

An aerial photograph showing a city skyline in the background, partially obscured by a hazy atmosphere. In the foreground, there is a vast green agricultural landscape with a prominent canal running through it. The sky is a mix of light blue and orange, suggesting dawn or dusk.

TARGET2 info session

28 February 2019

DeNederlandscheBank

EUROSYSTEEM

Agenda

09.30 – 10.30 TARGET2 and T2S consolidation

10.30 – 11.00 Coffee break

11.00 – 12.00 TARGET Instant Payment Settlement (TIPS)

12.00 – 13.00 Lunch

13.00 – 15.00 The transformation of the European payments landscape (SWIFT)

TARGET2 and T2S consolidation

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DeNederlandscheBank

DeNederlandscheBank

EUROSYSTEM

TARGET2 and T2S consolidation

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2	Objectives
3	Features
4	Timeline
5	Next steps

TARGET2 and T2S consolidation

1. Motivation

For more than a decade TARGET2 has been running smoothly.



However:

- the payments landscape has changed significantly
- technical opportunities have further increased
- the cost structure has been challenged

TARGET2 and T2S consolidation

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TARGET2 and T2S consolidation

2. Objectives

- ✓ improved efficiency
- ✓ optimised liquidity management
- ✓ easier access to services via harmonised interface
- ✓ enhancement of RTGS services
- ✓ aligned use of messaging standards
- ✓ reduced operational costs

TARGET2 and T2S consolidation

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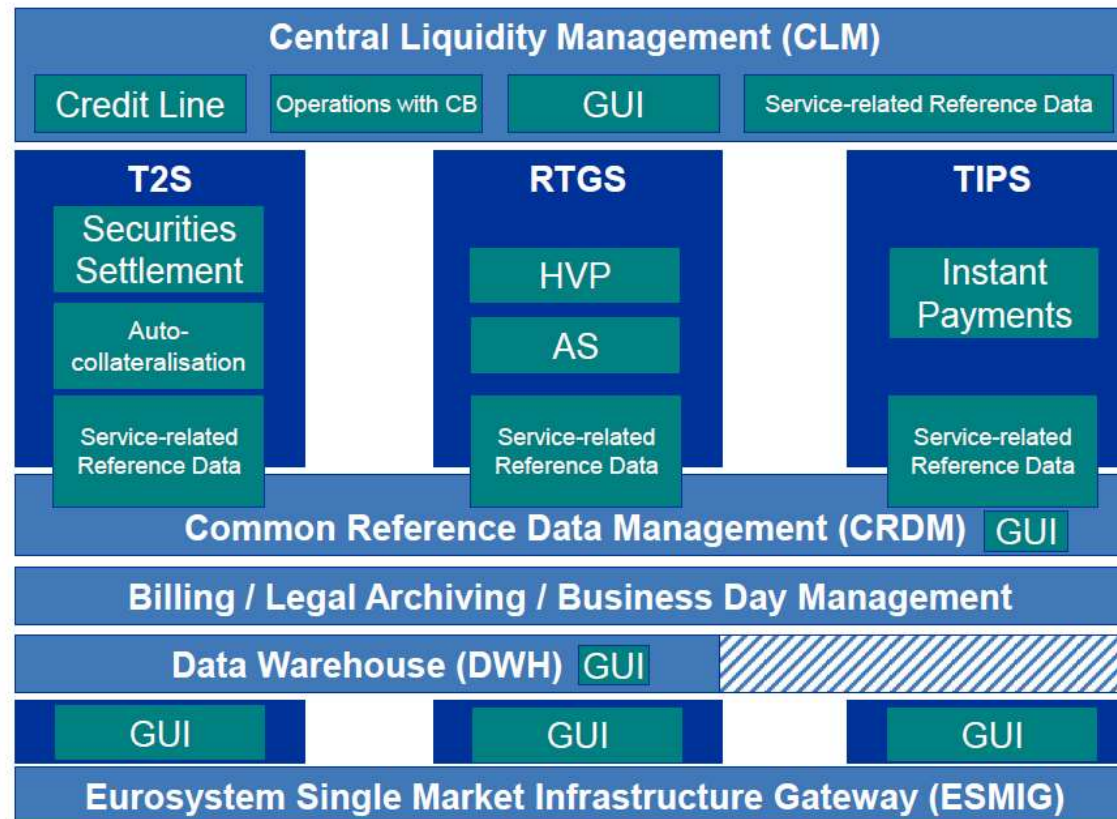
TARGET2 and T2S consolidation

Main changes

- Communication will be changed from MT-messages to ISO20022-messages (MX-messages).
- SWIFT Y-copy mode will be changed into V-shape-mode, i.e. payments have to be addressed to T2 and not to beneficiary bank.
- No separate Home Accounting Module (HAM) anymore, current Home Accounts will become part of the Central Liquidity Management (CLM), just like the current Payment Module Accounts.
- There will be no CB Customer Module anymore, CB customers will have to be administrated in own CB-application.
- No Standing Facilities Module anymore. Functionality will become part of CLM.
- No Reserve Management Module anymore. Reserve management will be handled in CLM.
- T2 will be network agnostic and will make use of at least two network providers. SWIFT specific features (like SWIFT RBAC) will be discontinued (i.e. replaced with T2-specific access right management).
- Liquidity Pooling/Virtual account and related functionality will be discontinued (Consolidated Information will remain).
- One common communication infrastructure for T2, T2S, TIPS and ECMS for both U2A and A2A-mode, i.e. Eurosystem Single Market Infrastructure Gateway (ESMIG).
- Static data of T2 will be shared with T2S, TIPS and ECMS (Common Reference Data Management (CRDM)).
- Multi-currency, but no conversion.

TARGET2 and T2S consolidation

High level functional domains



TARGET2 and T2S consolidation

Central Liquidity Management - Account Structure

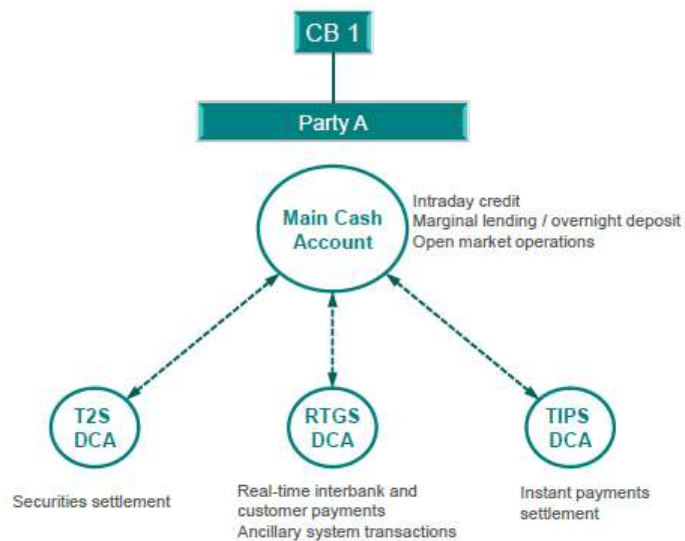


Figure 2: Basic account structure model

TARGET2 and T2S consolidation

CLM - Main Cash Account (MCA)

- The scope of operations of the MCA is:
 - Holding of minimum reserves.
 - Credit line management.
 - Standing facilities for counterparties on their own initiative (i.e. marginal lending on request and overnight deposits) as well as automatic marginal lending.
 - Cash withdrawals
 - Open market operations
 - Any other monetary policy operation
 - Debiting of billing amounts
 - Interest payments related to standing facilities and minimum reserves
 - Any other activity carried out by Central Banks in their capacity as Central Bank of Issue.
- No payments between market participants are allowed on a MCA. However, liquidity transfers with other MCAs within the same Liquidity Transfer Group are allowed, see next sheet.

TARGET2 and T2S consolidation CLM for a group of banks

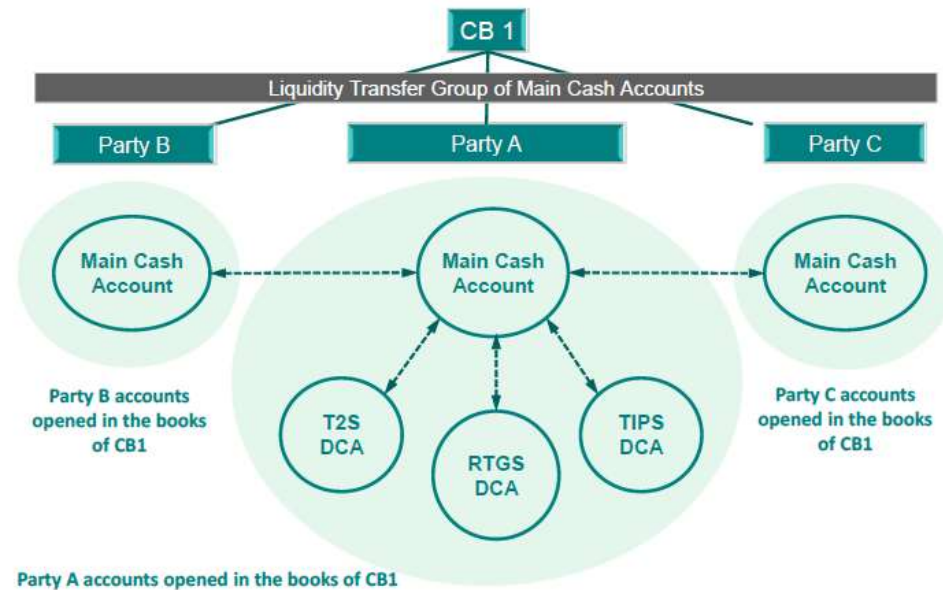


Figure 4: CLM for a group of banks

TARGET2 and T2S consolidation

Dedicated Cash Account in RTGS

- The Dedicated Cash Account in RTGS is for settlement of real-time interbank and customer payments and for transactions with ancillary systems.
- A party may have several RTGS DCAs each with a unique BIC11.

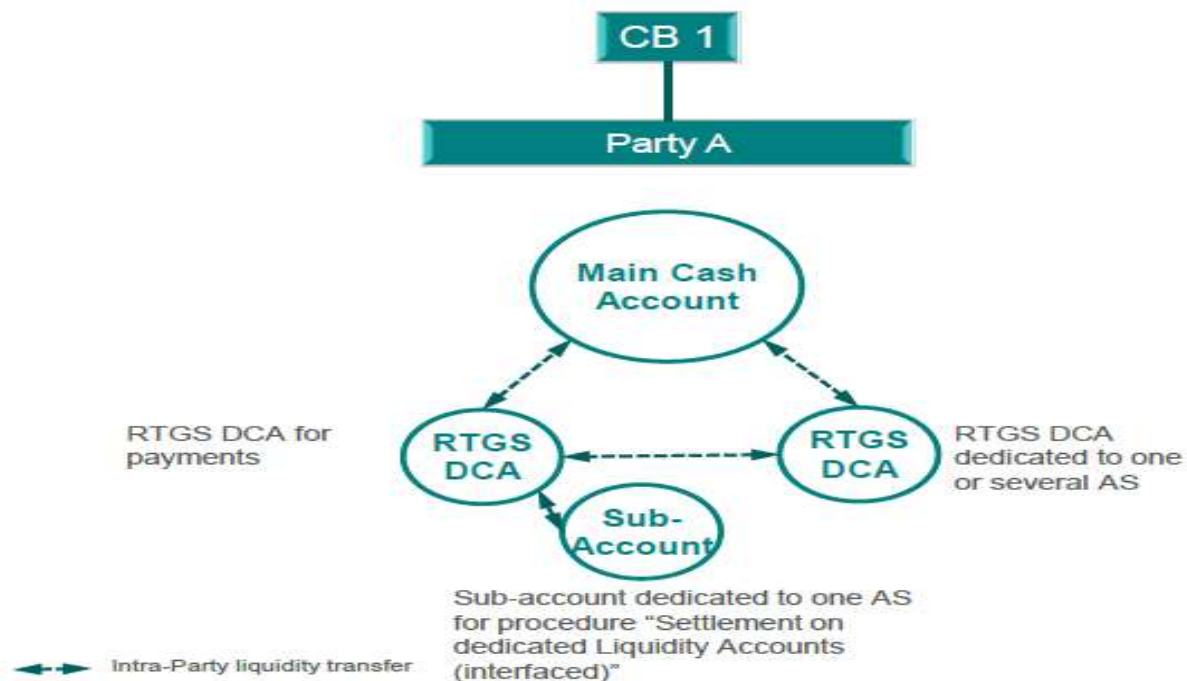
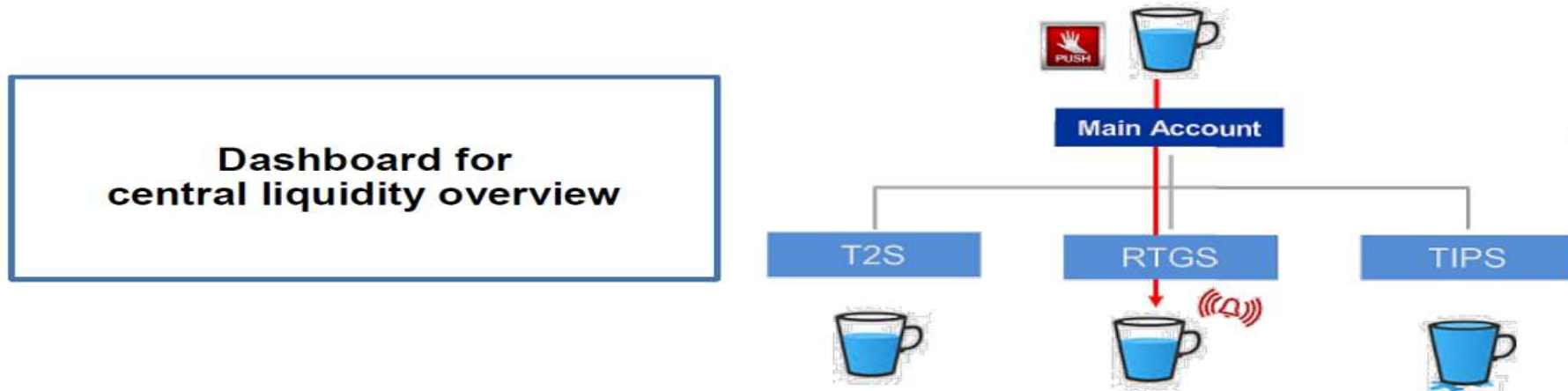


Figure 5: Model for RTGS accounts

TARGET2 and T2S consolidation Liquidity monitoring tools



- The Graphical User Interface (GUI) allows the party to access RTGS and CLM components in U2A mode:
 - In the CLM-GUI a overall overview on all MCAs, RTGS, T2S and TIPS accounts will be given.
 - In the GUI of a dedicated settlement service (i.e. RTGS, T2S, TIPS) specific information on the DCAs in the respective service will be given.
- The user can subscribe to alerts and notifications that CLM and RTGS push out to the GUI or in A2A-mode when an event takes place in the settlement process (e.g. breaching floor or ceiling amounts).
- The party can subscribe to standard reports that CLM or RTGS shall create on certain times or during certain events (e.g. end-of-day).
- The party can set up an Account Monitoring Group, see next sheet.

TARGET2 and T2S consolidation Account Monitoring Group

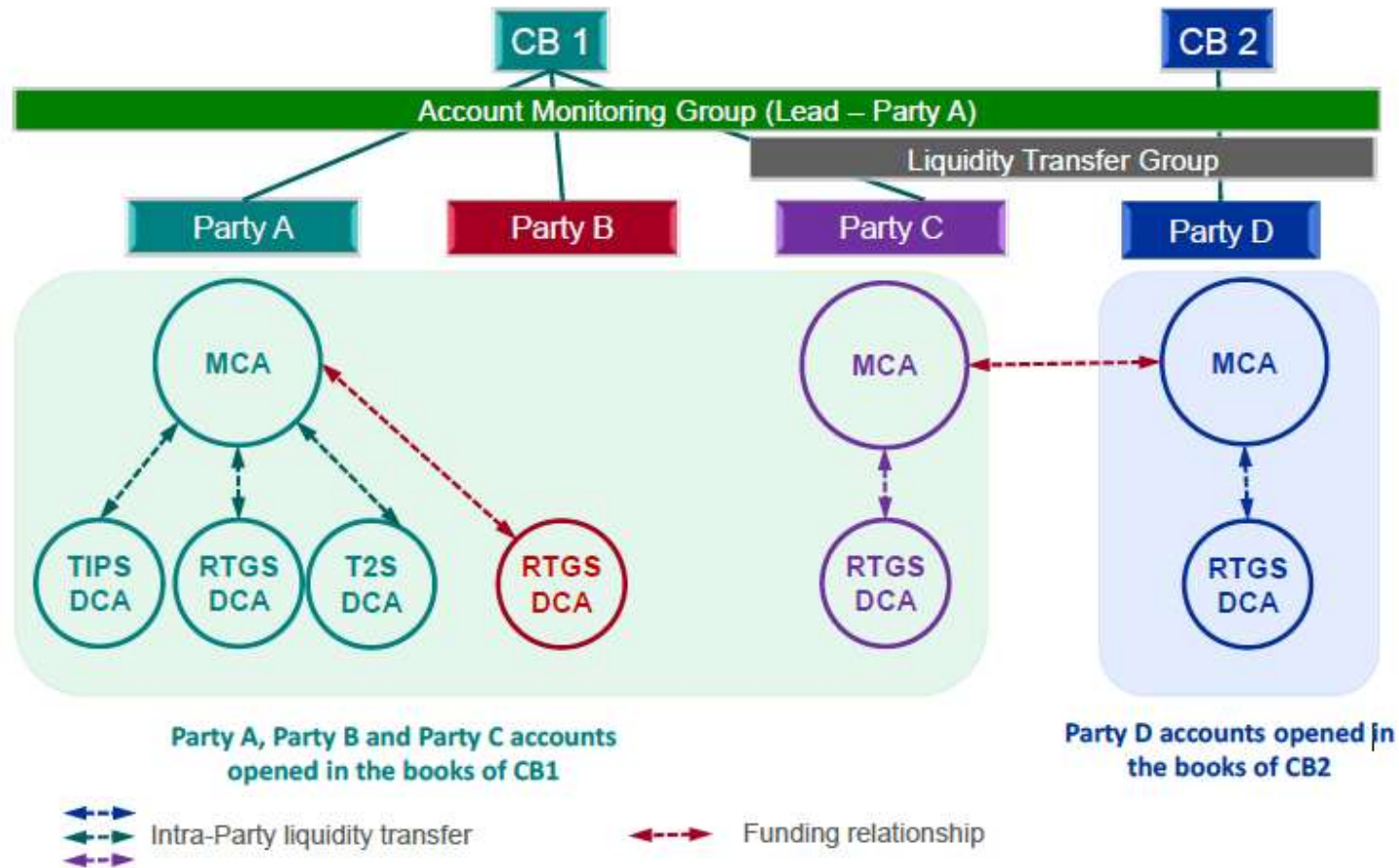


Figure 6: Multinational Account Monitoring Group

TARGET2 and T2S consolidation

Liquidity management tools

- Liquidity transfers entered manual in GUI.
- Manual liquidity transfers in A2A-mode.
- Automatic liquidity transfers configured in GUI, for example at start-of-day, end-of-day, breaching floor or ceiling amounts.
- In case of lack of payment capacity on the MCA to settle a CB operation, the system triggers automated liquidity transfers and tries to pull the amount of liquidity missing from the default RTGS DCA.
- For each MCA and RTGS DCA a party can define floor and ceiling breaching amounts in the GUI.
- Priority classes: Urgent (CB and AS only), High and Normal.
- Payment queue management.
- Liquidity Transfer Group (LTG): liquidity transfer are only allowed between RTGS DCAs or CLM MCAs that belong to the same LTG.

TARGET2 and T2S consolidation

Settlement of payments

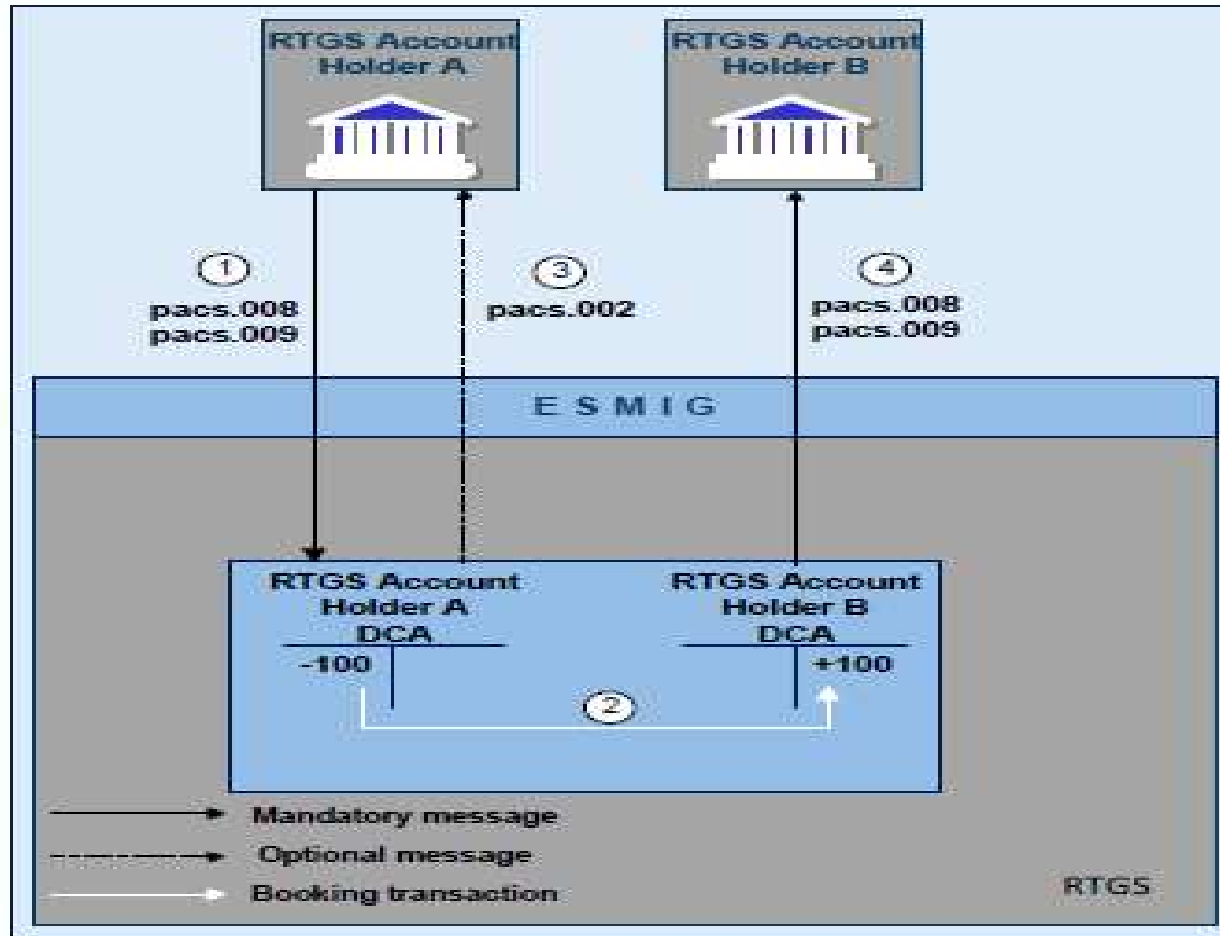
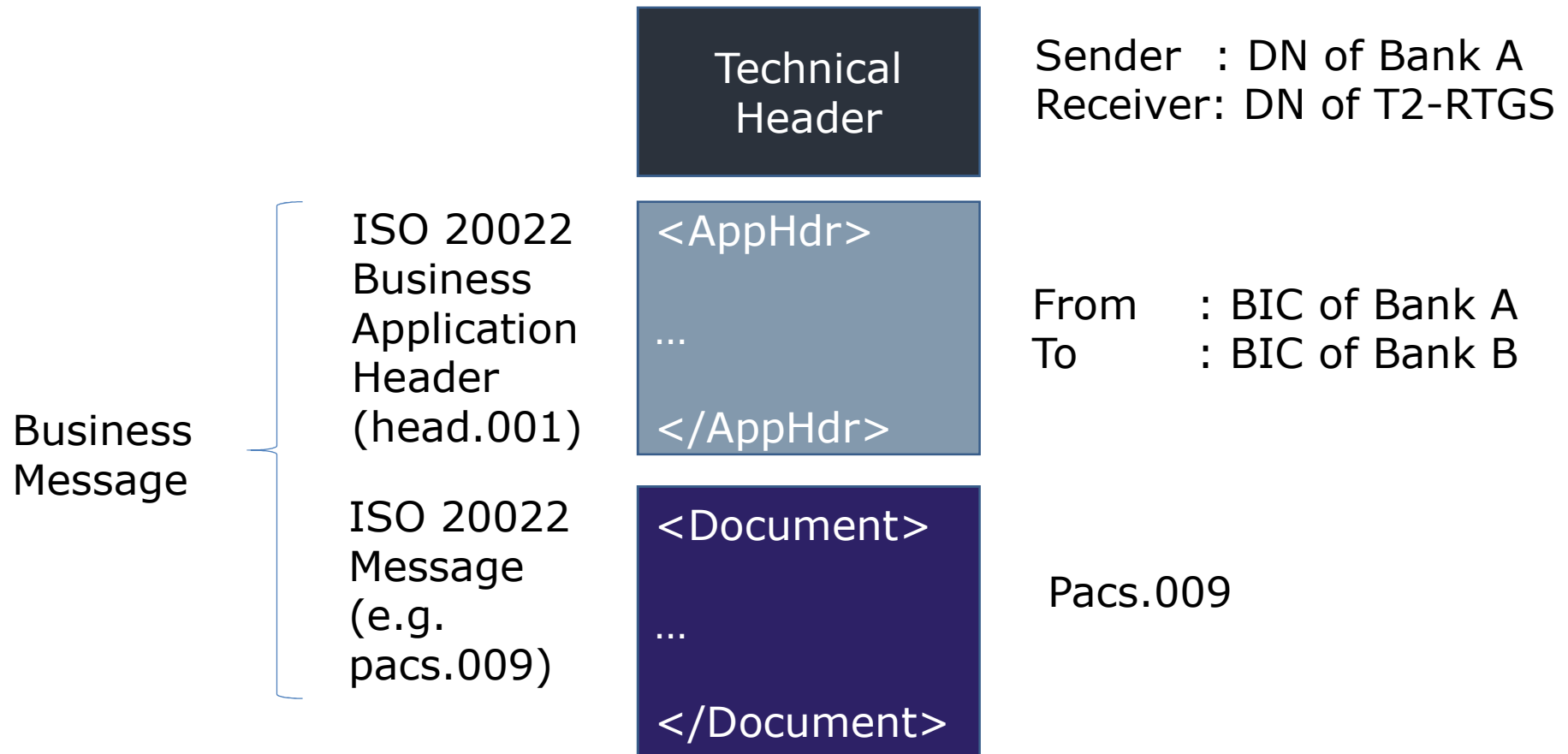


Figure 16 - pacs.008 – CustomerCreditTransfer/pacs.009 – FinancialInstitutionCreditTransfer

Example of a RTGS-message – payment from Bank A to Bank B



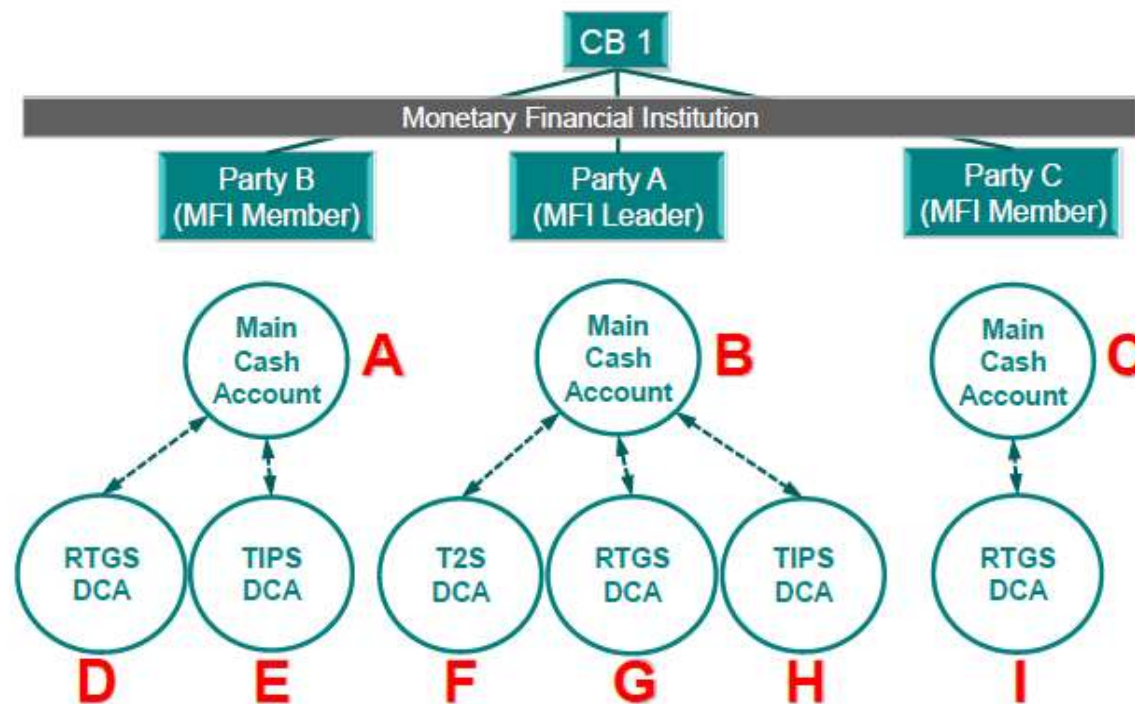
Example pacs.009

```
<?xml version="1.0" encoding="UTF-8"?>
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:pacs.009.001.07">
  <FICdtTrf>
    <GrpHdr>
      <MsgId>MSGIDpacs.009</MsgId>
      <CreDtTm>2018-08-24T09:30:44Z</CreDtTm>
      <NbOfTxs>1</NbOfTxs>
      <SttlmInf>
        <SttlmMtd>CLRG</SttlmMtd>
      </SttlmInf>
    </GrpHdr>
    <CdtTrfTxInf>
      <PmtId>
        <InstrId>INSTRIDpacs.009</InstrId>
        <EndToEndId>NOTPROVIDED</EndToEndId>
        <TxId>TXIDpacs.009</TxId>
      </PmtId>
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      <SttlmPrty>NORM</SttlmPrty>
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        </FinInstnId>
      </Cdtr>
    </CdtTrfTxInf>
  </FICdtTrf>
</Document>
```

TARGET2 and T2S consolidation

Minimum reserve fulfilment calculation

- Amounts on MCAs, RTGS DCAs, T2S DCAs and TIPS DCAs will be taken into account to calculate the minimum reserve fulfilment calculation.



Minimum Reserve fulfilment for MFI = Sum of cash balances in A, B, C, D, E, F, G, H and I

Figure 7: Minimum reserve fulfilment calculation

TARGET2 and T2S consolidation

Standing facilities management

- The accounts for the Standing Facilities (i.e. marginal lending and overnight deposit) will be opened in CLM.
- Account holders can initiate overnight deposits via liquidity transfers from their MCA to their overnight deposit accounts.
- Account holders can initiate marginal lending on requests via liquidity transfers from their marginal lending accounts to their MCA. Before the Euro-ECMS these marginal lending on requests will have to be initiated by the local CMS (i.e. ECMS for DNB).
- CLM will initiate automatic marginal lending via liquidity transfers. For this all balances in MCA, RTGS, T2S and TIPS will be taken into account.
- CLM will calculate the interest regarding the overnight deposit and will automatically return the capital amount and credit the interest (or debit in case of a negative interest rate) to the MCA at the start of the next business day.
- CLM will calculate the interest regarding the marginal lending and will automatically return the capital amount to and debit the interest from the MCA at the start of the next business day.

TARGET2 and T2S consolidation

Cash withdrawals

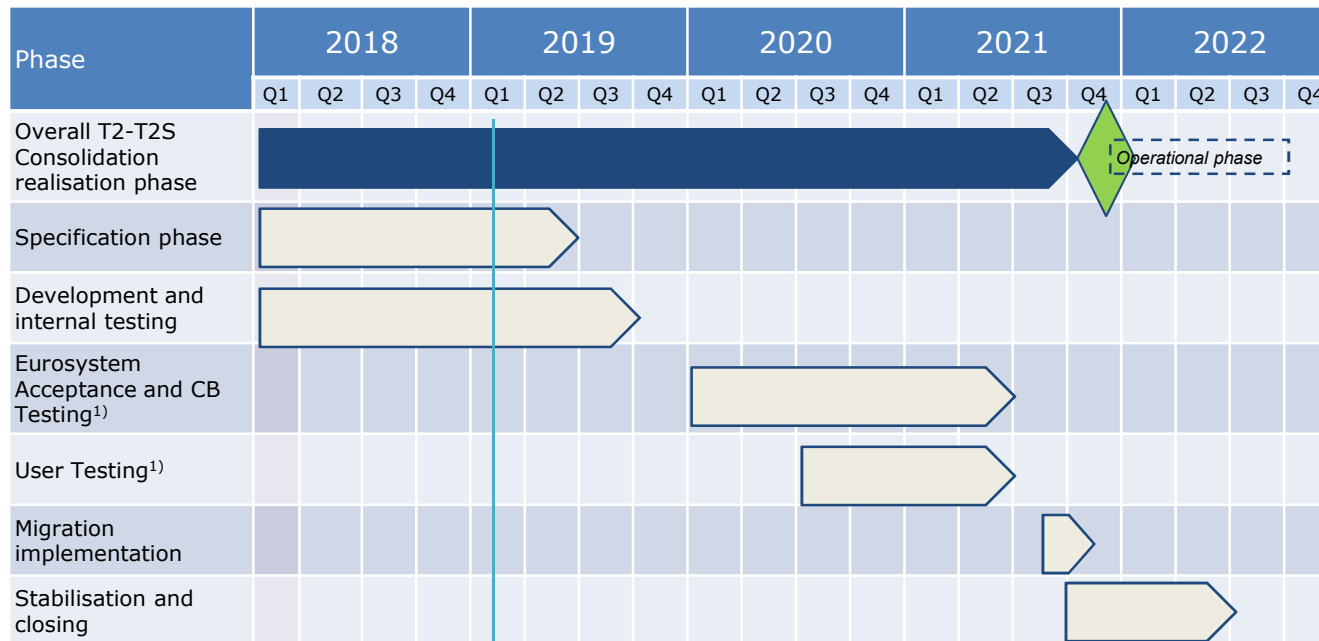
- Cash withdrawals are debited on the MCA of a party.
- Liquidity can be reserved for 'Central Bank Operations' (CBO). If this has been done by a party, cash withdrawals are taken from this reservation.

TARGET2 and T2S consolidation

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TARGET2 and T2S consolidation Planning

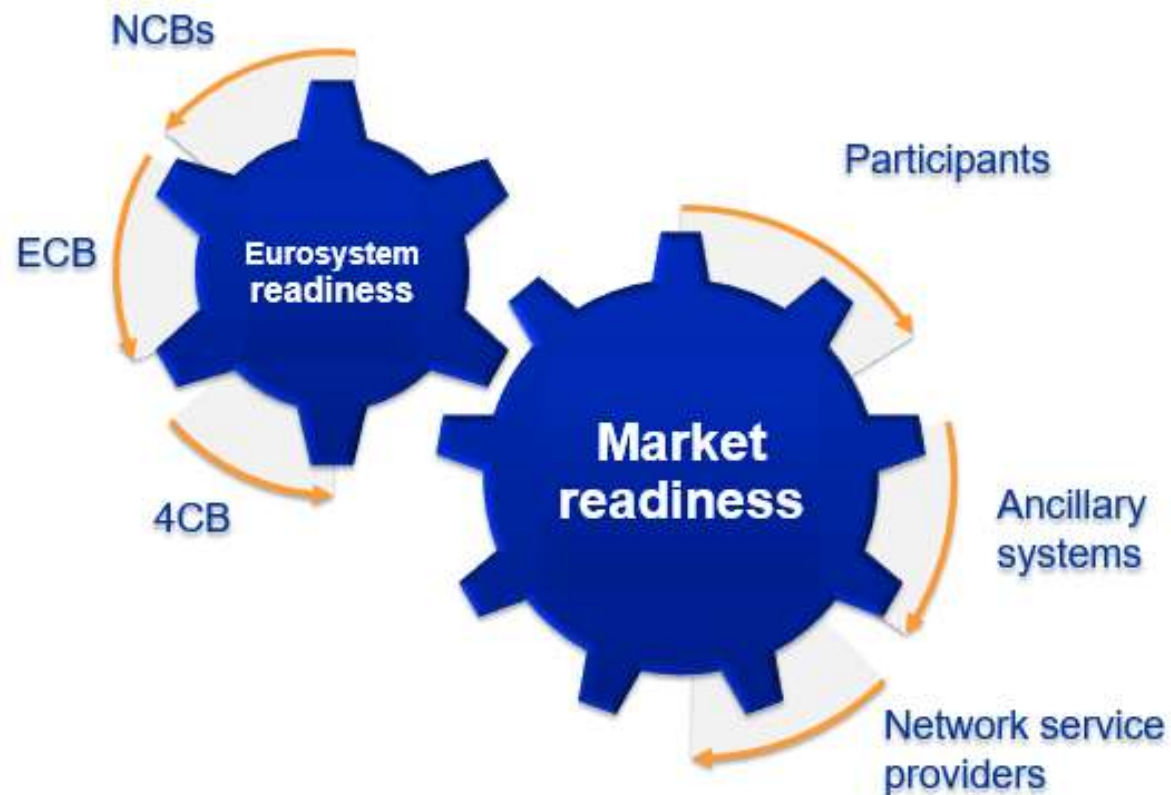


Today

¹⁾ Preparation and Execution phase are included to equal proportions

TARGET2 and T2S consolidation Planning

WHO needs to be ready?



TARGET2 and T2S consolidation Planning



WHAT are the consequences of not being ready?

A participant who is **not ready** to go-live will:

- Not be able to settle CB monetary policy operations
- Not be able to pay or to be paid in central bank money
- Be cut from ancillary system settlement in central bank money
- Need to access payment services through another counterparty

TARGET2 and T2S consolidation Planning



WHAT are the main challenges for each T2 service participant?

Technical readiness

- Assess required adaptations of IT infrastructure (software and hardware)
- Update interfaces
- Implement ISO20022 for messaging
- Set-up connectivity
- Perform internal testing

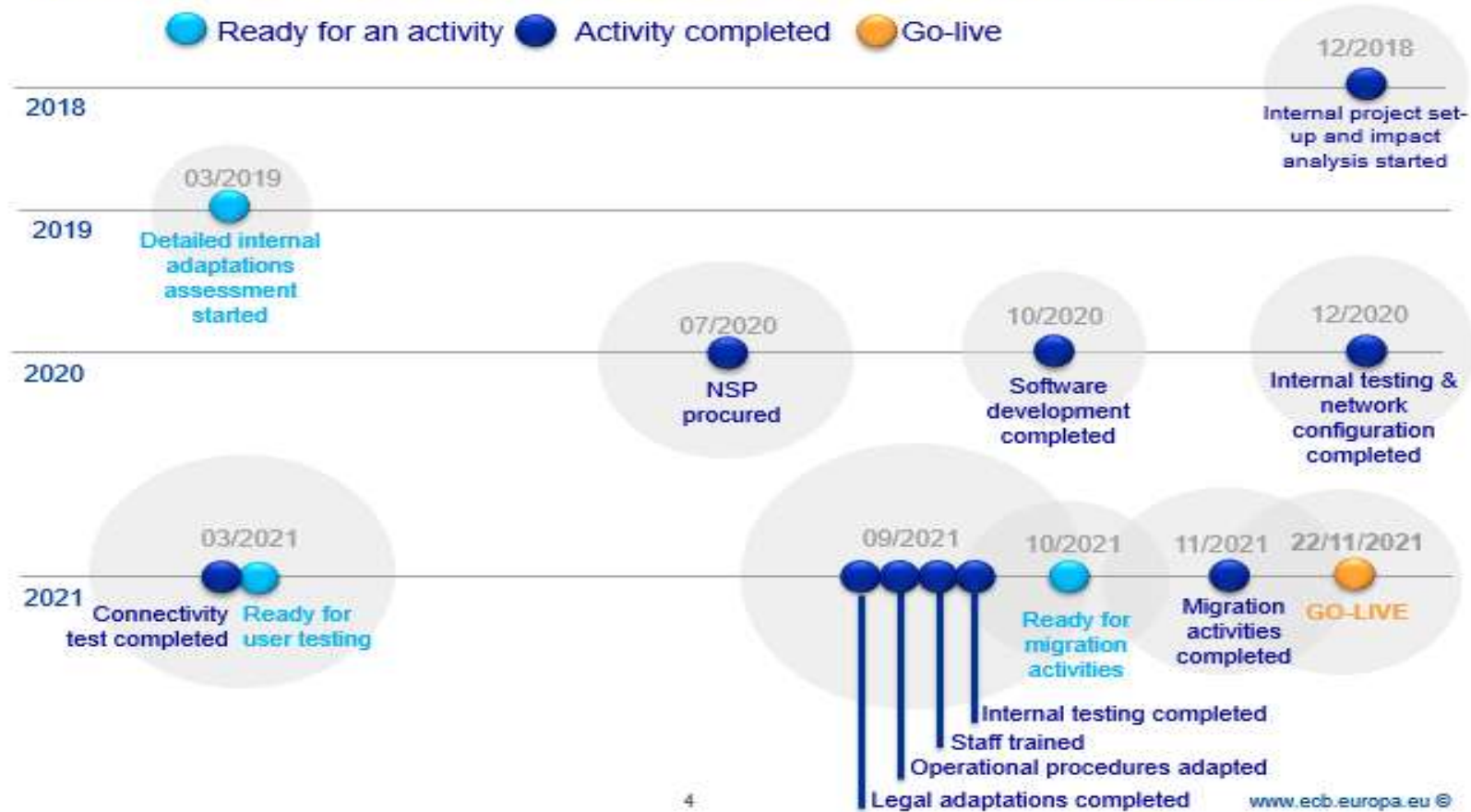
Business and operational readiness

- Assess business impact
- Align business model and processes
- Define operational procedures
- Prepare legal arrangements
- Procure Network Service Provider
- Train staff for testing, migration and operations
- Perform connectivity and user testing
- Prepare for and participate to migration rehearsals

TARGET2 and T2S consolidation Planning



WHAT are the main tasks and milestones?



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TARGET2 and T2S consolidation

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Project plan deliverables

Requirements and specifications



- User Detailed Functional Specifications
 (UDFS v1.1 – [RTGS](#) & [CLM](#))
- Business Description Document (BDD) ([v1.0](#))
- GUI screens

Client readiness



- Client Readiness Framework
- Milestones for participants

ESMIG Connectivity



TCCG - 9th Meeting on 06 February 2019

Project plan deliverables

Requirements and specifications

Client readiness

ESMIG Connectivity

UDFS v1.1

- Approved by the MIB on 17 January 2019
- Submitted to TCCG/TSWG and published on the ECB website on 21 January 2019
- Market consultation: 21 January 2019 – 05 April 2019 (11 weeks)

UDFS v2.0

- Implementation of market feedback from the consultation on UDFS v1.1
- Submission of the final version to TCCG/TSWG and publication on ECB website: July 2019



TCCG - 9th Meeting on 06 February 2019

Project plan deliverables

Requirements and specifications

Client readiness

ESMIG Connectivity

UDFS - approach for work after v1.1

- UDFS v1.1 was published on 21 January addressing the missing parts relevant for banks and expanding the quality of scope items included in version 1.0;
- Remaining aspects to be covered in UDFS 2.0:
 - CB related functionalities; Multi-currency; Billing; Data warehouse; Legal archiving; Consistent propagation of static data updates; Contingency services; Operations and support; Message and usage guideline updates; CRDM A2A scope

TCCG - 9th Meeting on 06 February 2019

TARGET2 and T2S consolidation

Client readiness monitoring

Each accountholder will have to send progress reports to DNB on a regular basis. This will be used as basis for the progress report that DNB will have to send to the ECB about the client readiness of the DNB-community.

A T2/T2S Consolidation Contact Group for DNB-accountholders (TCCG-NL) will be established. This group will consist of the Project Managers and the Business Experts of the main DNB-accountholders and will meet regularly to discuss about the T2/T2S consolidation and the progress of the DNB-community.

CLM and RTGS GUI workshops

RTGS and CLM GUI screens

Development of main GUI screens is structured in packages based on use cases

- **Payments**
- **Liquidity**
- **Liquidity management features**
- **Ancillary system functions**
- **Monetary policy functions, administration, ...**

Workshops are being held with users to discuss and agree on the design of the GUI screens

These are being followed by a user consultation (duration 2 weeks) to enable the community to provide feedback on the respective packages of screens (power point slides with snapshots of screens)

Workshops Dates

RTGS and CLM GUI screens

Timing of workshops

2019

15 January	February	13 March	12 April	29 May	June	17 July
Payment		Liquidity	Liquidity management features	Ancillary System functions		Monetary policy functions, Administration

RTGS and CLM GUI User Handbook

- | Development will be based on the agreed design of the GUI screens
- | The User Handbook will be the documentation of the developed GUI
- | Therefore, delivery of the handbook (with final screenshots) is planned by the end of the development phase beginning of May 2020 to the TCCG/TSWG

TARGET Instant Payment Settlement (TIPS)

ECB

DeNederlandscheBank

DeNederlandscheBank

EUROSYSTEM



EUROPEAN CENTRAL BANK

EUROSYSTEM

ECB-UNRESTRICTED

Marc Bayle de Jessé
Director General
Market Infrastructure & Payments

TIPS – TARGET Instant Payment Settlement

De Nederlandsche Bank

Amsterdam, 28 February 2019

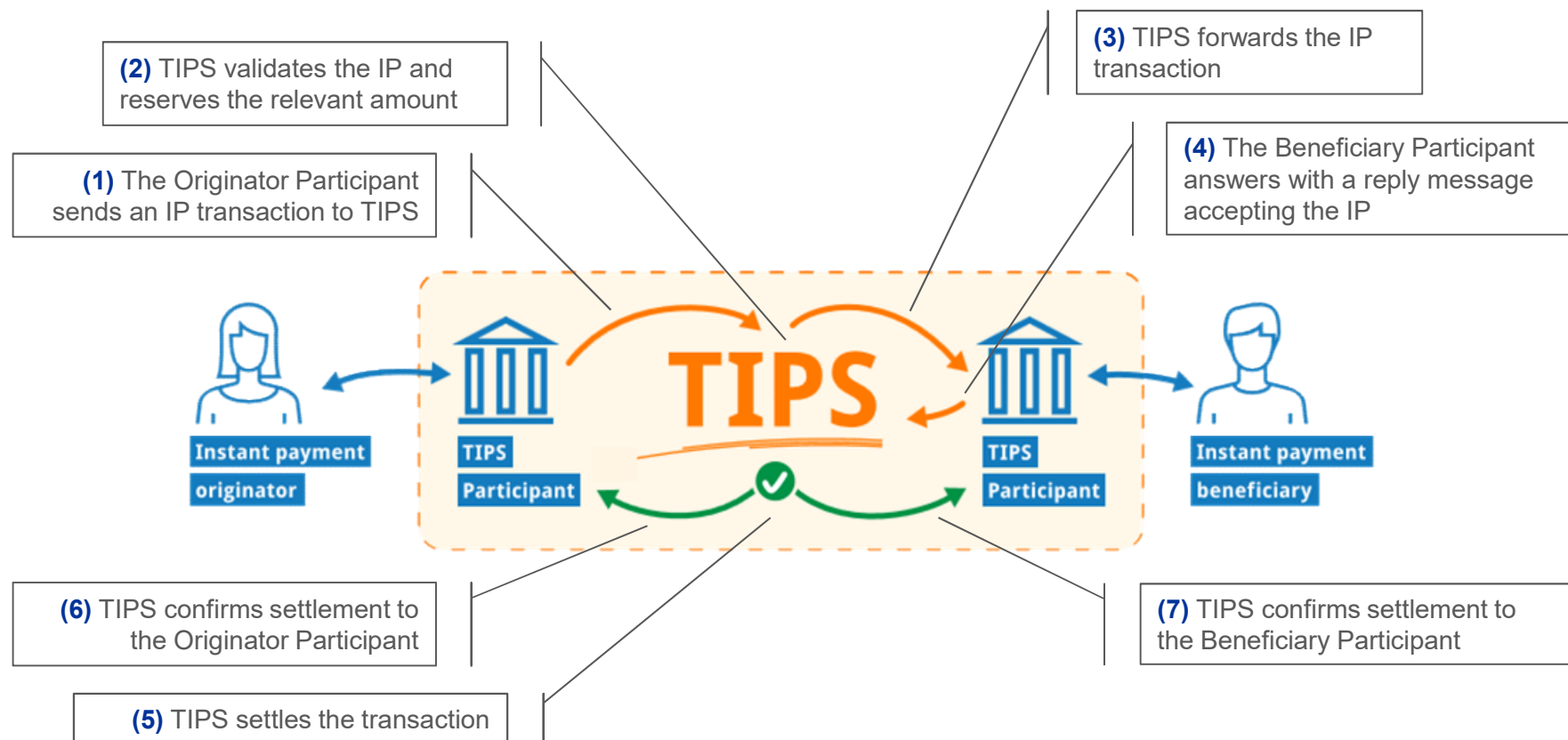
What is TIPS?

TIPS is the new service for the settlement of instant payments

TIPS enables payment service providers to offer their clients payment transfers in real time, 24/7 and 365 days a year



Instant payment (IP) process



TIPS principles



**Same participation
criteria as for
TARGET2**



**Instant payments
settlement in
Central Bank Money**



**24/7/365
operating hours**



**Operated on a
full cost recovery
basis**



**Supports participants to
comply with the
SCT Inst scheme**



**Multi-currency
technical capability**

Key benefits of TIPS



Key benefits of TIPS



Resilient

- Robust and resilient market infrastructure operated by the Eurosystem
- TIPS will adhere to the **Eurosystem oversight requirements** and the internationally applied CPMI-IOSCO Guidance on cyber resilience for financial market infrastructures

Key benefits of TIPS

Efficient

- Instant settlement in central bank money will increase safety and eliminate credit risk
- Simplified transaction processing linking directly the sending and receiving PSPs



Key benefits of TIPS

Fast

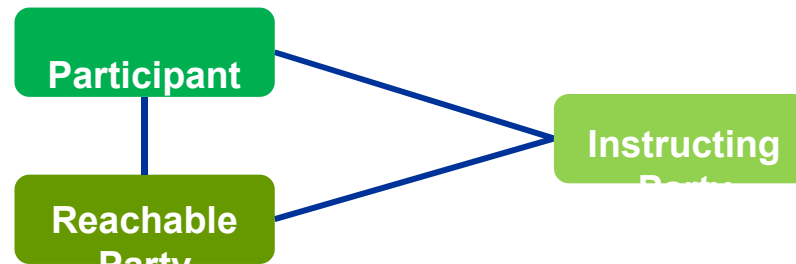
- SCT Inst scheme defines 10 seconds to finalise an instant payment transaction, but TIPS participants will be able to **process transactions in a few seconds**
- **Sophisticated settlement engine**, allowing each component to reach its maximum speed

Key benefits of TIPS



Wide-reaching

- **Extension to TARGET2** which has a network of over 1,700 participants and more than 51,000 addressable Business Identifier Codes (BICs)
- All **TARGET2 participants can open an account**
- Others can connect as reachable or instructing party



Key benefits of TIPS



Cheap

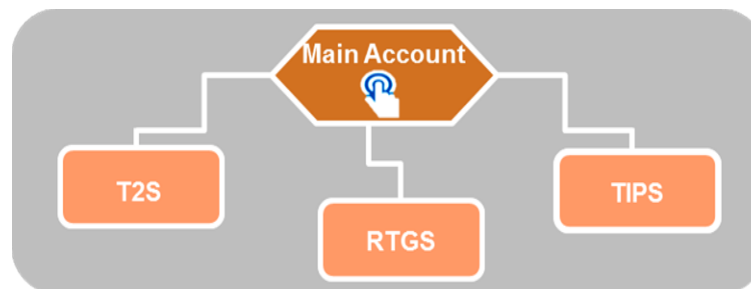
- Pricing policy based on **equality and non-discrimination**
- The TIPS account, as well as receiving payments and reporting, will be free of charge
- Only **0.2 eurocent (€0.002)** per payment sent
- **No charges for the first ten million payments** settled on each TIPS account by the end of 2019.

Key benefits of TIPS



Integrated

- TIPS account balances will count towards the **minimum reserve calculations**
- **Centralised account structure** between the different TARGET Services. Further integration of TARGET2 and T2S will automatically extend to TIPS



TIPS On-boarding Guide



**Connectivity Guide
and E-ordering**



**TIPS Registration
Forms and NSP**



**Reference Data Guide (updated)
and List of Roles and Privileges**



**Setup Guide
(new version)**



Thank you for the attention!

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 **@TARGET_ECB**

 **ECB: market infrastructure and payments**

The transformation of the European payments landscape

SWIFT

DeNederlandscheBank



The transformation of the European payments landscape

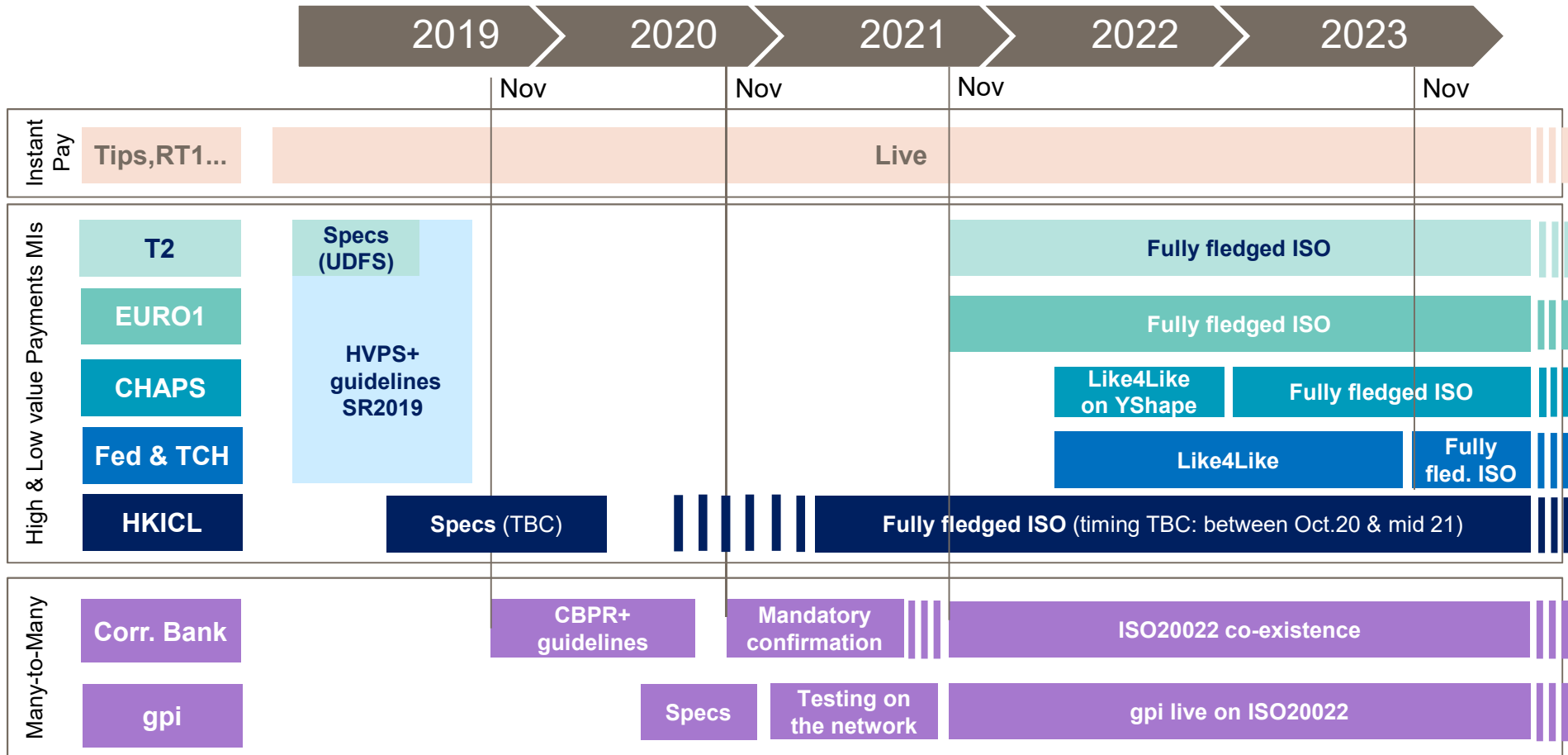


White paper

The transformation of the European payments landscape

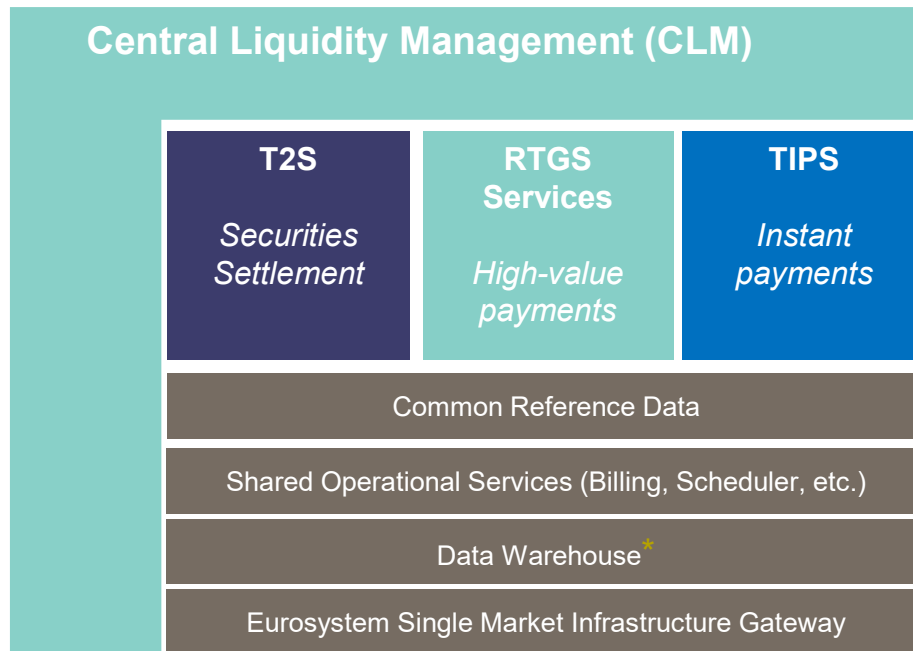


The Payments industry adopting ISO20022

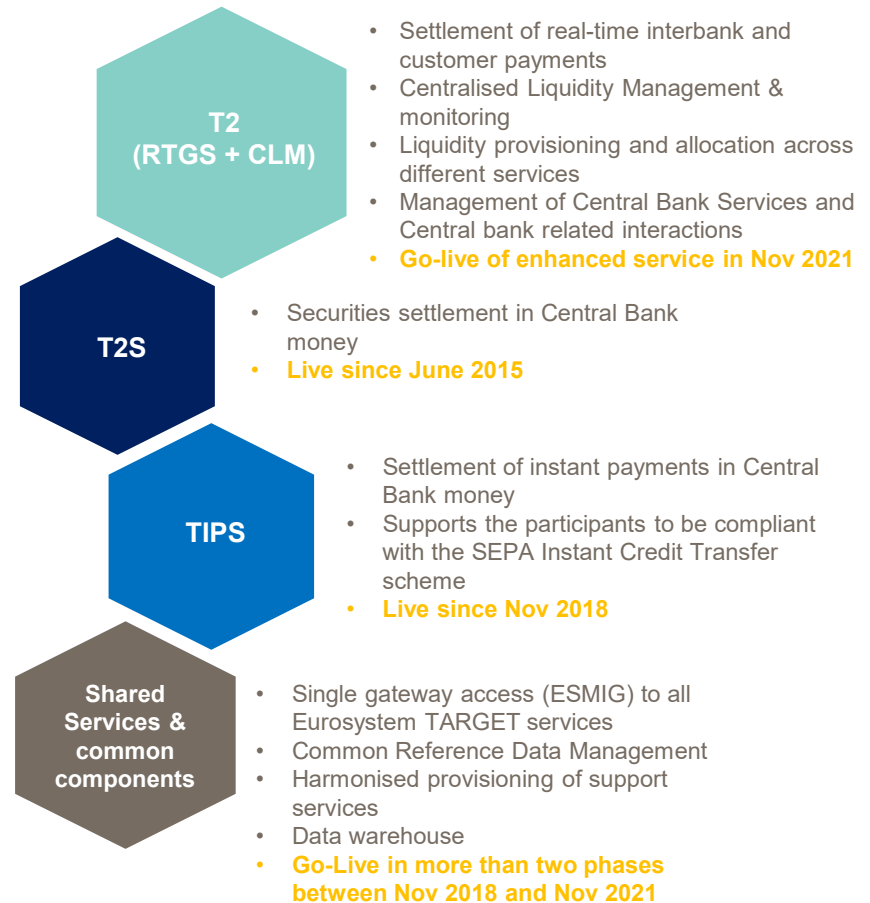


Future Eurosystem services – key aspects

High level functional domains



*for T2-T2S only



Eurosystem Vision 2020

What will be the impact on Financial Institutions

Connectivity and Integration

- Access to all Eurosystem services provided by authorized Network Service Provider in Application-to-application (A2A) and/or User-to-application (U2A)
- Integration with the Back-office applications, adoption of headers specificities
- Migration to new solution (i.e. user testing phase)

ISO 20022 V-shape

- Fully-fledged approach
- Big bang migration, i.e. no co-existence of FIN and ISO 20022
- Data flow changes: from Y-copy to V-shape
- Change of protocol: from FIN to ISO

New Liquidity Management model

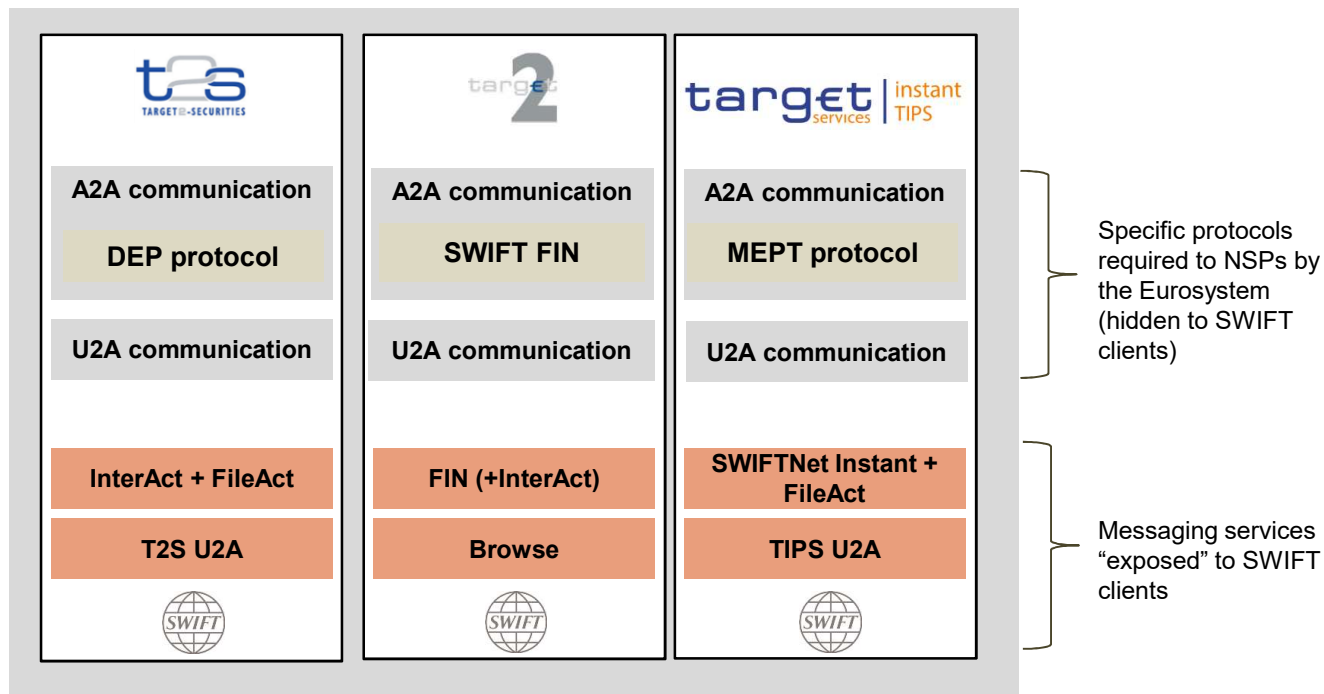
- Centralized Liquidity Management & monitoring
- New account structure
- Segregation of interaction with Central Banks from RTGS participation
- Operational changes through new functionalities & tools

Business changes

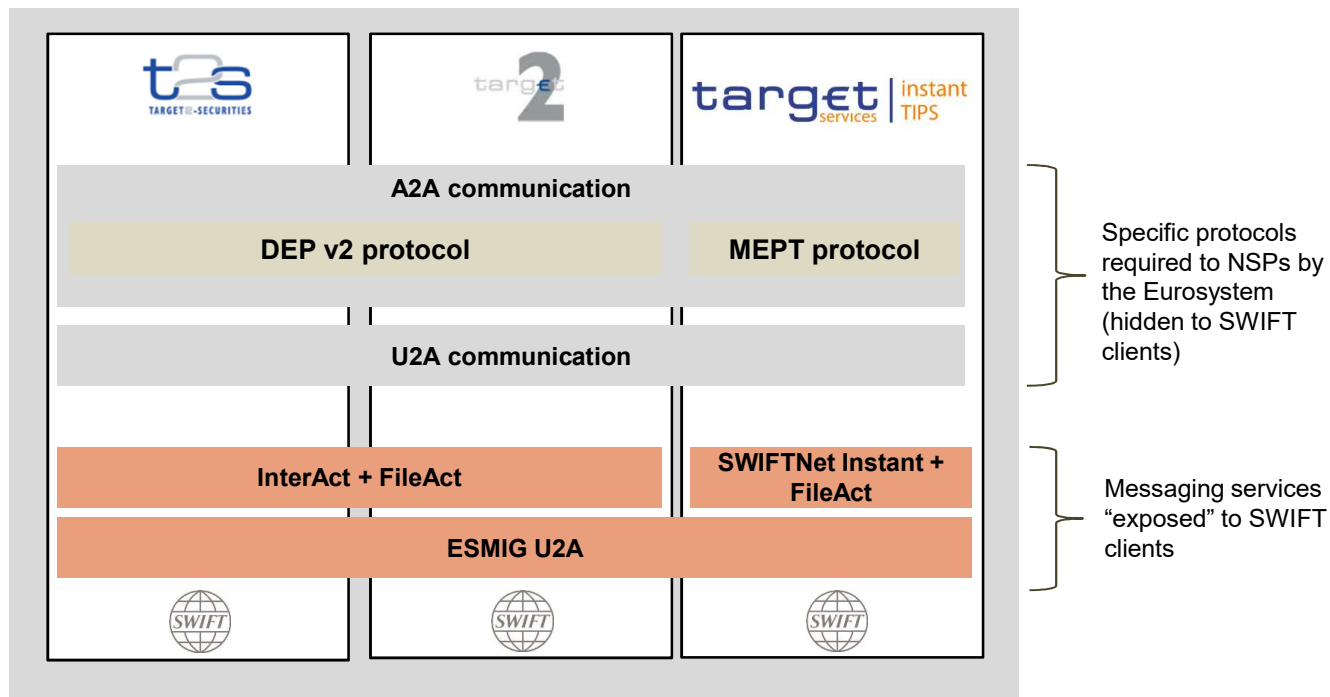
- Decision on participation model (direct vs. indirect)
- New business opportunities as a result of e.g. the centralization and outsourcing of payments/payment units



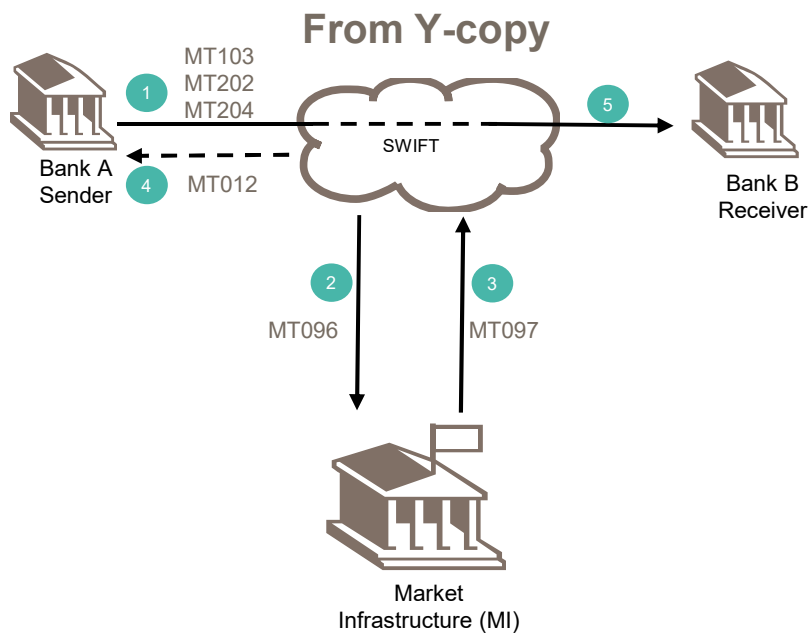
How does the “Eurosystem Single MI Gateway” operate like **today** with SWIFT



How will the “Eurosystème Single MI Gateway” operate like **tomorrow** with SWIFT

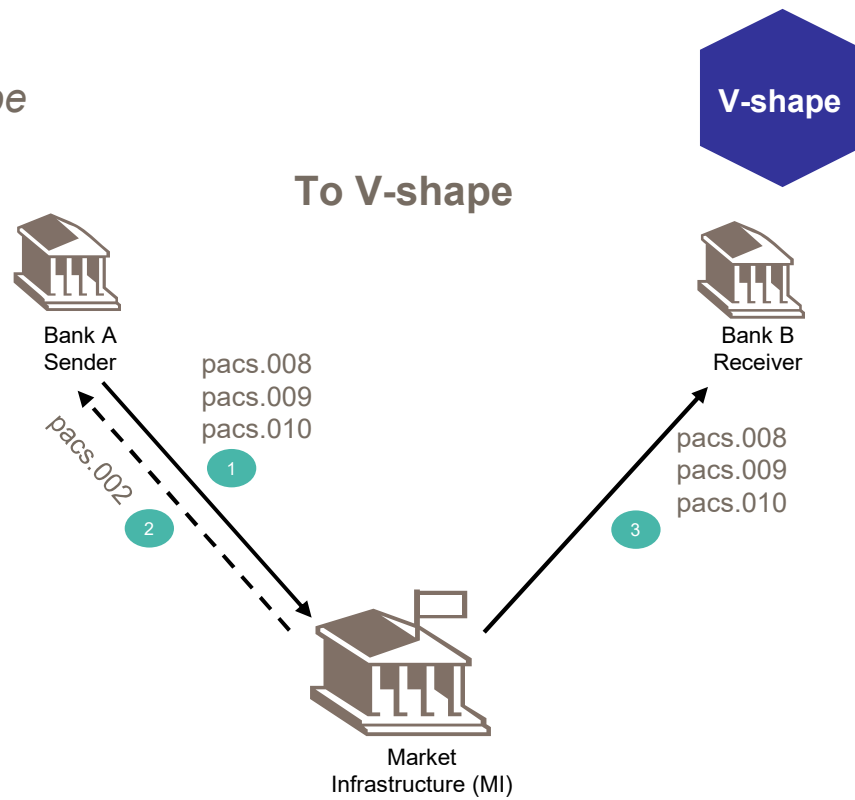


Message flows comparison *Y-copy* versus *V-shape*



Y-copy processing steps:

- 1 Bank A sends a payment message to SWIFT
- 2 SWIFT copies the payment message to the MI platform for authorization
- 3 MI platform sends an authorization message to SWIFT
- 4 (Optional) SWIFT sends a Settlement notification message to Bank A
- 5 SWIFT delivers the payment message to Bank B



V-shape processing steps:

- 1 Bank A sends a payment message to the MI platform
- 2 (Optional) Upon successful validation, the MI platform sends a settlement Confirmation message to Bank A
- 3 The MI platform delivers the payment message to Bank B





Key characteristics for T2: Impact of a migration from MT to ISO20022 Fully Fledged

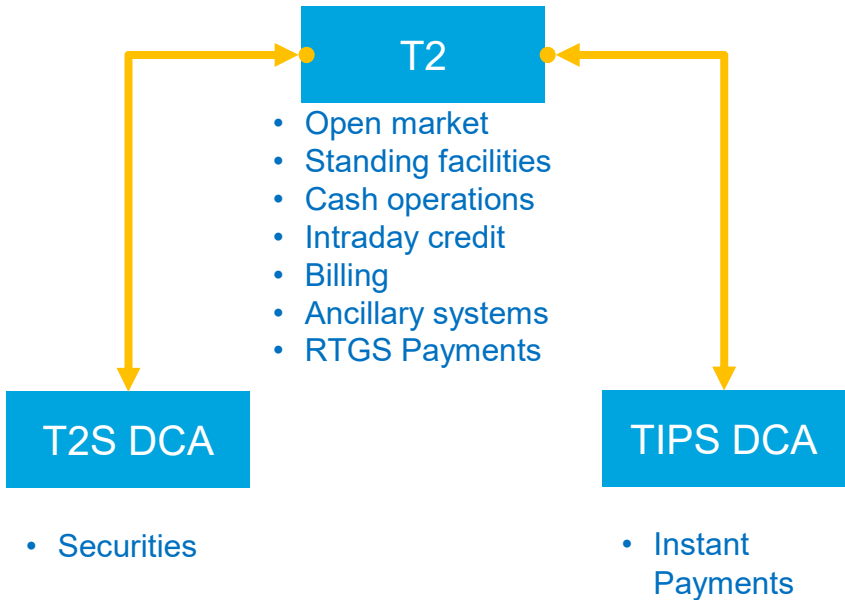
- **Fully-fledged approach:** In T2, the ISO 20022 message standard shall be implemented to its full extent, i.e. no “like-for-like” approach is followed in order to allow the usage of additional fields supported by ISO20022.
- **Message portfolio:** More than 55 ISO messages including 14 new messages.
- **Message versioning:** T2 will support only one message version at a time.
- **Big bang:** All messages will be replaced at the same time at the migration weekend in Nov 2021, i.e. no phased implementation is foreseen. Moreover, the Eurosystem does not plan to offer any message conversion service.



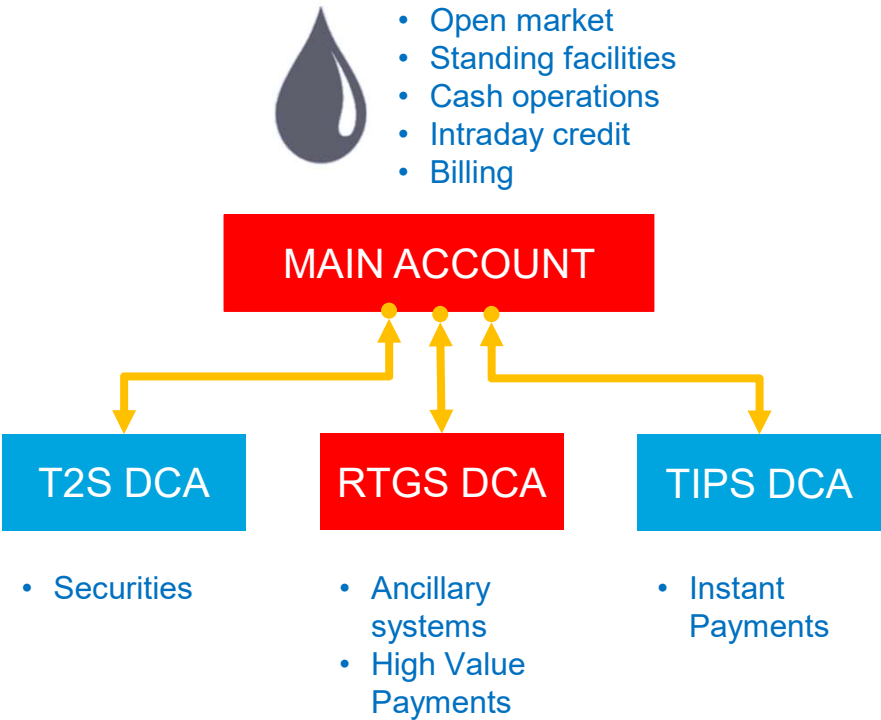
Central Liquidity Management & New account structure

New account structure

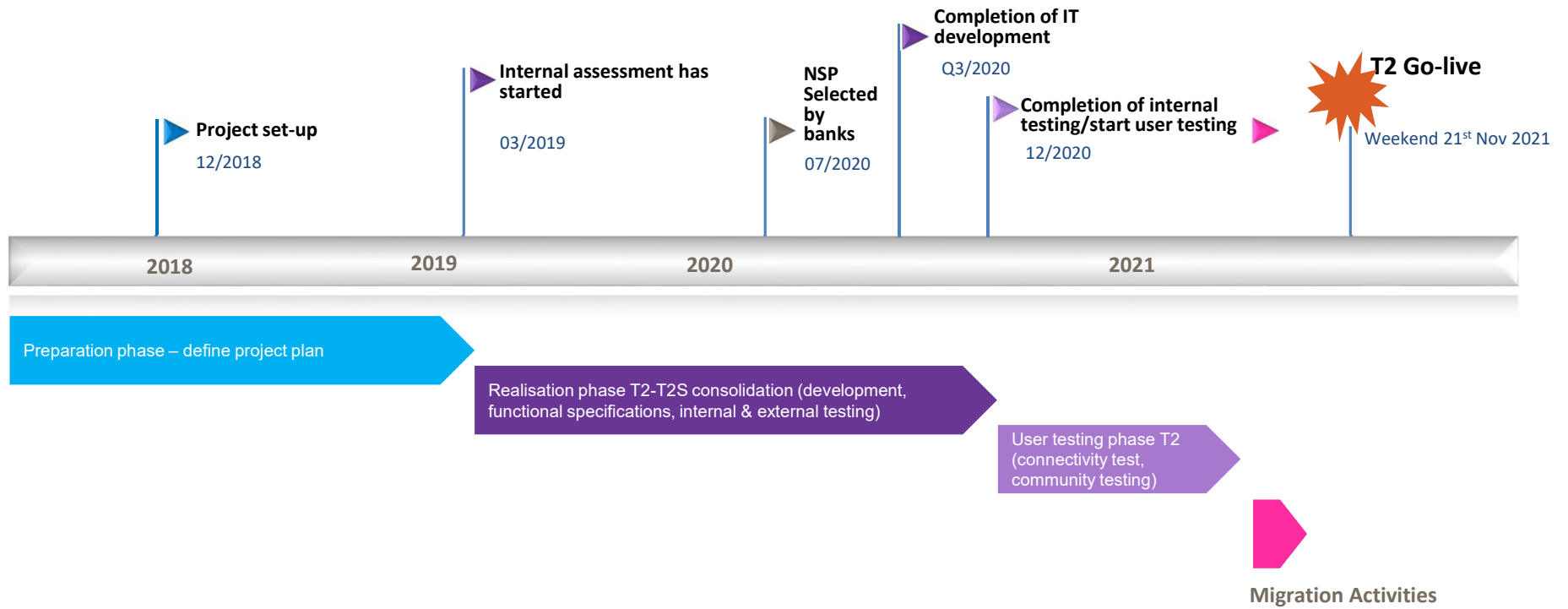
Today: T2 as main account



2021: Main Account & RTGS DCA



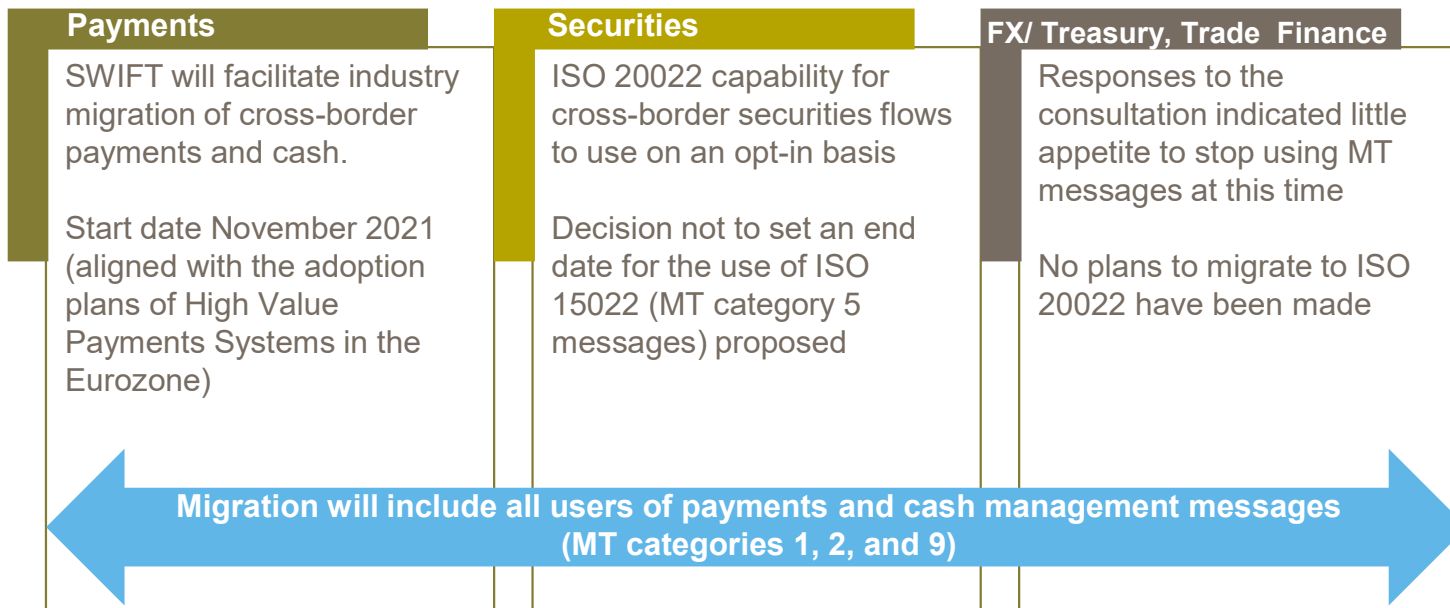
High-level ESMIG industry project for market participants



ISO 20022 migration of cross-border payments and reporting



ISO 2022 migration scope



Migration timeline



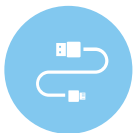
Coexistence and translation



During coexistence phase, all messages will be transmitted using the SWIFT network service native to the standard (FIN for MT and InterAct for ISO 20022)



Use of ISO 20022 for cross-border payments and cash management on the SWIFT network will be governed by market practice guidelines (newly established working group Cross-Border Payments and Reporting Plus CBPR+)



SWIFT will provide central translation service:

- SWIFT will implement and publish the rules formulated by the CBPR+ group
- Receiver will be responsible for triggering translation; users that translate ISO 20022 to MT will be required to manage risk of data truncation and to ensure that the original message is stored and screened
- All SWIFT users will be automatically enrolled to service, translation of received ISO 20022 to MT will be enabled by default

SWIFT gpi and ISO 20022



All MT and ISO 20022 payment messages will include mandatory, validated UETR and will be tracked by the gpi tracker. During the coexistence phase an end-to-end payments transaction may use any combination of the two standards.

Shared services and ISO 20022



Financial Crime Compliance (FCC) and Business Intelligence shared services products will be adapted to work with InterAct and ISO 20022 in time for the start of coexistence in 2021.



FCC Sanctions Screening for ISO 20022 will be offered to users with MT-based back-office systems to ensure that received messages can be fully screened before processing.

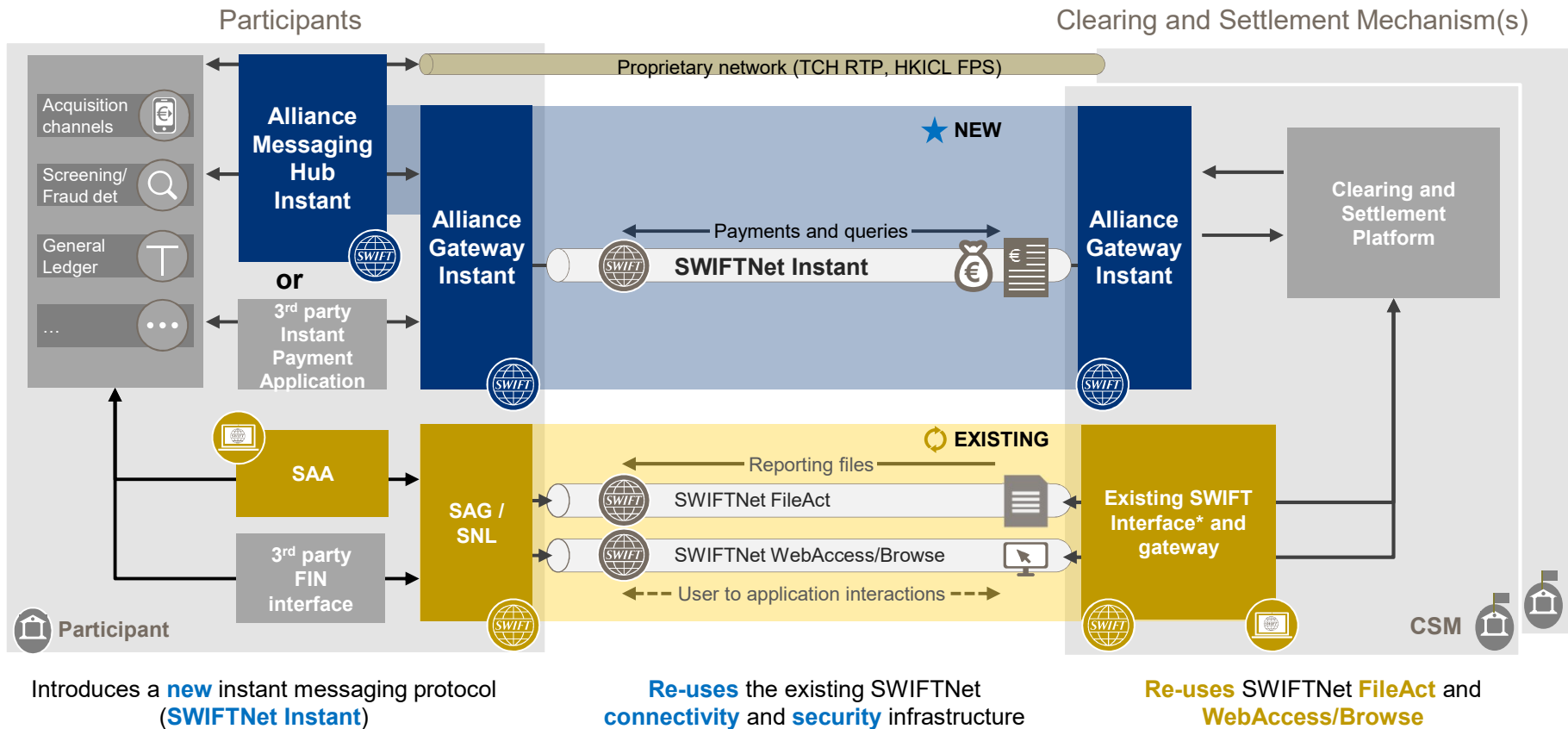


Instant Payments



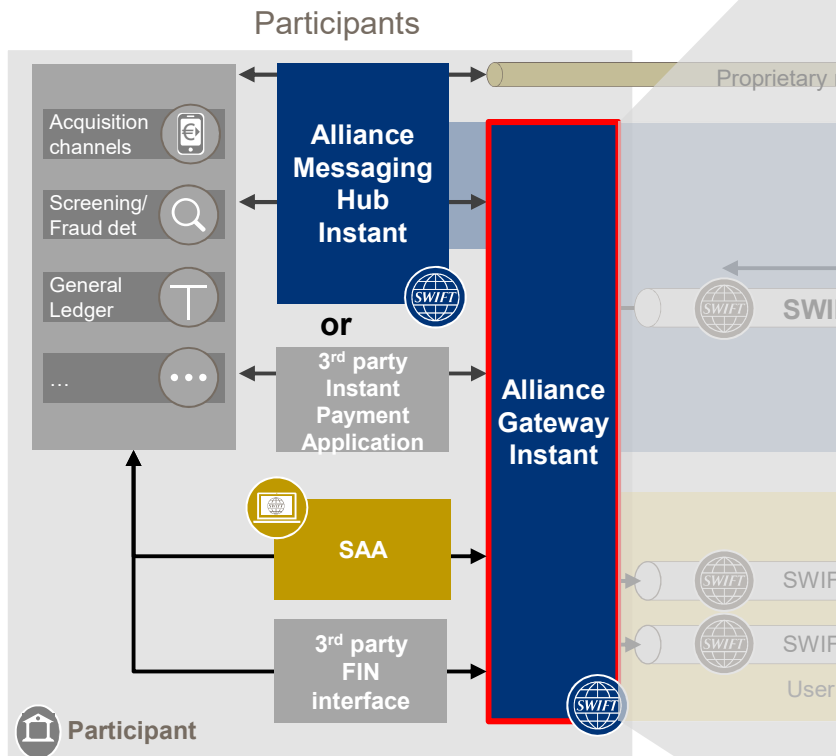
Proposed solution for instant payments

Overview of key components



Alliance gateway Instant

SWIFT technology evolution



Leverage instant payment knowledge from AU-NPP

Requirements related to 24x7 operations (graceful shutdown, distributed cluster of footprint...)

Create a new generic messaging capability to allow the support of other type of business

APIs in the context of open-banking, DLT....

Focus on the future state of the communication landscape in Europe

Multi-CSM solution, T2, T2S TIPS convergence

Trigger for a technology refresh of the footprint

New communication footprint, replacing SAG/SNL in the future

It is SWIFT's ambition to have AGI replacing SAG/SNL. SWIFT will allow Eurosystem Target services users to use AGI for all ESMIG connectivity needs, including generic InterAct and FileAct messaging services, in production by November 2021. Other specific SWIFT messaging services will be enabled on AGI in the following years.



What's next Cross-border

real-time payments

with gpi



SWIFT gpi tracker



Use case 1 – Real-time cross-border payment, via gpi between 2 banks *In progress*

Use case 2 – Real-time cross-border payment, via gpi into domestic instant payment system *In progress*

Use case 3 – Real-time end-to-end payment, from one domestic instant payment system to another via gpi *Planned*



What's next?



How can SWIFT support the financial community with the European Market Infrastructures evolution agenda



Support all Eurosystem 2020 connectivity requirements for TIPS, RTGS, CLM, T2S, etc. while allowing its community to re-use the generic SWIFTNet messaging services



Standards expertise consulting services: extensive understanding of the ISO20022 standards used for the future RTGS service



Business expertise consulting services to:

- Understand the new messaging flows and orchestration needs (FIN to ISO20022, Y-copy to V-shape)
- Understand the new Liquidity Management functions and Accounts structure
- Analyse the strategic impacts and opportunities of the T2-T2S consolidation



Translation and integration products and expertise



Project management expertise & experience in large migration projects



Tailored training



www.swift.com

TARGET2 info session

TARGET2 SSP Release 12.0:

http://www.ecb.europa.eu/paym/t2/professional/nov_2018/html/index.en.html

T2-T2S Consolidation:

http://www.ecb.europa.eu/paym/cons/html/future_rtgs_t2-t2s.en.html

Meeting documentation of Contact Groups:

<http://www.ecb.europa.eu/paym/initiatives/html/documents.en.html>



Thank you!

