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NPA Implementation Plan

Blueprint

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Version / Document History

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Contents

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 payments systems.

The PSF 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 blueprints that have been created under the authority of the PSF New Payments Architecture (NPA) Design Hub:

Workstream 1 – User Requirements and Rules

Workstream 2 – NPA Design and Transition

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

Workstream 3 (b) – Cost Benefit Analysis

Workstream 4 – Commercial Approach and Economic Models

This is the second version of the document, first published in July 2017. It has been edited and updated reflecting the ongoing activity and feedback received during the second half of 2017. It is a key artefact that will be handed over to the NPSO at the end of the year.

This particular document addresses Workstream 3 (a) and sets out proposals for a high-level implementation plan. It includes 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.

The ongoing activity, including the Consultation feedback, has enabled further development of the analysis to set out:

a) A payments landscape map detailing the activities and initiatives underway across the payments ecosystem.
b) An updated implementation plan for the NPA.
c) A high-level migration plan from existing systems including transition periods and system end dates.
d) A detailed Risk Register with 7 key focus areas and 6 mitigating themes.

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 and Request to Pay. The document contributed to the PSF Consultation document issued in July 2017 providing additional context and content. This update incorporates feedback from the Consultation responses, additional risk planning work and updates to the timelines.

We 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 described in the preceding 'About this Document' section.
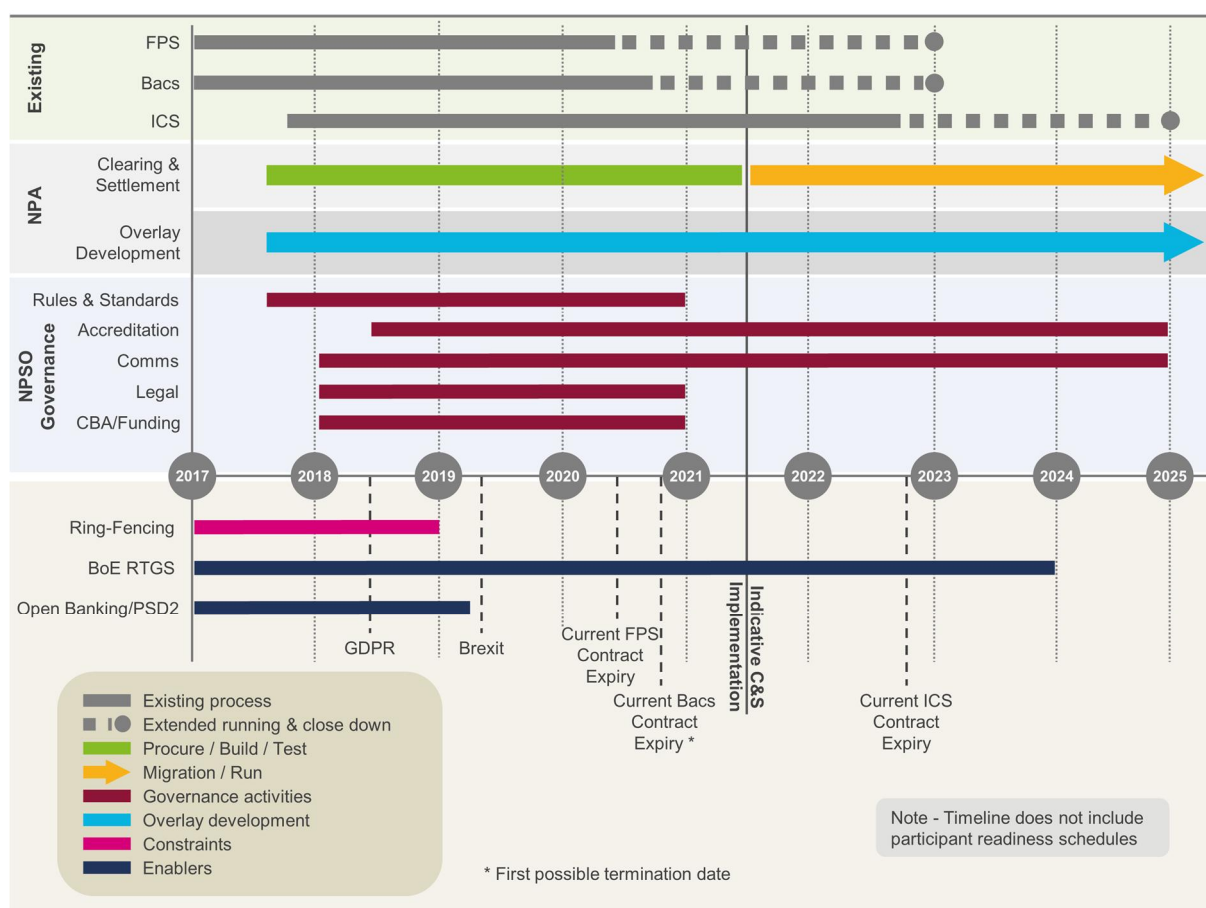
1.1 Implementation Timeline

Figure 1: Illustrative High-Level Timeline

The high-level timeline (shown above) proposes an indicative approach that implements a clearing and settlement capability mid-2021. At the same time the NPSO will develop governance processes to enable the development of overlay services.

After the first implementation of the clearing and settlement layer, a 3 and a half year transition is envisaged before the last payment on ICS is received and all 'old' processes are closed down.

It is important to note that the timeline focuses on the development of the NPA only and does not include any participant readiness activity.

1.2 Transition Periods

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 provides relevant settlement functionality.

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

Two subsequent transition periods will mark the commencement of volume migration 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 Confirmation of Payee and Request to Pay functionality as solutions that should bring the earliest benefit to end-users. Enhanced Data and solutions that provide greater Customer Assurance 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. A detailed overview of the risk related activity is discussed in section 3.3 below.

Since publishing this document in July 2017, we have created a detailed risk register, which has been handed over to the NPSO in November 2017 along with the other NPA Risk related artefacts. Further engagement with risk representatives from the payments community has also occurred including an independent "fresh eyes" review of the activity.
The key risks have been categorised into:

7 Focus Areas

- NPA Implementation.
- Existing Service Transition.
- Request to Pay Service Delivery.

- Confirmation of Payee Delivery.
- Enhanced Data Capability.
- New Service Development.
- Non-Adoption.

With 6 Broad Mitigation Themes

- Strong consumer (end-user) education and communication to drive adoption by all segment types.
- Deliver a clear plan with rules and standards to enable procurement, implementation and transition to occur on time.
- Extensive engagement with key stakeholder groups such as corporates to ensure implementation.
- Governance between NPSO and PSR embedded from Day 1.
- Securing formal industry commitment to support and implement the NPA and associated services from all stakeholder groups.
- Ensuring continuation of the PSF vision by the delivery of an overall architecture that meets the design principles.

The detailed Risk Register, comprising 47 causal factors, has been developed aligning to the areas and mitigations described above.

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, the PSF members have expressed their clear desire to deliver a fit for purpose NPA within an optimal timeline.

At the highest level, the timeline shows that the proposed transition to NPA can be achieved over a period of circa 4 years with the first implementation of a clearing and settlement layer mid-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.

The Consultation responses were generally in agreement with the implementation plan principles and assumptions. Feedback on the timeline, sequencing and transition approach has been reflected in the updated timeline and additional implementation risks have been captured in the risk register.

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.

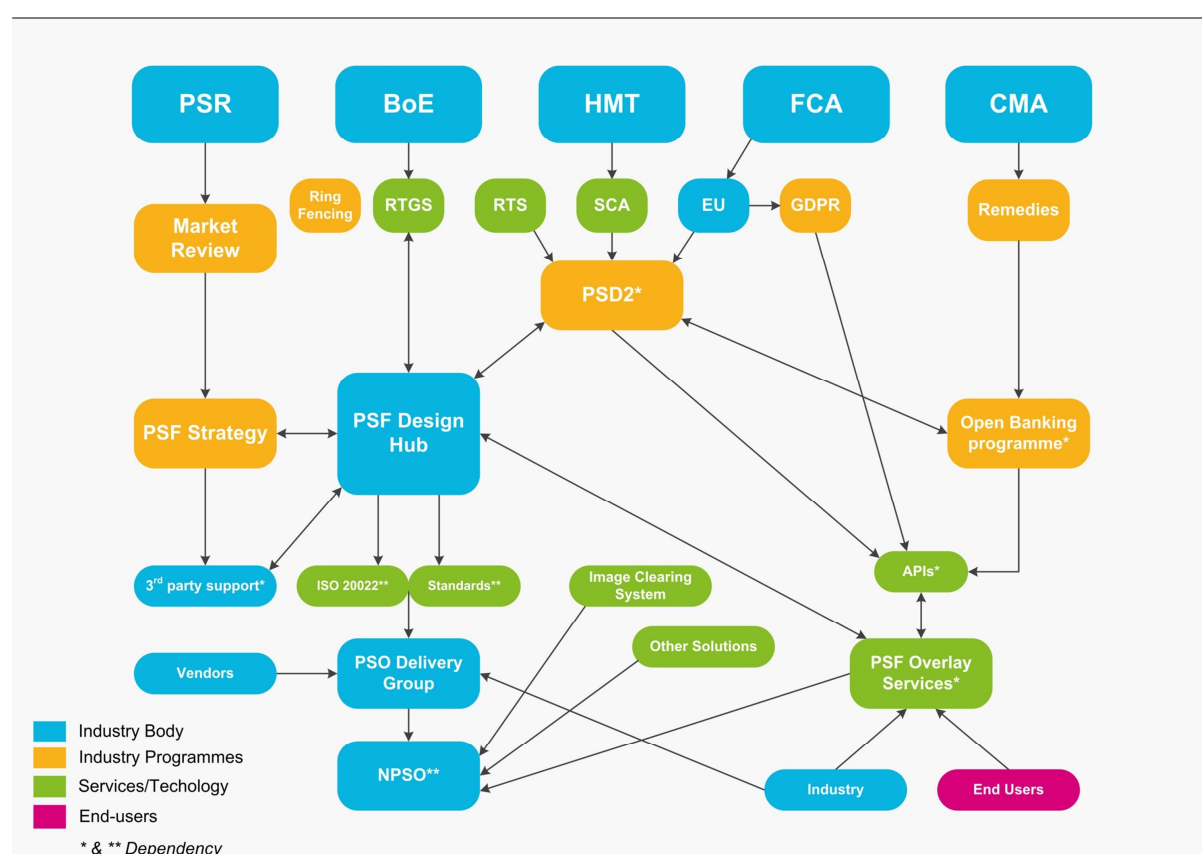The following diagram seeks to illustrate, at a high level, the activity and its origin.

Figure 2: 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 PSF. The Consultation responses suggested that the principles should include more explicit reference to flexibility, resilience, stability and a suitable funding model. These are represented in the amended principles below.

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 being implemented.

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.

Adaptability and flexibility: The plan will allow the end-user needs solutions and other overlay services to evolve over time as market needs change.

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 maintain the resilience and stability of the system and, where possible, improve 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 at a cost agreed by the industry, supported by an achievable funding model.

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. The Consultation suggested that the assumptions could be augmented to better identify end-users, confirm how Request to Pay would operate alongside Direct Debit and state that processes would be required to keep data in the old and new systems in sync. The assumptions below have been amended accordingly.

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

- End-users comprise consumers, businesses, government, charities, membership organisations, PSPs, TPSPs and FinTechs.
- 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 Payments Schemes Ltd (BPSL), Faster Payment Scheme Ltd (FPSL) and (in time) Image Clearing System (ICS) infrastructures through a safe and sensible transition whilst maintaining the resilience and robustness of payment processing in the UK.
- Request to Pay will operate alongside and complement Direct Debit, which will become a NPA overlay service.
- CHAPS, Cards and LINK are out of scope (CHAPS is in scope for Confirmation of Payee though).
- 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 and maintenance processes will need to be in place to keep data in sync between legacy and new systems.
- Any services that are discontinued for BAU reasons will not need to be supported and can be closed once the activity has ceased.

A managed and phased 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' capability (within the 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 overlay services will support the execution of payment instructions across existing payment types (e.g. Bacs, FPS and ICS) and the NPA to enable early delivery of end user benefits.

Each payment scheme can be transitioned independently.

- BPSL, FPSL 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 the existing and/or NPA route during transition phase.
- Close down of BPSL, FPSL 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 using 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 (such as 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.
- Transition solutions 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)
- Government
- Charities / Membership Organisations
- FinTechs
- 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

In the original supporting document, we referred to a requirement for the implementation plan to be met with positive feedback from the community of stakeholders that have an interest in the outcome of the PSF activity and resultant Consultation documentation.

Specifically, we looked for feedback that indicated that the high-level timelines and transition periods were understood and achievable. Therefore the responses to the Consultation questions plus any commentary were important to determine that the plans continued to stand up to scrutiny at this early conceptual and necessarily strawman phase.

To achieve this, we looked for the documents issued as part of the Consultation to reach the following outcomes:

Clarity

Seeking reassurance that the implementation plan that guides the industry and stakeholders throughout the transition was:

- Clear, easy to read and practical.
- Articulating the dynamic nature of the document.
- Subject to ongoing refinement and review.

Stakeholder Engagement

A key measure of success was seen as the level of engagement by stakeholders. The engagement has continued both through the regular workstream meetings, Forum updates and analysis of the Consultation responses 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 demonstrating a level of 'buy in' and interest in a successful outcome.

Clear and consistent communication

Ensuring that our outputs are consistent in message.

From the Consultation responses to the relevant questions, there appeared to be a broad agreement with the sequencing of the timeline and the timetable overall.

Specifically, 26 organisations supported the sequence of events against 7 that didn't; a further 15 organisations did not respond. Furthermore, 17 organisations agreed with the high-level timetable, with 13 not agreeing and 18 not responding.

The key observations to arise included the absolute need for the NPSO to determine the details for the NPA development and account for the other external developments such as the Bank of England RTGS renewal and PSD2/Open Banking deployment. Additional concerns were expressed around ensuring that the industry had a Go/No Go decision point in 2019 to enable the tracking of any hard dependencies.

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.
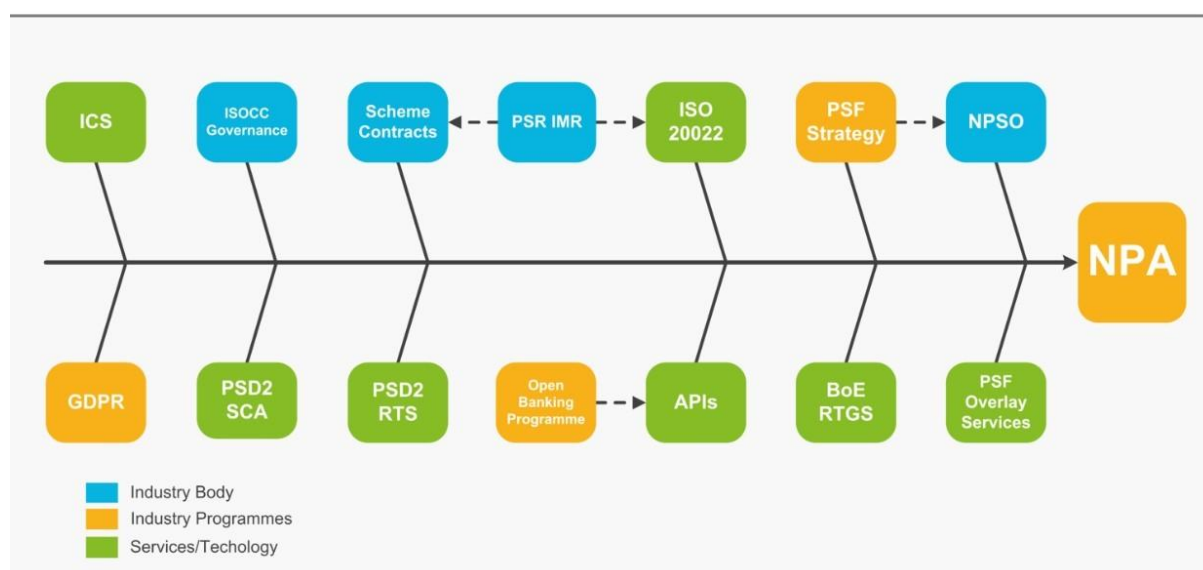
Figure 3: NPA Dependencies

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, implemented and over what timeline.

Industry Change	Considerations
Bank of England – RTGS Review	• Changes to settlement functionality are expected to be delivered between 2021-2022. • 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 4.1.2 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 BPSL and FPSL systems.
PSD2 and Open Banking regulations – UK implementation	• Defining how TPPs 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 Confirmation of Payee.
Structural Reform – Ring Fencing	• Constraints upon impacted PSPs: o Conflicting development resource.

Industry Change	Considerations
	o Change capacity constraints.

Table 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 referred to in section 3.3 formally notes this.

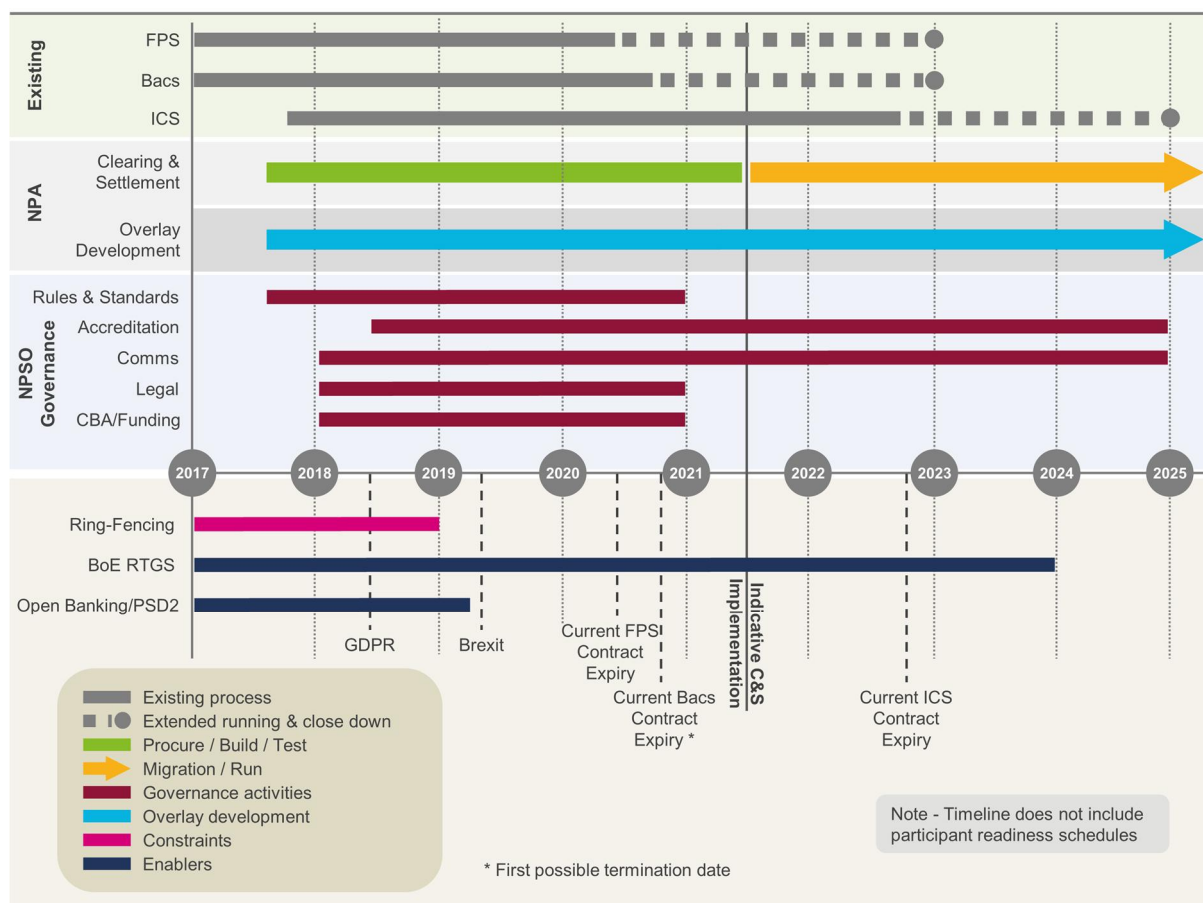# 3 Implementation Planning

3.1 High-Level Timeline

Figure 4: Illustrative High-Level Timeline

3.1.1 Strawman

The strawman plan centres on the delivery of the core Clearing and Settlement layer to support the overall NPA architecture. Consultation responses were broadly supportive of the suggested event sequencing. Of the 30 respondents that expressed a view, 17 agreed with the overall timeline. The feedback confirmed that examination of the next level of detail will be an important step for the NPSO to undertake to further inform the industry.

Through the next level of design the NPSO will refine the plan to reflect greater detail for additional services and activities. This phase of activity will consider the wider impacts on, and expectations of, key stakeholder groups such as PSPs, Vendors and Corporates for these activities, including the development of overlay services.

Work has continued in collaboration with the NPSO to further develop the plan schedule. The updated strawman plan illustrates that the preparation activity has commenced within the PSOs to provision a Clearing and Settlement architecture layer agnostic to the different payments and services that will be dependent upon it. The schedule does not identify specific commercial negotiation points or periods as that is for the NPSO to determine.

The broad governance activities shown in the updated timeline illustrate the areas requiring consideration by the NPSO enabling the whole industry to transition, whilst ensuring the stability of the UK payments environment.

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. However, there is 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 sets out 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 3.1, indicates that the existing FPSL and BPSL systems will terminate not long after this time – by the end of 2022. 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 Clearing and Settlement layer will continue into 2018 and will lead into the procurement phase. The NPA Clearing and Settlement layer implementation date is expected to be mid-2021 envisaging an initial capability to support FPS payments.

Following this, it is expected 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 FPSL, BPSL and ICS infrastructures will have migrated to the NPA and the legacy systems will have been closed down.
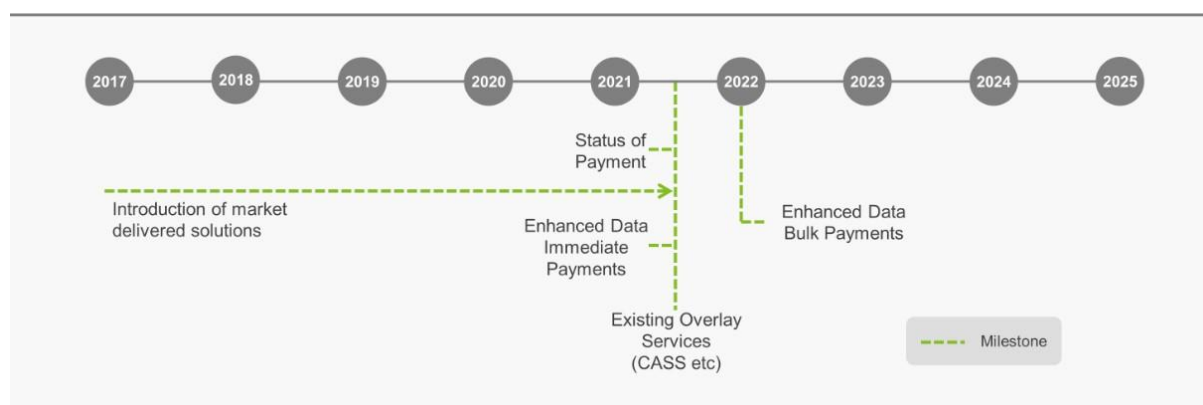
3.2 Customer timeline

Figure 5: 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 5 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, existing services such as CASS, BPRS etc. will be in place to support the NPA as transition commences.

The following sections illustrate the current indicative timelines to develop overlay solutions for Confirmation of Payee and Request to Pay; 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.

Further details for these solutions can be found in the Workstream 1 User Requirements and Rules supporting document.
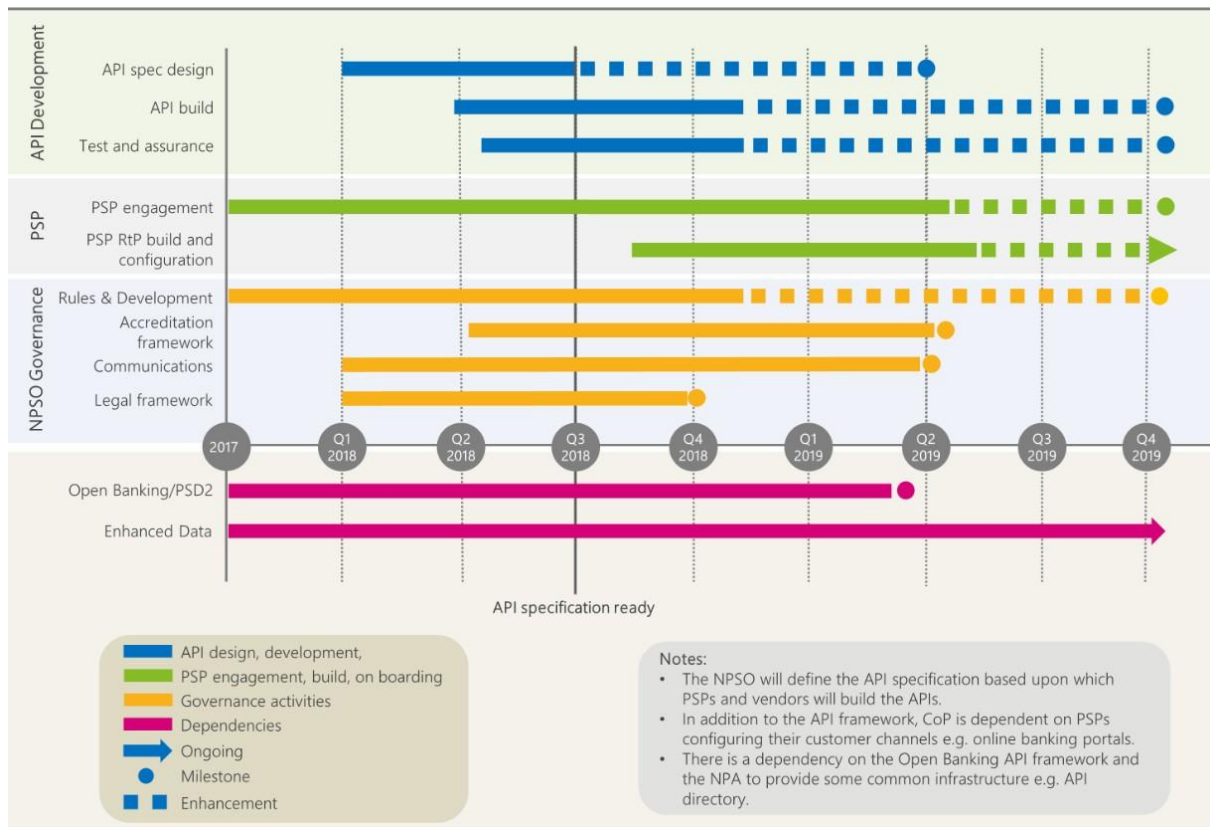
3.2.1 Confirmation of Payee

Figure 6: Confirmation of Payee Indicative Timeline
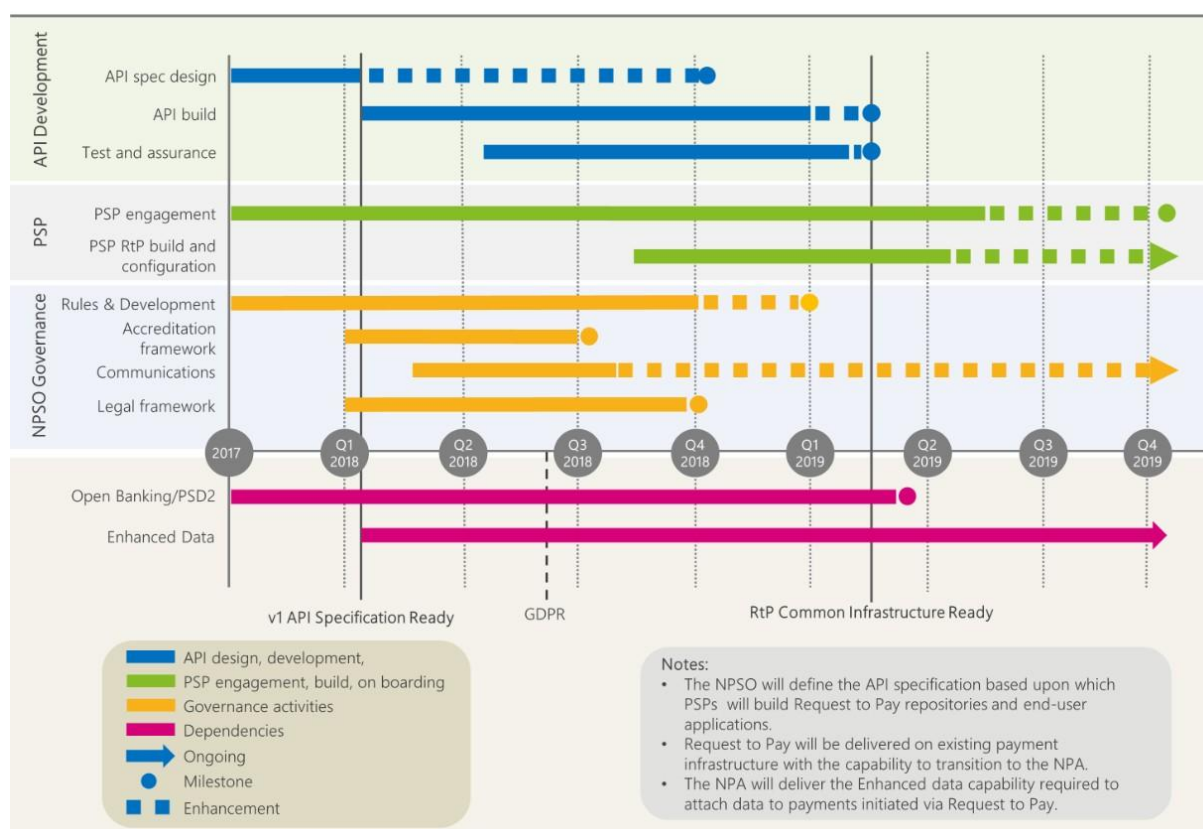
3.2.2 Request to Pay

Figure 7: Request to Pay Indicative Timeline

3.2.3 Enhanced Data and Customer Assurance

The PSF 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 8 below shows the implementation risks identified within the original PSF 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 8: PSF Strategy Paper Implementation Risks

Since the original strategy we have re-examined the risks 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.
- Relevant settlement functionality is available at the Bank of England.
- 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 was 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 emerged requiring mitigation. These were 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 9: PSF Strategy Paper Implementation Risks

Since the publication of the consultation, we have further examined the risks determined in the earlier activity (set out above). This work has expanded on the detail, with additional input sought from stakeholder risk experts to validate and update our work.

Wider stakeholder engagement has also been undertaken with PSOs and the PSR which has ensured alignment and a comprehensive assessment across multiple perspectives.

Building on the previous activity, 7 key focus areas and 6 mitigating themes have been developed:

7 Focus Areas

- NPA Implementation
- Existing Service Transition
- Request to Pay Service Delivery
- Confirmation of Payee Delivery
- Enhanced Data Capability
- New Service Development
- Non-Adoption

6 Broad Mitigation Themes

- Strong consumer (end-user) education and communication to drive adoption by all segment types.
- Deliver clear plan with rules and standards to enable procurement, implementation and transition to occur on time.
- Extensive engagement with key stakeholder groups such as corporates to ensure implementation.
- Governance between NPSO and PSR embedded from Day 1.
- Securing formal industry commitment to support and implement the NPA and associated services from all stakeholder groups.

- Ensuring continuation of the PSF vision by the delivery of an overall architecture that meets the design principles.

From this position, a detailed 'point in time' risk register has been developed, which permits the identification of risk and mitigation themes. These risks and mitigations were underpinned by 55 detailed causal factors that have been subsequently refined to 47 following the review activity noted below.

This work has been reviewed by different stakeholder groups who have provided commentary and endorsed the approach taken:

- PSOs – commented and updated.
- NPSO Risk Chair – approach endorsed.
- PSF design hub – activity endorsed.
- Workstream advisory group – commented and updated.
- Consultation feedback – considered and included.

PSP Risk Expert Review

Alongside the workstream activity, Risk experts from PSPs, who were involved in the assessment undertaken in the first half of 2017, have been re-engaged to independently test the results of the work. The key focus in this activity has been to maintain the 'purity of vision' through the transition to the NPSO, ensuring risks to the NPA implementation are considered as early as possible with mitigations identified and in place where appropriate

This work analysed and tested the detailed risk register using a causal risk analysis methodology to identify the linkages and contagion factors between risks and causes in order to identify the key causes.

This different lens approach determined two key risk events:

- Implementation risks associated with the NPA.
- The risks of not meeting the end-user needs detriments.

The causal factors were then summarised into the below key themes, which underpin these risk events:

- Culture: NPSO may prioritise running of existing CI and culturally struggle with transition to role of market catalyst in development of new products or services in response to evolving user needs.
- Public / media perceptions and lessons learned: End-user and media perception must be managed and customer concerns responded to in a timely manner (for example, messaging on the future of direct debit) to ensure there is not a repeat of criticism received by the payments industry (e.g. Cheque End Date).
- Ubiquitous service / reach is not achieved: It is vital that EUN solutions have the reach and ubiquity to ensure adoption.
- End-user and PSP adoption: Ability of end-users and PSPs to adopt new solutions may be restricted due to an insufficient business case or use case. For PSPs, design interlocks with Open Banking and PSD2 and their capacity for change given the wider regulatory agenda may be restricted.
- Systems are more complex than anticipated: Bacs has 50 years of evolution that needs to be redesigned into the NPA and the increased demands on potential suppliers could deter them and / or lead to scope creep once procurement is complete.

There are three key recommended mitigations:

- NPSO to ensure it has the capabilities to support new funding and liability models introduced by NPA and can deliver in its role as a 'market catalyst'.
- Detailed planning is required to ensure that a strong business case / use cases exist for end-users and PSPs to adopt EUN solutions. Back up plans should also be developed on how to mandate

- adoption for PSPs if ubiquity cannot be delivered via the market.
  - · CPMI-IOSCO Principles to be considered throughout design and build phases to ensure NPA can support UK Critical National Infrastructure.

Importantly, these findings align and have been mapped back into a refresh of the risk register. The action is included as part of the handover to ensure that the risk assessment and mitigation activity can continue in the NPSO, leveraged by existing Risk capability in the PSOs.

The review noted that even without the NPA / EUN being implemented, it was evident that the industry will be required to accept a certain level of risk as current systems require tendering, migration and refresh.

A key objective for the NPSO moving forward will be to ensure that the risks are within the risk appetite of the NPSO (as systemic risk manager of the retail payments industry) and of other key stakeholders.

'Fresh Eyes' Review

As a final validation of the work the PSF Design Hub instigated a further 'fresh eyes' review of the approach and findings. It has looked at the risks identified for the NPA and End-User Needs implementation

This review set out a number of recommendations that aligned with the outcomes of the workstream activity and the PSP risk expert review – these can be summarised as:

- · A refresh of the register is to be completed prior to the handover to simplify the risks down to a manageable set of prioritised key items, incorporating the recent risk activities and feedback.
- · An active risk management approach is adopted with a communications approach and plan that ensures all stakeholders are engaged and onside.
- · Commitment should be sought from the NPSO to complete an early review of risks with key industry stakeholders to define tangible mitigations and confirm ownership.
- · Visibility is required by an agreed set of stakeholders from the Forum of the ongoing status of key risks ensuring the purity of vision is maintained through the implementation.

All recommendations have been adopted and included as part of the handover of the Risks to the NPSO which have now been accepted.

4 Transition Periods

Our proposed approach is that all participants should be able to receive single immediate payments 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 during the ICS implementation 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]
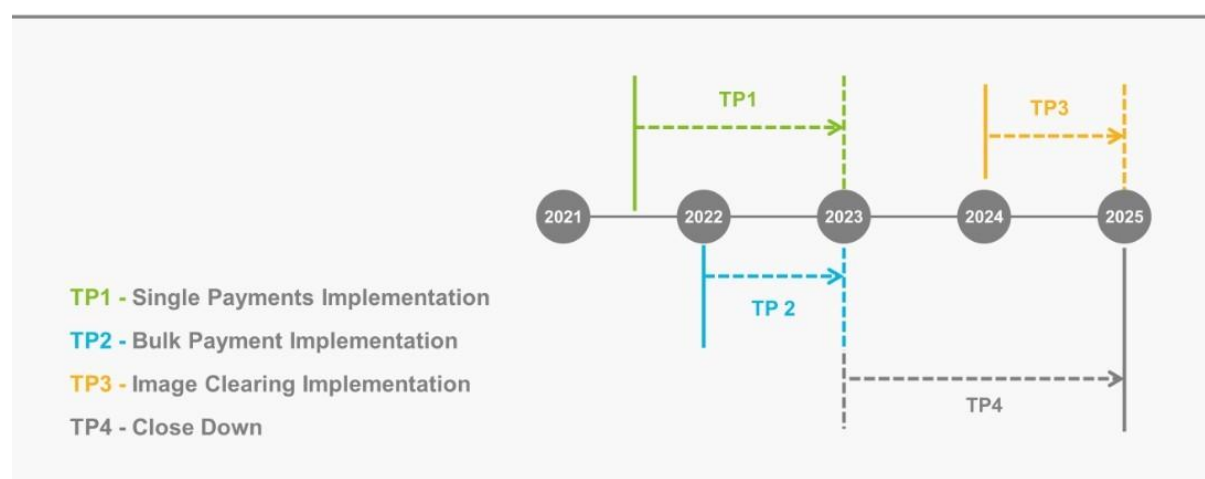

Figure 10: Transition Periods Overview

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

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.
- 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 Blueprint 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:

- 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.
- Relevant settlement functionality is available at the Bank of England.

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 single immediate payments (phased)
- **Phase 2:** Sending forward-dated payments

Timeline - Q3 2021 to end 2022

Prerequisites
- Relevant settlement functionality is available at the Bank of England.   - The Clearing and Settlement layer and prerequisite components for single immediate payments will be in place.   - All PSPs will have obtained accreditation from the NPSO and will be ready to receive single immediate payments.   - Any overlay service providers (e.g. Confirmation of Payee/Request to Pay) have obtained accreditation from NPSO and solutions are in place.

Payment Type	Migration Status
FPS	• Single Immediate Payments (SIPs) begin migration to NPA including deferred payments e.g. standing orders and future 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** • Confirmation of Payee 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** • Confirmation of Payee 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 single immediate NPA payments from Day 1. • Begin sending single immediate payments via NPA.

	· Roll out enhancements to their own propositions to support the NPA end-user benefits.

Table 2: Transition Period 1

Figure 11 below illustrates the first transition period where all PSPs will be capable of receiving NPA derived payments, which enables the FPS migration to commence. This enables PSPs to commence migration at their own pace (within the agreed overall migration period constraint).
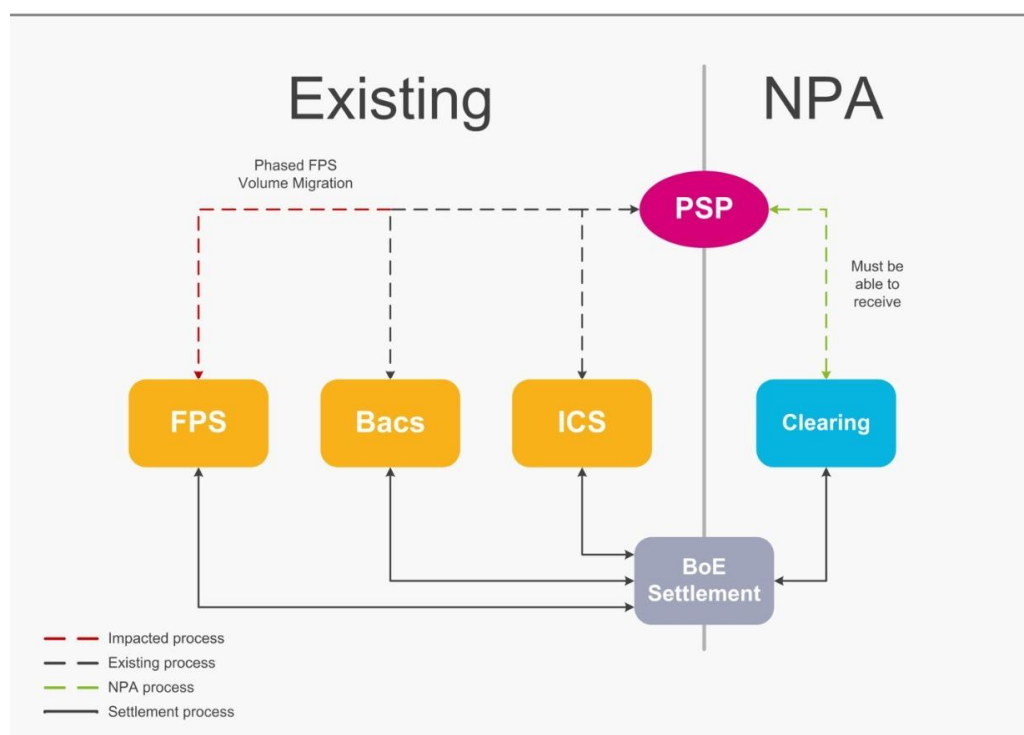

Figure 11: Transition Period 1

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 - Q1 2022 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
FPS	• 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** • Confirmation of Payee 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** • Confirmation of Payee 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. • FPS migration will complete during this period enabling the close down of legacy FPSL systems.

Table 3: Transition Period 2

Figure 12 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.
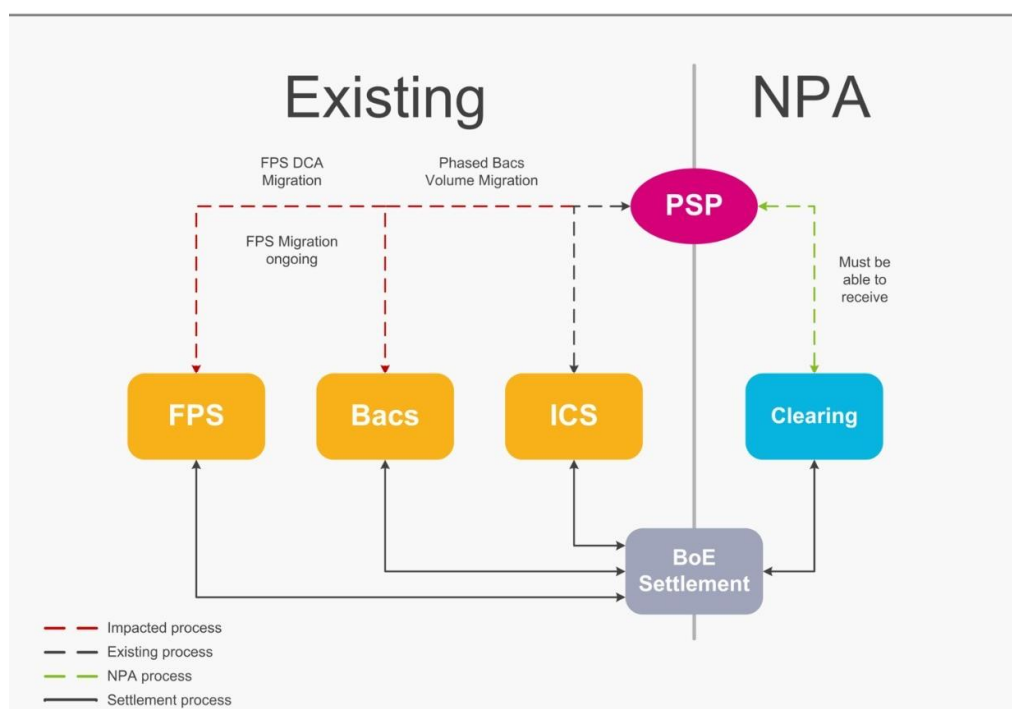

Figure 12: Transition Period 2

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 ISO20022 file format in order to provide additional information, e.g. Enhanced Data, which 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 Image Clearing. • All Paying PSPs will need to be able support NPA image clearing.

Payment Type	Migration Status
FPS	• FPS migration now complete.
Bacs	• Bacs migration now complete.
ICS	• ICS migration begins.

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: Transition Period 3

Figure 13 below Illustrates the third and final migration related transition period when ICS volumes can commence migration.

31
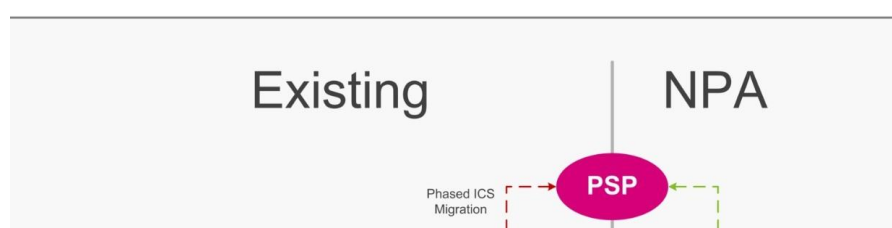
4.5 Transition Period 4 – Close down

Timeline – Q1 2023 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 14 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.
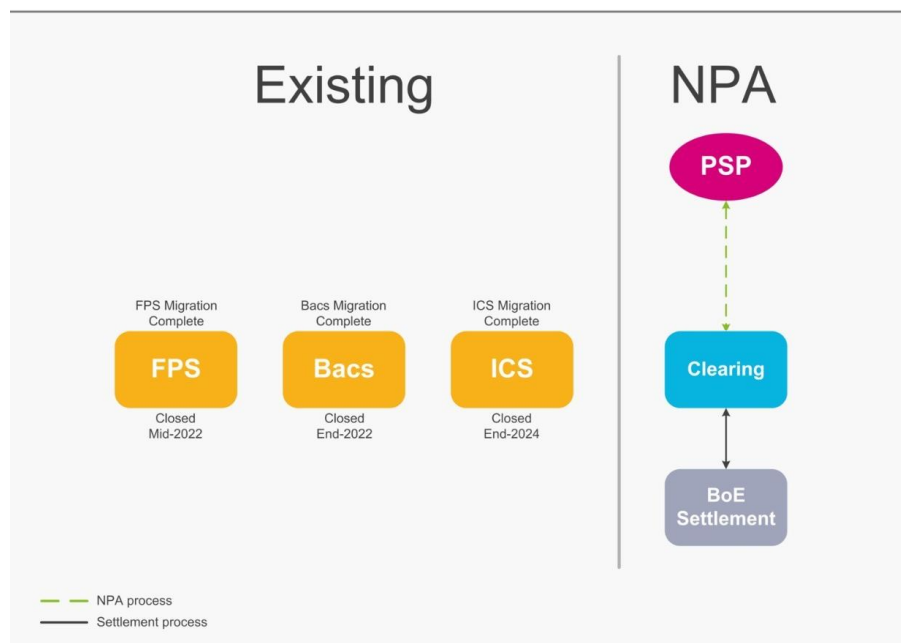
Figure 14: Transition Period 4

4.6 Suggested Phased Timeline and Approach

For the consultation a suggested phased timeline and approach for the NPA was included. This remains an indicative illustration only.

The revised implementation planning, ongoing work in Workstream 2 and Consultation feedback in the second half of 2017 has determined that at this stage it is not appropriate to update the timeline further at this stage.

The timeline will be subject to review and update as the NPSO develops its plans.

Figure 15: 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 nee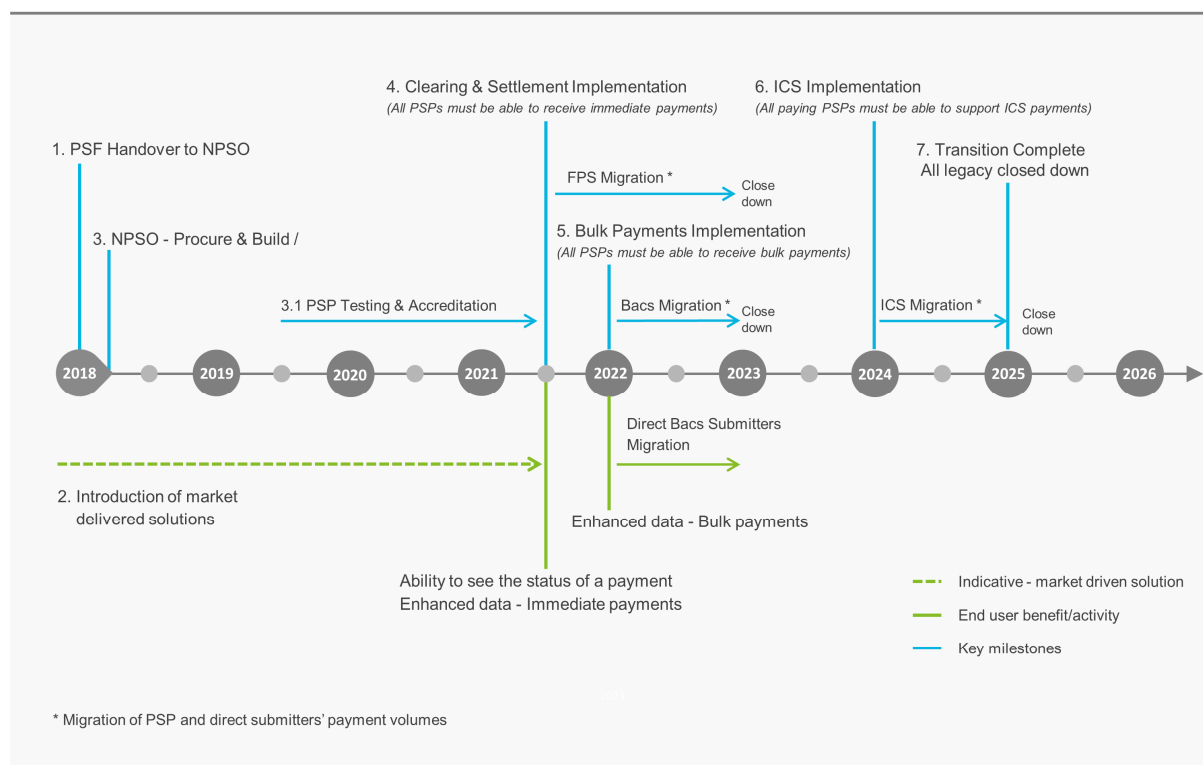ds to be factored in to allow organisations to budget and plan for any required changes they may need to make, such as registering and/or gaining accreditation for participation in NPA.

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

As identified in the Risks section above, there is a recommendation for the NPSO to develop a communications plan and approach for NPA including a comprehensive stakeholder engagement plan.

The following gives a high-level indicative view of timing considerations that may be required for communications to key user groups throughout the implementation time frame. The actual timeline will be subject to review and update as the NPSO develops its plans.
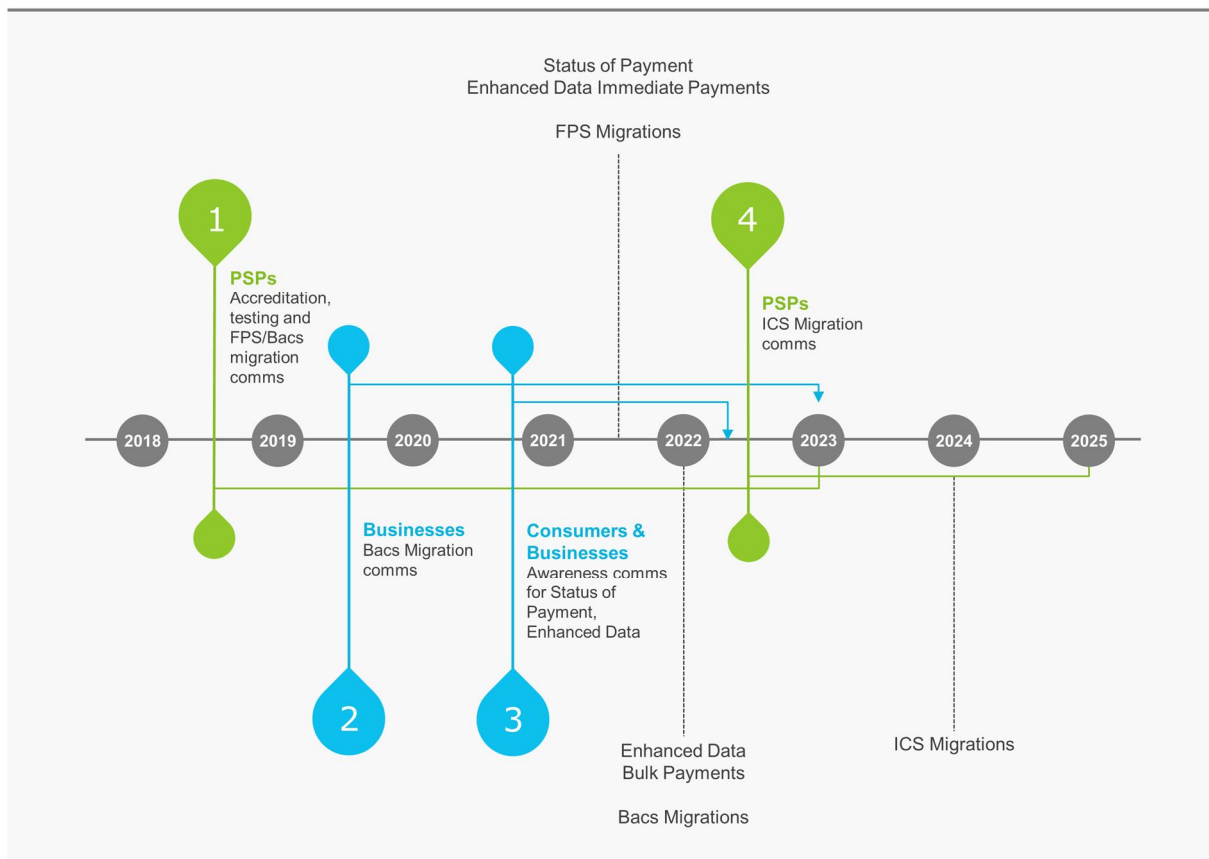
Figure 16: Illustrative Communications Timeline

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 content has been leveraged to create the relevant sections of the Consultation document 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.

Since the publication of the Consultation the document has been updated reflecting the responses and ongoing activity.

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 PSF's wide constituency through:

- PSF 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.
- PSF 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 PSF '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 work streams.
- Deliver outcomes that meet the requirements of the Design Hub Terms of Reference.
- Identify dependencies, e.g. relevant settlement functionality is available at the Bank of England 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 subsequently update a strawman timeline and transition shape with stakeholder groups.

7 Implementation Planning - Handover

Activity undertaken in the second half 2017 has focused on an outcome that ensured a successful handover to the NPSO at the end of 2017. This included a key overarching control activity to 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.
- Updated background thinking and reasoning – principles and assumptions.
- Artefact records – identified and deployed into a suitable repository.

Delivery plan to manage risks

- Detailed definition of risk and development of a register.
- Review and assessment of mitigations.
- Wider socialisation to update.
- PSP/PSO SRM assessment.
- Define minimum hurdles to satisfy industry risk appetite.
- "Fresh eyes" review.
- Define next steps for NPSO.

Alignment of already in-progress related industry initiatives

- Ongoing inflight activity within the wider NPA design work.

Further socialisation and communication

- Stakeholder engagement has continued and features as a key requirement for the NPSO.

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

- Significant and ongoing "inflight" activity is being undertaken in Workstream 2 to ensure that existing products and services have a transition path to the NPA.

Engagement and socialisation with new NPSO CEO/team

- Activity is ongoing.

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

- PSF & Advisory Group have agreed to our plans, which are aligned to the NPSO "receive" activity.

Collation and analysis of relevant Consultation responses

- Responses considered and changes assimilated and reflected in revisions throughout this document since publication of the original version in July 2017.

8 Consultation responses

Based on the assessment of the current and future industry landscape, there is general agreement with the principles and assumptions supporting the implementation plan for the NPA, the high-level timeline proposed, sequencing and transition approach.

Several respondents, however, observed that the timeline is too ambitious. Some felt that Direct Debits should be migrated separately. The timeline earlier in this document has therefore been modified as part of the post Consultation activities.

The majority of respondents felt there were additional risks not captured within the consultation paper, and we have acted on this feedback by performing a detailed risk review, which will be handed over to the NPSO. Most of these risks were already reflected in the detailed documentation.

Themes	Responses
Implementation plan principles and assumptions.	Activities: In line with respondents' suggestions, amendments have been made to the implementation plan principles and assumptions, such as: o Strengthening the wording around the principle of retaining resilience and stability of the system. o Adding an assumption to clarify that RtP would operate alongside and complement Direct Debit rather than replace it. o Adding an assumption that processes would be put in place to keep data in sync between legacy and new systems (e.g. CASS).
Implementation timeline, sequencing and transition approach.	The implementation timeline initially proposed in the consultation document has been updated after collaboration with the NPSO which reflects the procurement process they intend to use to deliver NPA. The feedback on the Consultation has been taken on board in this process. Activities: o An updated timeline incorporating respondent feedback, which is reflected in the final blueprint. o Ongoing additional engagement work with small and medium enterprises that will be continued by the NPSO till Q1 2018. o Ongoing targeted meetings with respondents to respond to concerns and address challenges to the approach that will be continued by the NPSO till Q1 2018.
Implementation risks o The majority of respondents felt there were additional risks not captured within the consultation paper. o Confusion over Direct Debit led to responses from SMEs / corporates that any significant changes would be a risk to their business.	Activities: o Additional risks and mitigating actions have been incorporated into the blueprint and risk register, which will be handed over to the NPSO. o Clarification on Direct Debit in the blueprint.

Table 5: Consultation Responses

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).

Bacstel IP: One of three communication channels used to connect to the Bacs infrastructure. This is typically used by indirect PSPs and corporates with smaller transaction volumes.

Bank of England (BoE): The central bank of the UK. It runs the RTGS service used for settlement in central bank money and is the prudential supervisor of some types of PSPs as well as payment systems with an objective of protecting and enhancing financial stability.

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. It operates on a three-day cycle and settles net once a day in RTGS.

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

Competition and Markets Authority (CMA): A non-ministerial department of the UK government that promotes competition for the benefit of consumers, both within and outside the UK.

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 payee's payment account, with a payment transaction or series of payment transactions, from a payer's payment account, by the Payment Service Provider which holds the payer's payment account, based on an instruction given by the payer.

Direct debit: A payment service for debiting a payer's payment account, where a payment transaction is initiated by the payee on the basis of the payer's consent given to the payee, to the payee's PSP or to the payer's own PSP.

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: Person or organisation that actually uses a product.

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 FPS payment system.

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

FinTech: Financial Technology companies that provide services and technology to institutions and consumers.

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

General Data Protection Regulations (GDPR): The General Data Protection Regulation (GDPR) (Regulation (EU) 2016/679) is 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). It was published in the Official Journal of the EU on 4 May 2016. It will apply from 25 May 2018.

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 sets out the regulatory regime that lays the foundations for open banking, by giving registered/authorised third party providers a 'right' to access a consumers account. As part of the implementation of this, Open Banking are designing API Standards to create a more effective system for connecting third party service providers and financial institutions.

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

Paym: A service that enables payments to be made using a proxy such as a mobile phone number to a bank account. Paym is run by the Mobile Payments Service Company Limited (MPSCo), a company limited by guarantee. The Paym service is offered directly to customers by Payment Service Providers that are participants in MPSCo.

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): A person when making use of a payment service in the capacity of payer, payee, or both.

Payment Services Directive 2 (PSD2): Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC, published in the Official Journal of the EU on 23 December 2015.

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 United Kingdom. The PSR, the Financial Conduct Authority and the Bank of England attend the Forum as observers.

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 PSF proposed consolidation of the three retail PSOs: BPSL, C&CCC and FPSL.

Payment Systems Regulator (PSR): The economic regulator of payment systems in the United Kingdom. The PSR aims to promote competition, innovation and interests of end-users of payment systems.

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

PSF 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.

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 that is initiated by the payee.

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): A set of cryptographic hash functions designed by the United States National Security Agency (NSA). The cryptographic hash functions are mathematical operations run on digital data; by comparing the computed 'hash' (the output from execution of the algorithm) to a known and expected hash value, a person can determine the data's integrity.

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 and is not limited to a specific group of users. Service users will include – banks who use payment services provided by other institutions; businesses; retailers; charities; government and consumers.

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

Standing Order: an instruction to a bank by an account holder to make regular fixed payments to a particular person or organisation.

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.

Vendor: A technology provider of payment services. Those that offer clearing and settlement services are also referred to as infrastructure providers.