A Payments Strategy for the 21st Century

Putting the needs of users first

November 2016

Draft

Foreword from the Chair

The Payments Strategy Forum is a unique group of 23 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 need 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 the 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 through 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 go to those who have driven the development of the Strategy, whether by leading Working Groups or as members of the Forum:

- Adam Marshall, Director General, British Chambers of Commerce (BCC)
- 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 (RBS)
- Michael Maier, Chief Operating Officer, Fidor Bank
- Mike Smith, Commercial Director, Raphaels Bank
- Neil Lover, Head of Payments and Financial Crime, Coventry Building Society
- Nick Davies, Richer Data Strategy Lead, DWP
- Otto Benz, Director: Strategic Payments, Virgin Money
- Philip McHugh, Chief Executive, Barclaycard Business Solutions
- Russell Saunders, Managing Director, Global Payments, Lloyds Banking Group
- Ruth Milligan, Head of Financial Services and Payments, techUK
- 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 (BRC)

I would like to especially note the contributions of [xxx] for their financial support which has enabled the final Strategy to become a reality.

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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 and Cheques via The Cheque & Credit Clearing Company (C&CCC).

Across this complex environment, the gap between end-user needs and what is being delivered by our current payments infrastructure is growing as well as 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 Payments Systems Regulator 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.

To guide the Strategy, The Forum 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

> **Our Vision is underpinned by strategic objectives to ensure our payments systems are versatile to end-user needs, efficient, secure, stable and resilient**

These areas of focus enable it to meet the needs of current and future generations of payments service users.

The Forum has identified five key challenges that currently impede our Vision:

Figure 1: Key challenges to the UK payments industry
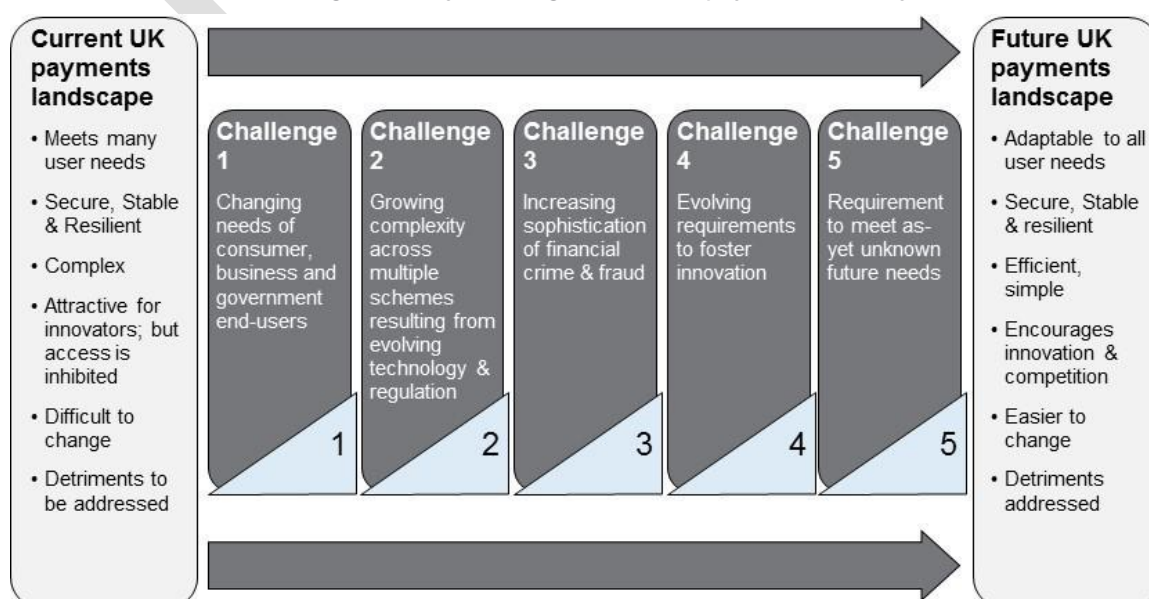
Our Strategy addresses these challenges head on. It will:

- **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
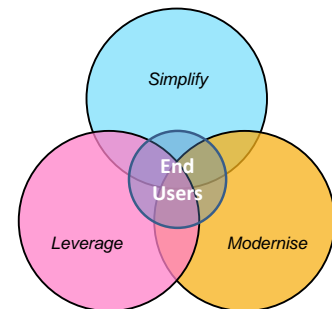- Simplification of technology infrastructure

- **Leverage** our current capabilities and the outcomes expected from known industry initiatives

Despite technical limitations, our current payment systems have capabilities that can be leveraged to move our Strategy forward. There are a number of existing and planned industry activities that have the potential to deliver key aspects of our Strategy. For example, the work being done on Open Banking APIs, the Bank of England's RTGS review, the Image Clearing System (ICS) being deployed by C&CCC, and other projects to deliver new functionality, such as 'Paym' on FPS.

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 coordinate with known initiatives, collaborating across the industry.

- **Modernise** through the assessment and deployment of modern technology to deliver our New Payments Architecture

Our current infrastructure has grown organically over several decades, and as a result it suffers from technical limitations. There are limits 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 uses ageing technology. This ageing technology is unable to fully deliver on our strategic vision and objectives.

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 'Simplified Payments Platform' (SPP). The SPP will deliver greater competition and more innovation at lower costs. It will support simpler access for PSPs, and it will be agile and respond quickly to the needs of consumers, businesses and government.

To implement our Strategy, The Forum has defined solutions across four areas, as shown in Figure 3. These are categorised as:

- **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
- **Building A New Architecture for Payments:** solutions to enable the development of the future payments architecture
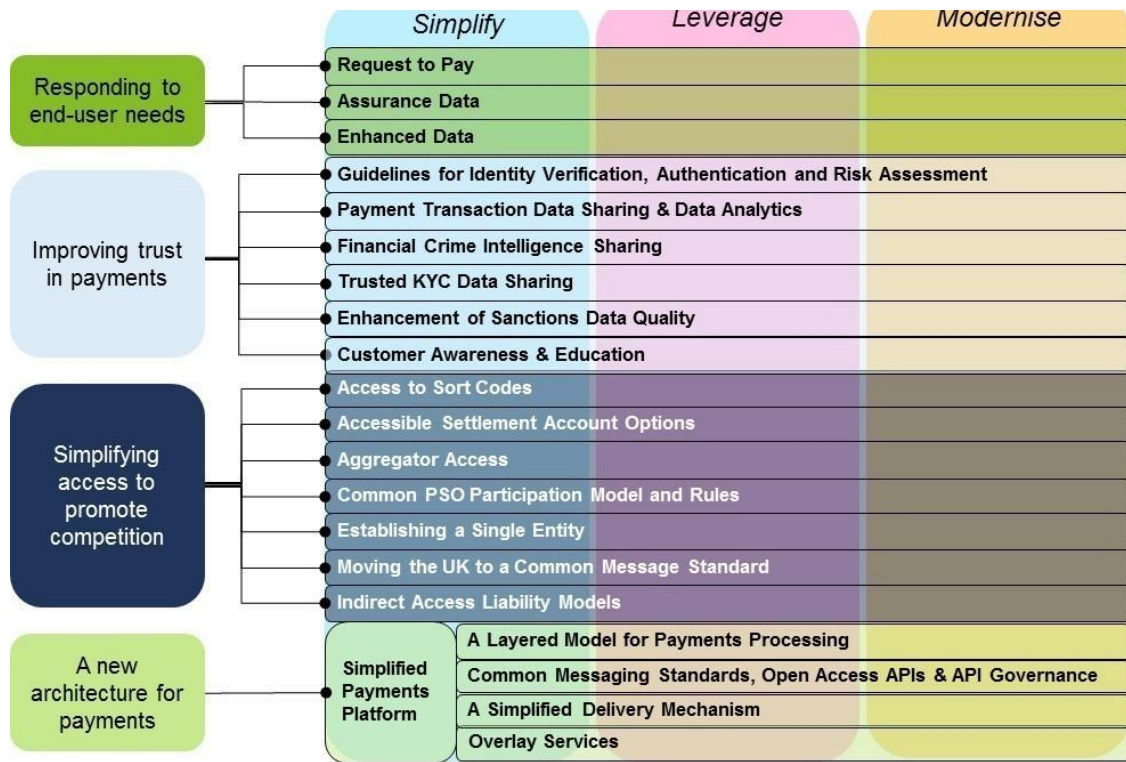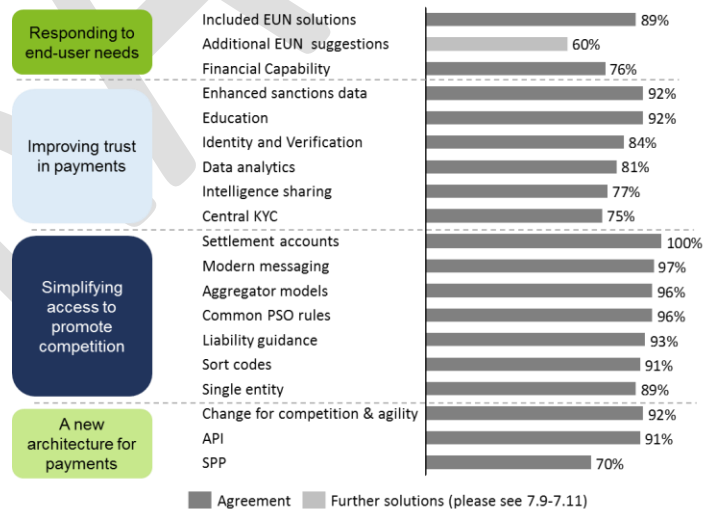
Figure 3: Our Solutions

	Simplify	Leverage	Modernise
Responding to end-user needs	Request to Pay		
	Assurance Data		
	Enhanced Data		
Improving trust in payments	Guidelines for Identity Verification, Authentication and Risk Assessment		
	Payment Transaction Data Sharing & Data Analytics		
	Financial Crime Intelligence Sharing		
	Trusted KYC Data Sharing		
	Enhancement of Sanctions Data Quality		
	Customer Awareness & Education		
Simplifying access to promote competition	Access to Sort Codes		
	Accessible Settlement Account Options		
	Aggregator Access		
	Common PSO Participation Model and Rules		
	Establishing a Single Entity		
	Moving the UK to a Common Message Standard		
	Indirect Access Liability Models		
A new architecture for payments	Simplified Payments Platform	A Layered Model for Payments Processing	
		Common Messaging Standards, Open Access APIs & API Governance	
		A Simplified Delivery Mechanism	
		Overlay Services	

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 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 **Error! Reference source not found.**. his 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 response questions

Figure 4: Agreement to response questions

Responding to end-user needs	
Included EUN solutions	89%
Additional EUN suggestions	60%
Financial Capability	76%

Improving trust in payments	
Enhanced sanctions data	92%
Education	92%
Identity and Verification	84%
Data analytics	81%
Intelligence sharing	77%
Central KYC	75%

Simplifying access to promote competition	
Settlement accounts	100%
Modern messaging	97%
Aggregator models	96%
Common PSO rules	96%
Liability guidance	93%
Sort codes	91%
Single entity	89%

A new architecture for payments	
Change for competition & agility	92%
API	91%
SPP	70%

Agreement Further solutions (please see 7.9-7.11)

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 Simplified Payments Platform (SPP) or a distributed SPP. The Forum agreed to continue with detailed design of the New Payment Architecture, developed on modern technology, learning from and leveraging ongoing technology developments and deployments where appropriate and run a 'proving pilot' by the end of 2017.

A Business Case Evaluation (BCE) has been conducted to understand the estimated, relative financial benefit of all of our solutions on each of these infrastructure scenarios. The BCE found that the New

Payments Architecture infrastructure scenarios show a net benefit of £1.4~£2.1bn 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 New Payments Architecture to adapt to future, as yet unknown needs, makes the case for a detailed design phase incontrovertible.

To this end, the Forum has created a roadmap, illustrated in Figure 5, for the implementation of the Strategy 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 CMA work on Open Banking APIs and the Bank of England 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. Each solution will go through a
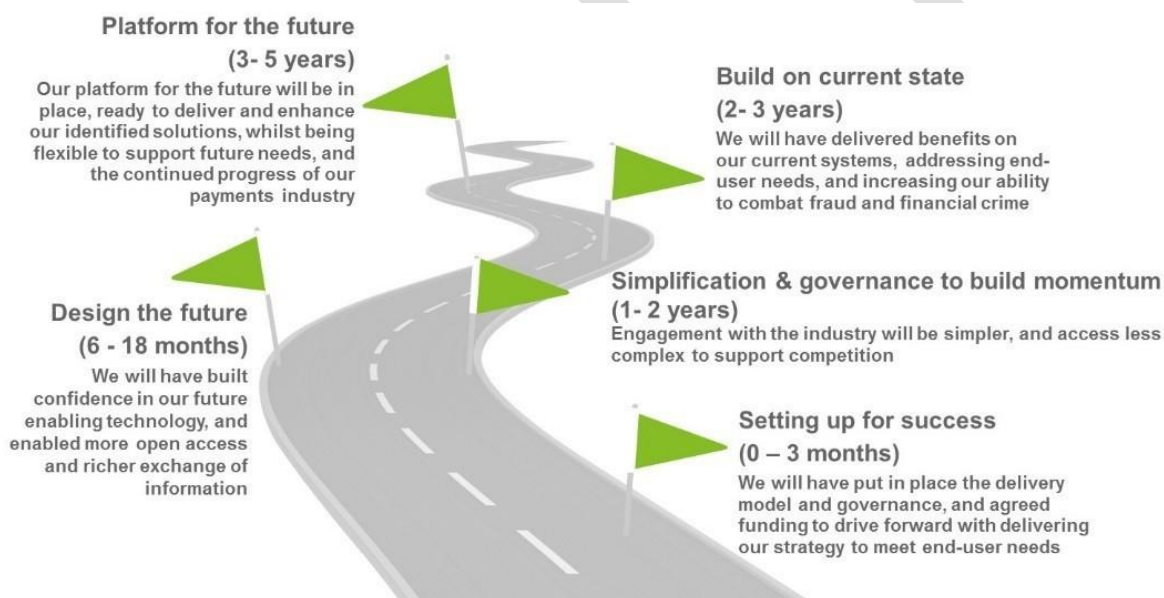
detailed design and implementation planning phase. Much of the work during the design phase will be to develop standards for the capability delivered by our solutions. This will enable elements of delivery on our current systems where technically feasible, ensure interoperability and support an easier transition to a future architecture if needed.

The Forum recognises 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 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 programmes of work, and adjust our roadmap when needed, whilst delivering benefit and addressing detriments as soon as possible.

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

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 New Payments Architecture. These standards and rules will enable partial delivery on the current architecture, by aligning with other industry initiatives such as 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. But to fully meet all end-user needs would require the implementation of a New Payments Architecture (NPA).

To increase momentum, we can build on the work already underway 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 benefits to PSPs now and in the shorter term to close the gap between direct and indirect participants in the market.

To give these initiatives greater traction, the Draft Strategy proposed consolidation of the interbank system governance of Bacs, Cheque & Credit Clearing Company and Faster Payments into a single Consolidated PSO. This work has already begun with the formation of the PSO Delivery Group (PSODG) jointly by the PSR and the Bank of England, which is responsible for the delivery of the Consolidated PSO by the end of 2017, with oversight from the Forum.

We also want to increase trust in payment systems. To that 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 argues 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 APIs that act as the glue holding together the payments architecture. This will be a foundational element for new services under PSD2 and Open Banking, and a key component our proposed New Payments Architecture.

In the longer term, the proposed New Payments Architecture 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 messaging standard),
* A 'thin' collaborative infrastructure, allowing multiple providers of overlay infrastructure or services to compete in the market simultaneously
* The need to ensure our payments systems are secure & resilient, with financial stability a key principle

Based on these principles, we will continue with detailed design of the New Payment Architecture, developed on modern technology, learning from and leveraging ongoing technology developments and deployments where appropriate (e.g. APIs, PSD2, ICS). We will run a 'proving pilot' with clear outcomes including the demonstration of interoperable standards and proving the proposed layered design by the end of 2017.

The Forum will be directly responsible for the next phase of delivery of solutions to deliver control, 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 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 New Payments Architecture.

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. For example, for our Financial Crime Intelligence Sharing solution. The Forum will seek to confirm ownership and transition responsibility with 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 Delivery Group will own delivery of the single Consolidated PSO. In addition activity to deliver Accessible Settlement Account Options will be overseen by the Bank of England, and Aggregator Access by the PSOs.

It is anticipated that at the end of 2017 the Consolidated PSO will take on delivery responsibility from the Forum, subject to the outcome of the PSODG. Delivery responsibility will include planning for 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

> **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**

the necessary technical, legal and commercial capabilities to run such a process.

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 in our next phase of activity, Set Up for Success.

1. Introduction

1.1. From the Forum's inception there has been a strong focus 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 to a wider consultation to:

- Develop a long term strategic vision for the industry

- Focus on areas that require collaboration

- Recommend areas of priority

- Hold the industry to account

1.4. The Forum has 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 that were presented to us 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 key aspect of developing our Strategy. The Forum recognises 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 enabling the PSR to use its statutory objectives to enforce our recommendations, if necessary.

1.7. This paper presents the Forum's 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

- A summary of the responses to our industry consultation and how we have addressed them

- The key findings of the high-level Business Case Evaluation 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.

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

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.

Figure 6: 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 7, interactions between a variety of participants enable a payment, and protect end-users:

Figure 7: Participants in the UK payments industry
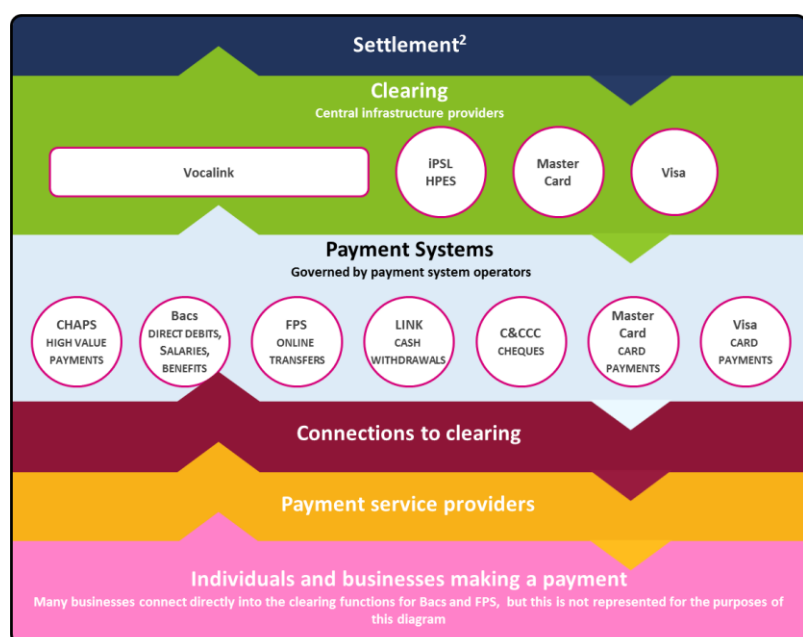
2.5. Across this landscape there are a number of critical initiatives which are changing and improving some areas of the payments industry. Some of these are driven by regulation to reduce risk, protect consumers, and/or to drive innovation and competition. Others are led by the industry, looking for better ways to serve customers.

- Domestic initiatives include the Bank of England's review of its RTGS System, HM Treasury's 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

- The Payment Services Directive (PSD) and subsequently PSD2 are substantial pieces of European legislation that enable new services and participants in the industry, enhance security and improve transparency. The industry is committed to delivering these requirements despite the UK's vote to leave the European Union. The impact of 'Brexit' is as yet unclear but the Forum will continue to take developments into account as it delivers its 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-payments[2]), an increasing demand for real time mechanisms and a reduction in the use of cash and cheques.

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).

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[1] Central bank (BoE) settlement and commercial bank settlement
[2] E-payments are a way of paying for a good or services electronically, instead of physical payments, such as by case or by cheque. Examples of e-payments include cards payments, online purchases, Direct Debit and online bank transfers.

2.9.   As shown in Figure 8 this trend is expected to continue due to a variety of factors such as more online purchases and mobile payments.

Figure 8: UK payment mix (no. purchases bn); Source: 2015 UK Payment Statistics - Payments UK
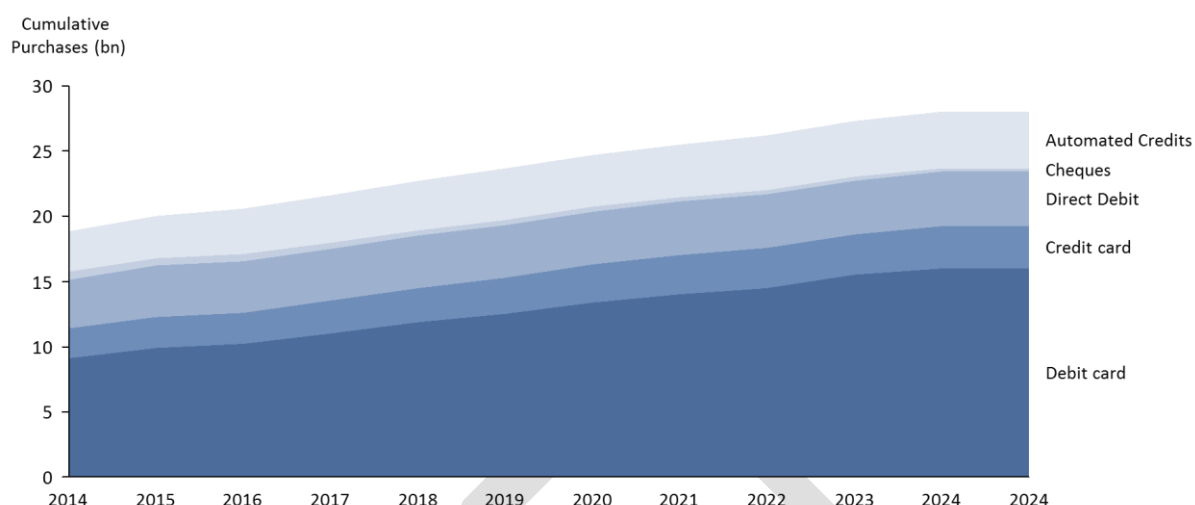
2.10.   Emerging technology is expected to further drive the growth in electronic payments, which may increase volumes beyond these estimates. Technological changes, such as the development of the Internet of Things (IoT), have the potential to significantly affect the way that consumers pay for products, 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 requirements 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 market, potentially hindering competition.

3.3.   A lack of competition in the 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 OFT Taskforce and Cave's internal review of the Payments Council3 (2012). Each underlined the same root problems, but none were able to effect significant change. Recognising these ongoing issues, HMT established the PSR, which was formally launched in April 2015. One of its first priorities was to propose the establishment of the Forum.

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 and large value transfer on CHAPS. More broadly, the industry is at the forefront of global innovation, with a large numbers 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.

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[3] The Payments Council was succeeded by Payments UK in June 2015.

Figure 9: Key needs of payments industry stakeholders

All Stakeholders	• 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	• A choice of services to best suit individual needs • More control over automated payments • Greater assurance that their payment will reach the intended beneficiary • Great visibility of the status of a payment once it has left their account
Businesses	• 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	• Reduced administration for making and receiving payments • A payment system that supports benefit payment and assessment • Improved data sharing to reduce the opportunity for fraud • Faster settlement
PSPs	• 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, highlighted in Figure 10. The Forum has undertaken a process of identifying and refining the detriments that result from these challenges, shown in [Appendix 6]. The need to alleviate these detriments further supports the case for change.

3.8.   The UK payments industry faces several challenges (Figure 10), which it must address in order to alleviate the identified detriments, 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 10: Key challenges to the UK payments industry as it moves towards the future
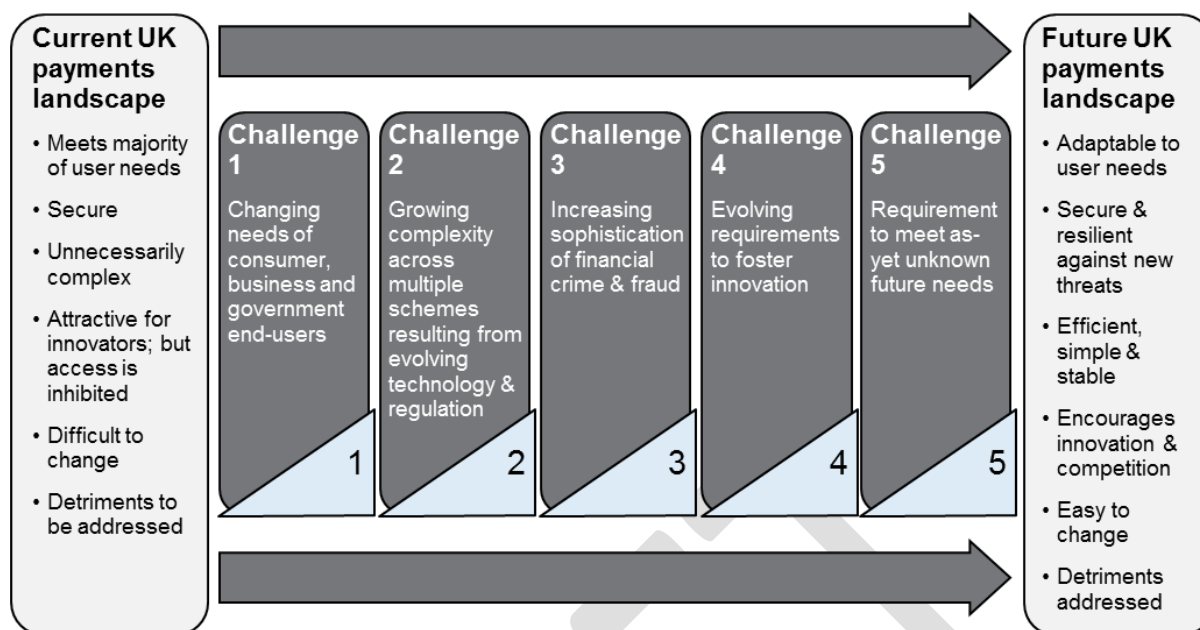
3.9. To address these challenges, the industry needs an infrastructure which is simple, secure, stable and resilient; versatile and responsive to user needs, and efficient to run and develop.

3.10. In order to reach this future state and address the challenges outlined above, the Forum has set out a Strategy and defined a set of solutions to enable delivery of that Strategy.

4. Our Vision & Strategy

4.1.   Our Vision is for the future architecture for 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.

We have grounded this Vision in three strategic objectives, as illustrated in

4.2.   Figure 11. 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 11: Our Vision for the UK payments industry

Our Vision for the UK Payments Industry

"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."

Our Strategic Objectives

I	II	III
Secure, stable and resilient	Versatile and Responsive to End-user Needs	Efficient

4.3.   To guide our efforts in setting out a Strategy to achieve our Vision, we identified seven Strategy-setting principles (Figure 12). These principles were chosen to ensure that our final Strategy supports our Vision for the future, as well as addressing known detriments[4] identified by the Payments Community.

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[4] Please Appendix [1] for more detail on the detriments

4.4.   Execution of our Strategy will deliver our Vision and achieve our objectives. It will face into 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.

4.5.   To achieve this, 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 modern technology to deliver our new architecture for payments

4.6.   Most importantly, our Strategy will have the needs of end-users at its heart.

Figure 13: Our Strategy
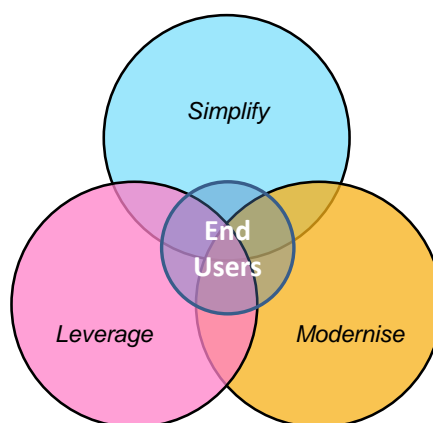
Simplify

4.7.   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

4.8.   Complex and divergent access requirements and governance across our existing systems are increasing 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.

4.9.   The Forum views 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.

4.10.   They 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'. Finally, clear standards will support transition of services from existing to new infrastructure, when required

4.11.   We have multiple systems build on different technologies. This complex environment must be simplified to deliver our Vision. Our proposal for a New Payments Architecture has technology simplification as a core element.

Leverage

4.12.   The Forum recognises that despite some technical limitations, our current payment systems do have capability that can be leveraged to support moving our Strategy forward in some areas.

4.13.   The Forum is also mindful of other industry activities that have potential to enable the delivery of our Strategy. For example, the work being done by the CMA Implementation Entity to deliver Open APIs and the work being done by the Cheque & Credit Clearing Co. (C&CCC) to deliver the Image Clearing System (ICS).

4.14.   Similarly, when considering how to move forward our efforts to combat fraud and financial crime, there is positive activity being led by others in the industry, e,g. Financial Fraud Action UK (FFAUK), the Joint Money Laundering Intelligence Taskforce (JMLIT), the National Crime Agency (NCA), the Joint Fraud Taskforce (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.
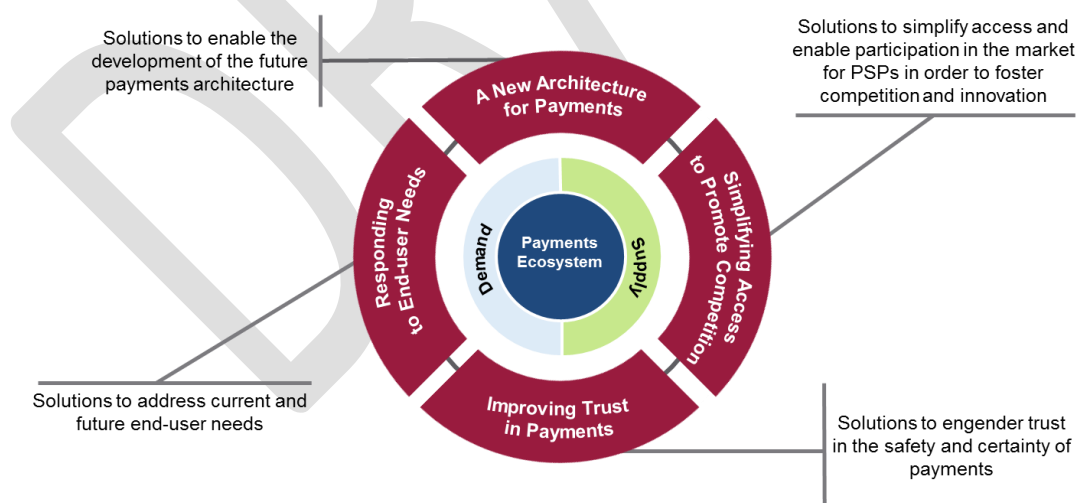
Modernise

4.16.   Our current infrastructure has 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 aging technology is unable to fully deliver on our strategic vision and 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. Delivery of new and innovative propositions is 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 'Simplified Payments Platform' (SPP). It is the culmination of a number of our initiatives, and also recognises the need to leverage other initiatives as set out above. 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:

- **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
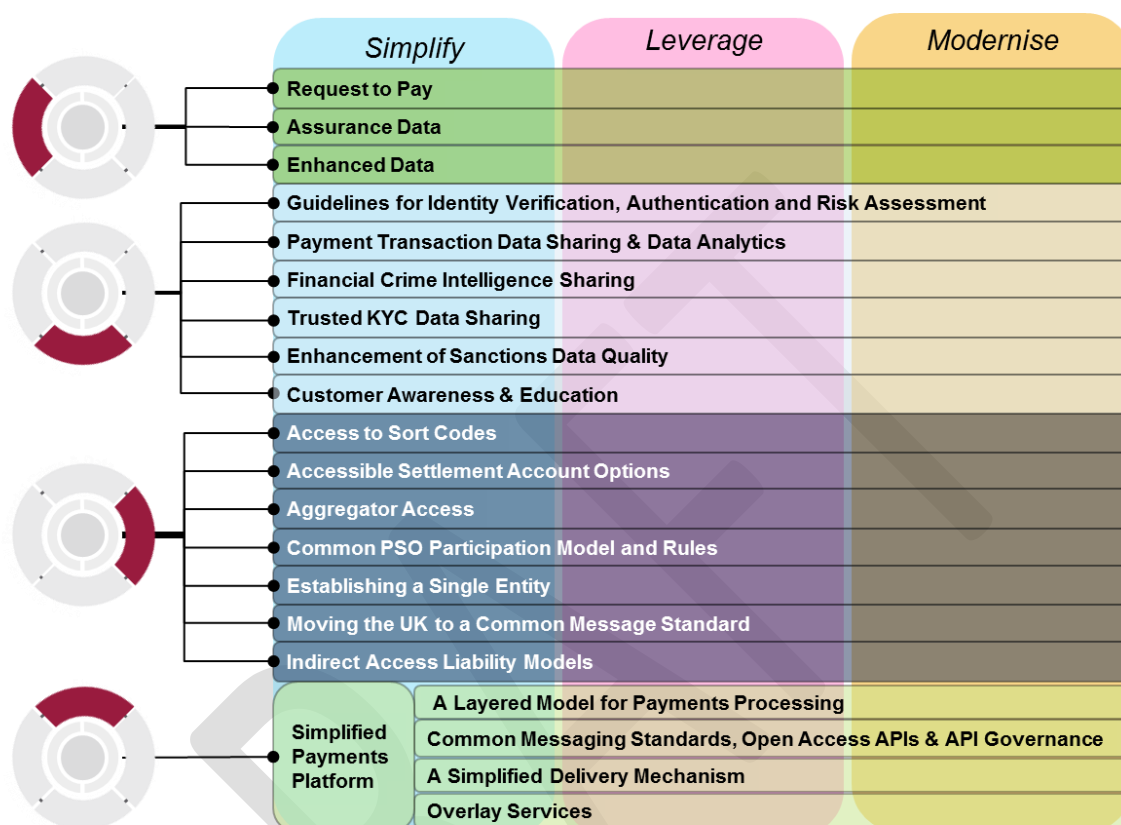
Figure 14: Overview of the Solutions which support our Strategy

4.20. These solutions were broadly supported by the response to our industry consultation. Our intent to 'Simplify', 'Leverage' and 'Modernise' underpins these solutions, as illustrated in

4.21.   Figure 15. This will enable us to deliver our Vision, address the detriments and enable the industry to react quickly to evolving end-user needs.

Figure 15: Our Solutions are underpinned by our Strategic intent to 'Simplify', 'Leverage' and' Modernise'

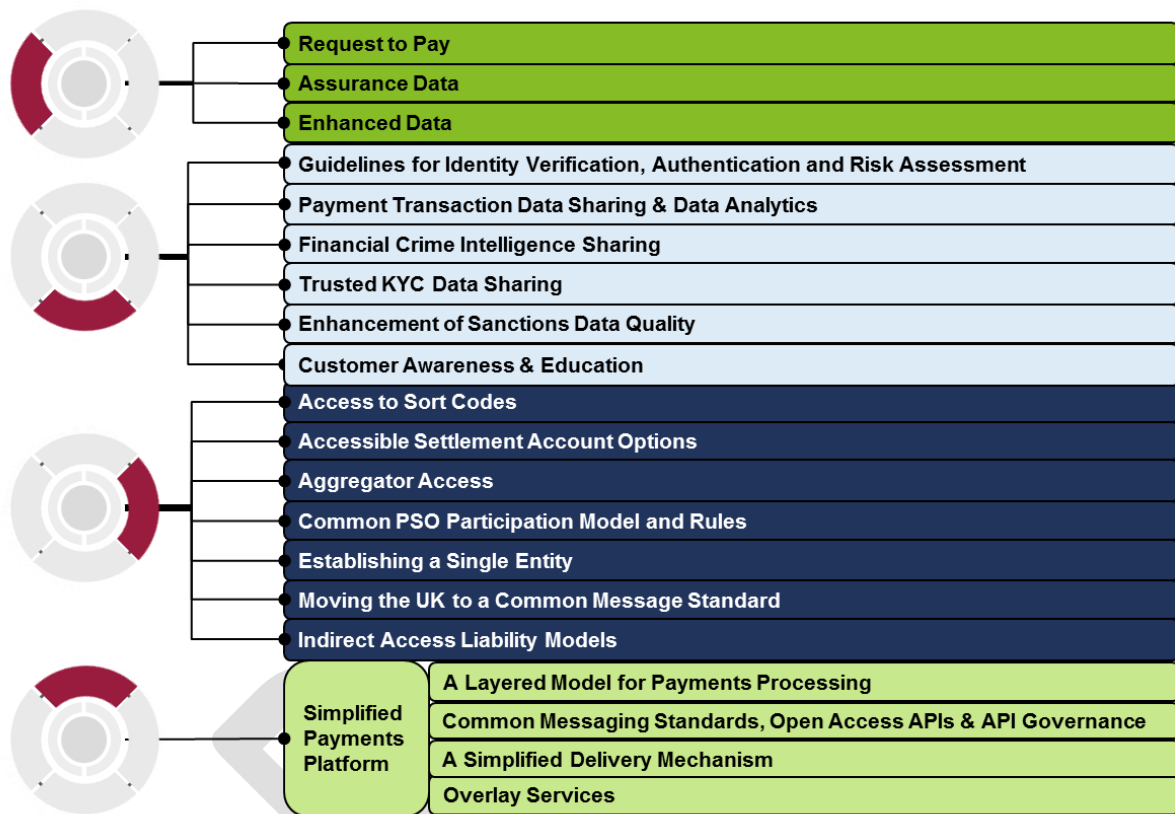|	Simplify	Leverage	Modernise
	Request to Pay		
	Assurance Data		
	Enhanced Data		
	Guidelines for Identity Verification, Authentication and Risk Assessment		
	Payment Transaction Data Sharing & Data Analytics		
	Financial Crime Intelligence Sharing		
	Trusted KYC Data Sharing		
	Enhancement of Sanctions Data Quality		
	Customer Awareness & Education		
	Access to Sort Codes		
	Accessible Settlement Account Options		
	Aggregator Access		
	Common PSO Participation Model and Rules		
	Establishing a Single Entity		
	Moving the UK to a Common Message Standard		
	Indirect Access Liability Models		
Simplified Payments Platform	A Layered Model for Payments Processing		
	Common Messaging Standards, Open Access APIs & API Governance		
	A Simplified Delivery Mechanism		
	Overlay Services		

4.22.   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.

Figure 16: Our Solutions

| Request to Pay |
| Assurance Data |
| Enhanced Data |
| Guidelines for Identity Verification, Authentication and Risk Assessment |
| Payment Transaction Data Sharing & Data Analytics |
| Financial Crime Intelligence Sharing |
| Trusted KYC Data Sharing |
| Enhancement of Sanctions Data Quality |
| Customer Awareness & Education |
| Access to Sort Codes |
| Accessible Settlement Account Options |
| Aggregator Access |
| Common PSO Participation Model and Rules |
| Establishing a Single Entity |
| Moving the UK to a Common Message Standard |
| Indirect Access Liability Models |

Simplified Payments Platform

| A Layered Model for Payments Processing |
| Common Messaging Standards, Open Access APIs & API Governance |
| A Simplified Delivery Mechanism |
| Overlay Services |

5.2.   Each solution overview sets out the:

- Problem definition

- Solution definition

- Potential risks to end-users (where applicable)

- Next steps

5.3. Our proposed Solutions were included in our Draft Strategy that was published 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 17.The responses provide a broader perspective to support the drafting of the final Strategy paper and provide representation of diverse perspectives from across the industry.

5.5. The trade bodies represent a variety of firms and end-users including technology providers, companies and vulnerable customers.

Figure 17: Categorisation of Responses

5.6. There was broad agreement with the solutions proposed across all four Solution areas, as shown in Figure 18. This agreement was accompanied by a variety of questions, suggestions and comments which have been taken into account whilst finalising this Strategy.
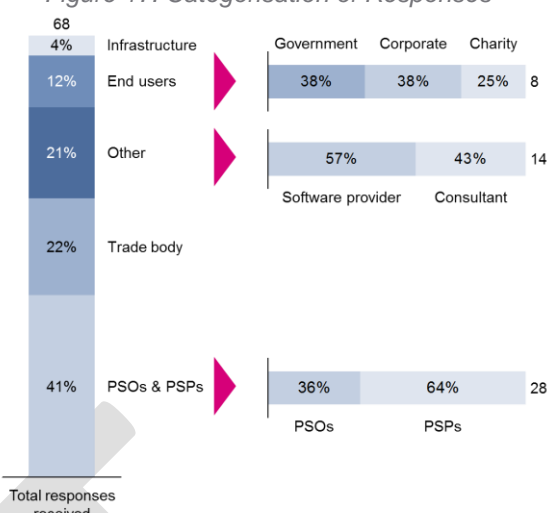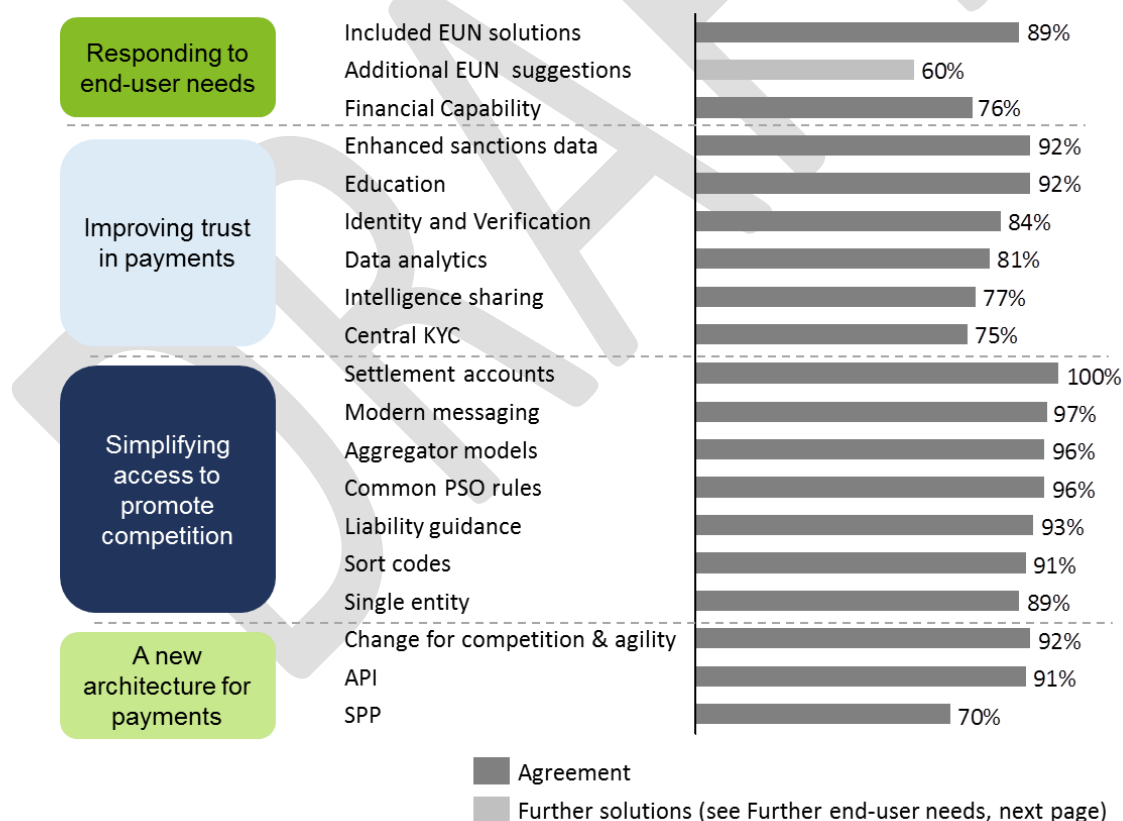
*Figure 18: Directional agreement with solutions*

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 [Appendix X].

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 it happen…"

Ruth Evans, Chair
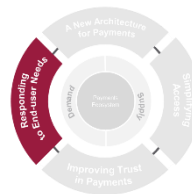
Overview

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. The Forum recognises 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. The Forum 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 are often not able to access the data that allows them to fully understand what a payment relates to. This results in significant reconciliation work for business, government and small businesses, makes liquidity difficult to manage and will causes problems for customers

- **Reduced Financial Crime:** In addition improving understanding and responsiveness to financial crime across the whole in the system requires more data and would benefit all users.

5.13. In response to the consultation process on the Draft Strategy 60% of respondents noted additional user needs for consideration, in particular those related to cards.

5.14. An analysis of these additional end-user needs is included in [Appendix x]. The majority of these will form part of the proposition development centred on greater control, greater assurance and enhanced data.

5.15.   A number of responses referenced a desire to consider the role of card payments. Some detriments for consideration were suggested in a number of responses, for example relating to fees and limited choice. Card payments systems were also referenced by some as being able to deliver some elements of functionality being targeted by our solutions, for example aspects of Enhanced Data. We recommend consideration of card related detriments is handed over to the PSR to consider.

5.16.   The government response to the consultation highlighted a number of desired capabilities that will address their specific needs, these are set out in Appendix [...], which also sets out the Forum's view on how this will be covered by the currently defined solutions.   We also highlight where a desired capability does not wholly fall within the scope of payment systems. The Forum recognises the importance of these capabilities, and will continue to consider them as detailed design of our solutions continues.

Financial Capability

5.17.   We defined a set of financial capability principles for payments design and delivery that focus on meeting the needs of the most vulnerable people.

Figure 19: What is a vulnerable customer?

What is a vulnerable consumer?
The FCA defines a vulnerable consumer as someone who due to their personal circumstances is especially susceptible to detriment, particularly when a firm is not acting with appropriate levels of care

5.18.   The Forum recognises that there are already initiatives underway to improve the UKs financial capability, so the new principles will align with these.

5.19.   Providers of payment systems will need to 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 the interests of these people are protected in the design and delivery of future industry developments.

Solution 1: Request to pay (RtP)

The problem

5.20.   The issues raised by the Payments Community and existing research[5] shows 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 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 payment to better meet the needs of payers.
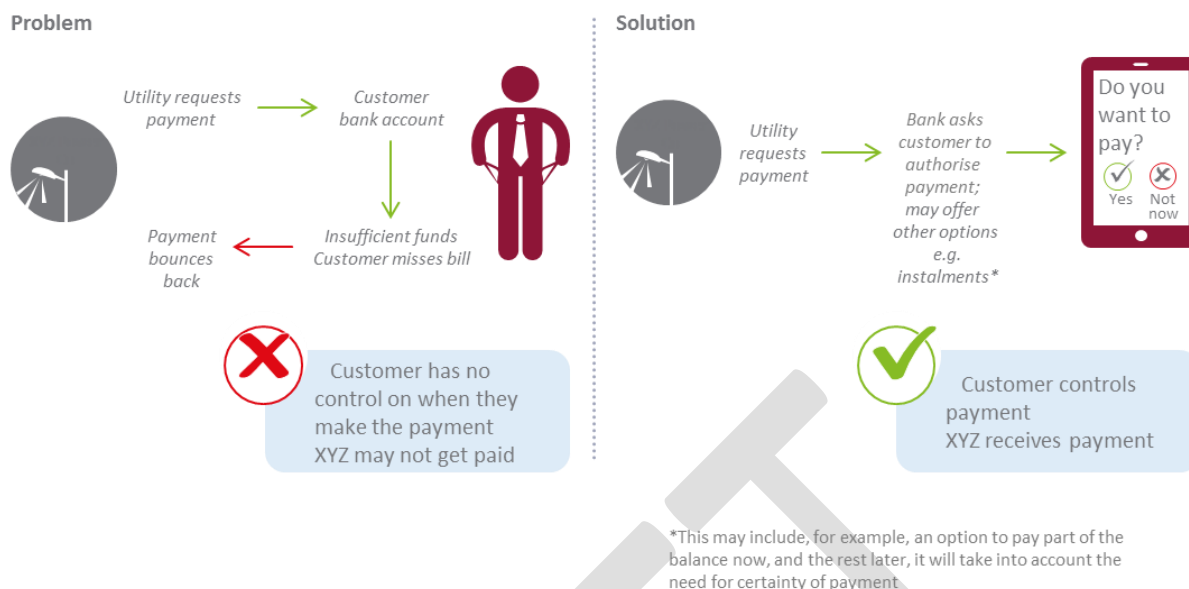
Our Solution

5.21.   Request to Pay 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.

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

5.23.   The Forum notes that some activity is already underway by existing providers to deliver RtP capability. We are supportive of these efforts and will consider them as noted in our next steps.

Potential risks to end-users

5.24.   A lack of customer awareness may inhibit adaption by end-users, so this solution must be accompanied by communications and awareness activity.

5.25.   Request to Pay could create a variety of risks for businesses by reducing certainty of payment. Facilitating the deferral of payments makes cash flow management more challenging and could increase non-payment. It may also increase individuals' debt problems, so the desire for control must be balanced with the need for certainty of payment.

5.26.   There is a risk that if standards are not agrees for the solution, non-interoperable offerings will be taken to market.

5.27.   The solution will need to ensure that similar customer protection are in place for an RtP Service as those associated with Direct Debit.

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[5] Toynbee Hall (2014) *The Poverty Premium in Tower Hamlets*

Figure 20: Request to pay problem and solution

Problem

Utility requests payment → Customer bank account

↓

Payment bounces back ← Insufficient funds Customer misses bill

❌ Customer has no control on when they make the payment XYZ may not get paid

Solution

Utility requests payment → Bank asks customer to authorise payment; may offer other options e.g. instalments* → Do you want to pay? ✓ Yes ✗ Not now

✓ Customer controls payment XYZ receives payment

*This may include, for example, an option to pay part of the balance now, and the rest later, it will take into account the need for certainty of payment

Next steps

5.28. 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 New Payments Architecture. This will include consideration of legal and privacy risks and will take into account the needs of consumers, businesses and PSPs.

5.29. 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. Additionally, existing PSOs may wish to develop their own solutions on their current payment systems. Some such activity is already underway, for example by FPS and Bacs. The Forum recognises the potential of these activities to inform the development of the standards, and the design of the Solution.

5.30. The industry, when developing APIs' for OBWG and PSD2, should take into the Forum's requirements for and the standards defined for the RtP service.

5.31. The Forum recognises that to fully meet all end-user needs would require the implementation of a New Payments Architecture (NPA).

Solution 2: Assurance data

The problem

5.32.   The issues raised by the Payments Community and existing evidence[6] shows that end-users feel that they are not always in full control of their payments and 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 PSR[7], on safeguards in the market for push payments, highlights some of these vulnerabilities.

Our Solution

5.33.   Assurance Data is a package of information - including real time balance information, the intended time of the transaction completion, 'Confirmation of Payee' and confirmation of receipt.

5.34.   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

5.35.   The Forum has 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 techniques; however, these concerns will be addressed in the detailed design for this solution.

5.36.   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.

Figure 21: Assurance data (Confirmation of Payee aspect) problem and solution

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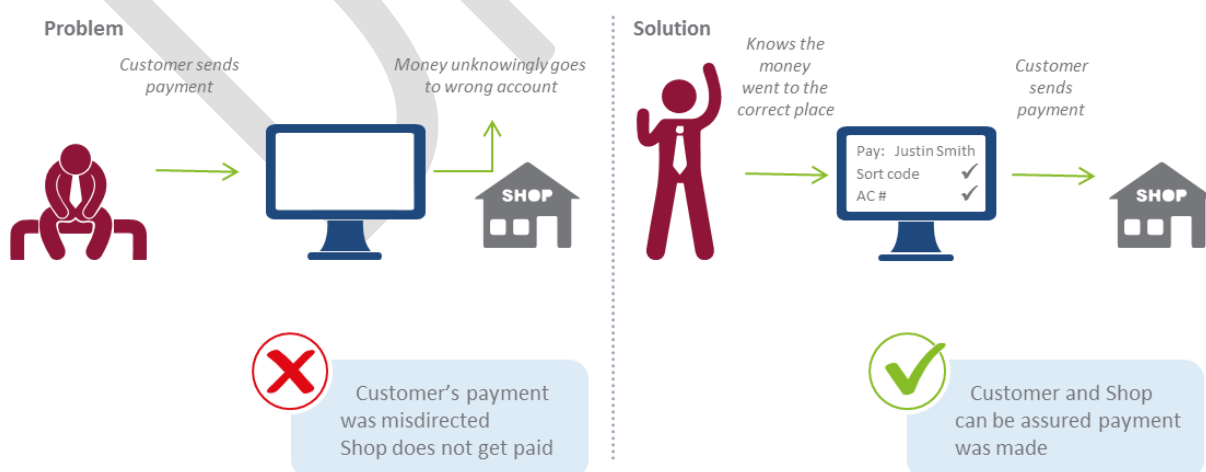
[6] Tooley Street Research (2015), *Towards World Class: The Consumer View of Current Accounts and Payments*

[7] https://www.psr.org.uk/sites/default/files/media/PDF/which-super-complaint-sep-2016.pdf

5.37.   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 New Payments Architecture.

5.38.   Once these standards and rules are in place the competitive market will be in a position to develop products and services for end-users. Additionally, existing PSOs may wish to develop their own solutions on their current payment systems (e.g. FPS and Paym). This will include consideration of legal and privacy risks and will take into account the needs of consumers, Businesses and PSPs.

5.39.   The industry, when developing APIs' for OBWG and PSD2, should take into the Forum's requirements for and the standards defined for the Assurance Data service.

5.40.   However, the Forum recognises that to fully meet all end-user needs would require the implementation of a New Payments Architecture (NPA).

Solution 3: Enhanced Data

The problem

5.41. The issues raised by the Payments Community and existing research[8] shows that end-users would like to include more data within 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.
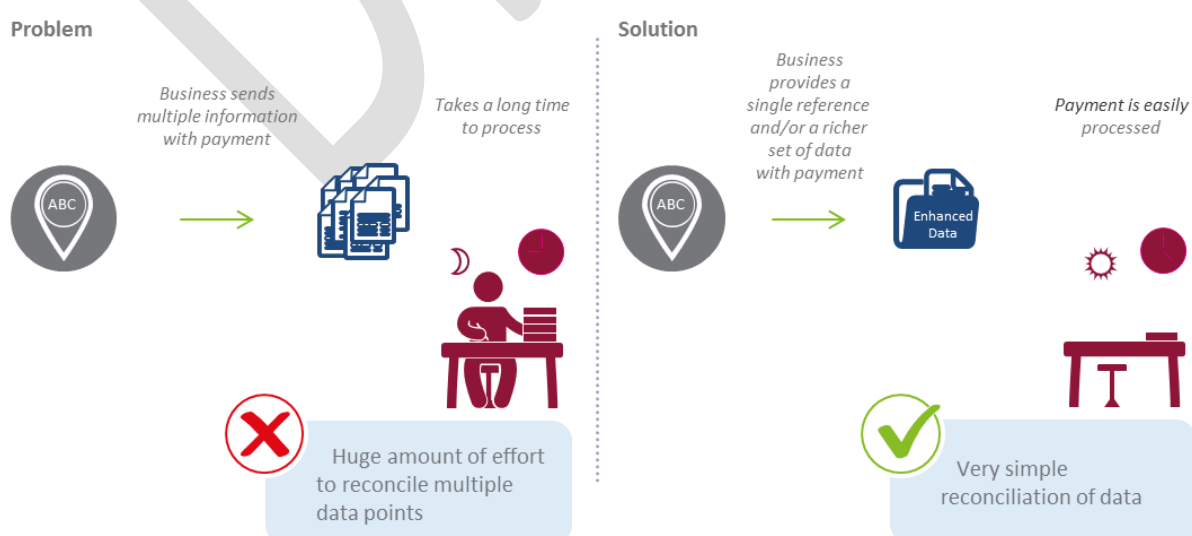
Our Solution

5.42. Enhanced Data is the capacity to include more data in 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 accurately and more efficiently reconcile the payment with their internal systems.

5.43. 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.

5.44. 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.

Potential risks to end-users

5.45. There are many benefits associated with enabling more information to travel with payments. However, data privacy and data protection considerations are important.

5.46. 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).

5.47. The Forum has developed its financial capability principles, highlighted in [Appendix X] to mitigate these problems as the solution is designed.

Figure 22: Enhanced data problem and solution

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[8] Payments UK (2015), *World Class Payments in the UK Enhancing the payment experience*

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5.48. 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 New Payments Architecture.

5.49. Once these standards and rules are in place the competitive market will be in a position to develop products and services for end-users. Additionally, existing PSOs may wish to develop their own solutions on their current payment systems. This will include consideration of legal and privacy risks and will take into account the needs of consumers, businesses and PSPs.

5.50. The industry, when developing APIs' for OBWG and PSD2, should take into the Forum's requirements for and the standards defined for the Enhanced Data service.

5.51. However, the Forum recognises that to fully meet all end-user needs would require the implementation of a New Payments Architecture (NPA).

Improving trust in payments

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

Ruth Evans, Chair

5.52.   The UK is a leader in payments with an excellent record on security and resilience, but technology and the methods criminals use to exploit any weaknesses in the payment system are becoming more sophisticated. Our Strategy proposes that the industry collaborates with others to fight crime and engender trust in payments.

5.53.   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.

5.54.   To addresses these concerns, we propose six strategic initiatives which will require the industry, users of payment systems and relevant authorities to collaborate. These are:

- Supporting the delivery of a more joined-up approach to education and awareness raising

- Creating 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 Know-Your-Customer (KYC) background checks for business customers

- Enhancing the quality of data on the industry's sanctions lists

5.55.   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.

5.56.   You can find out more detail about our initiatives in [Appendix 3].

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

The problem

5.57.   Criminals can assume 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 in their control. Inadequate identity management and verification is one 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 vast majority of which is estimated to be from misuse of identity.

5.58.   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. 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

5.59.   The proposal is to develop and implement a published, non-compulsory specification as an assessable benchmark to determine how the identity of a payment service user is established, verified, used and subsequently relied upon by other PSPs.

5.60.   This solution's aim is to create an overarching, end-to-end approach, and overlaps with adjacent pieces of legislation and regulation (e.g., 4th AML Directive (2015/849), PSD2 (2015/2366)) in order to establish consistent rules for identity encompassing many mainstream payment types. This will aim to significantly reduce risk when transferring money using different payment mechanisms.

5.61.   The proposal at this stage has not set out what the specification should state; that is envisaged for the next phase in detailed design and development. We expect that the specification would include requirements for identity assurance in a number of these areas: in 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.

5.62.   Compliance with the proposed specification should therefore be proportionate to the scope and size of operations of the payment service provider. By taking this approach the burden on smaller providers should be reduced.

5.63.   The first phase of this solution is to establish and implement the specification. 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

5.64.   Careful management is necessary around why these proposals are required and how consumer's data will be protected.

5.65. Any changes need to be made with extreme care to avoid impact on financial inclusion.

Next steps

5.66. The Forum will begin delivery and implementation and then hand over to the appropriate industry body to own in the future, with BBA and New FS Trade Association potentially seen as a good fit.

5.67. Address legal considerations and outstanding issues during the design phase supervised by the body responsible for design and development.

5.68. Align with current industry initiatives (e.g. MIDAS or eIDAS) during the initial design phase.

5.69. Review and consider other digital identity initiatives currently being developed in financial services or adjacent (OIX, TISA, gov.UK Verify, etc.) to inform the design phase of the guidelines and understand how the solution will align with these schemes in phase 2.

Solution 5: Payment Transaction Data Sharing & Data Analytics

The problem

5.70.   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 is also necessary in the future to rapidly and proactively tackle new forms of fraud and financial crime-related activity as they develop.

Our Solution

5.71.   The UK payments industry creates a very large, high quality dataset through the processing of payments. The emergence of more sophisticated ways to handle and query 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.

5.72.   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 manipulate the data and extract insights relating to priority financial crime use cases. 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.

5.73.   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 be updated rapidly to respond to the fast-changing approaches taken by criminals.

5.74.   We have considered different options to create and maintain data sharing and analytical capabilities. Whilst at this stage it is recommended that a central data repository and centralised analytical capability is adopted, further analysis is required to determine the most appropriate solution. This will also enable the costs and the associated benefits to be better understood.

Potential risks to end-users

5.75.   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

5.76.   The Forum will own initially and then will propose an industry body to undertake design responsibility.

5.77.   Address the legal issues and considerations arising from sharing customer's personal data in the early stage of design and factor this into deployment.

5.78.   Agree the parameters of what data is shared and which parties will be obliged to share such transactional data within the design.

5.79.   Align on the technical requirements (e.g. size of database required, volume of data, etc.) as a precursor to an effective vendor selection process.

5.80.   The Forum believes that this solution is a strong candidate for competitive tender procurement.

Solution 6: Financial Crime Intelligence[9] Sharing

The problem

5.81.   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 the payments systems.

5.82.   Several barriers constrain intelligence sharing; legislation, such as DPA, Tipping-off risk and Proceeds of Crime Act, the variety of sources of data and lack of interaction between suppliers of data.

Our Solution

5.83.   This solution will include the ability to provide, near-real-time and real time, all known financial crime data records for confirmed, attempted, suspected or at-risk events relating to an identity, financial account or article of crime, for the purposes of data matching, data mining, trend analysis, and profiling.

5.84.   This solution will seek to leverage the Government efforts to improve information sharing on financial crime, primarily focused on banks, in creating the Joint Money Laundering Intelligence Taskforce (JMLIT) and the Joint Fraud Taskforce. The Criminal Finances Bill will legislate for clear powers to share such information.

5.85.   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, underpinned by a formal, strict legal agreement, security code of conduct and appropriate data protection dispensations.

5.86.   Under this 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.

5.87.   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 the security risks.

5.88.   The scope of this solution is to include all financial crime data, encompassing anti-money-laundering, counter terrorist financing, bribery and corruption (and politically exposed persons, PEPs) as well as fraud, and including intelligence on attack methods used.

Potential risks to end-users

5.89.   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 may be considered unfair or inappropriate. 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.

5.90.   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

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[9] Financial crime intelligence is defined as the collection and analysis of PSP data to identify potential instances of financial crime

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

5.91.   Factor legal issues surrounding the terms of data sharing into the initial design phase.

5.92.   Consider the reliability of data from other institutions and scope of data sharing (e.g. AML, Fraud, and Sanctions etc.) and include this in the design of technical requirements.

5.93.   Consider minimal functionality requirements in the design of technical requirements to be deployed on the current infrastructure (e.g. typology and trends sharing for Anti Money Laundering and fraud). The full functionality could be deployed on the New Payment Architecture.

5.94.   The Forum will take forward initially and handover to appropriate industry body within six months, aligning on future ownership through industry engagement with bodies such as FFA-UK, JMLIT and JFT.

Solution 7: Trusted KYC Data Sharing and Storage Repository

The problem

5.95. Know Your Customer (KYC) is the due-diligence and regulations that financial institutions must perform on business customers before agreeing 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 the financial institutions and the customer, who are often delayed in undertaking genuine business activity.

5.96. Current gaps in the KYC processes allow financial crime to continue which undermines a number of business activities in the economy.

Our Solution

5.97. Our Strategy proposes a mechanism for sharing KYC data, focusing on business customers that aggregates and shares specific, non-competitive KYC information for usage by participating PSPs. The solution approach could involve member organisations sharing data, with sufficient safeguards, or could be built around a shared service that independently completed customer checks for all PSPs.

5.98. This will enable more effective and efficient compliance with AML, PEPs and sanctions policies. Specific to combatting financial crime, this solution would 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.

5.99. The FSB's 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

5.100. The main risk is the possibility that inaccuracies are wrongly captured on application 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 to the system.

Next steps

5.101. The following next steps are proposed for Trusted KYC Data Sharing and Storage Repository:

- Begin initial design phase including:

  o Consider legal issues on data sharing in the initial design

  o Develop a strong governance framework to ensure that customer personal data will remain confidential

  o Clarify any future regulations, with industry players and the Regulator, to explicitly consenting to PSPs to share customer data, the alternative is that PSPs will have to ask their customers individually

5.102.   The Forum is further considering 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

5.103.   Customer on-boarding relies on good data quality to enable PSPs to screen customers against the HMT sanctions list. While Payment Service Providers acknowledge there has been progress in this area, they remain concerned that some of the identifiers on the HMT list are not sufficiently specific and as a result the process undertaken is inefficient, leading to delays in genuine business activity.

Our Solution

5.104.   Our proposal is for the UK payment industry to work closely with HMT 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.

5.105.   We also propose that the industry should support HMT in assessing whether there is a case for the UK to adopt the UN's Advanced Sanctions Data Model, or whether the UK should continue to use its own sanctions list and data model tailored to the UK market environment.

Potential risks to end-users

5.106.   No significant risks to end-users have been identified.

Next steps

5.107.   Assess sanctions data quality in the initial months.

5.108.   Agree on ownership and actions for sanctions data quality with HM Treasury and the Payments Community.

5.109.   Liaise with international bodies as part of the design to ensure acceptance.

Solution 9: Customer Awareness and Education

5.110.   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 the end-user efforts to reduce financial crime.

The problem

5.111.   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 to better understand the steps they should take to reduce the risk of becoming a victim or unwittingly participating in financial crime.

Our Solution

5.112.   Our Strategy proposes a joined-up approach to consumer awareness and education. There is already a significant amount of activity underway 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 avoiding unnecessary duplication and cost across the industry.

5.113.   This can reinforce the 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 aware of the most prevalent and latest threats so that they are as informed as possible.

Potential risks to end-users

5.114.   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.

5.115.   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

5.116.   Form 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, including the development and delivery of a centralised and collective education program. The Forum will identify the appropriate industry body to take this forwards; candidates would include JFT, and the new Financial Services Trade Association.

5.117.   The group should:

- Focus education on key messages, such as the need to address privacy and security concerns, to be included in the collaborated campaign (expected delivery towards the end of 2017).

- Focus awareness exercise on preventing customers from suffering fraudulent activity – avoiding the risk of giving a competitive advantage to individual PSPs.

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
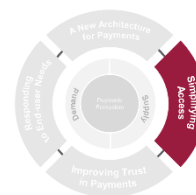
The Forum has reviewed where collective action can promote innovation or downstream competition in a way that will benefit PSPs and ultimately customers. Payment systems should offer simple and open access appropriate to the PSP's needs and the level of risk to the payments system. PSPs should be able 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.

5.118. 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 and 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.

5.119. 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 payment system operator participation models and rules.

- Establish a single entity by consolidating three retail interbank PSOs

- Move the UK to modern payment message standards

- Clarify liability models for PSPs who do not directly access the payment systems

Solution 10: Access to sort codes

The problem

5.120. 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

5.121. 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 underway to improve the availability of access and sort code information on an independent and transparent basis.

Next steps

5.122. 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

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

Our Solution

5.124. Our Strategy supports the BoE's announcement that it intends, over time, to extend direct access to accounts in RTGS to non-bank PSPs. By extending RTGS access, the Bank'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. The 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

5.125. The following next steps are proposed for Accessible Settlement Account Options:

- Align with current BoE development of blueprint for the new RTGS service

- PSPs which are not a bank or a building society should consider performing their own business case evaluation to assess holding a settlement account at the Bank of England

    o Part of their internal assessments should consider changes in resourcing, technology, governance and operational processes and when these changes would be required to take effect

Solution 12: Aggregator access

The problem

5.126. In order to connect to each payment 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

5.127. 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

5.128. Support both LINK's and Faster Payments' solutions in place to encourage and support aggregator access.

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

5.130. 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

5.131. 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

5.132. 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 scheme entity. The common model will cover areas such as:

- Terminology

- Eligibility criteria and baseline regulatory requirements

- Categorisation of participants and products offered by Payment System Operators

- On-boarding processes and migration to common connectivity models

- Simplification in assurance

Next steps

5.133. Via the ISOCC, the PSO's, will be responsible for progressing this solution and will report progress to the PSR.

5.134. The Forum will continue to monitor progress of this solution throughout 2017.

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Solution 14: Establishing a single entity

The problem

5.135.   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

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

5.137.   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, Faster Payments and C&CCC. A delivery group 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 entity operating by end 2017.

5.138.   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 the various industry standards, including APIs. This requires structuring to ensure that it has expertise, knowledge and experience to support these activities.

Next steps

5.139.   The Chair of the PSODG to report progress to the PSR and BoE.

5.140.   Implementation recommendations to be developed by end-March 2017 and to include both detailed design of Consolidated PSO and transition process.

5.141.   Consolidation process to be completed so that scheme operators are operating as one entity by end of 2017.

Solution 15: Moving the UK to a common message standard

The problem

5.143.   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.

The solution

5.144.   The Forum proposes 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 new payments architecture outlined in chapter 8 should a decision be taken to progress this new platform once evaluation is complete.

Next steps

5.145.   The Forum fully supports moving the UK to a common messaging standard and this should be proactively progressed. Should a decision be taken to progress the proposed New Payments Architecture then this development can be progressed in the detailed design phase for the New Payments Architecture.

Solution 16: Indirect access liability models

The problem

5.146.   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 to support payment systems access.

Our Solution

5.147.   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.

5.148.   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

5.149. Recognising that guidance already exists from the JMLSG, the Forum will set up an industry Working Group to clarify specific points of concern and propose to the JMLSG for consideration. Any change to guidance will also need to be approved by the FCA and HMT.

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
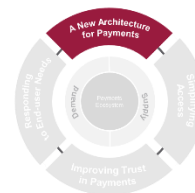
Solution 17:   *Figure 23: Future payment infrastructure terminology*   **Simplified Payments**

Future payments infrastructure
- The New Payments Architecture (NPA): The NPA is a collection of solutions including the SPP and APIs which will form the basis of the infrastructure for the payments industry
- Simplified Payments Platform (SPP): is a specific design of delivery through overlay services on either centralised or decentralised technology

Platform (SPP)

The problem

5.150. 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 Payment Service Operator 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.

5.151. 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 aging technology is unable to fully deliver on our strategic vision and objectives.

5.152. 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

5.153. 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.

5.154. 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 deliver the identified benefits.

5.155. The Simplified Payments Platform (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:

- A layered model for payments processing

- Common messaging standards, Open Access APIs and API Governance

- A Simplified Delivery Mechanism

- Overlay services

Figure 24: The simplified payments platform
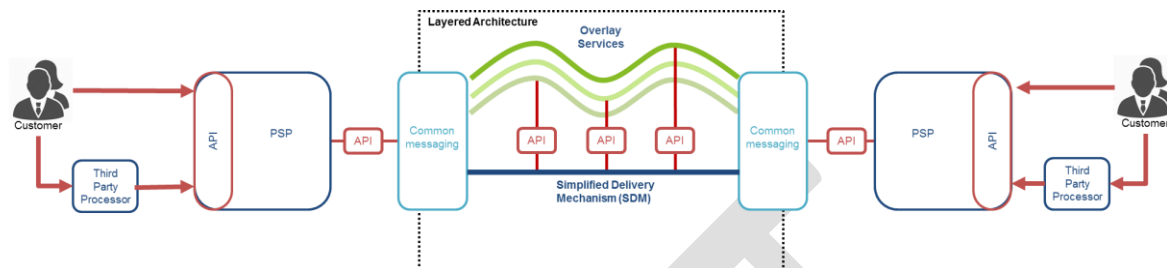
5.156. Some of the proposals we outlined earlier in this Strategy are stepping stones towards implementing these strategic initiatives, such as Common Messaging Standards. However, the SPP requires further detailed work and we are committed to delivering detailed design by the end of 2017, as set out in the roadmap in [Appendix x], which will specify the new architecture in detail, assess the detailed costs and benefits and, as appropriate, outline an implementation plan.

5.157. 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.

5.158. The core principles of the New Payments Architecture 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 messaging standard),

- A thin collaborative infrastructure, allowing multiple providers of overlay infrastructure or services to compete in the market simultaneously

- Secure & resilient, with financial stability a key principle

5.159. When developing our Draft Strategy the Forum considered Account Number Portability; the supporting analysis can be found on its website. We concluded that the estimated costs to deliver a standalone solution would be extremely high. We have instead proposed a package of proposals, including the development of a New Payments Architecture that will deliver the potential benefits of ANP, as well as others, but in a more cost efficient manner.

Layered architecture

5.160. 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.

5.161. 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).

5.162. 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

5.163. Different providers could compete for the delivery of each layer, or each layer may even support multiple delivery providers.

5.164. 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.

Common messaging standards

5.165. Common messaging 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 Messaging Standards activity defined as part of 'Simplifying Access'.

5.166. A common messaging standard will enable the Simplified Payments Platform. ISO20022 can facilitate the enhanced data the Strategy envisages and will make it easier for PSPs to connect directly, simply and at low cost.

5.167. 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 outlined below.

End-user APIs and open access APIs

5.168. 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 into 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).

5.169. 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 also provide the framework for other kinds of innovation, not yet imagined.

5.170. 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.

5.171. The APIs can 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.

5.172. The Simplified Payments Platform 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

5.173. 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.

5.174. 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 Revised EU Payment Services Directive (PSD2) which gives consumers new rights to use payment initiation and account information services, and requires account-servicing firms to provide access for these services

- The Open Banking Working Group (OBWG), which reported to HM Treasury on the design for an Open Banking API standard for payment accounts

- The remedies of the CMA Retail Banking Market Investigation, which include recommendations for banks to introduce an Open Banking APIs standard for payment accounts, linked closely to the requirements of PSD2

5.175. Our Strategy recommends that all work on APIs across payment accounts is co-ordinated. It 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, subject to the findings of the PSODG, that the Consolidated PSO should be designed in a way so it can take on governance responsibility for all API development but in the meantime the Forum expects the work to be co-ordinated across related industry initiatives. The CMA Implementation Entity, with close interaction with the BoE, could be a strong candidate to take on this role, which would need to be balanced with its roll-out of the Open Banking standards (and related parts of PSD2's implementation).

A simplified delivery mechanism

5.176. The Simplified Delivery Mechanism underpins the Simplified Payments Platform (SPP). It makes access easier for PSPs, reduces the need for collaboration across the system and facilitates innovation and competition.

5.177. 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).

5.178. 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. The processing and clearing of a payment may be done through a centralised or distributed infrastructure.

5.179. In a centralised model, the infrastructure and connectivity between Payment Service Providers 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.

5.180. 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.

5.181. The use of Blockchain Technology is not being considered at this time given it is in its early stages of development and understanding across the industry. It is recognised that more traditional technology approaches are also applicable and can be deployed to allow for technology evolution in the future.

5.182. Both models for centralised and distributed processing would require the Simplified Delivery Mechanism.

5.183. 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.

5.184. The Forum notes 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. The Forum is committed to aligning settlement to the BoE's programme and requirements.

5.185. 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.

Overlay services

5.186. 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.

5.187. 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.

5.188. Using the Simplified Payments Platform, 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.

5.189. Existing payment products 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.

5.190. 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

5.191. If delivered, over a period of time the Simplified Payments Platform will become the standard. It is therefore vital that it is compatible with existing services during the period of transition. In [Appendix X] 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.

Next steps

5.192. Continue with detailed design of New Payment Architecture, learning from and leveraging ongoing technology developments and deployments where appropriate (e.g. APIs, PSD2, ICS):

- Developed on modern technology

- Learning from and leveraging ongoing technology developments and deployments where appropriate (e.g. APIs, PSD2, ICS)Detailed design of all components of NPA

5.193. Run a proving pilot with clear outcomes:

- Definition of interoperable standards

- Demonstrate standards through a pilot

- Proving layered design (e.g. scalability, extensibility, operating model etc.)

5.194. Detailed implementation plan for transition towards NPA, including funding arrangements and pricing models

5.195. Detailed cost-benefit analysis to support implementation plan

5.196. The following next steps are proposed for Open Access APIs and API Governance:

- Agree on the scope and definition of responsibilities in the initial months of design with CMA representatives

- Define a clear governance framework to ensure successful deployment in line with current CMA requirements

- Deliver required APIs during the design phase in line with CMA requirements

- Issue standards and guidelines for data interoperability, security, liability, fraud, API specs etc.

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 25. 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.   For each scenario we provide:

- A description of each scenario

- The findings of our BCE analysis for each scenario

Overview of scenarios

6.3.   Our three potential future payments infrastructure scenarios have been subject to a Business Case Evaluation (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 Simplified Payments Platform**: a new payments architecture with a single, centralised retail interbank payments system

iii. **Distributed Simplified Payments Platform**: a new payments architecture with a single, distributed retail interbank payments system

Figure 25: Scenario construction
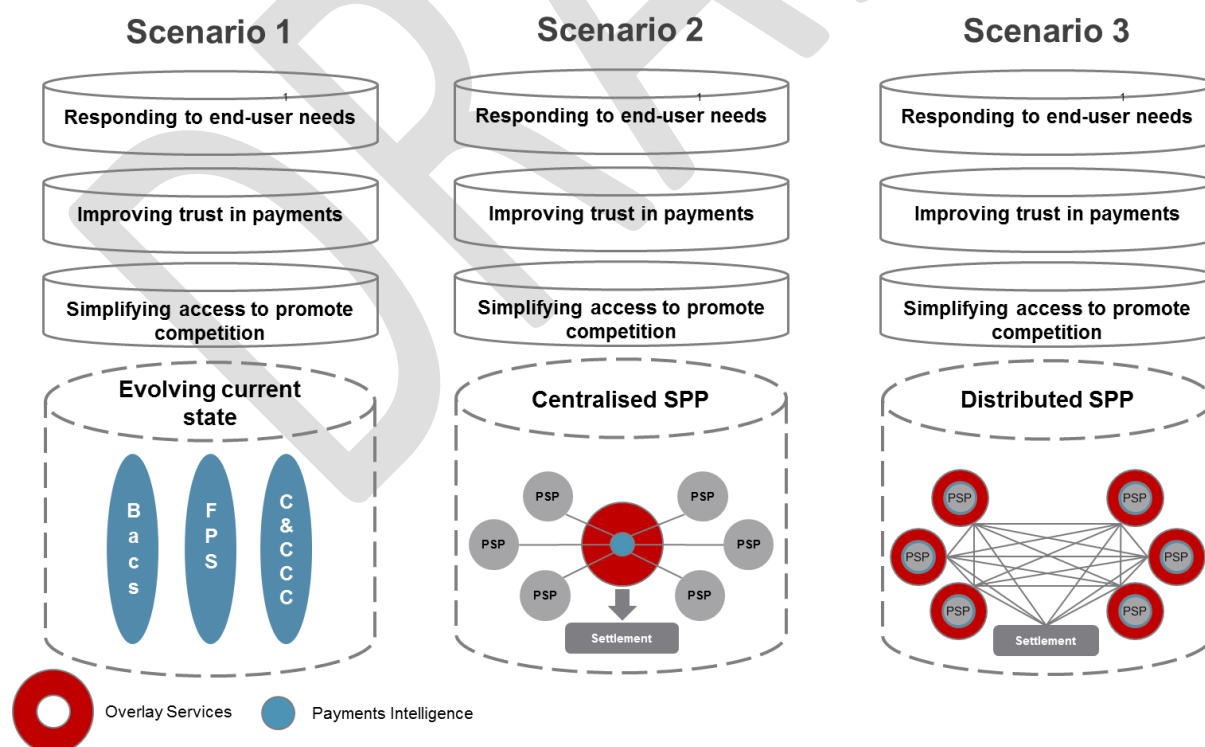
6.4.   In Figure 26 we have laid out the characteristics of each of the scenarios across seven attributes to highlight the differences in approach for the architecture that will support the development of all of the solutions.

Figure 26: 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 payment system built on layered architecture	This can be achieved through modern technology with distributed architecture, not Distributed Ledger Technology (DLT), as the model under investigation
PSP connection	PSPs connect to individual payments systems (either directly or via aggregators)	PSPs connect to a single central payment system	PSPs connect directly to other PSPs
Governance	Governance by a the Single Consolidated PSO	Governance by central body[10]	Governance by central body10
Payment mechanism & messaging	Messaging embedded in core payment mechanism	Payment though single push-payment rail with other services offered as overlay services by competitive market	Payment though 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

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 25.

Figure 27: 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	New functionality easily added through overlay services	New functionality easily added through overlay services

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[10] This central body has not been identified, but could potentially be the new Consolidated PSO entity

	need to be implemented across multiple payment systems		
Access	Multiple payment systems to access, aggregator solutions exist	Only one centralised payment system to access	Only one distributed network to access
Risks	• Slower development • Reactive rather than proactive	• Potentially high costs for participants • One point of vulnerability for attacks to the system • System may be disrupted by the addition of new members	• Participants have a higher degree of responsibility in preserving the integrity of the system, they require higher security • 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 the three scenarios. The results 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. The assumptions behind the numbers (for Figure 29, Figure 28 and Figure 30) can be found at [Forum 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 results of evolving the current infrastructure or building a SPP. These exclude costs that will be incurred in a "do-nothing" scenario.

6.8.   On the basis of our analysis, we have reached three main conclusions:

*   Under the three scenarios assessed, the Business Case Evaluation shows that the incremental benefits exceed the incremental[11] costs

*   The analysis shows that the Simplified Payment Platform scenarios lead to a better outcome from a Business Case Evaluation perspective compared to evolving the current infrastructure

*   The rate of adoption assumptions of these solutions is exerting a strong influence over the results of the Business Case Evaluation and can lead to significant variations in costs and benefits of each solution and scenario. To address this uncertainty, the analysis adopts net benefit ranges which reflects the uncertainty associated with the rate of adoption

6.9.   The differences between the SPP and Evolved Infrastructure scenarios are substantial, with a difference in net benefits of £1.4 to 2.1 billion for the moderate adoption rate over 10 years when the Evolving Infrastructure scenario is compared with the New Payments Architecture SPP scenarios.

Scenario 1: Evolving Current Infrastructure

6.10.   Figure 28 presents the forecast gross benefits, fully inclusive costs[12], incremental costs, net present value (NPV) and cost benefit ratio of building and implementing the solutions on an evolved version of the current infrastructure.

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[11] Incremental payment infrastructure costs are additional costs that would borne as a result of evolving the current infrastructure or building SPP. These exclude costs that will be incurred in a "do-nothing" scenario, that is do not contribute to incremental benefits delivery.
[12] Fully inclusive costs are costs that include the incremental costs as well as the existing costs of running the current infrastructure in a "do-nothing" scenario

6.11.   For all scenarios, whilst the gross benefits are not the same, the differences in the discounted costs are more telling. Under a moderate take-up, it is estimated that it costs approximately £1.2 billion more to evolve the current infrastructure than it does to build a centralised SPP. This impacts the overall scenario net benefits.

6.12.   The ratio of benefits to incremental costs (the value of benefits created for every £1 of incremental cost) ranges from 1.33 (moderate take-up) to 2.39 (rapid take-up), this is equivalent to an NPV between £2.0 billion and £8.9 billion respectively.

6.13.   The analysis shows that building the solutions on an evolved version of the current infrastructure is estimated to generate a discounted net benefit of between £2.0 billion and £8.9 billion over 10 years, depending on the rate of adoption. In GDP terms this is between 0.1% and 0.5% of UK GDP 2015.

Figure 28: Evolving infrastructure cost benefit table (£m, moderate take-up)

Description	Measures
Discounted aggregate 10-year fully inclusive costs	(10,200)
Discounted aggregate 10-year incremental costs	(6,136)
Discounted aggregate 10-year benefits	8,151
Net Present Value	2,015
Benefit Cost Ratio	1.33

Scenario 2: Centralised SPP infrastructure

6.14.   Figure 29 below presents the forecast gross benefits, fully inclusive, incremental costs, NPV and cost benefit ratio of building and implementing the solutions on centralised SPP.

6.15.   The ratio of benefits to costs (the value of benefits created for every £1 of incremental cost) ranges from 1.69 (moderate take-up) to 3.10 (rapid take-up), this is equivalent to an NPV of between £3.4 billion and £10.6 billion respectively.

6.16.   The analysis shows that building the solutions on Centralised SPP will generate a discounted net benefit of between £3.4 billion (moderate take-up) and £10.6 billion (rapid take-up). In GDP terms this is between 0.2% and 0.6%of UK GDP 2015.

Figure 29: Centralised SPP cost benefit table (£m, moderate take-up)

Description	Measures
Discounted aggregate 10-year fully inclusive costs[13]	(8,961)
Discounted aggregate 10-year incremental costs	(4,897)
Discounted aggregate 10-year benefits	8,276
Net Present Value	3,379
Benefit Cost Ratio	1.69

Scenario 3: Distributed SPP infrastructure

6.17.   Figure 30 below presents the forecast gross benefits, fully inclusive costs, incremental costs, NPV and cost benefit ratio of building and implementing the solutions on distributed SPP.

6.18.   The ratio of benefits to costs (the value of benefits created for every £1 of incremental cost) ranges from 1.98 (moderate take-up) to 3.67 (rapid take-up); this is equivalent to an NPV between £4.1 billion and £11.7 billion respectively.

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[13] This includes an element of dual running with existing infrastructure.

6.19.   The analysis shows that building the solutions on Distributed SPP will generate a discounted net benefit of between £4.1 billion and £11.7 billion. In GDP terms this is between 0.2% and 0.6% of UK GDP 2015.

Figure 30: Distributed SPP cost benefit table (£m, moderate take-up)

Description	Measures
Discounted aggregate 10-year fully inclusive costs	(8,283)
Discounted aggregate 10-year incremental costs	(4,219)
Discounted aggregate 10-year benefits	8,361
Net Present Value	4,142
Benefit Cost Ratio	1.98

Figure 31: Scenario infrastructure cost benefit table (£m, moderate take-up)
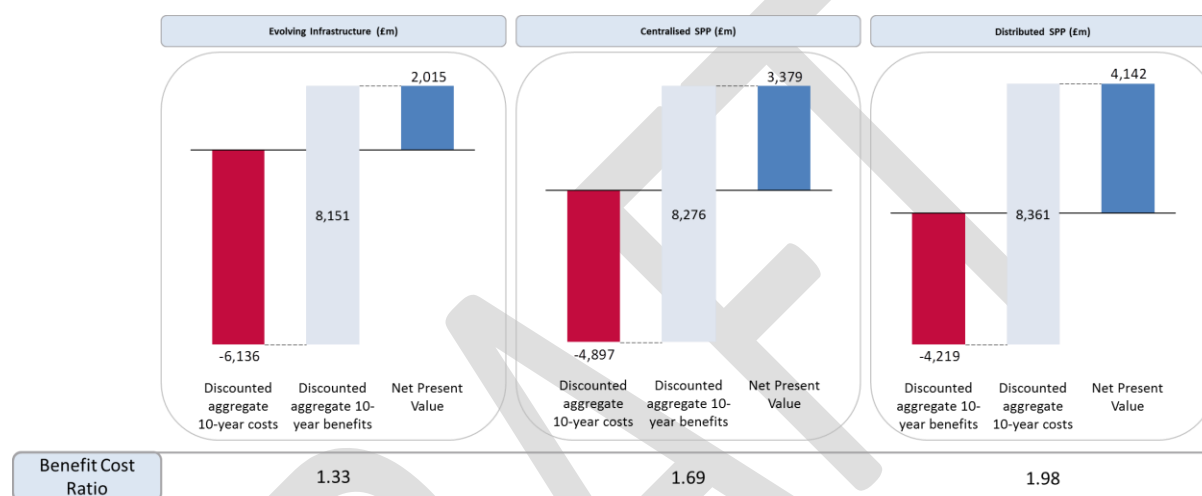
7. Our Strategy in Sequence

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 32, namely:

- Simplify:
    - o Simplification & governance to build momentum
- Leverage:
    - o Build on current state
- Modernise
    - o Design the future
    - o Platform for the future

Figure 32: The delivery of our Strategy

Platform for the future (3- 5 years)
Our platform for the future will be in place, ready to deliver and enhance our identified solutions, whilst being flexible to support future needs, and the continued progress of our payments industry

Build on current state (2- 3 years)
We will have delivered benefits on our current systems, addressing end-user needs, and increasing our ability to combat fraud and financial crime

Design the future (6 - 18 months)
We will have built confidence in our future enabling technology, and enabled more open access and richer exchange of information

Simplification & governance to build momentum (1- 2 years)
Engagement with the industry will be simpler, and access less complex to support competition

Setting up for success (0 – 3 months)
We will have put in place the delivery model and governance, and agreed funding to drive forward with delivering our strategy to meet end-user needs

7.5. 'Setting up for Success' will focus on delivery design; this will include:

- Confirming governance, including agreeing ownership of specific solution initiatives

- Clarifying funding requirements and securing funding for the next phase

- Putting in the place the appropriate working structures to begin implementing our strategy

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 Bank of England RTGS programme team

- The PSO Delivery Group that has been set up to deliver the consolidation of PSOs

7.7. The Forum believes that formal 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. 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 where it is technically feasible and is financially sensible. Consideration will also be given to other industry initiatives (e.g. PSD2, CMA etc.) which will deliver enhancements to our current systems that can be leveraged.

7.10. 'Design the future' will deliver a detailed design for the proposed New Payments Architecture, 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. Decision criteria will define the required level of benefits a solution must provide post-implementation, in order to be progressed. To validate standards, validate technology choices and investigate scalability and other key characteristics, we will use a technology proving pilot. In doing so, 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. 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 activity groups, taking into account key delivery factors such as dependencies between solutions, other industry initiatives, and implementation risks. Figure 33 summarises the allocation of solutions across the five activity groups:

Figure 33: Summary analysis of solutions by group

Solution	Setting up for success	Simplification & governance to build momentum	Design the future	Build on current state	Platform for the future
Request to Pay	✓			✓	✓
Assurance Data	✓			✓	✓
Enhanced Data	✓		✓		✓
Guidelines for Identity Verification, Authentication and Risk Assessment	✓	✓			
Payment Transaction Data Sharing & Data Analytics	✓			✓	
Financial Crime Intelligence Sharing	✓			✓	✓
Trusted KYC Data Sharing	✓				✓
Enhancement of Sanctions Data Quality	✓			✓	
Customer Awareness & Education	✓			✓	
Access to Sort Codes	✓	✓			
Accessible Settlement Account Options	✓	✓			
Aggregator Access	✓	✓			
Common PSO Participation Model and Rules	✓	✓			
Establishing a Single Entity	✓	✓			
Moving the UK to a Common Message Standard	✓		✓	✓	✓
Indirect Access Liability Models	✓	✓			
Simplified Payments Platform — A Layered Model for Payments Processing	✓				✓
Simplified Payments Platform — Common Messaging Standards, Open Access APIs & API Governance	✓		✓		✓
Simplified Payments Platform — A Simplified Delivery Mechanism	✓		✓		✓
Simplified Payments Platform — Overlay Services	✓				✓

7.14.   As we proceed with the next phase of activity, the Forum will continue to lead the development of key solutions, including the Simplified Payments Platform. For some solutions the Forum recognises 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.

7.15.   Views shared by the PSR during the development of the Strategy on ownership of solutions delivery are described below, along with the Forum's ongoing role. The Forum supports this view, recognizing that details will be clarified during 'Setting up for Success'. This will be done under the ongoing oversight of the PSR, Bank of England and other regulatory bodies as appropriate within the scope of their respective mandates.

The Forum will continue to oversee and monitor the development of all the Solutions. We support the PSR's views' on governance, ownership and oversight, which need to be confirmed with all parties involved, shown in Figure 34.

Solution	Ownership
Request to Pay **Assurance Data** **Enhanced Data**	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 New Payments Architecture.
Guidelines for Identity Verification, Authentication and Risk Assessment	The Forum will move delivery and implementation forwards and then hand over to the appropriate industry body to own in the future, with BBA and New FS Trade Association potentially seen as a good fit.
Payment Transaction Data Sharing & Data Analytics	The Forum will manage delivery of this solution with the target to undertake a competitive tendering in H2 2017.
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, FFA-UK 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 the financial sanctions team of HMT. The Forum will engage with The Treasury to understand how best to execute
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 Bank of England'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 PSO Delivery Group.
Moving the UK to a Common Message Standard	The Forum will manage the development and implementation of this solution.
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 HMT.
Simplified Payments Platform	Forum ownership of design, detailed implementation planning to be handed over to the Consolidated PSO entity when established and stable.

7.16.   The first step for the Forum to deliver solutions to respond to end-user needs is to 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 New Payments Architecture. 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 PSD2 or Open Banking. However, the Forum recognises that to fully meet all the 'End-user Needs' would require the implementation of a New Payments Architecture (NPA).

7.17.   The Forum will conclude its design work of the New Payments Architecture by the end of 2017, to be ready to hand over to the new Consolidated PSO entity.

7.18.   The Forum believes that the PSO Delivery Group 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 standards, including APIs.

7.19.   How the NPA will be delivered in practice will be determined as part of the Consolidated PSO's procurement process, through engagement with potential infrastructure suppliers. This will include how much of the NPA would be distributed or centralised.

7.20.   Our roadmap delivers our Solutions over several years, starting in 2017 as shown in Figure 35. Each solution will go through a detailed design and implementation planning phase to confirm our deployment sequence.

7.21.   The Forum recognises 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, whilst delivering benefit and addressing detriments as soon as possible.

Figure 35: Solution enablement timeline[14]
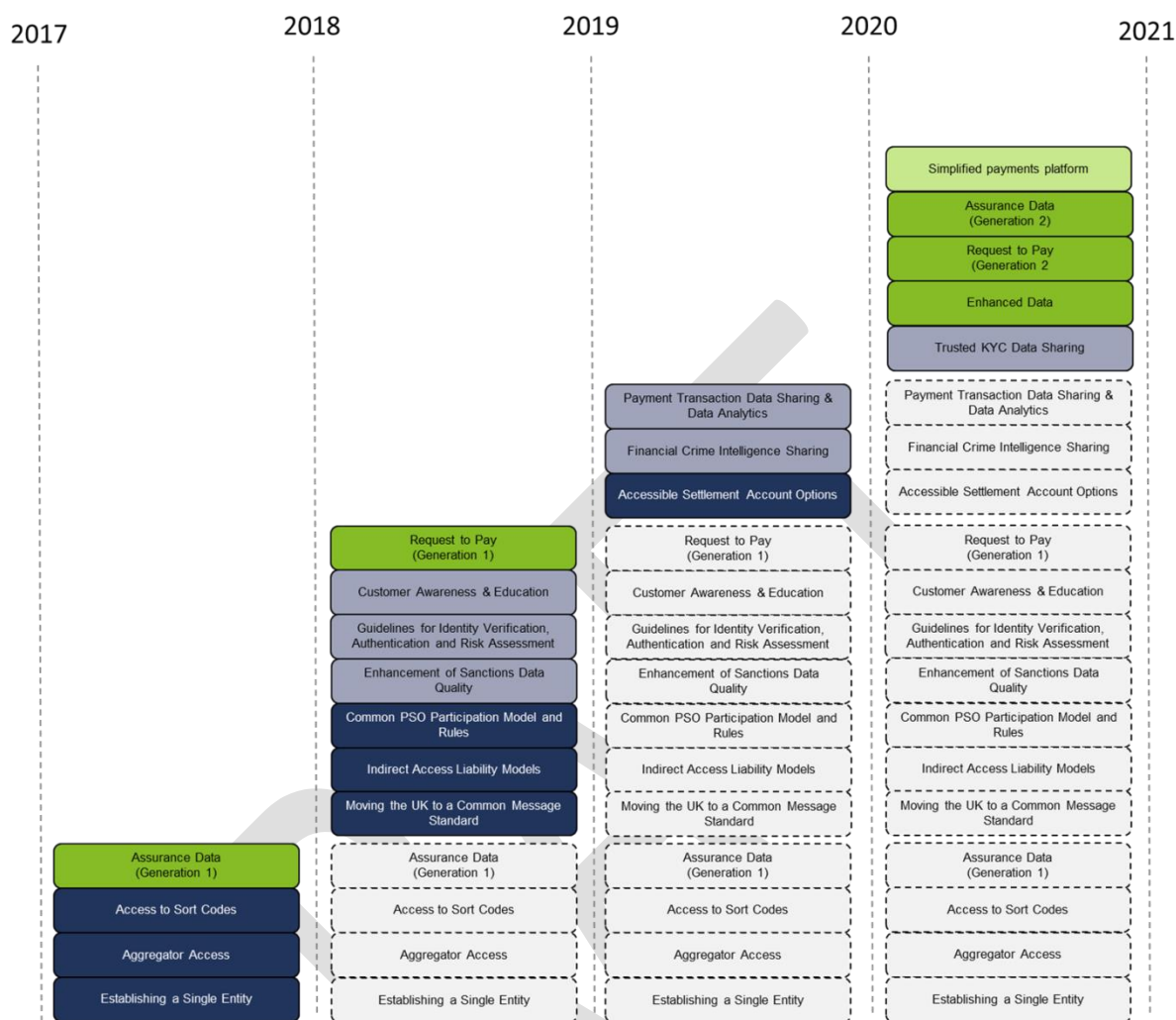
7.22. As we continue to refine our Solutions' designs and conduct detailed planning, we will continue to develop this roadmap into an integrated set of implementation plans, which also continues to take into account broader industry developments, as have been highlighted throughout this document.

7.23. More detail on the implementation roadmap can be found in the appendix.

Economic considerations

7.24. The high-level BCE of our Solutions, based on a moderate take-up over ten years, has showed a positive NPV. These findings support the economic argument for proceeding with Solution implementation.

7.25. Funding discussions with industry participants (PSPs, PSOs, Schemes, Government, others) will be held as part of ongoing Forum activity to 'Set up for Success'.

7.26. 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.

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[14] 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.

7.27.   It is the Forum's belief that the setting of standards, where required, for our solutions will promote competitive market development of those Solutions.

7.28.   Competitive procurement is a key element of how we believe our Strategy can be implemented, in particular the NPA.

7.29.   Ongoing assessment is informed by next stage design with robust governance and strict decision criteria to ensure continued demonstration of commercial viability.

Implementation risk

7.30.   Delivery risks have been identified as the Forum has developed its implementation roadmap. We have classified the identified risks into six areas, these are summarised in Figure 36.

Figure 36: 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.

7.31.   For a detailed list of identified risks refer to Appendix […]

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 Business Case Evaluation. 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 of the Implementation design phase 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, 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 meet this challenge. We look forward to working together in our next phase of activity, Set Up for Success.

9. Appendix: implementation roadmap

	CMA/ open banking PSD2	GDPR	Ring-Fencing					BoE RTGS
Q4 2016	H1 2017	H2 2017	H1 2018	H2 2018	H1 2019	H2 2019	H1 2020	H2 2020

Setting up for success
- Delivery model & funding

Simplification & governance to build momentum
- Common PSO Participation Model and Rules
- Establishing a Single Entity
- Aggregator Access
- Access to Sort Codes
- Indirect Access Liability Models
- Guidelines for Identity Verification, Authorisation & Risk Assessment
- Accessible Settlement Account Options

Design the future
- End-User & Open Access APIs
- Moving the UK to a Common Message Standard
- Enhanced Data
- SPP 'Viability Demonstration'

Build on current state
- Moving the UK to a Common Message Standard
- Customer Awareness & Education
- Request to Pay (1st generation: on current infrastructure)
- Assurance Data (1st generation: Confirmation of Payee)
- Financial Crime Intelligence Sharing
- Enhancement of Sanctions Data Quality
- Payment Transaction Data Sharing & Data Analytics

Platform for the future
- Simplified Payments Platform and overlay services
- Enhanced Data
- Request to Pay (2nd generation on the Simplified Payments Platform)
- Assurance Data (2nd generation)
- Trusted KYC Data Sharing
- Competitive Tender Process

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