**T2S Information Session DNB**

**February 25th, 2014**

# T2S Information Session DNB

## Basic Agenda

| | | |
|---|---|---|
| 09.30 – 09.45 | 1. Introduction to T2S | Ariena van Wageningen |
| 09.45 – 10.00 | 2. Access to T2S | Marcel Otten |
| 10.00 – 10.30 | 3a. Functional detailing of T2S | Erik Beunen |
| 10.30 – 11.00 | Koffiepauze | |
| 11.00 – 11.30 | 3b. Functional detailing of T2S | Erik Beunen |
| 11.30 – 11.45 | 4. T2S User Testing | Ton Tol |
| 11.45 – 12.00 | 5. TARGET2 | Ton Tol |
| 12.00 – 12.15 | 6. Planning | Marcel Otten |

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**Introduction to T2S**

# Introduction to T2S

## Overview T2S – What Is TARGET2-Securities (T2S)?

- **Concept:** T2S is a technical solution to support Central Securities Depositories (CSDs) by providing core, borderless and neutral settlement services

- **Objective of T2S:** To achieve harmonised and commoditised settlement in Central Bank Money (CeBM) in euro and other eligible currencies for substantially all securities in Europe

- **Governance of T2S:**

  – The CSDs participating in T2S and the Central Banks (CB) whose currencies participate in T2S will maintain full control over the business and contractual relationship with their customers

  – The Eurosystem manages and operates the business application and the technical solution providing the T2S Services

# Introduction to T2S

## Overview T2S – Background and History of T2S

**Why does Europe need T2S?**

- Europe's securities markets are too fragmented and inefficient

- There is lack of competition in services related to settlement

- Europe needs a single pool of securities to stimulate competition and harmonisation

- There is no other realistic Europe-wide approach to creating this single pool

# Making Europe a better place to invest and trade
# (in line with the Lisbon agenda)

# Introduction to T2S
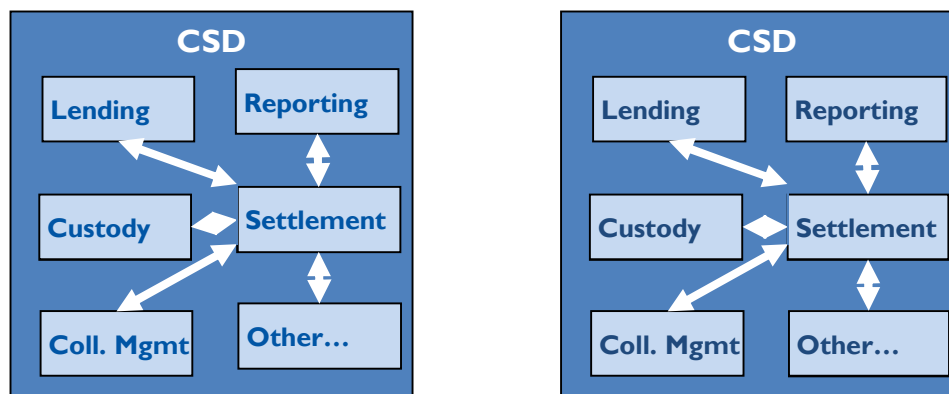
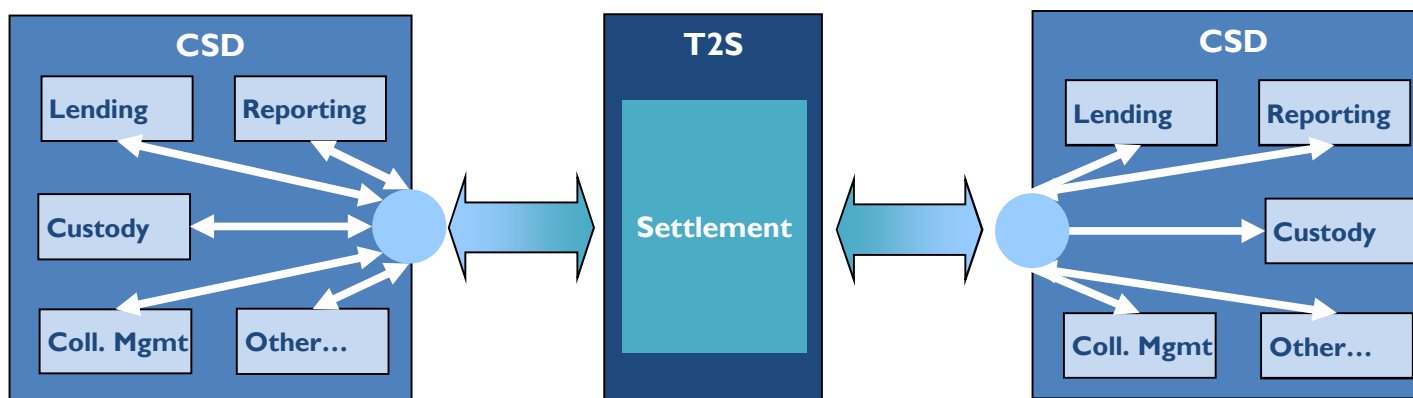## Overview T2S – Integrated Model and Multi-Currency Capability
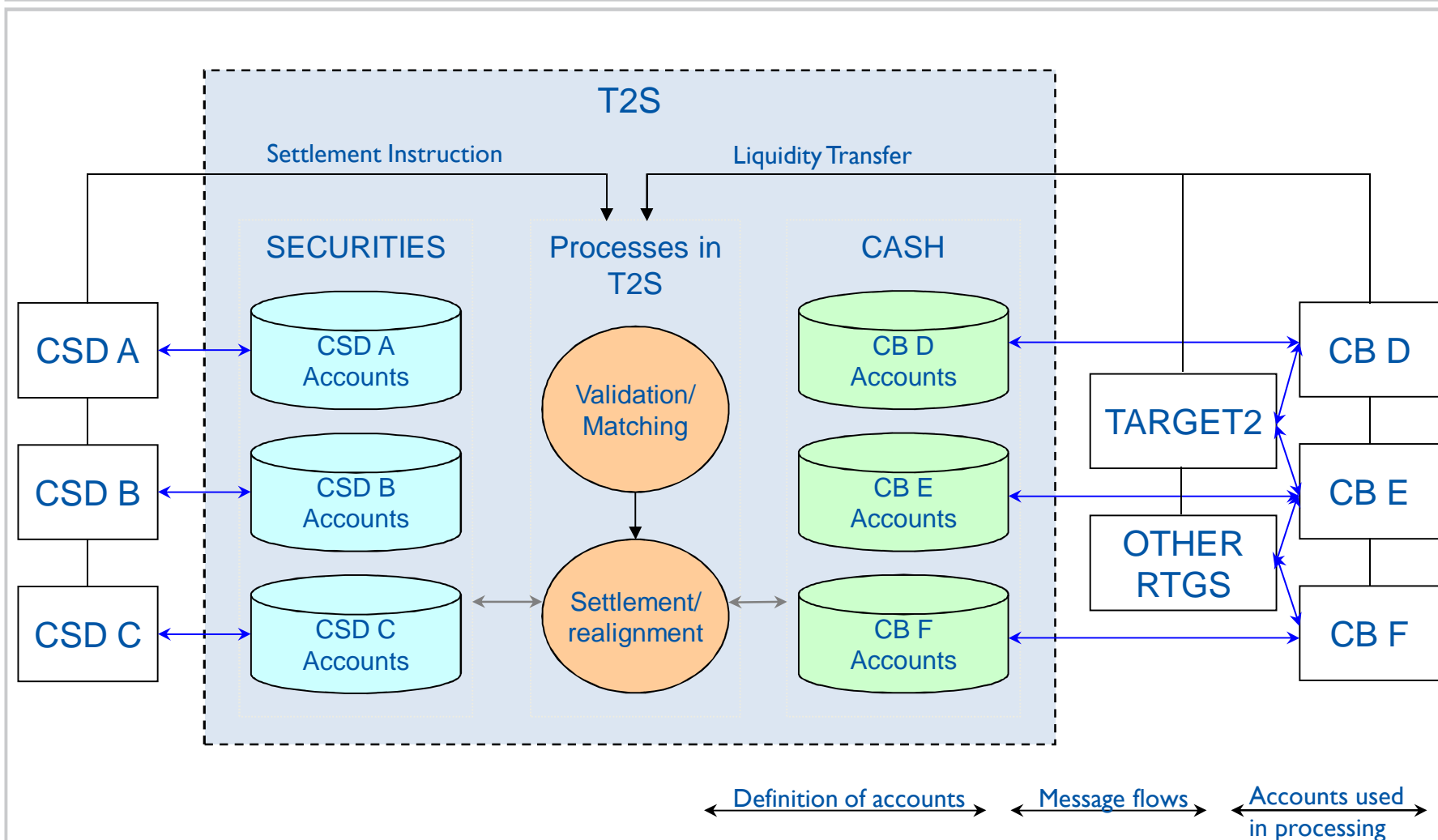
## Overview T2S – Entirely New Concept Changing The Industry

### T2S – A Service for the CSDs, not a CSD

**Today**

CSD
- Lending
- Reporting
- Custody
- Settlement
- Coll. Mgmt
- Other…

CSD
- Lending
- Reporting
- Custody
- Settlement
- Coll. Mgmt
- Other…

**T2S world**

CSD
- Lending
- Reporting
- Custody
- Coll. Mgmt
- Other…

T2S
- Settlement

CSD
- Lending
- Reporting
- Custody
- Coll. Mgmt
- Other…

## Overview T2S – Cross-Border Settlement with T2S

**With T2S – One integrated settlement process (domestic and cross-border)**
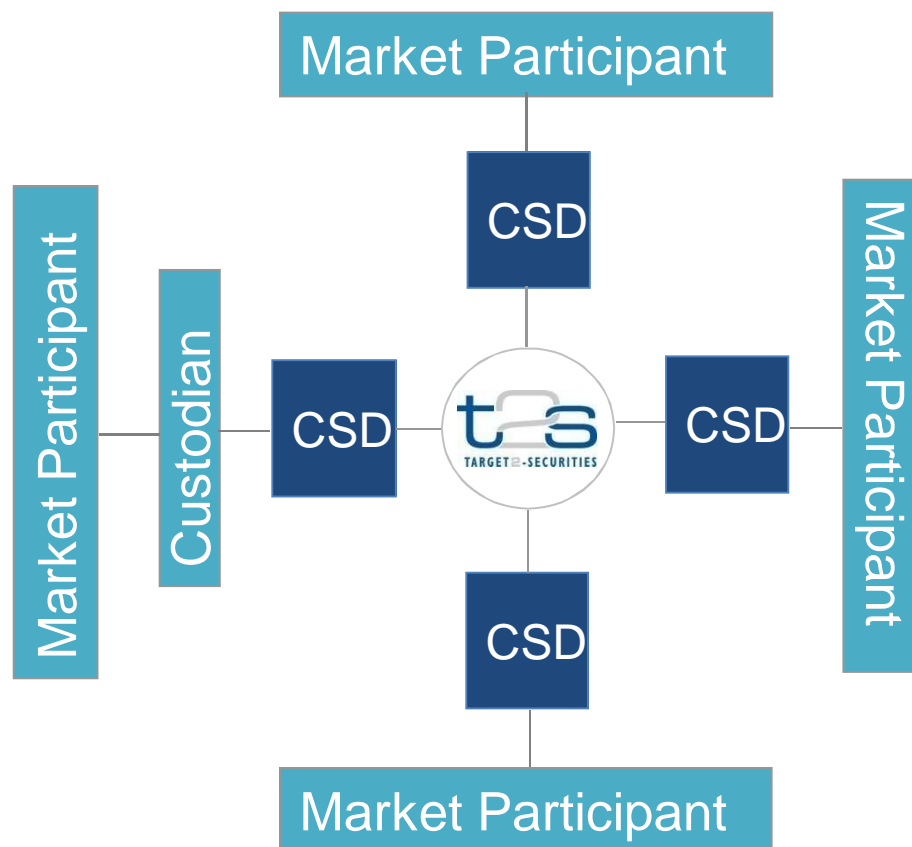
# Introduction to T2S

## Overview T2S – Key Benefits of T2S

- Higher level of competition in post-trade industry

- A Single Market for financial services in Europe through harmonized clearing and settlement

- Reduced settlement risks on cross-border transactions improves financial stability

- Same processing and reduced settlement fees for domestic and cross-border transactions

- Possibility to access all securities from one account in one CSD

- Potential to optimise collateral and liquidity requirements

- Reduced back-office costs by centralising settlement and thus streamlining interfaces

# Introduction to T2S

## T2S Infrastructure Principles



- **T2S on T2**

  - T2S shall be based on the TARGET2 platform and will provide the same levels of availability, resilience, recovery time and security as TARGET2.
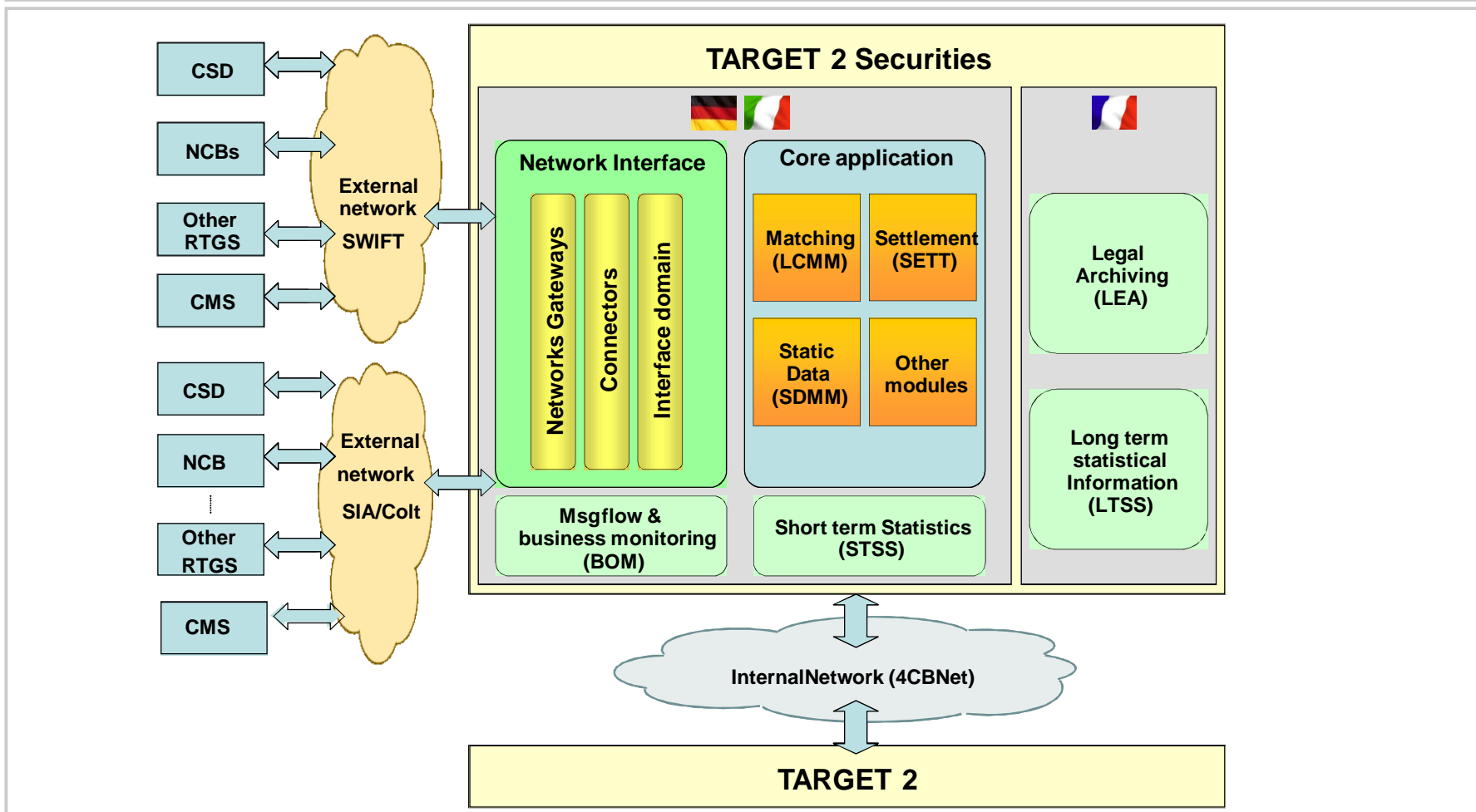
- **"*Active-Active*" Model**

  - Infrastructure is deployed over three Regions (BdI, BBk, BdF) and will be shared with T2;

  - BdI and Bbk will host, in any moment, one production environment (T2 or T2S)

- **Logical independency between TARGET2 and T2S**

  - Each system must be able to run independently from the other.

# Introduction to T2S



T2S Technical Architecture Overall View

# Introduction to T2S

## T2S Pricing – T2S Pricing Policy

- Commitment to not increase fees by more than 10% per year from 2019 until the end of the cost recovery period

- Early signatories of the Framework Agreement benefit from fee reductions during the migration period

- Conditions of T2S pricing policy;

  – Non-euro currencies add at least 20% to total settlement volumes

  – EU settlement volumes are not more than 10% lower than those projected based on market advice

# Introduction to T2S

## T2S Pricing – A Very Lean and Transparent Price List

| Settlement services | Price (euro cent) |
|---|---|
| Delivery versus payment | 15 cent |
| Free of payment / Payment free of delivery | 9 cent |
| Internal liquidity transfer | 9 cent |
| Account allocation | 3 cent |
| Matching | 3 cent |
| Intra-balance / Intra-position movement | 6 cent |
| Auto-collateralisation with a payment bank | 15 cent |
| ISD settlement fail | 15 cent |
| Daytime settlement process | 3 cent |

**Prices are per instruction**

# Introduction to T2S

## T2S Pricing – Items Priced Currently at Zero

- Certain items have a zero price, assuming use is within expected consumption patterns…

| Settlement services | Price (euro cent) |
| --- | --- |
| Daytime congestion charge | 0 cent |
| Auto-collateralisation with central bank | 0 cent |
| Top/high priority instructions | 0 cent |
| Cancellation | 0 cent |
| Modification (including Hold & Release) | 0 cent |
| Cash account | 0 cent |

…and securities accounts to be free of charge
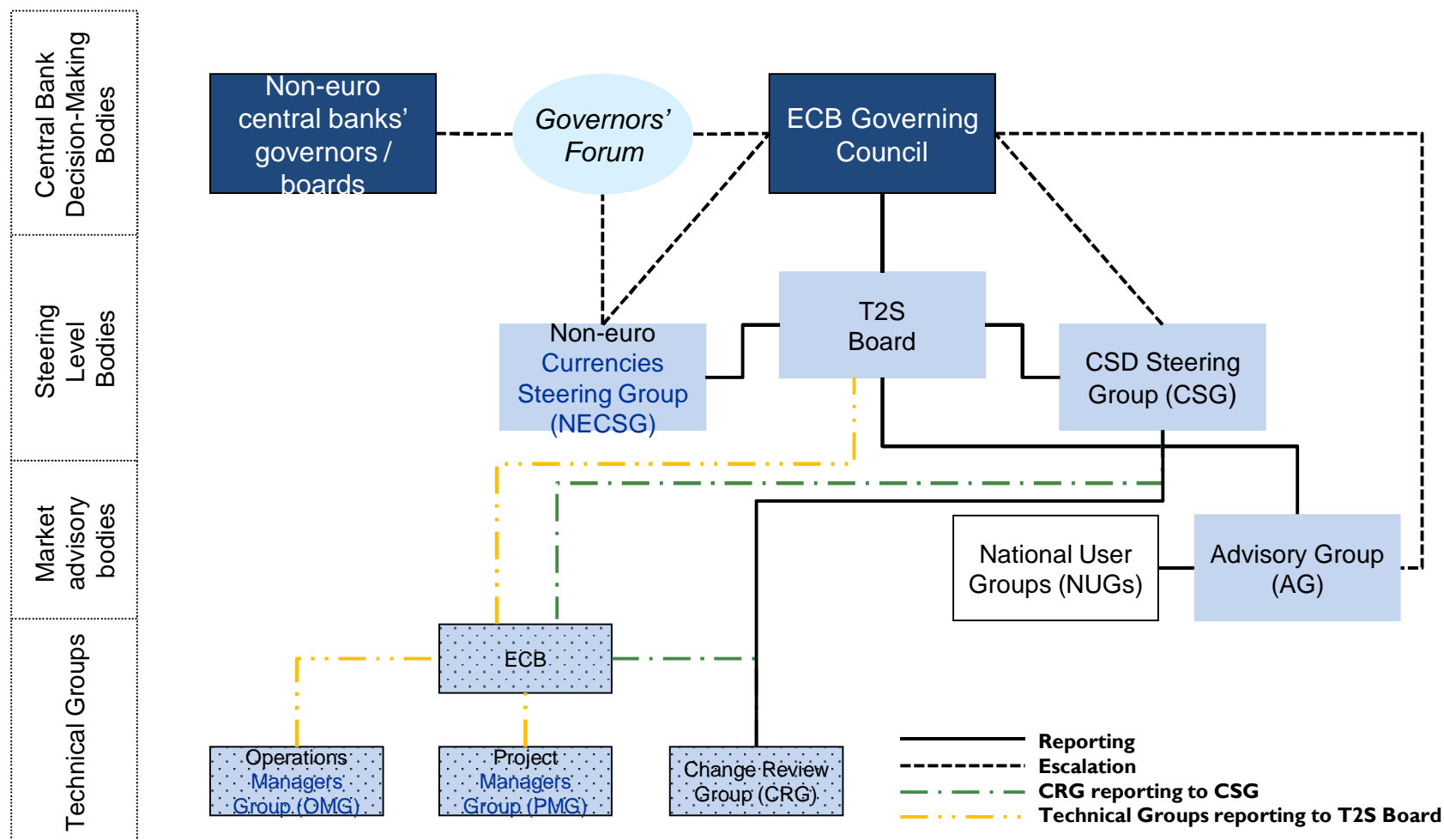at least until the end of the cost recovery period

## T2S Pricing – Pricing of Information Services

| Information services | Price (euro cent) | Explanation |
|---|---|---|
| A2A reports | 0.4 cent | Per business item in any A2A report generated |
| A2A queries | 0.7 cent | Per queried business item in any A2A query generated |
| U2A queries | 10 cent | Per executed search function |
| Messages bundled into a file | 0.4 cent | Per message in a file |
| Transmissions | 1.2 cent | Per transmission |

## T2S Governance – Including ECB and Technical Groups



**Central Bank Decision-Making Bodies**
- Non-euro central banks' governors / boards
- Governors' Forum
- ECB Governing Council

**Steering Level Bodies**
- Non-euro Currencies Steering Group (NECSG)
- T2S Board
- CSD Steering Group (CSG)

**Market advisory bodies**
- National User Groups (NUGs)
- Advisory Group (AG)

**Technical Groups**
- ECB
- Operations Managers Group (OMG)
- Project Managers Group (PMG)
- Change Review Group (CRG)

Legend:
- Reporting
- Escalation
- CRG reporting to CSG
- Technical Groups reporting to T2S Board

# Introduction to T2S

## Links to Further Information (1)



**T2S on the web**

- Publication of all relevant information and key documents
- Access to documents of all T2S working groups
- 'Spotlight' on latest information on the project
- Insights on project plan, governance, pricing, harmonisation
- Ad hoc sections dedicated to all stakeholder categories (CSDs, banks, NCBs, others)
- Publication of quarterly newsletter 'T2S OnLine'

## Links to Further Information (2)

**Specific documents, obtainable via the T2S website:**

- T2S User Requirements Document (URD):

  http://www.ecb.europa.eu/paym/t2s/pdf/URD_v5_02.pdf?19394074f3527807eb8846b866943b39

- T2S General Technical Design:

  http://www.ecb.europa.eu/paym/t2s/pdf/general_technical_design_spotlight.pdf?be5c4592183ad9ab6dfc7890c2816387

- T2S User Detailed Functional Specifications :

  http://www.ecb.europa.eu/mwg-internal/de5fs23hu73ds/progress?id=lbWJtGyjsO

# Introduction to T2S

## Links to Further Information (3)

**Specific documents, obtainable via the T2S website:**

- T2S Framework Agreement (Schedule 5 – Service description, Schedule 7 - T2S Pricing):

  http://www.ecb.europa.eu/paym/t2s/pdf/csd_FA/T2S_Framework_Agreement_Schedules.pdf?65fab03bc7d7d54a09efb89313899cf1

- **Currency Participation Agreement (CPA)**

  http://www.ecb.europa.eu/paym/t2s/progress/pdf/currency-participation-agreement-including-schedules.pdf?b2c2ea4140ca0ba6c7c3446d1708abc9

# T2S Information Session DNB

## February 25th, 2014

## Access to T2S

## Access to T2S – Party Data Model of T2S

The party data model in T2S is built in a hierarchical structure and defines the relationships between the parties.
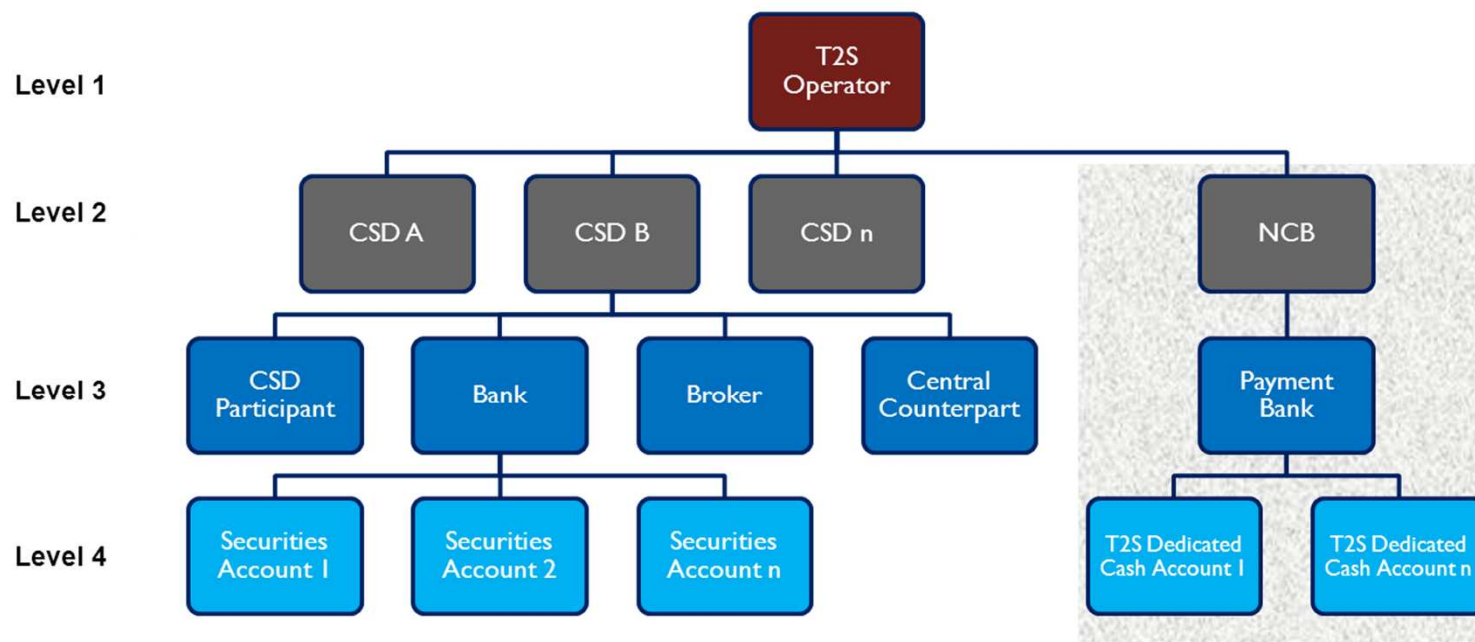


**Note:**
1. A business role of "T2S Party" includes CSD Participants, Banks, CCP, stock exchanges, Brokers, etc
2. A legal entity representing a "settlement bank" is a party in T2S with the role of "T2S party" and the role of a "payment bank"

## Access to T2S – Party Data Model of T2S – Central Bank

- The CB leg of the hierarchy includes all data relating to the CB and the T2S Dedicated Cash Accounts (DCAs) held by payment banks with a CBs:
    - The third tier of the hierarchy consists of the payment banks operating T2S DCAs
    - The T2S DCAs exists on the lowest level of the hierarchy

- CBs may not access the data of another CB or of a CSD unless given the relevant privileges by the other CB or by the CSD

- CSDs may not access the data of another CSD or of a CBs

- T2S ensures the access and access restrictions to data through roles and access rights on the level of the T2S system user

# Access to T2S

## Access to T2S – Roles in T2S

- Roles in T2S define the specific privileges and access rights (applications, functions and data) to which a T2S system user has access

- T2S will differentiate business roles for all T2S Actors

- No restrictions on the number and types of roles that can be configured

- Designed to provide maximum flexibility in adapting the access rights of T2S system users. Constraints and privileges to accessing functionality will be based on the business requirements for access to T2S

# Access to T2S

## Options for Technical Connectivity to T2S

- DiCoAs (Directly Connected Actors): All T2S Actors who are technically directly connected to T2S
  - CSDs
  - CBs
  - Directly Connected Participants (DCPs, described later)

- T2S can be accessed using one of two licensed Network Service Providers (NSPs):
  - VAN: Value-Added Network (application-to-application (A2A)) as well as user-to-application (U2A) via Graphical User Interface, GUI)
  - SWIFT and SIA/COLT



T2S Actor — Network Provider — T2S

A2A     U2A

# Access to T2S
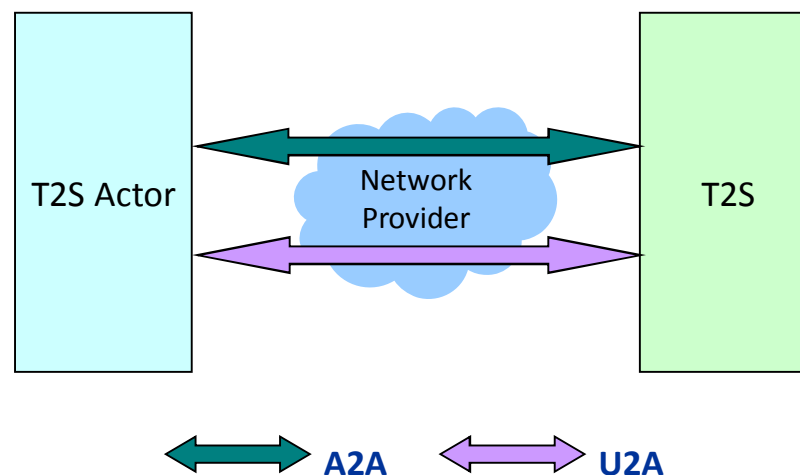
## Options for Technical Connectivity to T2S – Required Adaptations

Intermediaries



- ISO 20022 communication
- ISO 15022 communication
- Proprietary standards based communication
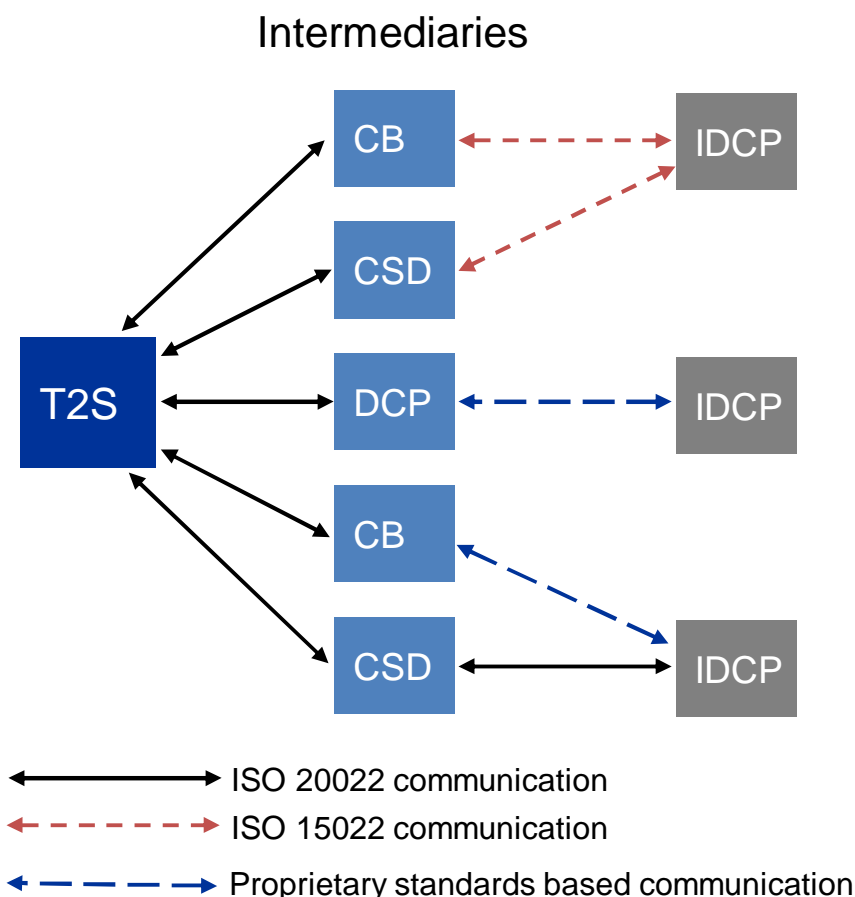
T2S does not impose how the IDCP connects to the CSD, CB or DCP

**Handling ISO 15022**

- Continuation of existing communication possibilities until coexistence period of ISO 15022 and ISO 20022

- Migration to ISO 20022 after coexistence period

- Possible thin layer of translation between ISO 20022 to/from ISO 15022

**Handling proprietary**

- Possible need of translation to/from ISO 20022

# Access to T2S

## Application-To-Application and User-To-Application – A2A and U2A

A2A access mode offers the majority of the T2S functionality, e.g.

- Sending settlement instructions from T2S

- Maintaining static data in T2S, like party, securities accounts, DCAs

- Querying T2S for settlement instructions

- Receiving reports from T2S

- Liquidity management
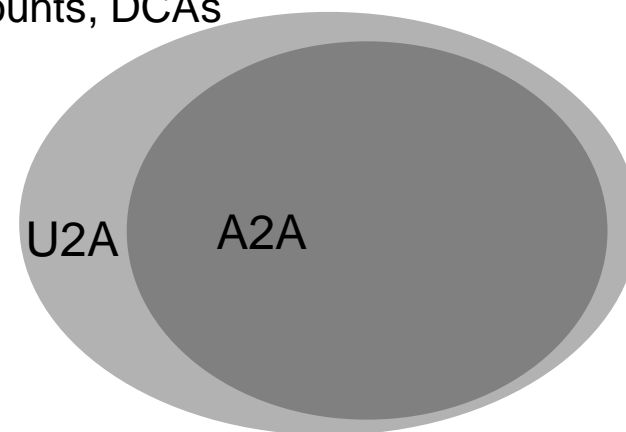
U2A mode offers access to the complete T2S functionality;

additional functionality includes e.g.

- Maintaining relationship between CSD Participant and a Securities Account

- Maintaining external RTGS accounts data in T2S

U2A    A2A

# Access to T2S

## Direct Connectivity – Principles

Before a CSD or a CB participant can become a DCP (CSD) or DCA Holder (CB) in one market, this participant needs to get authorisation from its CSD or CB in that market to establish technical connectivity to T2S.

- However, for becoming DCP or DCA Holder in other markets, this participant needs to get authorisation and privileges from its CSD or CB in the respective market. Hence, depending on the set-up, the Payment Bank may be a DCA Holder with one CB while being an Indirect Participant with another CB

- A participant could use one technical connectivity to T2S to act as a DCP/DCA Holder in several markets

- For the DCP/DCA Holder
  - Regarding security settlement: the contractual relationship remains between the DCP and the CSDs at which their settlement accounts are held
  - For the Payment Bank: the contractual relationship remains between the DCA Holder and the CBs at which their RTGS accounts are held

# Access to T2S

## Direct Connectivity – DCA Holder Liquidity Management Scenario

Depending upon the legal and business arrangements between the Payment Banks and their CBs, the CB will grant the relevant privileges to the Payment Bank as DCA Holder (see below an example of potential set-up)
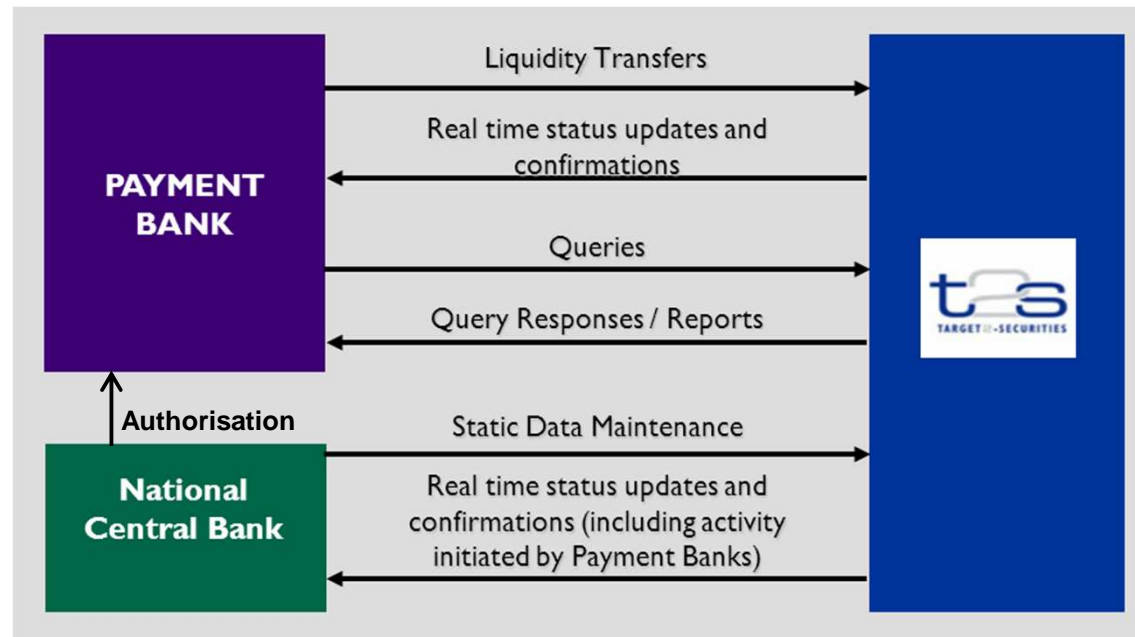
## Direct Connectivity – Principles for Information Provision (1)

- To receive information directly, the CSD/CB needs to set up the routing configuration as part of the static data

    - The routing configuration is the technical address specified in the static data to which T2S will always send the responses and

    - Irrespective of whether the settlement instruction is sent directly or via the CSD/CB

- There are almost no mandatory messages T2S will send, a participant need to define via subscription in T2S which messages to receive

- The message subscription does not define to which technical address the message is actually delivered

    - For instance, in practice, even though the subscription is made for a Party A (As T2S Party in T2S), the actual recipient of the message might be the CSD/CB

    - The technical address stored in the Party Reference data and the routing configuration(s) will define who will physically receive the message

# Access to T2S

## Direct Connectivity – Principles for Information Provision (2)

- T2S offers a certain set of predefined reports, that can be configured in advance by the CSD/CB via the report configuration

  - The reports are generated either at a specific time or following a T2S event

  - Reports can be either sent automatically by T2S, or retrieved at a later stage by the recipient via a query/ download

- Each CSD and CB can define for itself and its participants (including DCA Holders) which messages and copies of messages have to be received

- The configuration is based on a set of rule set, these rules will define whether the interested parties want to receive a message or copy of this message

## Management of Access Rights – Access Rights Configuration

- Each user is linked to the party it belongs to
- Each user inherits the default data scope of the party
- The link between user and party cannot be changed
- Each party must have at least one administrator
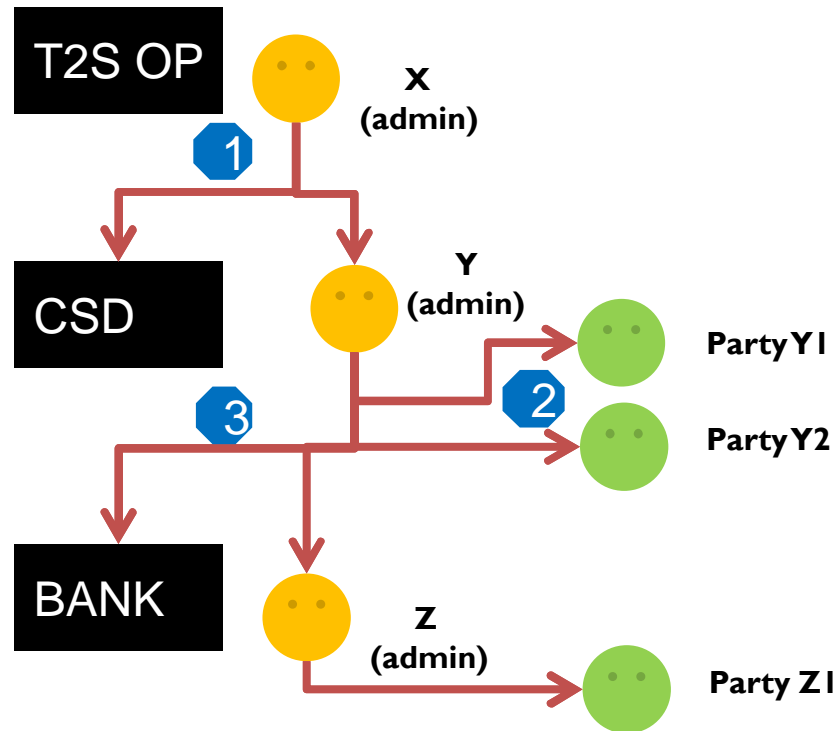


- **1** The administrator of the T2S operator creates the CSDs / CBs and the CSD/CB administrators, and grants the Party (CSD/CB) the relevant privileges (system and object)

- **2** The administrator of CSD/CB grants its parties the relevant roles/privileges depending on their need
  - Y1 ➔ static data management
  - Y2 ➔ settlement

- **3** The administrator of CSD/CB grants one of its party (BANK) some privileges (querying positions)

- **4** The administrator of BANK grants one of its parties the privilege to query on positions (default data scope for Z1 is all accounts of BANK, except it is reduced by its administrator)

# Access to T2S

## Management of Access Rights – Data Scope

- Through the hierarchical party data model the default data scope of a user is defined:

  – The T2S Operator has visibility on all static (e.g. party and account) and dynamic (e.g. instructions) data objects, and can act on objects belonging to participants only in exceptional circumstances, following a specific agreement

  – The CSDs and the CBs have visibility on all static and dynamic data objects belonging to their CSD and CB, and their participants

  – The CSD participants and those of the payment banks have visibility on static and dynamic data objects that are (directly or indirectly) linked to themselves



DIAGRAM 42 – DEFAULT DATA SCOPES

T25 Operator default data scope
CSD default data scope
CSD participant default data scope
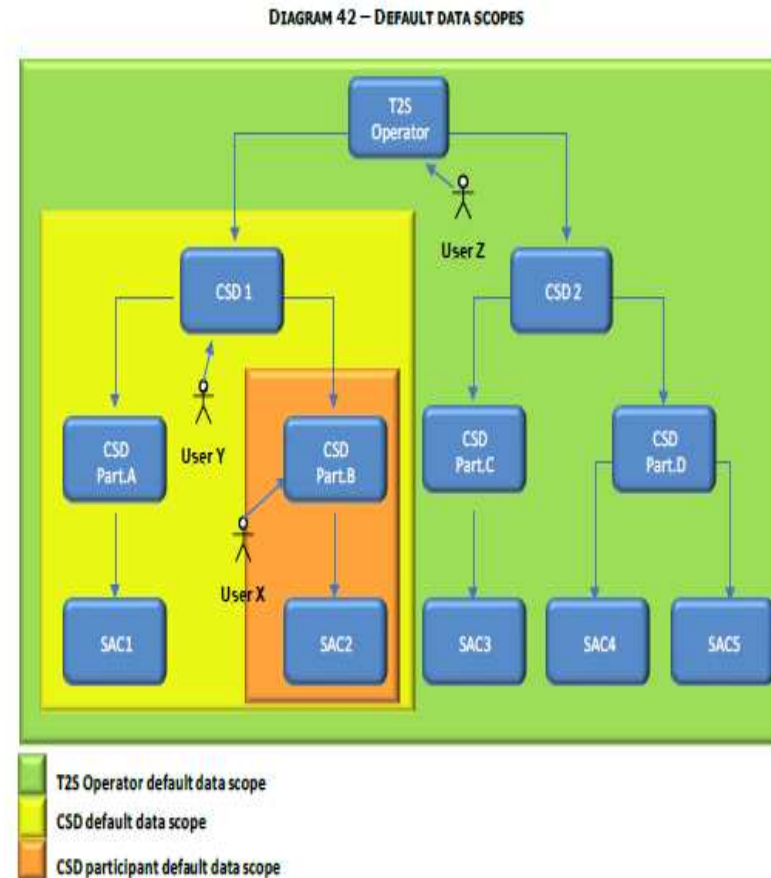
**T2S Information Session DNB**

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**Functional Detailing of T2S**

# Functional detailing of T2S

## T2S Services/Functional Architecture – Integrated Settlement Model



T2S

Settlement Instruction          Liquidity Transfer

SECURITIES          Processes in T2S          CASH

CSD A          CSD A Accounts          Validation/ Matching          CB D Accounts          CB D

CSD B          CSD B Accounts                    TARGET2          CB E Accounts          CB E

CSD C          CSD C Accounts          Settlement/ realignment          OTHER RTGS          CB F Accounts          CB F

Definition of accounts          Message flows          Accounts used in processing

BANCA D'ITALIA EUROSISTEMA
BANCO DE ESPAÑA Eurosistema
BANQUE DE FRANCE EUROSYSTÈME
DEUTSCHE BUNDESBANK EUROSYSTEM
EUROPEAN CENTRAL BANK EUROSYSTEM

# Functional detailing of T2S

## T2S Services/Functional Architecture – Service Classification Framework

- The T2S Service/functional architecture or classification is based on the data model underlying T2S:

  - **Securities side:** CSDs set up and maintain its own Security Accounts' structure for securities settlement in T2S

  - **Liquidity management side:** All Central Banks set up and maintain Dedicated Cash Accounts (DCAs) for cash settlement in T2S
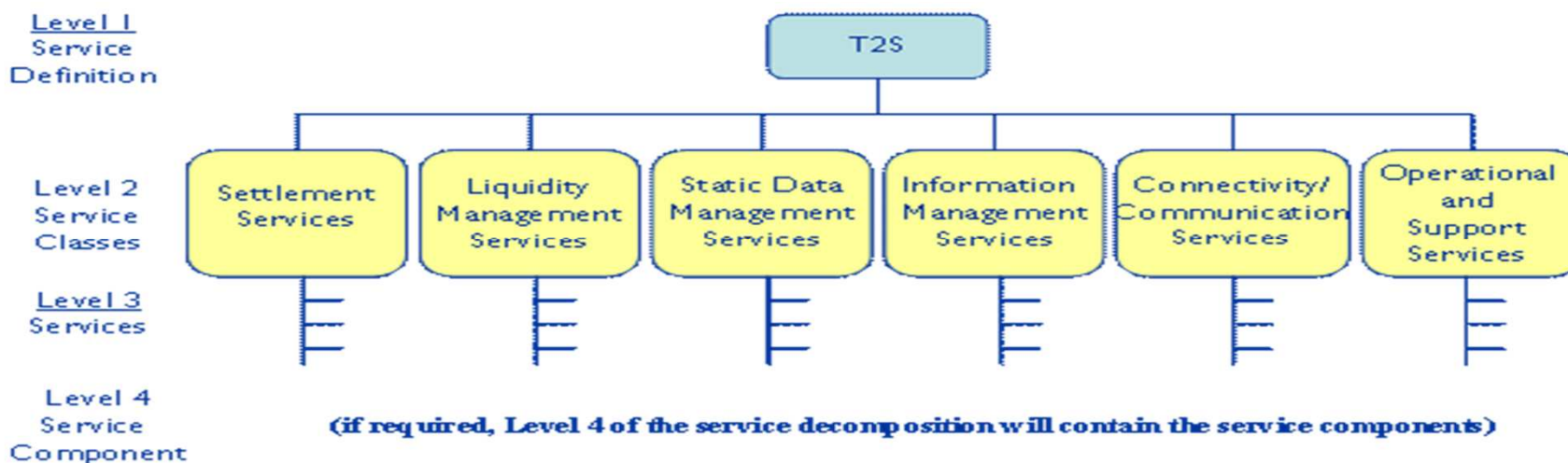
# Functional detailing of T2S

## T2S Services/Functional Architecture – Service Classification Framework (2)



**Level 1**
Service
Definition

T2S

**Level 2**
Service
Classes

Settlement Services

Liquidity manag. services

Static Data Management Services

Information Management Services

Connectivity/ Communication Services

Operational and Support Services

**Level 3**
Services

**Level 4**
Service
Component

(if required, Level 4 of the service decomposition will contain the service components)
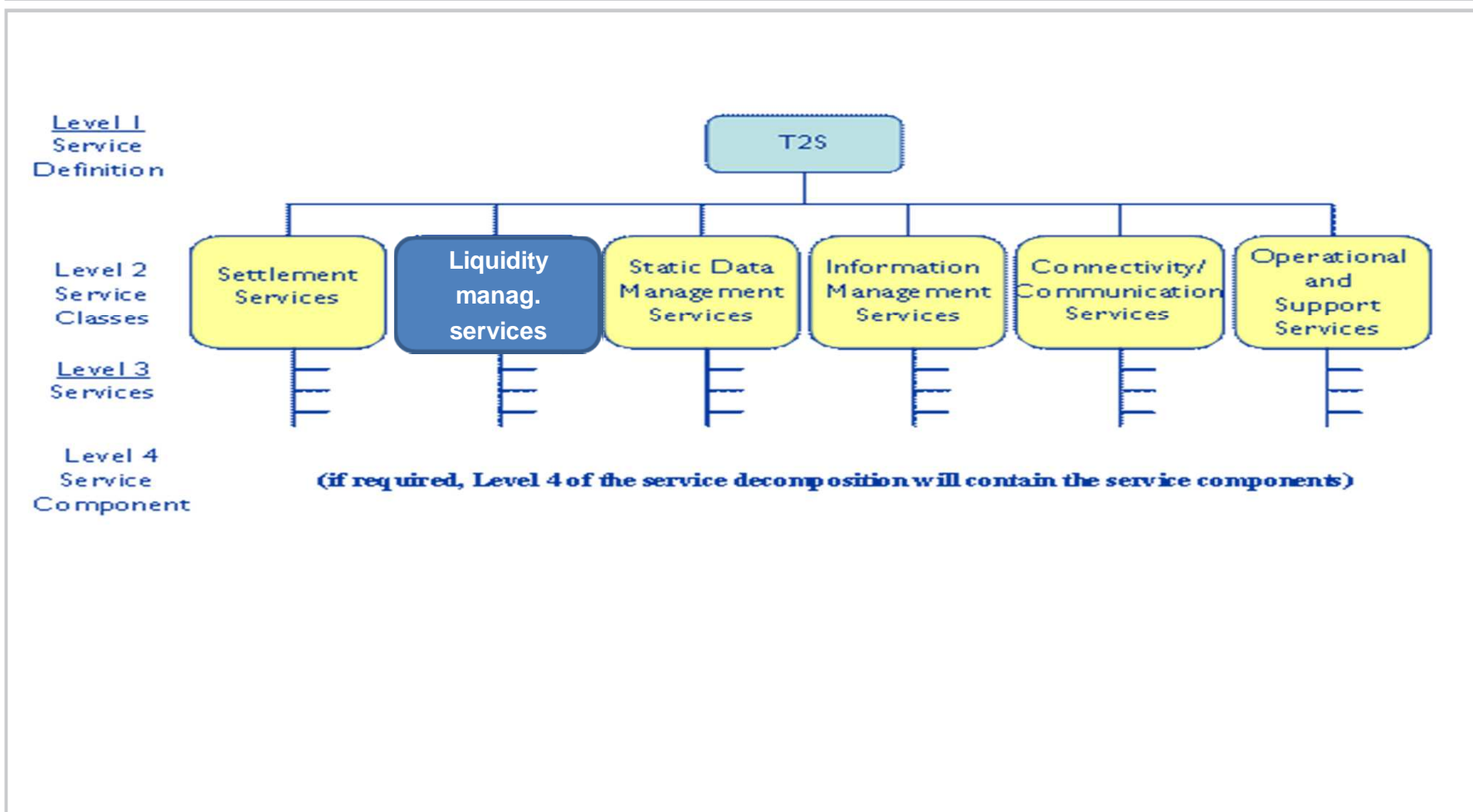
# Functional detailing of T2S

## T2S Liquidity Management – Cash Account Structure in T2S

- Cash leg of securities settlement will take place in the T2S Dedicated Cash Accounts (T2S DCAs) in euro/non-euro currency in central bank money

- T2S DCAs are a central bank money account opened on the books of a CB

  - The T2S DCA holder must define in T2S, the RTGS (Real Time Gross Settlement) account (in the respective RTGS system) to which the T2S DCA must be linked to enable the EOD (End of Day) liquidity repatriation (can be the RTGS-account of a different bank).

  - A DCA cannot be used for settlement in different currencies

  - T2S shall not perform/facilitate any currency conversion (i.e. FX)

  - T2S DCA shall start with a nil balance at SOD (Start of Day), receive funds and sweep the balances at the EOD to the linked RTGS A/C, leaving it back to nil

- A T2S DCA holder is allowed to hold one or several T2S dedicated cash accounts in the euro/non-euro currency. Each DCA can be linked to another RTGS-account.

# Functional detailing of T2S
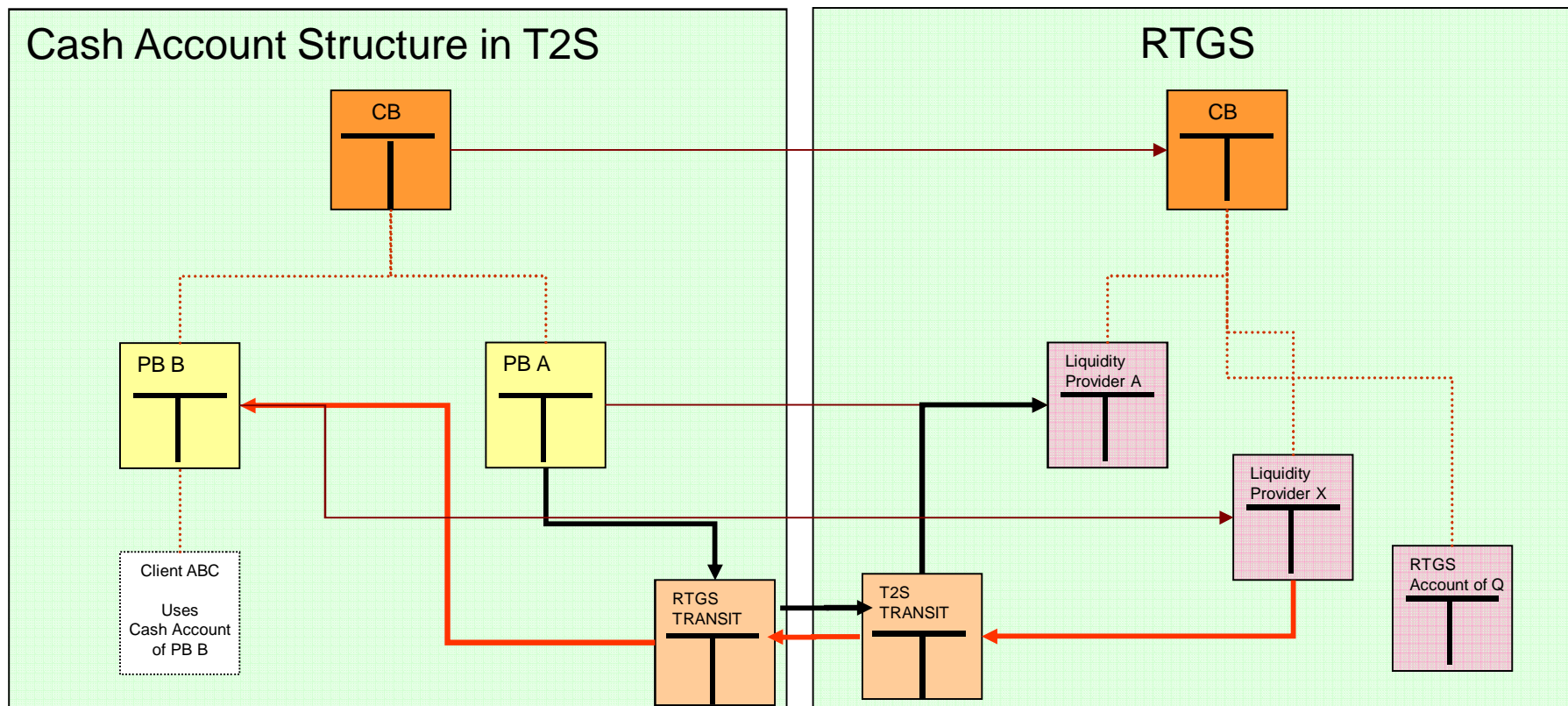


| Notation | Description |
|---|---|
| CB | Central Bank |
| PB A | Settlement Bank (financial institution with both cash and securities account) |
| PB B | Payment Bank (provides cash for securities settlements of a CSD participant) |
| Client ABC | CSD Participant using the services of Payment Bank B |

| Notation | Description |
|---|---|
| CB | Central Bank |
| Liquidity Provider A | RTGS Account holder which would receive liquidity at EoD from Payment Bank A in T2S |
| Liquidity Provider X | RTGS Account holder which would receive liquidity at EoD from Payment Bank B in T2S |
| RTGS Account Q | An independent RTGS Account holder in the RTGS system |

# Functional detailing of T2S

## T2S Liquidity Management – T2S Dedicated Cash Accounts (DCAs)

- T2S envisages the following types of T2S Dedicated Cash Accounts
  - **T2S Dedicated Cash Accounts**: Each CB opens T2S dedicated cash accounts for itself and for the payment banks under its responsibility. T2S dedicated cash accounts are denominated in a specific T2S settlement currency and they are used for the settlement of the cash leg of Settlement Instructions in T2S
  - **RTGS Dedicated Transit Accounts**: These accounts are opened by and belong to Central Banks and they are used for liquidity transfers from/to RTGS. One RTGS dedicated transit accounts per currency must be defined in T2S
  - **Central Bank Dedicated Cash Accounts**: These accounts also belong to central banks. CBs use T2S central bank accounts to provide intraday liquidity to their payment banks, therefore they may have a negative balance
- Every T2S dedicated cash account must be **linked** to an external RTGS cash account, to retransfer any remaining liquidity at end-of-day in T2S

# Functional detailing of T2S

## T2S Liquidity Management – Liquidity Transfer Key Facts

- Central Banks will need:

  - a mechanism to track the flow of liquidity (e.g. via transit accounts) and

  - to monitor the flow of liquidity (to take corrective actions if necessary)

- A liquidity transfer is an instruction from a cash account holder to transfer a specified amount of money from its cash account to another cash account

- Classification based on direction of flow of liquidity:

  - **Inbound Liquidity Transfers**: Transfer of liquidity from RTGS Accounts (in RTGS system) to T2S Dedicated Cash Accounts

  - **Internal Liquidity Transfers**: Transfer of liquidity between T2S Dedicated Cash Accounts of the same payment bank (or) between T2S dedicated cash accounts linked to the same RTGS account

  - **Outbound Liquidity Transfers**: Transfer of liquidity from T2S Dedicated Cash Accounts to RTGS Accounts (in RTGS system)

# Functional detailing of T2S

## T2S Liquidity Management – Liquidity Transfers between T2 and T2S
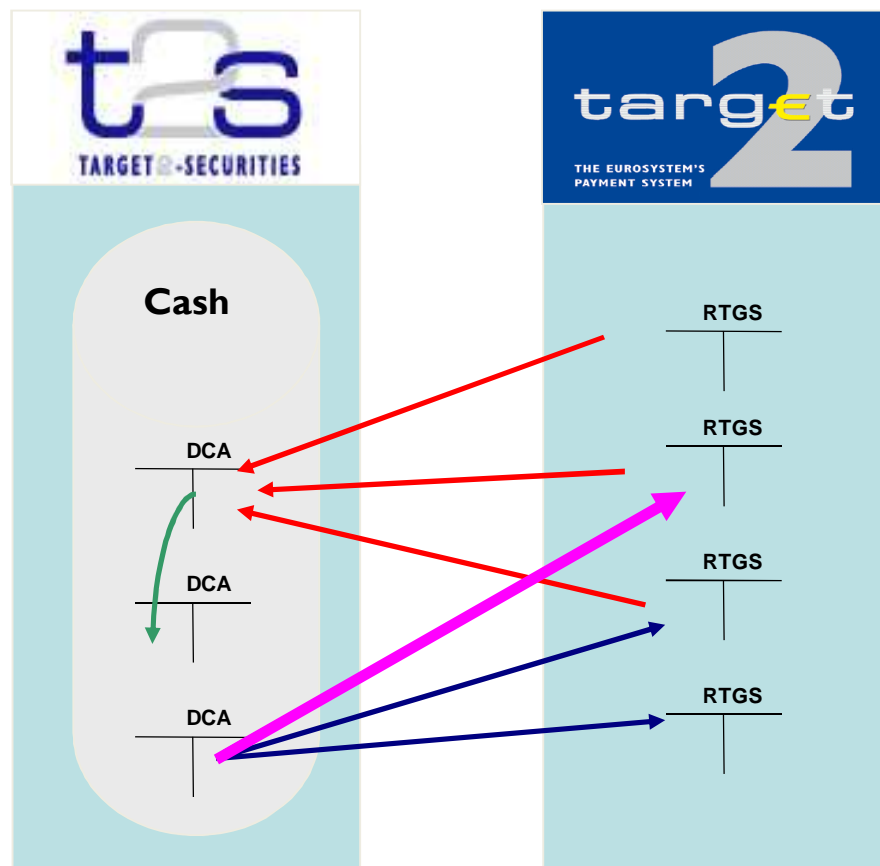


**→** (red) Liquidity transfers are possible from any TARGET2 account to any DCA (incl. standing orders)

**→** (dark blue) Liquidity transfers are possible from any DCA to any TARGET2 account.

**→** (green) Internal liquidity transfer between DCAs are only possible between DCAs belonging to the same entity or linked to the same TARGET2 account. Rebalancing is possible between the DCAs under the same BIC11

**→** (magenta) Each DCA needs to be linked to one TARGET account. The liquidity sweeps transfer liquidity from the DCAs to the linked TARGET2 account.

# Functional detailing of T2S

## T2S Liquidity Management – Liquidity Transfer Types (1)

- **Immediate** liquidity transfer order:

  – Liquidity will be transferred immediately after the transfer was instructed*

  – Applicable to transfer of liquidity between RTGS accounts and T2S DCA (or) between two T2S DCA (if these DCA belong to the same payment bank (or) between T2S dedicated cash accounts linked to the same RTGS account)

- **Predefined** liquidity transfer orders:

  – Liquidity will be transferred at a certain time or business event chosen by the account holder of the account to be debited*

  – The transfer will be executed only once at a defined time or event

  – Liquidity will be transferred from a T2S DCA to an RTGS account only

* Providing that there is sufficient liquidity available on the account to be debited (or) partial execution is allowed

# Functional detailing of T2S

## T2S Liquidity Management – Liquidity Transfer Types (2)

- **Standing** liquidity transfer orders:

    – Liquidity will be transferred at a certain time or business event chosen by the account holder of the account to be **debited**\*

    – The transfer will be executed on every occurrence of the event until the order is deleted or the validity period is over

    – Liquidity will be transferred from a T2S DCA to an RTGS account only

\* Providing that there is sufficient liquidity available on the account to be debited (or) partial execution is allowed

# Functional detailing of T2S

## T2S Liquidity Management – Types and Handling of Liquidity Transfers

| Liquidity Transfers | RTGS A/C to T2S DCA (Inbound) | T2S DCA to RTGS A/C (Outbound) | T2S DCA to T2S DCA (Internal) | Partial Execution | Number of Executions |
|---|---|---|---|---|---|
| Immediate liquidity transfer order | YES | YES | YES* | NO** | As many as send by DCA owner |
| Predefined liquidity transfer order | NO | YES | NO | YES | One order per DCA per point in time or defined event |
| Standing liquidity transfer order | NO | YES | NO | YES | Repeating order per DCA per point in time/event |

\*)   T2S dedicated cash accounts shall be owned by the same T2S party (or) between T2S dedicated cash accounts linked to the same RTGS account

\*\*)   Partial execution can only take place if the instruction is placed by a T2S Actor (i.e. CSD/CB) acting on behalf of an account owner.

# Functional detailing of T2S

## T2S Liquidity Management – Automated Retransfer of Cash

- T2S offers a facility to the CB/payment banks to setup standing liquidity transfer orders to be executed at a predefined time or at the occurrence of a specific business event

- This facility is used by a payment bank to retransfer the cash proceeds arising due to settlement of corporate action instruction

- T2S offers this facility at anytime during settlement periods

- T2S will settle corporate action and the liquidity transfer related settlement transactions on an "all-or-none" basis

- When a settlement/payment bank does not setup a standing liquidity transfer order:

  - the cash proceeds will remain in the T2S dedicated cash account

  - this cash will be potentially reused during recycling of any unsettled DVP transactions or for any other settlement instructions before the DVP cut-off

# Functional detailing of T2S

## T2S Liquidity Management – Limit Management
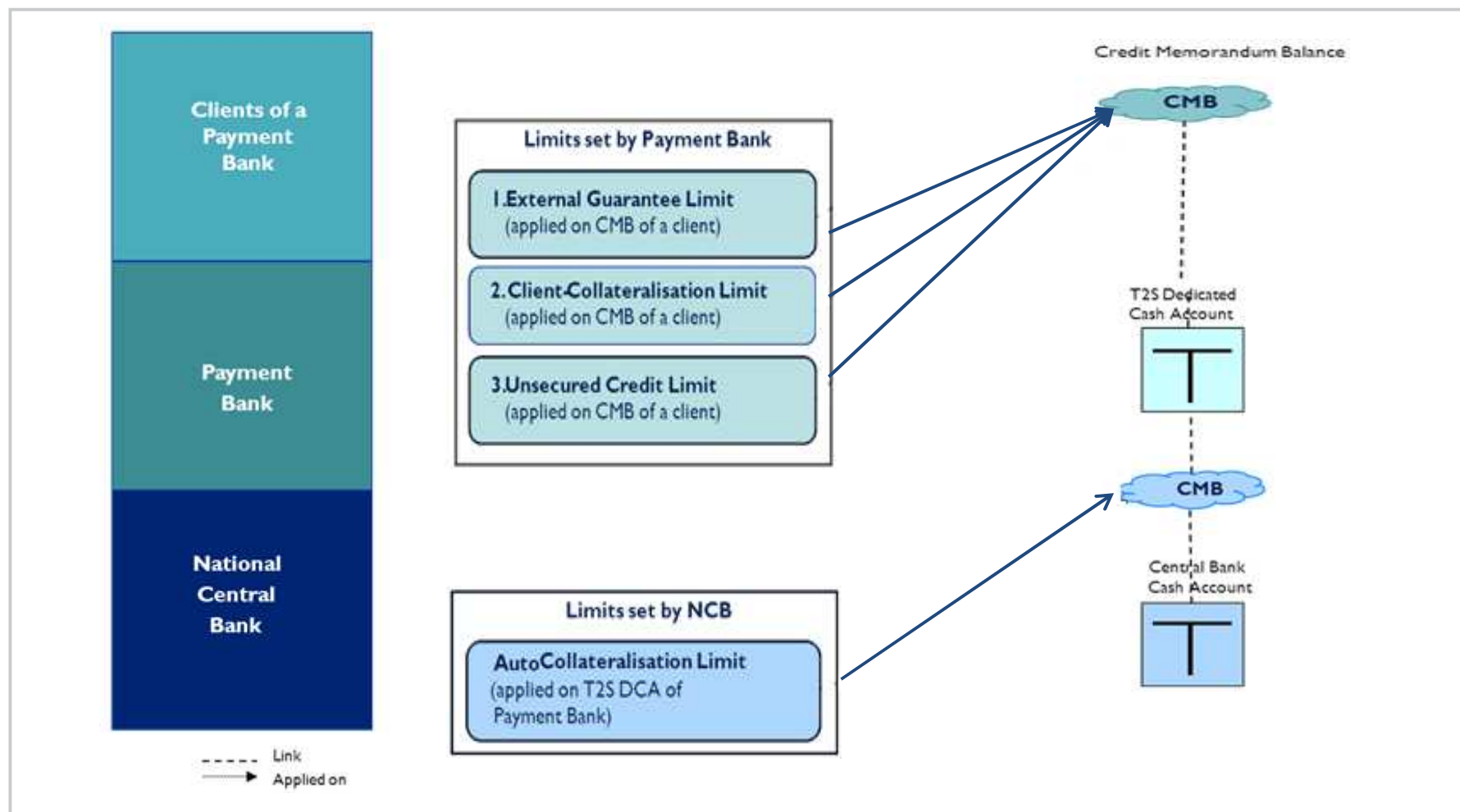
# Functional detailing of T2S

## T2S Liquidity Management – CMB to Track Limits in T2S

- The **CMB** provides with the facility to track the limit utilisation:

  - Between the Central Bank and the Payment Bank (auto-collateralisation limit)

  - Between the Payment Bank and its client (external guarantee limit, client-collateralisation limit and unsecured credit limit)

- A CMB to manage the relationship between Central Banks and Payment Banks is created for each DCA (one CMB per DCA) => auto-collateralisation

- A CMB to manage the relationship between the Payment Bank and its client (one or multiple per DCA) => client-collateralisation

# Functional detailing of T2S

## T2S Liquidity Management – Limit Management – Types of Limits (1)

- **Auto-collateralisation limit** between Central Bank and payment bank: Auto-collateralisation limit is the <u>limit defined by a CB</u>, for the maximum net amount of intraday credit that its payment bank can obtain for a T2S dedicated cash account through the collateralisation of securities with the Central Bank. DNB will set this limit to the maximum possible amount (i.e. maximum number of 9s)

- **Client-collateralisation limit** between payment bank and T2S Actor for which it acts as a liquidity provider: Client-collateralisation limit is the <u>limit defined by a payment bank</u>, for the maximum net amount of intraday credit that its client can obtain through the collateralisation of securities with the payment bank for a T2S dedicated cash account from which the client receives liquidity

## T2S Liquidity Management – Limit Management – Types of Limits (2)

- **External guarantee limit**: External guarantee limit (defined by a payment bank) is the cap of <u>credit secured outside T2S</u> that its client can obtain with the payment bank for a T2S dedicated cash account from which the client receives liquidity

- **Unsecured credit limit**: Unsecured credit limit (defined by a payment bank) is the cap of <u>credit unsecured outside T2S</u> that its client can obtain with the payment bank for a T2S dedicated cash account from which the client receives liquidity

# Functional detailing of T2S

## T2S Liquidity Management – Different Possibilities to Provide Liquidity (1)

- Payment Bank uses one DCA to provide liquidity to all its clients and for own settlement business

  - The securities account of the clients can be located in different CSDs
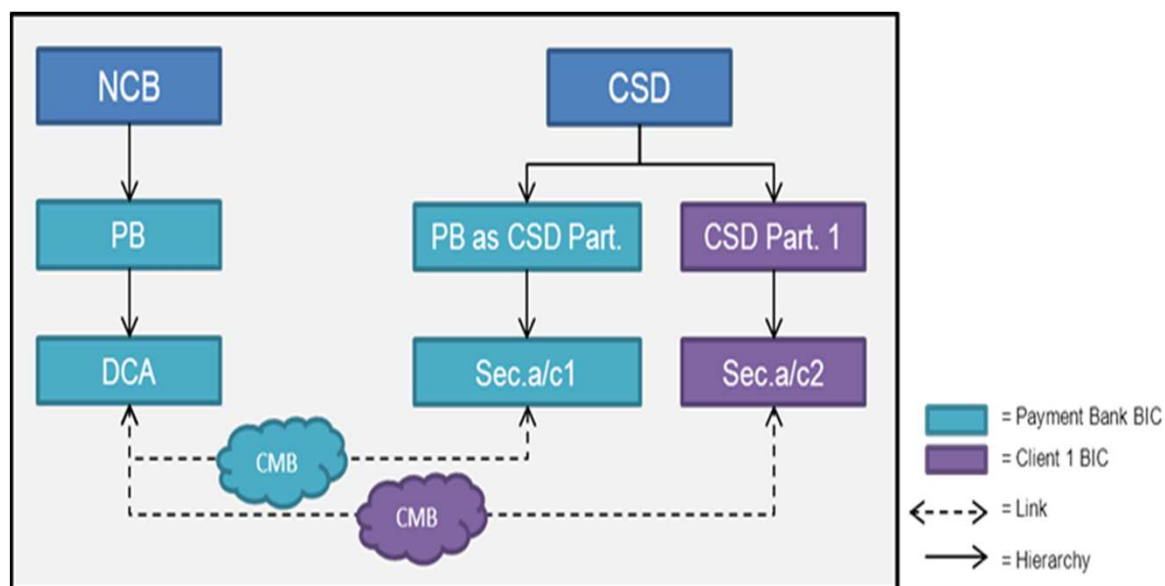
# Functional detailing of T2S

## T2S Liquidity Management – Different Possibilities to Provide Liquidity (2)

- Payment Bank uses one DCA to provide liquidity to all its clients and another one for its own settlement business:

  – The securities account can be located in different CSDs
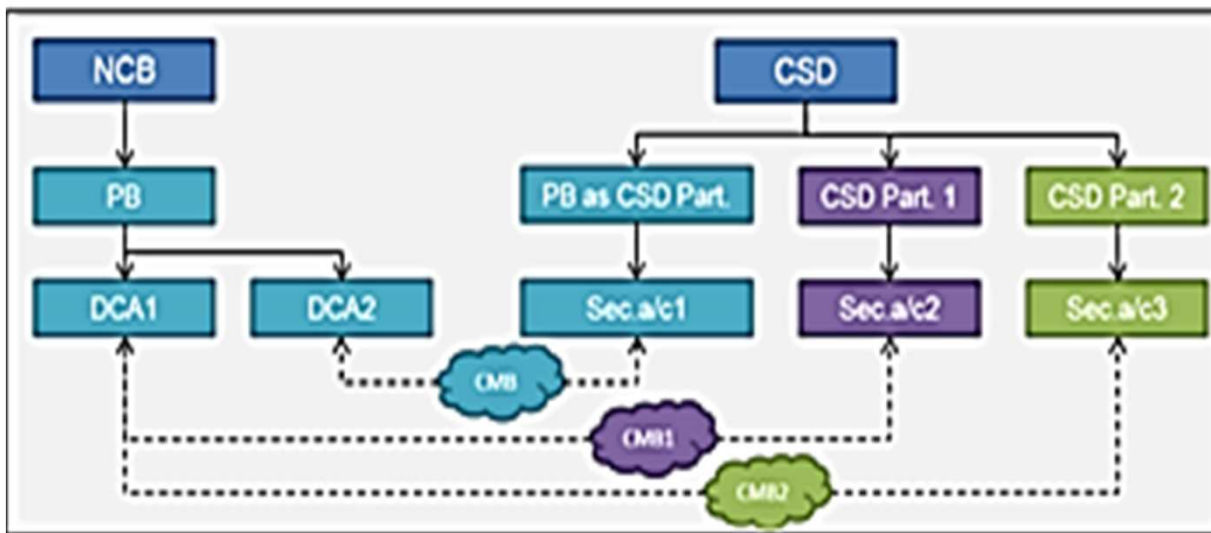
## T2S Liquidity Management – Different Possibilities to Provide Liquidity (3)

- Payment Bank uses one DCA per client and another one for its own settlement

  business:

  – The securities account can be located in different CSDs
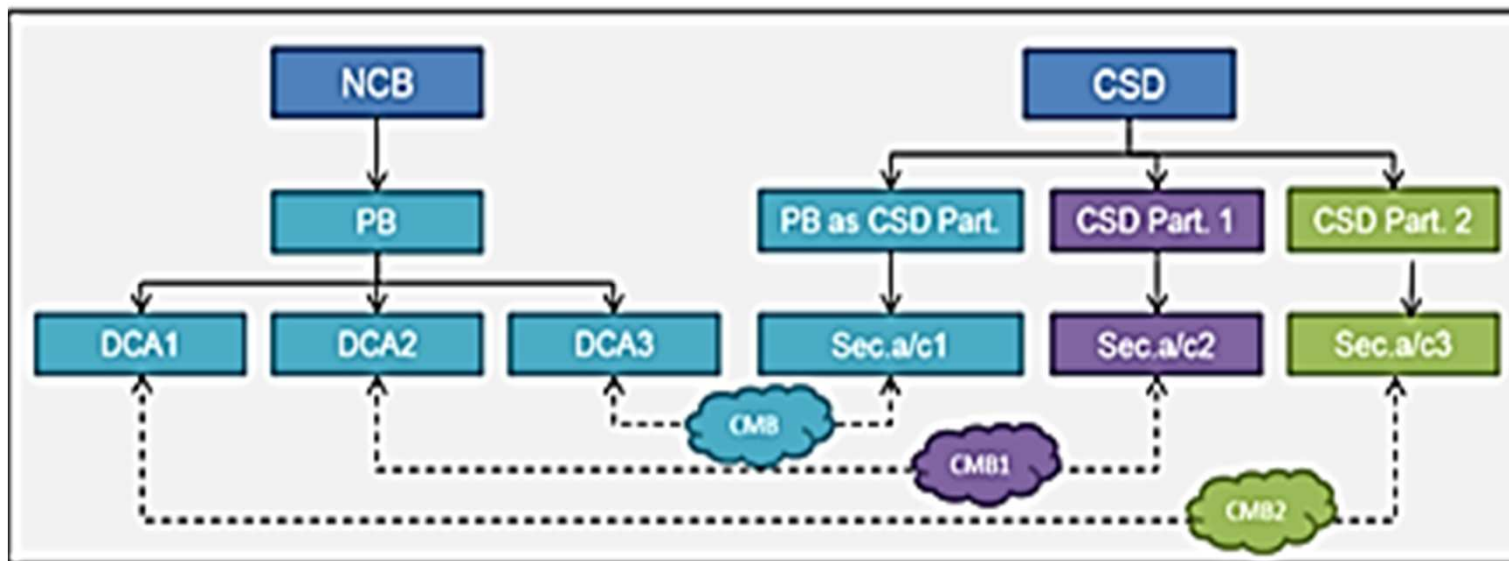
## T2S Liquidity Management – Different Possibilities to Provide Liquidity (4)

- One client of the Payment Bank has multiple securities accounts of one client linked to one DCA
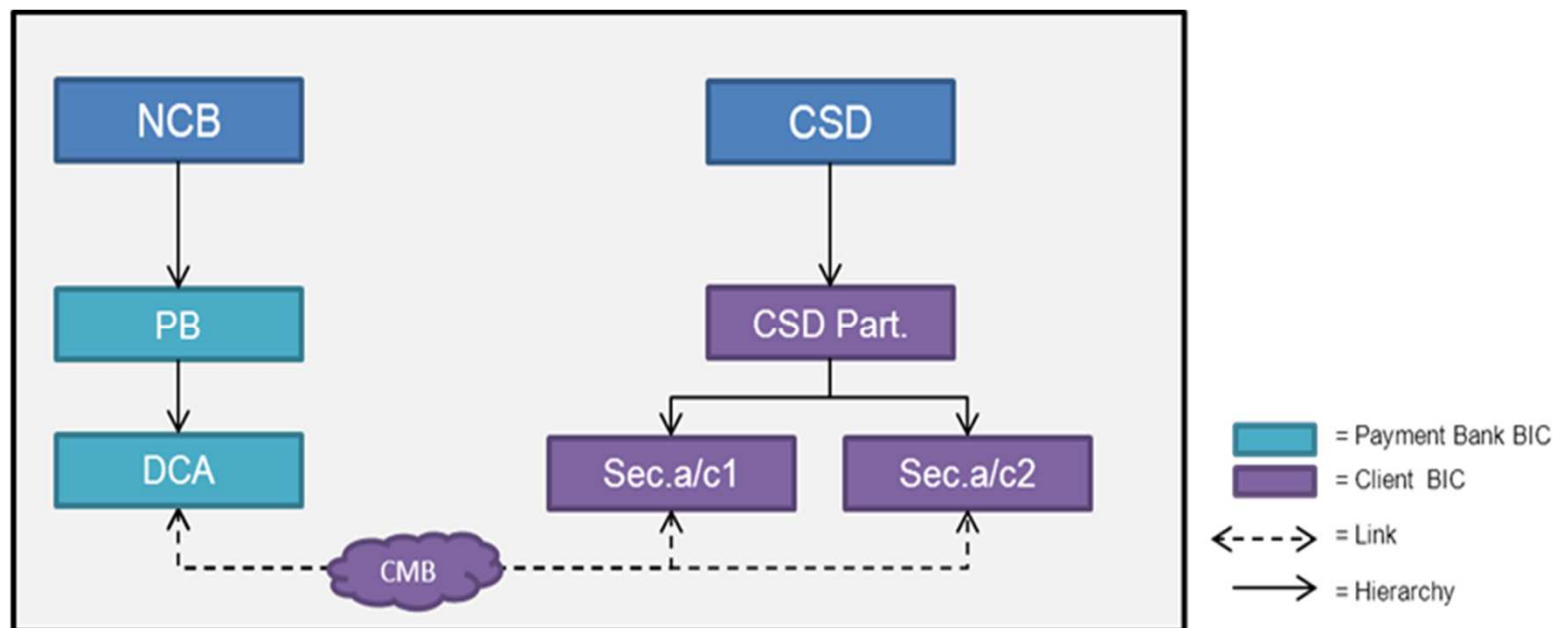
## T2S Liquidity Management – Different Possibilities to Provide Liquidity (5)

- One securities account of a client can be linked to multiple DCAs, this require multiple CMBs

  - This could be the case where the client wants to have a DCA for securities settlement and another one for Corporate actions cash proceeds
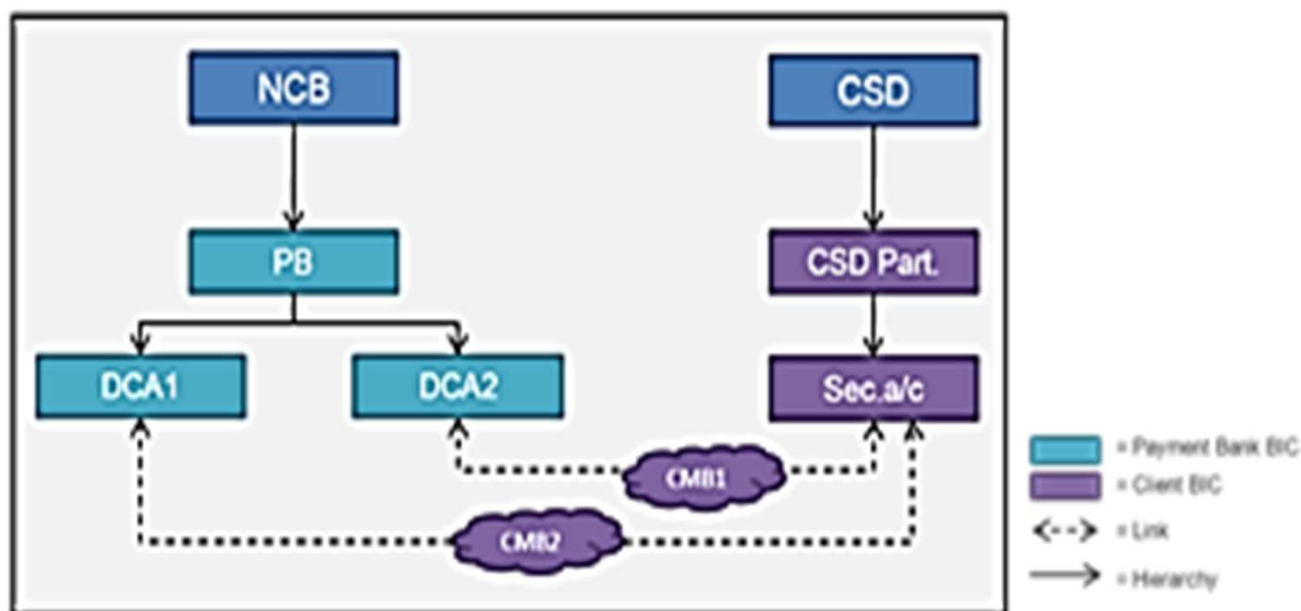
# Functional detailing of T2S

## T2S Liquidity Management – Different Possibilities to Provide Liquidity (6)

- One DCA could be linked to the securities of different clients via one CMB

# Functional detailing of T2S
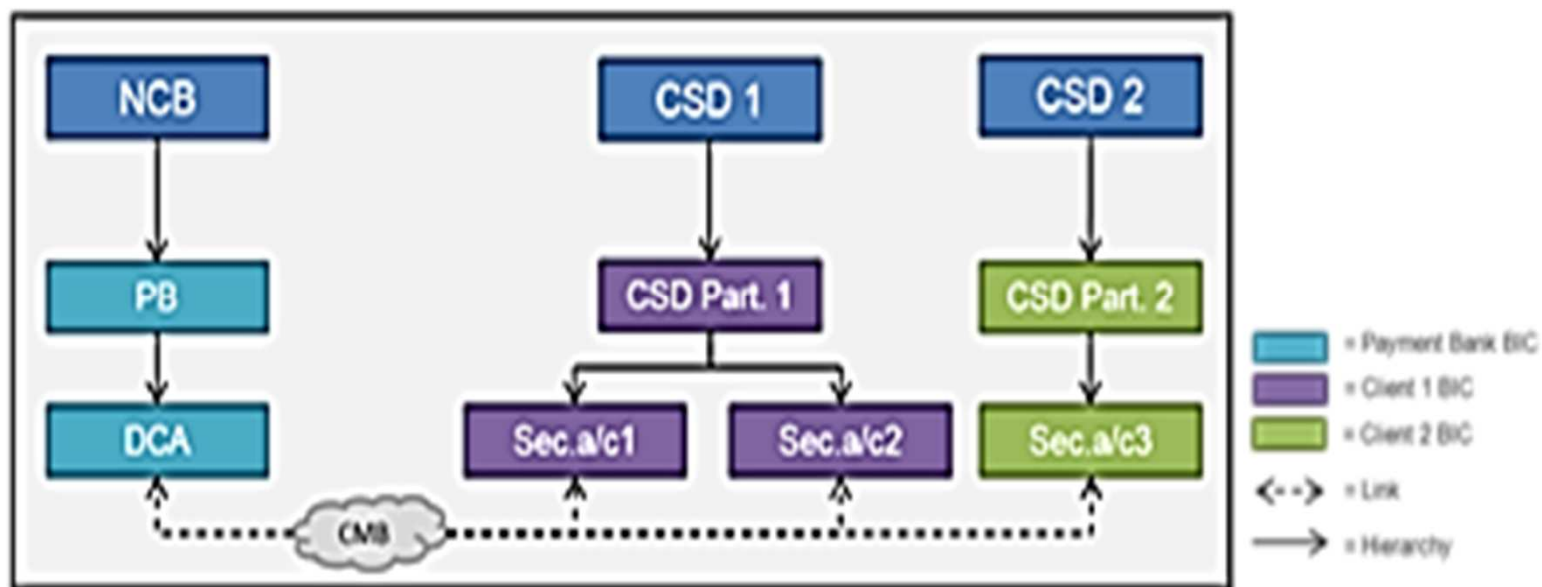
## T2S Liquidity Management – Cash Blocking/Reservation Key Facts

- T2S provides T2S Actors with the possibility to set restrictions on cash balances

- T2S  Actors can block and reserve dedicated amounts for specific purposes:

  - **Blocking** is only possible for funds lower than or equal to the cash balance on the T2S Dedicated Cash Account, whereas

  - A **reservation** of funds greater than the cash balance would be possible. If the amount to be reserved exceeds the available  balance, the reservation is partially filled, the remaining amount is filled by incoming cash step by step until  the full amount of the reservation is reached

  - At the end of the day of the blocking/reservation are released – the account is on 0, and have to be resent at the beginning of the next day

# Functional detailing of T2S

## T2S Liquidity Management – Liquidity Monitoring Key Facts

A T2S Dedicated Cash Account holder and any other authorised T2S Actor can obtain information regarding:

- Settled amounts

- Cash balances

- Blockings

- Reservations, as well as

- Exceeding of thresholds

This information can be either requested by the T2S Actor:

- On a real time basis (queries), or

- Sent to the T2S Actor based on defined parameters or business events (reports)

# Functional detailing of T2S

## T2S Liquidity Management – Liquidity Monitoring and Cash Forecasts

A T2S Actor may request information on:

- Cash needs for instructions pending for settlement during the current Settlement Day

- Cash forecasts for the following Settlement Day

  - cash needs resulting from the net balance between

    o cash proceeds and

    o cash needs

  - the amount of intraday credit that can be obtained through auto-collateralisation

    o Based on limit set by the CB vis-à-vis their payment banks

  - available as query (via U2A) or report (via A2A)

## T2S Liquidity Management – Auto Collateralisation Key Facts (1)

Auto-Collateralisation is an **intraday credit** operation in central bank money that is triggered when the buyer has insufficient funds in its T2S Dedicated Cash Account to settle securities transactions

- Auto-collateralisation should be available
  - To all participating markets
  - During the whole settlement day at zero interest
  - In repo, pledge and pledge-sub environments
- An Intraday credit provision via auto-collateralisation is always collateralised in T2S
  - Through **collateral-on-flow** via the eligible securities that are being purchased, or
  - With securities already held by the buyer via **collateral-on-stock**
- Each DCA for which central bank auto-collateralisation should be used will require that the same legal entity has an RTGS-account with intraday credit with the same Central Bank

## T2S Liquidity Management – Auto Collateralisation Key Facts (2)

- Substitution of auto-collateral operations
  - If securities used for auto-collateral operations are needed for a securities transaction, T2S will automatically release the securities for an equivalent amount of cash, or automatically substitute them for other securities.

- Closing of auto-collateral operations
  - Settlement banks will have the choice to close all or part of their auto-collateral operations on request.
  - All auto-collateral operations will be closed automatically at the end of day, possibly triggering relocation of collateral in case of insufficient funds, i.e. securities will become regular collateral for DNB, and DNB will send connected payment to TARGET2 (i.e. increase the credit line and debit the PM-account of the involved Payment Bank in one operation). For each day on which the relocation of collateral procedure has taken place, an administrative fee of EUR 1000 will be charged to the Payment Bank.

# Functional detailing of T2S

## T2S Liquidity Management – Auto Collateralisation DNB-specifics (1)

- DNB will support auto-collateralisation as of wave 2.

- DNB will use the repo-technique, i.e DNB will open separate securities account on which the collateral regarding auto-collateralisation will be received.

- DNB will perform ex-post close-link checks (like today).

- As there are no links between Euroclear NL and Euroclear FR, and because Euroclear FR will have links with other CSDs in T2S, DNB will have to open two securities accounts for the support of auto-collateralisation:

  - One at Euroclear NL for domestic auto-collateralisation
  - One at Euroclear FR for cross-border auto-collateralisation

- As a consequence, all Eurosystem eligible marketable assets issued in Euroclear NL, in Euroclear FR and in CSDs with a link with Euroclear FR are eligible for auto-collateralisation at DNB.

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EUROPEAN CENTRAL BANK
EUROSYSTEM

# Functional detailing of T2S

## T2S Liquidity Management – Auto Collateralisation DNB-specifics (2)

- Due to the static data in T2S, each DCA can only be linked to one 'collateral receiving account' of a CB, i.e:

  - If a Payment Bank under the responsibility of DNB only wants to make use of domestic auto-collateralisation, one DCA is enough.

  - If a Payment Bank under the responsibility of DNB only wants to make use of cross-border auto-collateralisation, one DCA is enough.

  - If a Payment Bank under the responsibility of DNB wants to make use of both domestic and cross-border auto-collateralisation, this Payment Bank needs (at least) 2 DCAs

- Also for the regular collateral management, DNB will open two securities accounts:

  - One at Euroclear NL for domestic collateral

  - One at Euroclear FR for cross-border collateral

  - These accounts can be linked to the same DCA

## T2S Liquidity Management – Flow during auto collateralisation

Example: A Settlement Bank is involved in a buy trade

In case of insufficient liquidity with the Settlement Bank, Auto Collateralisation is triggered

**Security Account**   **Cash Account**

Settlement Bank (SB)

① Inflow of securities in buy trade

# — link

1' Outflow of cash for buy trade

T2S Dedicated Cash Account

National Central Bank (NCB)

**Limits set by NCB**

1. Auto-collateralisation Limit*
(applied on T2S dedicated cash account of a Settlement Bank)

② Flow of eligible Collateral

2' Provision of Intraday Credit via **Auto collateralisation**

Central Bank Cash Account

**T2S shall automatically generate the necessary reimbursement instructions (on hold) equivalent to the auto-collateralisation instructions**

Applied on ●——●

* The limits shown are set in every required currency
# One or several accounts

**Note:** 1, 1', 2, 2' are linked on a "All-or-none" basis

# Functional detailing of T2S

## T2S Liquidity Management – CB and Client Collateralisation

Differences between central bank & client collateralisation

| Characteristics | Central Bank Collateralisation | Client Collateralisation |
|---|---|---|
| Credit Provider | Central Bank | Payment Bank |
| Credit Consumer | Payment Bank | Payment Bank client |
| Maintenance of Eligibility | Central Bank | Payment Bank |
| Maintenance of Securities Prices | Central Bank | Payment Bank |
| Maintenance of Close Links | Central Bank | Central Bank |
| Trigger for Auto-Collateralisation | Lack of cash on DCA | Lack of external guarantee limit headroom |
| Ceiling of Auto-Collateralisation | Central Bank collateralisation limit | Client-collateralisation limit |
| Intraday Re-Imbursement | - Automatic substitution<br>- Manual release<br>- Central Bank collateralisation limit reduction below utilisation | - Automatic substitution<br>- Manual release |
| End of Day Re-Imbursement | Automatic | Manual |

# Functional detailing of T2S

## T2S Liquidity Management – EoD Cash Management Key Facts

The sequence of events/ processes during the real-time settlement closure period are listed below

| Time (CET) | Event/ Processes |
|---|---|
| 4.00 p.m. | DVP cut-off |
| 4.00 p.m. | Cash restriction cut-off |
| | Release of unused cash restriction |
| 4.30 p.m. | Automatic reimbursement |
| | Optional cash sweep 1 (based on standing liquidity transfers) |
| 5.40 p.m. | BATM cut-off |
| 5.40 p.m. | CBO cut-off |
| 5.45 p.m. | Inbound liquidity transfer cut-off |
| | Automated cash sweep 2 |
| 6.00 p.m. | Securities restriction cut-off |
| 6.00 p.m. | FOP cut-off |

# Functional detailing of T2S

## T2S Liquidity Management – Corporate Action Cash Service Key Facts

- T2S allows T2S Actors receiving cash proceeds stemming from Corporate Actions on their T2S Dedicated Cash Accounts to determine if these cash proceeds must be automatically transferred to an RTGS account

- If this automatic transfer is used, T2S credits the T2S Dedicated Cash Account with the corporate actions cash proceeds and debits it by transferring the corresponding amount of cash to the linked RTGS account

## T2S Liquidity Management – Corporate Action Cash Flows
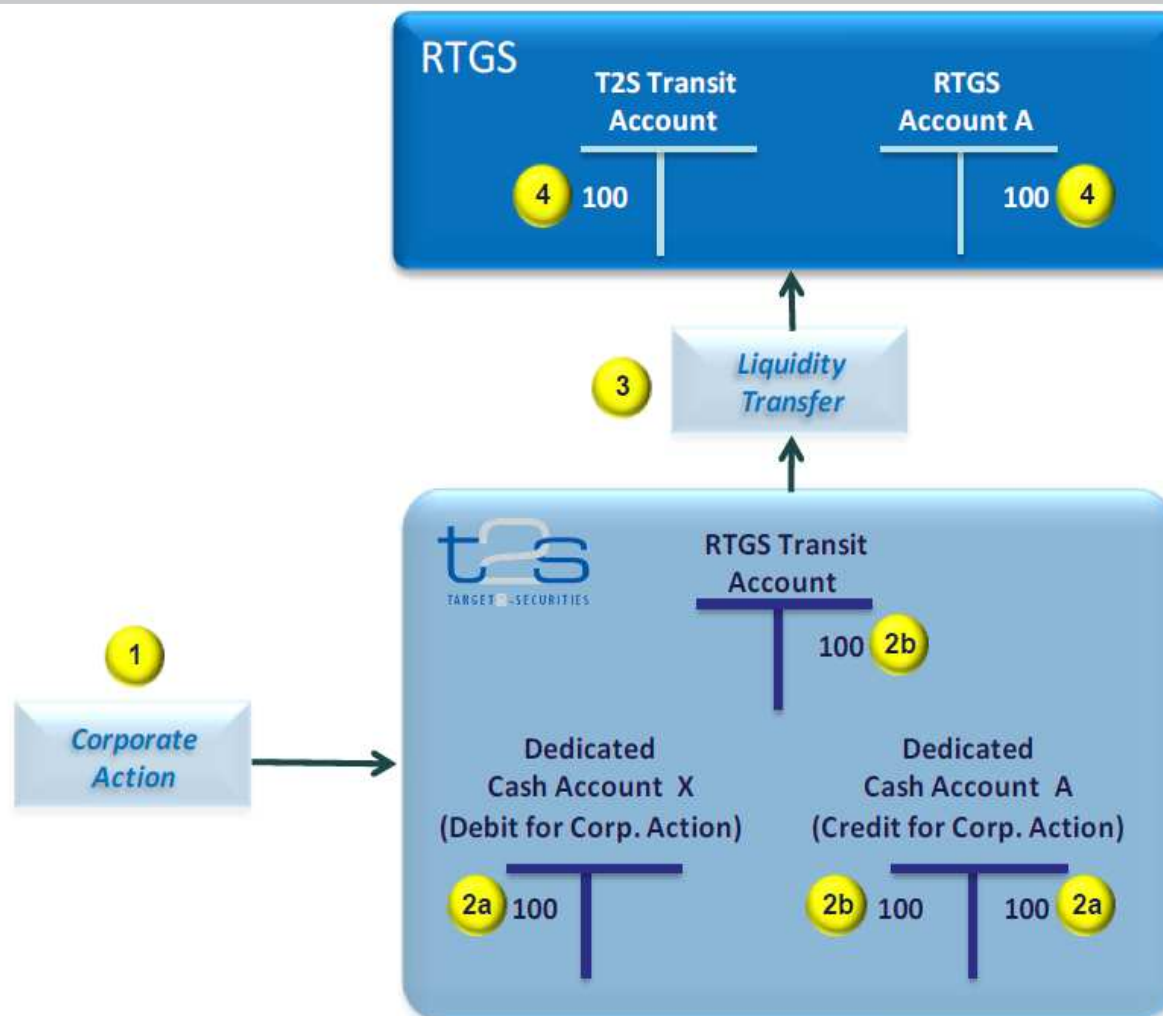
# Functional detailing of T2S

## T2S Liquidity Management – Multiple Liquidity Providers Key Facts (1)

- A Payment Bank in T2S may receive liquidity in its T2S DCA from **several liquidity providers** (in RTGS), to settle its securities transactions

- The liquidity providers will arrange to fund the T2S DCA at the Start-of-Day, prior to the beginning of the night-time settlement cycles

- At the end of the last night-time settlement cycle (in settlement sequence Y), T2S will generate liquidity transfer order
  - To reimburse each liquidity provider up to the maximum amount of cash lent before starting to reimburse the next liquidity provider in sequence
  - The sequence of execution will start the reimbursement in order of their priority
  - The last in the sequence is the main liquidity provider

Note:  The "Reimbursement of Multiple liquidity providers" is an optional process

# Functional detailing of T2S

## T2S Liquidity Management – Multiple Liquidity Providers Key Facts (2)

### Cash Account Structure in T2S

CB

PB A

**PB A has defined the order of reimbursement of liquidity to its different liquidity providers**

**PB A has setup the needed standing liquidity transfer orders**

This process of reimbursement of multiple liquidity providers is optional.

This process is performed during the Sequence Y in Night-time settlement

RTGS TRANSIT

### RTGS System

CB

Liquidity Provider P1

Liquidity Provider P2

Liquidity Provider P3

T2S TRANSIT
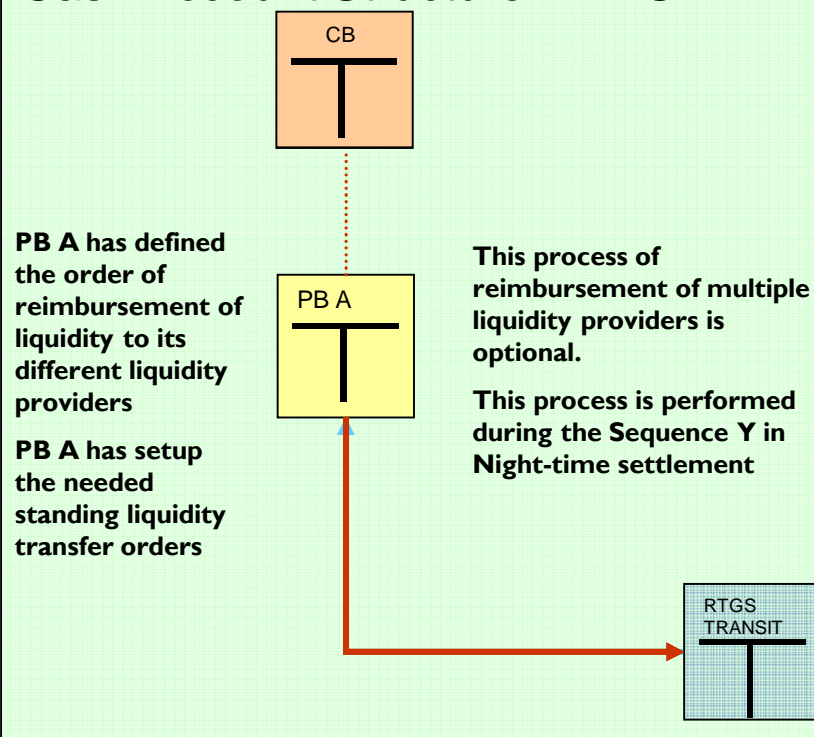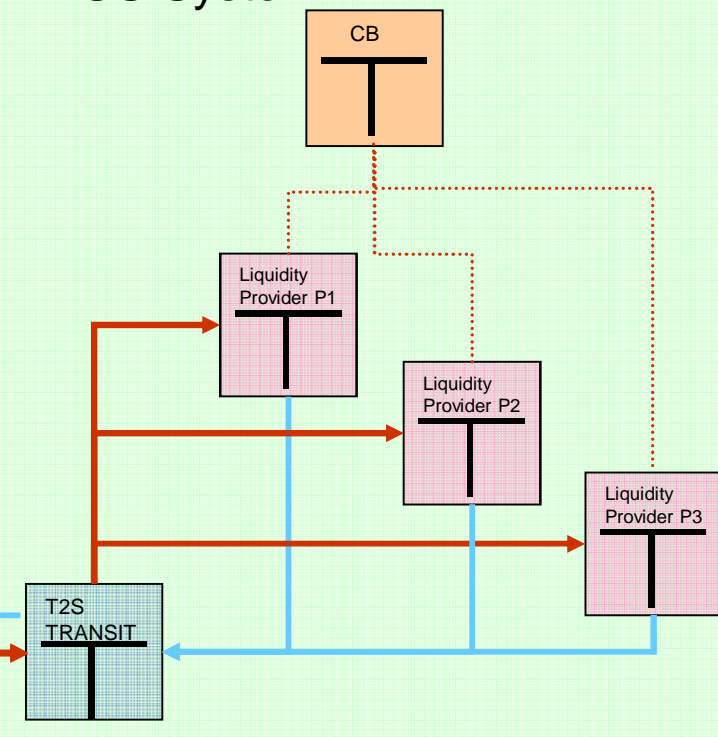
| Notation | Description |
|----------|-------------|
| CB | National Central Bank |
| PB A | Payment Bank |

| Notation | Description |
|----------|-------------|
| CB | National Central Bank |
| Main Liquidity Provider P1 | Acts as 1st Liquidity provider to PB A |
| Liquidity Provider P2 | Acts as 2nd Liquidity provider to PB A |
| Liquidity Provider P3 | Acts as the last Liquidity provider to PB A |

**Flow of liquidity from RTGS to T2S**

**Party Relationship**

**Flow of liquidity from T2S to RTGS**

Central Bank Cash Account

T2S Dedicated Cash Account

Transit Account

RTGS Account

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DEUTSCHE BUNDESBANK EUROSYSTEM

EUROPEAN CENTRAL BANK EUROSYSTEM

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# Functional detailing of T2S

## T2S Services/ Functional Architecture – Service Classification Framework (4)
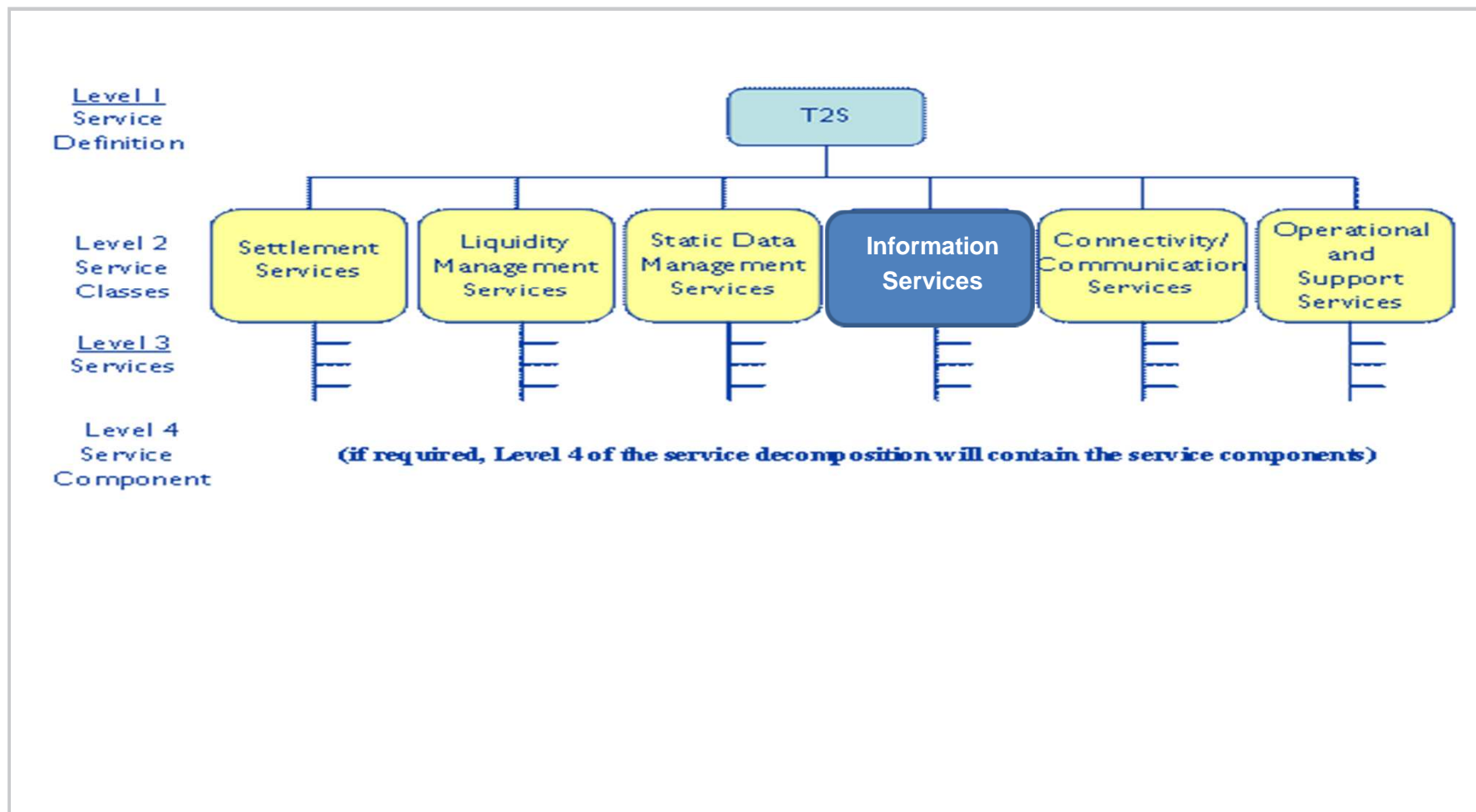
# Functional detailing of T2S

## T2S Information Management – Report Generation Key Facts

- T2S provides a defined set of reports:

  - Reports are triggered automatically by T2S

  - All reports are available in both **User-to-Application (U2A)** and in **Application-to-Application (A2A)** mode

  - T2S reports are either **event-triggered** or **sent at a predefined time**

  - When a CSD, T2S Actor or CB require information at a time when the relevant report is not available, the information can also be retrieved using the query service

- Delta mode is available for some reports (e.g. only new data is reported compared to previously generated report). Below few examples of the Delta mode reports:

  - Statement of transactions

  - Statement of pending instructions

  - Statement of holdings

  - Statement of settlement allegements

# Functional detailing of T2S

## T2S Information Management – Reports for CSDs, CBs, DCPs

- A **CB may receive reports** only on:

  - Instructions that were submitted by the CB itself, its DCPs, or by its Payment Banks

  - Cash balances of its own DCAs in T2S, those of its DCPs and those of its Payment Banks as well as cash movements on its own DCAs and those of its payment banks and

  - Common Static Data of the CB in T2S itself, those of its DCPs and of its Payment Bank

  - Additionally, a CB may query all Common Static Data that relate to its national currency

- A **DCP on the cash side may receive reports** only on

  - Its cash balances and those of any other T2S Actor for which the appropriate authorisation was granted

  - Instructions submitted by the T2S Actor (or a Third Party with access rights - supported by power of attorney) and instructions that refer to the cash account of the T2S Actor (or any sub-account thereof)

  - Its own Common Static Data, as well as some generic Common Static Data on instruments and the daily schedule

# Functional detailing of T2S

## T2S Information Management – Query Concept

- Queries are provided by T2S to the T2S Actor as a means of satisfying his information needs on demand. It can obtain information on different business items by submitting query requests to T2S. These are answered on the basis of the latest data available in T2S



**T2S Actor** → Query →

**T2S Actor** ← Query queuing information* ←

**T2S Actor** ← Query response ←
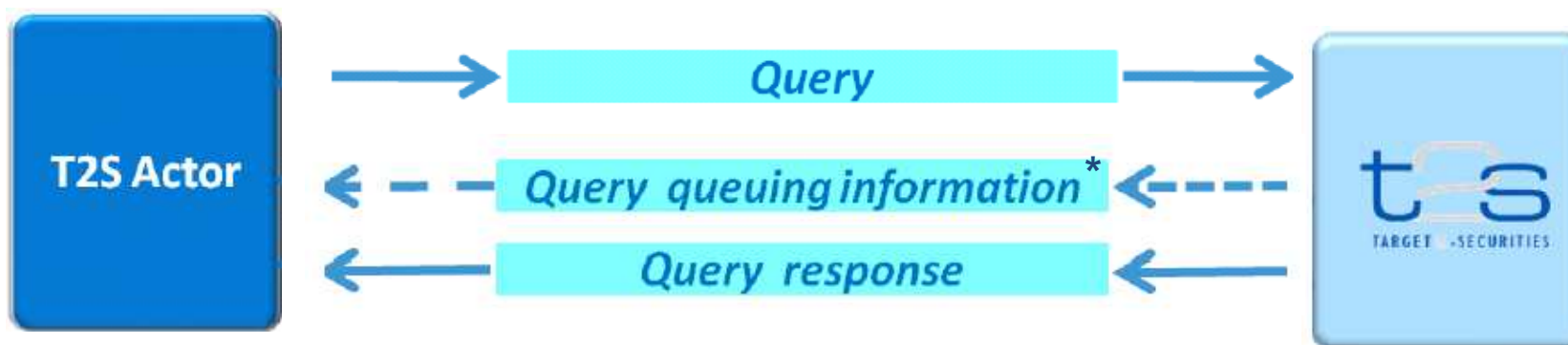
\* **Query could be queued if in a NTS (Night Time Settlement) sequence and being a balance/position query**

# Functional detailing of T2S

## T2S Information Management – Query Key Facts

- T2S offers a certain set of queries to allow the T2S Actor to monitor settlement, perform reconciliation or support a specific business process like corporate actions (CA)

- T2S will use pre-defined set of standard queries that are available to T2S Actors

- T2S allows information to be queried in T2S

  – Queries are **triggered by the duly authorised T2S Actor**

  – All queries are available in **User-to-Application (U2A)** and a subset in **Application-to-Application (A2A) mode**

  – T2S processes all queries in real time, on the basis of the **latest available data**

# Functional detailing of T2S

## T2S Information Management – CSD, CB, DCP Queries

- A **CB may query:**

  - Cash (and securities) balances of the DCAs kept at the CB in question

  - Movements on the DCAs kept at this CB

  - And Common Static Data pertaining to the DCAs for which it is responsible

- A **DCP on the cash side may query:**

  - Securities positions on its cash balances of its DCAs

  - Common Static Data pertaining to the DCAs for which it is responsible

# Functional detailing of T2S

## T2S Services/Functional Architecture – Service Classification Framework (6)
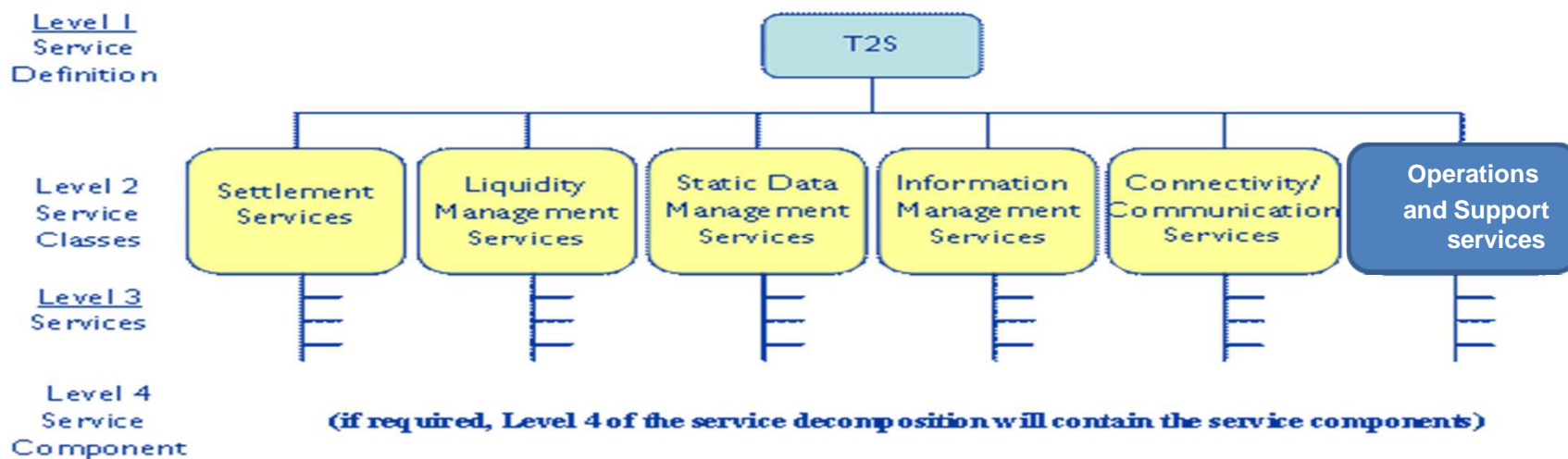
# Functional detailing of T2S

## T2S Operational and Support – Business Continuity Schema
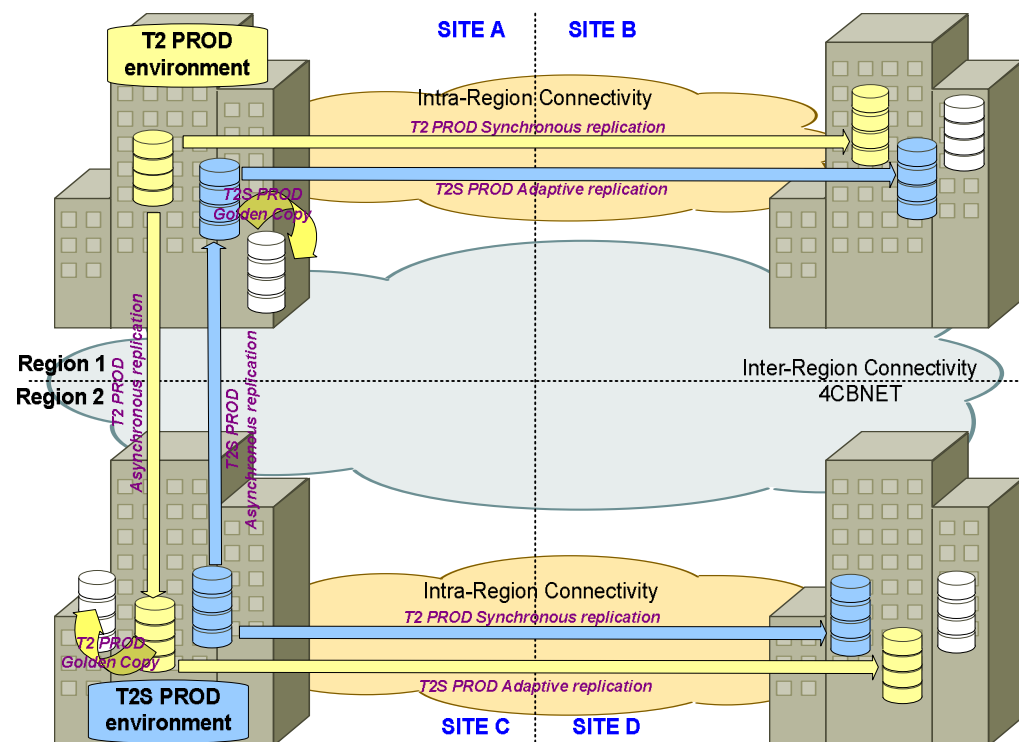


The service continuity design involves different levels of the overall architecture requiring various technical solutions. A detail description of the technical solution can be found in the General Technical Design document

# Functional detailing of T2S

## T2S Operational and Support – CSD/CB Invoicing Support

- T2S automatically calculates invoices based on the current **T2S Tariff Structure** and **Price List**

- Instructions are always charged to the CSD/CB of the two counterparties:
  - Each Security Account and DCA needs to be assigned unambiguously to one CSD or CB for the billing of the fixed fees

- T2S supports the CSDs/CBs invoicing their clients based on their individual tariff structures

- As part of the T2S information services, a CSD/CB may query this level of data for each of its customer accounts:
  - CSDs/CBs can query the itemised billing data so they can see details of the cumulative invoice (e.g. for a single participant or account)

# Functional detailing of T2S

## T2S Operational and Support – Archiving Key Facts

- T2S provides a **centralised archive** for T2S Static and Transactional Data:

    - T2S archives inbound and outbound messages (except queries) in their original format

    - messages are copied to the centralised archive **3 months** after the day they are in their final status (e.g. settled, cancelled)

    - messages are archived for a harmonised **10-year period**

- Archived data is accessible exclusively by the T2S Operator, who:

    - can access the archive for its own purpose

    - can access the archive upon request of a CSD, a CB or a DCP made for audit and/or regulatory purposes in order to meet requirements of a legal nature

    - is not meant to perform forensic work beyond identifying and producing a copy of the relevant records to process the request

Message received or sent by/to T2S

Retrieval via request to the T2S Operator

Messages are archived

# Functional detailing of T2S
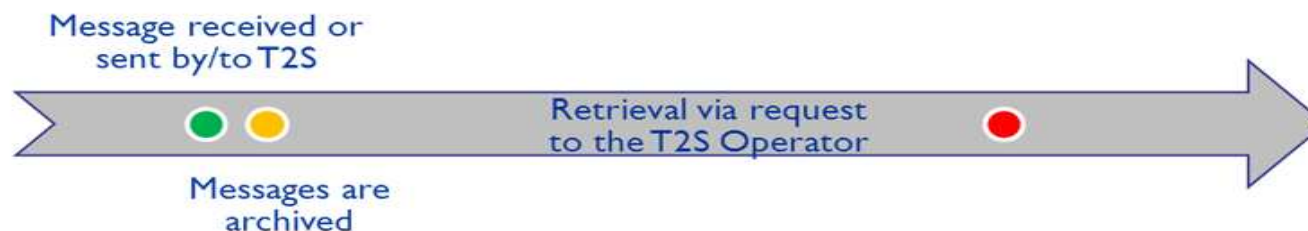
## T2S Operational and Support – Business Application Configuration Key Facts

- **Business application configuration**

  The T2S Operator defines and maintains the set of rules and parameters which configure the T2S business application

- **T2S Calendar**

  T2S will maintain a T2S Operating day calendar, which includes the opening days and closing days for all T2S settlement currencies:

  - T2S is usually open from Monday to Friday every week (with the exception of closing days during the week)

  - At the end of a Friday settlement day (or the last T2S operating day of the week), T2S moves to the next Monday (or the next first T2S operating day of next week) as settlement day

# Functional detailing of T2S

| 6.45 p.m. – 7.30 p.m. | 7.30 p.m. – 3.00 a.m. | ~3.00 a.m. – 5.00 a.m. | 5.00 a.m. – 6.00 p.m. | 6.00 p.m. – 6.45 p.m. |
|---|---|---|---|---|
| **Start-of-day period** | **Night-time settlement period** | **Maintenance window** | **Real-time settlement period** | **End-of-day period** |
| • Change of Business Date <br> • Deadline (7:00 p.m.) to accept data feeds from CMS and Payment Banks <br> • Static Data Update <br> • Instruction Revalidation based on current static data and Business Date <br> • Valuation of securities positions & eligible collateral <br><br> *Static Data updates & maintenance instructions are accepted throughout the night-time settlement but are implemented at the end of sequences <br> # BATM: Bilaterally Agreed Treasury Management instructions <br> ## CBO: Central Bank Operations (Monetary Policy Operations) | • First cycle <br>  • Liquidity Transfers <br>  • Settlement sequences <br>  • End of Sequence reporting <br>  • Static Data update* <br>  • Maintenance instructions* <br><br> • Last Cycle: <br>  • Partial Settlement <br>  • Multiple Liquidity Provider reimbursement at end of cycle <br>  • End of Sequence Reporting <br><br> • Real-time Settlement if end of last night-time settlement cycle < 3.00 a.m. | • System maintenance tasks & emergency fixes <br> • No processes running | • Real-time Settlement <br> • Liquidity Transfers <br> • Partial Settlement period <br> • Real-time Closure period <br>  • DVP cut-off <br>  • Release of EoD cash restrictions <br>  • EoD intraday credit reimbursement <br>  • BATM#, CBO## cut-off <br>  • Inbound Liquidity Transfer cut-off <br>  • EoD Liquidity Transfers (cash sweep) <br>  • Securities restriction cut-off <br>  • FOP cut-off | • Stop settlement <br> • Recycling and purging <br> • Securities Accounts consistency check <br> • Statement and reports |

# T2S Information Session DNB

# February 25th, 2014

# T2S User Testing

# T2S User Testing

## Context of T2S User Testing – Objectives of User Testing

- Main objective of user testing is to

  – Ensure that the T2S platform meets the user requirements

  – Ensure readiness of the Contracting CSD and its community as well as its Central Bank and Payment Banks for the migration to and operation on the T2S Platform

- To achieve those objectives

  – T2S Actors needs to:

    o Test that T2S is compliant with the agreed user requirements, and

    o Ensure that their internal systems are compliant and can cooperate with T2S

  – The Eurosystem:

    o Ensures that the migration of a single T2S Actor to T2S does not create adverse impact on other T2S Actors and the T2S system as a whole

# T2S User Testing

## Context of T2S User Testing

Monday, 22 June 2015 – first CSDs and Central Banks migrate to T2S

# What will happen before?

# T2S User Testing

## Context of T2S User Testing – User Testing as Part of T2S Programme

- The User Testing will orchestrate:

  - The testing of **24 CSDs** and **19 Central Banks**

  - In **4 migration waves**/configurations in production

  - Over the testing period from **October 2014 until February 2017**

  - Through **5 mandatory testing stages**

  - On **4 T2S test environments**

- It is the first testing phase involving users following the 4CB Internal Acceptance Test (IAC) and the Eurosystem Acceptance Tests (EAT)

- Once the User Testing of a particular wave is completed the migration weekend of this wave can start

| Specification & Development | IAC / EAT | User Testing (incl. Pilot Testing) | Migration Weekend (after completion of UT) |
|---|---|---|---|

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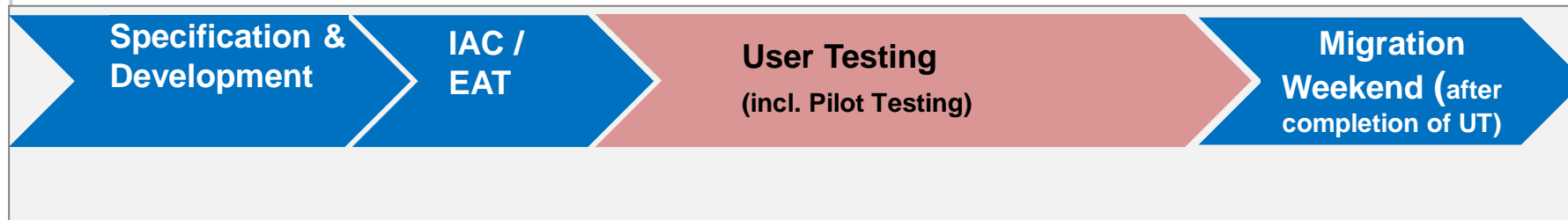
# T2S User Testing

## User Testing Stages – Overview

- T2S User Testing is conducted in five testing stages

- This allows for gradual increase of test case complexity and number of testing

**User Testing Phase**

| Connectivity | Bilateral I/O | Multilateral I/O | Community | BD |

**Connectivity and Bilateral Interoperability Testing:**

Individual CSD/CB testing of connectivity and T2S functionalities

**Multilateral Interoperability Testing:**

Joint CSD/CB testing of T2S functionalities according to wave composition

**Community and Business Day Testing:**

CSD/CB testing with their communities according to wave composition

# T2S User Testing

## User testing - Migration Waves Composition

**Wave 1** ◆ 22-06-15 — 9 months — **Wave 2** ◆ 28-03-16 — 6 months — **Wave 3** ◆ 12-09-16 — 5 months — **Wave 4** ◆ 06-02-17 — min. 3 months — Contingency Wave 05-17

**Wave 1**
- BOGS
- Depozitarul Central Romania
- Malta Stock Exchange
- Monte Titoli
- SIX SIS

**Wave 2**
- Euroclear ESES
- Interbolsa
- NBB-SSS

**Wave 3**
- Clearstream Banking
- Keler Hungary
- LuxCSD
- OeKB
- VP Lux
- VP Securities

**Wave 4**
- AS Eesti Väärtpaberikeskus
- CDCP Slovakia
- CSD of Lithuania
- Euroclear Finland
- Iberclear
- KDD Slovenia
- BNY Mellon CSD

# T2S User Testing

## User Testing Stages – DCP Certification

### DCP Certification

- Mandatory certification testing by which the DCPs have to prove to the Eurosystem that they have the capacity to use the T2S functionalities in such a way that they will not harm T2S or other market players

- In addition to the Eurosystem certification tests, CSDs and CBs may define additional test cases to be conducted by their DCPs and ICPs in their authorisation tests

- Executed during Community Tests, to be finished before start of Business Day Tests

## User Testing Stages – Description of the DCP Certification

- The scope the certification testing can be defined as:

  - The ability to send to and receive messages from T2S through A2A communication mode

  - The ability to log successfully into the GUI; and

  - The ability to subscribe to and receive reports

- DCP Certification Preparation

  - CSDs/ CBs to communicate the list of their participants intending to become DCPs to the Eurosystem in advance of the Community testing stage (of their respective migration wave)

  - Eurosystem to communicate the certification test cases for DCPs prior to the start of the Community testing stage of the first migration wave

# T2S Information Session DNB

# February 25th, 2014

# TARGET2

# TARGET2

## TARGET2 – Adaptations in view of T2S



**Standard offer**
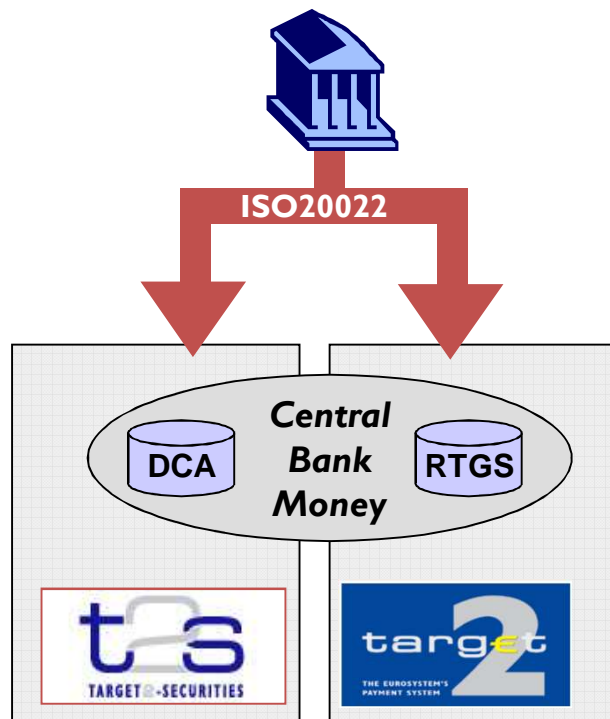
- **ISO20022 compliant interface for participants, allowing them to manage their liquidity on their RTGS accounts, i.e. liquidity transfers from T2 to T2S can be initiated via ISO20022 (XML)-messages (camt5).**

- **Access to DCAs related features via T2S but using the same ISO20022 standards as T2.**

- **Liquidity transfers from T2 to T2S can also be initiated via ICM**

- **Optional notification of debit/credit stemming from liquidity shifts in either ISO20022 or MT900/MT202 formats;**

## TARGET2 – Adaptations in view of T2S

# Optional Offer – *general approach*

**Optional offer**
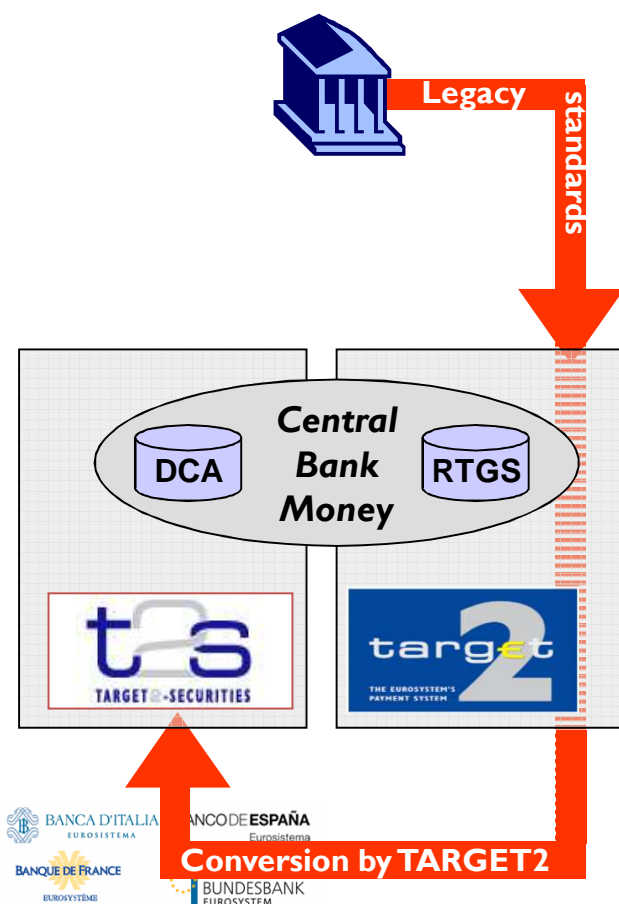
- **Alternative interface using legacy standards for managing liquidity on both RTGS and DCAs:**
  - **Possibility for participants to initiate pushed liquidity transfers (T2→T2S) and pulled liquidity transfers (T2S→T2) via MT202 messages;**
  - **TARGET2 will ensure the conversion of messages to/from ISO20022.**
- **Provision of the intraday balances of DCAs on the ICM (U2A) or via GetAccount messages (A2A) for all DCAs linked to the RTGS account of the participant;**
- **Possibility for participants to initiate pulled liquidity transfers (T2S→T2) via the ICM (U2A) or via LiquidityCreditTransfer messages (A2A);**

Legacy

standards

**Central Bank Money**

DCA

RTGS

**Conversion by TARGET2**

BANCA D'ITALIA
EUROSISTEMA

BANCO DE ESPAÑA
Eurosistema

BANQUE DE FRANCE
EUROSYSTÈME

BUNDESBANK
EUROSYSTEM

EUROPEAN CENTRAL BANK
EUROSYSTEM

## TARGET2 – Adaptations in view of T2S

# Optional offer – main features

**Optional offer**

**General rules for "faded in" or "faded out "T2S related liquidity information:**

- **DCA balance information are not displayed by default when entering a liquidity related screen**

- **Those balance information are always faded out by default ('+' in front of the respective T2S-related item in the screen), i.e. no charged request is sent to T2S by T2**

- **By clicking on the '+' (the '+' will switch to '-'), the T2S related balance information are requested in the background (and charged by T2S according to their 'pricing schedule')**

- **By clicking on the '-' (the '-' will switch to '+'), the T2S related balance information is faded out again**

- **When DCA-related information is shown on the ICM-screen, a refresh will result in a new charged request to T2S.**

# TARGET2

## TARGET2 – Differences between T2S-GUI and TARGET2 Optional Offer (1)

| | Details | Acces Mode | |
|---|---|---|---|
| | | T2S GUI | T2 Optional Offer |
| 1.3 | Access Rights/Privileges | Y | N |
| 1.4 | User Set-up | Y | N |
| 1.5 | Grant Roles | Y | N |
| 1.7 | Report Configuration | Y | N |
| 2.1 | Intra-Balance Movements | Y | N |
| 3.2 | Secondary CMB-Set-up | Y | N |
| 4.1 | Eligible Securities | Y | N |
| 4.2 | Securities Valuation | Y | N |
| 5.1 | External Guarantee Headroom (Limit) | Y | N |
| 5.2 | Client Collateralisation Limit | Y | N |
| 5.3 | Unsecured Limit | Y | N |

# TARGET2

| Details | | Acces Mode | |
|---|---|---|---|
| | | T2S GUI | T2 Optional Offer |
| 6.2 | Limit Utilisation Query | Y | N |
| 6.3 | Limit Utilisation Journal Query | Y | N |
| 7.1 | Internal LTO | Y | N |
| 7.2 | Inbound LTO | Y | Y |
| 7.3 | Outbound LTO | Y | Y |
| 7.4 | Multiple Liquidity Provider Set-up | Y | N |
| 8.2 | Cash Forecast Reports/Query | Y | N |
| 8.3 | T2S DCA Balance/Posting Query | Y | Y |
| 8.4 | LTO List/Detail Query | Y | Y |
| 8.5 | T2S Overall Liquidity Query | Y | N |

## TARGET2 – Differences between T2S-GUI and TARGET2 Optional Offer (3)

- The TARGET2 Optional offer is mainly targeted at small Payment Banks.

- It would not be sufficient if a Payment Bank offers client auto-collateralization services and payment services to other market participants. In that case the Payment Bank will have to set up and maintain its static data (limits, eligible securities, securities valuation). In this case, the Payment Bank would need to use a network provider service to get at least access to the T2S-GUI.

## TARGET2 – Pricing

- Pricing Policy:

  – Fee level set in accordance to 'users pay' principle and full cost recovery (no cross-subsidiation with other services).

  – For each DCA linked to a PM-account, a monthly fee of EUR 150 will be charged.

  – For the Optional Offer, the fee takes the form of a fixed monthly fee per PM-account:

    o EUR 50 for banks with flat fee structure (Option A)

    o EUR 625 for banks with degressive fee structure (Option B)

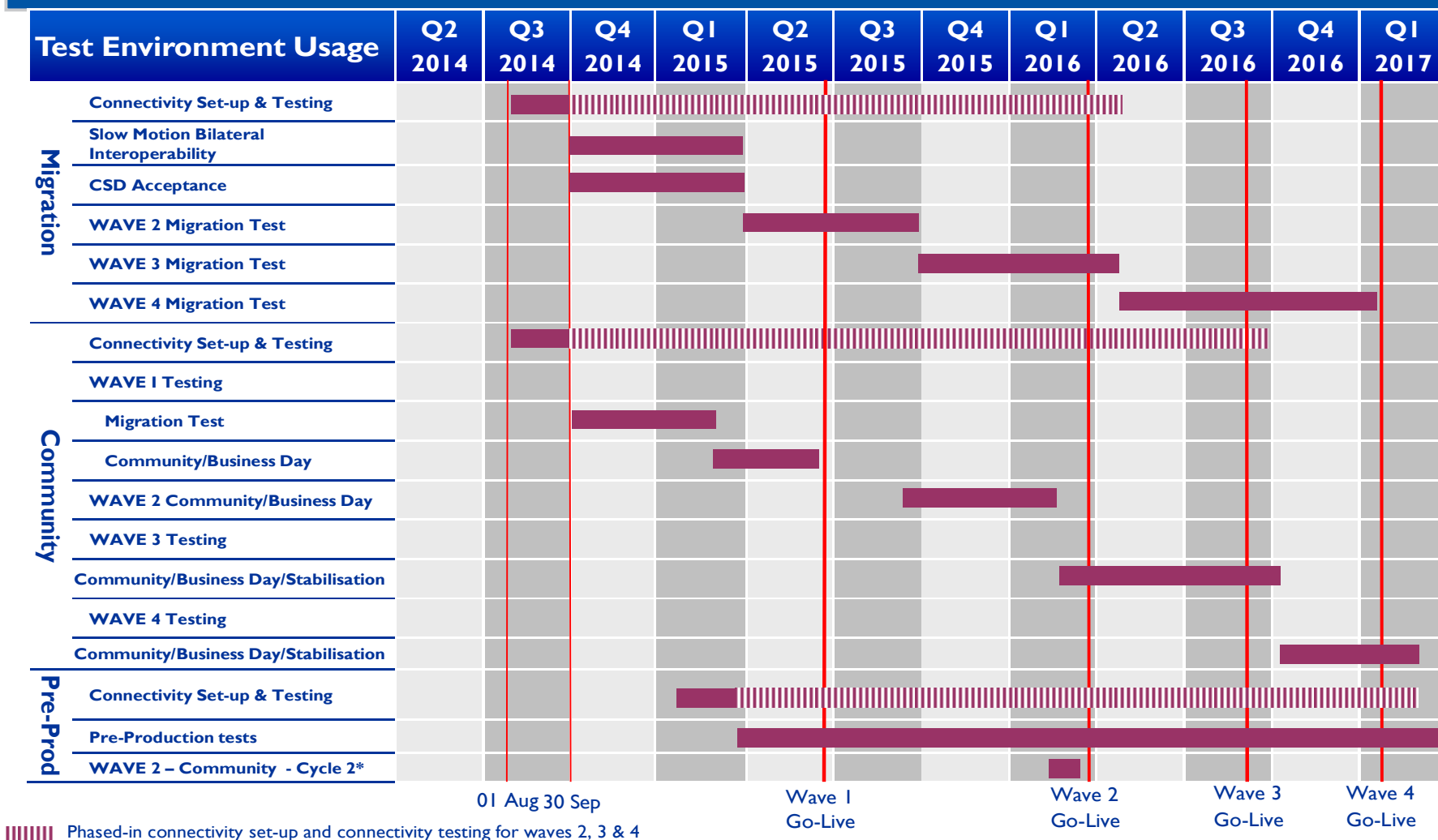# T2S Information Session DNB

# February 25th, 2014

# Planning

# Planning

## High Level Planning

# Planning

## UT Environments – Migration, Community, Pre-Production

| Test Environment Usage | | Q2 2014 | Q3 2014 | Q4 2014 | Q1 2015 | Q2 2015 | Q3 2015 | Q4 2015 | Q1 2016 | Q2 2016 | Q3 2016 | Q4 2016 | Q1 2017 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Migration** | Connectivity Set-up & Testing | | ▰ | ▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨ | | | | | | | | | | |
| | Slow Motion Bilateral Interoperability | | | ▰▰▰▰ | | | | | | | | | |
| | CSD Acceptance | | | ▰▰▰▰ | | | | | | | | | |
| | WAVE 2 Migration Test | | | | | ▰▰▰▰ | | | | | | | |
| | WAVE 3 Migration Test | | | | | | | ▰▰▰▰ | | | | | |
| | WAVE 4 Migration Test | | | | | | | | | ▰▰▰▰▰ | | | |
| **Community** | Connectivity Set-up & Testing | | ▰ | ▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨ | | | | | | | | | |
| | WAVE 1 Testing | | | | | | | | | | | | |
| | Migration Test | | | ▰▰▰ | | | | | | | | | |
| | Community/Business Day | | | | ▰▰▰ | | | | | | | | |
| | WAVE 2 Community/Business Day | | | | | | ▰▰▰ | | | | | | |
| | WAVE 3 Testing | | | | | | | | | | | | |
| | Community/Business Day/Stabilisation | | | | | | | | ▰▰▰▰▰ | | | | |
| | WAVE 4 Testing | | | | | | | | | | | | |
| | Community/Business Day/Stabilisation | | | | | | | | | | | ▰▰▰▰ | |
| **Pre-Prod** | Connectivity Set-up & Testing | | | | ▰ | ▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨ | | | | | | | |
| | Pre-Production tests | | | | ▰▰▰▰▰▰▰▰▰▰▰▰▰▰▰▰▰▰▰▰▰▰▰▰▰ | | | | | | | | |
| | WAVE 2 – Community - Cycle 2* | | | | | | | | ▰ | | | | |

01 Aug  30 Sep          Wave 1 Go-Live          Wave 2 Go-Live          Wave 3 Go-Live          Wave 4 Go-Live

▨▨▨ Phased-in connectivity set-up and connectivity testing for waves 2, 3 & 4

\* With Liquidity Transfer Utility

# Planning

## Follow-up (1)

### Declaration procedure for directly connected DCA Holders

Institutions intending to become directly connected DCA holders should inform DNB (in a binding manner) at the latest:

▪ for A2A mode, 1 year before the start of the Community testing stage of the respective migration wave with which they first time migrate to T2S

▪ for U2A mode, 3 months before the start of the Community testing stage of the respective migration wave with which they first time migrate to T2S

|        | A2A mode          | U2A mode          |
|--------|-------------------|-------------------|
| Wave 1 | 28 February 2014  | 1 December 2014   |
| Wave 2 | 17 September 2014 | 17 June 2015      |
| Wave 3 | 13 February 2015  | 13 November 2015  |
| Wave 4 | 7 October 2015    | 8 July 2016       |

# Planning

## Follow-up (2)

- **Declaration procedure for directly connected DCA Holders**

For this declaration a letter must be sent to:

> De Nederlandsche Bank NV
>
> tav. T2S-NL projectbureau (W2.341)
>
> Postbus 98
>
> 1000 AB  AMSTERDAM

- This declaration is the precondition for certification.

- **Consultation on the number of DCAs**

DNB does not only want to know which communication channel you will use, but also the number of DCAs you will open. Therefore you are asked to send **before 4th of April 2014** an email to T2S@DNB.NL indicating the number of DCAs you will open as a directly or indirectly connected DCA Holder.

**Thank you for your attention**

## Answers to questions not covered in the presentation (1)

- **What is the cost estimate for a DCA Holder?**

Under the present volumetric assumptions made for T2S, it can be estimated that, on average, each NCB will be billed every month by T2S for an amount that corresponds to approximately 15€ per DCA, half of which is expected to be passed to the DCA holder via the holder of the "main RTGS account" through a dedicated billing mechanism. Of course the level of the fees will also largely depend on the actual recourse to T2S billable services by the DCA holder or on the monitoring practices of the Central Bank.

- **An RTGS account, which is part of a Group of Accounts, has an DCA. Which NCB will be billed for this DCA?**

The NCB of the GoA manager should process the billing of all DCAs linked to the RTGS belonging to the GoA.

# Q&A

## Answers to questions not covered in the presentation (2)

- **What are the consequences of partial settlement of a liquidity transfer to T2S?**

For a **standing order** the consequence in case of lack of funds is a pro rata execution of all standing orders executed at the execution event (i.e. together with the ASI standing orders). The remaining part will not be queued for settlement.

For a **current order by account holder** partial settlement is not possible. Consequence in case of lack of funds is during:

- Daylight phases (07.00 - 17.45): Queuing

- Night-time phases (19.30 - 07.00): Rejection

For a **current order by T2S Actor in TARGET2** partial settlement is possible. Consequence in case of lack of funds is during:

- Daylight phases (07.00 - 17.45): Queuing

- Night-time phases (19.30 - 07.00): Partial execution

For more information see chapter 2.9.3 of TARGET2 UDFS 1st book  (version 8.0)