99. During the initial design phase, legal issues surrounding the terms of data sharing, privacy and security will be addressed.
- 5.100. The design will also consider how to determine and manage the reliability of data from other institutions and the scope of data sharing (e.g. AML, Fraud, and Sanctions etc.).
- 5.101. Minimal functionality for the design of technical requirements to be deployed on the current infrastructure (e.g. typology and trends sharing for AML and fraud) will be defined to enable delivery on existing systems where possible. However, the full functionality will be deployed on the New Payment Architecture.

Solution 7: Trusted KYC Data Sharing and Storage Repository

The problem

- 5.102. KYC is the due-diligence and regulations that financial institutions must perform on business customers before agreeing to open their accounts. The current method of implementation is costly to operate, contains significant duplication of work for the business in form filling and for the PSP in processing. It has negative impacts on both financial institutions and customers, who are often delayed in undertaking genuine business activity.
- 5.103. In addition, Current gaps in KYC processes allow financial crime to continue which undermines a number of business activities in the economy.

Our Solution

- 5.104. To address this problem, our Strategy proposes a mechanism for sharing KYC data between PSPs and potentially other participants, focusing on business customers, which enables AML and KYC checks to be more accurate in identifying bad actors while also requiring less resource-intensive internal processes for many PSPs. The Solution will support the collection and classification of KYC data for business customers, according to an agreed set of standards, and the auditing of the creation of the data together with any subsequent data updates. The Solution would potentially support the storage of data within the repository with an associated status indicating the integrity of the data stored, and will require issuing or using credentials to authenticate the customer entity whose data is held. The Solution will enable data sharing including the transmission, using industry recognised encryption techniques, of such data between participating PSPs.
- 5.105. While maintaining a risk-based approach, this Solution will enable more effective and efficient compliance with AML, PEPs and sanctions policies. Specific to combatting financial crime, this Solution will reduce the ability for bad actors to open accounts and execute payments or transfers. It would also significantly improve the experience for good actors (good-faith customers), and enable greater efficiency for PSPs KYC activities – reducing operational costs for established PSPs and enabling a more affordable entry point for medium/small PSPs and new entrants looking to expand their range of services. This standardised, more controlled approach across industry would enable easier integration into the wider global KYC ecosystem, and enable more dynamic AML risk monitoring across the industry and reporting of suspicious activity.
- 5.106. The Financial Stability Board's (FSB) correspondent banking co-ordination group has a working group looking at promoting the use of KYC Utilities and the potential for legal entity identifiers (LEIs). This is a key plank of international work to address the challenges presented to the global financial system by de-risking.

Potential risks to end-users

- 5.107. The main risk is the possibility that inaccuracies are wrongly captured on applications and passed on to the next financial services provider. Some form of 'corporate identity' may also need to be captured so that businesses can authenticate themselves to new providers based on the identity already provided. This would need careful design to avoid the creation of new potential weaknesses in the system.

Next steps

- 5.108. The Forum will undertake more research to confirm the viability of our Solution, including potential for delivery by the competitive market.

- 5.109. Our initial focus will be to begin the next phase of design. This will include:
- Defining and agreeing the governance entity, and the legal and commercial structures, required for delivering this Solution
 - Addressing legal issues on data sharing in the initial design in order to understand the best allowable approach for the sharing end-user data
 - Developing a strong governance framework to ensure that customer personal data will remain confidential
 - Clarifying any future regulations, with industry players and regulators, particularly with respect to data sharing permissions
- 5.110. We recognise that our Solution will need significant further work and evaluation, and so will continue to consider the scope and business case for this proposal to determine the most appropriate design and to better understand risks and dependencies.

Solution 8: Enhancement of Sanctions Data Quality

The problem

- 5.111. Customer on-boarding relies on good data quality to enable PSPs to screen customers against the HM Treasury's 'consolidated' list of financial sanctions targets, which in turn is based on data from the UN and EU. While PSPs acknowledge there has been progress in this area, they remain concerned that some of the identifiers on the list are not sufficiently specific and as a result the process undertaken is inefficient, leading to delays in genuine business activity.

Our Solution

- 5.112. Our proposal is for the UK payments industry to work closely with the Foreign and Commonwealth Office (FCO) and the Treasury's Office of Financial Sanctions Implementation (OFSI) to deliver improved data and processes for collecting and managing data for sanctions screening to address the detriments identified. This will encompass the quality of the data in sanctions lists and the approach for managing that data between the authorities and payments industry.
- 5.113. We also propose that the industry should support OFSI in assessing whether there is a case for the UK to adopt the UN's Advanced Sanctions Data Model.

Potential risks to end-users

- 5.114. Potential risks include PSPs and other businesses that use the consolidated list having to update or adapt their existing systems to accommodate any new sanctions data model.

Next steps

- 5.115. This is the responsibility of industry and of the Office of Financial Sanctions at HM Treasury. The Forum will engage with the Treasury to understand how best to take forward this work.

Solution 9: Customer Awareness and Education

5.116. Alongside the previous Solutions in which the industry will seek to address identified fraud and financial crime related detriments and improve trust in payments, there is still a role for end-users to play to reduce vulnerabilities and improve security. Therefore, this Solution is focused on supporting and enabling end-user efforts to reduce financial crime.

The problem

5.117. A priority issue in financial crime is the ability of consumers and businesses to identify and understand the methods by which criminals seek to exploit them in order to obtain or launder money. They need more information on the steps they can take to reduce the risk of becoming a victim or unwittingly participating in financial crime.

Our Solution

5.118. Our Strategy proposes a joined-up approach to consumer awareness and education. There is already a significant amount of activity under way to deliver awareness and education campaigns. We propose that one of the trade associations leading such activity should take the lead on delivering more co-ordinated and streamlined activities, thus improving clarity of messages and avoiding unnecessary duplication and cost across the industry.

5.119. This approach can reinforce efforts to further equip consumers with the right tools to protect themselves and increase confidence and usage of electronic payments. Although awareness and education alone will not resolve financial crime, it is a crucial to keep consumers as informed as possible about the most prevalent and latest threats.

Potential risks to end-users

5.120. Although no significant risks to end-users as a result of this Solution have been identified, it will be important to provide a clear and consistent message to avoid lack of understanding by consumers on how they can protect themselves.

5.121. There is a need to recognise and consider in the development of this Solution that elements of awareness programmes have become a competitive element for PSPs.

Next steps

5.122. The Forum will identify the appropriate industry body to take this forward, candidates would include JFT and the new FS Trade association.

5.123. The industry body will support and engage with a multi-agency campaign group including the City of London Police Economic and Cyber Crime Unit amongst others. This group will be tasked and empowered to design, align and coordinate industry campaigns, delivering simple, clear, and consistent messages to specific target audiences through a range of media channels, and providing cross-industry collaboration to achieve better results from finite funds and resources.

5.124. The group should:

- Focus education on key messages, such as the need to address privacy and security concerns, to be included in the collaborative campaign with expected delivery towards the end of 2017
- Focus awareness activities on preventing customers from suffering fraudulent activity – avoiding the risk of giving a competitive advantage to individual PSPs
- Ensure a forward-looking component that identifies and pre-empts small but growing fraud types through early advice and messaging

Simplifying access to promote competition

“...The future system needs to be modern and open to new entrants so there’s more competition and dynamism in payments...”

Ruth Evans, Chair



- 5.125. The Forum has assessed where collective action can promote innovation or downstream competition in a way that will benefit PSPs and ultimately customers. Payment systems should offer simple and open access appropriate to the PSP’s needs and the level of risk to the payments system. PSPs should be able to reach other PSPs simply and affordably. Messaging should be modern and align with international standards. This will enable other providers to enter the market, and increase competition between PSPs and infrastructure and network providers.
- 5.126. In order to support this simple access, the Strategy has identified a range of Solutions to reduce barriers to entry for new participants in the payments system, to enable increased competition in the market. Our proposals are designed to deliver simplified and standardised access to PSOs, increased interoperability and clearer, more consistent governance. This should lead to simpler and more flexible access options for PSPs, in turn supporting increased competition and better outcomes for service users.
- 5.127. To help simplify payment systems we propose seven strategic initiatives which will require the industry, users of payment systems and relevant authorities to collaborate. These are:
- Providing independent access to sort codes
 - Providing more accessible settlement account options
 - Enabling aggregator access models to payment systems
 - Establishing common PSO participation models and rules
 - Establish a single entity by consolidating three retail interbank PSOs
 - Move the UK to common payment message standards
 - Clarify liability models for PSPs who do not directly access the payment systems

Solution 10: Access to sort codes

The problem

5.128. New PSPs that wish to connect directly to a payments system must use a sort code. Sort codes are a key routing mechanism for retail payments in the UK. They act like the postcode does in a postal address. Until very recently, obtaining a sort-code could present difficulties because new PSPs were required to obtain one from within the range of an existing direct participant. In addition, there were restrictions on the use and transfer of sort codes that constrained new participants. A new PSP had to ask a competitor for a sort code, which could cause a barrier to entry.

Our Solution

5.129. We note that work is underway in the industry to address this problem and our Strategy supports the work that Bacs has commenced, in its role as operator of Bank Reference Data, to make available a new 'utility' sort code range for indirect PSPs. Further work is under way to improve the availability of access and sort code information on an independent and transparent basis.

Next steps

5.130. We are pleased to note that this Solution has been implemented by Bacs and propose no further action.

Solution 11: Accessible settlement account options

The problem

5.131. Certain payment systems (e.g. Bacs, CHAPS, Cheque & Credit and FPS) require direct system participants to hold a settlement account at the BoE. However, current BoE restrictions mean that PSPs which are not a bank or a building society cannot obtain a RTGS account. The PSPs who are not in these categories are therefore currently precluded from being direct participants in these systems.

Our Solution

5.132. The BoE has announced that it intends, over time, to extend direct access to accounts in RTGS to non-bank PSPs. This would solve the problem outlined above. Our Strategy supports the BoE's announcement.

5.133. By extending RTGS access, the BoE's stated objective is to increase competition and innovation in the market for payment services. Increasing the proportion of settlement in central bank money and driving innovation in risk reducing technology will, in turn, bring financial stability benefits. As access is extended, resilience will also be safeguarded.

5.134. The Financial Conduct Authority (FCA), who along with HMRC supervise non-bank PSPs, is considering the potential implications for its statutory objectives and what any changes, if any, in supervisory approach might be appropriate.

Next steps

5.135. The Forum will support the BoE's development and implementation of this Solution and ensure alignment of related Forum activity and engage with the FCA to understand changes, if any, in supervisory approach.

5.136. PSPs which are not a bank or a building society should consider performing their own BCE to assess holding a settlement account at the BoE.

Solution 12: Aggregator access

The problem

5.137. In order to connect to each payments system, PSPs have to develop specific technology solutions to connect to each PSO. This means that both direct and indirect market participants need to have multiple solutions to connect to the retail interbank payment systems which add to both cost and complexity.

Our Solution

5.138. To solve this problem, our Strategy proposes encouraging the development of more commercial and competitive access solutions like aggregators. They will be accredited for use by, or on behalf of the PSOs and will be capable of supporting both direct and indirect access to any PSO through a single gateway. This model is already live for FPS and Link. Bacs is currently in the process of consulting on an appropriate model.

Next steps

5.139. We recognise current schemes' efforts e.g. Faster Payments' solutions to move forward with aggregator access, and the Forum encourages other schemes to promote the development of aggregator solutions.

5.140. Individual PSOs should identify actions that they would have to take to allow simple connection for aggregator services both for direct and indirect access participants.

5.141. The Interbank System Operators Coordination Committee (ISOCC) will be the responsible body for coordinating the design phase.

Solution 13: Common PSO participation model and rules

The problem

5.142. There is currently no common entry point for access to PSOs and no standard on-boarding process. There are different rules, requirements and terminology for each payments system operator. A PSP wishing to access multiple schemes must navigate each of these different on-boarding processes. The result is an increase in time, complexity and cost.

Our Solution

5.143. The proposed Solution is to have a common PSO participation model unless there is justification to retain a different approach. This Solution will be complementary to the process to establish a Consolidated PSO. The common participation model will cover areas such as:

- Terminology
- Eligibility criteria and baseline regulatory requirements
- Categorisation of participants and products offered by PSOs
- On-boarding processes and migration to common connectivity models
- Simplification in assurance

Next steps

5.144. Via ISOCC, CHAPS, Bacs, FPS, C&CCC and Link¹⁷ will be responsible for progressing this Solution and will report progress to the PSR. Activity will also need to be appropriately coordinated with efforts to deliver a Consolidated PSO, as set out in the next section.

5.145. The Forum will continue to monitor progress of this Solution throughout 2017.

¹⁷ Although Link are not an ISOCC member they are participating fully in this initiative.

Solution 14: Establishing a single entity

The problem

5.146. A key issue identified by the Payments Community was that multiple payment systems are unnecessarily complex, time consuming, and costly for PSPs to join and participate in. This acts as a barrier to direct entry for PSPs, which in turn restricts competition in the downstream market. The structure is also considered inefficient, because PSPs currently undertake work which is likely to be duplicated across the separate payment systems.

Our Solution

5.147. To address these problems, in our Strategy we recommended consolidating three of the retail interbank PSOs; Bacs, C&CCC and FPS. Further consideration needs to be given on whether it is also appropriate to include the non-core services that these operators are responsible for.

5.148. Based on the consultation responses and dialogue between the Forum, the BoE and the PSR, proposals have been put forward to progress consolidation of Bacs, FPS and C&CCC. The PSODG has been established, led by an independent chair. The group consists of 6 members in addition to the chair, made up of two PSP representatives, an end-user representative and the three PSO chairs. The group will recommend an implementation approach by end March 2017, with a target to have the Consolidated PSO entity operating by end 2017.

5.149. The PSODG should ensure that the new Consolidated PSO be designed in a way that it is both capable of procuring the component parts of the NPA as part of its competitive procurement process and also acting as the Governance body for the various industry standards, including APIs. This requires structuring to ensure that it has expertise, knowledge and experience to support these activities.

Next steps

5.150. The PSODG will own delivery of this Solution. The Chair will report progress to the PSR and BoE.

5.151. Implementation recommendations are to be developed by the end of March 2017 and will include both detailed design of the Consolidated PSO and the transition process.

5.152. The consolidation process is to be completed so that scheme operators are operating as one entity by the end of 2017.

Solution 15: Moving the UK to a common message standard

The problem

5.154. The UK PSOs each operate various payment message types. This has two main impacts: firstly the message types are UK specific, while globally, countries have recognised the benefits of moving to the ISO20022 standard; secondly the variety of standards and higher complexity stifles innovation.

Our Solution

5.155. We propose that the UK continues adoption of the ISO20022 messaging standard. FPS and Payments UK have already undertaken a significant amount of work to map these data standards to the PSOs. This short term action should continue. However, it should now also be aligned to the NPA outlined in Chapter 5, should a decision be taken to progress this new platform once evaluation is complete. We also recognise that support for such a common message standard will also enable ongoing in international interoperability.

Next steps

5.156. The Forum fully supports moving the UK to a common message standard and this should be proactively progressed by the industry; in particular we encourage aggregators to use these mappings. Should a decision be taken to progress the proposed NPA, then this development can be progressed in the detailed design phase for the NPA. The Forum also recognises current efforts from the schemes to adopt ISO20022¹⁸ messaging standards e.g. FPS, and encourages other schemes to follow.

5.157. We also note the BoE's RTGS review consultation proposes to adopt ISO 20022 for the next generation of RTGS including CHAPS payments, and we will engage with the BoE to align with these efforts.

¹⁸ The BoE's RTGS review consultation proposes to adopt ISO 20022 for the next generation of RTGS including CHAPS payments.

Solution 16: Indirect access liability models

The problem

5.158. PSPs who require payment systems access but who do not wish to directly participate must gain access to a bank account via an Indirect Access Provider. There remains a lack of clarity about how liability and accountability (for example, for applying AML rules to end customers) is divided between the Providers and Indirect PSPs. This has left Providers with the view that they are overly exposed to risk, resulting in them stipulating tougher requirements for indirect access. This market restriction makes it more difficult for indirect PSPs to gain access to bank accounts which in turn support payment systems access.

Our Solution

5.159. The draft Strategy proposed a mapping exercise to clarify the party holding responsibility for relevant obligations, and so identify gaps where clarity was still needed. It recognised the complexity and extent of the issues identified, the range of interested parties (this issue is much wider than the UK and so global considerations would be needed), and the various, and not always successful, efforts by industry and regulators to address the issue. Due to this complexity, a multi-stakeholder group, akin to the Forum, is needed to address these issues.

5.160. The multi-stakeholder group should consider the following as potential ways to address the indirect access liability problem:

- Provider PSPs to define more clearly the criteria they would expect a PSP to meet to obtain a bank account, noting that providers would continue to exercise commercial and risk based decision-making criteria as defined within their corporate policies
- The introduction of a simplified and standardised accreditation process of direct and indirect access for smaller payment institutions at the time of their authorisation and periodically, potentially through external accredited audit

Next steps

5.161. Recognising that guidance already exists from the JMLSG, the Forum will set up a Working Group that will liaise with industry to understand concerns with current JMLSG guidance. The industry Working Group will clarify specific concerns for consideration by the JMLSG with approval of any changes needed by FCA and HM Treasury.

A new architecture for payments

“We’ve got the technology to do it now. The regulators are ready. We just need the structure to make it happen...”

Ruth Evans, Chair



Solution 17: Simplified Payments Platform (SPP)

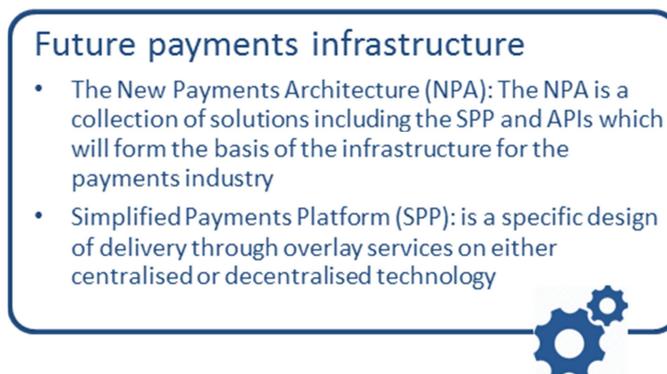
The problem

- 5.162. PSPs who want to provide payment services to customers are currently inhibited by high barriers to entry which are inherent in the current infrastructure. Through the evolution of the current PSO landscape, delivering new services is costly and therefore is only a practical prospect for a few players in the value chain. However, even for these, high costs are incurred.
- 5.163. Our current infrastructure has developed over many years and as a result has technical limitations. Therefore, there are limits to how far leveraging what we have today will take us. This is evident in the message data that can be transferred on current systems, which in some cases use old technology. This ageing technology is unable to fully deliver on our strategic Vision and objectives.
- 5.164. Customer needs are rapidly evolving and the current infrastructure doesn't provide a versatile, responsive foundation that can easily adapt to future user needs. Delivery of new and innovative propositions is inhibited by the cost and complexity of development on existing systems.

Our Solution

- 5.165. We have a Vision for a new architecture for retail interbank payments. We call this the 'Simplified Payments Platform' (SPP). It is the culmination of a number of our initiatives. The SPP will deliver greater competition and more innovation at lower costs. It will be agile and respond quickly to the needs of consumers, businesses and government.
- 5.166. There are a variety of potential technical standards for implementation of the SPP; however, regardless of the technology used the focus of SPP is the structure, capabilities and characteristics that will deliver the identified benefits.

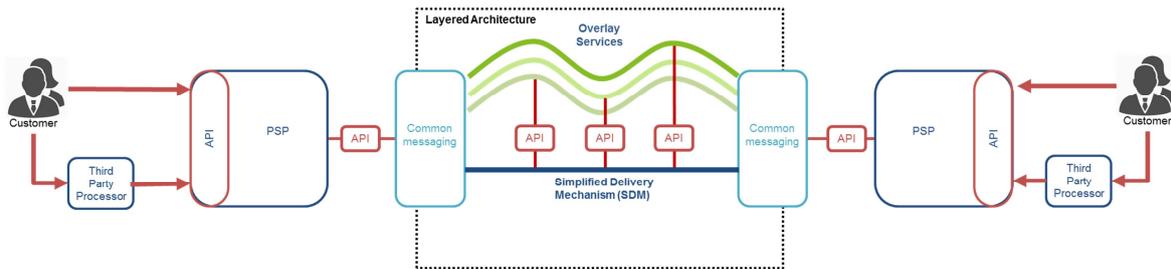
Figure 24: Future payment infrastructure terminology



5.167. The SPP is the embodiment of our long term Vision for payments. It is a new layered architecture for payments which can be delivered through a number of key elements, illustrated in Figure 25:

- A layered model for payments processing
- Common message standards, Open Access APIs and API governance (distinct from Open Banking APIs)
- A Simplified Delivery Mechanism
- Overlay services

Figure 25: The Simplified Payments Platform



5.168. Some of the proposals we outlined earlier in this Strategy are stepping stones towards implementing these strategic initiatives, such as common message standards. However, the SPP requires further detailed work and we are committed to delivering detailed design by the end of 2017, as set out in the roadmap in Appendix 1, which will specify the new architecture in detail, assess the detailed costs and benefits and, as appropriate, outline an implementation plan.

5.169. During 2017, the Forum will oversee the detailed design of the NPA. This will include the setting of standards, which will promote competitive market delivery of the NPA. It is anticipated that, at the end of 2017, the new consolidated PSO will take on delivery responsibility for the NPA from the Forum, subject to the PSODG finalising its proposals for the consolidated entities. We believe that delivery would best be accomplished by going out to competitive tender, and so the Consolidated PSO will need to have the necessary technical, legal and commercial capabilities to run such a process.

5.170. The core principles of the NPA will underpin the detailed design phase. They are:

- A single set of standards and rules, with strong central governance
- End-to-end interoperability (including APIs and a common message standard)
- A thin collaborative infrastructure, allowing multiple providers of overlay infrastructure or services to compete in the market simultaneously
- Secure and resilient, with financial stability a key principle

Layered architecture

5.171. Currently it is very difficult to make changes to payment systems without impacting all who use them. Multiple participants (some of whom will be competitors) have to collaborate on any changes, agree implementation and testing. It makes the current system slow to change and acts as a brake on innovation.

- 5.172. The layered architecture approach is established best practice in IT and in particular in the telecoms sector where end-to-end systems are built in layered stacks. Importantly, each layer has functions to isolate capabilities from the layer above and below it. This means that it is possible to make changes to and create new components of the layer – for instance, an overlay service like Paym – while still preserving the service characteristics, without it affecting all the other layers (and thus participants).
- 5.173. We are proposing the introduction of a layered architecture for payments. Each layer will provide a defined part of the value chain, based upon an agreed standard. Together these layers will deliver:
- Flexibility, to make changes and the ability to innovate quickly for customers
 - Adaptability, to create new services
 - Compatibility with existing models, as existing models can be replicated
 - Improved resilience as each service is separated and single points of failure are removed
 - A future proofed and agile model which supports different approaches to change
- 5.174. Different providers could compete for the delivery of each layer, or each layer may even support multiple delivery providers.
- 5.175. The layered architecture will set out how overlay services should interact with the simplified delivery mechanism, for example through the use of standard APIs. It will also enable these overlay services to be developed either competitively or collaboratively. This layered approach reduces the systemic risk of failure in payment services, which has to be very carefully managed with the introduction of any new functionality or service updates.

Security

- 5.176. In the keeping with these core principles, the design efforts of the NPA will focus on ensuring security, resilience and stability of the overall future payments infrastructure.

Common message standards

- 5.177. Common message standards based on ISO20022 will align the UK with global standards and modernise our payments. Standardising messaging formats across PSOs will reduce complexity and provide the basis for functional enhancements and innovation. This will be done to align to the common message standards activity defined as part of 'Simplifying Access'.
- 5.178. A common message standard will enable the SPP. ISO20022 can facilitate the enhanced data the Strategy envisages and will make it easier for PSPs to connect directly, simply and at low cost.
- 5.179. For consistency and to cater for all requirements, the exact specification, rules and standards of how ISO20022 will be used needs to be specified and governed. Overlay services can then be developed using the specifications, and the messaging standard will allow the overlay service to communicate with the Simplified Delivery Mechanism, which is described below.

A simplified delivery mechanism

- 5.180. The Simplified Delivery Mechanism underpins the SPP. It makes access easier for PSPs, reduces the need for coordinated change across the system and facilitates innovation and competition.
- 5.181. The Simplified Delivery Mechanism is the lowest common denominator of any payment. It simply sends a payment instruction from A to B in real-time, reliably and efficiently (the overlay service determines when a payment is sent).

- 5.182. The Simplified Delivery Mechanism is the set of rules or 'scheme' for the underlying payment message. It embodies the fundamental rules for the transfer of funds and the risk controls for the transmission of the message. It should control the safety, security and risk controls around the message. At the moment these elements are all delivered differently by various PSOs.
- 5.183. In a centralised model, the infrastructure and connectivity between PSPs would be provided by a single central platform. The processing and clearing 'engine' would be provided by a single central infrastructure, as it is done today.
- 5.184. In the distributed model connectivity will be established between PSPs. This peer to peer connectivity could potentially provide benefits in terms of greater scalability, and resilience and potentially also increase competition in infrastructure provision by allowing individual PSPs to procure their own infrastructure.
- 5.185. The design will continue to consider both centralised and distributed models and the modern technologies that could be used to deliver them. This may or may not result in inclusion of Distributed Ledger Technology. It will also consider how upcoming new technology deployments already planned by the industry can be leveraged..
- 5.186. Both models for centralised and distributed processing would require the Simplified Delivery Mechanism.
- 5.187. We have undertaken some analysis to consider these options but recognise that further work must be performed to better understand the associated advantages and disadvantages of each. There are natural tensions between resilience, control and functionality, which must be understood and managed. It will be important to work with the BoE here to understand the implications for financial stability and resilience.
- 5.188. We note the BoE's ongoing review of its RTGS system, and acknowledges that the specific details of settlement would need to be agreed with the BoE during the design period. We are committed to aligning settlement to the BoE's programme and requirements.
- 5.189. The PSR and the BoE are both aware of the important interactions between the NPA development and the RTGS project. These interactions will be addressed by appropriate coordination between the design and delivery activities of the two projects, including representation by the BoE on the future working structures created by the Forum to undertake these activities.

End-user APIs and open access APIs

- 5.190. The SPP uses two kinds of APIs; Open Access APIs are the APIs which enable PSPs to communicate with the Simplified Delivery Mechanism and provide access to the Overlay services. The End-user APIs provide the PSP to consumer interface, for example, the experience of Confirmation of Payee for the end-user (customer). These are distinct from the current industry work to develop an Open Banking API, though there are similarities that can be considered further during the design of the SPP.
- 5.191. The Open Access API framework delivers more flexibility and innovation in payments messages. In particular, Open Access APIs will enable data to flow around the payments system. Additional data can be deployed by PSPs to offer services which improve security, track payments made or hand over more control to the payer. They will also provide the framework for other kinds of innovation, not yet imagined.

- 5.192. The Open Access APIs provide instructions to the PSP on what to do with the payment in addition to the basic payment message, 'A pays B'. The Open Access API information may include the authorisation for the payment, the value, the timing and any additional data that a PSP might be required to send. For instance a message might convey the information that 'Mark should pay Martha £100, in 3 days' time, at 3pm, with a reference to an invoice for a birthday cake'. The experience of this is provided to the customer by the End-user API.
- 5.193. The APIs could begin to deliver benefits without the Simplified Delivery Mechanism. For instance, they could potentially provide for Request to pay and Confirmation of Payee functions on parts of current systems. However, the technical capabilities and limitations of some current systems would make it costly to enable Request to pay across all existing systems.
- 5.194. The SPP requires the Simplified Delivery Mechanism to realise the full benefits of enhanced data and particularly the ability to offer payment assurance (for instance confirmation that the payment has been transacted).

API governance

- 5.195. APIs allow two pieces of software to interact with one another, enabling different IT developers to connect their products more easily. A governance framework is needed to underpin the use of APIs, to set rules for the exchange of data and how it is used (including how End-user and Open Access APIs are written), and to ensure consumers and businesses are protected.
- 5.196. There is currently a key driver for the use of APIs as part of industry work on an Open Banking standard. This stems from:
- The PSD2 which gives consumers new rights to use payment initiation and account information services, and requires PSPs to give access to these services
 - The remedies of the CMA Retail Banking Market Investigation, which include recommendations for banks to introduce an Open Banking API Standard, linked closely to the requirements of PSD2
- 5.197. We see these as very positive moves, which support our Strategy and will seek to engage and work alongside these initiatives to deliver beneficial outcome across all programmes of work.
- 5.198. Our Strategy recommends that all work on APIs across payment accounts is co-ordinated. The target future state will enable APIs to work seamlessly end-to-end across the whole payments journey. It will reduce the possibility of fragmentation or the inconsistent use of standards. The Forum is thus proposing, that following the delivery by the Implementation Entity on the CMA's remedy on Open Banking APIs by January 2018, that the Consolidated PSO should be designed in a way so it can take on governance responsibility for all API development¹⁹.

Overlay services

- 5.199. All payments involve the transfer of value from the payer to the beneficiary. The exchanges between the payer and beneficiary do not technically need to be part of the actual payment. These exchanges and supporting data can be delivered through Overlay Services.

¹⁹ The (constituent parts of the) Consolidated PSO will be engaged in the design and development work under taken throughout 2017, in order to have a smooth handover at the end of 2017.

- 5.200. Overlay services allow PSPs to build their own unique propositions or to emulate existing schemes without requiring corresponding PSPs to offer the same proposition. The pre-requisite is that the overlay service supports the underlying message type (in this case, the Simplified Delivery Mechanism) and that all PSPs use this message type. This supports the development of a far more competitive and innovative market.
- 5.201. Using the SPP, an overlay service that communicates with the Simplified Delivery Mechanism could enable a payment to be made to the beneficiary PSP without that PSP needing to have the same overlay service. For example, using PSD2 requirements to allow third party access to an account, a consumer could download and use an app without being required to change bank account or pre-load it; and their PSP would support it without being required to have the same overlay service.
- 5.202. Existing payment products, including, for example, Bacs direct debt could be developed into overlay services. As a result, it is envisaged that the existing users of payments systems would be able to continue largely unaffected. This includes the 20,000+ Direct Corporate Access users who use applications provided by their solution providers or PSPs.
- 5.203. We anticipate that over time all current UK domestic retail payment types would transition to overlay services and use the Simplified Delivery Mechanism as their single set of rules.

Compatibility and transition

- 5.204. If delivered, over a period of time the SPP will become the standard. It is therefore vital that it is compatible with existing services during the period of transition. In the supplementary documentation on our website we set out the principles that would ensure a smooth transition and the continued delivery of the existing payment services customers enjoy today. A detailed implementation plan including transition is a key activity for the Forum at the start of 2017. This transition would be brought about through natural evolution.

Potential risks to end-users

- 5.205. The primary risks will be related to continuity of service during any transition and dual-running period. This will be managed as part of detailed design and transition planning.
- 5.206. Users will need to be informed about changes to how services will be delivered on the NPA, to the extent that they are visible. This is vital to ensure continued trust in our payments infrastructure.

Next steps

- 5.207. The Forum will continue with detailed design of New Payment Architecture to be developed on the latest technology; learning from and leveraging ongoing technology developments and deployments where appropriate (e.g. APIs, PSD2, ICS).
- 5.208. A proving pilot with clear outcomes will be run in 2017, this will include:
- Definition of interoperable standards
 - Demonstration of standards
 - Proving the layered design (e.g. scalability, extensibility, operating model etc.)
 - Creation of a reference implementation
- 5.209. The detailed implementation planning to be handed over to the Consolidated PSO entity when it is established anticipated to take place at the start of 2017.

5.210. The next steps for Open Access APIs and API Governance will follow once the consolidated PSO is in place and will include:

- Agreeing on the scope and definition of responsibilities
- Defining a clear governance framework to ensure successful deployment
- Issuing standards and guidelines for data interoperability, security, liability, fraud, API specifications, and other elements of the API Framework

6. Business Case Evaluation of our Strategy

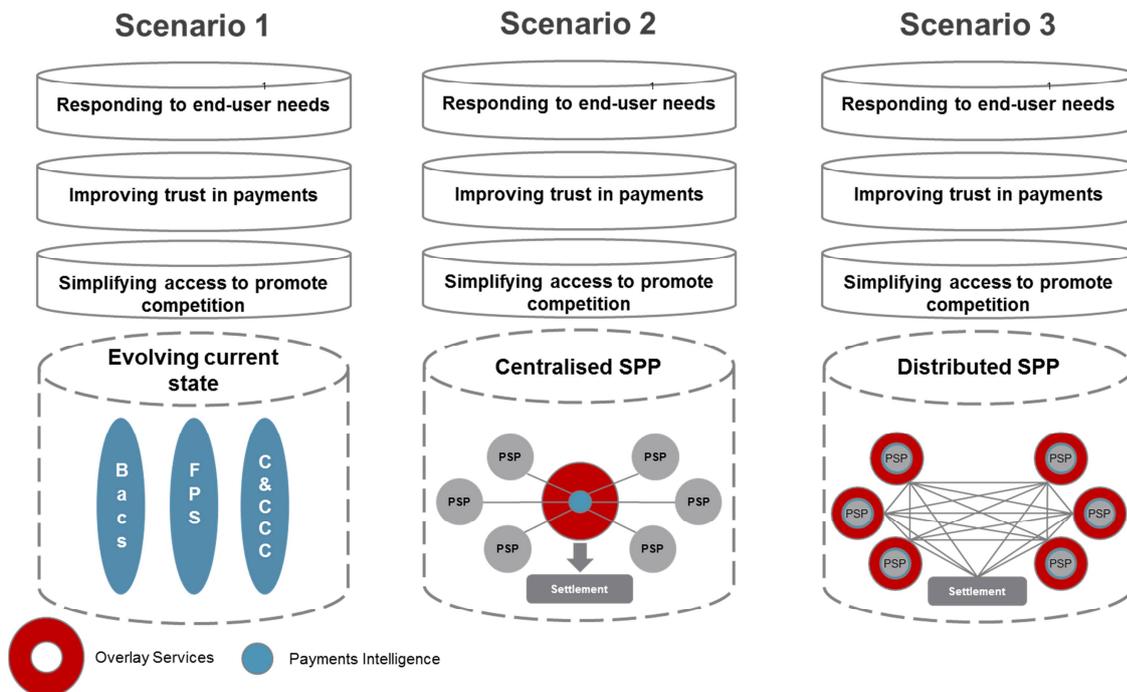
Overview of this section

- 6.1. In considering how best deliver our Solutions, described in detail in the previous section, we have developed three infrastructure scenarios shown in Figure 26. We have considered these scenarios due to the impact that the underlying infrastructure will have on the delivery of our Strategy and Solutions.
- 6.2. It is recognised that the current Business Case Evaluation (BCE) exercise was based on the existing available information at this phase of our work. It will be revisited and refined into a full economic evaluation during the next phase of the Forum's work, once standards definition, detailed design and implementation planning are conducted, including impact on end-users. Therefore current BCE has been conducted in order to inform the decisions of the Forum at this stage, and should not be considered final.

Overview of scenarios

- 6.3. Our three potential future payments infrastructure scenarios have been subject to a BCE as part of developing our Strategy; in the analysis, all scenarios seek to deliver the full portfolio of Solutions. The three scenarios considered are:
- i. **Evolving Current State:** building on our current payments infrastructure
 - ii. **Centralised SPP:** a new payments architecture with a single, centralised retail interbank payments system
 - iii. **Distributed SPP:** a new payments architecture with a single, distributed retail interbank payments system

Figure 26: Scenario construction



6.4. In Figure 27 we have laid out the characteristics of each of the scenarios across seven attributes to highlight the differences in approach for the architecture that will support the development of all of the Solutions.

Figure 27: Overview of infrastructure scenarios

Scenario attribute	Scenario 1: Evolving infrastructure	Scenario 2: Centralised SPP	Scenario 3: Distributed SPP
Payment system(s)	Current retail interbank payment systems remain	The current retail interbank payment systems are replaced by a single push payment rail, which is operated by the Single Consolidated PSO	Current retail interbank payment systems are replaced by a distributed, single push payment rail
Technical development	Making changes on the existing payments infrastructure, however, this is constrained by existing technical limitations and must be replicated across four payment systems	Development of a new central infrastructure to support one single payments system built on layered architecture	This can be achieved through modern technology with distributed architecture
PSP connection	PSPs connect to individual payments systems (either directly or via aggregators)	PSPs connect to a single central payments system	PSPs connect directly to other PSPs
Governance	Governance by a the Single Consolidated PSO	Governance by central body ²⁰	Governance by central body ²⁰
Payment mechanism & messaging	Messaging embedded in core payments mechanism	Payment through single push payment rail with other services offered as overlay services by competitive market	Payment through single push payment rail with other services offered as overlay services by competitive market
Settlement	Information provided by the Single Consolidated PSO to BoE RTGS	Information provided by the Single Consolidated PSO to BoE RTGS	Information provided by PSPs to BoE RTGS, in accordance with BoE requirements

6.5. Each of the scenarios will have an impact on key dimensions of the Solution. This is most notable in the distinctions between using the current infrastructure and developing a new architecture as shown in Figure 28.

²⁰ It is anticipated that this will be the Consolidated PSO.

Figure 28: Overview of the impact of each of the infrastructure scenarios on our Strategy and Solutions

Solution dimension	Scenario 1: Evolving infrastructure	Scenario 2: Centralised SPP	Scenario 3: Distributed SPP
Messaging	Any changes to messaging would require changes to the complex core of each payment system and would need to be implemented across multiple payment systems	Modern messaging standards and requirements built-in	Modern messaging standards and requirements built-in
Functionality	New functionality require changes to the core of each payment system and would need to be implemented across multiple payment systems	New functionality easily added through overlay services	New functionality easily added through overlay services
Access	Multiple payment systems to access, aggregator solutions exist	One centralised payments system to access	One distributed network to access
Risks	<ul style="list-style-type: none"> • Slower development • Reactive rather than proactive 	<ul style="list-style-type: none"> • Potentially high costs for participants • One point of vulnerability for attacks to the system • System may be disrupted by the addition of new members 	<ul style="list-style-type: none"> • Participants have a higher degree of responsibility in preserving the integrity of the system. • Not yet proven at scale for payment systems

Summary of BCE results at Scenario level

- 6.6. This section presents the aggregated Solution results under of the BCE. The findings presented in this summary section have been adjusted so as to eliminate double counting in situations where there is a duplication of costs and/or benefits across Solutions. More information on the findings and assumptions can be found at in the supplementary documentation on our website.
- 6.7. In estimating the net benefits, only the incremental costs have been taken into consideration. These are additional costs that would borne as a result of evolving the current infrastructure or building a SPP. These exclude costs that will be incurred in a “do-nothing” scenario.
- 6.8. As we go through detailed design we will reassess the BCE on the basis of the additional information. So the figures shown inform our direction at this stage, but will change as we progress, we will also consider whether differing execution risks would need to be factored into the model, depending upon the architectural approach. This may bring the relative BCE results closer together.

- 6.9. On the basis of our analysis, we have reached three main conclusions:
- Under all three scenarios assessed, the BCE shows that the incremental benefits exceed the incremental costs
 - The analysis shows that the Simplified Payment Platform scenarios lead to a better outcome from a BCE perspective compared to evolving the current infrastructure
 - The assumed rate of adoption for our Solutions has a considerable impact on the results of the BCE. To account for this impact, the net benefit figures we present are across a range (from low to high adoption)
- 6.10. The difference in net benefit between the Evolving Infrastructure and the two SPP scenarios is substantial. The SPP scenarios have a net benefit of between £0.8 bn and £1.5 bn in excess of the Evolving Infrastructure²¹²². The BCE estimate also shows a higher net benefit for the distributed SPP scenario over centralised SPP. We believe that alongside the net financial benefit, the ability of our proposed NPA to adapt to future, as yet unknown needs of users, makes the case for a detailed design phase incontrovertible.
- 6.11. These findings will be reassessed as we move into the detailed design phase for our Solutions.

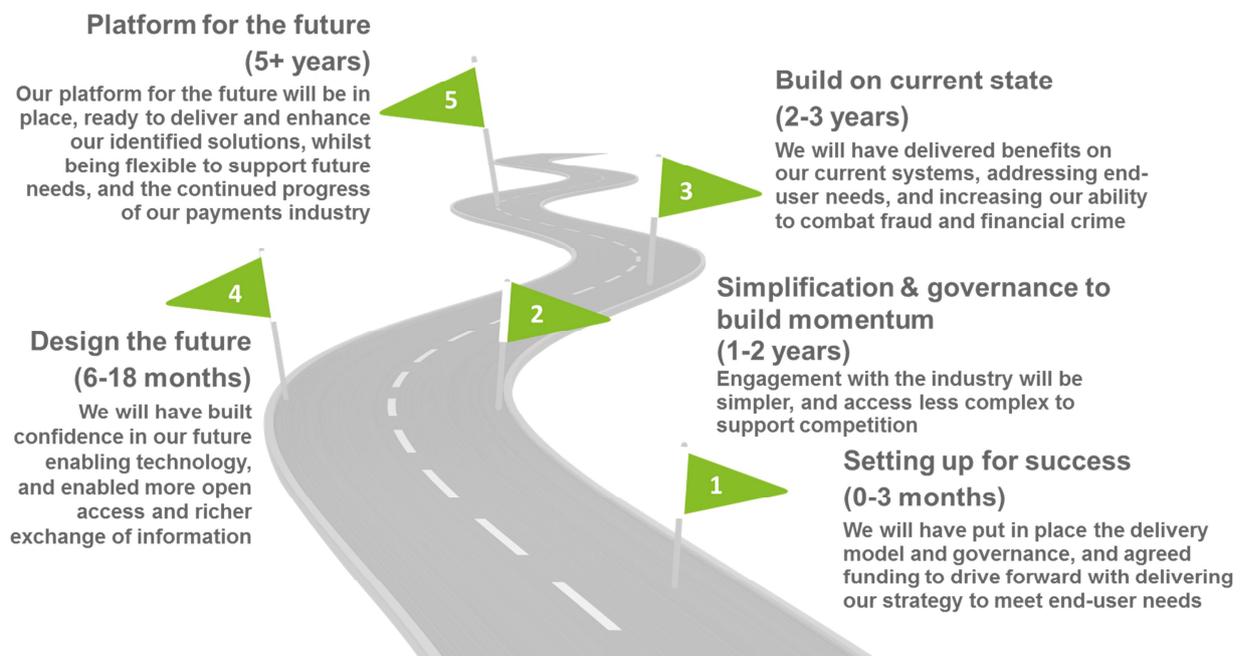
²¹ Assuming a moderate adoption rate over 10 years.

²² More information on the BCE analysis can be found in the supplementary documentation on our website

7. Our Strategy in Sequence

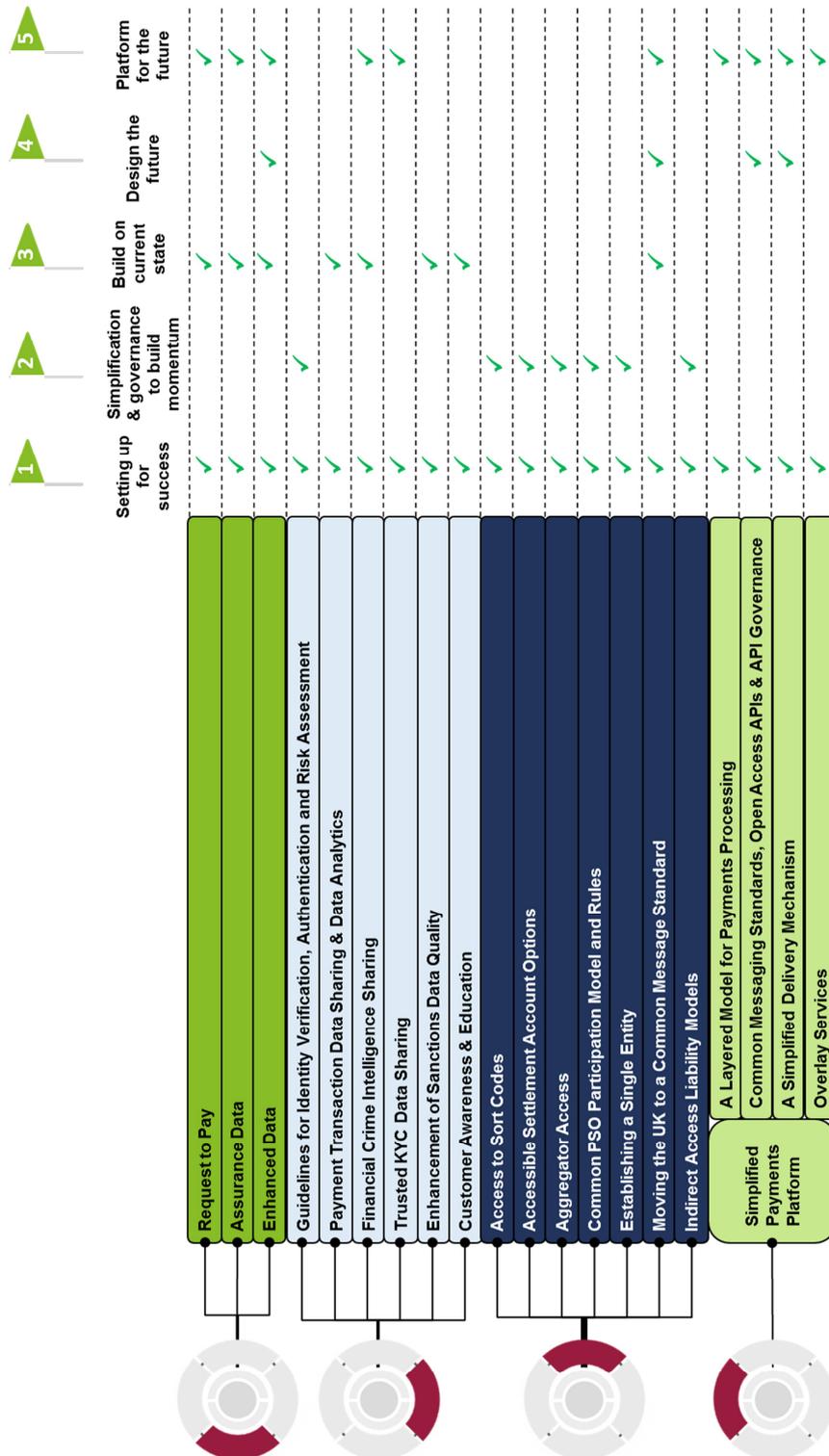
- 7.1. In this section we explain how our Strategy will be delivered. We have grouped our Solutions to develop a roadmap which best reflects our Strategy to Simplify, Leverage and Modernise.
- 7.2. The Forum recognises that our Strategy is a starting point, and that previous reviews have struggled to drive the ambitious change that the industry needs to serve all users of payment systems. However, we now have an opportunity, with a strong case for change, to implement this Strategy supported by the PSR.
- 7.3. To start, we have defined an initial phase of activity which we call 'Setting up for Success', which is a critical element of our strategic roadmap, to give us the best chance of delivering our Vision. During this stage we will put in place the delivery model, governance, and agree funding for the ongoing delivery of our Strategy.
- 7.4. The delivery of our Strategy is then composed of four additional activity groups, shown in Figure 29, namely:
- Simplify:
 - Simplification & governance to build momentum
 - Leverage:
 - Build on current state
 - Modernise:
 - Design the future
 - Platform for the future

Figure 29: The delivery of our Strategy



- 7.5. 'Setting up for Success' will include:
- Confirming governance, including agreeing ownership of specific Solution initiatives
 - Clarifying funding requirements and securing funding for the next phase
 - Putting in place the appropriate working structures to begin implementing our Strategy
 - Conducting a brief study to identify key issues prior to detailed design
- 7.6. A critical element of Setting up for Success will be to agree formal engagement with regulators and coordination of activities with other related industry delivery groups, specifically:
- The CMA Implementation Entity working on Open Banking APIs
 - The BoE RTGS programme team
 - The PSODG that has been set up to deliver the consolidation of PSOs
- 7.7. We believe that coordination between these groups, with each recognizing the delivery responsibilities of the others is critical to the success of all. Putting this in place will give the industry as a whole the best chance of achieving all desired outcomes.
- 7.8. 'Simplification & governance to build momentum' will be achieved by supporting initiatives already underway, e.g. increasing **access to sort codes**, and by delivering new Solutions, e.g. developing **guidelines for identity verification, authentication and risk assessment**. It will focus on removing complexity and simplifying access to payment systems.
- 7.9. 'Building on the current state' will address end-user needs and improve the security of payment systems on our existing infrastructure where it is technically feasible and is financially sensible. By leveraging other industry initiatives (e.g. Open Banking API) we will also consider how to deliver enhancements to our current systems and help deliver more control, assurance and enhanced data for end-users.
- 7.10. 'Design the Future' will deliver a detailed design for the proposed NPA, engaging regularly with stakeholders (including regulators) on the proposed plans and Solutions. We will develop and utilise decision criteria to continually re-assess the financial model and implementation feasibility. To validate standards, validate technology choices and investigate scalability and other key characteristics, we will use a technology proving pilot. At the same time, we will also develop a detailed implementation plan.
- 7.11. 'Platform for the future' will build the new infrastructure ready to migrate the industry from old to new. It will be done in line with the outputs of 'Design the Future'. The new infrastructure will be more flexible, resilient and efficient, putting in place a 'Platform for the Future' to support ongoing Solutions and developing end-user needs.
- 7.12. This five-part delivery will enable us to achieve our strategic objectives for a payments industry that is more secure, efficient and responsive to developing end-user needs. In addition, it facilitates the movement of the industry to a new payments architecture, which will offer enhanced usability, resilience and efficiency, and will be more adaptable to future needs, compared to the current infrastructure.
- 7.13. We have allocated each of the proposed Solutions into groups, taking into account key delivery factors such as dependencies between Solutions, other industry initiatives, and implementation risks.
- 7.14. Figure 30 summarises the allocation of Solutions across the five groups.

Figure 30: Summary of analysis of Solution by group²³



²³ Building on the current state for Request to Pay, Assurance Data and Enhanced Data will entail defining standards and rules. Once these standards and rules are in place, the competitive market will be in a position to be able to develop products and services for end-users. The Forum recommends that these standards are adopted by those who bring services to market.

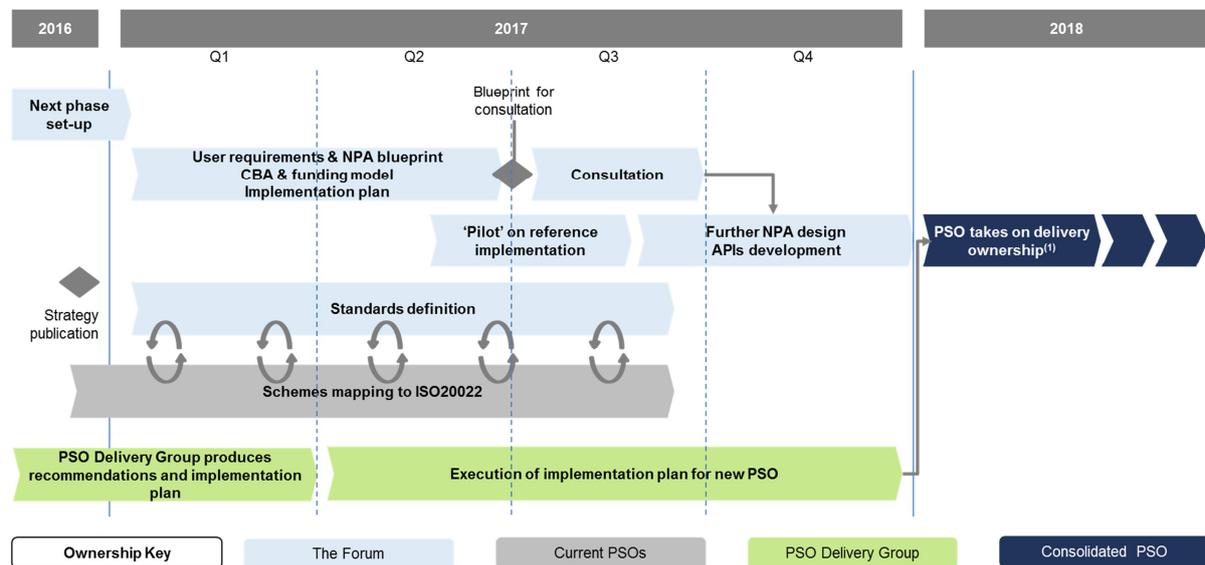
- 7.15. As we proceed with the next phase of activity, the Forum will continue to lead the development of key Solutions, including the SPP. For some Solutions, we recognise that other organizations may already be doing work or be better placed to take Solutions forward. Regardless of who is responsible for implementation of our Solutions, delivery will require the continued commitment and support of the industry.
- 7.16. Views shared by the PSR during the development of the Strategy on ownership of Solutions delivery are described in Figure 31. We support this view, recognizing that details will be clarified during 'Setting up for Success'. This will be done under the ongoing oversight of the PSR, BoE and other regulatory bodies as appropriate within the scope of their respective mandates.

Figure 31: Ownership of next phase of activity, 2017

Solution	Ownership
Request to pay	The Forum will oversee definition of standards and rules for interoperability. The Competitive market will then be able to design and implement a suitable service. The Forum will also ensure these standards are applied to subsequent delivery on NPA
Assurance Data	
Enhanced Data	
Guidelines for Identity Verification, Authentication and Risk Assessment	The Forum will move implementation forwards initially, and will seek to confirm ownership and proceed with a handover within six months
Payment Transaction Data Sharing & Data Analytics	The Forum will manage the next phase of delivery for this Solution, and propose an industry self-regulating body to be responsible for high-level design
Financial Crime Intelligence Sharing	The Forum will own the next steps and handover during 2017 to an appropriate industry body. We will collaborate with existing bodies (e.g. JFT, FFAUK and JMLIT) to agree appropriate future ownership
Trusted KYC Data Sharing	The Forum will undertake more research to confirm viability including potential delivery by the competitive market
Enhancement of Sanctions Data Quality	This is the responsibility of industry and of the Office of Financial Sanctions at HM Treasury. The Forum will engage with the Treasury to understand how best to take forward the work
Customer Awareness & Education	The Forum will identify the appropriate industry body to take this forward, candidates would include JFT and the new FS Trade association
Access to Sort Codes	This has already been implemented by Bacs
Accessible Settlement Account Options	The Forum will support the BoE's development and implementation of this Solution and ensure alignment of related Forum activity
Aggregator Access	The Forum will monitor the implementation of this Solution by the PSOs
Common PSO Participation Model and Rules	The Forum will monitor the implementation of this Solution by ISOCC
Establishing a Single Entity	The Forum will oversee the development of the Consolidated PSO entity by the PSODG
Moving the UK to a Common Message Standard	The Forum will manage the development and implementation of this Solution, including considerations required for the design of the NPA
Indirect Access Liability Models	The Forum will set up a Working Group that will liaise with industry to understand concerns with current JLMSG guidance. The industry Working Group will clarify specific concerns for consideration by the JMLSG with approval of any changes needed by FCA and HM Treasury
Simplified Payments Platform	Forum ownership of design, detailed implementation planning to be handed over to the Consolidated PSO entity when established and stable

- 7.17. The first step for the Forum to deliver Solutions to respond to end-user needs is the collaborative development of the standards and rules, which are required for implementation of this Solution, whether on existing architecture or the NPA. With the standards and rules in place, these Solutions could be partially delivered on the current architecture by aligning with other industry initiatives such as Open Banking. However, we recognise that to fully meet all 'End-user Needs' would require the implementation of the NPA.
- 7.18. The Forum will conclude its design work of the NPA by the end of 2017, to be ready to hand over to the new Consolidated PSO entity, as illustrated in Figure 32.
- 7.19. We believe that the PSODG should ensure that the new Consolidated PSO be designed in a way that it is both capable of procuring the NPA as part of its competitive procurement process and also act as the governance body for relevant industry.

Figure 32: Proposed high-level timelines for NPA

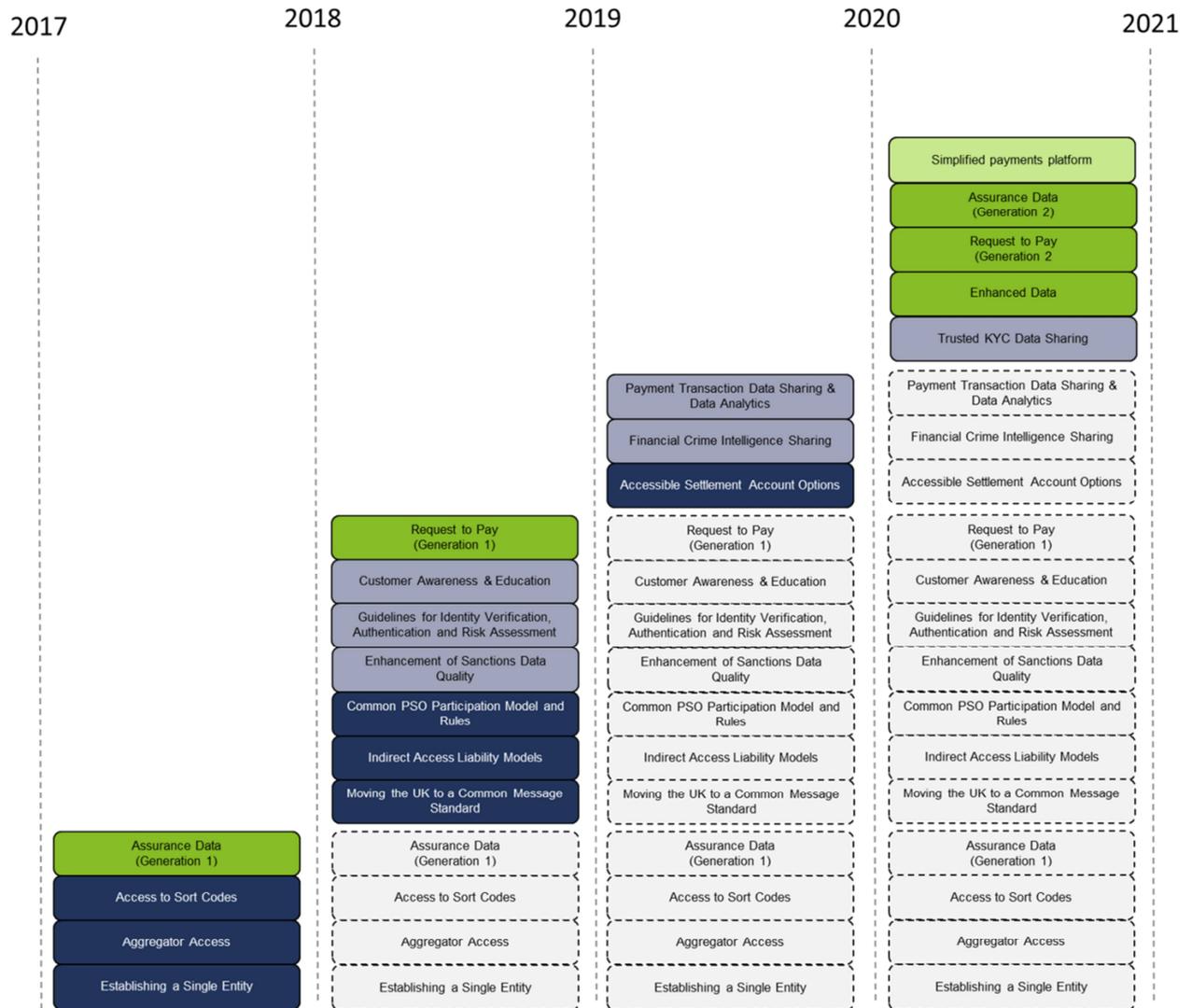


Note: (1) Including competitive procurement of any central infrastructure in the NPA

- 7.20. Our view is that the establishment of a clearly mandated Consolidated PSO with the capacity and skills to procure the required infrastructure is critical to success. We see this as an opportunity to drive forward the implementation of our NPA. How the NPA will be delivered in practice will be determined as part of the Consolidated PSO's competitive procurement process, through engagement with potential infrastructure suppliers. This will determine how much of the NPA would be distributed or centralised.
- 7.21. We also recognise that any new retail payments architecture will be required to settle in central bank money. In light of that, it is essential that our roadmap for the NPA aligns with current BoE plans for the new RTGS system. Specifically, the timeline for decisions on settlement options is mid-2017 and will therefore form an early part of design considerations.
- 7.22. Our roadmap delivers our Solutions over several years, starting in 2017 as shown in Figure 33. Each Solution will go through a detailed design and implementation planning phase to confirm the deployment sequence.

7.23. We also recognise that there is a significant amount of change already underway and planned across the industry. As a consequence, we recognise the risk created by delivery capacity constraints, which need to be collectively managed. As we proceed with detailed design and implementation planning, we will continue to monitor this risk, collaborate with other programmes of work, and adjust our roadmap when needed, while delivering benefit and addressing detriments as soon as possible.

Figure 33: Solution enablement timeline²⁴



7.24. As we continue to refine our Solutions' designs and conduct detailed planning, we will continue to develop our roadmap into an integrated set of implementation plans, which also continues to take into account broader industry developments, as have been highlighted throughout this document.

²⁴ This Figure shows when the foundation of each solution will be delivered, enabling the competitive provision of services by the relevant parties from then onwards (for example PSPs, PSOs, third-party commercial providers, etc). Adoption of services would begin from that point.

Economic considerations

- 7.25. The high-level BCE of our Solutions, based on a moderate take-up over ten years, has showed a positive (Net Present Value) NPV. These findings support the economic argument for proceeding with detailed design and implementation planning.
- 7.26. Funding discussions with industry participants (PSPs, PSOs, Schemes, Government, others) will be held as part of ongoing Forum activity of 'Setting up for Success'.
- 7.27. A detailed economic model will also be developed in the next phase of Forum activity. A core principle of the economic model will be setting a payback period for investment, for example over a 10-year take-up period.
- 7.28. It is our belief that the setting of standards, where required, for our Solutions will promote competitive market development of those Solutions.
- 7.29. Competitive procurement is a key element of how we believe our Strategy can be implemented, in particular the NPA.
- 7.30. Ongoing assessment will be informed by next stage design with robust governance and strict decision criteria to ensure continued demonstration of commercial viability and delivery feasibility.

Implementation risk

- 7.31. Delivery risks have been identified as we have developed its implementation roadmap. We have classified the identified risks into six areas, these are summarised in Figure 34.

Figure 34: Implementation risks classification and mitigation

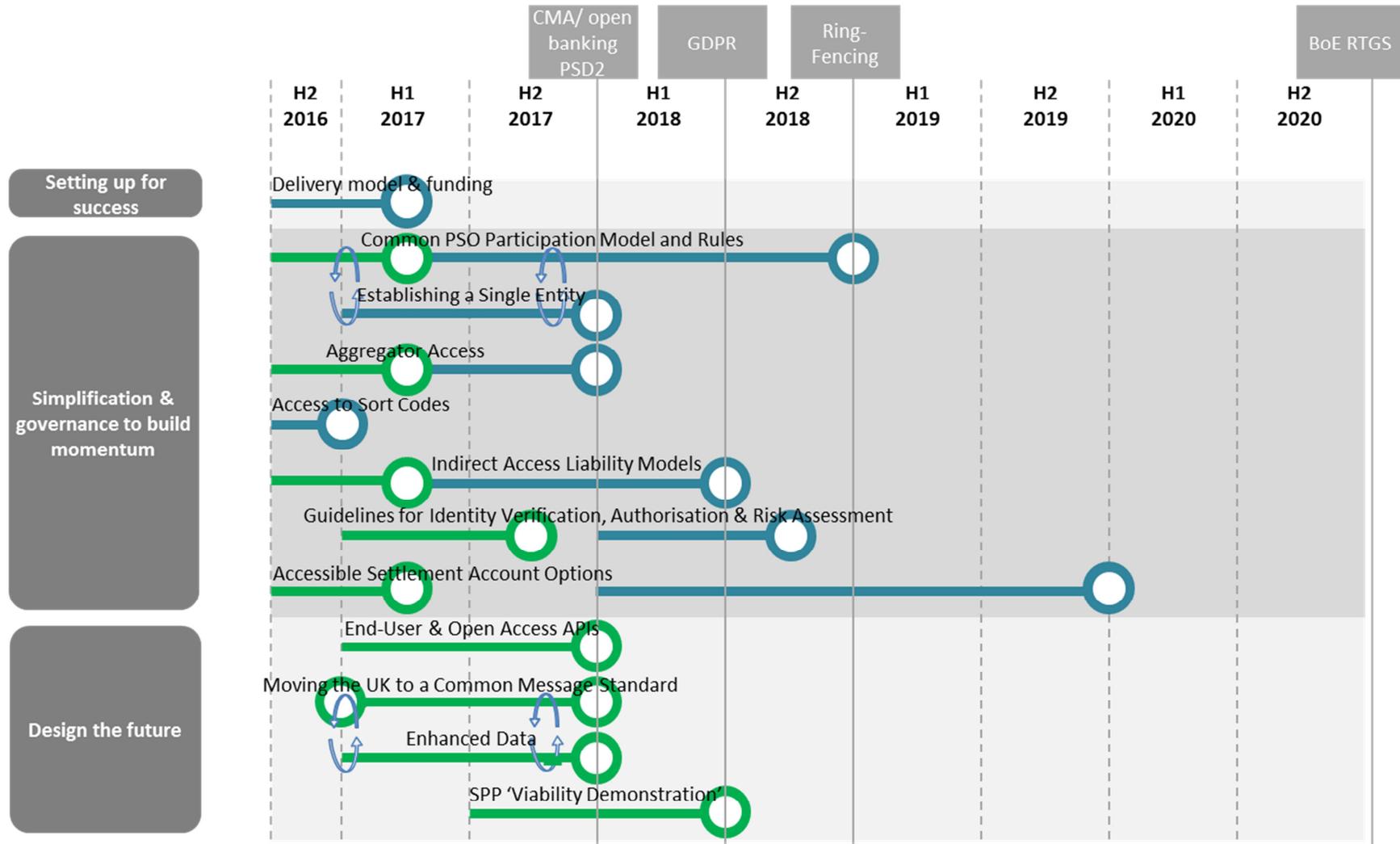
Risk Type	Description of Risk	Mitigation
Customer related	Possible risks related to customer experience or significant impact on the security of the customer's personal data	Placing customer considerations at the heart of the development of solutions and involving end users in development
Industry adoption	Possible risks that increase industry resistance to or reduce uptake of the proposed solutions (e.g. business case for the use of one solution may not be clear)	Collaborating with all industry participants in the development of our Solutions
Delivery constraints	Possible risks that industry players may face in terms of capital restrictions, human resources availability and physical assets to deploy the solutions	Recognising wider industry initiatives and adapting our roadmap accordingly
Technology complexity	Technology related risks surrounding implementation of the proposed solutions (e.g. Systems integration, post-implementation risks, degree of complexity)	Using best practice technology implementation
Stability	Risks for the implementation which could have an effect on the stability of financial systems (e.g. slowing transactions, limiting volumes and threatening resilience)	Undertaking a trial build and detailing transition to implement solutions; agreeing approach with regulatory bodies, incl BoE, FCA, PSR, etc.

8. Conclusion

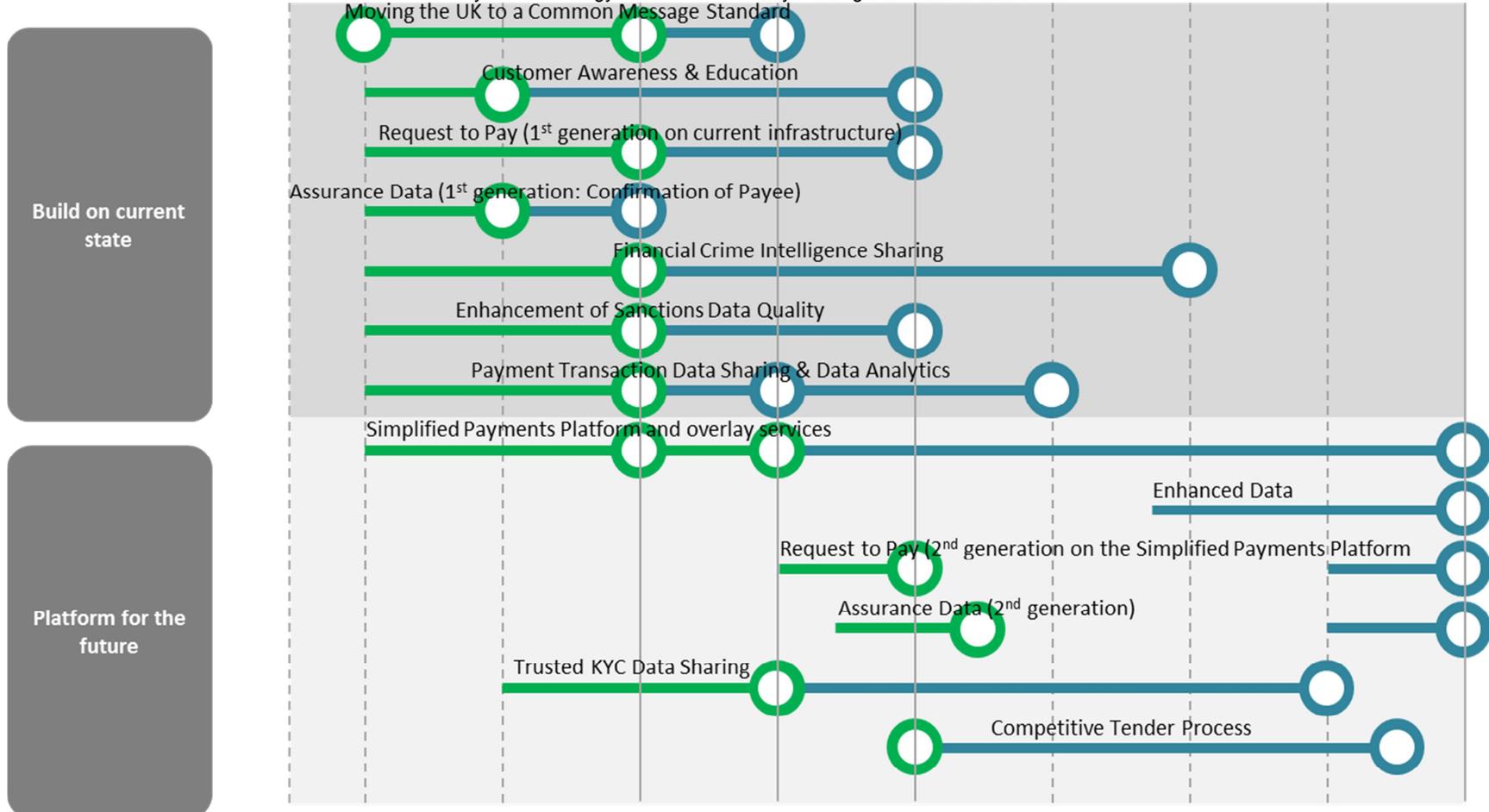
- 8.1. Over the past 12 months we have developed our Strategy for the UK payments industry. This Strategy is the product of a significant amount of work by the members of the Forum, the members of our Working Groups and valued input of the more than three hundred people in our Payments Community.
- 8.2. Our Strategy has taken into account the responses to our industry consultation and is supported by the findings of our high-level BCE. Our view on the way forward for our Strategy has been set out in our high-level implementation roadmap.
- 8.3. For the next phase of activity, the Forum will lead this work through 2017. To this end, the first Forum meeting to continue the design phase of the implementation will take place within a month of publication of this Strategy. The Forum will oversee the progress of all of our Solutions.
- 8.4. During 2017, the PSODG will set up a Consolidated PSO. It is anticipated that at the end of 2017 the Consolidated PSO will take on delivery responsibility from the Forum, with details being subject to the outcome of the PSODG's analysis and planning.
- 8.5. This Strategy represents a unique opportunity for the industry to deliver truly responsive, resilient, trustworthy and accessible payments which will benefit everyone. We are confident that the industry, together with all the key collaborators who made this Strategy possible, are ready to continue this journey and deliver a future ecosystem that achieves our Vision. We look forward to working together in our next phase of activity, Setting Up for Success.

9. Appendices

Appendix 1 - Roadmap for the Delivery of our Strategy



A Payments Strategy for the 21st Century: Putting the needs of users first



Legend

- Design activities
- Implementation activities; capability available at the end of this phase
- ▬ Regulatory milestones
- ↻ Interrelated activities

Notes

- Implementation activities driven by centralised body or market forces
- Request-to-Pay: during the design phase activities, current industry’s schemes will continue to work without any change
- Moving the UK to a Common Message Standard: design phase activities will also support Simplified Payments Platform design activities
- Simplified Payments Platform and overlay services: detailed design phase of SPP until end of 2017. Iteration of design based on proving pilot to be conducted for H1 2018

Appendix 2 - Glossary

AML	Anti-Money Laundering
API	Application Programming Interface
BCE	Business Case Evaluation
BoE	Bank of England
C&CCC	Cheque & Credit Clearing Company
CMA	Competition and Markets Authority
eIDAS	Electronic Identification and Signature
EUN	End-User Needs
FCA	Financial Conduct Authority
FFAUK	Financial Fraud Action UK
FPS	Faster Payments Service
FSB	Financial Stability Board
GDP	Gross Domestic Product
GDPR	General Data Protection Regulation
HMRC	Her Majesty's Revenue & Customs
HM Treasury	Her Majesty's Treasury
ICS	Image Clearing System
IoT	Internet of Things
ISOCC	Interbank System Operators Coordination Committee
JFT	Joint Fraud Taskforce
JMLIT	Joint Money Laundering Intelligence Taskforce
JMLSG	Joint Money Laundering Steering Group
KYC	Know Your Customer
LEI	Legal Entity Identifier
MIDAS	Mobile Identity Authentication Standard
NCA	National Crime Agency
NPA	New Payments Architecture
OBWG	The Open Banking Working Group
PSD	Payment Services Directive
PSF	Payments Strategy Forum
PSO	Payment System Operator
PSODG	Payment System Operator Delivery Group
PSP	Payment Service Provider
PSU	Payment Service User
SAM	Simplifying Access to Markets (Working Group)
SME	Small & Medium Enterprises

Appendix 3 - Members of the Forum

Ruth Evans	Chair	
Adam Marshall	Director General	British Chambers of Commerce
Alan Smith	Head of Payments and Banking Services	Post Office
Becky Clements	Head of Industry Engagement and Payment Change	Metro Bank
Carl Pheasey	Head of Policy	Money Advice Service
Carlos Sanchez	CEO	Orwell Group
Faith Reynolds	Member	Financial Services Consumer Panel
John Hackett	Group Chief Operating Officer, Financial Crime Risk	HSBC Bank
Katherine Horrell	Group Treasurer	Centrica
Lisa Felton	Head of Consumer Policy	Vodafone
Mark Lyonette	Chief Executive	ABCUL
Marion King	Group Director of Payments	Royal Bank of Scotland
Michael Maier	Founding Board Member, Delivery and Technology	Fidor Bank AG
Mike Smith	Commercial Director	Raphaels Bank
Neil Lover	Head of Payments & Financial Crime and MLRO	Coventry Building Society
Nick Davies	Richer Data Strategy Lead	DWP
Otto Benz	Director, Strategic Payments	Virgin Money
Philip McHugh	Chief Executive, Business Solutions	Barclaycard
Russell Saunders	Managing Director, Global Payments	Lloyds Banking Group
Ruth Milligan	(Until February 2016) Head of Financial Services and Payments	British Retail Consortium
Ruth Wandhöfer	Global Head for Regulatory and Market Strategy	Citi Bank
Sian Williams	Head of National Services	Toynbee Hall
Thaer Sabri	Chief Executive	Electronic Money Association
Tom Ironside	Head of Business and Regulation	British Retail Consortium