T2-T2S Consolidation

ECB Operations Managers Group

17/12/2020

DG-MIP Market Infrastructure Development
1. Context
T2-T2S Consolidation context

- For more than a decade TARGET2 has been running smoothly
- However
  - The payments landscape has changed significantly
  - Technical opportunities have further increased
Objectives of T2-T2S Consolidation

- Improved **efficiency**
- Optimised **liquidity management**
- Easier access to all services via a **harmonised interface**
- **Enhancement** of RTGS service
- **Aligned** use of messaging standards (**ISO20022**)
- Reduced **operational costs**
- Increased **cyber resilience**
2. Building Blocks – Business Services
From a silo approach ...

- **T2S (Securities settlement)**
  - Reference Data
  - Billing
  - Data Warehouse
  - Gateway

- **TARGET2 (High-value payments)**
  - Reference Data
  - Billing
  - Data Warehouse
  - Gateway

- **TIPS (Instant Payments)**
  - Reference Data
  - Billing
  - Data Warehouse
  - Gateway
… to a modular approach

Central Liquidity Management
Credit line

T2S
Securities Settlement

Service-related Reference Data

Future RTGS Services
HVP
AS

Service-related Reference Data

TIPS
Instant Payments

Service-related Reference Data

Common Reference Data

Shared Billing

Data Warehouse

GUI

GUI

GUI

Eurosystem Single Market Infrastructure Gateway

Common Components
Central Liquidity Management (CLM)

- Bundles all necessary features to manage the liquidity across all Eurosystem services that a participant uses
- Flexible and supports a high degree of automation (e.g. event based liquidity transfers based on floor and ceiling amounts) for those participants that do not want to actively manage their liquidity
- Allows to use available payment capacity whenever one of the connected services is open for business without the need for harmonised operating times
- Provides a central liquidity overview in a single screen/point with an easy access to more detailed information
CLM: Pivotal role of the main account

Main Account

- Open market
- Standing facilities
- Cash operations
- Intraday credit
- Billing

All operations with Central Banks

Funding

Adjustments

Central Bank liquidity

Reserves

Funds dedicated to specific businesses

Spending

T2S
- Securities

RTGS
- Ancillary system
- High-value payments

TIPS
- Instant payments
CLM: Optimised Liquidity Management
Shared Reference Data

• Avoids inconsistencies and redundancies in the data used by the different services (e.g. party data, account data)
• Reduces effort of creating and maintaining reference data
• Enables a central (by NCB) blocking of parties across the different services
Shared Billing

- Aggregates raw data provided by the different services into invoices based on a given pricing scheme
- Avoids inconsistencies in the creation of invoices (as they happen today), as data is directly aggregated to the required level for all Eurosystem counterparties (i.e. no need for splitting T2S invoices anymore)
- Would still enable separate invoices for the different services
- Granularity and pricing of billing items as well as the counterparty to be charged is to be defined by the different services (in line with their pricing scheme)
Eurosystem Single Market Infrastructure Gateway

• Provides a shared communication infrastructure for all services
• Avoids duplication of communication related features into all the different services (e.g. user authentication, signing, signature validation, logging and archiving of messages)
• Would allow Single Sign-on for GUI users across the different services
• Multi-vendor approach
V-shape communication schema
3. Summary
In summary

- ISO20022
- Multi-currency RTGS services (no conversion)
- Multi-network service providers (ESMIG)
- Longer operating hours
- Enhanced Data Analytics
4. Success Factors
Key success factors

Technical readiness

Business and operational readiness

Commitment

Management awareness

Project funding

Risk management

Coordination: internal and with community
WHAT participant need to ensure?

• **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 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
5. Key Milestones
## Eurosystem milestones

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<th>Specifications</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
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### Development and 4CB internal testing
(02/01/2019-13/08/2021)

- Extended 5 months

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### Eurosystem Acceptance Testing (EAT)
(04/05/20-30/09/21)

- EAT2 duration 2 months - extended 1 month

### Central Bank Testing
(01/06/21-30/11/21)

- Duration: 6 months - extended 2 months

### User Testing (UT)
(01/12/21-30/09/22)

- Duration: 10 months - extended 3 months

### Migration
(22/08/22-21/11/22)

- Extension of phases
## Roadmap to T2-T2S Consolidation

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<th>MILESTONES</th>
<th>2020</th>
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<tr>
<td></td>
<td>Q4</td>
<td>Q1</td>
<td>Q2</td>
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<tr>
<td>Software development and testing of internal applications</td>
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<td>(IAD5 31/03/2020)</td>
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<td>Software development for the required adaptation changes to T2</td>
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<td>started and completed (15 months)</td>
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<td>Testing of internal applications started and completed (6 months)</td>
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<td>IAD6 30/06</td>
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<td>NSPs procurement</td>
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<td>NSP3 - NSPs selection and contracts preparation completed</td>
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<td>NSP4 - Network Service Providers procurement completed</td>
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<td>Connectivity tests and user testing</td>
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<td>Network connectivity tests started and completed (3 months)</td>
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<td>Training for user testing started and completed (3 months)</td>
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<td>User Testing activities started and completed (10 months)</td>
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<td>Contractual and operational procedures adaptation</td>
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<td>CLA - Contractual and legal adaptation completed</td>
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<td>OPA - Operational procedures adaptation completed</td>
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<tr>
<td>Connectivity testing on production and migration implementation</td>
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<td>Network connectivity tests on production started and completed (3 months)</td>
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<tr>
<td>Pre-migration activities on production environment started and completed</td>
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<td>(2 months and 1 week)</td>
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Roadmap for participants to T2-T2S consolidation

2021

IAD7 (01/03): Testing of the internal applications started
NSP3 (31/03): NSPs selection and contract preparation completed

IAD6 (30/06): Software development for the required adaptation changes to T2 completed
NSP4 (30/06): Network Service Providers procurement completed

IAD8 (31/08): Testing of the internal applications completed
NCO2 (30/11): Network connectivity tests completed
IST2 (30/11): Training for user testing completed

UTA1 (01/12): User testing activities started
NCO1 (01/09): Network connectivity tests started
IST1 (01/09): Training for user testing started

March 2021
June 2021
Aug 2021
Dec 2021
Sep 2021
Nov 2021
Roadmap for participants to T2-T2S consolidation

2022

NCPO1 (01/05): Network connectivity tests on production started

NCPO2 (31/07): Network connectivity tests on production completed

MIG1 (22/08): Pre-Migration activities on production started

August 2022

September 2022

OPA (30/09): Operational procedure adaptations completed
CLA (30/09): Contractual and legal adaptations completed
UTA2 (30/09): User testing activities completed

MIG2 (31/10): Pre-Migration activities on production completed

21 Nov 2022 Launch

May 2022

July 2022

October 2022
Thank you
Questions & Answers