payments strategy forum

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NPA Implementation Plan

Supporting Document

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About this Document

The Payments Strategy Forum (PSF) was created in 2015, to discuss and agree strategic priorities for the future of the UK payments industry. In November 2016, the forum published the paper 'A Payments Strategy for the 21st Century – Putting the needs of users first', which set out a vision for the future of the UK's payment systems.

The Forum was asked by the Payment Systems Regulator (PSR) to continue work into 2017 to oversee the implementation of the Strategy. A working structure was created to progress the design and delivery, divided into the NPA Design Hub and the Financial Crime Working Group, each containing specific workstreams.

This document is one of five that are being created under the authority of the Forum's New Payments Architecture (NPA) Design Hub:

Workstream 1 – User Requirements and Rules

Workstream 2 – NPA Design and Transition

Workstream 3 (a) – NPA Implementation Plan **(This document)**

Workstream 3 (b) – Cost Benefit Analysis

Workstream 4 – Commercial Approach and Economic Models

The content of these documents will underpin the Forum's Consultation document to be issued in July 2017.

This particular document addresses Workstream 3 (a) and sets out proposals for a high-level implementation plan. It sets out transition periods required to migrate from the current architecture to the NPA. Key planning principles and assumptions that all workstreams within the NPA Design Hub can align with are also identified against the backdrop of the current environment.

The implementation plan takes into account relevant industry initiatives including:

- The PSR market review into the ownership and competitiveness of infrastructure provision
- The Bank of England's strategic review of Real Time Gross Settlement (RTGS)
- The Competition and Markets Authority (CMA) Open Banking remedies
- The implementation of the Payment Services Directive 2 (PSD2)
- The move from paper cheque clearing to the Image Clearing System (ICS)
- The General Data Protection Regulation (GDPR)
- Structural Reform due to ring-fencing

Our analysis has identified and developed:

a. A payments landscape map detailing the activities and initiatives underway across the payments ecosystem.
b. An implementation plan for the NPA.
c. A high-level migration plan from existing systems including transition periods and system end dates.

The plan will provide guidance to the New Payment Systems Operator (NPSO) from 2018 as the activity is handed over from the Forum.

1 Executive Summary

This document proposes a strawman high-level implementation plan and transition periods for the NPA. Additionally, it recognises the plans for Confirmation of Payee (CoP) and Request to Pay. Overall, the document contributes to the Forum's Consultation document to be issued in July 2017 providing additional context and content.

The activity has identified six key principles and nine assumptions that all workstreams can align with (see subsequent sections). The activity to define the plan and transition periods also acknowledges and considers the impact of relevant industry initiatives listed in the preceding section.

1.1 Implementation Timeline
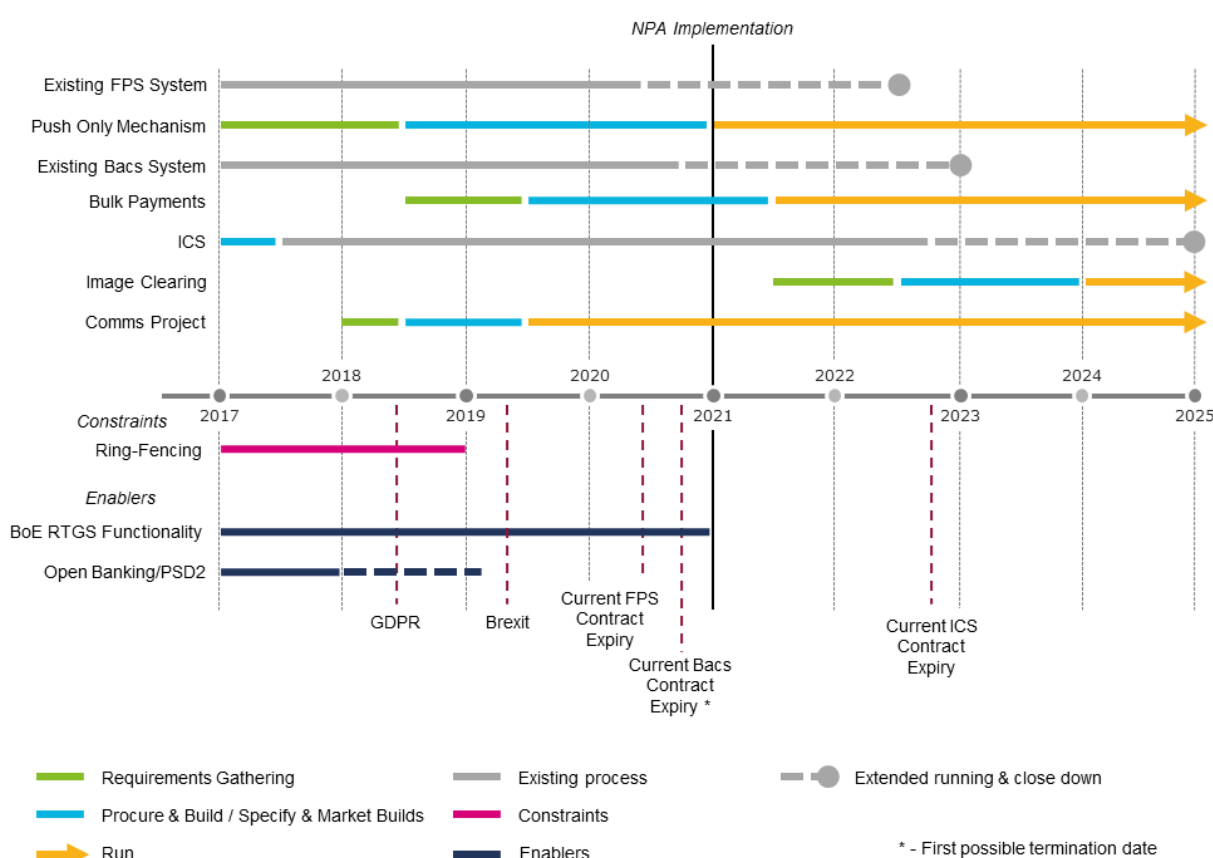
Figure 1.1 Illustrative High-Level Timeline

The high-level timeline (shown above) proposes a phased approach that initially implements a push payment capability, permitting the migration of existing Faster Payments volumes onto the new architecture over a period of approximately 18 months ending in mid-2022. Bacs migration follows this initial activity and subsequently, ICS.

Overall, following the first implementation of the push payment mechanism, a 4 year transition is envisaged before the last payment on ICS is received and all 'old' processes are closed down.

1.2   Transition Periods

As illustrated in Section 1.1 above, during the implementation, a number of transitionary periods are anticipated for NPA.

Three key activities are assumed to have been undertaken prior to commencing the first transition period:

1. All Payment Service Providers (PSPs) will be able to receive payments in the new architecture from go live.
2. Directory services are implemented across the ecosystem by Open Banking.
3. The Bank of England's delivery of the relevant settlement functionality in the renewed RTGS system.

This will enable PSPs to send NPA Single Immediate Payments (SIPs) as and when their respective implementations go live, commencing with the migration of volumes from FPS.

Two subsequent transition periods will mark the commencement of the migration of volumes from Bacs (bulk payments) followed by ICS (Cheque and Credit Clearing).

A final fourth transition period will occur once all payment volumes have migrated and existing scheme infrastructures are closed down. Existing infrastructures will potentially close at different intervals, so it is likely that the transition periods will overlap.

1.3   End-User Needs and Overlay Services

The Forum proposes Request to Pay and CoP functionality as solutions that will have greatest short term benefit to end-users. Enhanced Data and solutions that provide greater customer assurance capability will follow as functionality which NPA delivery enables.

The NPA design workstream has undertaken a review of the end-user needs for these services to validate that they will be aligned and compliant with the overall NPA design.

It is important to note the proposal that any new overlay services will be delivered competitively by the market. They would require wide adoption by users and end customers to create and achieve the necessary ubiquity for a successful service. Any implementation will be independent of payment methods and therefore could be delivered onto existing schemes prior to the NPA's implementation and ported into the NPA at a later date.

Existing services such as the Current Account Switch Service (CASS), the Bulk Payment Redirection Service (BPRS) etc. will be in place to support the NPA as transition commences.

1.4   Risks

The proposed timeline presumes that key delivery risks have been mitigated. These risks are identified in section 3.3 below.

During the process of writing this paper, we have engaged risk representatives from the payments community who have identified and validated the key risks to be taken into the consultation.

At a high-level, the key risks have been categorised under 4 main risk types:

1. Design
2. Implement
3. Operate
4. Adopt

A summary of the risks and mitigations are set out in the consultation document. These have been reviewed in greater detail and are discussed later in this document.

1.5 Summary Conclusion

The implementation planning activity illustrates the tasks the payments industry will need to take to successfully implement the NPA in the UK against a backdrop of significant existing change. Much of this change will be a key dependency to be leveraged in order for NPA to be implemented.

Whilst there is a high level of concurrent activity, much of which is depended on for the NPA, the Forum members have expressed their clear desire to deliver a fit for purpose NPA in an optimal timeline.

At the highest level, the timeline shows that the proposed transition to the NPA can be achieved over a period of circa 4 years with the first implementation of a push payment capability at the beginning of 2021. This timeline provides for existing legacy processing capabilities to be closed down in a relatively short period of time; thereby avoiding extensive parallel running.

As the NPA is being designed with elements that will be delivered by the market, there are risks to the timeline. The considerable changes required by PSPs and the business community may add to this. It is considered, however, that the opportunities presented in the architecture are compelling for solution providers; so confidence of delivery is high. Responses to the consultation will enable this confidence to be validated.

2 Scene Setting

The UK payments environment today can be described as being both diverse and, in many respects, market leading with aspects such as the real-time functionality of Faster Payments being implemented in many countries globally.

At the same time, regulatory authorities in the UK and EU are driving a significant agenda towards increasing competition, innovation and efficiency whilst preserving the absolute need for a resilient systemically critical environment.

The combination of these factors has created a substantial change landscape for the industry, affecting both the central system and participants. They also create participation opportunities for all parties, including emerging challengers and FinTech solution providers, which can enable new and exciting proposition enhancements for customers.

The following diagram seeks to illustrate, at a high level, the activity and its origin.

Figure 2.1 Industry Change Overview

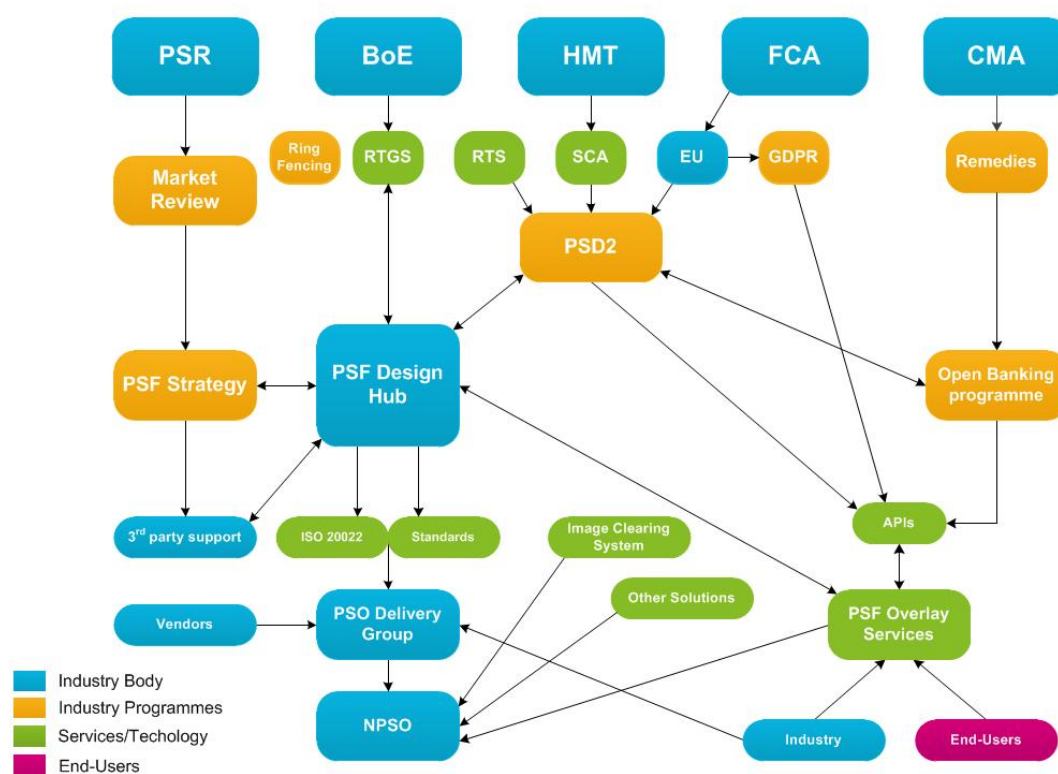The implementation of any solutions for NPA will be undertaken in the context of the wider significant change activity. The plan, including any transition to a new or revised infrastructure, set out in this document will consider this.

To consider the plans, even at this relatively high level, we have identified some core principles and assumptions. These are set out in the following sections.

2.1 Key Principles

Six key planning principles have been defined to support the creation of the overall implementation plan. The principles reflect into, and are consistent with, the other workstream activity undertaken by the Forum:

Ensuring customer considerations are at the heart of any solution development plans.

Requirements driven and aligned to end-user needs: Shall be fit for purpose and there will be a clear need for any functionality planned.

Ubiquity and ease of use: Subject to legal and regulatory consideration, services will be commonly available to all (both end-users and PSPs). The plan will ensure simple access and be easy to adopt by all.

Facilitating collaboration with industry participants in the development of any solutions where appropriate.

Standards compliant and interoperable: The plan will map out steps required for migration to the defined and agreed industry standard. Adoption of this standard will be a requirement for participation to ensure interoperability.

Simplicity: The plan will be as simple as possible to avoid any unnecessary complexity in the existing payments environment.

Adopt and enhance market best practice: The plan will align to existing or emerging industry activity recognising that the plan may need to set new market practice in some areas.

Recognise wider industry developments when developing the plan.

Flexible and extensible: The plan must be capable of being adapted or extended to meet emerging changes to business requirements and to allow for varied pace of participant adoption.

Optimal: The plan will be optimised to account for concurrent activity and other deliverables, ensuring timely delivery and benefits realisation.

Use best practice in technology implementation.

Safe and Secure: The plan must, as a minimum, maintain the existing security, integrity and fraud resistance of all aspects of the end to end payment transaction.

Providing optimum benefits for stakeholders.

Maximum benefits at lowest cost and risk: The plan will aim to maximise benefits generated for the customer, the industry and wider UK economy at the lowest overall risk and cost.

Agree plan approach with regulatory bodies including transition through to end solutions.

Trust and confidence: The plan must maintain and continue the trust and confidence in the environment today, minimising residual risks in the existing processes.

Business continuity and integrity: Plan sufficient resilience and controls to accommodate planned downtime or unforeseen incidents without service loss or impact on data integrity, maintaining continuous deployment.

2.2 Planning Assumptions

Overall planning assumptions have been defined for adoption and consideration by all workstreams. Assumptions outlined in this section have been used to inform activities in undertaking the overall design and planning of the NPA.

End-users will have the same transaction capabilities as they do today or better.

- End-users comprise consumers, businesses and government.
- They will receive communications about any beneficial changes throughout the implementation.

- As a minimum they will be able to transact as they do today with any changes being due to enhancements such as more functionality and greater choice.

NPA implementation will mitigate any additional systemic risk.

- NPA will supersede the existing Bacs, Faster Payments and (in time) ICS infrastructures through a safe and sensible transition whilst maintaining the resilience and robustness of payment processing in the UK.
- Bacs Direct Debit functionality will become a NPA overlay service.
- CHAPS, Cards and LINK are out of scope.
- RTGS will be used for settlement in central bank money.

Existing payment services functionality will continue or improve under NPSO oversight.

- Existing services include (but are not limited to): mobile proxy look up service, account transfer services (current accounts and ISAs), bulk payment redirection, biller update service and EISCD.
- These will need to continue during and after transition to the NPA.
- Any services that are discontinued for BAU reasons will not need to be supported and can be closed once the activity has ceased.

An appropriate managed approach to implementation.

- Existing schemes, their services and systems will be maintained to run in parallel with the NPA for sufficient time to allow a phased migration - roll back (within a determined period) will provide migration flexibility.
- All users of the schemes will be able to migrate to NPA in phases to mitigate volume transition risk, allowing for a broad range of readiness timeframes – there will be no 'big bang' implementation.
- Where appropriate, new Forum derived overlay services will support the execution of payment instructions across existing payment types (e.g. Bacs, Faster Payments and ICS) and NPA to enable early delivery of end-user benefits.

Each payment scheme can be transitioned independently.

- Bacs, Faster Payments and ICS transition to NPA will be independent of each other and can run in parallel.
- Institutions will be able to send and receive payments via existing and/or NPA route during transition phase.
- Close down of Bacs, Faster Payments and ICS infrastructures will occur at pre-determined dates and can happen independently of each other.

NPSO will be responsible for governance, rules, standards and delivery.

- PSPs/TPSPs will require accreditation before they can use the NPA.
- The operation of any Overlay services will need to comply with the NPSO rules and governance will be approved by the NPSO to ensure NPA interoperability.
- NPSO will mandate the closing dates for legacy infrastructure.

PSPs/TPSPs will manage end-user interfaces and proposition competitively.

- User interfaces and customer channels will remain in the competitive space.
- Individual institutions will be able to independently develop and tailor their own propositions unless there is a compelling end-user benefit from rules specifying some elements of the user's experience (for consistency and ease of adoption).

Transition solutions will be in place to support the close down of legacy infrastructure.

- Transition solutions will alleviate the burden of having to immediately change formats enabling a phased adoption – e.g. converting payment messages from 'old' format to NPA format.
- Will still require a definitive end date to ensure transition solutions can 'retire'.

Transition will be planned to provide continuity with minimal user impact.

- Transition and migration will be carefully planned to ensure maximum availability.
- From a pre-determined date all PSPs will be required to receive NPA derived payments.
- All PSPs will be required to continue to receive the legacy payments that they currently receive until legacy infrastructures are closed or switched through a transition solution.
- PSPs can make other account types (e.g. mortgage accounts) reachable at their own discretion.

2.3   Stakeholders

The fundamental objective of the Forum is to identify, prioritise and develop strategic collaborative initiatives to promote innovation in the interest of Payment Service Users (PSUs). PSUs, in the capacity of either a Payee or Payer when making use of a payment service, are the ultimate stakeholders (beneficiaries) for these initiatives.

It follows therefore that the benefits of collaborative initiatives can only be achieved through the involvement of all other parties that create the Payments environment including:

- Service Users
- PSPs – existing and new
- Third Party Service Providers (TPSPs)
- Payment System Operators – existing and new
- Infrastructure and solution providers
- Regulators

2.4   Planning Approach

Using the assumptions and principles as a guide, our approach to the creation of the implementation and transition timeline has focused on the:

- Creation of a core timeline.
- Transition away from the existing architecture.
- Beneficial impact on end-users.

2.5   Success Criteria

The overall success of this activity will be measured through feedback from the wider community of stakeholders that have an interest in the outcomes of the Forum activity and resultant consultation documentation.

Specifically, we are looking for feedback that indicates that the high-level timelines and transition periods are understood and achievable. We will determine this from the quality of responses to the Consultation questions plus any commentary that is received concerning the assumptions, principles and risks that we have set out.

This does not require an affirmative position to be taken by all stakeholders; rather that any feedback is constructive in its nature and provides quality input into the next more detailed phase of activity.

To achieve this, we have looked for this document, plus the relevant input into the Consultation document, to achieve the following outcomes.

Clarity

An important measure of an implementation plan's quality is its clarity. The implementation plan that guides the industry and stakeholders throughout the transition should:

- Be clear, easy to read and practical.
- Clearly articulate the dynamic nature of the document.

- Set out that the plan will be subject to ongoing refinement and review.

Stakeholder Engagement

A key measure of success will be the level of engagement by stakeholders. The engagement so far has been very encouraging with valuable inputs helping to provide:

- Additional insight into issues, challenges, concerns and opportunities which may not have been known or fully understood.
- An excellent proxy to demonstrate 'buy in' and interest in a successful outcome.

Clear and consistent communication

Ensuring that our output (this document) and the resultant joined up Consultation document is consistent in message.

2.6 Relevant Industry Change

The payments environment is undergoing a period of significant change. The NPA recognises these dependencies and has been defined to leverage the concurrent change activity.

The chart below illustrates the change in the environment that is in progress, which NPA will be reliant on as activity progresses.
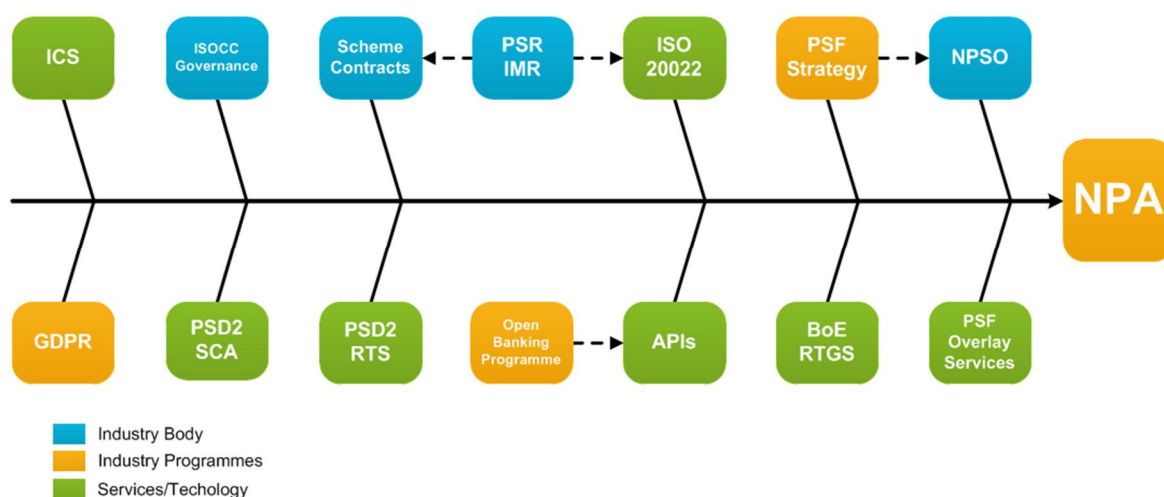

Figure 2.2 NPA Dependencies

In particular, it is noted that the undermentioned in progress, and known, activity (not exhaustive) may influence how NPA and any overlay services will be constructed and implemented over what timeline.

Industry Change	Considerations
Bank of England – RTGS Review	• Relevant Settlement functionality is expected to be delivered in 2020 • The change will impact all direct settlement users across existing and future payment solutions. • Changes in access may increase the number of new 'direct' participants • Any amended resilience/liquidity requirements may also impact the final NPA design.

NPSO – Set-up and Governance	· Dependency on the NPSO becoming operational and putting in place the required governance. · This could include rules for the NPA and how overlay services can operate within the NPA.
PSR –Infrastructure Market Review (Section 3.1.2 for further detail)	· Definition of principles for procurement of new infrastructures. · Requirement for introduction of common standards. · There are requirements to run a competitive procurement and introduce ISO 20022 for the next central infrastructure services contract for the existing Bacs and Faster Payments systems.
PSD2 and Open Banking regulations – UK implementation	· Defining how TPSPs and PSPs will operate in the new Open Banking environment. · Successful delivery of the API ecosystem. · NPSO rules and governance will leverage the registration and accreditation processes, avoiding unnecessary duplication.
EU GDPR regulations	· Critical development that will shape data handling within the NPA and any overlay services such as CoP.

Structural Reform – Ring Fencing	· Constraints upon impacted PSPs:
	   o Conflicting development resource
	   o Change capacity constraints

Table 2.1 Industry Change Considerations

The impact on industry participants due to the level of complexity and volume of change is widely recognised. The risk assessment set out in section 3.3 formally notes this.

3 Implementation Planning
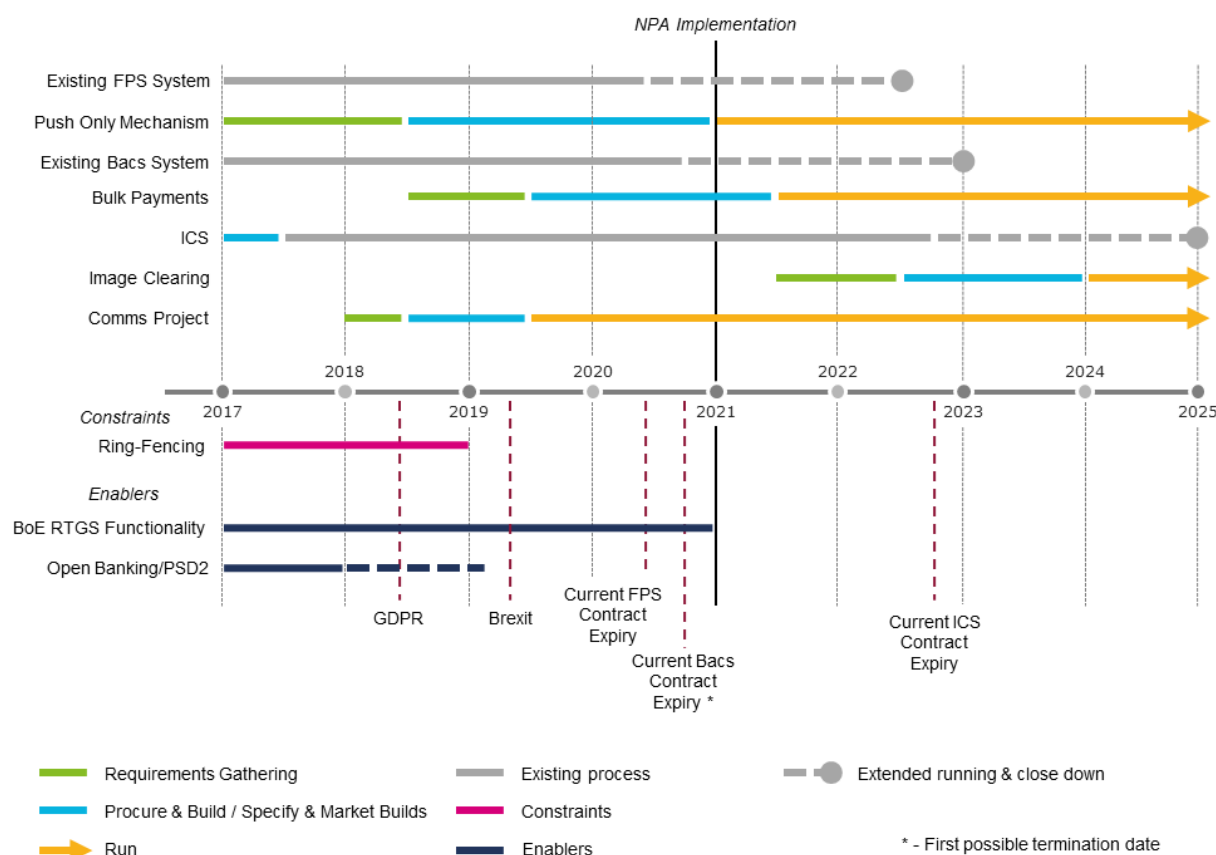
3.1 High-Level Timeline

Figure 3.1 Illustrative High-Level Timeline

3.1.1 Strawman

The diagram above illustrates the strawman phased approach that is expected to implement NPA.

As identified in section 2.6 above, the industry is engaged in significant change activity, which has to be accounted for alongside any planning activity for NPA. This adds to the overall complexity that the industry has to contend with. There is, however, an appetite to deliver NPA promptly to achieve the benefits at the earliest opportunity.

It is acknowledged that historically, migrations involving bulk payments (e.g. Bacstel IP and SHA-2) have taken two to three years, plus planning, to implement. A key planning assumption, however, for this timeline is that the market will provide transition solutions to support users, particularly for bulk payments. Early interactions with solution providers suggest that such solutions can be made readily available and have the potential to provide a faster track to migration onto NPA.

3.1.2 Influencing Factors

The changes being contemplated are significant and wide ranging in their impacts. Therefore precise timings, including aspects such as dual running periods for legacy infrastructures will not be determined until a full specification is defined in the subsequent work phases. This will include planning for sequencing of different payment types, e.g. bulk credits and bulk debits.

The wider activity referred to earlier in this document adds to the overall complexity that the industry has to contend with.

Any timeline delay, either as a result of dependencies on other activity or a specific NPA delay, will likely have impacts such as:

- Delayed benefits realisation.
- Extended legacy infrastructure costs.
- Potential interim Procurement need (for existing schemes).
- Increased risk of existing ageing technology infrastructure requiring renewal.

The PSR's Infrastructure Market Review has now published its final remedies. PSR Specific Directions 3 and 4 place requirements on FPSL and BPSL (and NPSO in due course) to undertake competitive tendering for the next contract for central infrastructure for the existing systems when the current contracts terminate in 2020. The transition to the NPA, as shown in the high level timeline in 4.1, indicates that the existing FPSL and BPSL systems will terminate not long after this time – by June 2022 and end 2022, respectively. The PSR noted in its final remedies decision that the directions need to be flexible to allow for the implementation and transition to the NPA. This included where the FPSL and BPSL contract would be of short duration so it might not be economic to run a full competitive procurement as required by the direction. The PSR's directions allow for FPSL and BPSL to apply to extend the due date for when they must complete a competitive procurement, which could be for a time after the NPA transition has completed.

3.1.3 Sequencing

It is expected that requirements gathering for the new push payments mechanism will continue into 2018 and will lead into the procurement phase. With the delivery of the majority of functionality expected in 2020 from the Bank of England's RTGS renewal, we have aligned the NPA implementation date to Q1 2021.

Following this, it is envisaged that the capability to handle bulk payments will be available six months later, enabling the start of Bacs payment volume migration. Image clearing functionality will be added by the start of 2024, enabling the migration of the ICS volume.

By 2025, all payment volume from legacy Bacs, Faster Payments and ICS infrastructures will have migrated to the NPA and the legacy systems will have been closed down.
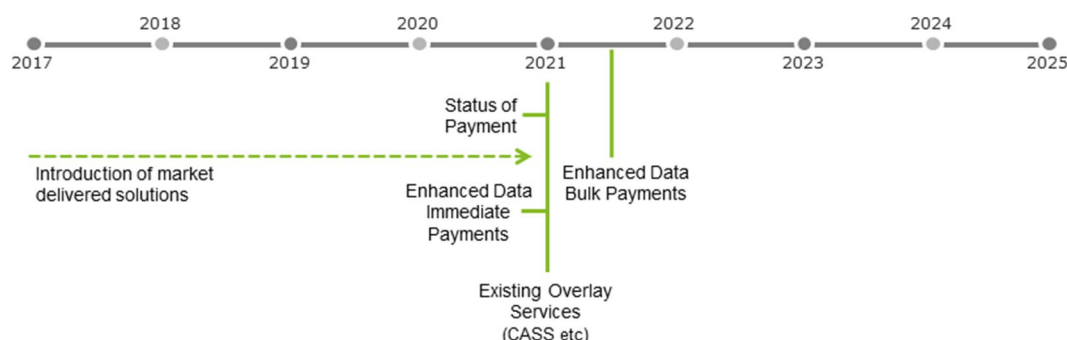
3.2   Customer timeline

Figure 3.2 Customer Delivery Timeline

End-user (i.e. payers and receivers of payments) needs will be satisfied through both new (e.g. Enhanced Data), existing and competitively delivered service propositions. Figure 4.2 above identifies a customer delivery timeline, illustrating when customers may begin to realise benefits from an NPA and wider market driven activity.

It is important to note that end-user overlay solutions will be delivered competitively. In order to achieve ubiquity, and thus a successful service, a wide adoption by end-users is required.

Additionally, as stated in our planning assumptions, the existing services such as CASS, BPRS etc. will be in place to support the NPA as transition commences.

The timeline takes into consideration in-progress activity to develop overlay solutions for CoP and Request to Pay (by Paym and FPSL as an example); the first examples of market delivered solutions. Any implementation will be independent of payment methods and therefore could be delivered onto existing schemes prior to the NPA's implementation and ported into the NPA at a later date.

It is expected that CoP and Request to Pay overlay services will be available through the NPA from the start of 2021, competitively provided by TPSPs and PSPs. We have assumed that the NPSO will ensure that its governance, rules and NPA configuration can support such solutions. As these specific activities are not in the remit of the NPA activity, it should be recognised the timeline dates shown are indicative only.

3.2.1 Confirmation of Payee (A market delivered solution outside the scope of the Forum)

Activity is ongoing within Paym to extend existing functionality such that a CoP could be achieved using a sort code and account number in addition to the existing lookup capability against a mobile phone number. It is expected that technically this will be enabled within the Paym architecture during Q4 2017. Participant proposition development would then be required to deliver this capability to end-users. It is being developed in a way that any payment initiation following a CoP will be capable of being initiated through NPA (with the appropriate accreditation being achieved).

Data protection considerations are also under review to understand how CoP can be delivered in compliance with the relevant regulations, including the EU GDPR.

3.2.2 Request to Pay (A market delivered solution outside the scope of the Forum)

FPSL are developing proposals for a Request to Pay service. It is anticipated that towards the end of 2017 a demonstration capability will be available to test end-user reactions to such a service. Progression towards a full competitive service delivery will then be considered during 2018, while at the same time aligning to any additional outcomes of the Forum.

3.2.3 Enhanced Data and Customer Assurance

The Strategy additionally identified a requirement for enhanced data and greater customer assurance on the status of a payment. NPA will provide a capability to develop improved end-user propositions.

3.2.4 Existing Services

The NPA will need to support existing essential services, such as CASS and BPRS. In the next phase of activity, a more detailed assessment of what will be required will be led by the service owners (NPSO), but at this high level there is no indication that changes to ensure compatibility with the NPA cannot be delivered in line with the indicative timeline.

3.3 Risks

Figure 3.3 below shows the implementation risks identified within the Strategy paper.

Risk Type	Description	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.

Figure 3.3 The Strategy Paper Implementation Risks

For this phase of activity we have re-examined the thinking in the light of the proposed architecture, potential implementation and phasing timeline.

The proposed timeline presumes that key delivery risks have been mitigated. At a summary level, these risks were initially identified as follows:

- Industry capacity - particularly relevant when considering a requirement for all PSPs to receive NPA derived payments from a certain date and delivery of revised end-user propositions.
- Absence of market transition solutions - to support/accelerate migration onto NPA, e.g. direct access provision for Corporates and/or other direct access participants.
- Business community capacity to transition to new bulk payment options – particularly Direct Debit users.
- Dependence on the relevant settlement functionality being delivered by the Bank of England in 2020
- Dependence on competitive market readiness to deliver new end-user overlay services and bulk payment transition solutions – with an expectation that the market will evolve during development and delivery phases to provide solutions.
- Requirement to transition from, as yet, undelivered activity e.g. ICS and the need to eliminate the risk of duplication in the transition.
- Ensuring continuation and resilience of service for end-users.

This summary position has been reviewed with Risk representatives from the payments community to explore and formalise the risks at a more focused level.

Whilst the proposals for the NPA require a much greater level of analysis and definition in subsequent phases of activity, twenty one risks have emerged requiring mitigation. These have been grouped under four key risk types as illustrated below.

Risk Type	Description	Mitigation
Design	• The high level design is conceptual with unproven elements • The bulk payments solution is radical and unproven • High dependency on concurrent change programmes e.g.PSD2/Open Banking • Over-engineering may deter suppliers • Design may not fully meet customer needs	• Extensive stakeholder engagement to validate and assess the detailed definitions prior to tendering • Ongoing design socialisation and transition planning • Ensure the NPSO has the right delivery capability and approach • Ensure detailed design definition is not over-engineered • Regular customer and end-user research
Implement	• Lack of transition capacity to implement including new ISO standards • Dependency on market (FinTechs/Suppliers) to provide end-user needs solutions • Timescales to build, test and implement not validated • Quality of industry testing may be insufficient • Industry and customer ability to adapt to change	• Deliver an industry agreed implementation plan • Early and wide engagement and socialisation. In depth diligence checks and competitive tendering processes • In depth transition plan assessment and agreement • Best practice implementation with unambiguous criteria • Develop detailed understanding of all end-user needs and incorporate into overall programme
Operate	• NPA does not deliver expected benefits or operational performance • Service is interrupted during transition • No embedded knowledge of new system elements • Resilience/vulnerabilities are exposed • Unforeseen or additional run costs	• Establish clear performance/benefits criteria at the initial definition phase • Agree phasing of migration and parallel running as identified • Extensive consultation and knowledge transfer to all stakeholder groups • Resilience and security to be at the core of programme • NPSO business case includes all stakeholder impacts
Adopt	• End-user education is insufficient for degree of change • Increased fraud exposure during transition • Pace of change is impacted by end user/PSP capabilities • Solution is not sufficiently scalable • NPA proposals are rejected, in part or whole, by stakeholder groups • Insufficient priority delays transition and adoption	• Develop consistent cross industry comms plans • Engagement with financial crime prevention representatives across industry • Best practice implementation techniques for large scale projects • Designed in scalability with robust monitoring • Compelling comms and socialisation plans developed • Clearly signposted migration milestones and end dates

Figure 3.4 Implementation Risks and Mitigations

As part of the transition to the NPSO, these risks will be further considered as the definition for the NPA becomes clearer. This will enable more detailed assessment of the associated mitigations and uncover any new risks.

The outcome of these deliberations will be critical in assessing that the mitigations proposed are robust and deliver both a timeline and architecture that fits within the overall risk appetite for the NPSO and wider industry stakeholders.

4 Transition Periods

Our proposed approach is that all participants should be able to receive SIPs on the day of the NPA launch ('Day 1'). We rely on all PSPs being ready on Day 1 in a similar manner to the approach taken by the ICS and consider this the best fit for the requirements set out in this section. The implication of this option, as with ICS, is that PSPs may need to run a number of co-existing payment systems in parallel, along with supporting any associated costs, until such time as they complete their systems migration or the particular payment scheme is no longer available.

This section summarises four periods of activity and identifies the benefits that will be seen at each stage. Together they deliver a successful implementation of the NPA, migrating legacy payment volumes and subsequently ensuring that existing scheme processing capability is closed down.

It uses a series of architectural positions known as 'Transition states' to describe the particular layers and components that would need to be achieved to deliver the functionality described within each state.

Transition State 1: Single Payments (all PSPs capable of receiving Single Payments)

Transition State 2: Bulk Payments (all PSPs capable of receiving Bulk Payments)

Transition State 3: Image Clearing System

Transition State 4: Close down of legacy services completed (a parallel activity aligned to the status of the other transitions)

The implementation timeline then shows the period that each of the Transition States will exist for and how they overlap. The architecture changes required for each state are discussed in the NPA Design and Transition Supporting Document.[1]

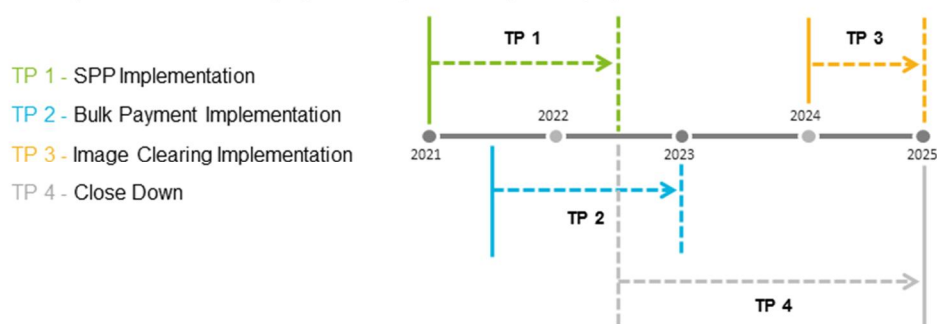The implementation timeline proposes 4 key transition periods (TP)

TP 1 - SPP Implementation
TP 2 - Bulk Payment Implementation
TP 3 - Image Clearing Implementation
TP 4 - Close Down

TP 1

TP 3

TP 2

TP 4

2021   2022   2023   2024   2025

Figure 4.1 Transition Periods Overview

4.1 Transition Objectives and Prerequisites

Transition to the NPA must achieve the primary goal of ensuring that the migration does not introduce any instability or risks. To achieve this, a number of transition principles have been established. The transition approach should:

- Be phased as this is least disruptive to the market, reduces transition risk and failures and introduces a transitionary period that ensures that all PSPs can develop or upgrade their systems over time.

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[1] The Design and Transition Supporting Document can be found at https://implementation.paymentsforum.uk/consultation

- Keep transition periods as short as possible, without creating unnecessary risk to keep the costs low and reap the benefits as early as possible.
- Avoid detrimental impact to the integrity of UK electronic payments during the migration to and adoption of ISO 20022; avoid detrimental customer impact, whatever the segment of customer; and avoid introducing uncontrolled risks.
- Facilitate transition of PSPs from the current payment models to the NPA.
- Ensure that the current and new systems run independently of each other for clearing.
- Minimise the impact on the existing payment schemes during transition.
- Permit an orderly and prompt closure of the existing schemes, to ensure optimal benefits realisation.

The NPA Design and Transition Supporting Document sets out detailed analysis of the transition options for the NPA. These are not discussed in this document; however, at the high level, two additional design options were considered as part of the work:

- A 'big bang' approach, which was discounted due to the inherent risk to stability.
- A 'phased send and receive' approach, which was discounted on the grounds of the additional complications of sending data between the NPA and the current payment systems resulting in data truncation, creating a need for many disposable transition developments states.

Notwithstanding the need for the detailed programme plans, rules, technology, governance etc., for the start of transition three key enablers are required to be in place:

- All PSPs will be able to receive payments in the new architecture.
- Directory Services are implemented across the ecosystem by Open Banking.
- The Bank of England's delivery of the relevant settlement functionality in the renewed RTGS system.

The following sections set out the proposed transition periods.

4.2 Transition Period 1 – Single Payments Implementation

All PSPs capable of receiving Single Payments:

- Phase 1: Sending of new SIPs (phased)
- Phase 2: Sending forward-dated payments

Timeline - Q1 2021 to end Q2 2022

Prerequisites
- Relevant settlement functionality will have been delivered in the new RTGS system.   - The Push Only Mechanism and prerequisite components for SIPs will be in place.   - All PSPs will have obtained accreditation from the NPSO and will be ready to receive SIPs.   - Any overlay service providers (e.g. CoP/Request to Pay) have obtained accreditation from NPSO and solutions are in place.

Payment Type	Migration Status
Faster Payments	• SIPs begin migration to NPA including deferred payments e.g. standing orders and forward-dated payments.
Bacs	• No migration yet.
ICS	• No migration yet.

User Group	Benefits/Changes
Consumers	• When sending payments will be able to confirm Payee, find out intended time of receipt and confirm receipt (Assurance data). • Will see more information when receiving payments and be able to include more information when sending (Enhanced data). • Greater flexibility and control when paying bills (Request to Pay).
Corporates	**Immediate payments** • CoP will save time and money by reducing misdirected payments and liability risks (Assurance Data). • Confirmation of receipt gives greater visibility (Assurance Data). • More efficient reconciliation (Enhanced Data).
Government	**Immediate payments** • CoP will save time and money by reducing misdirected payments and liability risks (Assurance Data). • Confirmation of receipt gives greater visibility (Assurance Data). • More efficient reconciliation (Enhanced Data).
PSPs	• Obtained NPSO accreditation. • Be able to receive NPA SIPs from Day 1. • Begin sending SIPs via NPA. • Roll out enhancements to their own propositions to support the NPA end-user benefits.

Table 4.1 Transition Period 1

Figure 4.2 below illustrates the first transition period where all PSPs will be capable of receiving NPA derived payments, which enables the Faster Payments migration to commence. This enables PSPs to commence migration at their own pace (within the agreed overall migration period constraint).
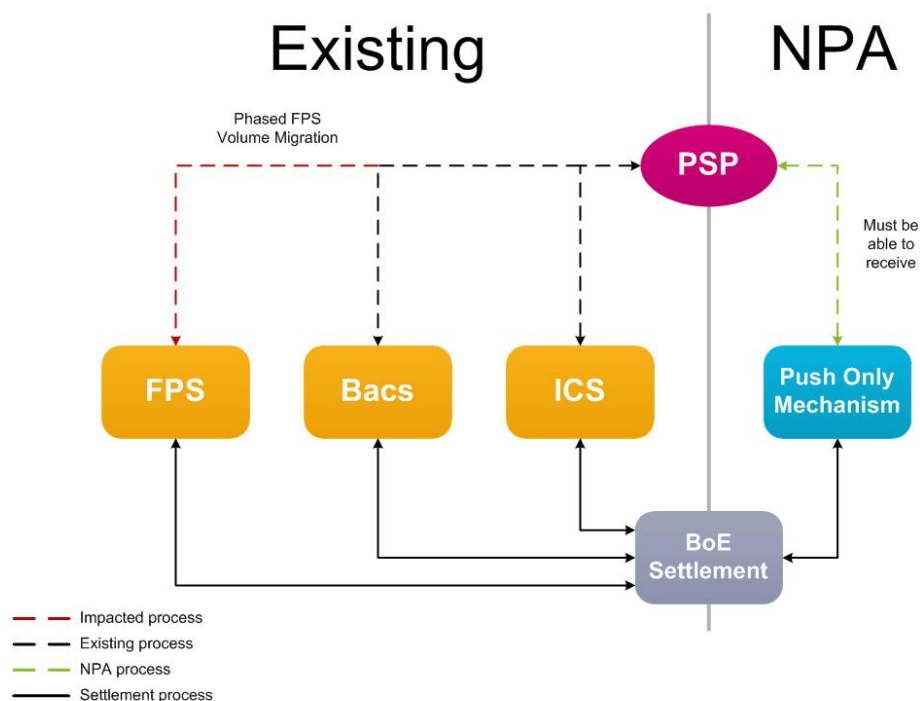

Figure 4.2 Transition Period 1

4.3   Transition Period 2 – Bulk Payments Implementation

All PSPs capable of receiving Bulk Payments

- Phase 1: Sending of bulk credit payments implemented (phased)
- Phase 2: Sending payments with a persistent mandate (Direct Debits) – this will continue as an overlay service

Timeline - Q3 2021 to end Q4 2022

Prerequisites

- Components for bulk payment functionality (Bacs Direct Credits and Debits, Bacs Direct Submission and Faster Payments Direct Corporate Access (DCA) will need to be available.
- All PSPs must be ready to be able to receive bulk payments.

Payment Type	Migration Status
Faster Payments	• DCA migration begins; SIP migration continues.
Bacs	• Direct Debit and Direct Credit migration; Direct submitters also migrate.
ICS	• No migration yet.

User Group	Benefits/Changes
Consumers	• Will see more information when receiving business to consumer payments.
Corporates	**Bulk payments** • CoP will save time and money by reducing misdirected payments and liability risks (Assurance Data). • Confirmation of receipt gives greater visibility (Assurance Data). • More efficient reconciliation (Enhanced Data). • Direct submitters will need to make changes to enable the migration to NPA. • Improved cash flow through faster clearing for bulk payments.
Government	**Bulk payments** • CoP will save time and money by reducing misdirected payments and liability risks (Assurance Data). • Confirmation of receipt gives greater visibility (Assurance Data). • More efficient reconciliation (Enhanced Data). • Will need to make changes to enable the migration to NPA.
PSPs	• All PSPs must be able to receive bulk payments. • Bacs volumes will migrate. • Faster Payments migration will complete during this period enabling the close down of legacy Faster Payments systems.

Table 4.2 Transition Period 2

Figure 4.3 below Illustrates the second transition period where the Bacs migration can commence; it includes enabling the direct submission of payments previously submitted via Bacstel IP and DCA.
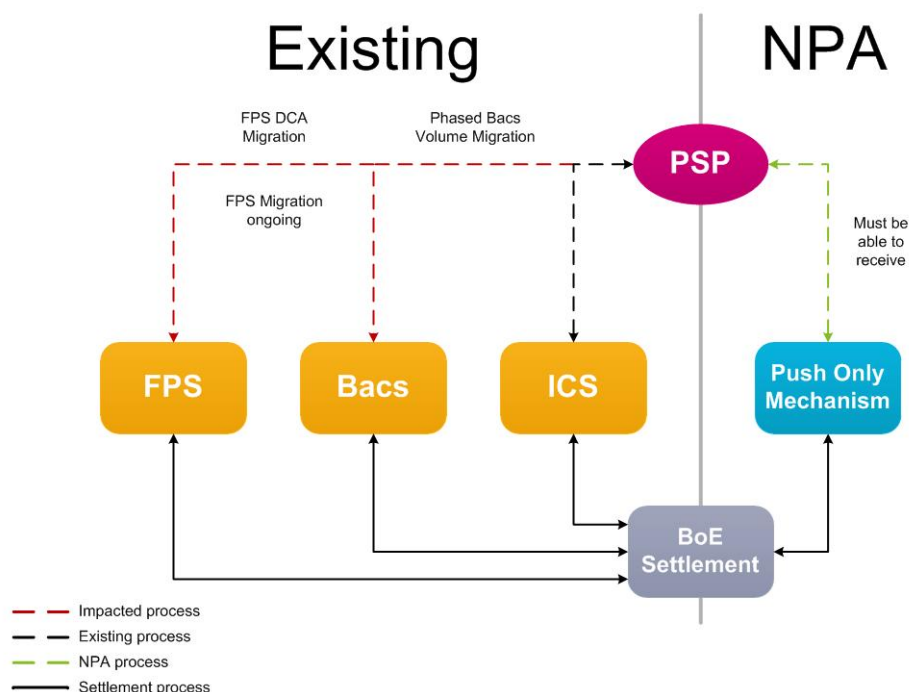

Figure 4.3 Transition Period 2

In Transition State 2, Corporates, Financial Institutions and Governments who submit payments directly will be required to migrate to NPA. Under the proposed approach, direct submitters will not be required to change their existing file format. These files will be sent to a TPSP (similar to sending them via Bacstel IP or DCA) who will complete the pre-processing; for example, disaggregating the file, changing the format to ISO 20022 etc., before submitting the file to the NPA for Direct Credits or to the Payer's TPSP for Direct Debits.

Direct submitters have the opportunity to adopt the ISO 20022 file format in order to provide additional information, i.e. Enhanced Data that is not supported in the current file format. Adoption of ISO 20022 could be implemented at any time during or after the transition period. Similarly, there is no requirement to change existing Direct Debit mandates during the transition period. Adopting a new Direct Debit mandate approach for Payer verification could be implemented at any time during or after the transition period.

4.4 Transition Period 3 – Image Clearing Implementation

- Phase 1: Processing of credits (Bank Giro Credits)
- Phase 2: Processing of cheques

Timeline - Q1 2024 to end Q4 2024

Prerequisites

- Components will be in place for ICS.
- All Paying PSPs will need to be able support NPA image clearing.

Payment Type	Migration Status
Faster Payments	• Faster Payments migration now complete.
Bacs	• Bacs migration now complete.
User Group	Benefits/Changes
Consumers	• No additional expected benefits or changes outside the prevailing proposition.
Corporates	• No additional expected benefits or changes outside the prevailing proposition.
Government	• No additional expected benefits or changes outside the prevailing proposition.
PSPs	• Migration of ICS volume leading to the wider NPA cost benefits.

Table 4.3 Transition Period 3

Figure 4.4 below Illustrates the third and final migration related transition period when ICS volumes can commence migration.
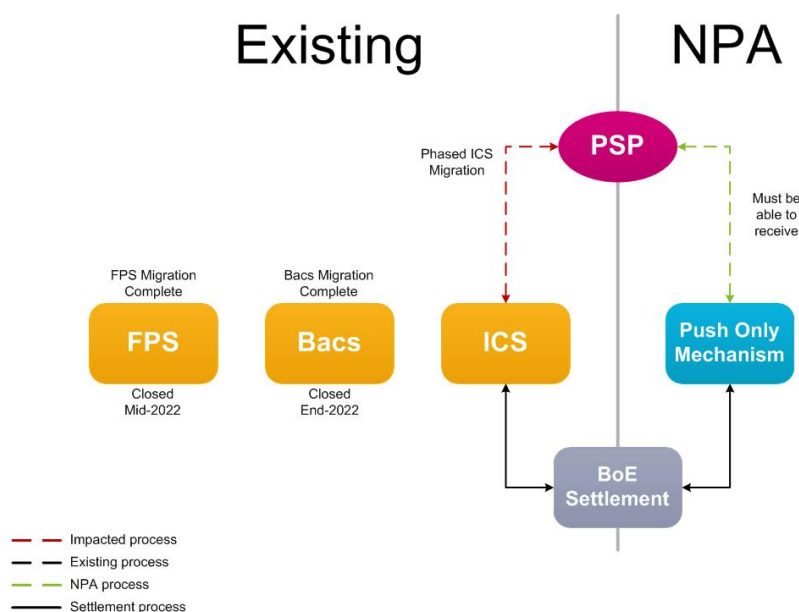

Figure 4.4 Transition Period 3

4.5   Transition Period 4 – Close down

Timeline - Q2 2022 to end Q4 2024

By the end of Transition Period 4 all legacy volume will have migrated to the NPA and legacy infrastructure will have been closed down. All users will be able to receive the full benefits of NPA from this point.

Figure 4.5 below illustrates the end position where the existing schemes have been closed down following completion of migrations. As with the other transition periods it is anticipated that there will be an overlap of activity with scheme closedowns occurring as soon as practical.
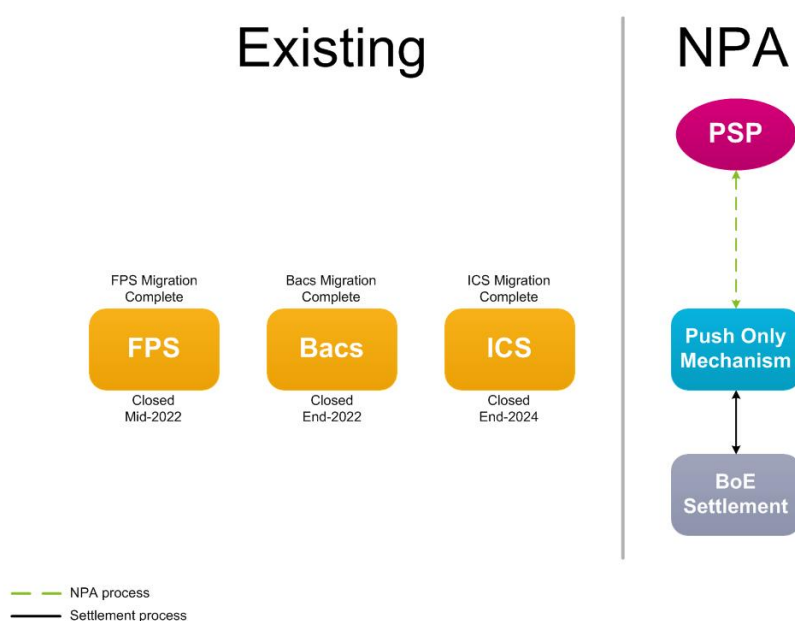

Figure 4.5 Transition Period 4

4.6 Suggested phased timeline and approach

The following timeline version illustrates the key strawman milestones, migration windows and end-user benefits together.
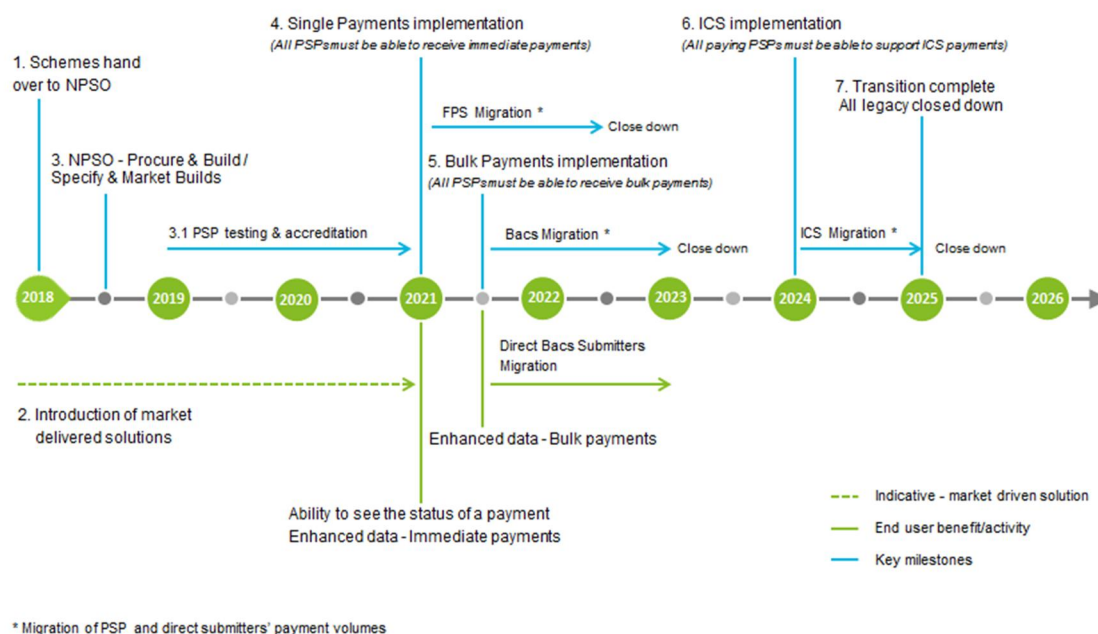

Figure 4.6 Key Milestones

5 Communications

5.1 Overview

Effective communication and socialisation will be a critical successful factor for implementation given the wide reaching nature of the changes being introduced to the UK's payments landscape. Sufficient lead time needs to be factored in to allow organisations to budget and plan for any required changes they may need to make, such as registering and/or gaining accreditation for participation in NPA.

Communication and socialisation could potentially include traditional media such as TV and radio, online media, social media, email and dedicated websites. Engagement methods could include working groups, workshops, roundtables, 1-2-1 meetings, agency days and webinars.

A more detailed communications plan will form a core part of further stages of NPA work. It will be able to leverage the learnings and best practices from other large scale industry projects such as Faster Payments, Paym, CASS and ICS.

5.2 Approach

The communications strategy should consider its approach for specific user groups in conjunction with interested representative organisations:

- Consumers – focus on general awareness of the benefits.
- Businesses (SMEs and Corporates) – general awareness campaigns focused on benefits and enhanced functionality; will tie in with the consumer communications. Will also need a particular focus on the Bacs direct submitters user group.
- Government – ongoing close central engagement (particularly with the Department of Work and Pensions) given the high volumes and criticality of their payments.
- Direct Member PSPs – close central engagement throughout the change lifecycle.
- Indirect Member PSPs – central engagement with Direct Members also being responsible for cascading information to their Indirect Members.
- Other stakeholders – e.g. vendors/technology providers, Payment System Operators and Regulators.

5.3 Communications Timeline

An overarching stakeholder engagement plan will be required to ensure all relevant parties are aware and informed as the implementation progresses.

The following gives a high-level indicative view of timing considerations that will be required for communications to key user groups throughout the implementation time frame.
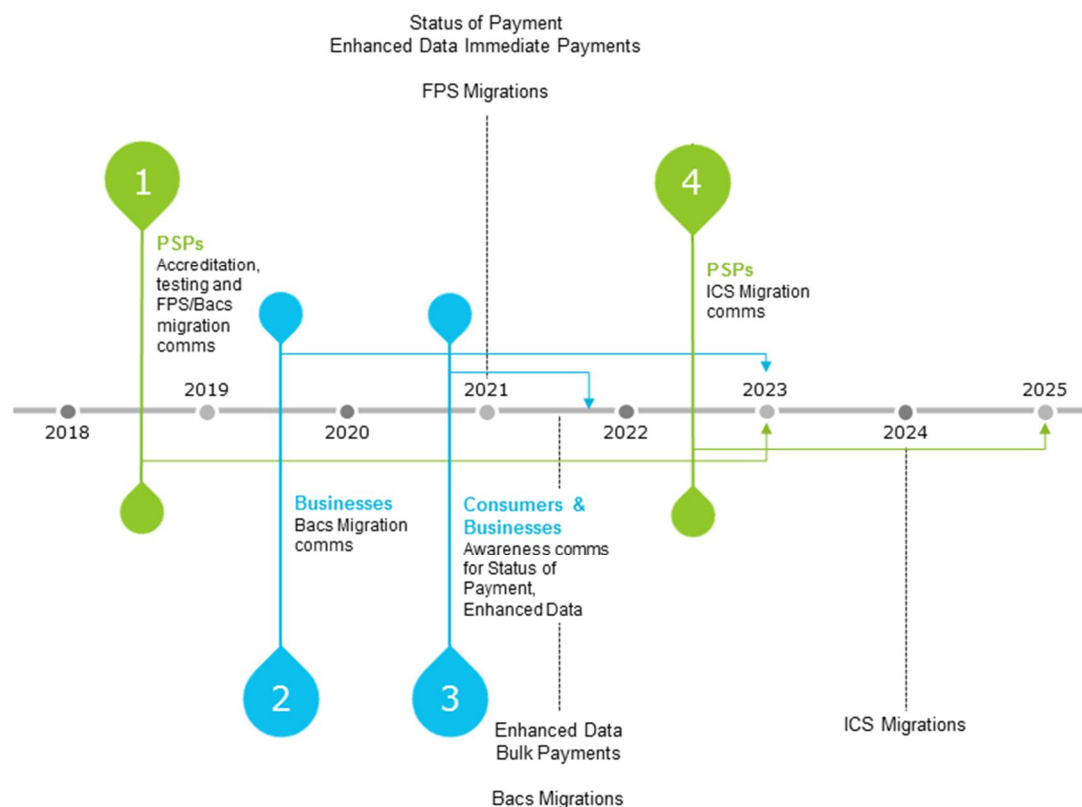

Figure 5.1 Communications Timeline

6 Belief Audit

In concluding the activity for this workstream we have assessed the outcomes against the broad objectives outlined in the Project Initiation document for the workstream dated 31st March 2017.

The document content has been leveraged to create the relevant sections of the Consultation document that will be issued at the end of July 2017. It defines and illustrates a strawman timeline of activity that will have a significant impact on the whole payments community in the UK. The document also recognises that a greater level of detail will be required to create a definitive timeline.

Notwithstanding the additional activity that is required, it is important to validate that the outcomes of this document, and input into the Consultation, are properly grounded, believable and consistent with the industry direction and momentum. The Design Hub Terms of Reference, in particular, required that the implementation plan take into account all relevant industry initiatives; specifically referring to the PSR Infrastructure Market Review, the RTGS review by the Bank of England, the CMA's Open Banking remedies and PSD2 implementation.

Corroboration of the thinking as the content has been compiled has been ongoing with engagement, socialisation and feedback using the Forum's wide constituency through:

- Design Hub meetings
- Workstream advisory group meetings
- Collaboration and alignment with other workstreams at both a working and workstream lead level
- Vendor Advisory Group meetings
- Payment Community briefings
- Forum updates
- Socialisation and discussion with key stakeholders including the PSR, Bank of England and Payment System Operators

The workstream has additionally validated its findings against previous work and other related artefacts. Specifically, we have reviewed the content for compatibility and consistency against a number of relevant public documents:

- The Forum's 'A Payments Strategy for the 21st Century' document issued (November 2016).
- The PSR 'MR15/2.5 Market review into the ownership and competitiveness of infrastructure provision Remedies decision' (June 2017).
- NPA Design Hub Terms of Reference (April 2017).
- Bank of England Blueprint for a new RTGS service (May 2017).
- CMA retail banking market investigation introducing Open Banking (August 2016).
- FCA 'Implementation of the revised Payment Services Directive (PSD2)' – linking to the CMA activity (April 2017).
- Payments UK World Class Payments reports (various).

As a result, we believe that these outputs meet the workstream objectives and that we have been able to:

- Confirm the core planning principles and assumptions with stakeholders and other workstreams.
- Deliver outcomes that meet the requirements of the Design Hub Terms of Reference.
- Identify dependencies, e.g. settlement functionality in the new RTGS system and Open Banking.
- Observe a broad alignment and consistency of timelines and delivery expectations such as those identified in the IMR remedies.
- Create, validate and confirm a strawman timeline and transition shape with stakeholder groups.

7 Implementation Planning Next Steps

We have assessed the next stages of activity required to ensure a successful handover to the NPSO at the end of 2017, which includes a key overarching control activity that will develop and track the overall risk profile for all activity.

Definition of the handover plan to the NPSO:

- Define process for handover
- Detailed timelines
- Assessments and inputs from consultation and socialisation
- Background thinking and reasoning – principles and assumptions
- Artefact records

Delivery plan to manage risks:

- Review and assessment of mitigations
- Wider socialisation to update
- Define minimum hurdles to satisfy industry risk appetite

Alignment of already in-progress related industry initiatives:

- Identify synergies to ensure smooth handover

Further socialisation and communication:

- Develop socialisation and communication plan to capture wide input into consultation

Drill down into implementation options/timelines e.g. Bacs Direct Credits and Debits:

- Expand on high-level definitions for transition
- Explore options
- Socialise and obtain consensus view
- Identify plan refinements for discussion and agreement

Engagement and socialisation with new NPSO CEO/team:

- Align and prepare for handover

Seek agreement to delivery plan and defining key activities for NPSO on handover:

- Sign off to overall activity from the Forum and advisory group

Collation and analysis of relevant Consultation responses:

- Consider responses
- Assimilate changes and develop any revisions as required
- Prepare required final outputs

8 Appendix

Consultation Questions

With the content for the Consultation, we defined questions for the stakeholder community to ensure relevant feedback in specific focus areas. These are set out below.

1. Principles

    - Are there any additional principles you think we should add or significant amendments to those already stated?

2. Assumptions

    - Are there any additional assumptions you think we should add or significant amendments to those already stated?

3. Implementation

    - Do you agree with the sequence of events laid out in the implementation plan? If not, what approach to sequencing would you suggest?
    - Do you agree with the high-level timetable laid out in the implementation plan? If not, what timing would you suggest?

4. Risks

    - Are there any significant potential risks that you think the implementation plan does not consider? If the answer is yes, then please provide input about what they are and how we can best address them.

9 Glossary

Application Programming Interface (API): A set of functions and procedures that allow the creation of applications which access the features or data of an operating system, application, or other service.

Bacs: The regulated payment system which processes payments through two principal electronic payment schemes: Direct Debit and Bacs Direct Credit. The payment system is operated by Bacs Payment Schemes Limited (BPSL).

Bacs Payment Schemes Ltd (BPSL): the operator of the Bacs payment system.

Bacstel IP: One of three communication channels used to connect to the Bacs infrastructure.

Bank of England (BoE): The central bank of the UK.

BAU: Business as usual.

'Big bang' implementation: An instant changeover from an old system to a new one.

Bulk Payment: Provides the ability to make multiple debit payments in one transaction.

Bulk Payment Redirection Service: A BPSL service which ensures that payments continue to be received when a sort code and / or account number is changed.

Cards: Used to collectively refer to payments via debit or credit card.

CHAPS: The sterling same-day system that is used for high-value/wholesale payments as well as for other time-critical lower-value payments.

Cheque and Credit Clearing (C&CCC): Payment scheme providing net settlement of cheques and paper credits between financial institutions.

CMA Remedies: The resulting remedial actions that came out of the CMA's Retail Banking Market Investigation.

Competition and Markets Authority (CMA): A department of the UK government that promotes competition for the benefit of consumers.

Confirmation of Payee (CoP): A capability which will provide a payer with assurance that the account to which they are making the payment belongs to the intended payee.

Current Account Switching Service (CASS): Free to use service that lets consumers and small businesses switch their current account from one participating bank or building society to another.

Direct Corporate Access (DCA): A connectivity method for large corporates to send payment files directly into the Faster Payments Service.

Direct credit: A payment service for crediting a payment account.

Direct debit: A payment service for debiting a payment account.

Direct Member PSPs: Payment Service Providers that are direct members of the clearing.

Disaggregation: The process of separating a file of payments into individual items.

End-users: A person, company or government entity that is sending or receiving payments.

Enhanced Data: The capability to send and receive greater amounts of information along with a payment than currently supported.

Extended Industry Sort Code Directory (EISCD): A database containing information about all the banks and building societies that are connected to the UK clearing systems.

Faster Payments Scheme (FPS): Provides near real-time payments on a 24x7 basis.

Faster Payments Scheme Limited (FPSL): Operator of Faster Payments system.

Financial Conduct Authority (FCA): A regulatory body for the financial services industry in the UK.

FinTech: Short for Financial Technology and is often used to describe any technological innovation in the financial sector.

Forward-dated payments: A payment set up to be processed on a date in the future.

General Data Protection Regulations (GDPR): A Regulation by which the European Parliament, the Council and the European Commission intend to strengthen and unify data protection for individuals within the European Union (EU).

HMT: Her Majesty's Treasury (or the Treasury). The British government department responsible for developing and executing the government's public finance policy and economic policy.

Image Clearing System (ICS): The new method for clearing cheques in the UK. Cheques will be cleared using a digital image of the cheque rather than via the current paper-based clearing system.

Indirect Member PSPs: Payment Service Providers that are not direct members of the clearing.

Infrastructure Market Review (IMR): A review by the PSR into the ownership and competitiveness of payment infrastructure provision.

ISO 20022: An international standard for the development of financial messages.

ISOCC: Interbank System Operators Coordination Committee – comprising of Bacs Payment Schemes Ltd, CHAPS Co, Cheque and Credit Clearing Company Limited, Faster Payments Ltd and Mobile Payments Service Company Limited (Paym).

Link: The UK's cash machine network.

New Payment System Operator (NPSO): The New Payment System Operator, which will be made up of BPSL, C&CCC and FPSL.

New Payments Architecture (NPA): The proposed new UK payments ecosystem.

Open Banking: PSD2 introduced the concept of open banking, which allows third party developers to build applications on the back of open APIs connecting to financial institutions. The capability for Open Banking is being created by the remedies issued by the CMA.

Overlay Services: Applications that can plug into the NPA to provide core and additional services as part of the layered architecture.

Paym: A mobile phone number proxy database service used to link an account number and sortcode with a mobile phone number.

Payment Service Provider (PSP): A Payment Service Provider can be any of the following when carrying out payment services: authorised payment institutions; small payment institutions; registered account information service providers; EEA authorised payment institutions; EEA registered account information service providers; electronic money institutions; credit institutions; the Post Office Limited; the Bank of England; the European Central Bank; and the national central banks of EEA States (other than when acting in their capacity as a monetary authority or carrying out other functions of a public nature); government departments and local authorities (other than when carrying out public functions) and agents of Payment Service Providers and excluded providers.

Payment Service User(s) (PSU): Customers, either individuals or corporate entities, who have one or more bank accounts.

Payment Services Directive 2 (PSD2): The second iteration of the European regulations governing payments.

Payments Strategy Forum (PSF): A forum made up of payment industry and end-user representatives with the aim to develop a strategy for payment systems in the UK.

Payment System Operator (PSO): A company that operates one or more schemes. All PSOs are regulated by the PSR and additionally certain PSOs are supervised by the Bank of England.

Payment System Operator Delivery Group (PSO DG): Set up by the BoE and the PSR as a response to the Forum's proposed consolidation of the three retail PSOs: BPSL, C&CCC and FPSL.

Payment Systems Regulator (PSR): The economic regulator of payment systems in the UK.

Persistent mandate: A direct debit mandate which allows the collecting company to debit recurring payments from the end-user's account.

Design Hub: The NPA Design Hub was established by the Forum to progress the detailed design of the New Payments Architecture ahead of the handover to the New Payment System Operator (NPSO) by the end of 2017.

Push Only Mechanism: Another term for the Simplified Payments Platform; referring to a payments architecture that utilises push payments only.

Push payments: Payments where the customer instructs their bank to transfer money from their account to someone else's account.

Real-Time Gross Settlement (RTGS): The accounting arrangements established for the settlement in real-time of sterling payments across settlement accounts maintained in the Bank of England's RTGS system.

Request to Pay (RTP): A flexible payment and bill management service concept that offers payers more control over bill payments.

Ring-fencing: The separation of retail banking from investment banking arms of institutions in response to the Bank of England's Structural Reform measures.

RTS: Regulatory Technical Standards from the second Payment Services Directive.

SCA: Secure Customer Authentication from the second Payment Services Directive.

Secure Hash Algorithm 2 (SHA-2): Cryptographic security commonly used in internet browsers. Bacstel IP users are now required to use a SHA-2 compliant browser.

Service users: Service users are defined under Financial Services (Banking Reform) Act 2013 as those who use, or are likely to use, services provided by payment systems.

Single Immediate Payment (SIP): A payment set up to be paid straight-away.

Standing Order: A payment for a fixed amount to be paid regularly to the same beneficiary.

Third Party Service Provider (TPSP): TPSPs provide services across the payments value chain to facilitate the processing, acceptance, management and/or transmission of payments, as well as provision of information (e.g. technology providers, telecommunication providers, payment gateways/platforms, point of sale terminal providers, fraud management services).

Transition period: The period of time during which a particular transition state will be in place.

Transition solutions: Services aimed at reducing the amount of change that businesses and organisations will be required to make when transitioning from legacy systems to the NPA. For example, conversion of legacy file formats into the go-forward format.

Transition states: A series of architectural positions comprising of a number of different layers and components required to deliver the functionality needed to migrate volume from legacy infrastructure.