Payments Strategy Forum
Summary Presentation
New Payments Architecture (NPA)
6th June 2017

Summary

- o This presentation provides a view of the latest content in development from each of the NPA workstreams

- o This view is being provided to the Forum as a response to an action following the 26th April Forum session

- o An earlier iteration of this content was recently presented to the Vendor Advisory Group on the 19th May

- o The content is providing the basis for Consultation document development

- o Each workstream has proposed draft questions for Consultation which we would appreciate your feedback on

- o More detailed content can be found in the supporting pack, if required

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Actions from 26th April Forum session

Update on actions / feedback points from the 26th April Forum session.

Action Ref	Action Description	Action Owner	Meeting Raised	Date Raised	Status	Comment
ID001	EY to share the timeline for consultation document development that has been set out to get to consultation (as has previously been shared in the Design Hub meetings).	PSF Central Team	26 April Forum	26/04/2017	Closed	Timelines for Consultation document shared with Design Hub on 28 April and 05 May.
ID002	NPA Design Hub to consider the structure; content; questions and detail of the July Consultation.	PSF Central	26 April Forum	26/04/2017	Closed	Addressed by PSF Central Team with NPA WS PMS in weekly meetings. Snapshot of progress to be shared at 06 June Forum
ID003	NPA Design Hub to provide a content update at the 6th June Forum meeting, followed by the first draft of the Blueprint at the 22nd June meeting and sign off at the 12th July meeting.	NPA Design Hub	26 April Forum	26/04/2017	Closed	Content update from each NPA workstream provided for 06 June Forum.
ID004	NPA Design Hub to consider the implementation approach / handover / transition from the Forum to the NPSO to ensure any risks are mitigated. It is anticipated this will take place during the consultation phase.	NPA Design Hub	26 April Forum	26/04/2017	In progress	PSF Central Team (Patrick Seal) worked with PSO DG representative, Becky Clements, to agree handover approach which has been discussed at PSO DG on 31/05/17
ID005	To document any unintended consequences / risks resulting from the three end user solutions and clearly articulate how they are being addressed.	NPA WS1	26 April Forum	26/04/2017	In progress	Work in progress by WS1
ID006	To document which stakeholders they have engaged with / plan to engage with during the development of their use cases.	NPA WS1	26 April Forum	26/04/2017	Closed	WS1 updated the Design Hub on 11/04 on who they have engaged for the development of their use cases.
ID007	To consider and implement an independent risk review, by risk professionals, of their implementation planning.	NPA WS3	26 April Forum	26/04/2017	Closed	A risk review has now been commissioned. It is currently being undertaken by risk experts from several PSPs and its findings will inform the implementation plan consultation document.
ID008	To update their thinking to reflect the dependencies heat map and roles and responsibilities.	NPA WS3	26 April Forum	26/04/2017	Closed	The dependencies heat map has been reviewed and revised in order to make it clearer. The revised version will be included in the consultation documentation.
ID009	To ensure that their output is positively phrased and also considers the opportunities created by various industry changes.	NPA WS3	26 April Forum	26/04/2017	In progress	Consultation documentation is being reviewed to ensure that a positive but realistic tone is achieved whilst noting any change carries with it risk, the anticipated outcomes will provide opportunities and benefits to multiple stakeholders.

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NPA Workstreams Status Overview
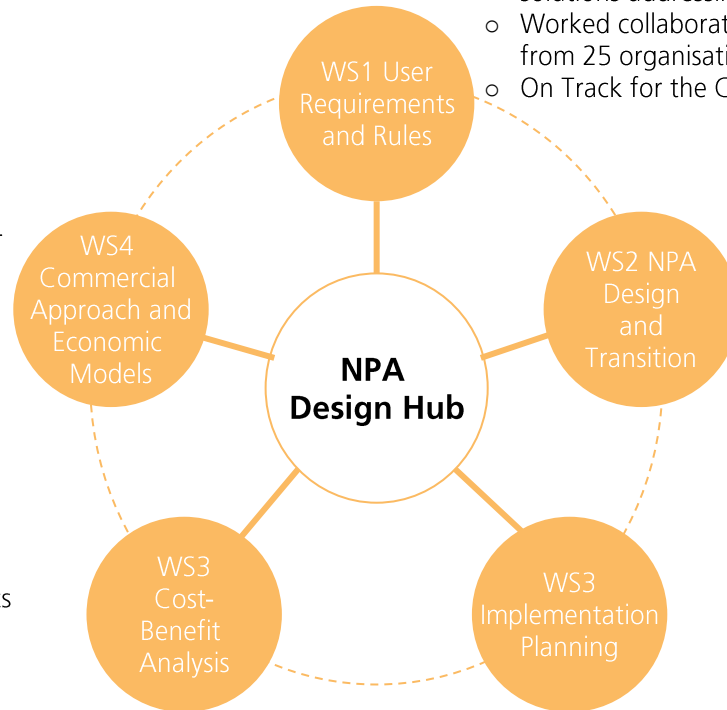
- o Designed and presented core proposition for the 3 End User Needs solutions addressing the detriments identified in the Strategy.
- o Worked collaboratively with input from a wide range of stakeholders from 25 organisations to design and validate the 3 EUN solutions.
- o On Track for the Consultation dates.

WS1 User Requirements and Rules

WS4 Commercial Approach and Economic Models

NPA Design Hub

WS2 NPA Design and Transition

- o Developed a commercial categorisation for the elements of the NPA.
- o Clarified the role of competition in the architectures.
- o Draft funding and economic models being discussed and finalised.
- o On Track for the Consultation dates.

- o High Level Architecture Outlined.
- o Preferred centralised option for Settlement and Clearing agreed at Design Hub.
- o A Settlement and Clearing Option analysis is included in the Supporting Doc pack.
- o Working on Transition States with Implementation Planning workstream.
- o Actions in place to bring on track for Consultation dates.

WS3 Cost-Benefit Analysis

WS3 Implementation Planning

- o Interviewed a wide sample of the payments community.
- o Built a CBA model in line with the agreed Inception Report.
- o Finalising the first draft report within the Workstream team.
- o Included Key Assumptions and emerging cost benefit model in this pack.

- o Developed a Payments Industry implementation Landscape shared with the Forum.
- o Risk assessment of Implementation Landscape undertaken
- o Key planning principles and assumptions agreed and in this pack.
- o Developing an Implementation Plan and we ask for your feedback on the draft version included in this pack.
- o On Track for the Consultation dates; dependent on WS2 for finalisation of transition states.

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Content

1
- WS1 User requirements and rules:
  - 3 End User Needs and Use cases
  - DRAFT Consultation Questions

2
- WS2 NPA Design & Transition:
  - High-level architecture and preferred Settlement & Clearing option
  - DRAFT Consultation Questions

3
- WS3 Implementation Planning:
  - Architectural Timeline
  - DRAFT Consultation Questions

4
- WS3 Cost Benefit Analysis:
  - **Guidance required** on Counterfactual scenario
  - DRAFT Consultation Questions

5
- WS4 Commercial Approach and Economic Models:
  - Competition Categorisation and Assessment Criteria
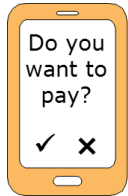 - DRAFT Consultation Questions

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Section 1

WS1 – User requirements and rules

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WS1 is defining Rules and Requirements for the 3 EUN solutions proposed in the PSF strategy
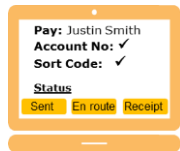
1. Request to Pay

For a majority of end users, current push pull payments work well. However, for an increasing share of the market they are **not flexible enough to meet their needs** especially driven by changing labour arrangements where more and more people/businesses are on increasingly variable income and trading receipt patterns.

2. Assurance Data

At present **end users making a payment are subject to uncertainty at various points in the payment journey.** They are not able to determine for certain the identity of the recipient and thereafter the subsequent status of the payment-Receipt as well as any events mid flight.
A recent "Which? Super complaint" to the PSR on safeguards related to push payments highlights some of these vulnerabilities

3. Enhanced Data

Traditionally a payment carries a limited set of data (Amount, Date, Identity of Origin). This is supplemented by a companion document sent via alternative means usually paper based. Receipts, invoices, tax certificates etc. **This inability to add data creates problems with providing sufficient data for reconciliation, adding additional data required for other solutions such as Request to Pay and Assurance Data etc.**

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We are utilising a User-Centric Requirements Approach

The Requirements approach:

o   places the end user at its heart

o   encourages a collaborative approach to requirements definition from the various stakeholders

1 _PSF Solutions_

o   Request to pay
o   Assurance data
o   Enhanced data

2 _Identify use cases_

o   Identify actors and relations
o   Identify various tasks between the various actors
o   Case Prioritisation

3 _Elaborate User stories_

o   Define user stories
o   Define acceptance criteria
o   Define high level e2e journeys
o   Carry out prioritization

4 _Detail and refine_

o   Detailed user stories
o   Detailed acceptance criteria
o   Detailed non Functional requirements

Enablers

Workshops   Stakeholders Consultation   Prioritisation Framework   Review and Sign off
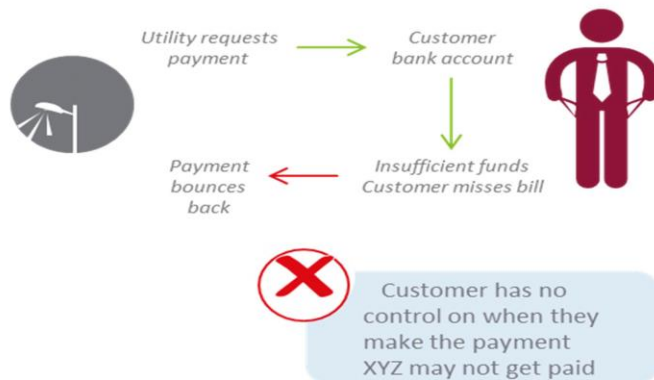
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Request to Pay

Problem Description

For a majority of end users, current push pull payments work well. However, for an increasing share of the market they are **not flexible enough to meet their needs** especially driven by changing labour arrangements where more and more people/businesses are on increasingly variable income and trading receipt patterns.
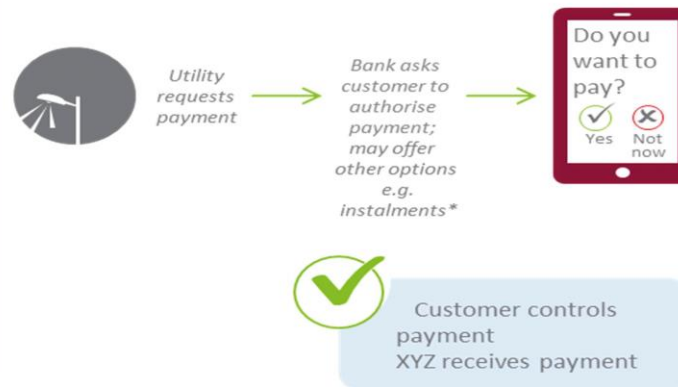
Value proposition

✓ Control: Payers would have increased control over the timing of their payments allowing them to sync these to their income

✓ Increased customer service quality and brand value for businesses

✓ Increased operational efficiency in the collection of bills for payees

Problem

Utility requests payment → Customer bank account → Insufficient funds Customer misses bill → Payment bounces back

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

Solution

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

✓ Customer controls payment XYZ receives payment

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

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Request to Pay

Payee's view

Initiate request to pay

Provide request related information (Invoice, receipt, etc.)

Receive payer's response

Reconcile payment ED

Update payers account ED

Example

Green Energy (GE), a UK energy supplier, would like to get paid by John, for energy supplied last month. GE sends John a request to pay with a bill amount and payment period.

Two days later, GE receives a response from John. He will be paying half of the amount and the rest later. One day before the end of the payment period, GE receives a second response from John saying he will pay the remainder immediately.

At the end of the payment cycle, GE reconciles the payments made. They utilize the Request to Pay Reference captured on the payment to carry this out.

ED Use Case Supported
by Enhanced Data

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Request to Pay
Payer's view

Receive request to pay

- Check associated payment info (Invoice, receipt, etc.)

Respond to request to pay

- ✔ Pay Full amount
- ✖ Pay Partial amount
- ⏱ Request payment extension
- ✖ Decline payment
- 📞 Contact requester/ Help

- Select payment method
- Initiate Payment   `ED`

Example:

GE sends out Request for Payment to its customers.

Both John and Mary, separately, receive a request to pay from Green Energy (GE), their energy supplier, with the amount and associated payment period during which they can make a payment.

Two days later John accepts and pays half of the amount owed. A week later he pays the remainder.

Meanwhile, Mary is not able to make the payment within the payment period. She requests GE to contact her to discuss alternative payment options. GE inform her that as part of their existing contract with her she has the option, and does qualify, for a payment extension. She requests a one week extension. GE approve this.

Three days into the extended period she receives some income and makes the payment to GE.
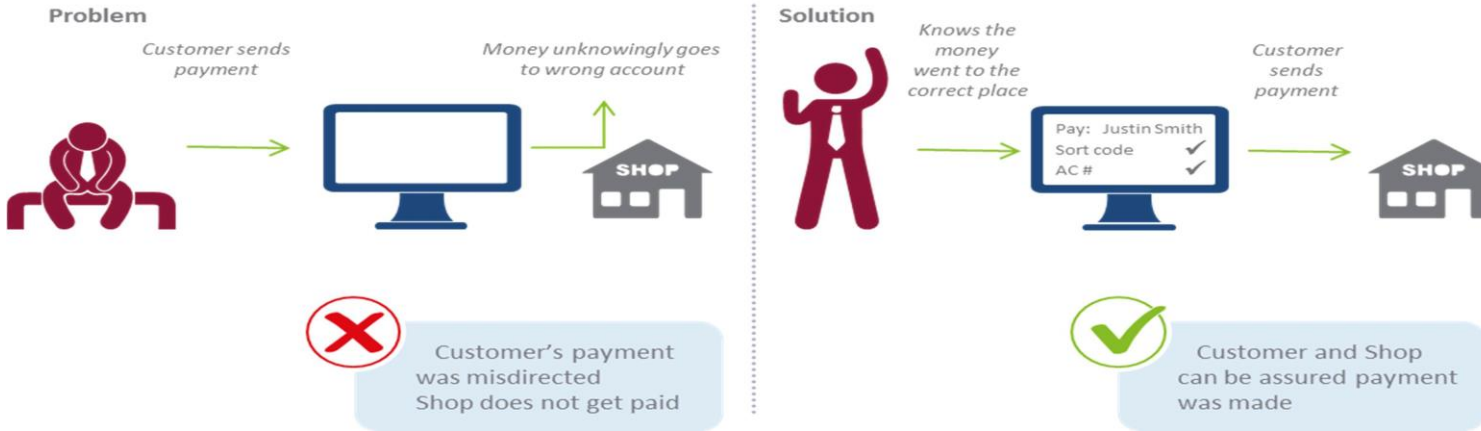
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`ED` Use Case Supported
      by Enhanced Data

Assurance Data

Problem Description

At present **end users making a payment are subject to uncertainty at various points in the payment journey.** They are not able to determine for certain the identity of the recipient and thereafter the status of the payment-Receipt as well as any events mid flight.
A recent "Which? Super complaint" to the PSR on safeguards related to push payments highlights some of these vulnerabilities

Value proposition

✓ **Increased certainty**: to end users-real time balance information, Intended time of Transaction completion, Confirmation of Payee, Confirmation of receipt

✓ **Increased uptake of electronic payments:** as a result of increased end user confidence

Assurance Data

Payee's view

Confirmation of Payer's identity

Determine Payer identity using an associated account reference or proxy

Determine Payer identity using an associated account reference or proxy details for 'indirectly addressable' accounts

*Use cases applicable only to payees acting as billers

Determine status of payment made

Determine position of payment on journey

Determine credit status

Example:

Matt has just signed up for a contract with British Mobile and chosen to pay via Direct debit.

As a DD service use British Mobile are required to verify the identity of the payer to ensure the account details provide relate to the payer.

In addition to validating the account number and sort code combination (modulus check) they proceed to verify that account details relate to Matt.

British Mobile utilises the Confirmation of Payer service to verify the latter.

Once payment has been made British Mobile is able to determine the credit status of the payment.

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ED Use Case Supported
     by Enhanced Data

Assurance Data

Payer's view

Confirm Payee's identity

Determine Payee identity using an associated account reference or proxy

Determine Payee identity using an associated account reference or proxy details for 'indirectly addressable' accounts

Determine Status of payment made

Determine delivery status

Determine position on journey to Payee

Determine debit status

Example:

Peter has received a text message from Mark, his window cleaner, with some bank account and payment details for a job Mark just concluded. Peter wants to be sure that the details he received are correct and that the account actually belongs to Mark when he makes the payment. Peter accesses his online banking account, inputs Marks account details and confirms that the account does belong the correct Mark he is willing to pay.

The next day Peter consults the payment he made given that he wants to be sure the payment has reached Mark's account and that the full amount has been accredited to him.

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ED Use Case Supported
     by Enhanced Data

Enhanced Data

Problem Description

Traditionally a payment carries a limited set of data (Amount, Date, Identity of Origin). This is supplemented by a companion document sent via alternative means usually paper based. Receipts, invoices, tax certificates etc. **This inability to add data creates problems with providing sufficient data for reconciliation, add additional data required for other solutions such as request to pay and assurance data etc.**

End users have expressed a desire to have more data included with the payment.

Value proposition

✓ **Reduced operational costs**: to end users associated with reconciling payments

✓ **Increased efficiency and reduction in errors** currently inherent in the reconciliation process

✓ **Greater opportunity for automation**

Enhanced Data

Payee's view

Reconcile a remittance to a payer

Reconcile a remittance to a transaction

Example:

Northern Water (NW), a water supplying company, receives a payment into their collection account.

Using the additional data, they are able to determine that the payment is from their customer Anne (Account holder) for her January sewerage bill. (Transaction). They update her account accordingly.
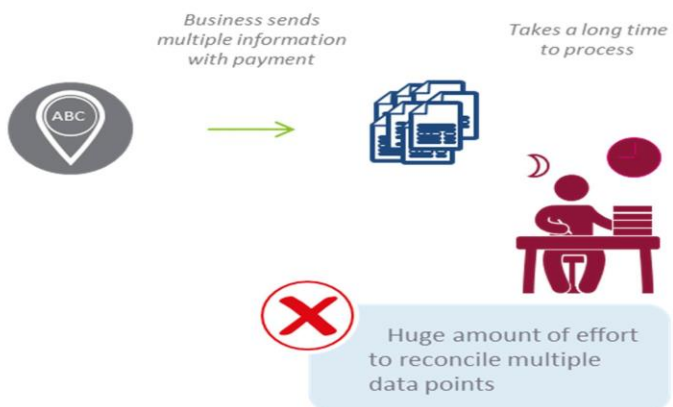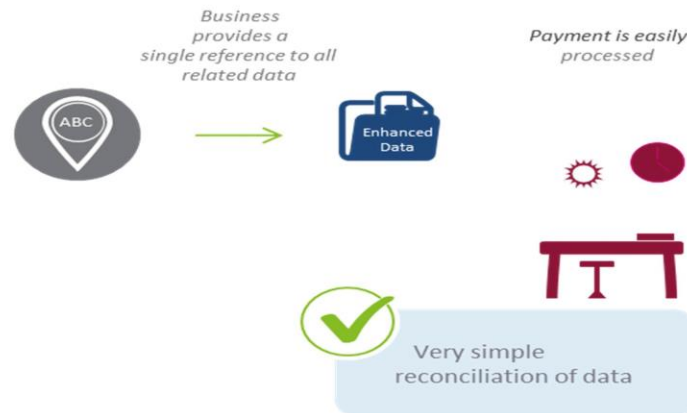
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Enhanced Data

Payer's view

Add additional data to a payment

Identify a payment made

Example:

Anne is making a payment to Northern Water, her water supplier, for February's bill. Within her online banking mobile application, she looks up her customers account and adds it with the payment as required by NW.

Two days layer, Anne accesses her bank and is able to identify every transaction she has made this month and to whom; for what and how much.

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Draft WS1 Questions for Consultation (1)

General Questions

o   Principles: Do you agree with our design principles?

o   Scope: Do you agree with the scope as outlined for each of the solutions?

o   Do you agree with our description of the solutions?

   o   Does it solve for the detriments identified in the PSF Strategy?

   o   Would your organisation utilise this solution?

The workstream has presented what it believes is the core proposition that meets the detriments identified and provides a platform for competition and innovation to build on.

   o   Do you believe the level of specification we have provided is sufficient to foster a common standard while leaving room for competition and innovation?

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Draft WS1 Questions for Consultation (2)

<u>Solution specific questions</u>

Request to Pay

The Forum has proposed flexibility on when a payment is made as a core aspect of the Request to Pay. This is through the Payment Extension functionality. The terms of which, are dictated in the contract between the payer and the payee.

- o Would your organisation utilise the Payment Extension functionality? If you are a Payee, would you offer it to all your customers?
- o Do you agree with our proposal to leave the terms of the Payment Extension to the contractual agreement between the payer and the payee?

Confirmation of Payee

The Forum has come to the conclusion that for Confirmation of Payee to achieve its intended goals, this must be an opt out service. All accounts applicable must be accessible via the service by default.

- o Do you agree with this conclusion?

Enhanced Data

The Forum has made the decision not to specify a minimum set of data elements/fields required as part of Enhanced Data. This decision is driven by the variety of data requirements from one end user to the other.

- o Do you agree with this conclusion?

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Section 2

WS2 – NPA Design and Transition

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NPA Key Features

NPA is layered to maximise enablement of competition

NPA uses standard messaging to make market access and innovation easier

NPA is based on push payments to enable simplicity and customer control

NPA will always know where payments are to provide peace of mind & service security

NPA will support compliance

NPA will be reliable, available and secure

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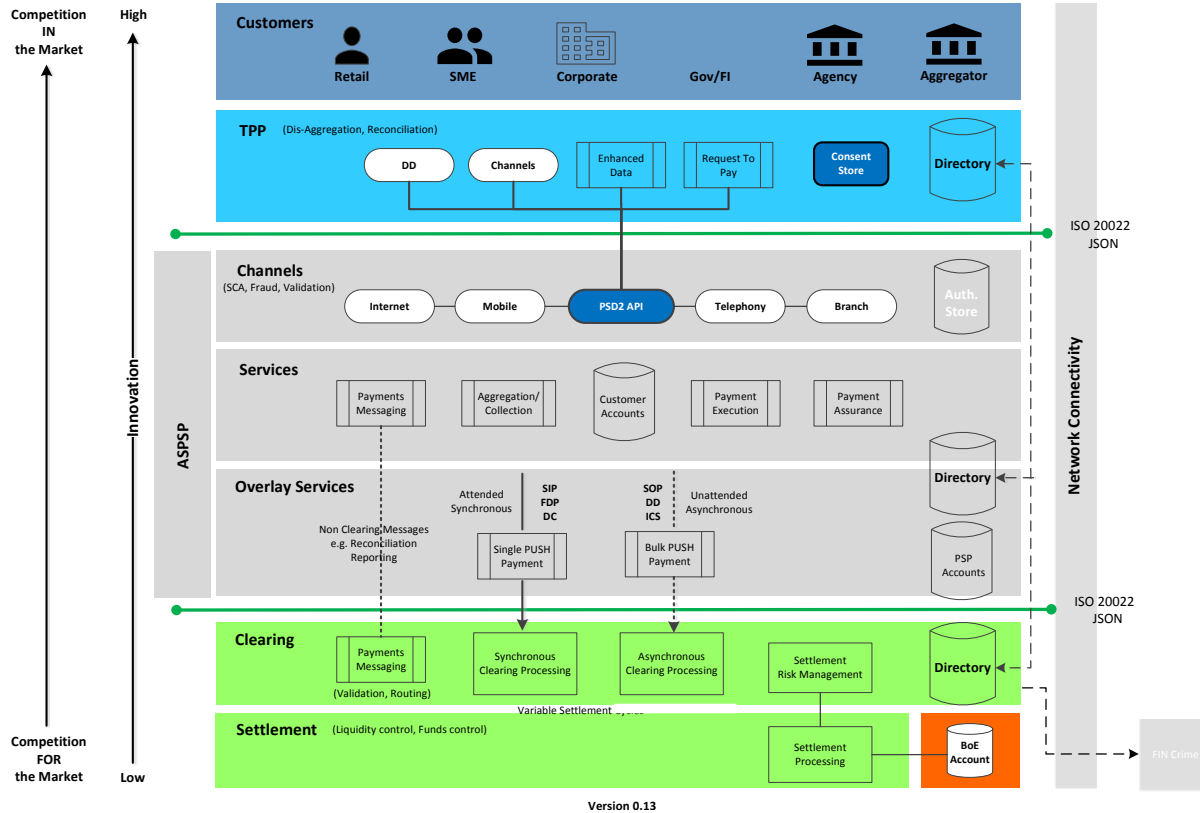
Core Principles of NPA
1. A single set of standards and rules, with strong central governance
2. End-to-end interoperability (including APIs and a common message standard)
3. A thin collaborative infrastructure, allowing multiple providers of overlay services to compete in the market simultaneously
4.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

RTGS Principles Supported
1. Strengthened resilience, interoperability and contingency messaging
2. Facilitates direct access and aggregators
3. Convergence of domestic messaging to ISO 20022 end2end
4. Flexible payment models via overlays and APIs
5. 24x7 operation and flexible/shorter settlement cycles
6. Transition designed to minimise impact and isolate users from change

Note: The NPA will support a Push Payment model.

Drivers for layered architecture
- ✓ Each layer separate from the other – mitigates the risk of contaminations
- ✓ Enables innovation and competition
- ✓ Allows for an easier 'upgrade path' to various components in the industry

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NPA Key Features Mapped to Core Principles

Four core principles were defined by the Forum to govern the New Payments Architecture. A set of aligned Architecture Design Principles were established as below to guide the design decisions.

Core Principle	NPA Design Principle
A single set of standards and rules, with strong central governance	o NPSO Approved Overlay Service(s) **enabling competition** o Participants will be required to be certified and registered (likely by the NPSO) **ensuring security and resilience**
End-to-end interoperability (including APIs and a common message standard)	o ISO 20022 - data standard will be used for all messaging **enabling market access** and **innovation** o Supports Transition Strategies and Methodologies **underpinning resilience and stability** o The fate of attended payments will be known immediately **providing customer control and service resilience** o Unattended Payments will be processed Asynchronously **maintaining core payments capability**
A thin collaborative infrastructure, allowing multiple providers of overlay services to compete in the market simultaneously	o Clear Boundary of Layers **enabling competition and innovation** o Service features and propositions can be vendor agnostic **enabling competition and innovation** o Utilizes a push payment model to enable simplicity and customer control
Secure and resilient, with financial stability a key principle	o 'Always On' Service **enabling 'real time' control of payments and resilience** o There will be certainty of settlement for cleared Items to **provide assurance and confidence** o Common Security Standard use **to underpin payment eco-system resilience and stability** o The fate of transactions will always be known to **provide peace of mind and service security** o Real time data to support **improvements in FinCrime detection and management**

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NPA High Level Target Architecture – Overview
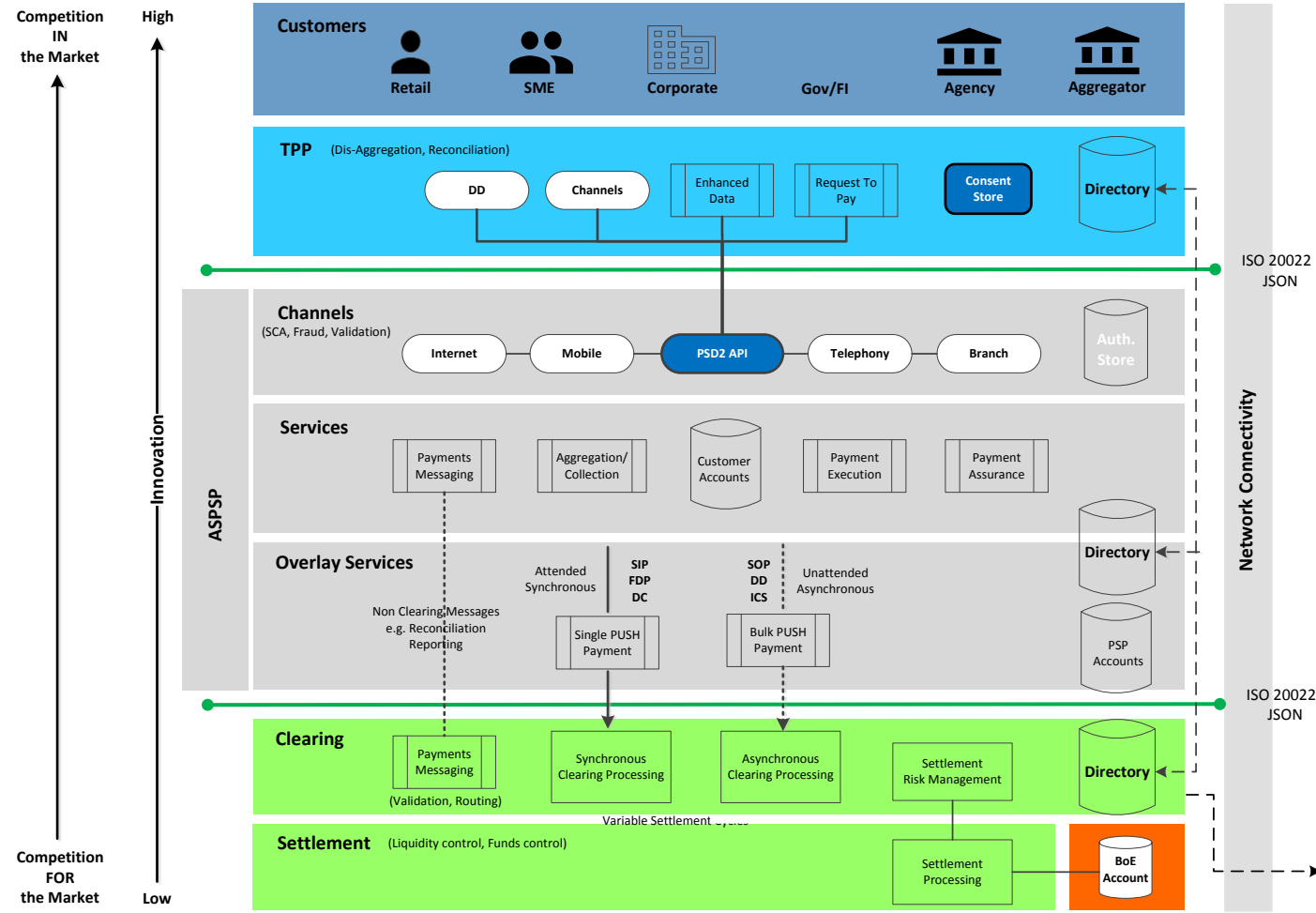
o   Please refer to supporting content Appendix B for a description of the components

NPA High Level Target Architecture – Customers & TPPs

Name	Description
Customer Layer	The full range of Payment Service Users (PSUs) will be supported. Their key use cases have been used to drive the design.
TPP Layer	Created under PSD2, Third Party Providers (TPPs) will be enabled to provide alternative channels and innovative payments for multiple Account Servicing Payment Service Provider (ASPSPs). They:- - Hold the consent for payments and execute against an ASPSP following authorisation - Can implement Assurance Data and Request To Pay, using Open Banking APIs - Can provide Channel alternatives and aggregation, disbursement solutions - Under the layered model approach ASPSPs can also choose to behave as a TPP.

Note:
- Customers will be able to access the NPA via a TPP or via their ASPSP.

* The Directory is expected to be available across all the layers and contain a range of reference data such as for CASS, sort codes, EISCD etc.

NPA High Level Target Architecture – ASPSPs

Name	Description
ASPSP Channels	Channels that are directly provided by ASPSPs including the APIs required to support PSD2 and Open Banking (with any extensions to support payment types, overlay specific TRA and variable amounts).

Channels (SCA, Fraud, Validation)

Internet · Mobile · **PSD2 API** · Telephony · Branch · Auth. Store

Services

Payments Messaging · Aggregation/Collection · Customer Accounts · Payment Execution · Payment Assurance

Overlay Services

Attended Synchronous · **SIP FDP DC** · **SOP DD ICS** · Unattended Asynchronous · Directory

Non Clearing Messages e.g. Reconciliation Reporting

Single PUSH Payment · Bulk PUSH Payment · PSP Accounts

Name	Description
ASPSP Overlay Services	Are approved by the NPSO and implemented on top of PUSH mechanisms (Single Push Payments and Bulk Push Payments). Can be used to emulate existing scheme messages (e.g. FPS, SIPs)
ASPSP Services	Services that are required to execute and process the payment against the customer account e.g. Debit the customer.

Note:
- Customers will be able to access the NPA via a TPP or via their ASPSP.
- PSD2 compliant corporates with their own or outsourced capability will be able to submit to the clearing layer (detailed analysis of options is currently underway)

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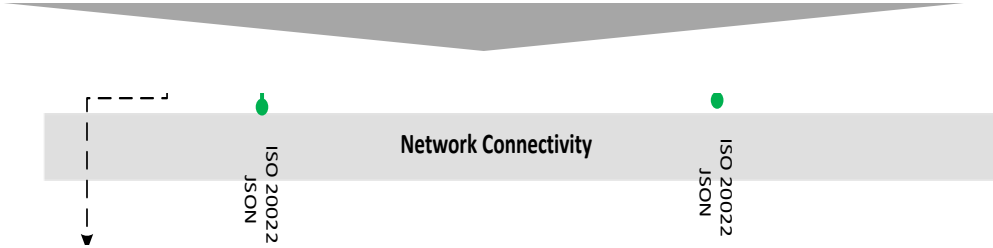
NPA High Level Target Architecture – Settlement & Clearing

Name	Description
SPP-Clearing	Provides coordination for ASPSP to ASPSP payments messaging - The Directory holds records of valid ASPSP participants and roles. It is expected to be managed by the FCA/NPSO along with associated SLAs. - Assures validation and correct routing - Separates payments and associated messaging - Real time attended payments will be credited immediately to customer accounts - Unattended and bulk payments will be acknowledged and a refunds process will be available
SPP-Settlement	Single point of settlement control for all payment instructions - Flexible settlement supported by overlay type to manage settlement risk.

Clearing

Payments Messaging
(Validation, Routing)

Synchronous Clearing Processing

Asynchronous Clearing Processing

Settlement Risk Management

Directory

Variable Settlement Cycles

Settlement (Liquidity control, Funds control)

Settlement Processing

BoE Account

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Single vendor and multi-vendor settlement and clearing deployment options (see later slides)

NPA High Level Target Architecture Networking Layer

Name	Description
Networking Layer	Connectivity between the layers and components will be open to multi-vendor competition (e.g. BT, Virgin, Vodafone) and not tied to a single or proprietary provider tied to a particular network element.

Network Connectivity

ISO 20022 JSON

ISO 20022 JSON

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NPA Settlement & Clearing

Settlement & Clearing Analysis Process

An exercise has been undertaken to analyse the options for settlement and clearing within the NPA..

Define Criteria
- Principles
- Requirements
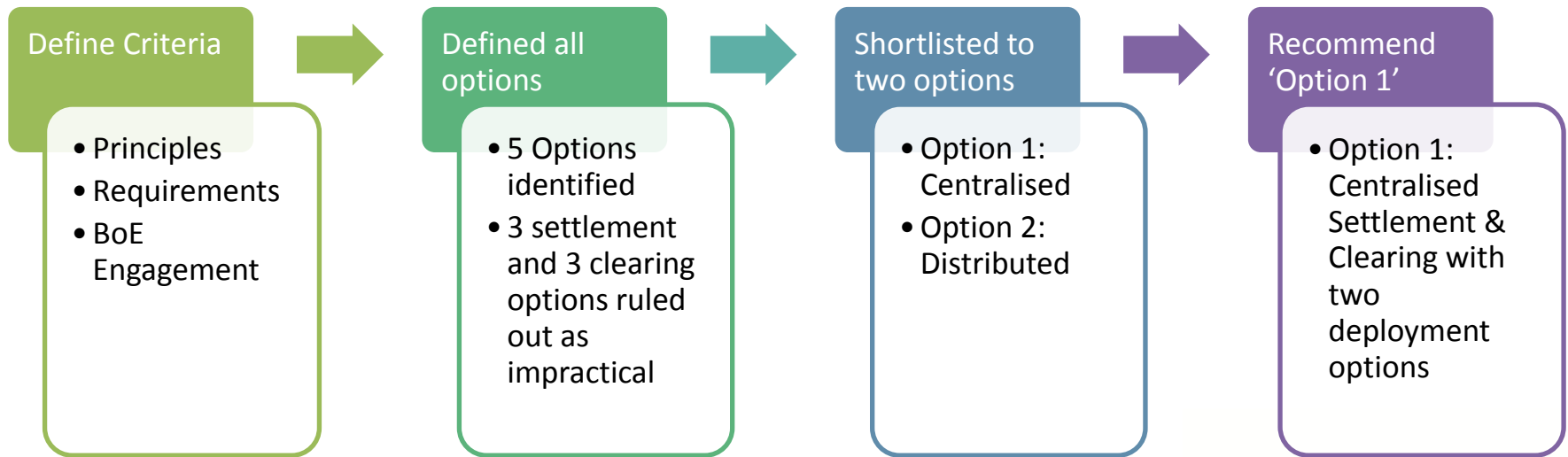- BoE Engagement

Defined all options
- 5 Options identified
- 3 settlement and 3 clearing options ruled out as impractical

Shortlisted to two options
- Option 1: Centralised
- Option 2: Distributed

Recommend 'Option 1'
- Option 1: Centralised Settlement & Clearing with two deployment options

- o The preferred Option (Option1: Centralised) is described in this main section.
- o Option 2: Distributed is described in the Appendix together with the rationale for the decision to recommend Option 1.

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Draft WS2 Questions for Consultation

NPA Design Principles
- Do you agree with the NPA design principles?
- If not, please provide details of what you do not agree with and why.
- Are there any design principles that you think are missing?
- Does the NPA design meet the four key principles?
- If not, please explain why.

Layered Approach
- Do you consider that the proposed design and layered approach creates more or less opportunities for competition and innovation?
- If less, please explain why.
- Do you consider that the proposed design and layered approach introduces more or less security and resilience?
- If less, please explain why.

Real Time Push Payment Model
- Does the NPA Real Time Push Payment approach pose any significant challenges to your organisation?
- If yes, please explain why.
- Are there any further pull payment use cases that have not been covered in this paper?
- If yes, please provide details.

Directory
- Does the concept of real time Directory data replication across multiple layers raise any concerns?
- If yes, please explain why.

Settlement & Clearing
- With the recommended approach (Option 1: Centralised) do you think the right balance of managing risk vs competition enablement has been achieved?
- If not, please explain why.

Performance
- Do you think that the NPA is better placed to support payment, messaging and transaction volumes of magnitudes larger than today's volumes? (assuming the advent of new services such as micropayments)
- If not, please explain why.
- Do you think that the other players in the (layered) eco-system can achieve the expected payment, transaction and messaging volumes?
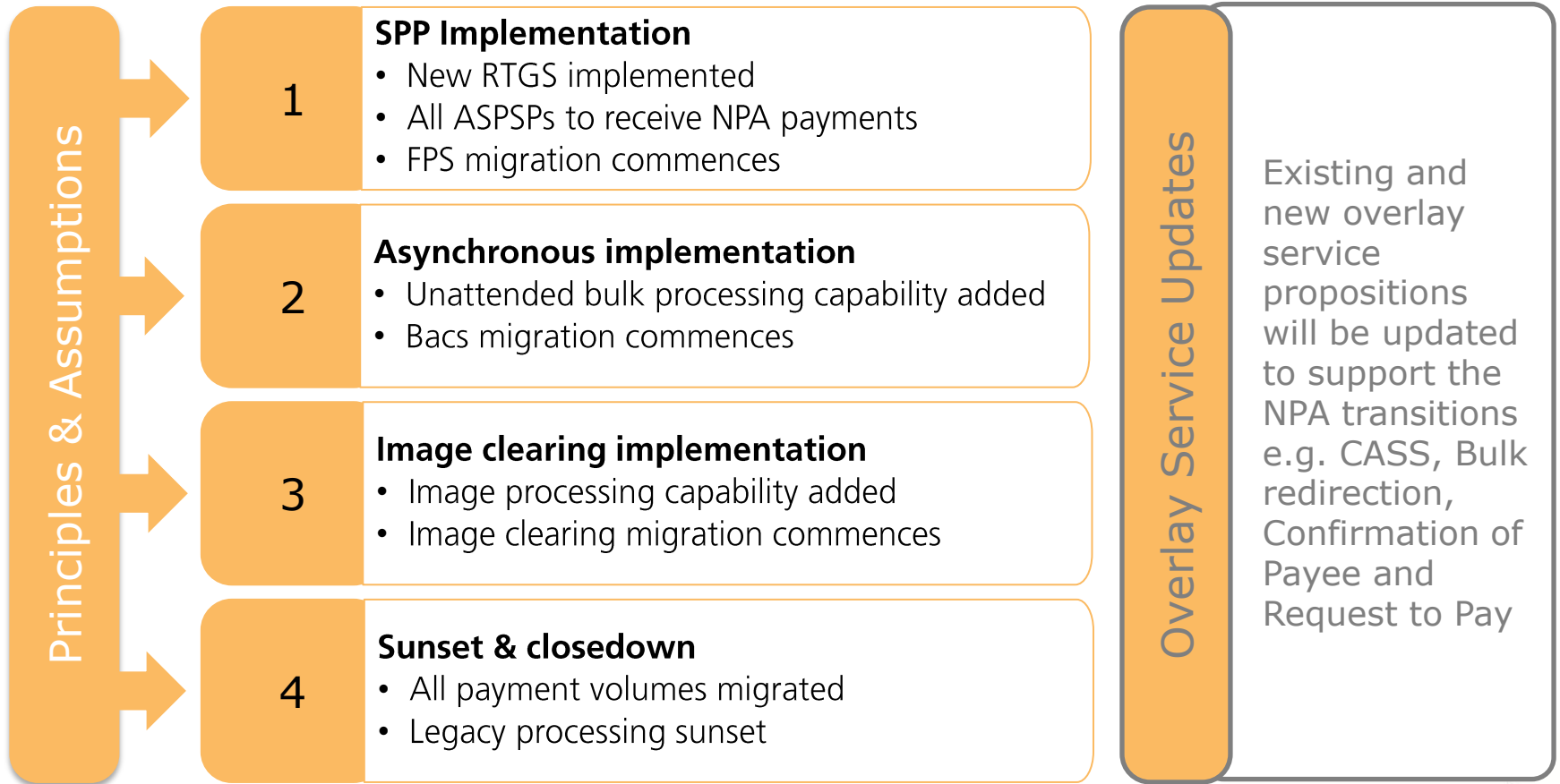- If not, please explain why.

Section 3

WS3 – Implementation Planning

High Level Architecture Timeline

The implementation timeline proposes 4 key transition periods

Principles & Assumptions

1

SPP Implementation
- New RTGS implemented
- All ASPSPs to receive NPA payments
- FPS migration commences

2

Asynchronous implementation
- Unattended bulk processing capability added
- Bacs migration commences

3

Image clearing implementation
- Image processing capability added
- Image clearing migration commences

4

Sunset & closedown
- All payment volumes migrated
- Legacy processing sunset

Overlay Service Updates

Existing and new overlay service propositions will be updated to support the NPA transitions e.g. CASS, Bulk redirection, Confirmation of Payee and Request to Pay

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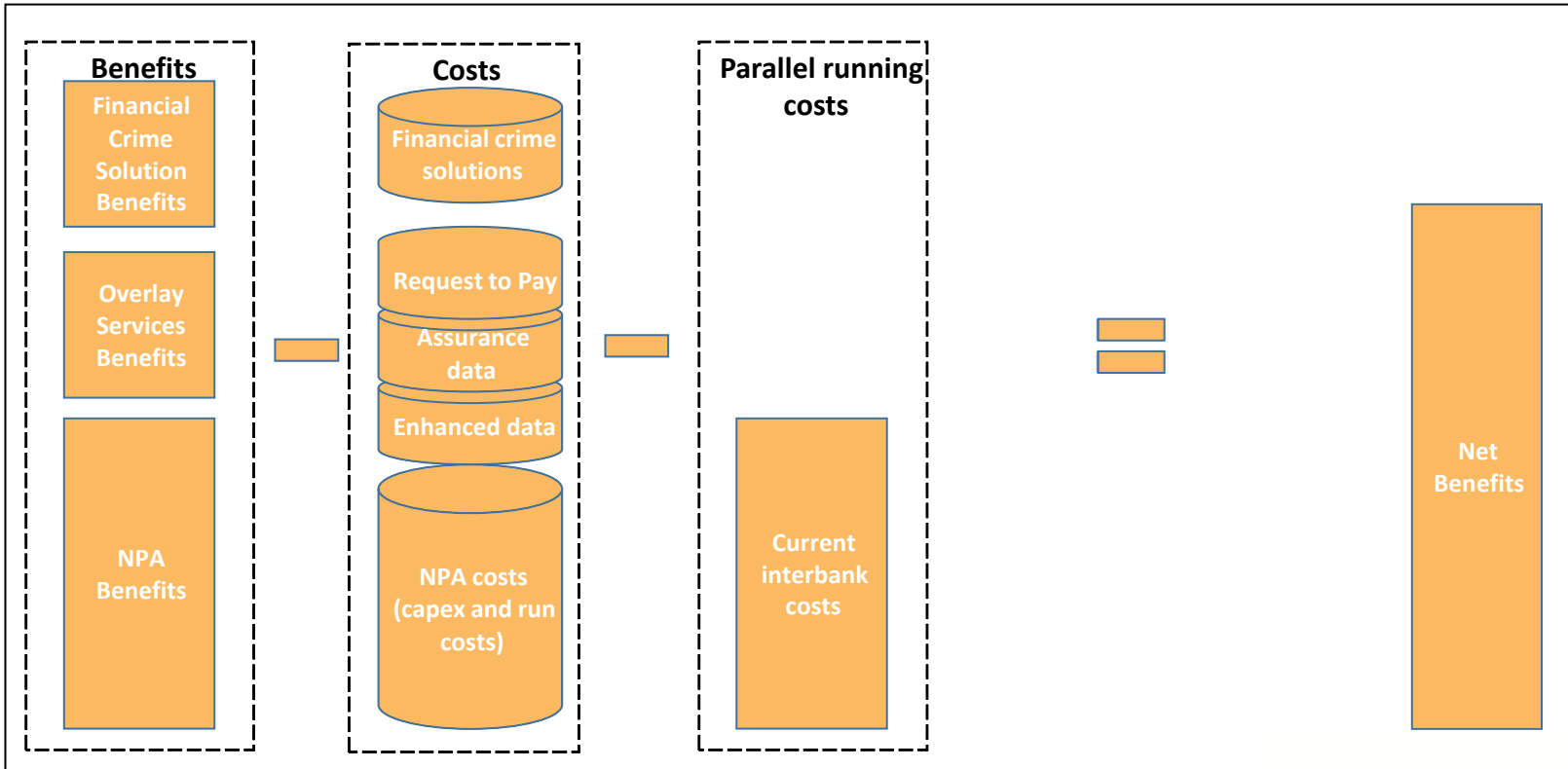strategy
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Draft WS3 Questions for Consultation

o **Timeline**: Do you agree with the timetable and sequence of events laid out in the implementation plan? If not, what approach to sequencing would you suggest?

o **Principles**: Do you agree with the implementation plan principles? If not, please provide details of what you do not agree with and why.

o **Principles:** Are there any principles that you believe are missing? If so, please provide details.

o **Assumptions:** Do you agree with the implementation plan assumptions? If not, please provide details of what you do not agree with and why.

o **Assumptions:** Are there any assumptions that you believe are missing? If so, please provide details.

o **Mandates:** Are the mandatory dates within the implementation plan realistic and achievable? If not, what would be a more appropriate timeframe?

o **Decision points:** Do you agree with the key decision points within the implementation plan? If not, please provide details.

o **Risk:** Are there any potential risks that you think the implementation plan does not address? If the answer is yes, then please provide details as to what they are and how we can best address them.

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Section 4

WS3 – Cost Benefit Analysis

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Overview of CBA analysis

Benefits
- Financial Crime Solution Benefits
- Overlay Services Benefits
- NPA Benefits

Costs
- Financial crime solutions
- Request to Pay
- Assurance data
- Enhanced data
- NPA costs (capex and run costs)

Parallel running costs
- Current interbank costs

Net Benefits

Draft WS3 CBA Questions for Consultation

o Do you agree with our main CBA methodological assumptions? If not, please explain your reasons and if possible, please suggest an alternative.

o Do you agree with our cost assumptions with regard to the NPA and each of the technical solutions (Request-to-Pay, Enhanced Data, Assurance Data)? If you do not agree on any of these individual itemised assumptions, please state your reasons and if possible, please suggest an alternative.

o Do you agree with the individual quantifiable benefits we have identified with regard to each of the technical solutions (Request-to-Pay, Enhanced Data, Assurance Data) as well as to their potential scale? If not, please state your reasons.

o Do you think that we may have missed a material quantifiable benefit provided by any of the technical solutions? If so, please state the suggested benefit(s) and potential data sources that could help us quantify it.
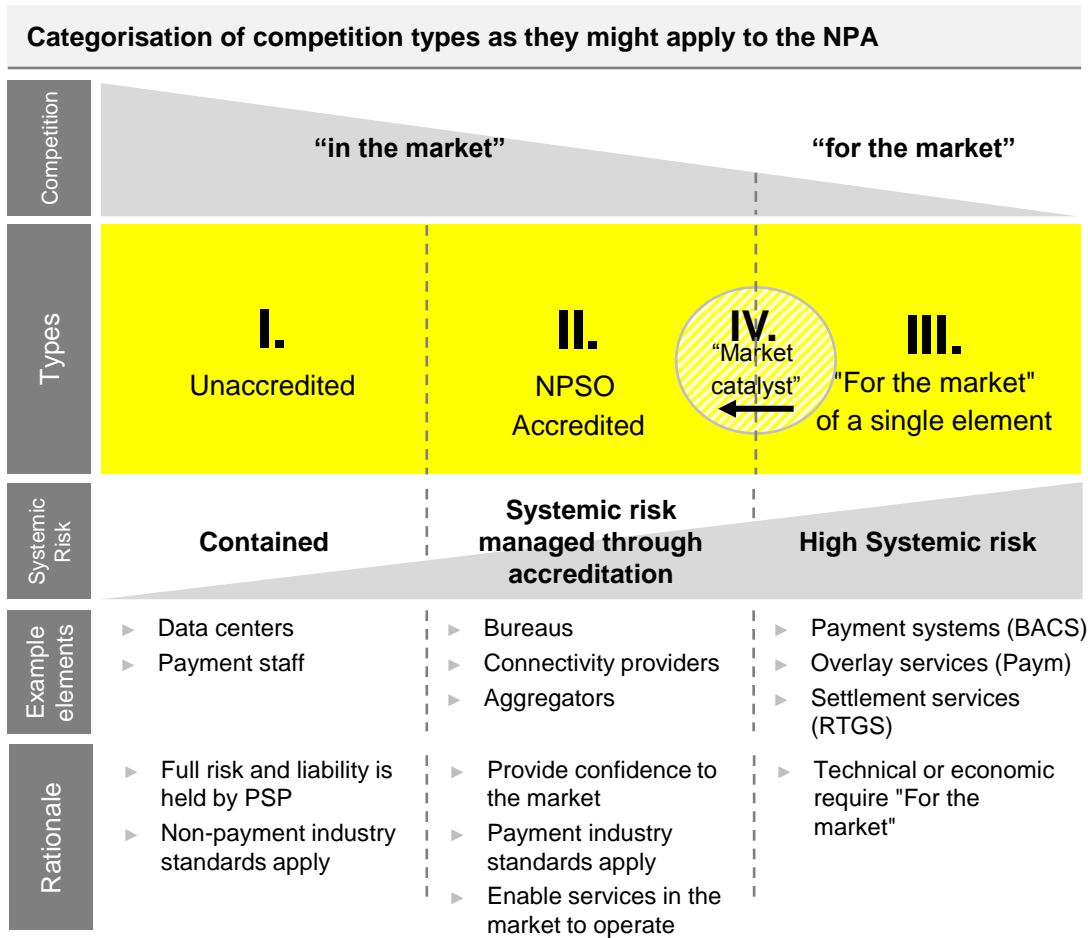
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Section 5

WS4 – Commercial Approach and Economic Models

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Competition categorisation

We propose a 4-layered categorisation of Competition types

Categorisation of competition types as they might apply to the NPA

Competition		
"in the market"		**"for the market"**

I. Unaccredited	**II.** NPSO Accredited	**IV.** "Market catalyst"	**III.** "For the market" of a single element

Systemic Risk

Contained	Systemic risk managed through accreditation	High Systemic risk

Example elements

► Data centers ► Payment staff	► Bureaus ► Connectivity providers ► Aggregators	► Payment systems (BACS) ► Overlay services (Paym) ► Settlement services (RTGS)

Rationale

► Full risk and liability is held by PSP ► Non-payment industry standards apply	► Provide confidence to the market ► Payment industry standards apply ► Enable services in the market to operate	► Technical or economic require "For the market"

Commentary

I. Unaccredited competition
► Sourced independently and paid for by PSPs, corporates as users

II. Accredited competition
► Purchased by PSPs, corporates from accredited suppliers
► Individual PSPs hold some systemic risk and thus need to be accredited by the NPSO to ensure standards and rules are followed
► Unaccredited' means participants are not required to be accredited directly by the NPSO. They may be required to meet other 'standards' set out by other bodies like the FC'A

III. "For the market"
► "For the market" services are operated on a fixed timeline by a third party and procured by the New Payment Systems Operator (NPSO).

IV. "Market catalyst"
► In circumstances where there is an identified need but there is a reticence among participants to create a market, the NPSO may become a 'Market catalyst', setting standards, undertaking research or offering a sandbox facility etc.

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Evolution of current UK payment infrastructure

Layered architecture will open up competition in UK payments

Proposed future payments architecture

Version 0.13 – PSF v.1

Legend: ■ Competition in the Market ■ Competition for the Market ◯ "Market catalyst"
■ Out of scope

Commentary
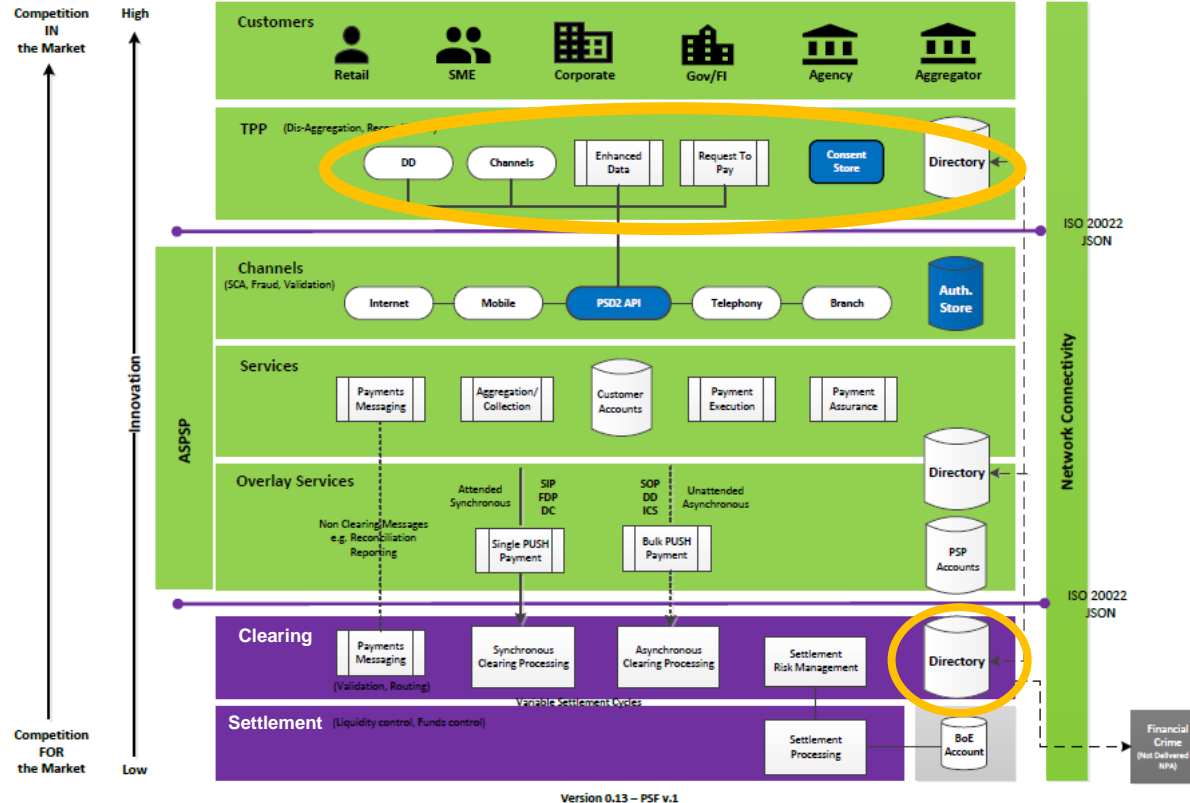
► The proposed NPA architecture is currently split into three competition types

► Standards and rules enabling vendors to operate 'elements' of the NPA architecture will be governed by the NPSO

► The TPP layer doesn't yet exist (as such) and so the entire layer has the potential to be 'market catalyst'. For example, to process a Direct Debit from day one the market will need at least one TPP to offer bulk payment processing services

► A directory to support payment routing for clearing & settlement will need to be built. However, as a catalyst the directory may need to be extended to support innovative services in other layers

► The Bank of England is out of scope for the NPA competition analysis

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Assessment Criteria

These criteria define the profile of the NPSO's competition types

WS4 has focussed its work on funding options for elements for which there is only one provider, which we define as 'competition for the market'. The PSR is working on the commercial relationships for 'competition in the market' where we expect there to be more than one provider.

Assessment criteria	Dimensions	Definition
Systemic risk	► Systemic importance in payments ecosystem ► Security and resilience of service	► Risk of failure of vendor solution and the impact it has on continuing providing payment services within the ecosystem ► Risk of failure of NPSO to manage systemic risk
Competition	► Number of competitors ► Level of innovation ► Discrimination of access through price or barriers	► Level of competitors interested in the market and wanting to compete on price and quality ► Level of innovation that is driven by vendors to differentiate themselves in the market ► Barriers to entry for other vendors
Accessibility	► PSPs access to a variety of products	► Level of accessibility for PSPs (large or small)
Efficiency	► Operational efficiency ► Lean structure to keep prices low ► Development speed	► Efficient delivery of the system and innovation to the end-users ► Corporate governance structures in place ► Reduced overheads and efficient operational structure ► Pricing impact for the end-user
Financial risk	► Capital at risk ► Commitment of usage or guarantees provided	► Financial risk (investment at risk) carried by the funder ► Size of investment required to Design, Build and Operate service ► Risk profile of the investment
Intellectual property	► Ownership of intellectual property	► Opportunity and restrictions in the usage of IP to develop other products or use the IP in other countries/sectors

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WS4: Commercial Approach and Economic Models Next Steps

We are in process of finalising our assessment of the NPSO competitive buckets and the funding models available to the NPSO

o   Currently the workstream is finalising the assessment of the NPSO competition buckets and the funding models identified by the workstream

o   WS4 is looking at the commercial relationship for the master node element and working with the PSR to understand the outputs from the Request to Pay and Registry elements

o   The workstream will also analysis of the so called '**deal levers**' (e.g. volume commitment by PSPs, pricing mechanism, etc.) which will help move the risk and implication of certain criteria among the stakeholders to create more appealing propositions which promote competition, accessibility and efficiency gains where possible

o   This will incorporate the workstream's view on the funding options which currently have been identified as following:

 ► **Vendor secured financing (managed service contract)**

 ► **NPSO secured financing (build and operate contract for vendor)**

o   Within the above two funding models the source of funding can be through:

 ► **Self-funded by funder**

 ► **Debt instrument funding**

 ► **Incorporate funding from a financial investor (VC, PE or Pension fund)**

 ► **Market participant funding (see PSODG report)**

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Draft WS4 Questions for Consultation

o Do you agree with our assessment of the competition types for the individual NPA elements ?

o Are there any further commercial relationships we have not considered?

o Are there any other criteria that we should use to assess the competitive types of the NPA?

o Are there any other criteria that we should use to assess the funding options we have identified?

o Do you agree with our assessment options? Please explain your opinion

o Are there any better funding alternatives?

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