



Roma, 28 Ottobre 2014

Centro Congressi Banca d'Italia

Training Session: Access Rights

Agenda

▪ Access rights

- General concepts
- Users
 - Configuration of users
- Privileges
- Roles
- Secured objects
- Secured groups
- Data scope
 - Default, extended and reduced

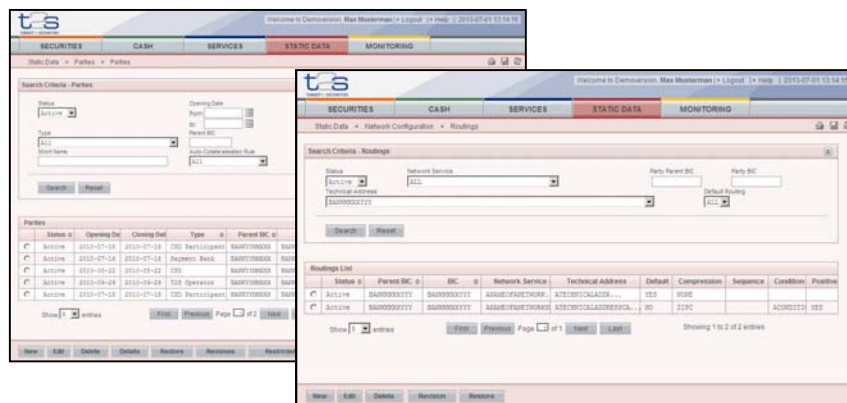
▪ Access rights configuration

- Configuration of access rights at party level
- Configuration of access rights at user level
- Configuration of access rights at role level
- Exercises

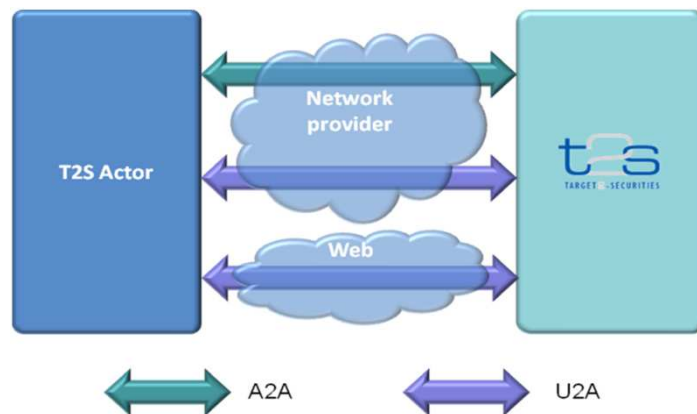
Access Rights: General Concepts

U2A/A2A Modes

U2A



A2A



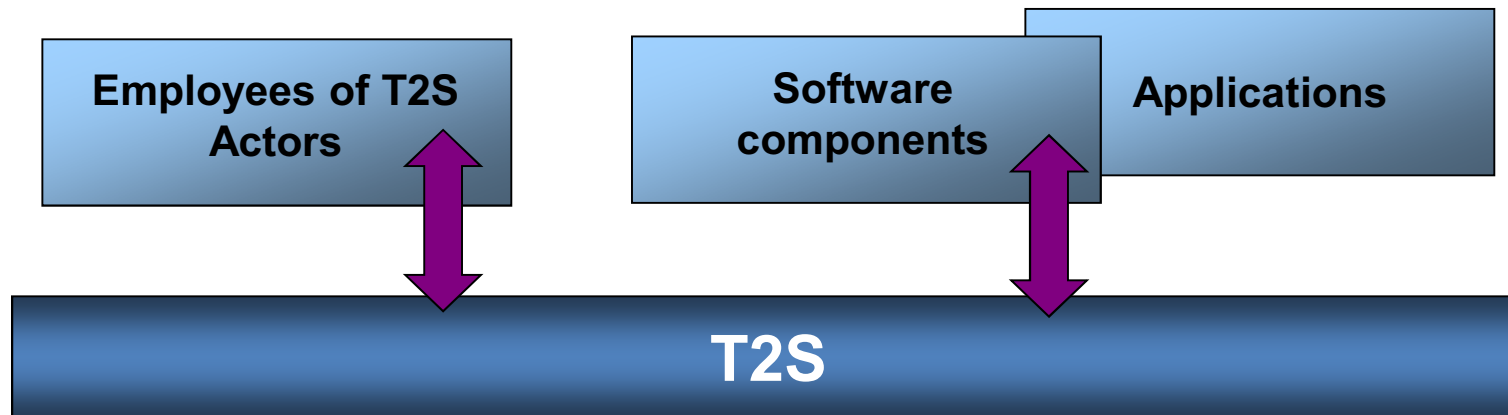
T2S User Function

- A user can interact with T2S in two modes:
 - U2A, via GUI interface
 - A2A, via XML messages or files
- A **user function** is any possible action a user can trigger in T2S
- Based on the GUI functions and XML messages, a set of T2S user functions can be defined such as:
 - Creating a party
 - Asking for a report
 - Sending a settlement instruction, etc

Access Rights: Users

T2S Users

- A system user is any individual or application that is authorized to interact with T2S



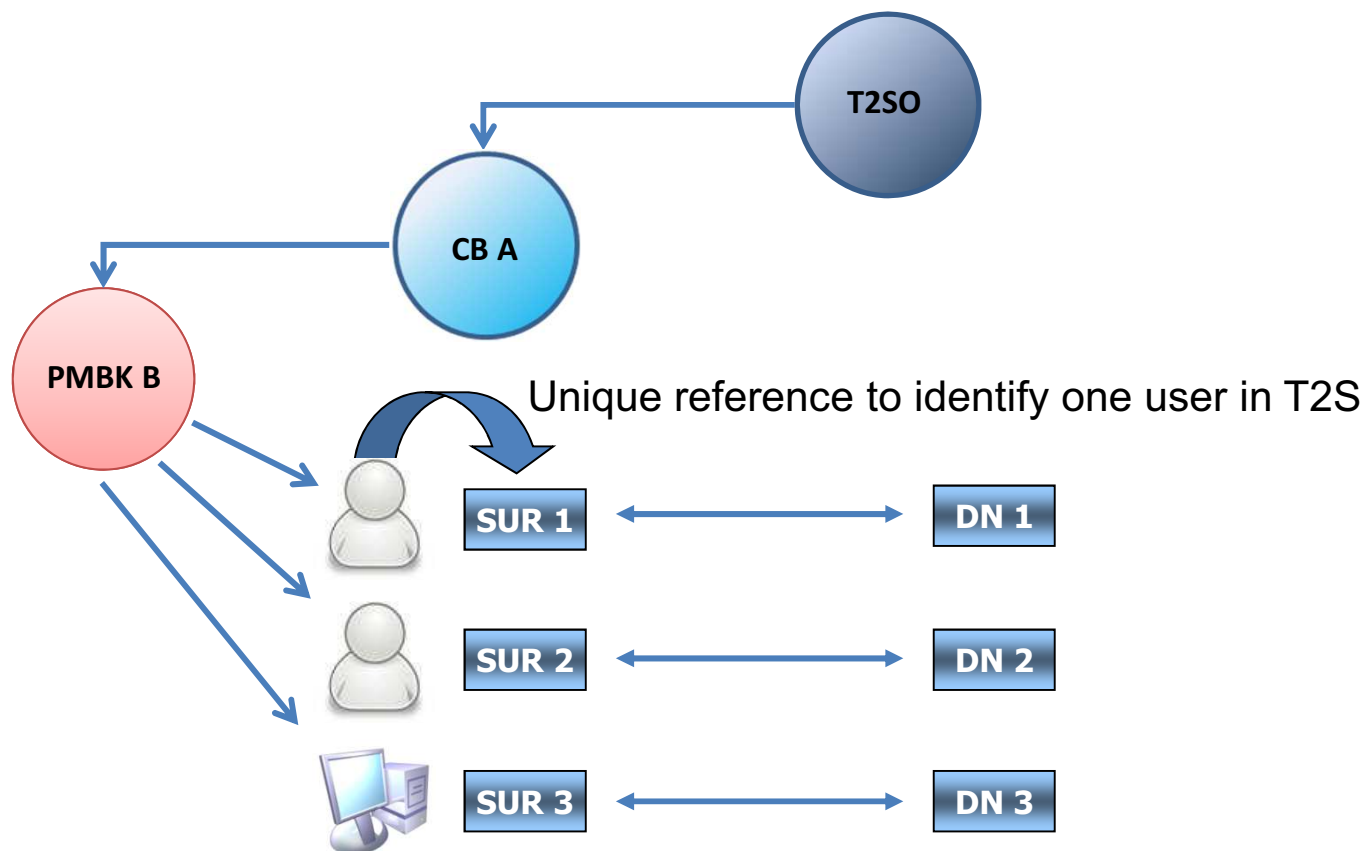
- Each user is univocally linked to one party
- The **access rights profile** of a system user is determined by the set of granted roles and privileges

Configuration of Users (1/6)

- Any individual or application willing to interact with T2S must be configured as a user in the T2S database
- T2S Operator, CSD, NCB, CSD Participant, Payment Bank or External CSD can create users, according to the hierarchical party model
- Each user is identified in T2S with:
 - A unique **System User Reference (SUR)**
 - One **Certificate Distinguished Name** (but the same user can eventually be linked to several Certificate DN)
 - A link to an existing **Party** in T2S
 - A unique **login name**
- A user can be created, updated or deleted in U2A only

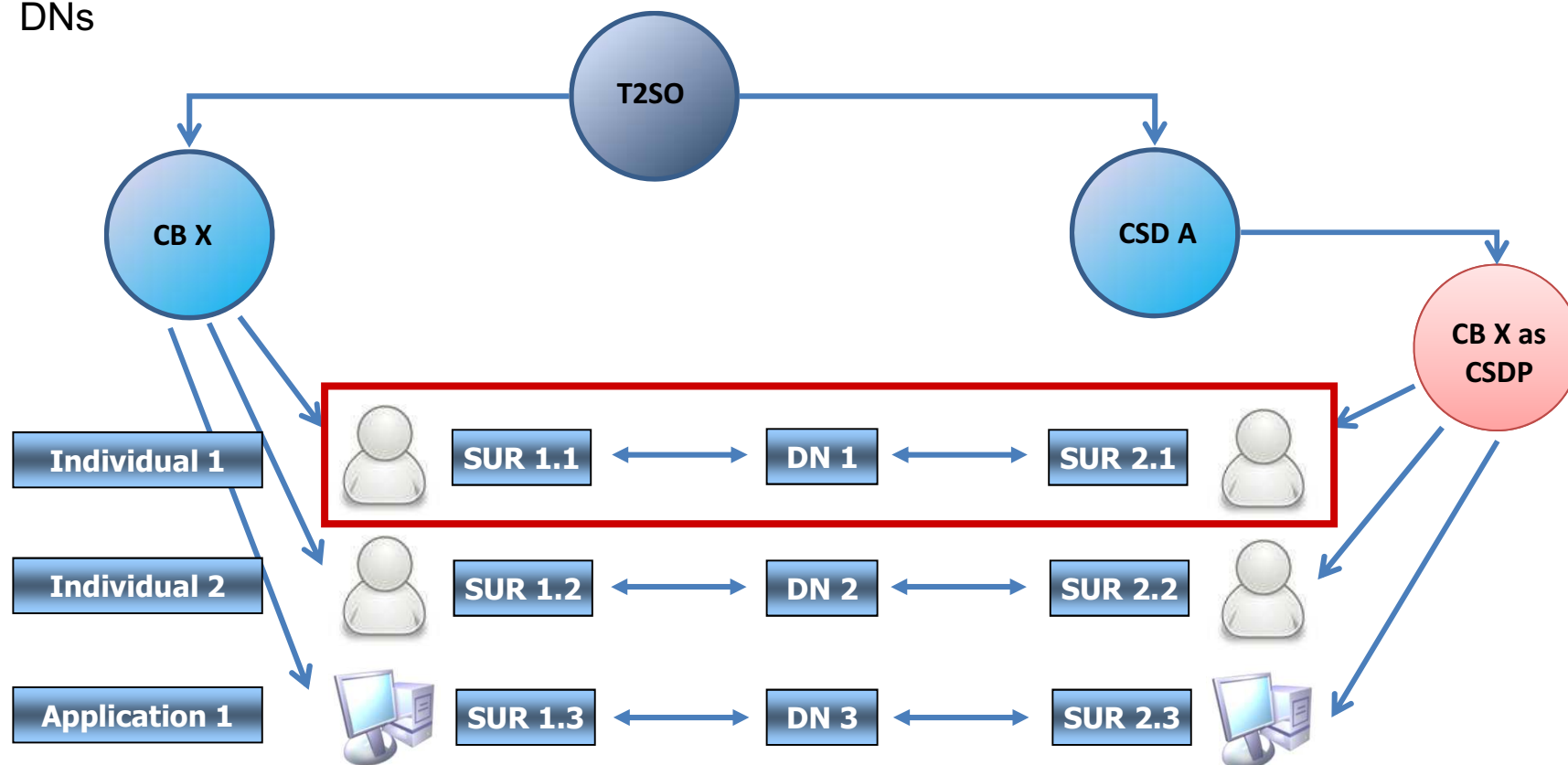
Configuration of Users (2/6)

- Basic scenario with a T2S Actor defined as one party



Configuration of Users (3/6)

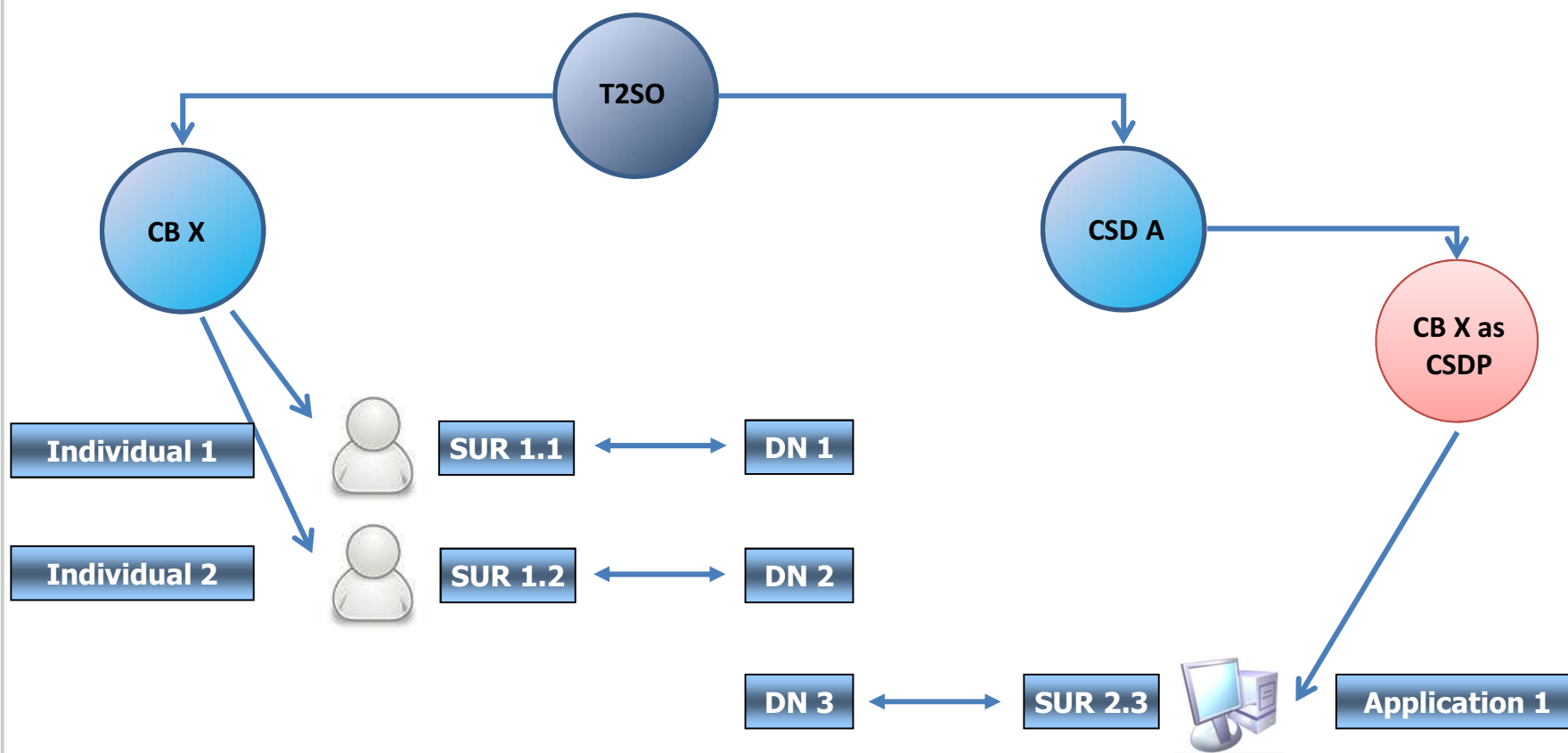
- T2S Actor defined as multiple parties and one-to-many relationship between users and DNs



Access Rights: Users

Configuration of Users (4/6)

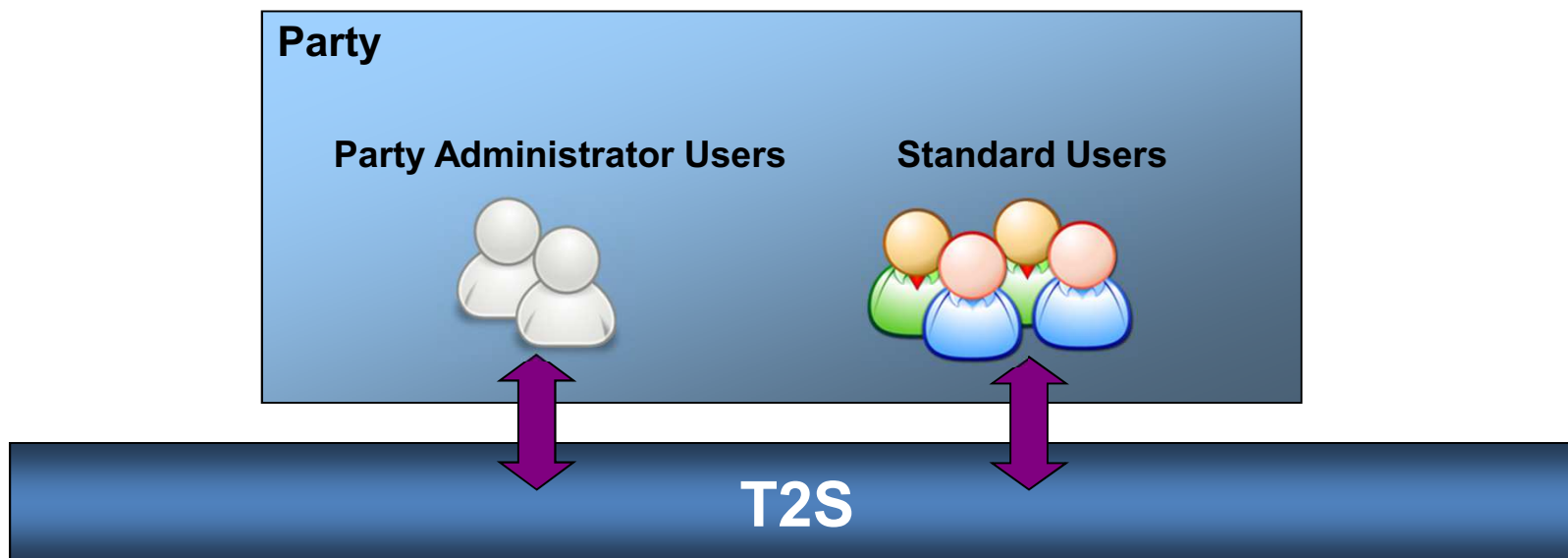
- T2S Actor defined as multiple parties and one-to-one relationship between users and DNs



Access Rights: Users

Configuration of Users (5/6)

- Different access right profiles are configured depending on the user's role
- A “system user” can be either **party administrator** or **standard user**
- T2S Operator assigns a specific privilege (i.e. “Administer party” system privilege) to CB/CSD Party administrators



Configuration of Users (6/6)

User configuration at T2S operator level

- T2S operator creates party object and Party Administrator users for each CB and CSD
- T2S operator assigns the needed privileges to enable Party Administrators to manage the relevant party

User configuration at CB/CSD side

- It is the responsibility of CBs and CSDs to reflect in T2S their relevant database of users and parties

User configuration at Payment bank/CSD participant side

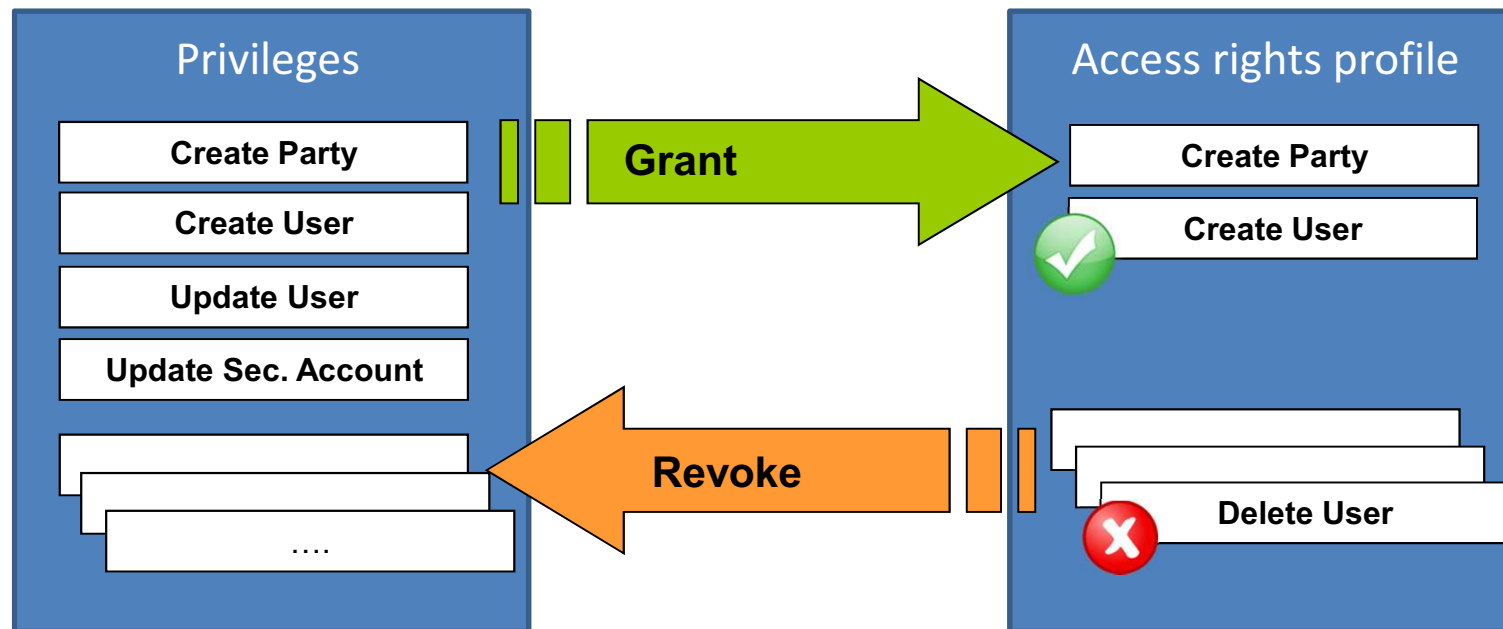
- Each Payment Bank and CSD participant is responsible to input in T2S their relevant database of users

Certificates in T2S

- A digital **certificate** is an electronic document binding the identity of a T2S user to a pair of electronic keys used for cryptography
- A **distinguished name** (DN) is a sequence of attribute-value assertions separated by commas, e.g.: cn=t2s,ou=t2s-ops o=bitait01,o=nsp-1
- Each identity bound to a digital certificate is assigned a unique DN. This applies both to individuals (U2A) and applications (A2A)
- If a T2S Actor uses multiple connectivity providers, each of its individuals and applications is assigned several certificates
 - one certificate per connectivity provider
 - one certificate DN per connectivity provider

Privileges in T2S

- A **privilege** identifies the ability for an individual or application interacting with T2S to trigger a particular user function
- Assignment of access rights to a T2S user is based on granting/revoking privileges



Privileges Classification in T2S

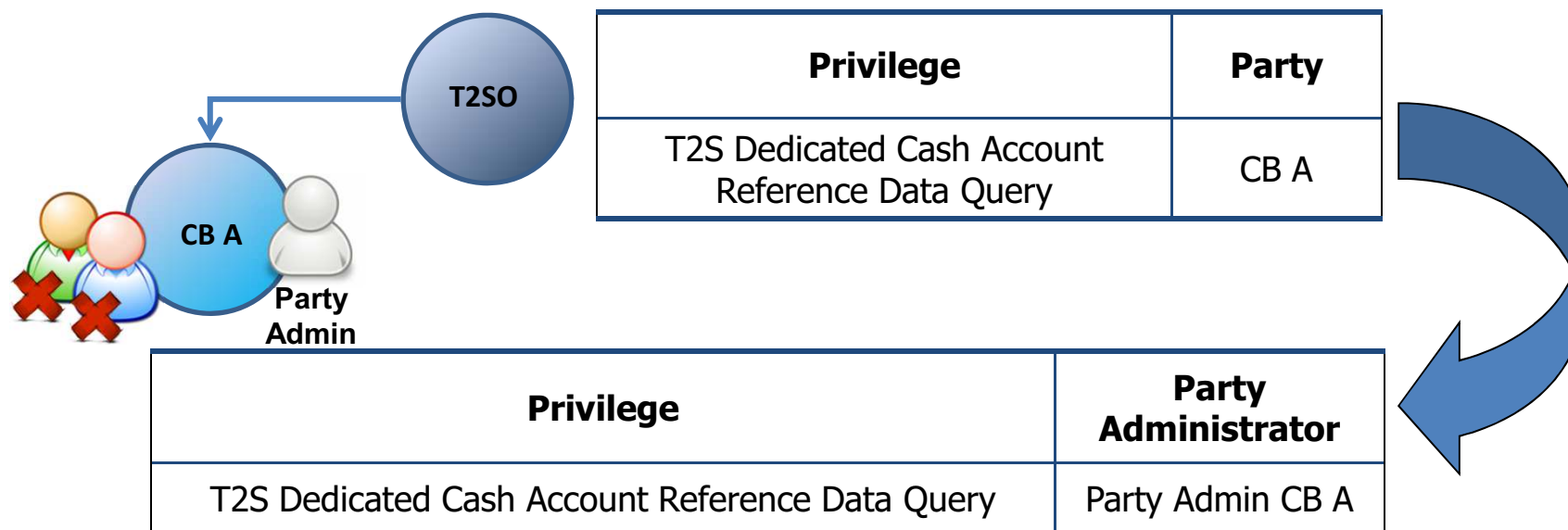
- In T2S the privileges are classified into two categories:
 - **System privilege** refers to a user function that does not apply to a specific data object (e.g. a query on the current phase of the settlement day)
 - **Object privilege** refers to a user function that applies to a specific data object or group of static data objects (e.g. a T2S user function to display the reference data of a securities account)
- A system or object privilege can be granted using different configurations:
 - at **Party** level
 - at **User** level
 - at **Role** level
- An object privilege can be granted only if the grantee already has the related system privilege
- The privileges which are not assigned to a user, role or party are implicitly denied

Attributes of a Privilege in T2S

- Additional boolean attributes determine specific features for each privilege assignment:
 - Administration
 - If set to „true“, it enables administrative rights on such privilege
 - Depending on the grantor duties, it enables to grant the same privilege:
 - to parties under the same system entity
 - or to user and roles under the same party
 - 4-Eyes
 - If set to „true“, a confirmation is needed in order to trigger the specific privilege
 - The option is relevant only when Deny is set to false
 - It is not relevant for privileges related to queries
 - Deny
 - The option specifies whether the associated user function is allowed or explicitly denied

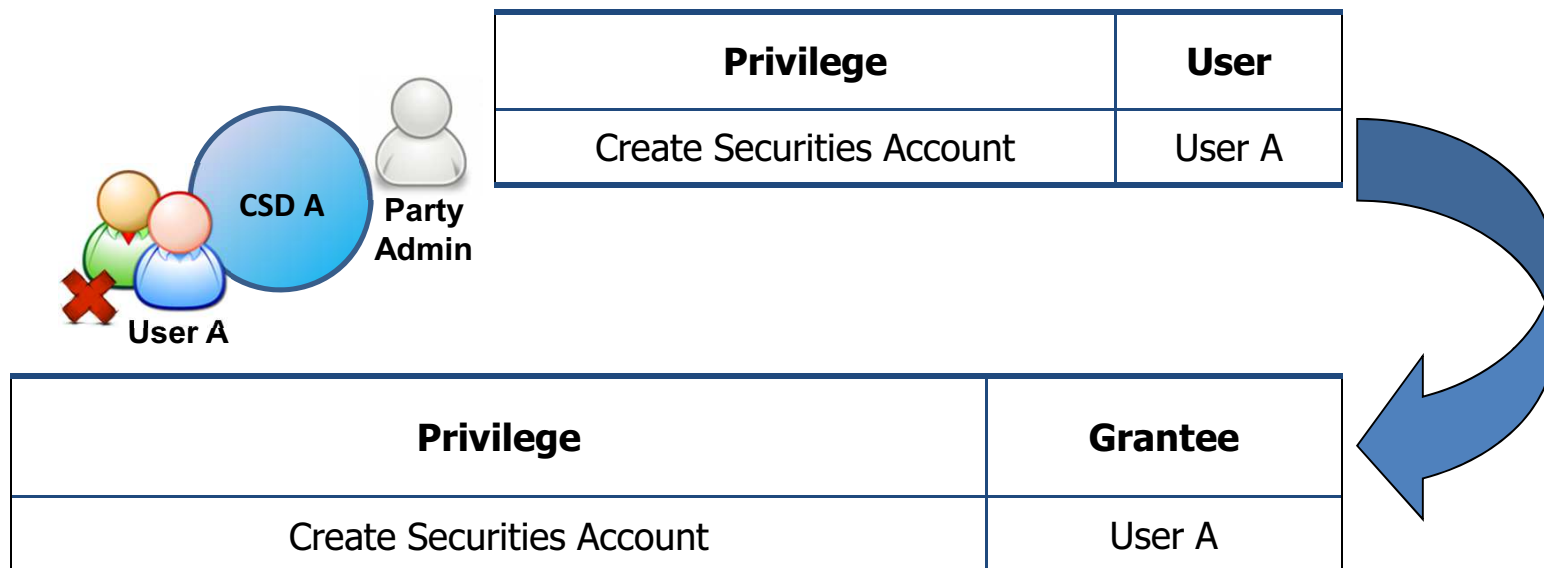
Configuration of Access Rights at Party Level

- In case a system/object privilege is granted **at party level**, such privilege becomes automatically available to the party administrators only
- The grantee party administrators can propagate the system/object privilege, according to the granted flags (i.e. Admin, Deny, 4-eyes)



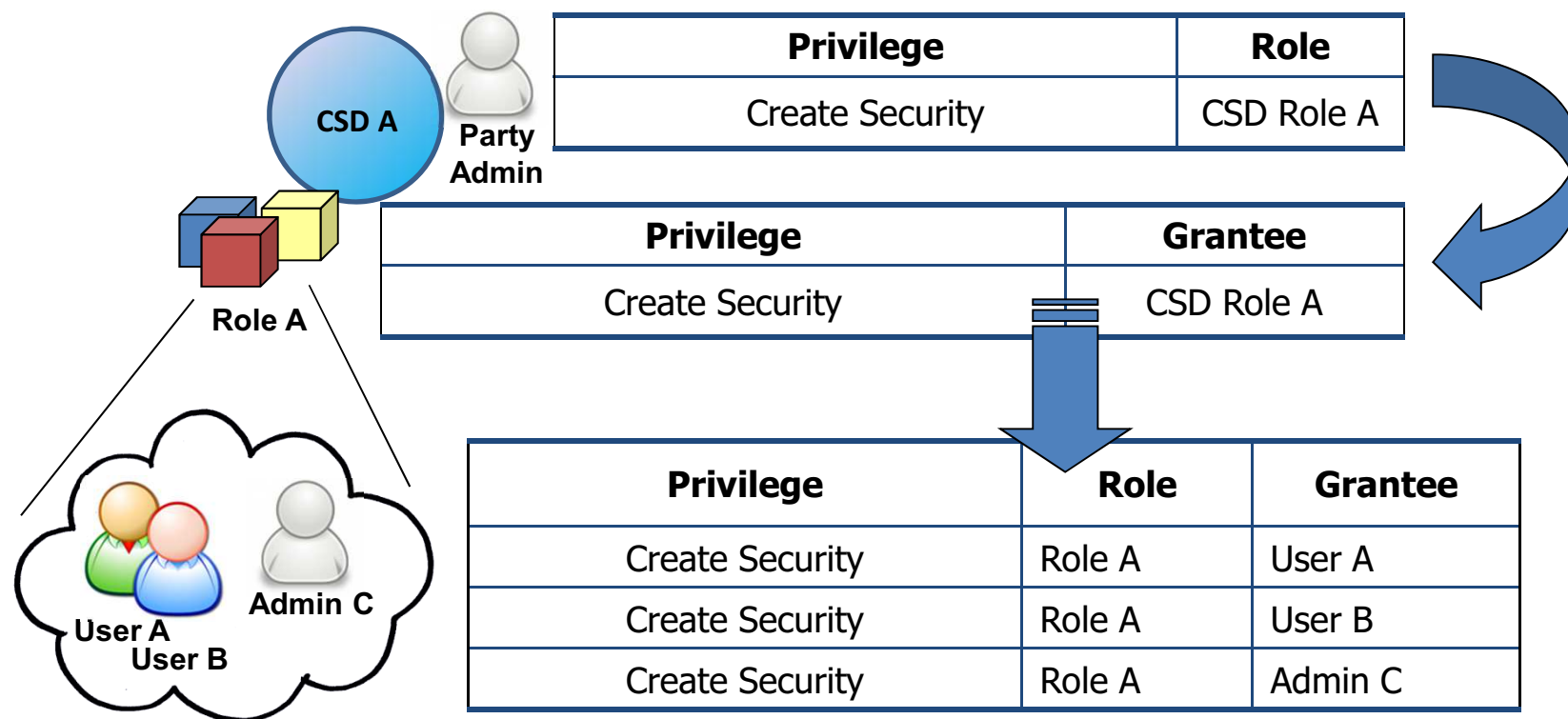
Configuration of Access Rights at User Level

- In case a system/object privilege is granted at **user level**, such privilege becomes available to the grantee user only
- The grantee user can propagate the system/object privilege to roles and users belonging to the same party, according to the granted flags (i.e. Admin, Deny, 4-eyes)



Configuration of Access Rights at Role Level

- In case a system/object privilege is granted at **role level**, such privilege becomes available to all the users belonging to that role



Contradicting Privileges

- The assignment of privileges representing a contradicting grant is forbidden in T2S

Scenario 1: same privilege, with contradicting flags



ROW	PRIVILEGE	PRIVILEGE TYPE	OBJECT	GRANTEE	DENY	ADMIN	FOUR-EYES
1	Update Security	Object	ISIN00001	User A	False	False	False
2	Update Security	Object	ISIN00001	User A	True	False	False

Scenario 2: same privilege, both at system and object levels

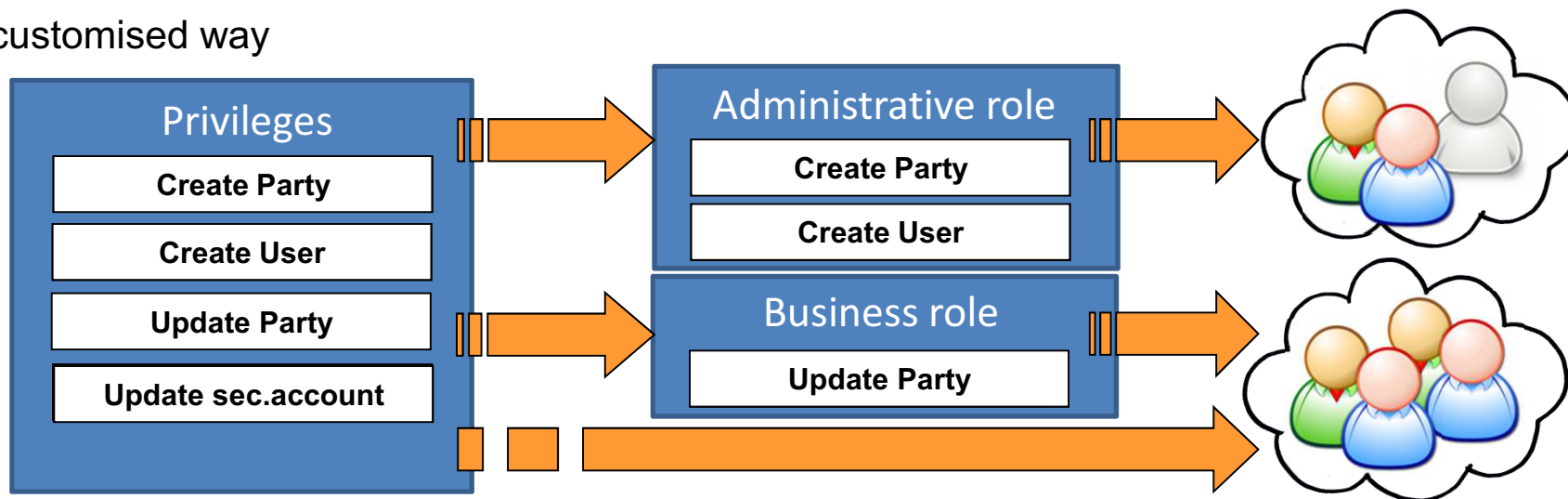


ROW	PRIVILEGE	PRIVILEGE TYPE	OBJECT	GRANTEE	DENY	ADMIN	FOUR-EYES
1	Update Security	System	n/a	User A	False	False	False
2	Update Security	Object	ISIN00001	User A	True	False	False
3	Update Security	Object	ISIN29021	User A	False	False	False

Access Rights: Roles

Role-Based Access Configuration (RBAC) Model

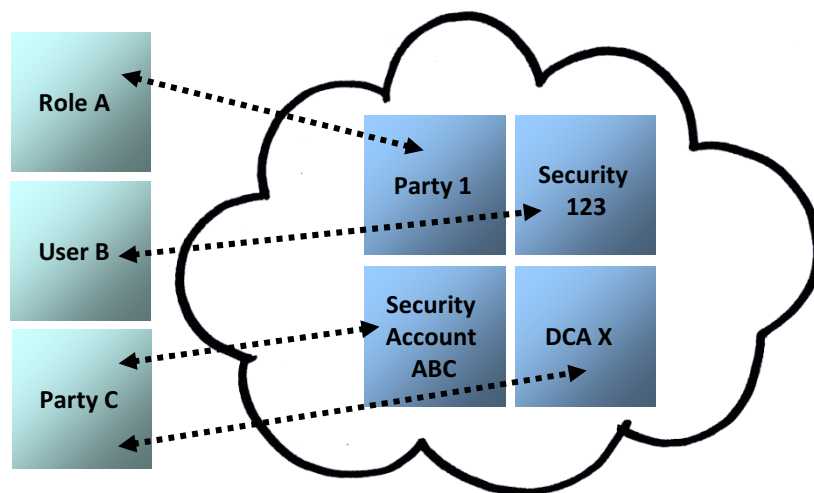
- Access rights configuration in T2S follows the **RBAC** approach
- Privileges can be grouped into **roles**
- The **access rights profile** of a system user is determined by the set of roles and privileges granted to it
- CSDs and CBs can create their own roles to manage the granted privileges in a customised way



Access Rights: Secured Objects

Definition of Secured Object

Secured Objects



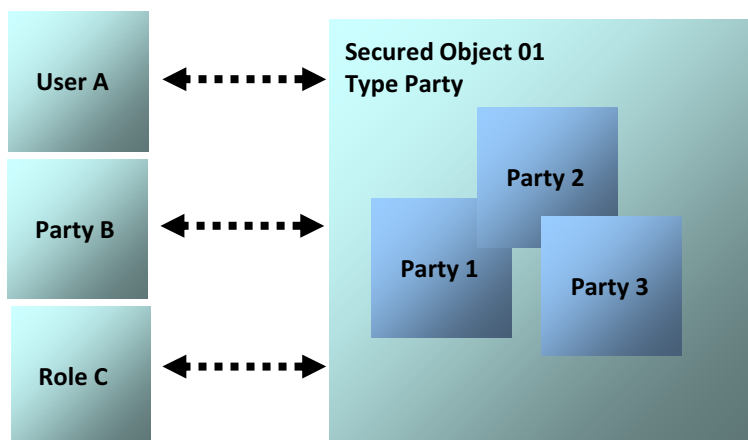
Granted privilege on specific secured objects

Grantee Id	Grantee Type	Privilege Id	Object Id	Object Type
<i>Role A</i>	ROLE	<i>P01</i>	<i>Party 1</i>	SEOB
<i>User B</i>	USER	<i>P02</i>	<i>Sec 123</i>	SEOB
<i>Party C</i>	PARTY	<i>P03</i>	<i>DCA X</i>	SEOB
<i>Party C</i>	PARTY	<i>P04</i>	<i>Sec. Acc. ABC</i>	SEOB

- A **secured object** is a static data object on which a grantee was granted an object privilege
- The exhaustive list of possible secured object types is:
 - Party
 - Security
 - Securities account
 - T2S dedicated cash account

Access Rights: Secured Groups

Definition of Secured Group



Granted privilege on specific group of objects

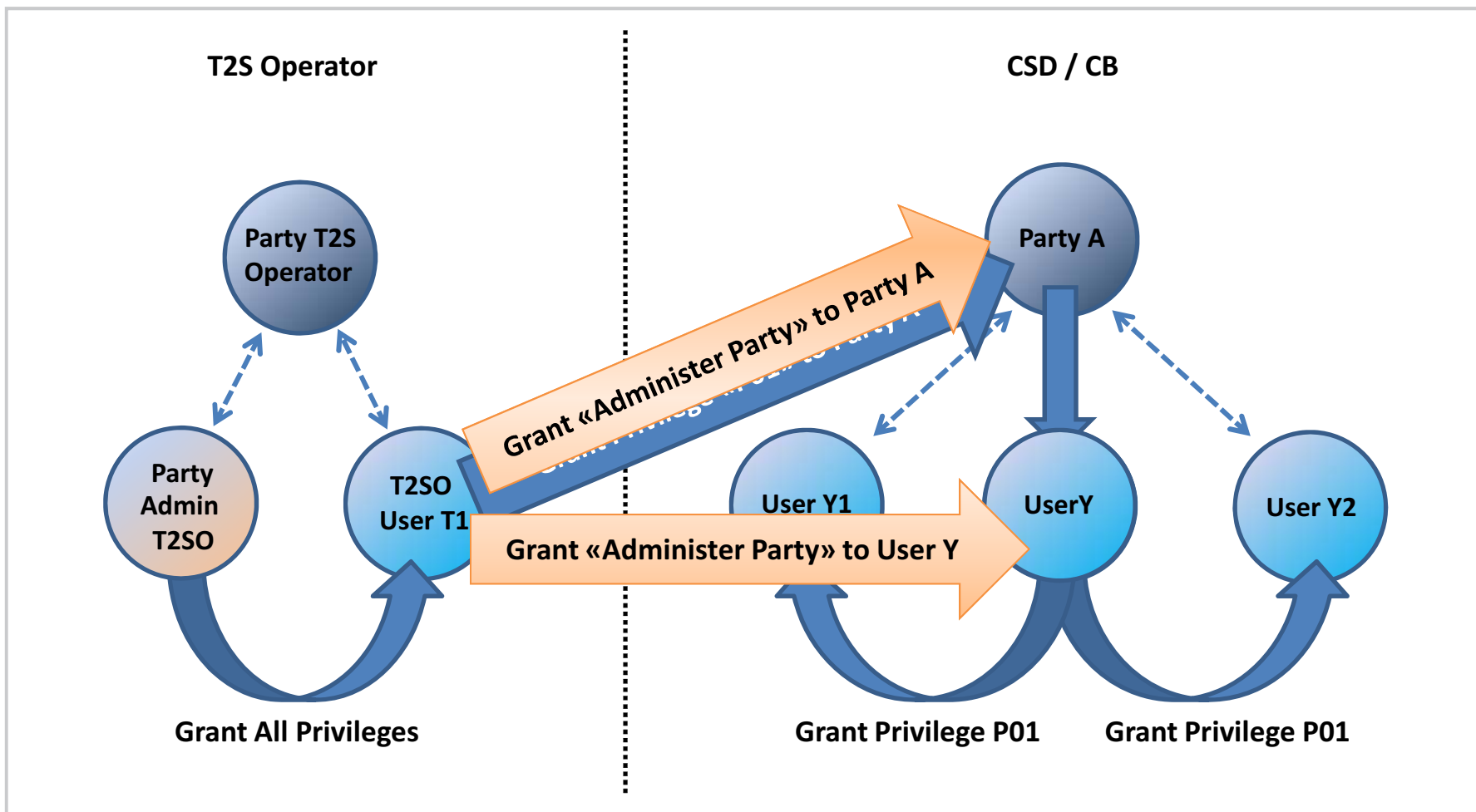
Grantee Id	Grantee Type	Privilege Id	Object Id	Object Type
User A	USER	P01	SO01	SEOB
Party B	PARTY	P02	SO01	SEOB
Role C	ROLE	P02	SO01	SEOB

- A **secured group** is a homogeneous group of secured objects, having the same type
- Each group is defined by:
 - an identifier of the group
 - the type of the secured group, i.e. the type of secured objects that can be assigned to the group
- Object privileges on secured groups can be granted to **roles**, **users** and **parties**

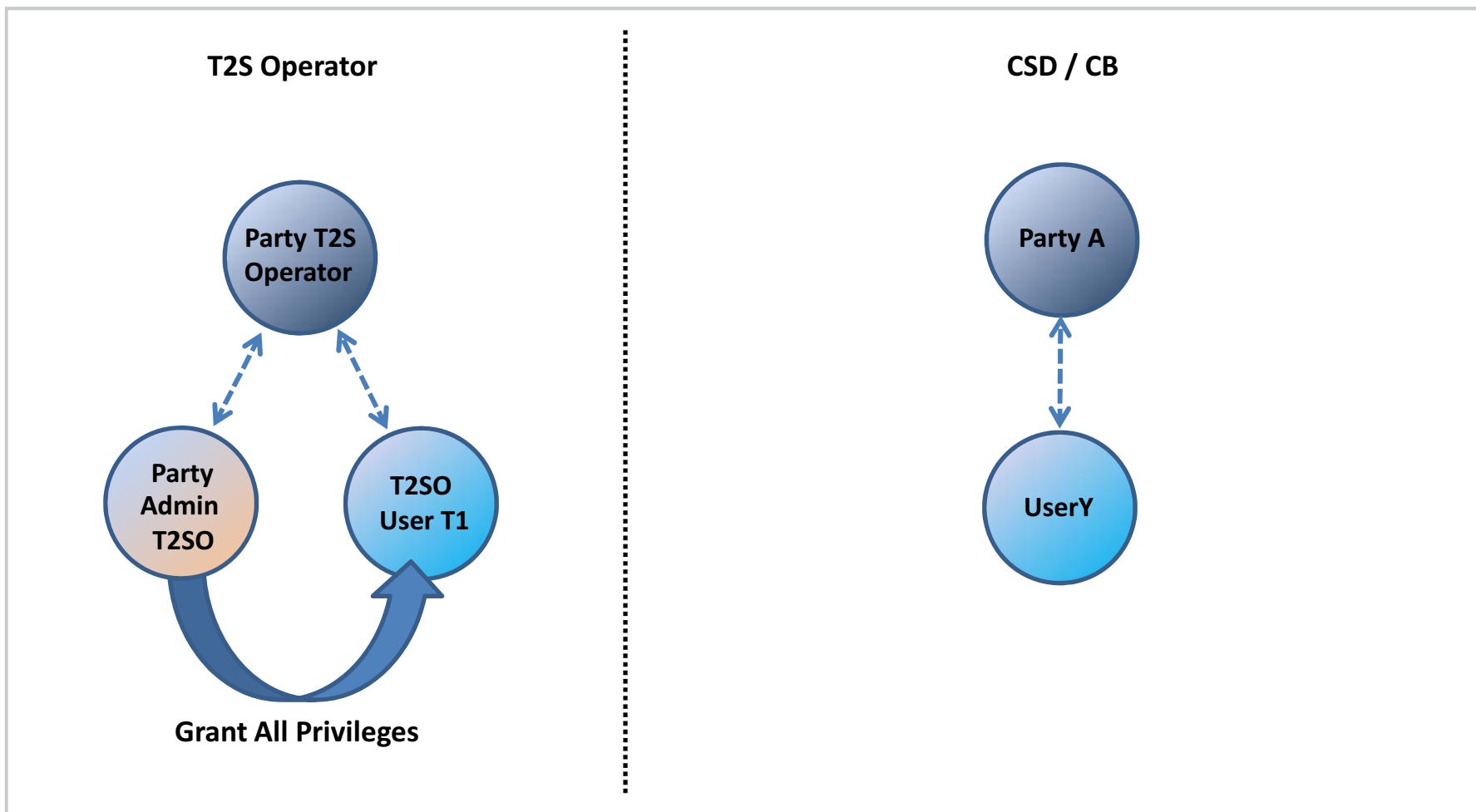
Decentralized Access Rights (1/3)

- Each parent party is responsible for assigning the set of T2S user functions that a participant falling under their responsibility is allowed to trigger
- Based on the previous assumption:
 - The **T2S Operator** assigns functions to CSDs and CBs
 - Each **CSD** assigns functions to each of its CSD participants
 - Each **CB** assigns functions to each of its payment banks
- It is worth noticing that different parties within the same system entity may be assigned different functions depending on a specific contractual agreement
- T2S follows a **decentralized access rights** model

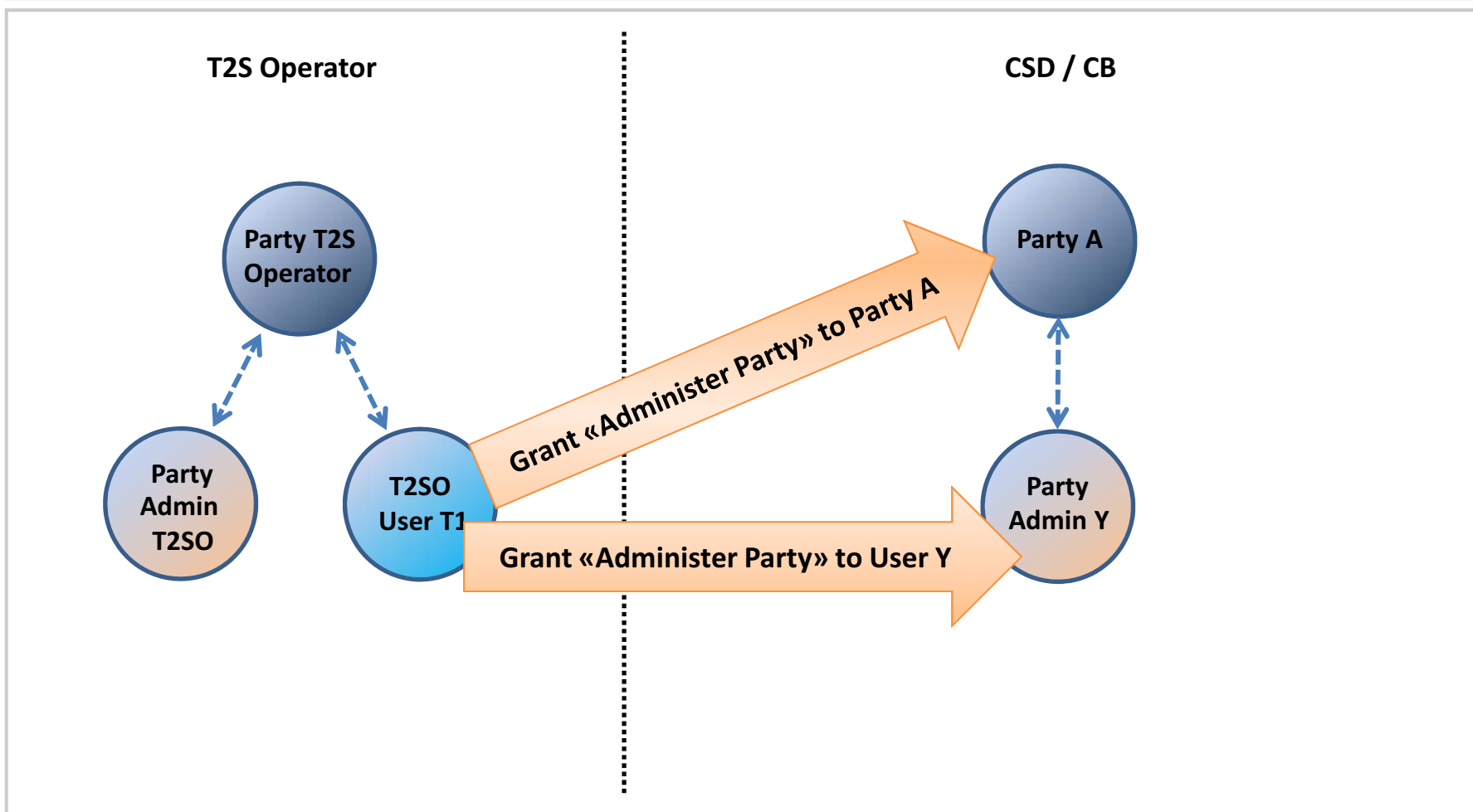
Decentralized Access Rights (2/3)



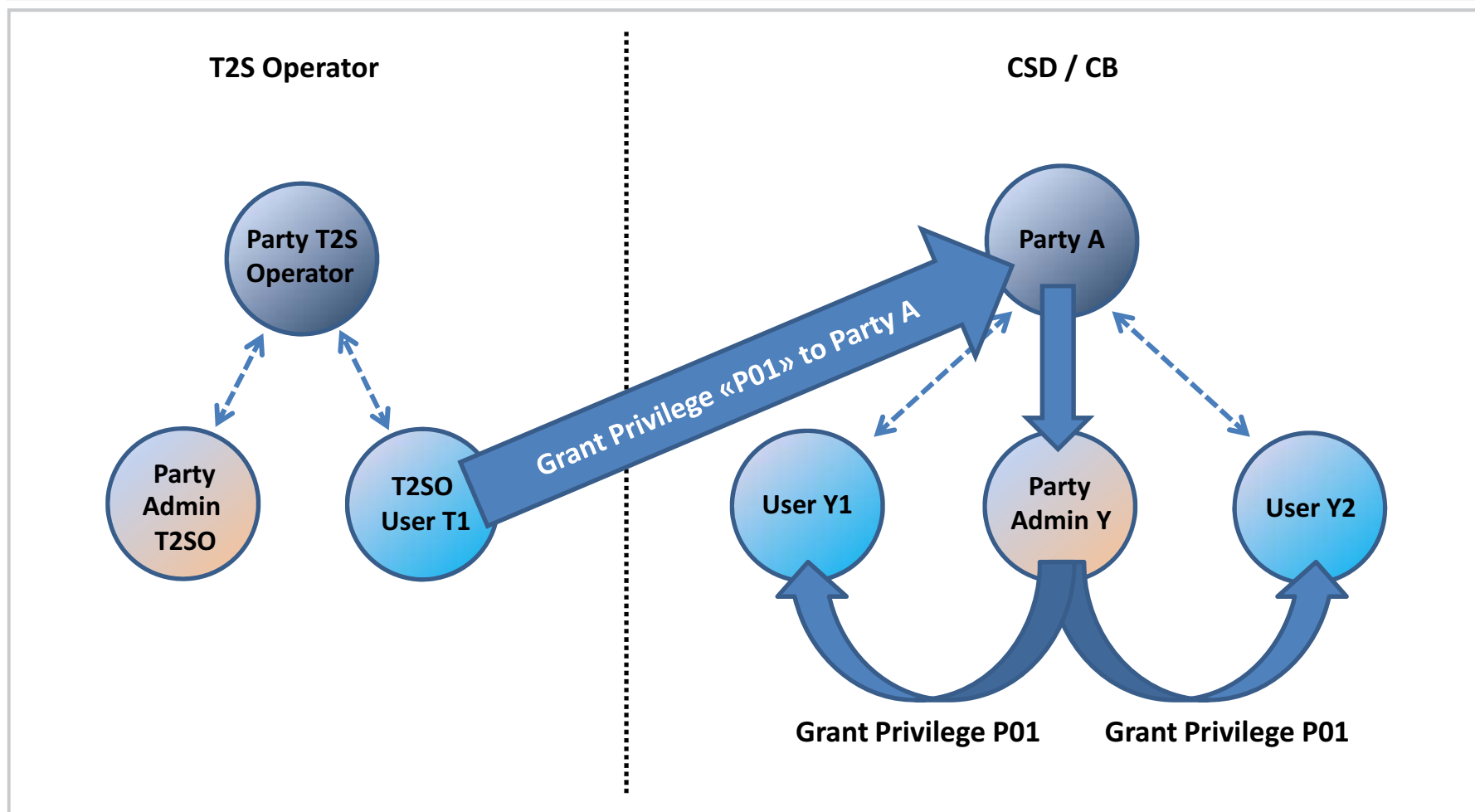
Decentralized Access Rights (2/3)



Decentralized Access Rights (2/3)

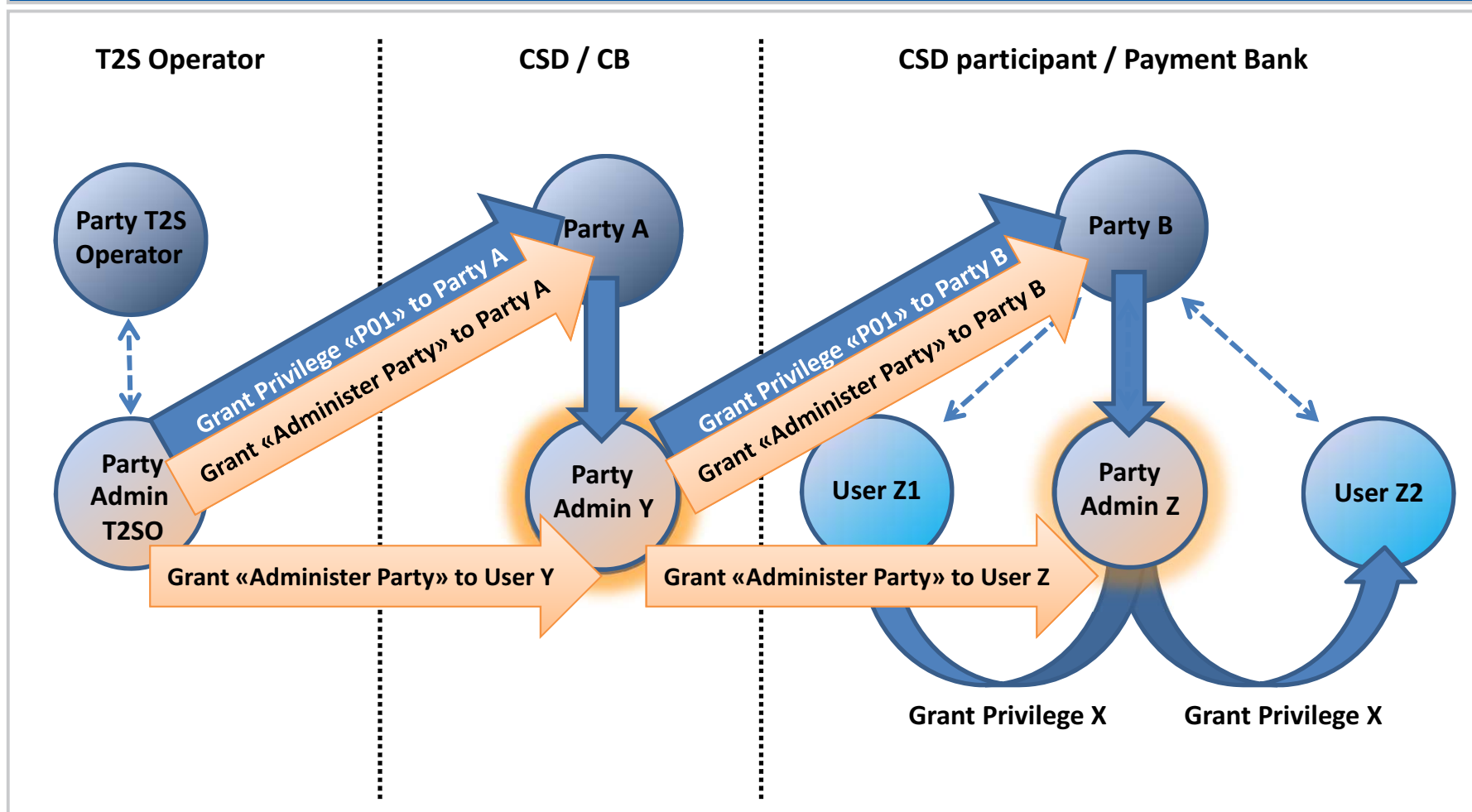


Decentralized Access Rights (2/3)

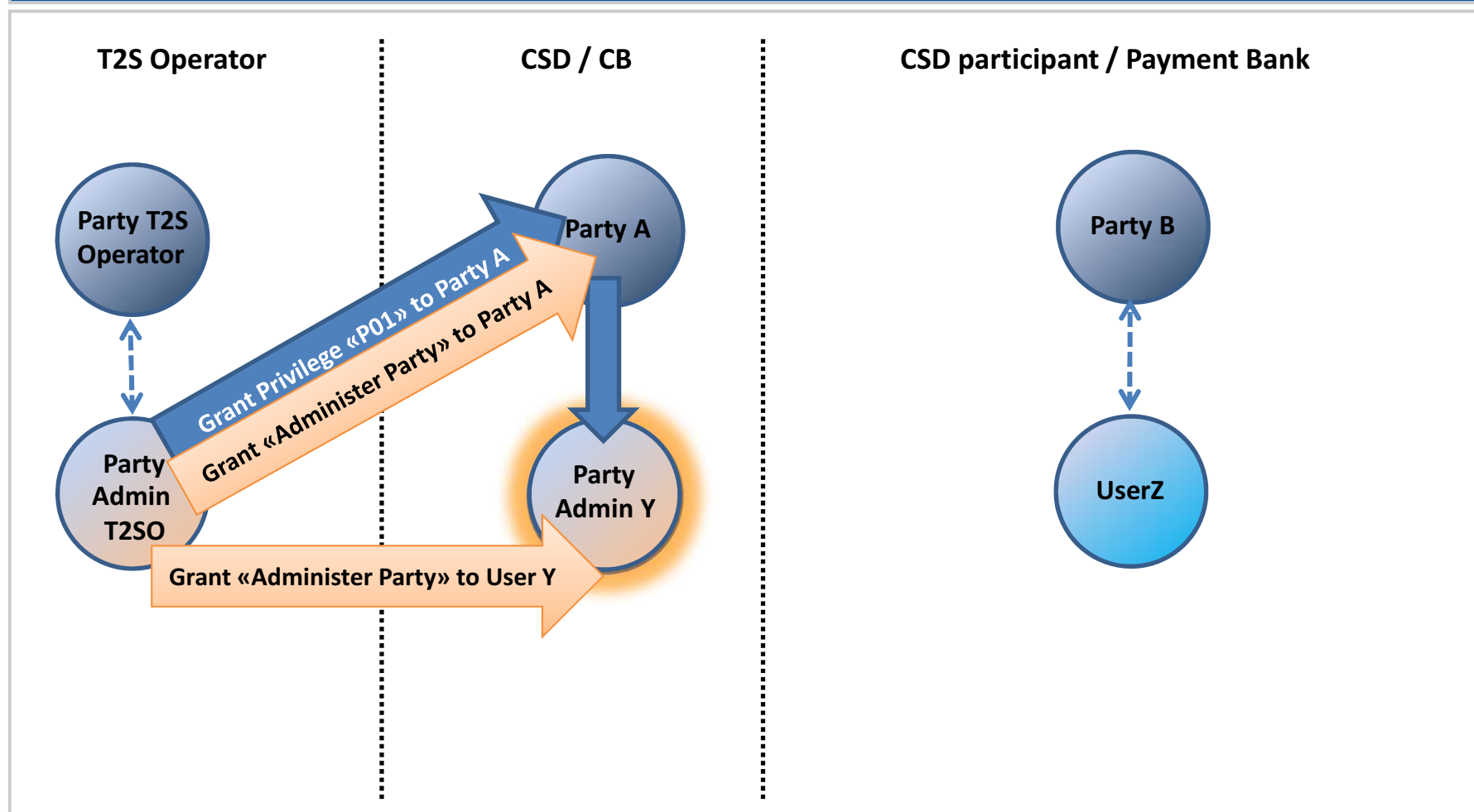


Access Rights: Hierarchical Party Model

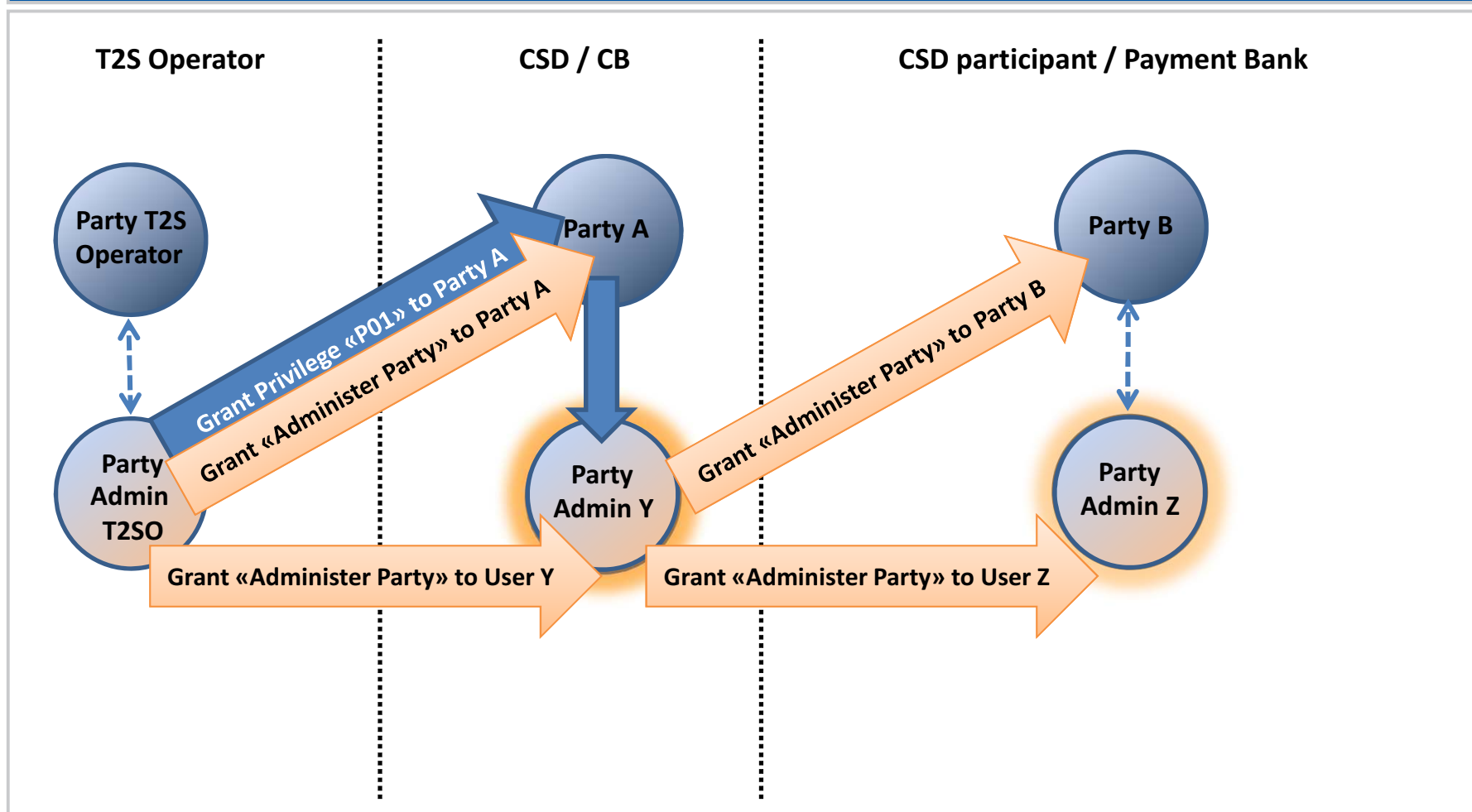
Decentralized Access Rights (3/3)



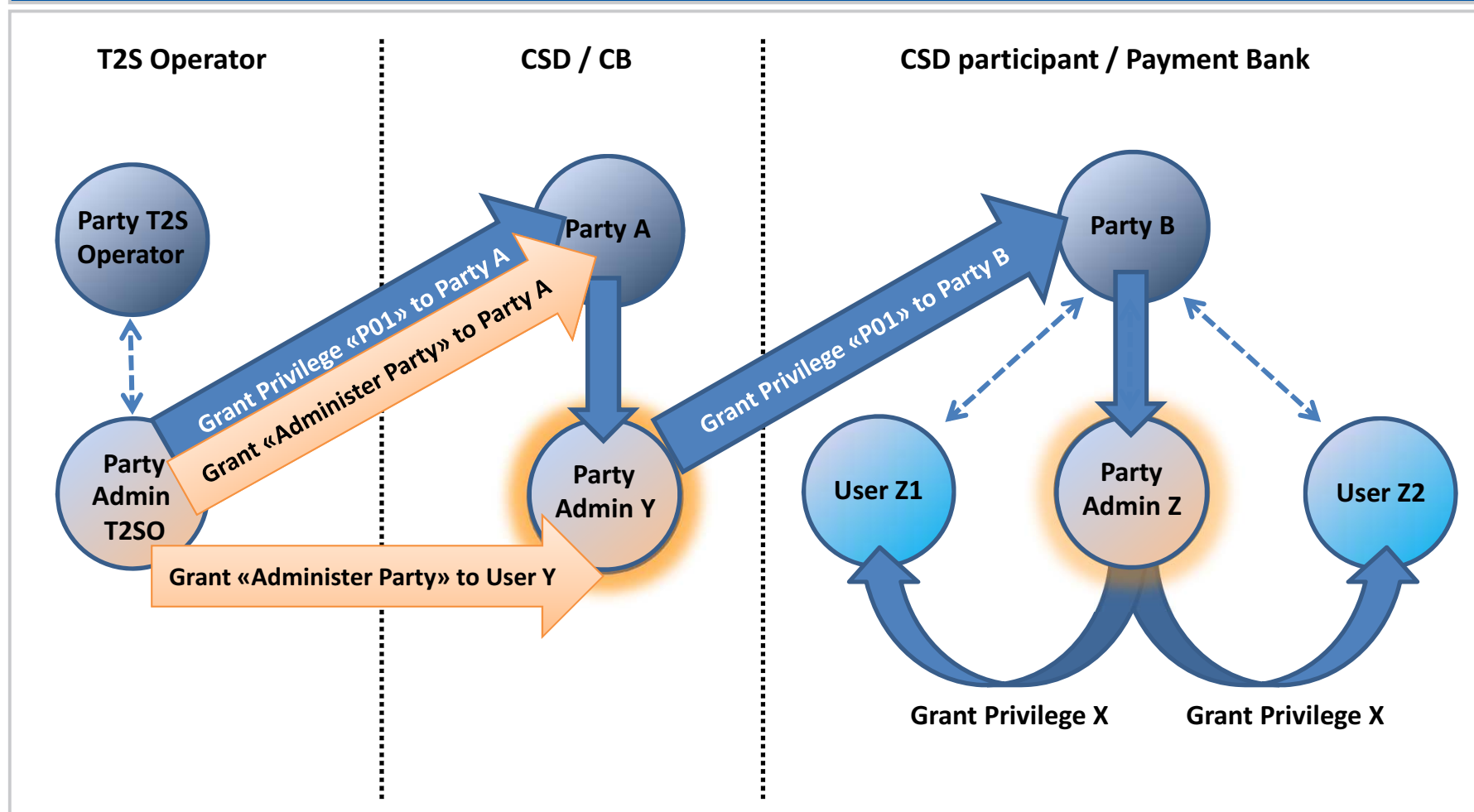
Decentralized Access Rights (3/3)



Decentralized Access Rights (3/3)

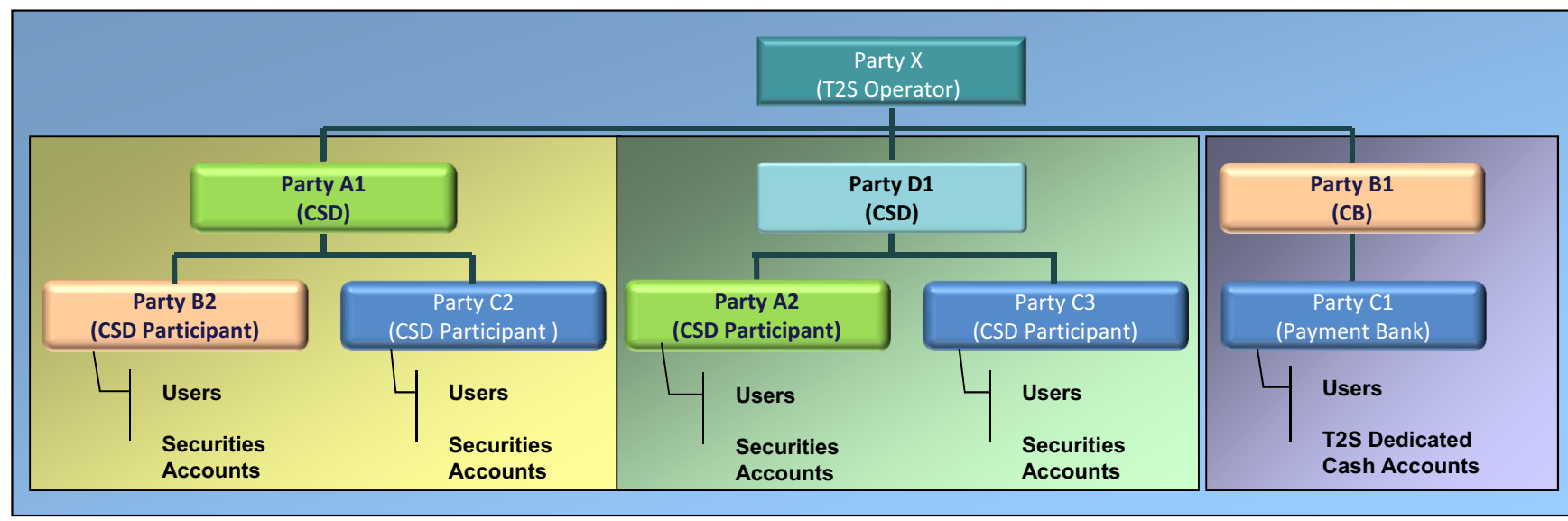


Decentralized Access Rights (3/3)



Concept of System Entity

- Each piece of information in T2S belongs to a system entity
- A **system entity** defines the legal entity by which T2S segregates the data and access rights of the CSDs, CBs and the T2S operator
- The configuration of CSDs and CBs as different system entities allows the partitioning of data on the technical and functional levels in T2S



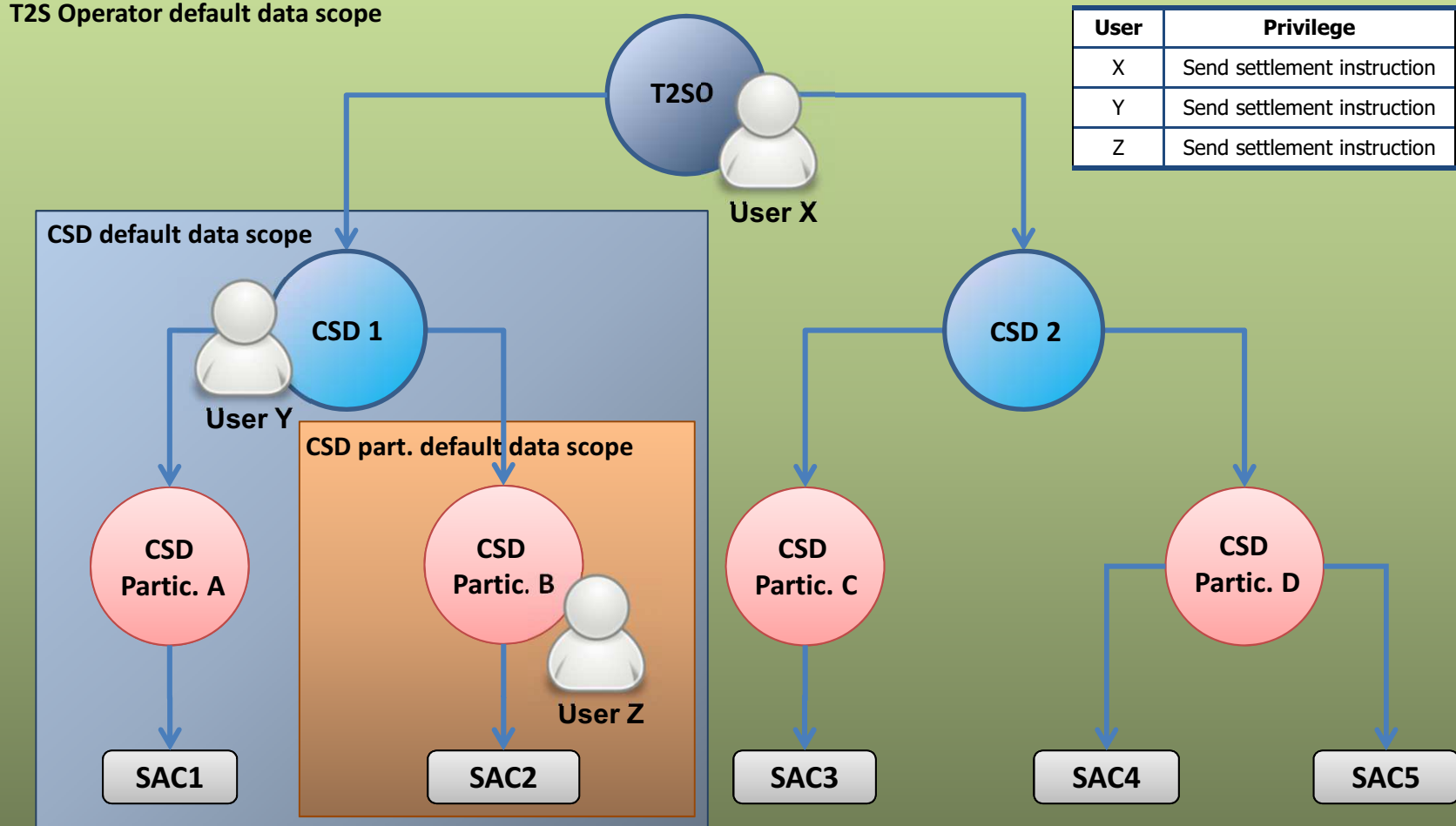
General Concepts

- The **data scope** is determined by the hierarchical structure:
 - Each system user is linked to one party
 - T2S uses this information to restrict the system user's access to the relevant data
- For each privilege, the hierarchical party model determines the **default data scope** (DDS) of the grantee user:
 - **T2S Operator users** have visibility on all static and dynamic data objects, and can act on objects belonging to participants only in exceptional circumstances
 - **CSD and CB users** have visibility on all static and dynamic data objects belonging to their system entity
 - **CSD participant and payment bank users** have visibility on static and dynamic data objects that are linked to their party.

Access Rights: Data Scope

Default Data Scope Diagram

T2S Operator default data scope



Extended and Reduced Data Scope

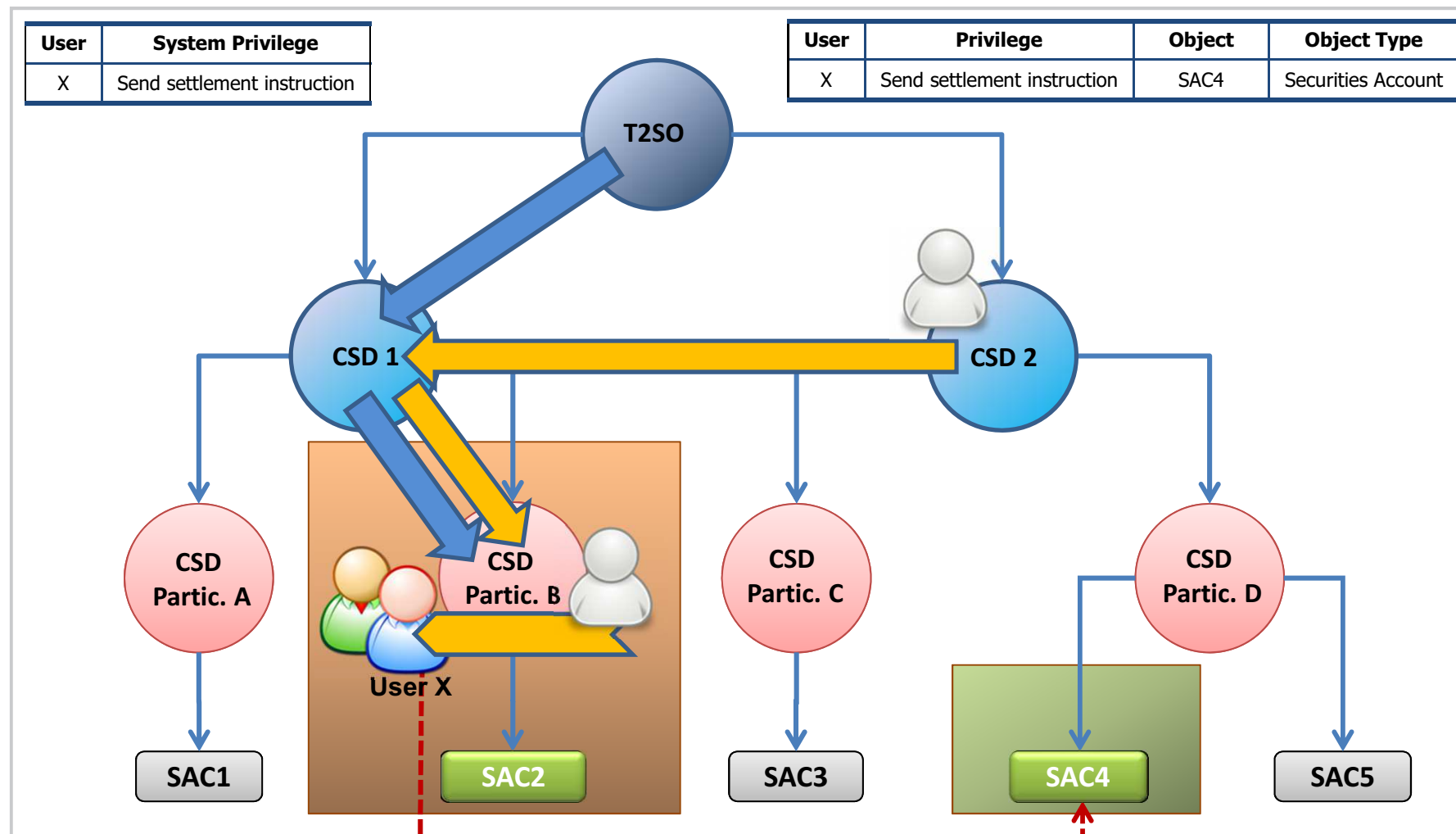
- The default data scope of a given system user, defined by its link to the relevant party, is not enough to cover some business scenarios
- The default data scope can be **extended** and/or **reduced** by means of object privileges
 - Granting a given privilege on a secured object (or on a secured group) results in **extending** the data scope of the user by adding the secured object (or the secured group) to the default data scope of the user
 - Denying a given privilege on a secured object (or on a secured group) results in **reducing** the data scope of the user by removing the secured object (or the secured group) from the default data scope of the user

Access Rights: Data Scope

Extended Data Scope - Example #1

User	System Privilege
X	Send settlement instruction

User	Privilege	Object	Object Type
X	Send settlement instruction	SAC4	Securities Account

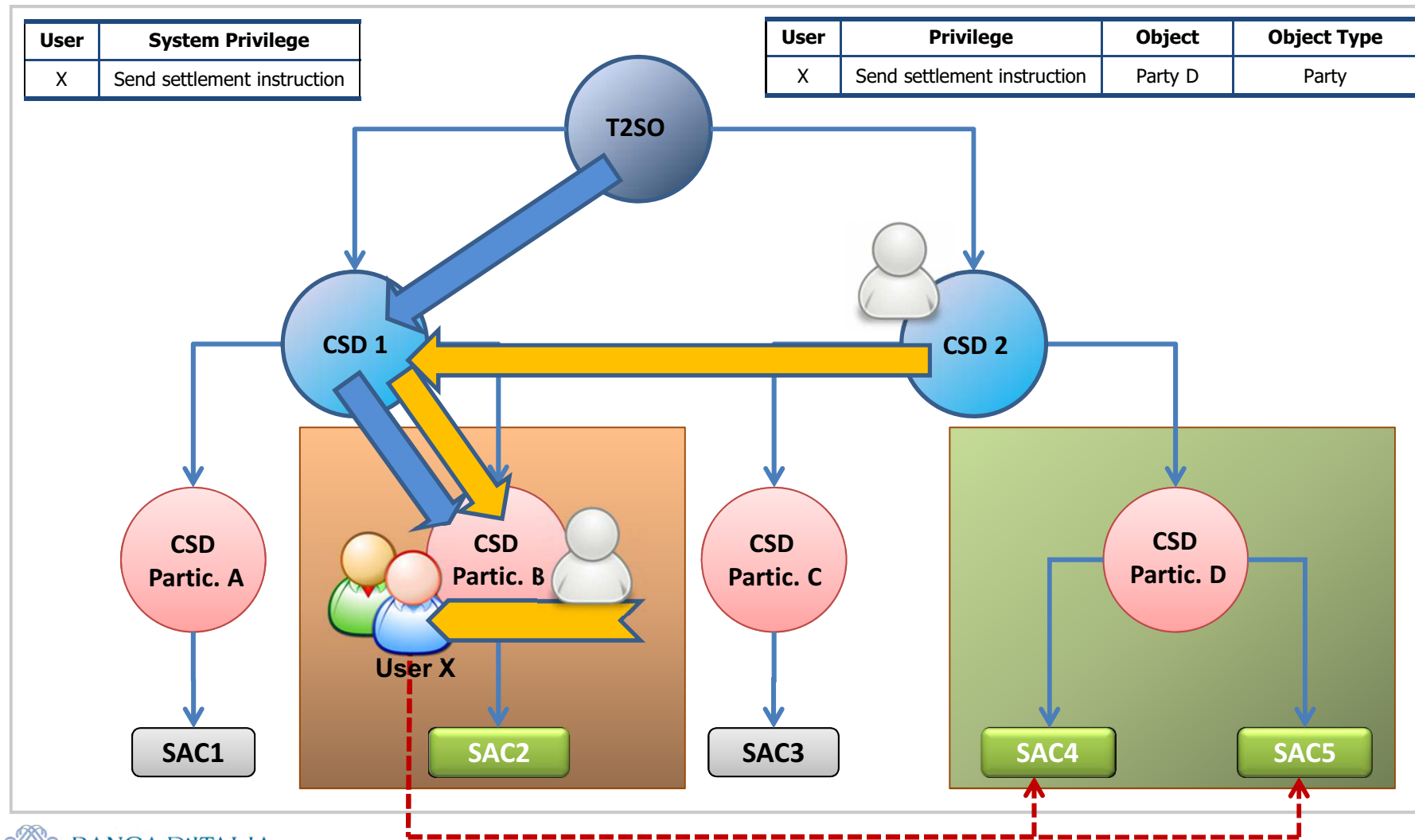


Access Rights: Data Scope

Extended Data Scope - Example #2

User	System Privilege
X	Send settlement instruction

User	Privilege	Object	Object Type
X	Send settlement instruction	Party D	Party

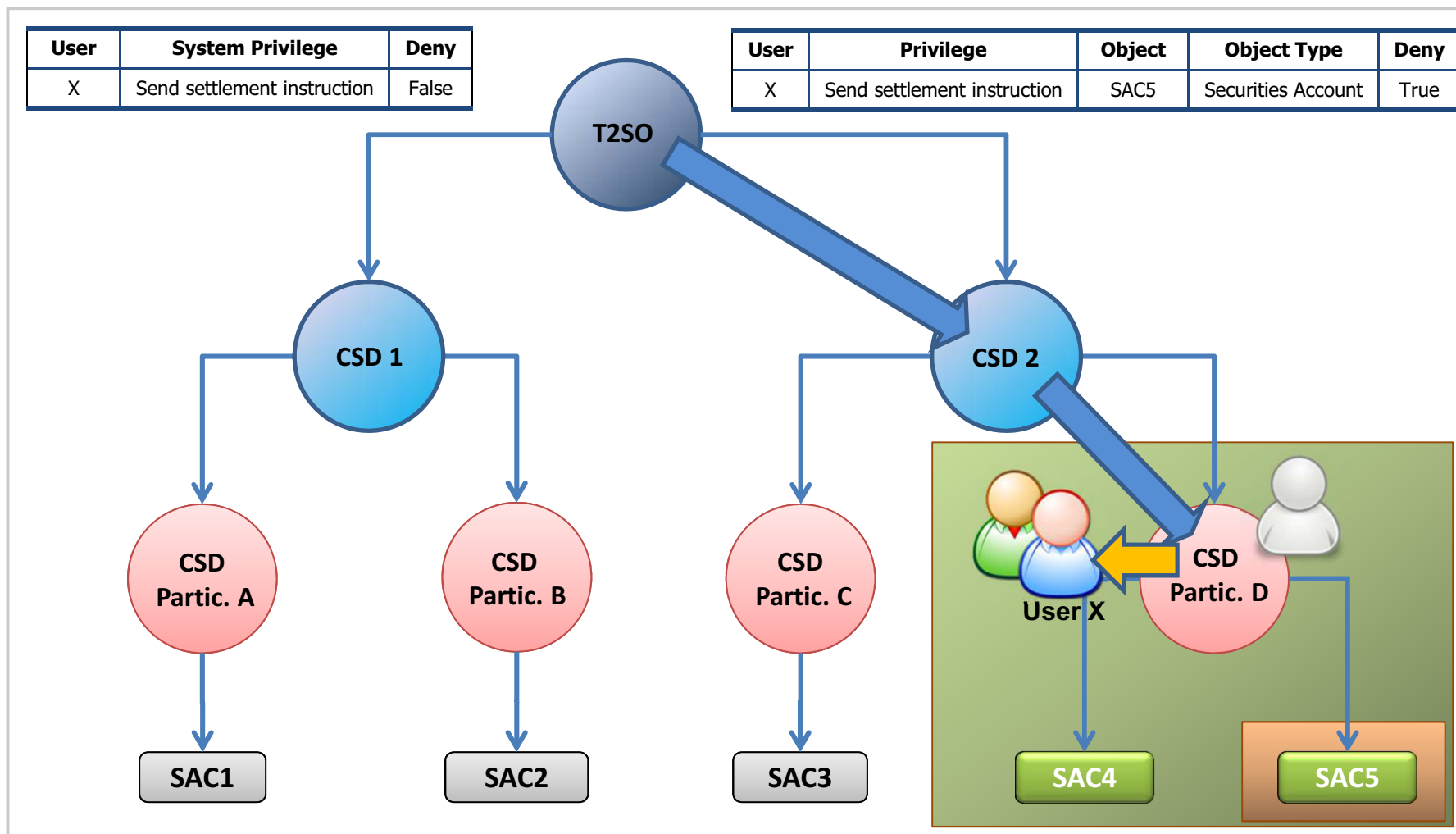


Access Rights: Data Scope

Reduced Data Scope – Example #3

User	System Privilege	Deny
X	Send settlement instruction	False

User	Privilege	Object	Object Type	Deny
X	Send settlement instruction	SAC5	Securities Account	True



Agenda

▪ Access rights

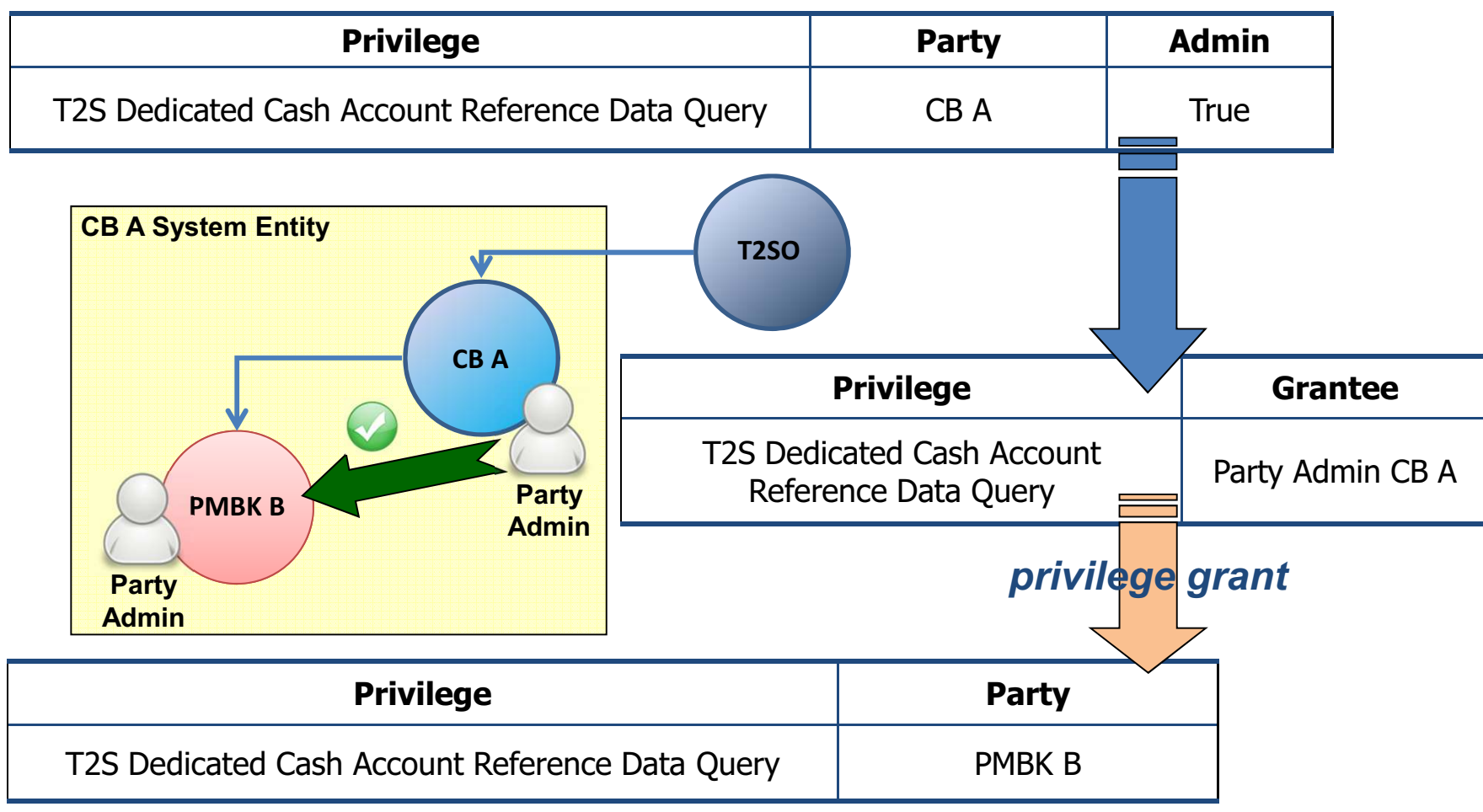
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▪ Access rights configuration

- Configuration of access rights at party level
- Configuration of access rights at user level
- Configuration of access rights at role level
- Exercises

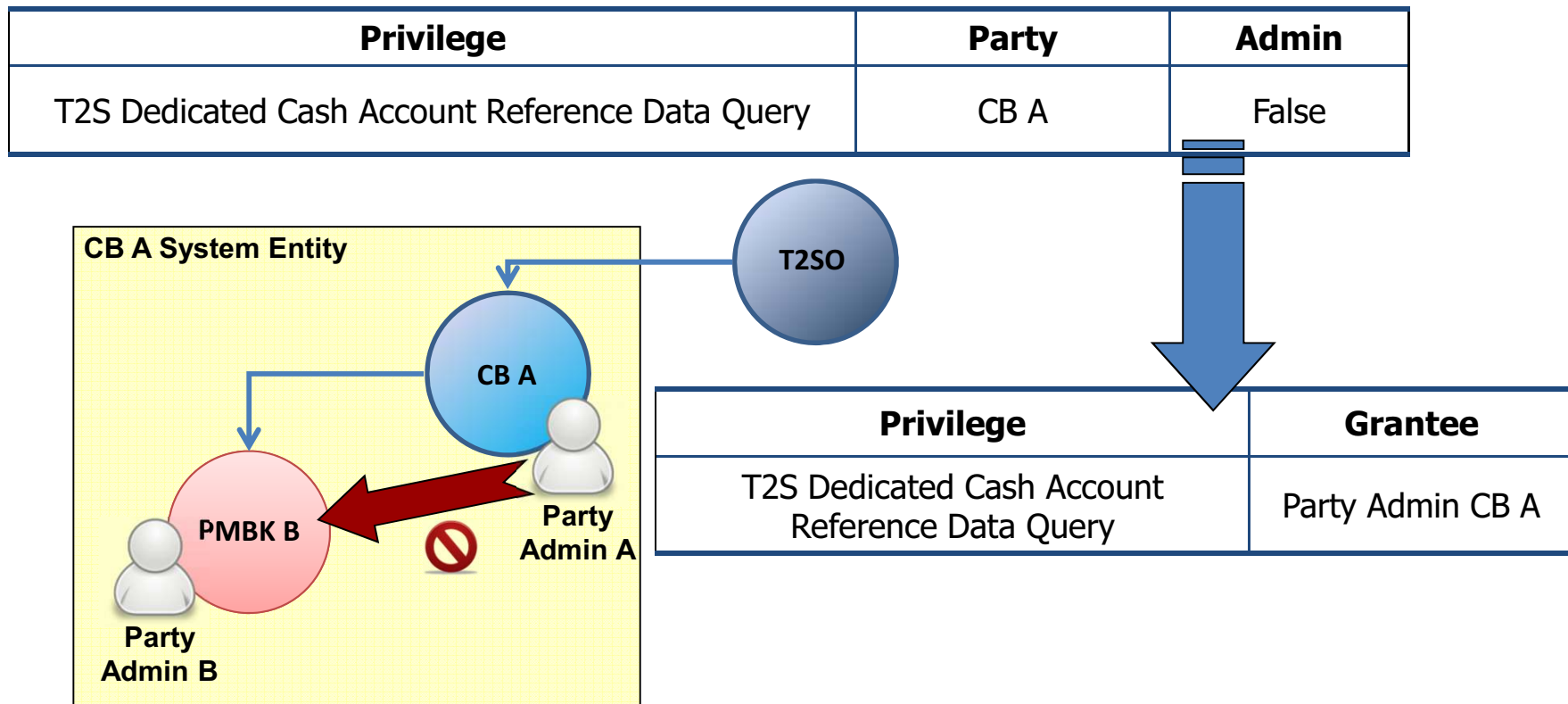
Access Rights Configuration

Configuration of Access Rights at Party Level – Admin Flag (1/2)



Access Rights Configuration

Configuration of Access Rights at Party Level – Admin Flag (2/2)



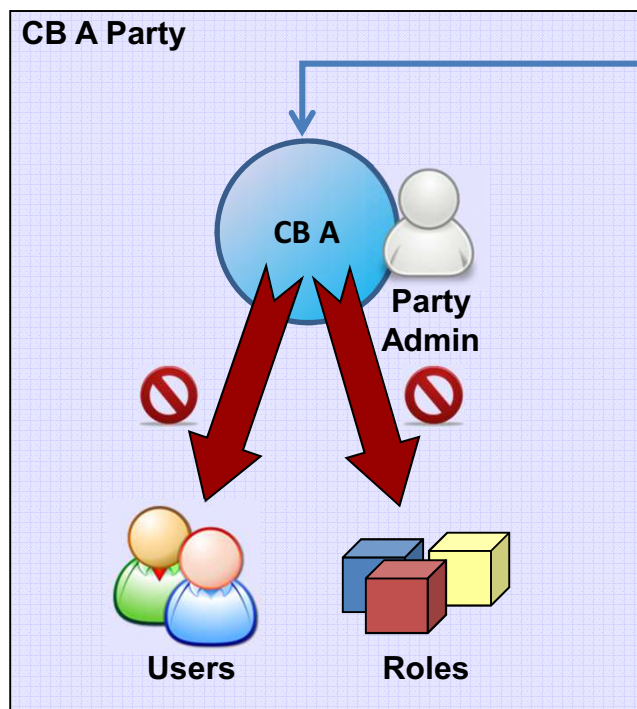
- Since the system privilege has been granted with Admin flag set to false, the privilege cannot be propagated to the Party Administrator of Party B

Access Rights Configuration

Configuration of Access Rights at Party Level – Deny Flag (1/2)

Privilege	Party	Deny
T2S Dedicated Cash Account Reference Data Query	CB A	True

CB A Party



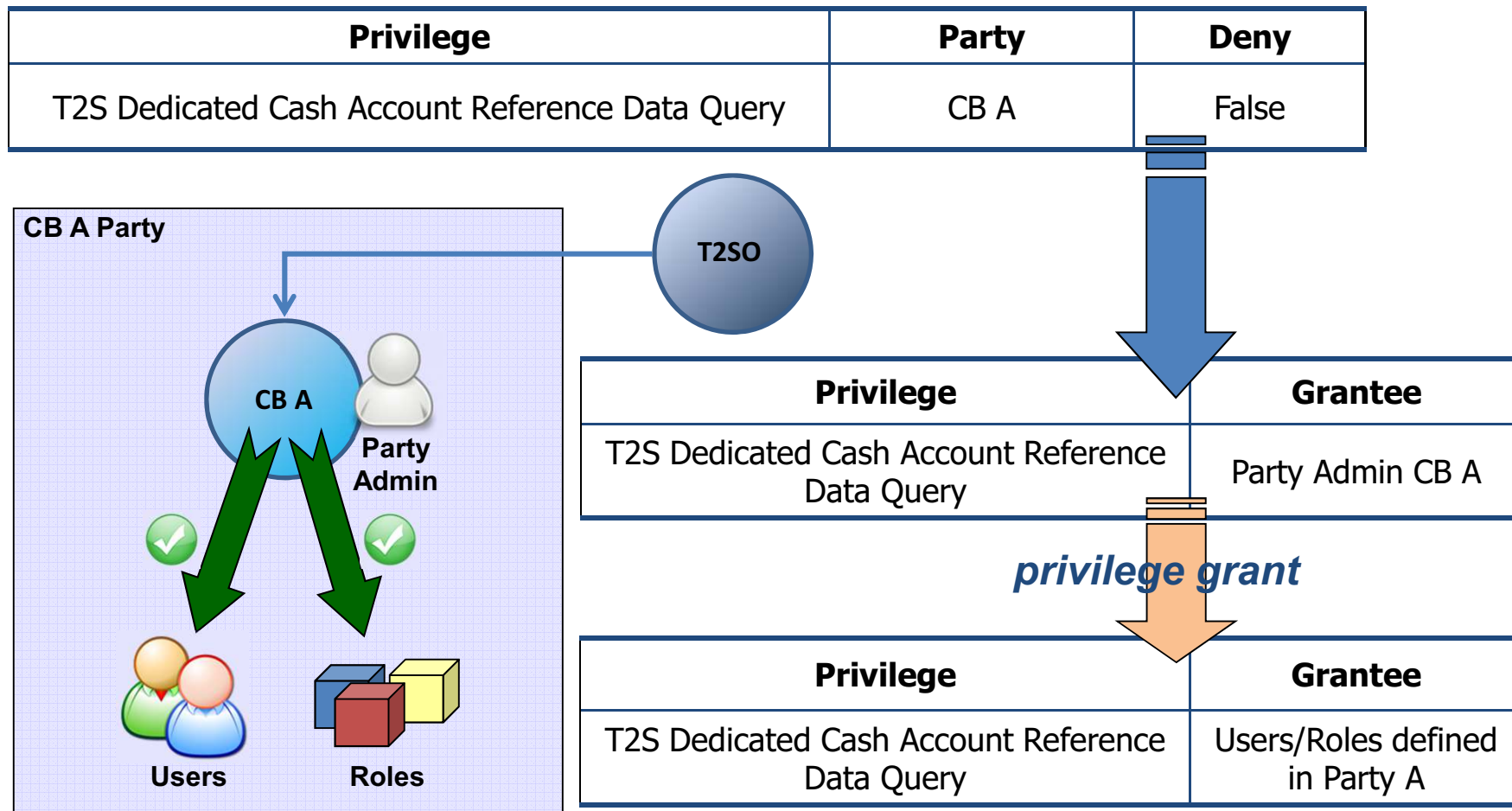
T2SO

Privilege	Grantee
T2S Dedicated Cash Account Reference Data Query	Party Admin CB A

- Party Administrator cannot propagate the privilege within the party
- It is used to reduce the data scope of the Party Administrator

Access Rights Configuration

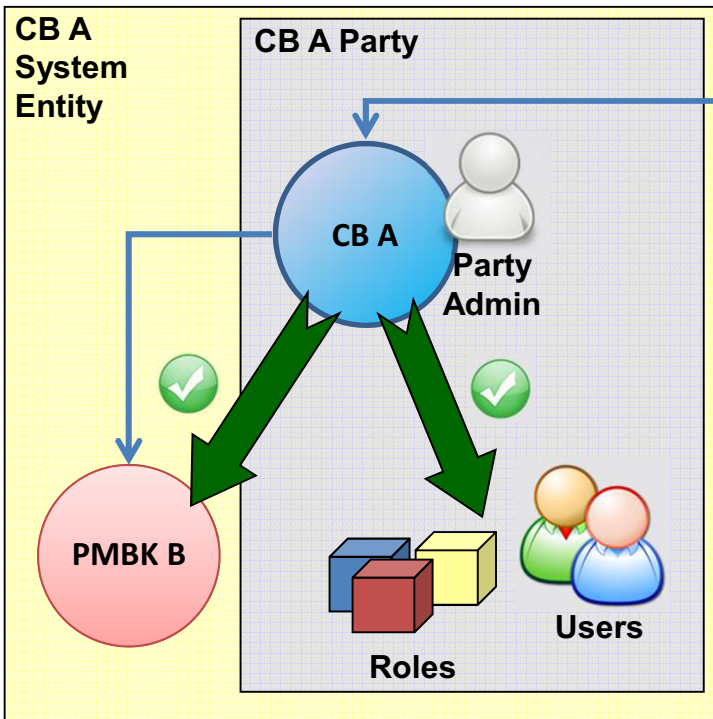
Configuration of Access Rights at Party Level – Deny Flag (2/2)



Access Rights Configuration

Configuration of Access Rights at Party Level – 4-Eyes Flag (1/2)

Privilege	Party	Flag	4-Eyes
Create Cash Accounts	CB A	Admin=True	True
T2S Dedicated Cash Account Ref. Data Query	CB A	Deny=False	True



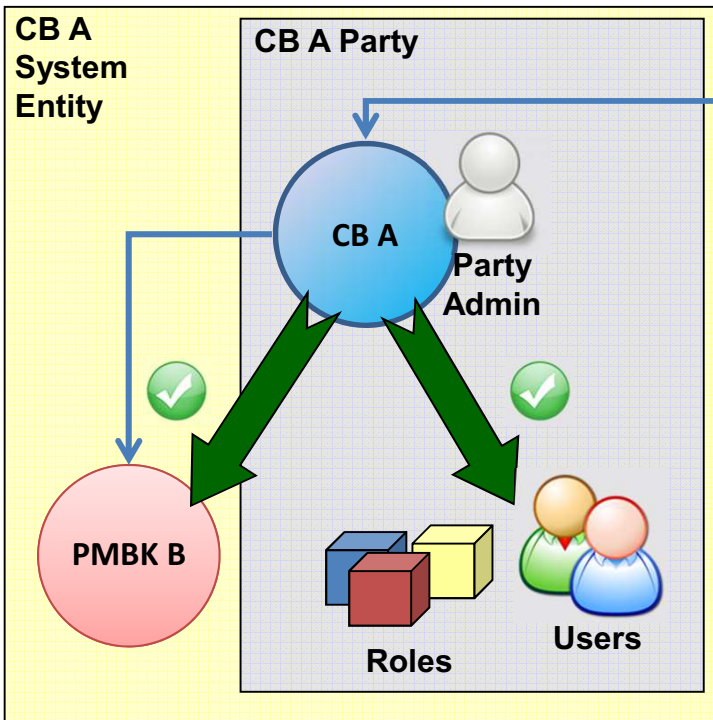
Privilege	Grantee
Create Cash Accounts	Party Admin CB A
T2S Dedicated Cash Account Ref. Data Query	Party Admin CB A

- Privileges having Admin = True can be granted to other parties in the system entities only in 4-Eyes
- Privileges having Deny = False can be granted to user/roles within the same party only in 4-Eyes

Access Rights Configuration

Configuration of Access Rights at Party Level – 4-Eyes Flag (2/2)

Privilege	Party	Flag	4-Eyes
Create Cash Accounts	CB A	Admin=True	False
T2S Dedicated Cash Account Ref. Data Query	CB A	Deny=False	False



Privilege	Grantee
Create Cash Accounts	Party Admin CB A
T2S Dedicated Cash Account Ref. Data Query	Party Admin CB A

- Privileges having Admin = True can be granted to other parties in the system entities in 2-Eyes
- Privileges having Deny = False can be granted to user/roles within the same party in 2-Eyes

Access Rights Configuration

Granting Privileges to a Party

Attribute	Value	Description
Deny	True	Each party administrator who belongs to the party cannot grant the privilege to other roles and users.
	False	Each party administrator who belongs to the party can grant the privilege to other roles and users of the same party.
Admin	True	Each party administrator who belongs to the party can grant the privilege to other parties.
	False	Each party administrator who belongs to the party cannot grant the privilege to other parties.
4-Eyes	True	Each party administrator who belongs to the party can grant the privilege, granted with Deny = False, to other roles and users of the same party according to the 4-eyes principle only. Each party administrator who belongs to the party can grant the privilege, granted with Admin = True, to other parties according to the 4-eyes principle only.
	False	Each party administrator who belongs to the party can grant the privilege, granted with Deny = False, to other roles and users of the same party according to the 2-eyes principle or to the 4-eyes principle. Each party administrator who belongs to the party can grant the privilege, granted with Admin = True, to other parties according to the 2-eyes principle or to the 4-eyes principle.

Agenda

▪ Access rights

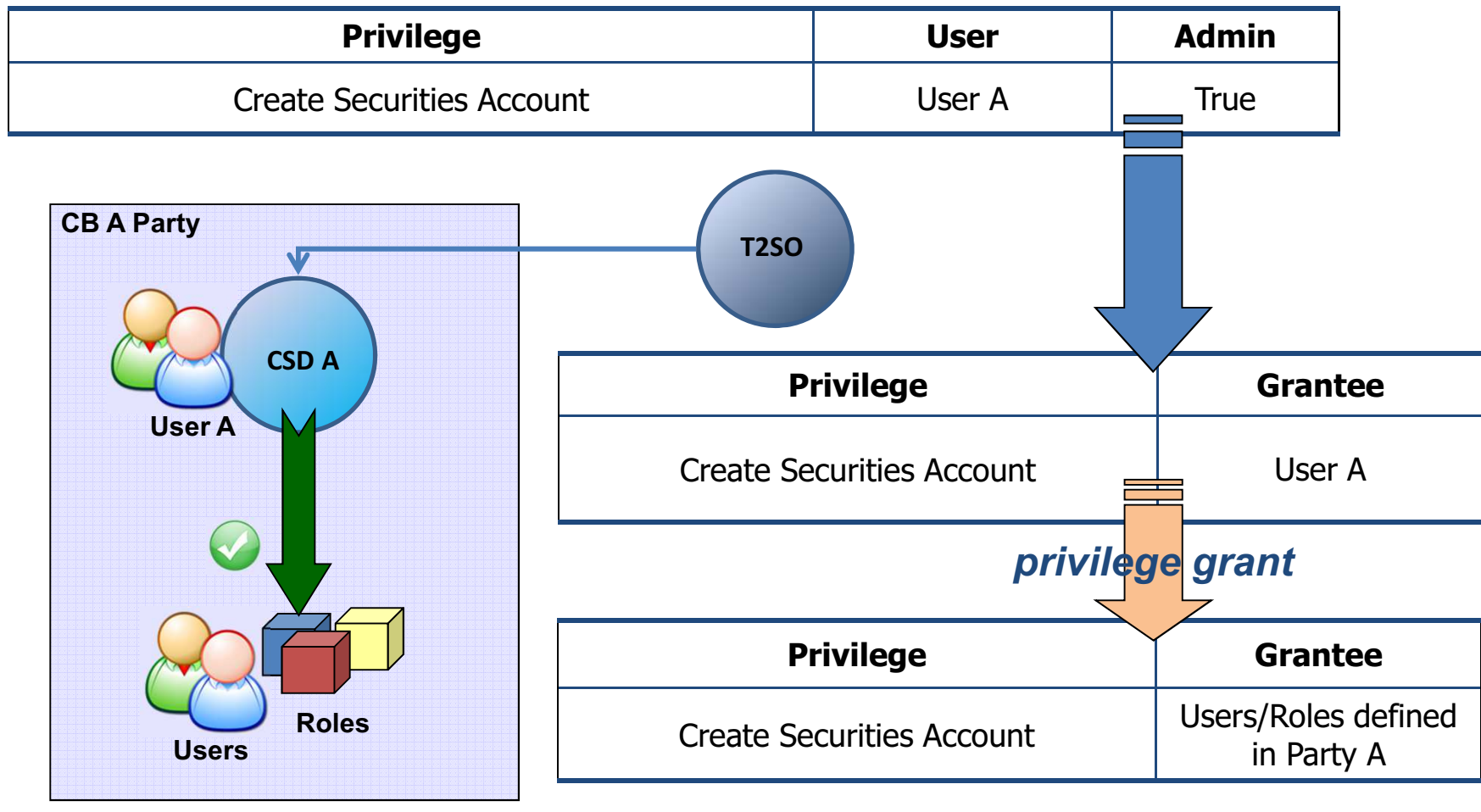
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- **Configuration of access rights at user level**
- Configuration of access rights at role level
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Access Rights Configuration

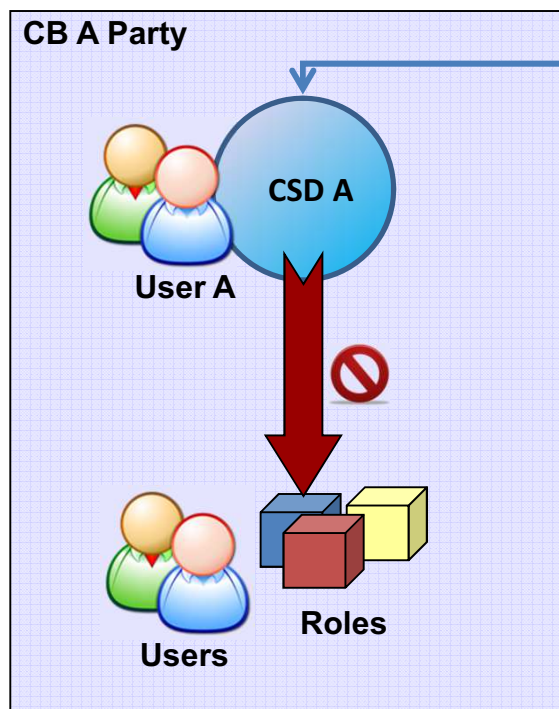
Configuration of Access Rights at User Level – Admin Flag (1/2)



Access Rights Configuration

Configuration of Access Rights at User Level – Admin Flag (2/2)

Privilege	User	Admin
Create Securities Account	User A	False



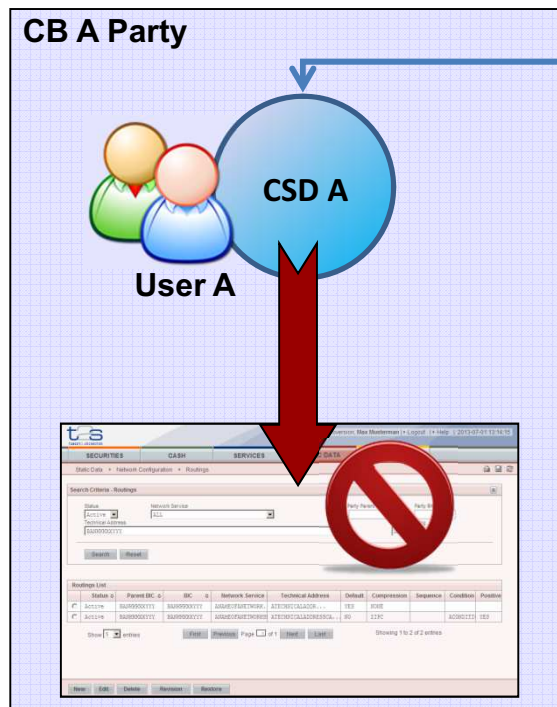
Privilege	Grantee
Create Securities Account	User A

- The privilege had been granted with Admin flag set to false, therefore the User A cannot grant the same to other roles or users within the party
- If Deny is set to false, User A can trigger the privilege

Access Rights Configuration

Configuration of Access Rights at User Level – Deny Flag (1/2)

Privilege	User	Deny
Create Securities Account	User A	True



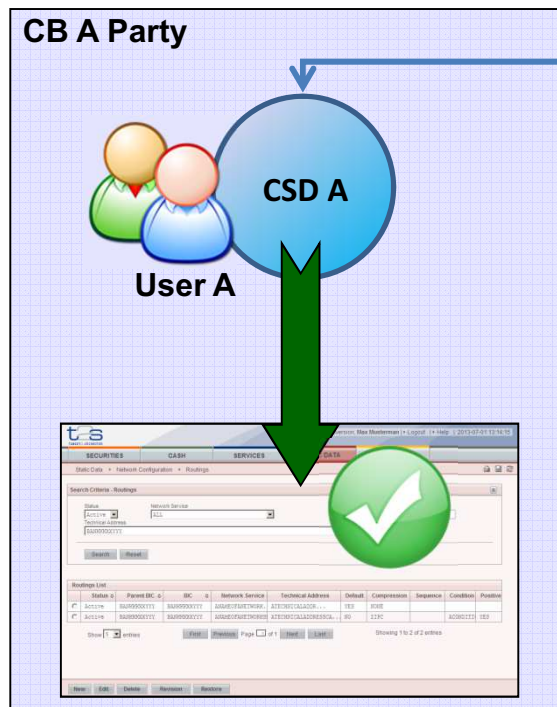
Privilege	Grantee
Create Securities Account	User A

- The User A cannot trigger the given user function
- It is used to reduce the data scope of user A

Access Rights Configuration

Configuration of Access Rights at User Level – Deny flag (2/2)

Privilege	User	Deny
Create Securities Account	User A	False



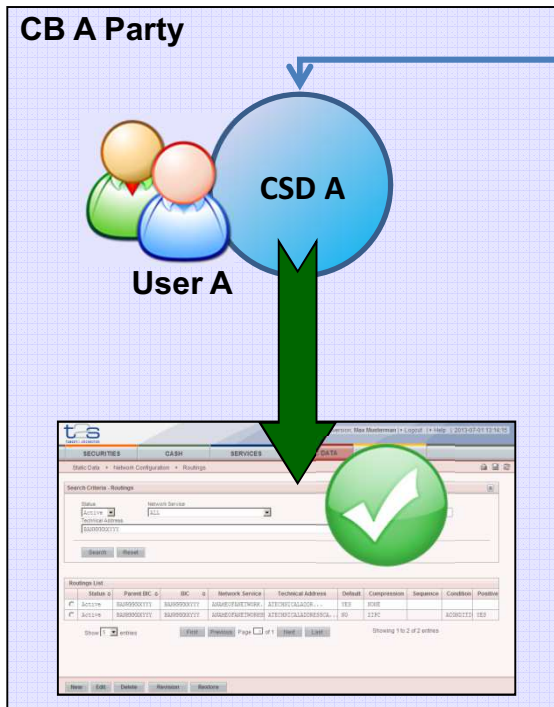
Privilege	Grantee
Create Securities Account	User A

- The User A can trigger the corresponding user function

Access Rights Configuration

Configuration of Access Rights at User Level – 4-Eyes Flag (1/2)

Privilege	User	4-Eyes
Create Securities Account	User A	True



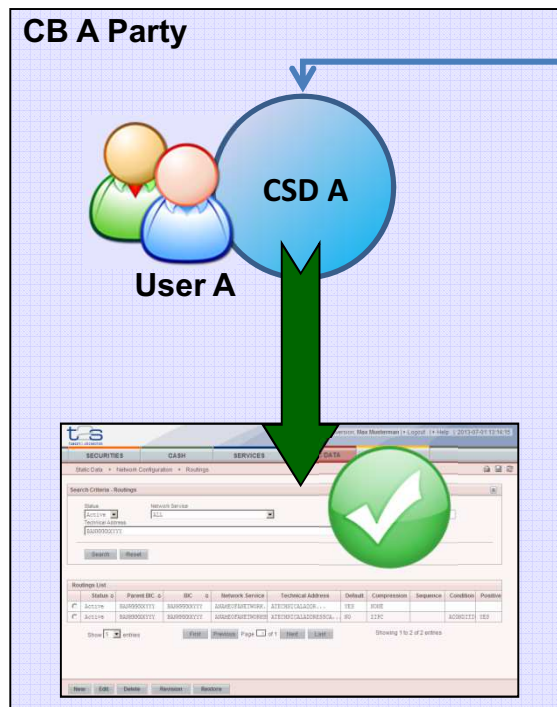
Privilege	Grantee
Create Securities Account	User A

- The User A can trigger the corresponding user function in 4-Eyes only

Access Rights Configuration

Configuration of Access Rights at User Level – 4-Eyes flag (2/2)

Privilege	User	4-Eyes
Create Securities Account	User A	False



Privilege	Grantee
Create Securities Account	User A

- The User A can trigger the corresponding user function in 2-Eyes

Access Rights Configuration

Granting Privileges to a User

Attribute	Value	Description
Deny	True	The user can not use the function related to the privilege.
	False	The user can use the function related to the privilege.
Admin	True	The user can grant the privilege to other roles and users of the same party.
	False	The user can not grant the privilege to other roles and users. This also applies for party administrators of each party linked to the privilege.
4-Eyes	True	The user can use the function related to the privilege, granted with Deny = False, according to the 4-eyes principle only. The user can grant the privilege, granted with Admin = True, to other roles and users of the same party according to the 4-eyes principle only.
	False	The user can use the function related to the privilege, granted with Deny = False, according to the 2-eyes principle. The user can grant the privilege, granted with Admin = True, to other roles and users of the same party according to the 2-eyes principle or to the 4-eyes principle.

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- Data scope
 - Default, extended and reduced

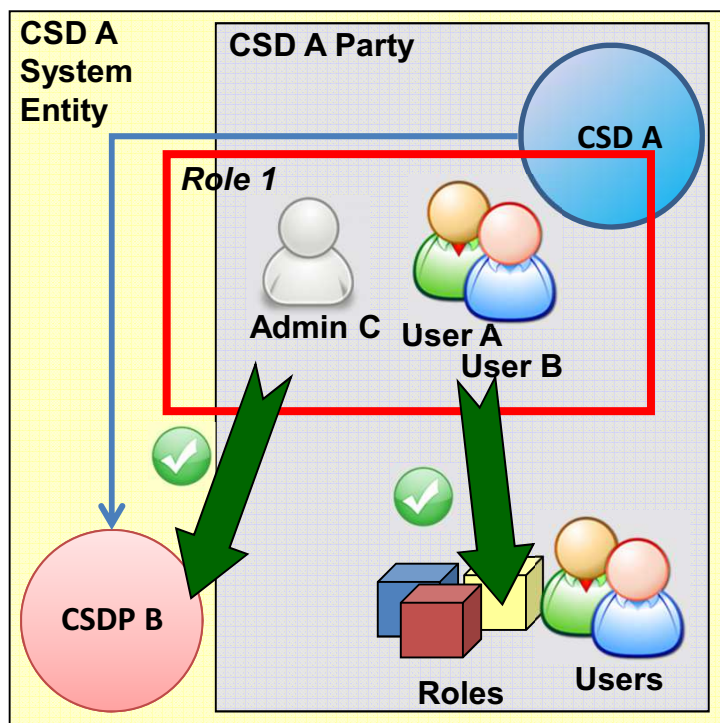
▪ Access rights configuration

- Configuration of access rights at party level
- Configuration of access rights at user level
- **Configuration of access rights at role level**
- Exercises

Access Rights Configuration

Configuration of Access Rights at Role Level – Admin Flag (1/2)

Privilege	Role	Admin
Create Security	Role 1	True



Privilege	Role	Grantee
Create Security	Role 1	Admin C
Create Security	Role 1	User A
Create Security	Role 1	User B

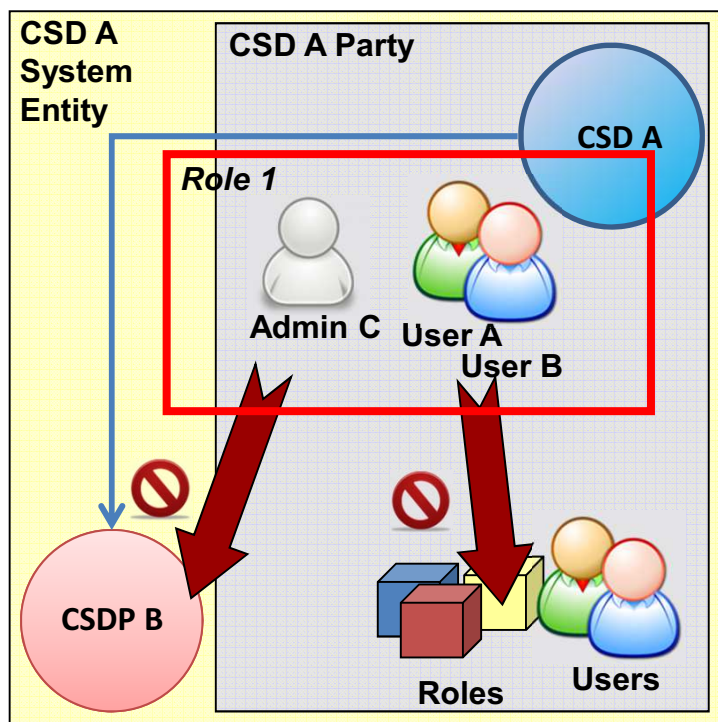
privilege grant

Privilege	Grantor	Grantee
Create Security	Admin (Role 1)	Party CSDP B
Create Security	Users (Role 1)	Users/Roles in CSD A

Access Rights Configuration

Configuration of Access Rights at Role Level – Admin Flag (2/2)

Privilege	Role	Admin
Create Security	Role 1	False



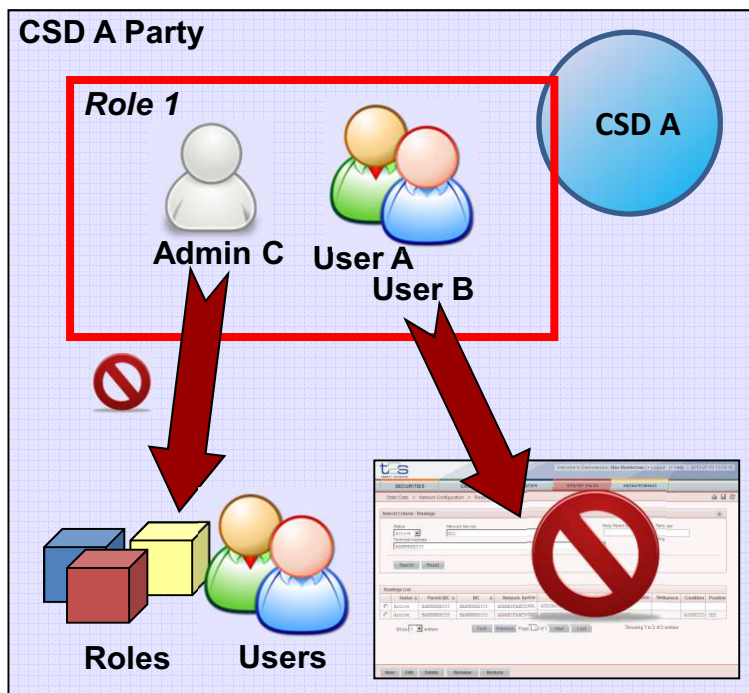
Privilege	Role	Grantee
Create Security	Role 1	Admin C
Create Security	Role 1	User A
Create Security	Role 1	User B

- The privilege cannot be propagated
- If Deny is set to false, the users belonging to Role 1 can trigger the corresponding privilege

Access Rights Configuration

Configuration of Access Rights at Role Level – Deny Flag (1/2)

Privilege	Role	Deny
Create Security	Role 1	True



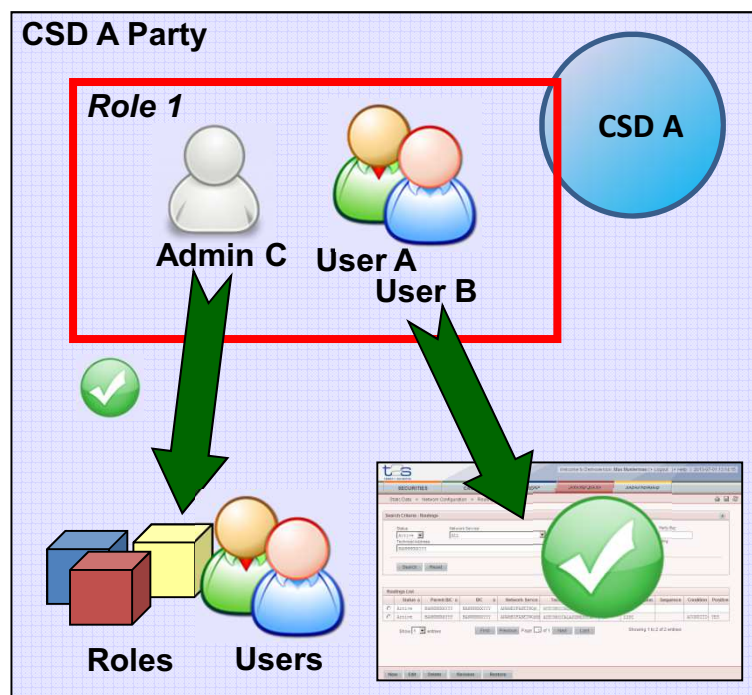
Privilege	Role	Grantee
Create Security	Role 1	Admin C
Create Security	Role 1	User A
Create Security	Role 1	User B

- Party Admin users cannot propagate the privilege within the party
- Users can trigger the corresponding T2S user function

Access Rights Configuration

Configuration of Access Rights at Role Level – Deny Flag (2/2)

Privilege	Role	Deny
Create Security	Role 1	False

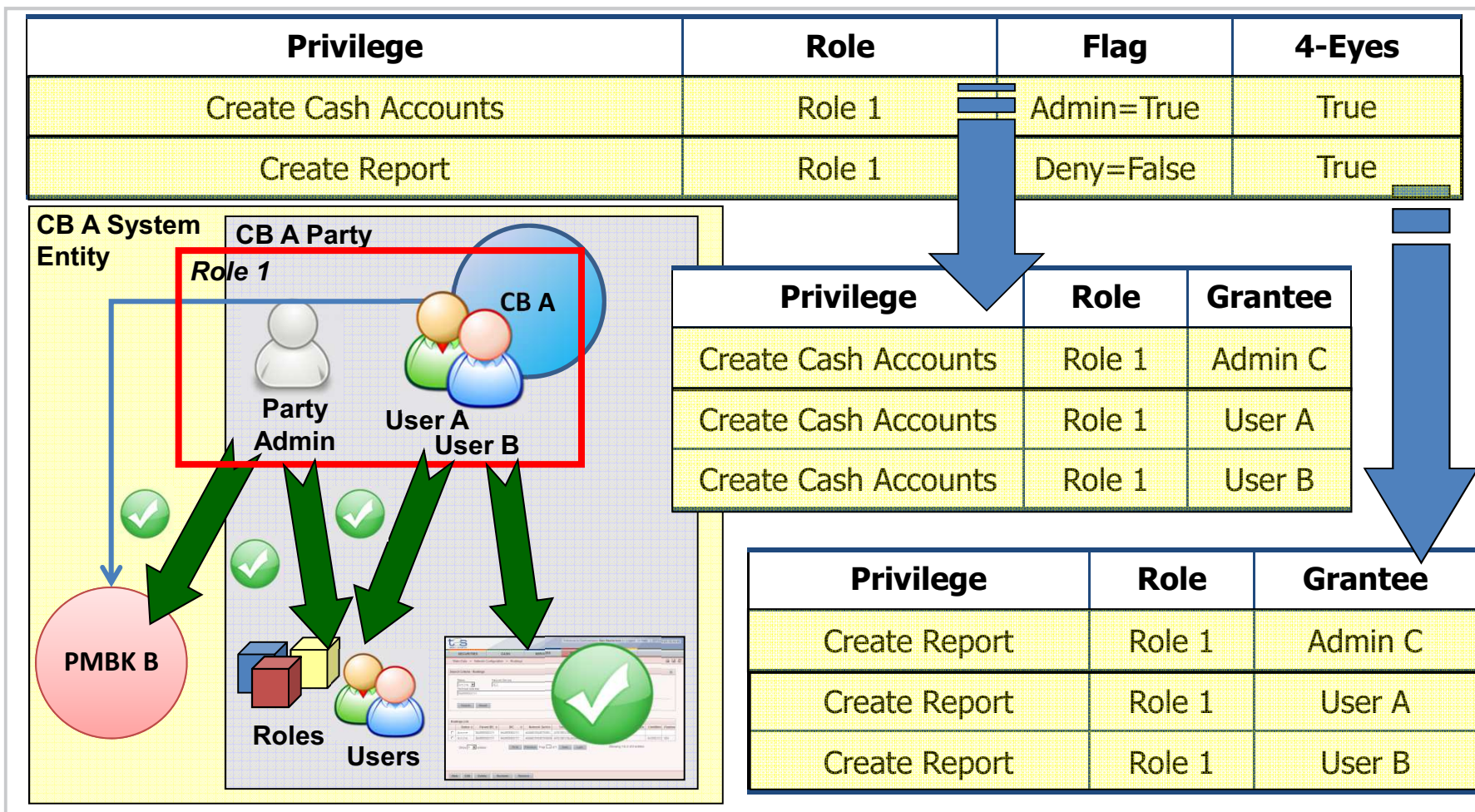


Privilege	Role	Grantee
Create Security	Role 1	Admin C
Create Security	Role 1	User A
Create Security	Role 1	User B

- Party Admin users can propagate the privilege within the party
- Users can trigger the corresponding T2S user function

Access Rights Configuration

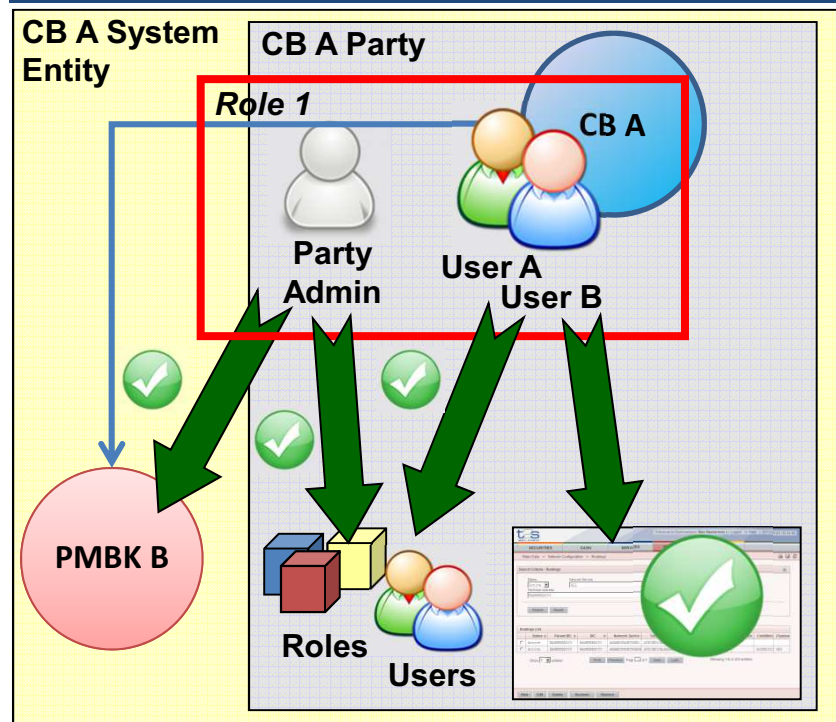
Configuration of Access Rights at Role Level – 4-Eyes Flag (1/2)



Access Rights Configuration

Configuration of Access Rights at Role Level – 4-Eyes Flag (2/2)

Privilege	Role	Flag	4-Eyes
Create Cash Accounts	Role 1	Admin=True	False
Create Reports	Role 1	Deny=False	False



Privilege	Role	Grantee
Create Cash Accounts	Role 1	Admin C
Create Cash Accounts	Role 1	User A
Create Cash Accounts	Role 1	User B

- The privilege can be triggered in 2-Eyes
- Each grantor can select whether the grantee is forced to trigger the privilege in 2-Eyes or 4-Eyes

Access Rights Configuration

Granting Privileges to a Role

Attribute	Value	Description
Deny	True	Each user linked to the role can not use the function related to the privilege. Each party administrator who belongs to a party that is linked to the role can not grant the privilege to other roles and users of the same party.
	False	Each user linked to the role can use the function related to the privilege. Each party administrator who belongs to a party that is linked to the role can grant the privilege to other roles and users of the same party.
Admin	True	Each user linked to the role can grant the privilege to other roles and users of the same party. Each party administrator who belongs to a party that is linked to the role can grant the privilege to other parties.
	False	Each user linked to the role can not grant the privilege to other roles and users. Each party administrator who belongs to a party that is linked to the role can not grant the privilege to other parties.
4-Eyes	True	Each user linked to the role can use the function related to the privilege, granted with Deny = False, according to the 4-eyes principle only. Each user linked to the role can grant the privilege, granted with Admin = True, to other roles and users of the same party according to the 4-eyes principle only. Each party administrator who belongs to a party that is linked to the role can grant the privilege, granted with Deny = False, to other roles and users of the same party according to the 4-eyes principle only. Each party administrator who belongs to a party that is linked to the role can grant the privilege, granted with Admin = True, to other parties according to the 4-eyes principle only.
	False	Each user linked to the role can use the function related to the privilege, granted with Deny = False, according to the 2-eyes principle. Each user linked to the role can grant the privilege, granted with Admin = True, to other roles and users of the same party according to the 2-eyes principle or to the 4-eyes principle. Each party administrator who belongs to a party that is linked to the role can grant the privilege, granted with Deny = False, to other roles and users of the same party according to the 2-eyes principle or to the 4-eyes principle. Each party administrator who belongs to a party that is linked to the role can grant the privilege, granted with Admin = True, to other parties according to the 2-eyes principle or to the 4-eyes principle.

Agenda

▪ Access rights

- General concepts
- Users
 - Configuration of users
- Privileges
- Roles
- Secured objects
- Secured groups
- Data scope
 - Default, extended and reduced

▪ Access rights configuration

- Configuration of access rights at party level
- Configuration of access rights at user level
- Configuration of access rights at role level
- Exercises

Access Rights Configuration



Exercise #1

Party Administrator Users



Grantee Id	Grantee Type	Privilege Id	Deny	Admin	4-Eyes
Grantee01	PARTY	P03	False	True	False
Grantee02	PARTY	P04	False	True	True

Standard Users



Grantee Id	Grantee Type	Privilege Id	Deny	Admin	4-Eyes
Grantee03	USER	P01	False	False	False
Grantee04	USER	P03	False	False	True
Grantee05	USER	P02	True	False	False

Scenarios

Match any grantee with the right scenario:

- Grantee0x is denied to trigger privilege P0x
 - Cannot grant P0x to other role/users
 - Cannot trigger P0x
- Grantee0x is granted with privilege P0x
 - Cannot grant P0x to other role or users
 - Can grant or trigger P0x in 2-Eyes
- Grantee0x is granted with privilege P0x
 - Party Admin can grant P0x to other role or users
 - Party Admin can only grant P0x in 4-Eyes mode
- Grantee0x is granted with privilege P0x
 - Cannot grant P0x to other role or users
 - A 4-Eyes confirmation is required
- Grantee0x is granted with privilege P0x
 - Party Admin can grant P0x to other role or users
 - Party Admin can grant P0x either in 2-Eyes or 4-Eyes mode

Access Rights Configuration



Exercise #1 - Solution

Party Administrator Users



Grantee Id	Grantee Type	Privilege Id	Deny	Admin	4-Eyes
Grantee01	PARTY	P03	False	True	False
Grantee02	PARTY	P04	False	True	True

Standard Users



Grantee Id	Grantee Type	Privilege Id	Deny	Admin	4-Eyes
Grantee03	USER	P01	False	False	False
Grantee04	USER	P03	False	False	True
Grantee05	USER	P02	True	False	False

Scenarios

Match any grantee with the right scenario:

- Grantee05 is denied to trigger privilege P02
 - Cannot grant P02 to other role/users
 - Cannot trigger P02
- Grantee03 is granted with privilege P01
 - Cannot grant P01 to other role or users
 - Can grant or trigger P01 in 2-Eyes
- Grantee02 is granted with privilege P04
 - Party Admin can grant P04 to other roles or users
 - Party Admin can only grant P04 in 4-Eyes mode
- Grantee04 is granted with privilege P03
 - Cannot grant P03 to other role or users
 - A 4-Eyes confirmation is required
- Grantee01 is granted with privilege P03
 - Party Admin can grant P03 to other role or users
 - Party Admin can grant P03 either in 2-Eyes or 4-Eyes mode

Solution to the exercise #1

Access Rights Configuration



Exercise #2

Row	Privilege	User	Deny	Admin	4-Eyes
1	Create Security	User Y	False	True	True

- Given the access rights configuration shown above and considering that User Y is not a party administrator, select the correct answers from the list below:

User has the privilege to create a security	True <input type="checkbox"/>	False <input type="checkbox"/>
User can grant the privilege to other parties	True <input type="checkbox"/>	False <input type="checkbox"/>
User cannot grant the privilege to other roles or users of the same party	True <input type="checkbox"/>	False <input type="checkbox"/>
User can grant the privilege to other roles or users of the same party in 4-Eyes only	True <input type="checkbox"/>	False <input type="checkbox"/>
User can create securities in 4-Eyes only	True <input type="checkbox"/>	False <input type="checkbox"/>
User can create securities also in 2-Eyes	True <input type="checkbox"/>	False <input type="checkbox"/>



Exercise #2 - Solution

Row	Privilege	User	Deny	Admin	4-Eyes
1	Create Security	User Y	False	True	True

- Given the access rights configuration, and considering that User Y is not a party administrator, select the correct answers from the list below:

User has the privilege to create a security	True <input checked="" type="checkbox"/>	False <input type="checkbox"/>
User can grant the privilege to other parties	True <input type="checkbox"/>	False <input checked="" type="checkbox"/>
User cannot grant the privilege to other roles or users of the same party	True <input type="checkbox"/>	False <input checked="" type="checkbox"/>
User can grant the privilege to other roles or users of the same party in 4-Eyes only	True <input checked="" type="checkbox"/>	False <input type="checkbox"/>
User can create securities in 4-Eyes only	True <input checked="" type="checkbox"/>	False <input type="checkbox"/>
User can create securities also in 2-Eyes	True <input type="checkbox"/>	False <input checked="" type="checkbox"/>

Solution to the exercise #2



Thank you for your attention



Training T2S - aspetti funzionali

Cash Restrictions

Roma, 28 Ottobre 2014
Centro Congressi della Banca d'Italia

Disclaimer

The T2S Training Materials are dedicated to teaching the various relevant aspects of T2S in a precise, clear and easily understandable manner.

The Training Materials (including descriptions, diagrams, examples, notes) are subject to change as the T2S User Training Programme is delivered.

Furthermore, the Eurosystem reserves the right to revise the currently proposed T2S Training Materials and to introduce changes or amendments from time to time without any obligation to notify any person or organisation of such amendments or changes.

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The Eurosystem is declining any responsibility for any kind of changes not authorised in writing by the Eurosystem.

Overview

- Moves cash into a particular T2S DCA cash balance, making it available for a specific purpose. Such as: Reserved/blocked cash for use within a Settlement Instruction
- Cash balance identified by cash account id, restriction type Id
 - Can be either Blocking or Reservation
 - Restriction Type must be preconfigured in static data prior to set-up

Setup:

creates new restricted balance associating it to a restriction reference or only a new restriction reference when the balance already exists

Increase:

restricts an additional amount of cash in an existing balance

Actions

Decrease:

frees an amount of cash from an existing balance

Use:

uses restricted balance for the settlement of an SI

Overview

- Set-ups, increases or decreases performed only through SRs
 - Identified through restriction references generated by T2S at each set-up
- Use of a blocked/reserved balance
 - Validation
 - Verifies if all indicated restriction reference(s) exist
 - When validating T2S also validates the release of cash to ensure the end of day automatic release.
 - No Revalidation as they are generated only if they can settle immediately
 - Not generated if subject to intraday restrictions (Instead SI is set to pending due to intraday restriction)
 - Posting
 - Provision check considers the sum of the remaining amount of restriction references complemented by the deliverable cash balance
 - Automatic rebalancing from blocked/reserved cash balance to the deliverable cash balance
 - T2S generates SRs during the use of blocked and reserved balances
 - Subject to same T2S processes as any SR. Can not be cancelled/amended as they are settled immediately

Overview: Cash blocking

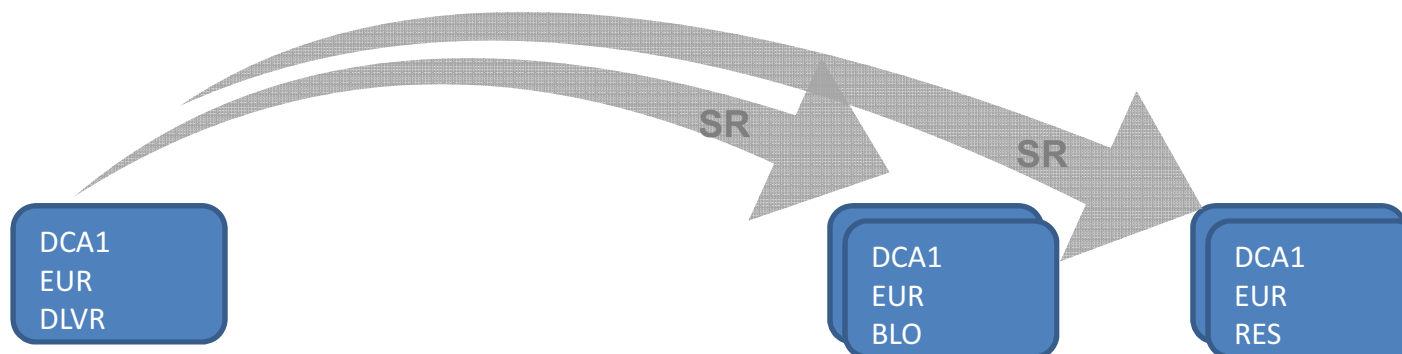
- Restriction processing type 'Blocking'
- It is not possible to block an amount of cash higher than the amount in the deliverable cash balance
- Can not be partially settled
 - Recycled with additional incoming cash and is eventually settled only when sufficient cash is available to ensure full settlement of the blocking

Overview: Cash Reservation

- Restriction processing type 'Reservation'
- May reserve an amount of cash higher than the amount in deliverable cash balance
 - In this case the Settlement Restriction is partially settled and all incoming cash is automatically pre-empted until the amount of the reservation is filled
- Pre-emption
 - When booking a settlement instruction T2S verifies if incoming resources can complement the settlement of a partially settled cash reservations from a previous Booking process
 - Performed prior to any other settlement instruction that may use the incoming resources
 - As it is booked on an all or none basis with the settlement instruction delivering the necessary cash
 - Fills oldest reservations first

Instructing a Set up

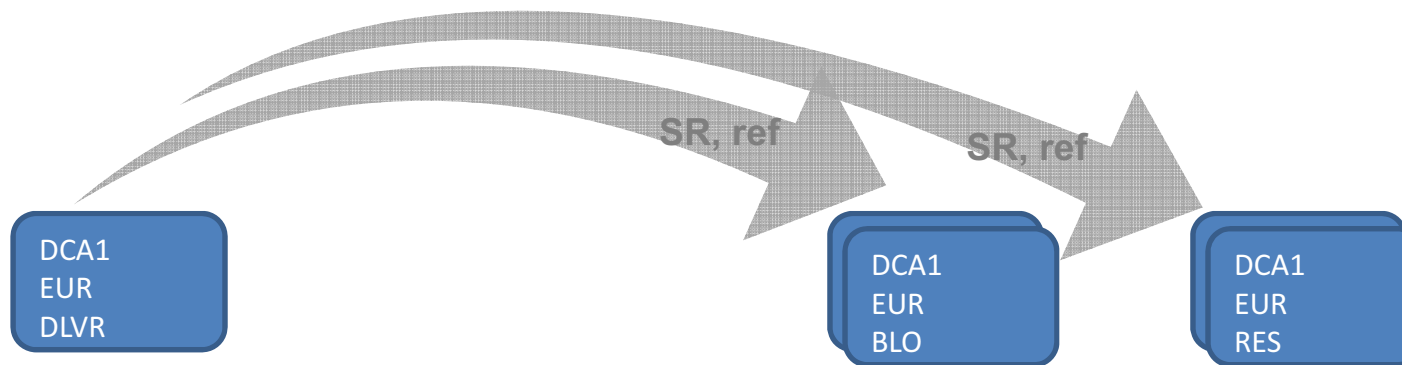
- These are the different possibilities to instruct a set up



- With a SR
 - Balance From must be of restriction processing type deliverable (DLVR)
 - Restriction reference is generated by T2S upon confirmation of the blocking or reservation set up

Instructing an increase

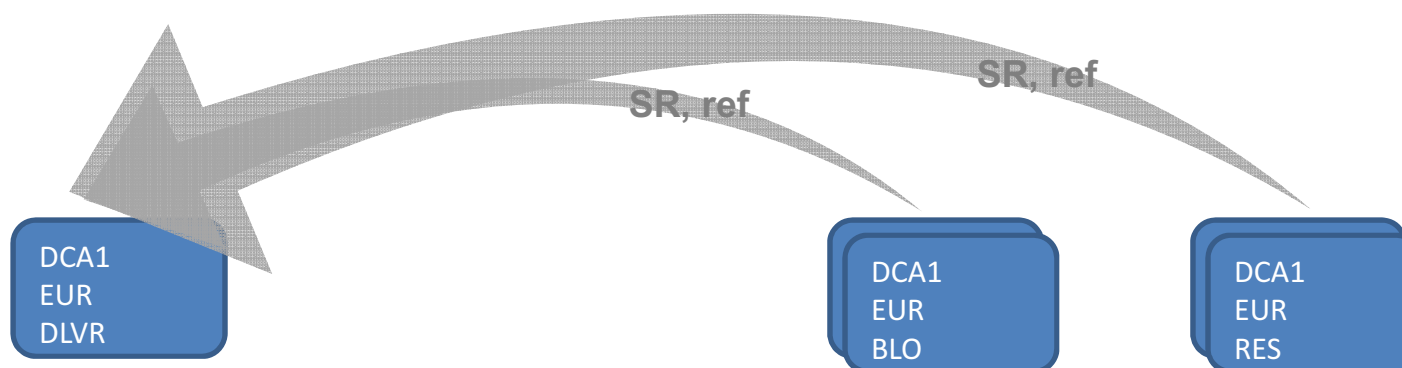
- These are the different possibilities to instruct an increase



- With a SR
 - Balance From must be of restriction processing type deliverable (DLVR)
 - Restriction reference must be provided in the SR for the increase of blocking or reservation

Instructing a decrease

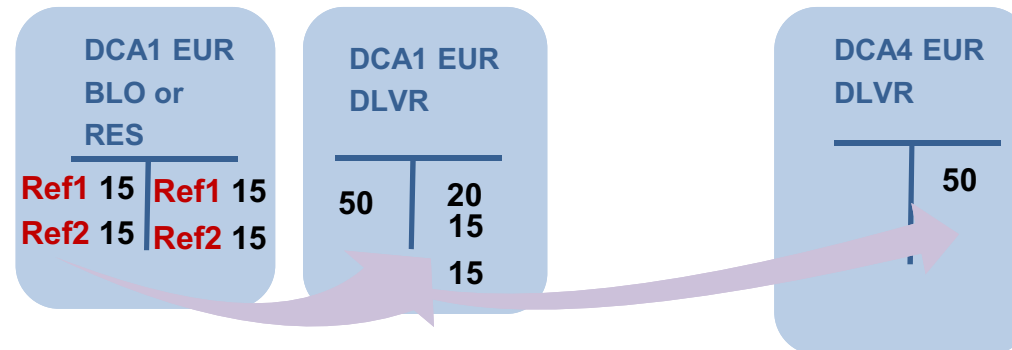
- These are the different possibilities to instruct a decrease



- With a SR
 - Balance To must be of restriction processing type deliverable (DLVR)
 - Restriction reference must be provided in the SR for the decrease of a blocking or a reservation

Instructing a use in indirect debit

OPE ID	T2S DEDICATED CASH ACCOUNT	CREDIT/DEBIT INDICATOR	AMOUNT	RESTRICTION REFERENCE(S)
SI1	DCA 4	CRDT	50	
SI2	DCA 1	DBIT	50	RRF12345; RRF98765



- With a SI
 - Delivering Impacted Balance *has a restriction processing deliverable or is not specified*
 - *The delivering Impacted Balance* is by default the deliverable
 - Restriction references can belong to several blocked or reserved restriction types
 - SR are generated by T2S to move the blocked or reserved restricted positions to the deliverable
 - If the debited balances are not sufficient, it is possible to complement with the deliverable



Thank you for your attention



Roma, 28 Ottobre 2014

Centro Congressi Banca d'Italia

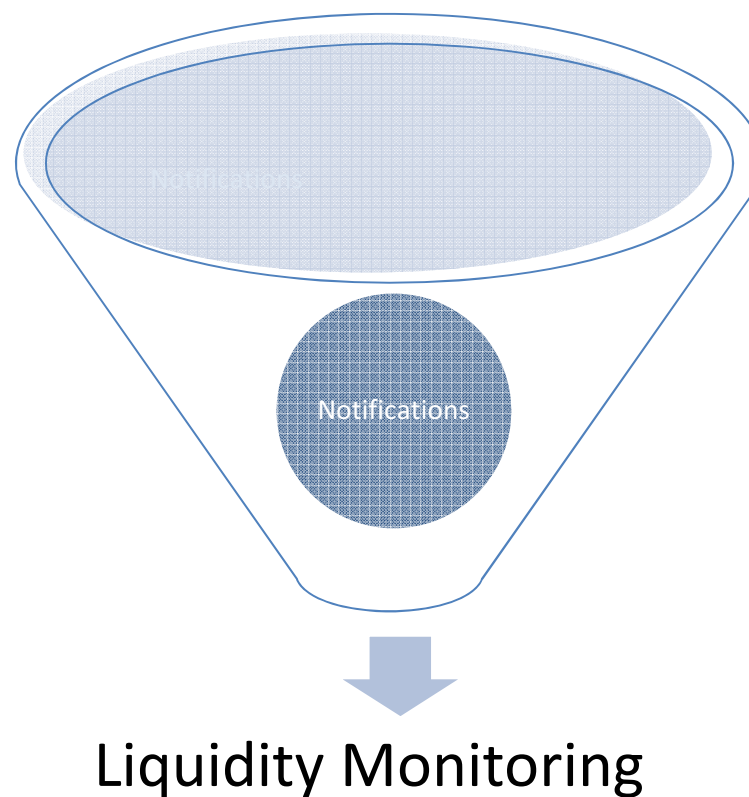
Training Session: Information Management

Agenda

- Reports
- Notifications
- Queries

Notifications	Reports	Queries
<ul style="list-style-type: none"> ▪ provide information on the liquidity situation ▪ automatically generated ▪ only available in A2A ▪ Types of notifications: <ul style="list-style-type: none"> – Credit/Debit Notification – Floor/Ceiling Notification 	<ul style="list-style-type: none"> ▪ provide predefined information to the T2S Actor ▪ available in U2A and A2A ▪ triggered at specified business events or a certain point in time according to configuration of the T2S Actor 	<ul style="list-style-type: none"> ▪ real-time requests triggered by the T2S Actor to get an overview about the liquidity situation in the T2S Dedicated Cash Account ▪ available in U2A and A2A ▪ availability is restricted during certain periods of the business day

Features of Liquidity Monitoring



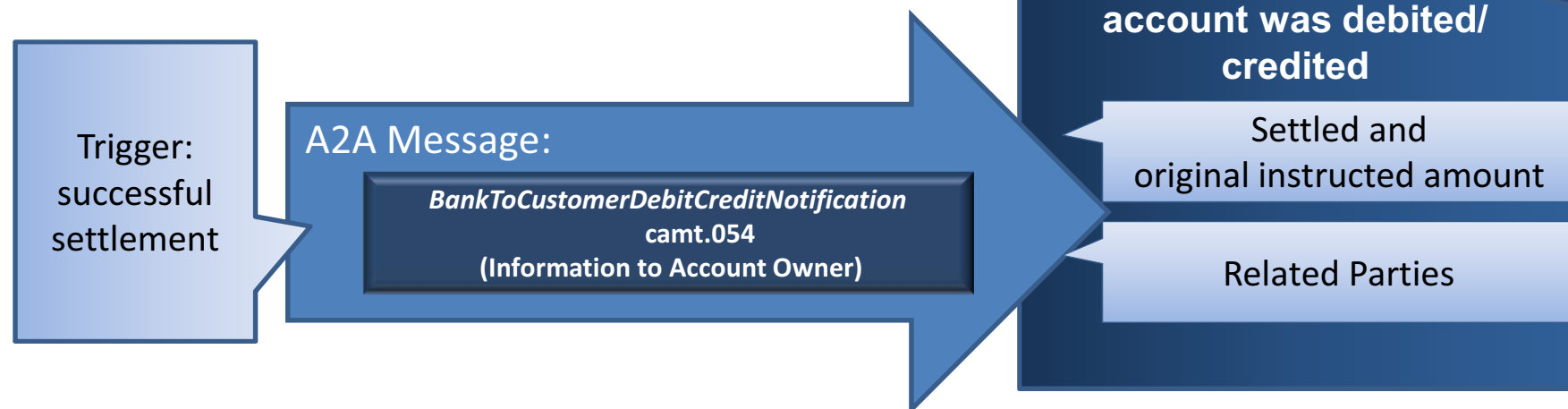
Notifications

- Notifications are **automatically** generated information regarding the liquidity situation
- T2S provides **predefined types** of notifications, which are **sent to any authorised user** depending on the defined **message subscription** rule
- Notifications are only available in **A2A**
- The following notifications are available for Liquidity Management
 - Credit/Debit Notification
 - Floor/Ceiling Notification

Debit/Credit Notifications

Debit/Credit notification:

- Reflect the respective movements on T2S dedicated cash accounts caused by Liquidity Transfers and Settlement Instruction
 - Information to T2S Actor - Credit Notification
 - Information to T2S Actor - Debit Notification



Bank to Customer Credit/Debit Notification

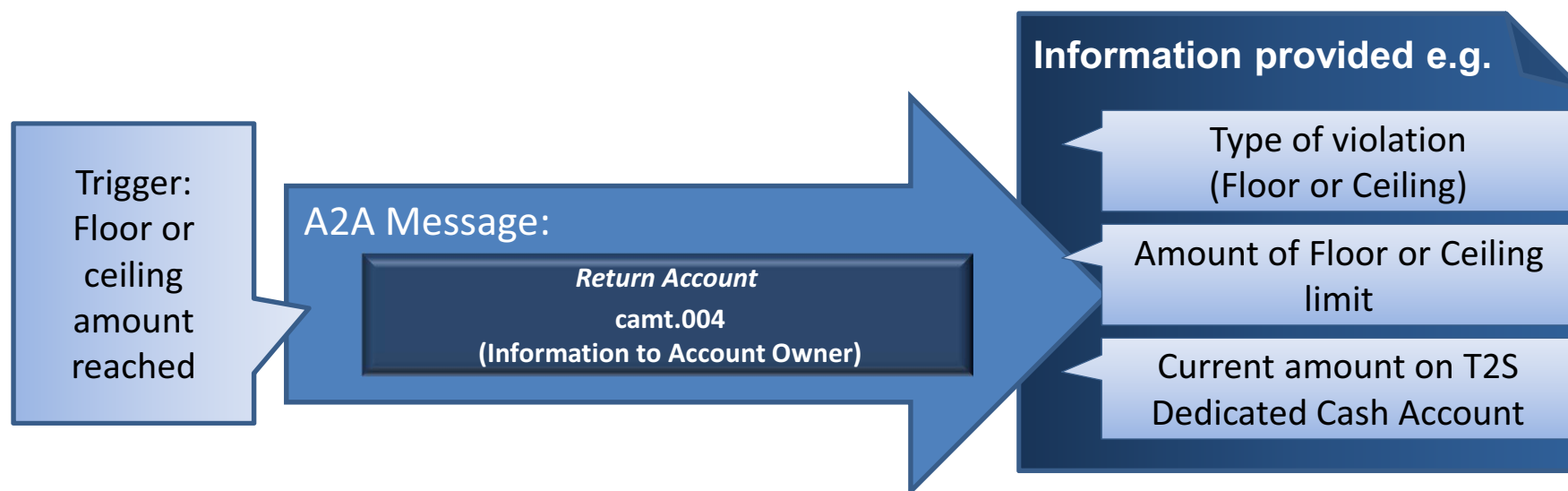
- Precondition to receive a Credit / Debit Notification:
 - Set up of message subscription in advance
 - The following criteria can be used to restrict the reception of the Credit/Debit Notification (optional usage of parameters)

MESSAGE TYPE	MESSAGE ID.	INSTRUCTION TYPE	MESSAGE STATUS	PARTY	SECURITIES ACCOUNT	ISIN	T2S DEDICATED CASH ACCOUNT	INSTRUCTION STATUS	TRANSACTION CODE	CURRENCY	ALREADY MATCHED FLAG
BankToCustomerDebitCreditNotification	camt.054	Yes	No	No	No	No	Yes	No	No	Yes	No

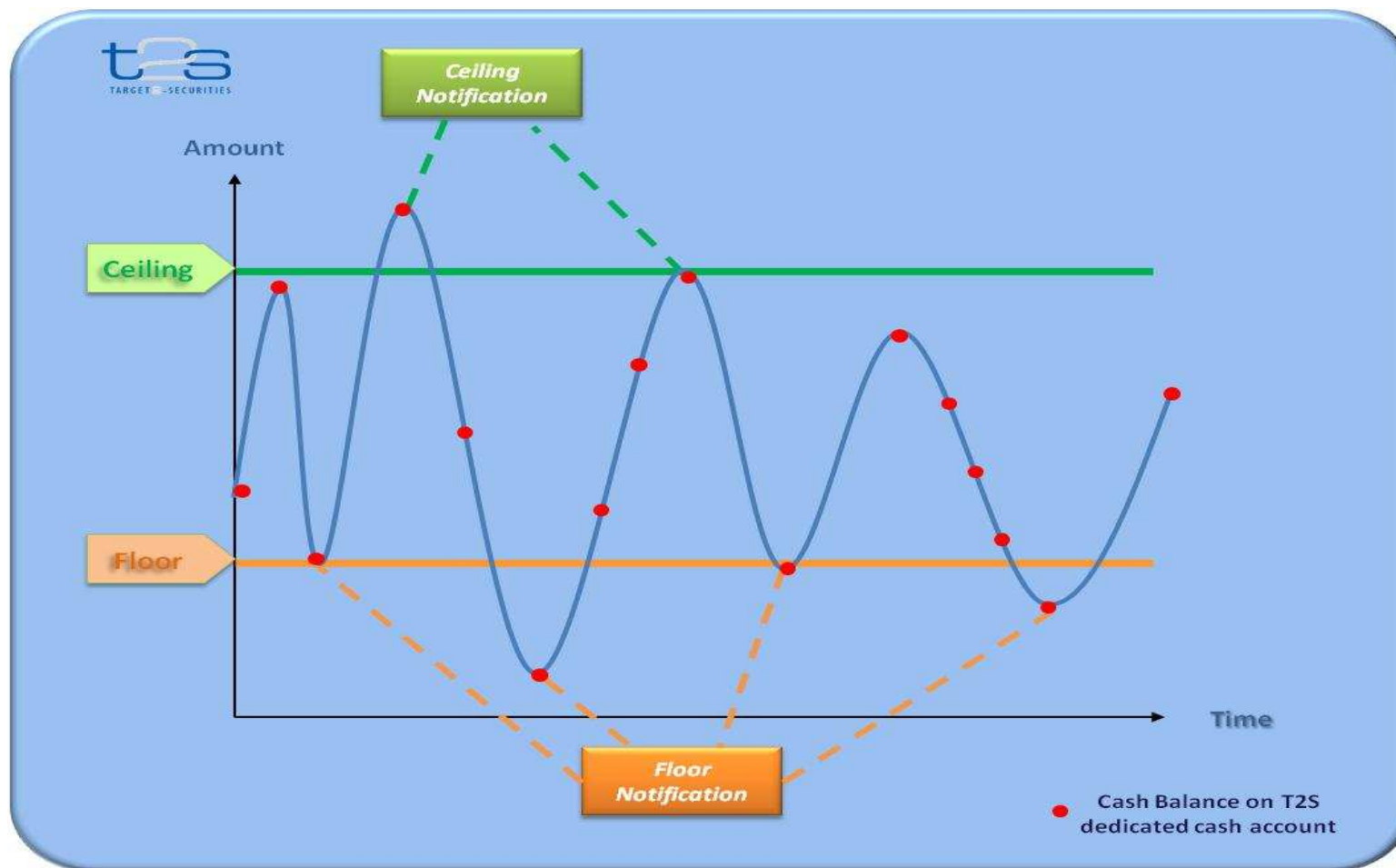
Floor/Ceiling Notification

Floor/Ceiling Notification:

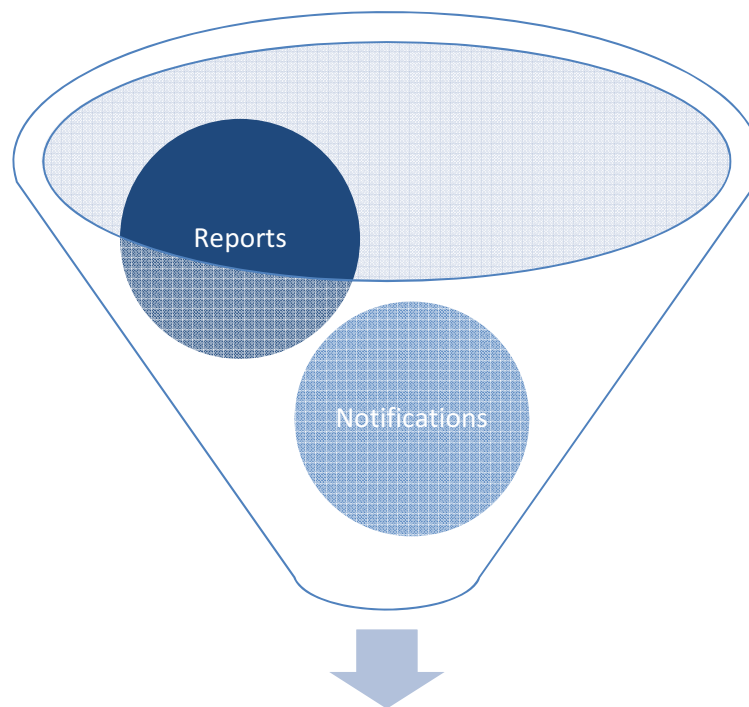
- T2S Actors can set limits for single T2S Dedicated Cash Accounts which are stored in static data
 - either a floor (minimum amount) and/or a ceiling (maximum amount)



Floor/Ceiling Notification



Reports



Liquidity Monitoring

Setting up a Report Configuration

- **Precondition** for the report creation is the proper set up of the report configuration
- Set up of the report configuration has to be done **in advance** (at least one business day)
- Set up of the report configuration can **only** be done in **U2A mode**
- Set up of the report configuration can only be done by a T2S Actor who has the appropriate access rights to do this set up

Report Type

Reporting Period

Concerned Party

Report on Party Level or System Entity Level

Moment of Data Extraction

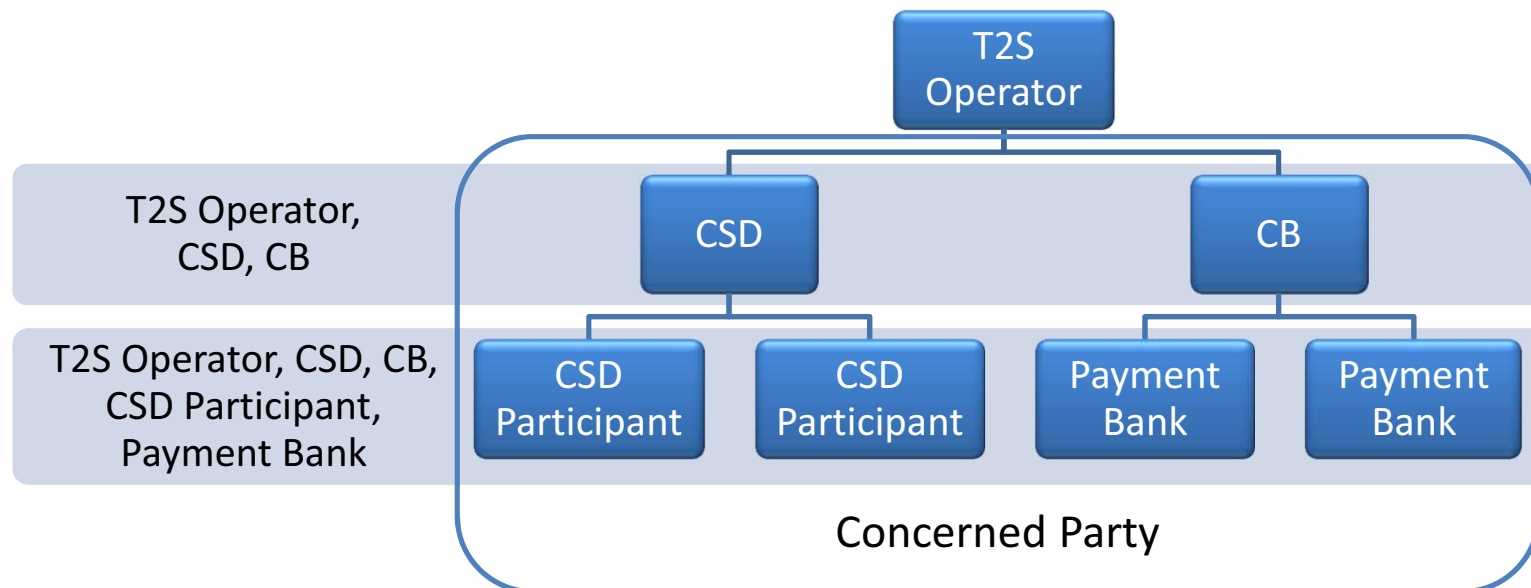
Validity Period

Report Recipients

Push or Pull Preference

Setting up a Report Configuration

- Set up can be done via U2A only
- T2S Actor has to be granted with the privilege to create a report configuration
- CSDs and CBs can create report configurations for themselves and their CSD Participants respectively Payment Banks
- CSD Participants and Payment Banks can create report configurations for themselves



Setting up a Report Configuration – Report Type (1/2)

- T2S offers 23 different report types
- From three different business areas
- Each report type can be set up individually

Cash related Report Types

• Statement of Accounts	camt.053
• Current Settlement Day Cash Information Report	camt.052
• Following Settlement Day Cash Forecast Report	camt.052

• Statement of executed Amendment Instructions for Intra-Balance Movements	camt.081
• Statement of pending Amendment Instructions for Intra-Balance Movements	camt.081
• Statement of executed Cancellation Instructions for Intra-Balance Movements	camt.083
• Statement of pending Cancellation Instructions for Intra-Balance Movements	camt.083
• Statement of pending Intra-Balance Movements	camt.085
• Statement of settled Intra-Balance Movements	camt.084

Securities related Report Types

• Statement of Holdings	semt.002
• Statement of Transactions	semt.017
• Statement of Pending Instructions	semt.018
• Statement of Settlement Allegements	semt.019
• Statement of executed Amendment Instructions for Intra-Position Movements and Settlement Instructions	semt.031
• Statement of pending Amendment Instructions for Intra-Position Movements and Settlement Instructions	semt.031
• Statement of executed Cancellation Instructions for Intra-Position Movements and Settlement Instructions	semt.033
• Statement of pending Cancellation Instructions for Intra-Position Movements and Settlement Instructions	semt.033
• Statement of pending Intra-Position Movements	semt.034
• Statement of settled Intra-Position Movements	semt.016

Static Data related Report Types

• Statement of Static Data for Party	reda.041
• Statement of Static Data for Securities	reda.009
• Statement of Static Data for Securities Accounts	reda.035
• Statement of Static Data for T2S Dedicated Cash Accounts	reda.038

Report Type

Reporting
Period

Concerned
Party

Report on
Party Level or
System Entity
Level

Moment of
Data
Extraction

Validity Period

Report
Recipients

Push or Pull
Preference

Setting up a Report Configuration – Report Type (2/2)

Cash related Report Types

➤ Balances and Postings

- Statement of Accounts camt.053

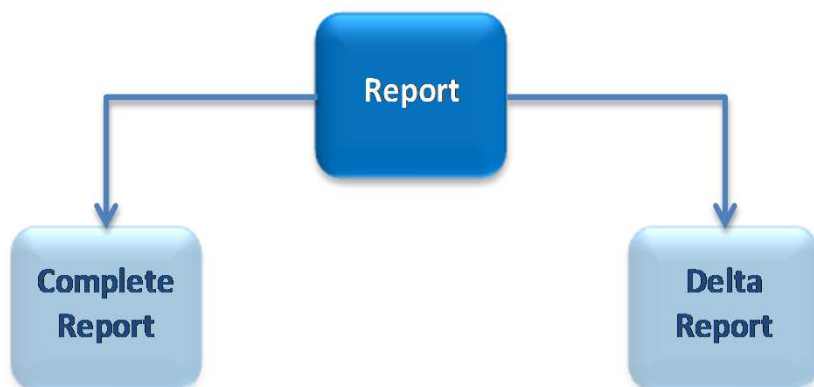
➤ Cash Forecast

- Current Settlement Day Cash Information Report camt.052
- Following Settlement Day Cash Forecast Report camt.052

➤ Cash related Instructions

- Statement of executed Amendment Instructions for Intra-Balance Movements camt.081
- Statement of pending Amendment Instructions for Intra-Balance Movements camt.081
- Statement of executed Cancellation Instructions for Intra-Balance Movements camt.083
- Statement of pending Cancellation Instructions for Intra-Balance Movements camt.083
- Statement of pending Intra-Balance Movements camt.085
- Statement of settled Intra-Balance Movements camt.084

Setting up a Report Configuration – Reporting Period (1/2)



- **Complete Reports** consider the business of the current business day since the start of day
- **Delta Reports** consider the business of the current business day as well but only that business which took place after the previous report was created

Report Type

Reporting Period

Concerned Party

Report on Party Level or System Entity Level

Moment of Data Extraction

Validity Period

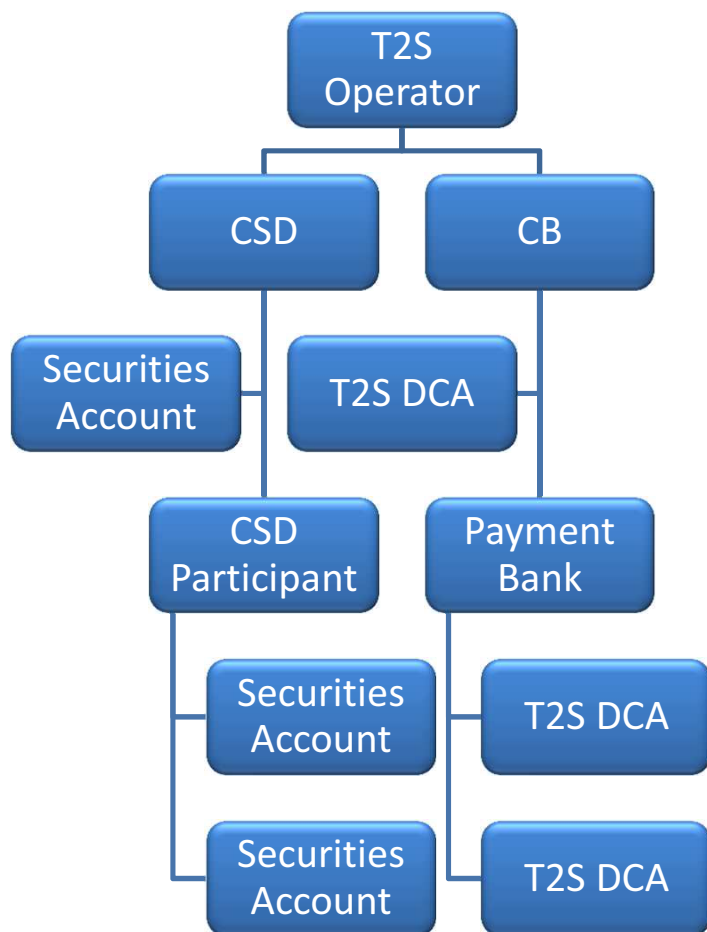
Report Recipients

Push or Pull Preference

Setting up a Report Configuration – Reporting Period (2/2)

Report Types	Complete Report	Delta Report
Statement of Holdings	x	x
Statement of Transactions	x	x
Statement of Pending Instructions	x	x
Statement of Settlement Allegements	x	x
Statement of Accounts	x	
Statement of Static Data for Party	x	
Statement of Static Data for Securities	x	
Statement of Static Data for Securities Accounts	x	
Statement of Static Data for T2S Dedicated Cash Accounts	x	
Current Settlement Day Cash Information Report	x	
Following Settlement Day Cash Forecast Report	x	
Statement of executed Amendment Instructions for Intra-Balance Movements	x	x
Statement of executed Amendment Instructions for Intra-Position Movements and Settlement Instructions	x	x
Statement of executed Cancellation Instructions for Intra-Balance Movements	x	x
Statement of executed Cancellation Instructions for Intra-Position Movements and Settlement Instructions	x	x
Statement of pending Amendment Instructions for Intra-Balance Movements	x	x
Statement of pending Amendment Instructions for Intra-Position Movements and Settlement Instructions	x	x
Statement of pending Cancellation Instructions for Intra-Balance Movements	x	x
Statement of pending Cancellation Instructions for Intra-Position Movements and Settlement Instructions	x	x
Statement of pending Intra-Balance Movements	x	x
Statement of pending Intra-Position Movements	x	x
Statement of settled Intra-Balance Movements	x	x
Statement of settled Intra-Position Movements	x	x

Setting up a Report Configuration – Concerned Party



Report Type

Reporting Period

Concerned Party

Report on Party Level or System Entity Level

Moment of Data Extraction

Validity Period

Report Recipients

Push or Pull Preference

Setting up a Report Configuration – Party or System Entity Level

Reports on
Party Level

Reports on
System Entity
Level

- T2S differentiates these two data scope levels
- Reports on **party level** provide information relating to a single party

Report Type

Reporting
Period

Concerned
Party

Report on
Party Level or
System Entity
Level

Moment of
Data
Extraction

Validity Period

Report
Recipients

Push or Pull
Preference

Setting up a Report Configuration – Moment of Data Extraction (1/2)



- Report creation triggered by Time event or Business event
- Report creation only within the validity period of the report configuration



Setting up a Report Configuration – Moment of Data Extraction (2/2)

List of Business Events

CODE	NAME	DEFINITION
BATM	Intraday BATM cut-off	Intraday BATM cut-off
C1R0	Start of cycle 1 / Settlement reporting of Sequence 0	Start of cycle 1 / Settlement reporting of Sequence 0
C1R1	Start of cycle 1 / Settlement reporting of Sequence 1	Start of cycle 1 / Settlement reporting of Sequence 1
C1R2	Start of cycle 1 / Settlement reporting of Sequence 2	Start of cycle 1 / Settlement reporting of Sequence 2
C1R3	Start of cycle 1 / Settlement reporting of Sequence 3	Start of cycle 1 / Settlement reporting of Sequence 3
C1R4	Start of cycle 1 / Settlement reporting of Sequence 4	Start of cycle 1 / Settlement reporting of Sequence 4
C1U0	Start of Cycle 1 / Settlement SD Update Reporting of Sequence 0	Start of Cycle 1 / Settlement SD Update Reporting of Sequence 0
C1U1	Start of Cycle 1 / Settlement SD Update Reporting of Sequence 1	Start of Cycle 1 / Settlement SD Update Reporting of Sequence 1
C1U2	Start of Cycle 1 / Settlement SD Update Reporting of Sequence 2	Start of Cycle 1 / Settlement SD Update Reporting of Sequence 2
C1U3	Start of Cycle 1 / Settlement SD Update Reporting of Sequence 3	Start of Cycle 1 / Settlement SD Update Reporting of Sequence 3
C1U4	Start of Cycle 1 / Settlement SD Update Reporting of Sequence 4	Start of Cycle 1 / Settlement SD Update Reporting of Sequence 4
C2R4	Start of cycle 2 / Settlement reporting of Sequence 4	Start of cycle 2 / Settlement reporting of Sequence 4
C2RX	Start of cycle 2 / Settlement reporting of Sequence X	Start of cycle 2 / Settlement reporting of Sequence X
C2RY	Start of cycle 2 / Settlement reporting of Sequence Y	Start of cycle 2 / Settlement reporting of Sequence Y
C2RZ	Start of cycle 2 / Settlement reporting of Sequence Z	Start of cycle 2 / Settlement reporting of Sequence Z
C2U4	Start of Cycle 2 / Settlement SD Update Reporting of Sequence 4	Start of Cycle 2 / Settlement SD Update Reporting of Sequence 4
C2UX	Start of Cycle 2 / Settlement SD Update Reporting of Sequence X	Start of Cycle 2 / Settlement SD Update Reporting of Sequence X
C2UY	Start of Cycle 2 / Settlement SD Update Reporting of Sequence Y	Start of Cycle 2 / Settlement SD Update Reporting of Sequence Y
C2UZ	Start of Cycle 2 / Settlement SD Update Reporting of Sequence Z	Start of Cycle 2 / Settlement SD Update Reporting of Sequence Z
CSRC	Intraday cash settlement restrictions cut-off	Intraday cash settlement restrictions cut-off
EESR	EoD Extract Data for Statements and Reports	EoD Extract Data for Statements and Reports
ICBO	Intraday CBO cut-off	Intraday CBO cut-off
IDVP	Intraday DVP cut-off	Intraday DVP cut-off
IFOP	Intraday FoP cut-off	Intraday FoP cut-off
LTRC	Intraday liquidity transfers cut-off	Intraday liquidity transfers cut-off
SSRC	Intraday securities settlement restrictions cut-off	Intraday securities settlement restrictions cut-off

UDFSv1.2.1 §4.2.2 T2S proprietary codes EventTypeCode_T2S_1

Setting up a Report Configuration – Validity Period

- T2S creates reports as long as a report configuration is valid
- Valid From Date is mandatory, Valid To Date is optional

Valid From	Valid To
2016-01-04	-
2016-01-04	2016-01-29

- Valid To Date can be amended after the report configuration has been stored

Report Type

Reporting Period

Concerned Party

Report on Party Level or System Entity Level

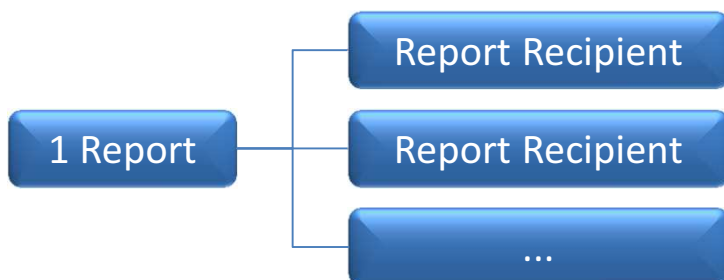
Moment of Data Extraction

Validity Period

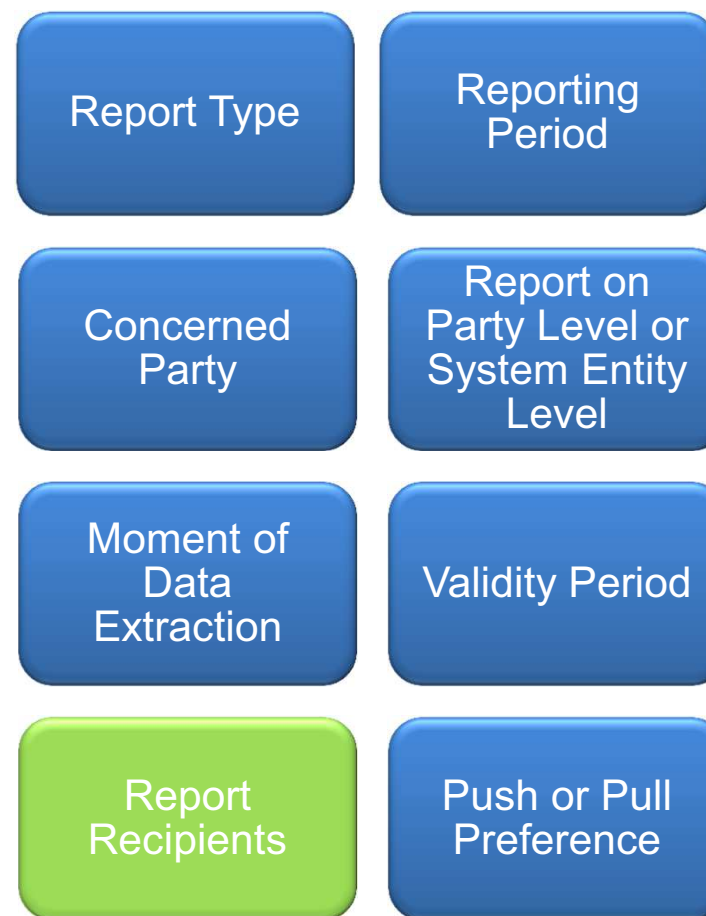
Report Recipients

Push or Pull Preference

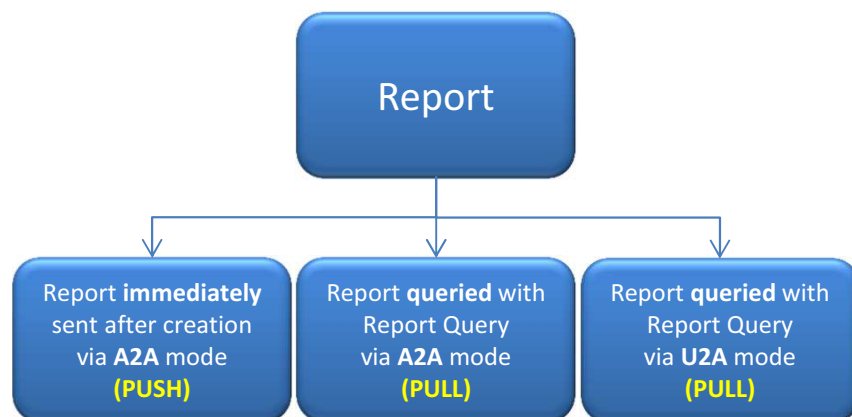
Setting up a Report Configuration – Report Recipients



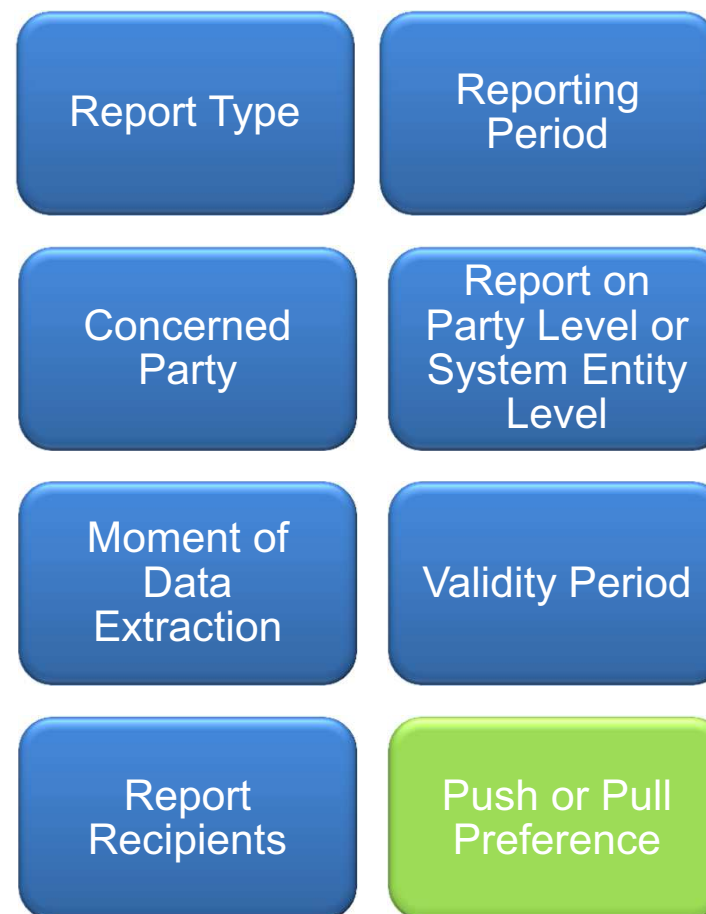
- Reports are available to directly connected T2S Actors
- Reports can be sent to several directly connected T2S Actors of T2S
- Report recipients can be different from the concerned party on which the report is based
- Report recipients and concerned party have to be within the same system entity
- Report recipients are original receiver of messages



Setting up a Report Configuration – Push or Pull

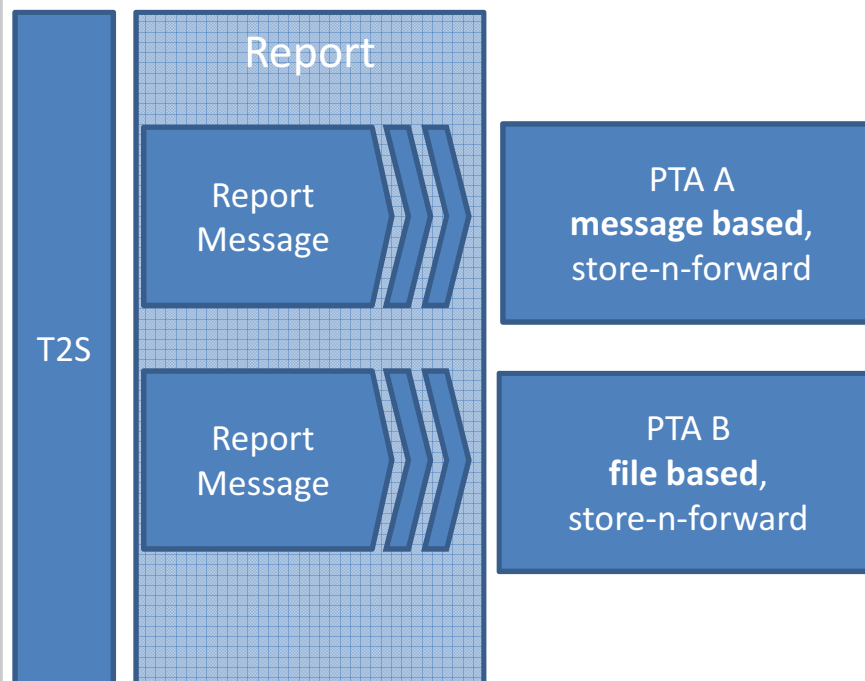


- T2S pushes reports via A2A mode
- Push or Pull Preference is stored for each Report Receiver of a single report individually
- A report which was created can be queried regardless of the Push or Pull Preference setting



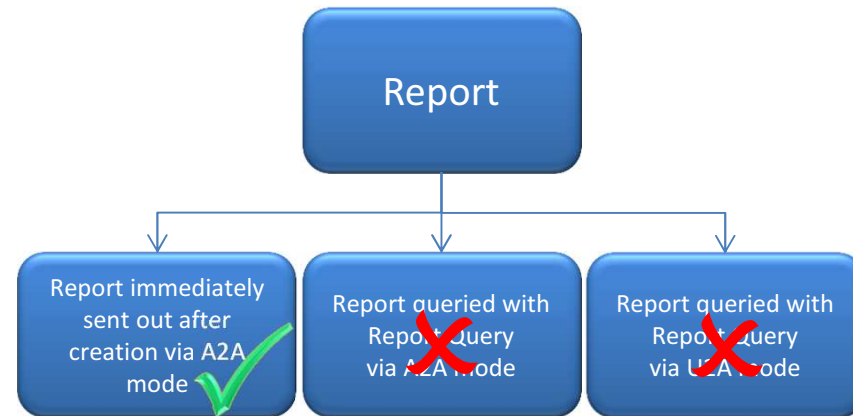
Receiving a Report

- Reports are sent via **Store and Forward**
- T2S Actors receive reports via the **party technical address** which they configured in their routing rules
- Note that T2S Actors may receive **several** report **messages** based on **one report** configuration
- Note that T2S Actors may receive these report messages which are based on **one** report **configuration via different party technical addresses** according to their routing rules



Resending a Report

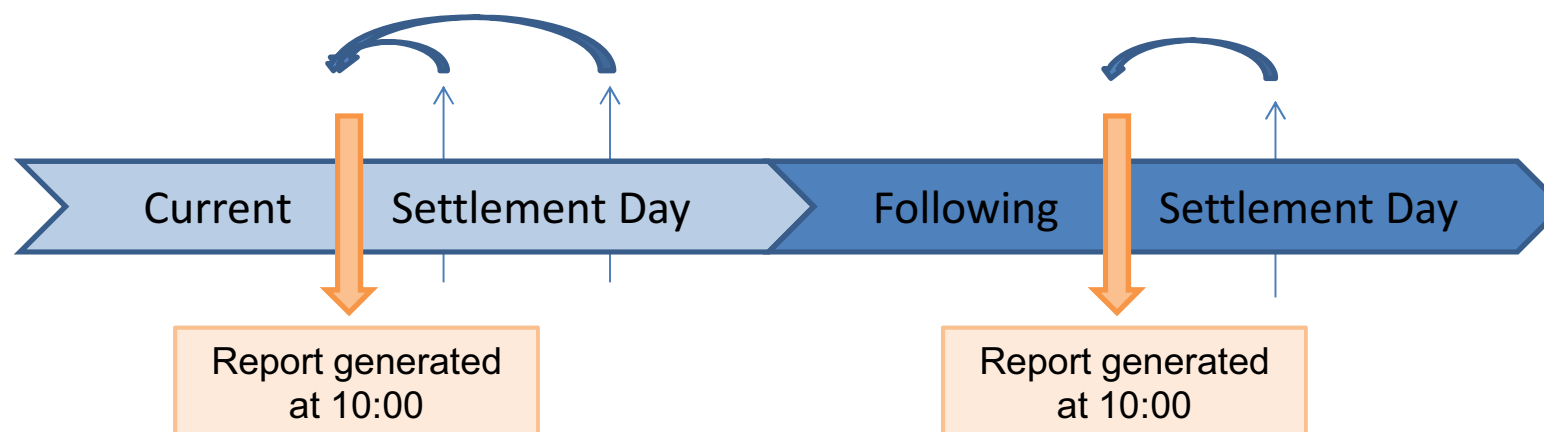
- A report can be resent if the report was sent in A2A mode before;
a report cannot be resent if the report was not sent out after creation via A2A mode
- Resending a report can be triggered in A2A mode as well as in U2A mode



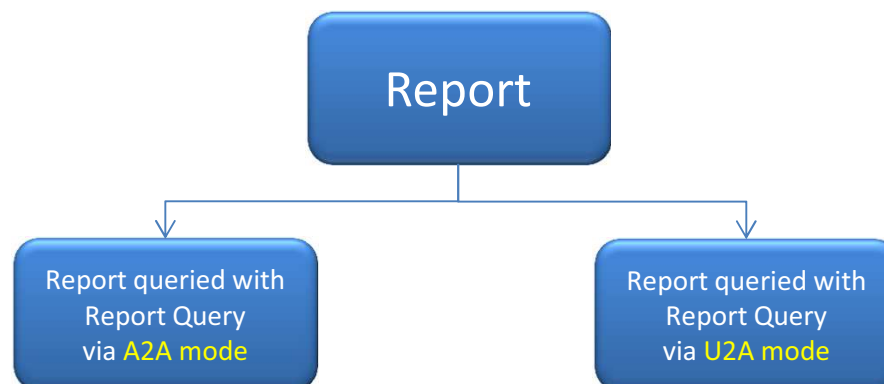
A2A mode	U2A mode
T2S Actor sends: ResendRequest admi.006	T2S Actor uses for triggering a resend request: Services >> Communication>> Resend Communication
T2S Actor receives: <ul style="list-style-type: none"> ▪ ReceiptAcknowledgement admi.007 (in case of a rejection and also in case of successful business validation) ▪ Message Type of the requested message which is to be resent 	T2S displays: No screen, only a notification; communication is resent to the original receiver via A2A mode

Querying a Report (1/2)

- A report can be queried if the report was created before
- A report can be queried only until it is replaced when the new report is generated



Querying a Report (2/2)



A2A mode		U2A mode
T2S Actor sends: ReportQueryRequest Message	admi.005	T2S Actor uses for searching a report: Services >> Additional Services >> Reports Available Reports – Search + List Screens Available Reports – Details Screen
T2S Actor receives: Receipt Acknowledgement (in case of operational error and if need be also as in case of business data) Any Report	admi.007 different message types depending on the report type	T2S displays a report on: Available Reports – Report Type – Details Screens

Reports - Example

The Statement of Accounts provides information on:

- opening cash balance and closing cash balance (if already available at predefined time)
- Cash Postings of the current settlement day up to the point of report creation are as well included in this report

Information provided (non exhaustive):

Statement Number

Party and Reference

T2S Dedicated Cash Account No.

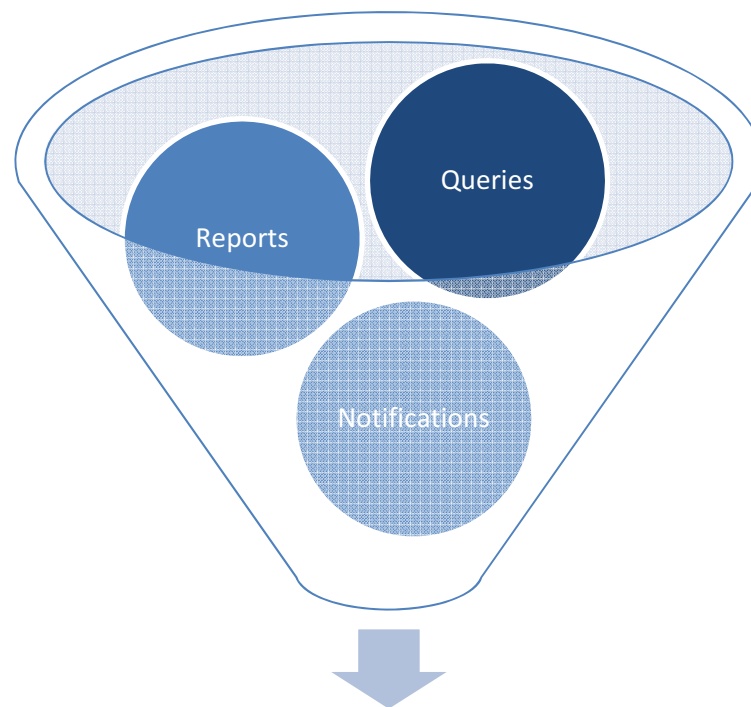
Currency

Opening Cash Balance

Closing Cash Balance

Explicit posting information

Queries



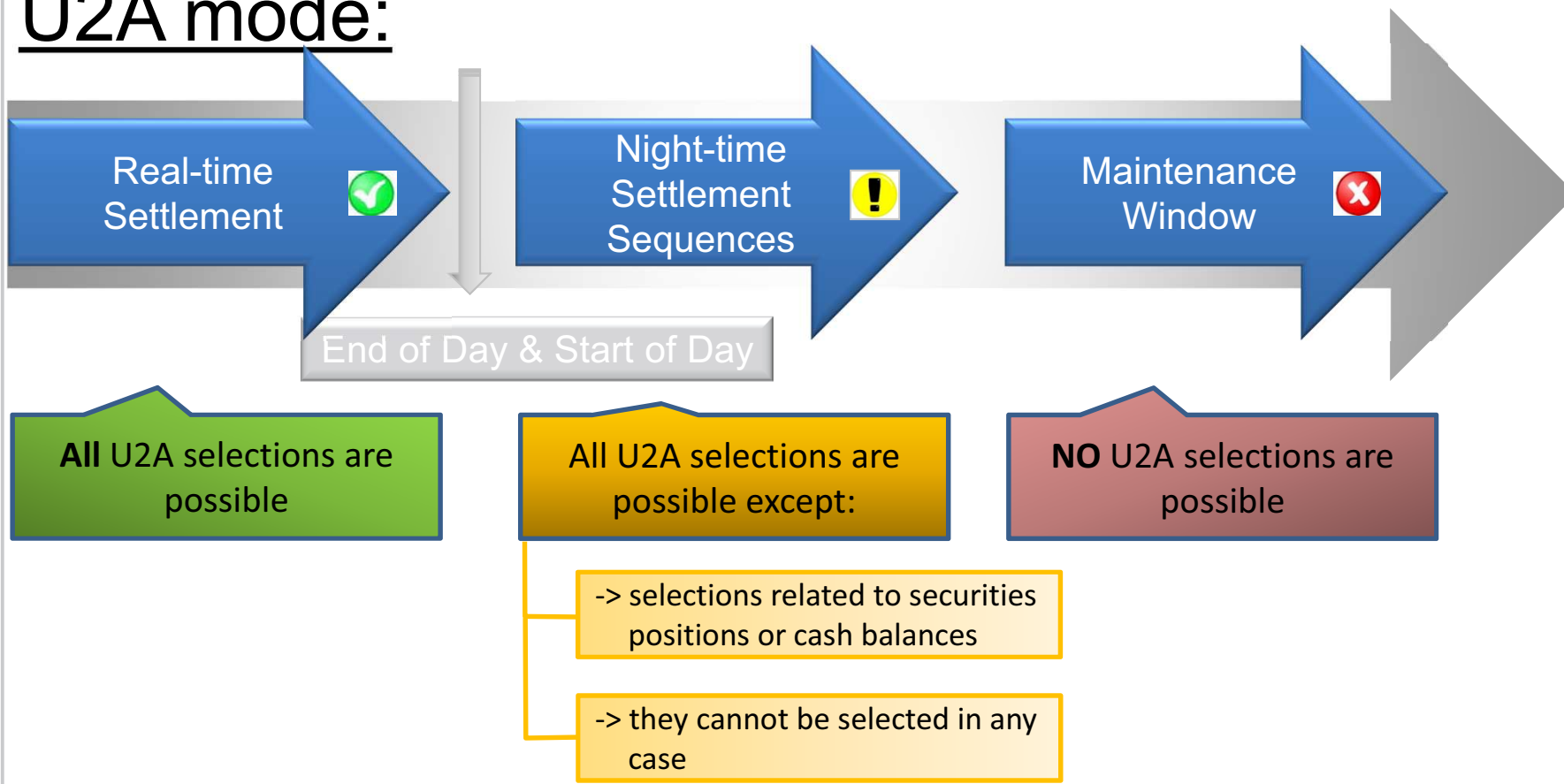
Liquidity Monitoring

Queries

- **Real-time** requests triggered by the T2S Actor to get an overview about the liquidity situation in the T2S Dedicated Cash Account
- T2S Actor can query data **via A2A or U2A** with the necessary **privilege** for specific queries (different privileges for different queries are needed)
- Each information is available in A2A mode as well as in U2A mode except some information which are only accessible via U2A mode
- The following slides give examples of useful queries regarding Liquidity Monitoring:
 - Immediate Liquidity Transfer Order List Query
 - T2S Dedicated Cash Account Balance Query
 - T2S Overall Liquidity Query
 - Cash Forecast Query

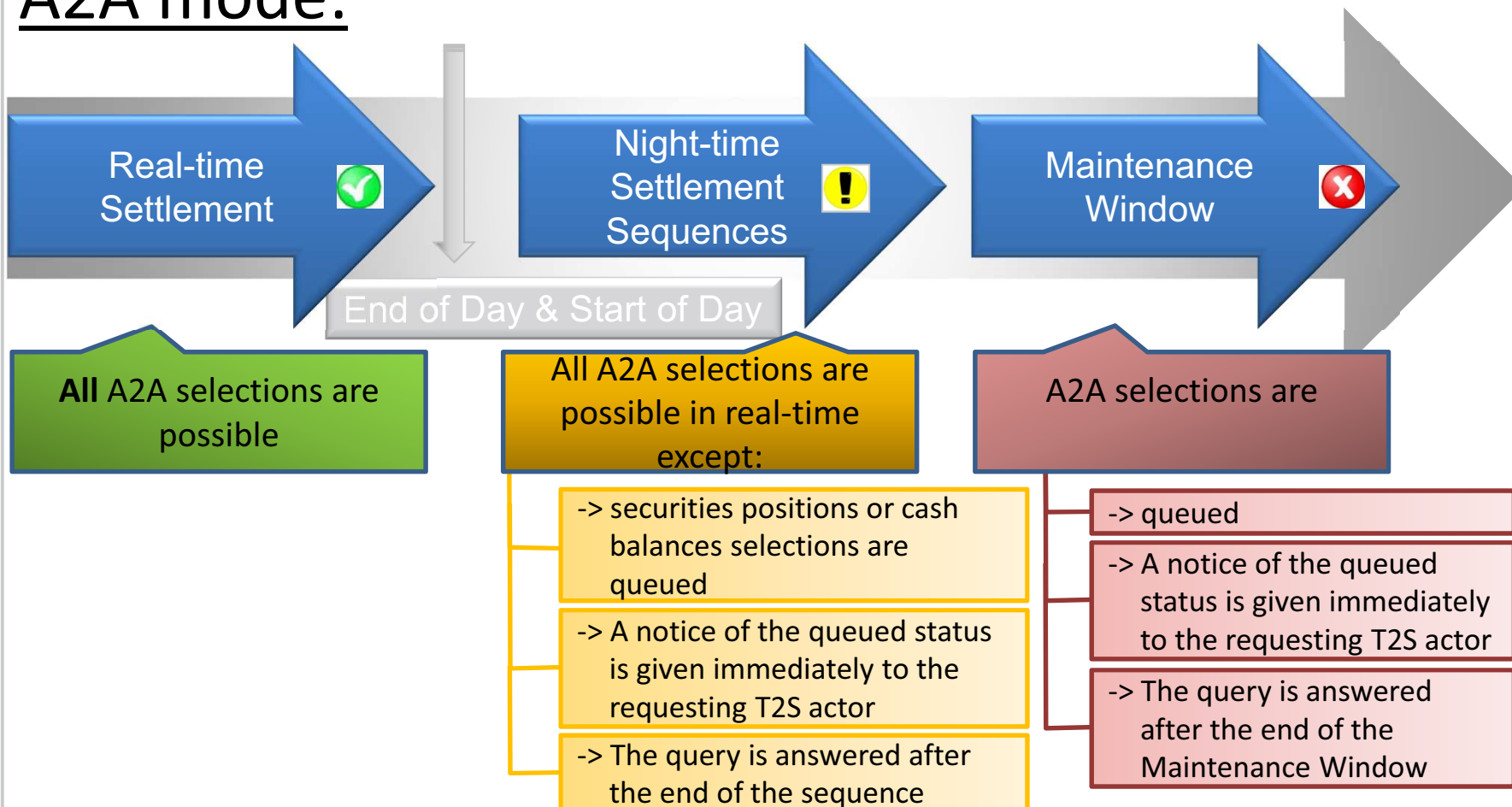
Using Queries (1/3)

U2A mode:



Using Queries (2/3)

A2A mode:



Using Queries (3/3)

- Querying information from T2S requires that the T2S actor is **granted with the appropriate privilege** (Each query requires a specific privilege)
- Privileges related to queries can be **system privileges and object privileges** depending on the query type
- Queried information has to be within the **individual data scope** of the T2S actor
- A privilege enables a T2S actor to query an information in **U2A as well as in A2A mode**

Using Different Queries for Different Business Areas (1/5)

Cash related ad-hoc information services

Displaying Liquidity Management Information
Cash Forecasts - Search/List Screen
Cash Forecast - Details Screen
Overall Liquidity - Search/List Screen
T2S Dedicated Cash Account Balances - Search/List Screen
T2S Dedicated Cash Account Balance - Details Screen
T2S Dedicated Cash Account Postings - Search/List Screen
Cash Restriction Details - Search/List Screen

Query Messages	Query Response Messages for Business Data
camt.003	camt.004
camt.005	camt.006

Displaying Immediate Liquidity Transfers
Immediate Liquidity Transfer Orders - Search/List Screen
Immediate Liquidity Transfer Order - Details Screen

Query Messages	Query Response Messages for Business Data
camt.005	camt.006

Displaying Cash Related Instructions
Intra-Balance Movement with Current and Historical Status - Search Screen
Intra-Balance Movement - List Screen
Intra-Balance Movement - Details Screen

Query Messages	Query Response Messages for Business Data
camt.078	camt.079

Using Different Queries for Different Business Areas (2/5)

Cash related ad-hoc information services

Displaying Maintenance Cash Instructions
Amendment Cash Instruction - Details Screen
Cancellation Cash Instruction - Details Screen
Maintenance Cash Instructions - Search Screen
Maintenance Cash Instructions - List Screen

Query Messages	Query Response Messages for Business Data
camt.080	camt.081
camt.082	camt.082

Displaying Collateral Value Information
Total Collateral Value per T2S Dedicated Cash Account - Search/List Screen
Collateral Value per T2S Dedicated Cash Account and Security - Search/List Screen
Collateral Value of a Security - Search/List Screen

Query Messages	Query Response Messages for Business Data
colr.001	colr.002

Displaying Limit Information
Limits - Search/List Screen
Limit Utilisation - Search/List Screen
Limit Utilisation Journal - Search/List Screen
Outstanding Auto-Collateralisation Credits - Search/List Screen

Query Messages	Query Response Messages for Business Data
camt.009	camt.010
camt.064	camt.065
camt.003	camt.004

Using Different Queries for Different Business Areas (3/5)

Message and report related ad-hoc information services

Reports	Query Messages	Query Response Messages for Business Data
Available Reports - Search/List Screen	admi.005	(admi.007) +
Available Report - Details Screen		camt.053
Available Report - Statement of Accounts - Details Screen		semt.002
Available Report - Statement of Holdings - Details Screen		semt.018
Available Report - Statement of Pending Instructions - Details Screen		semt.019
Available Report - Statement of Settlement Allegements - Details Screen		reda.041
Available Report - Statement of Static Data - Details Screen		reda.009
Available Report - Statement of Transactions - Details Screen		reda.035
Available Report - Current Settlement Day Cash Information Report - Details Screen		reda.038
Available Report - Following Settlement Day Cash Forecast Report - Details Screen		semt.017
		camt.052
		camt.052

Using Different Queries for Different Business Areas (4/5)

Message and report related ad-hoc information services

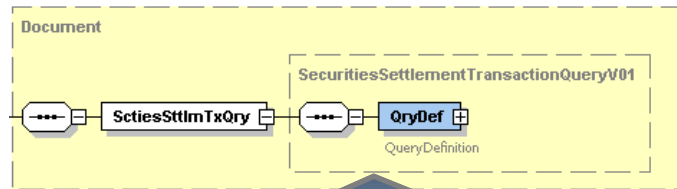
Reports	Query Messages	Query Response Messages for Business Data
Available Reports - Search/List Screen	admi.005	(admi.007) +
Available Report - Details Screen		camt.081
Available Report - Statement of Executed Amendment Instructions for Intra-Balance Movements - Details Screen		semt.031
Available Report - Statement of Executed Amendment Instructions for Intra-Position Movements and Settlement Instructions - Details Screen		camt.083
Available Report - Statement of Executed Cancellation Instructions for Intra-Balance Movements - Details Screen		semt.033
Available Report - Statement of Executed Cancellation Instructions for Intra-Position Movements and Settlement Instructions - Details Screen		camt.081
Available Report - Statement of Pending Amendment Instructions for Intra-Balance Movements - Details Screen		semt.031
Available Report - Statement of Pending Amendment Instructions for Intra-Position Movements and Settlement Instructions - Details Screen		camt.083
Available Report - Statement of Pending Cancellation Instructions for Intra-Balance Movements - Details Screen		semt.033
Available Report - Statement of Pending Cancellation Instructions for Intra-Position Movements and Settlement Instructions - Details Screen		camt.085
Available Report - Statement of Pending Intra-Balance Movements - Details Screen		semt.034
Available Report - Statement of Pending Intra-Position movements - Details Screen		camt.084
Available Report - Statement of Settled Intra-Balance Movements - Details Screen		semt.016
Available Report - Statement of Settled Intra-Position Movements - Details Screen		

Using Different Queries for Different Business Areas (5/5)

Message and report related ad-hoc information services

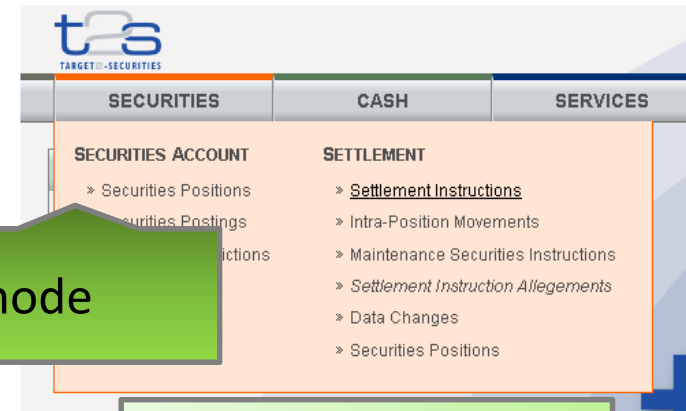
Displaying Messages and Files
Inbound Messages - Search/List Screen
Inbound Message - Details Screen
Outbound Messages - Search/List Screen
Outbound Message - Details Screen
Outbound Files - Search/List Screen
Outbound File - Details Screen
Inbound Files - Search/List Screen
Inbound File - Details Screen

Sending a Valid Query



A2A mode

U2A mode



Pass **Schema Validation**
(well-formed)

Pass **Field- and Cross-Field-Validation**

Pass **Business Rule Validation** (Populated with plausible and valid selection criteria by T2S actor, Privilege check...)

Privilege check: checks if the user is allowed to query the specified information

Receiving a Query Response (1/2)

Query Type	Query Message	Query Response Message for Operational Error	Query Response Message for Business Data
Settlement Instruction Query	semt.026.001.01	sese.022.001.03	semt.027.001.01
Settlement Instruction Current Status Query	semt.026.001.01	sese.022.001.03	semt.027.001.01
Settlement Instruction Status Audit Trail Query	semt.026.001.01	sese.022.001.03	semt.027.001.01
Settlement Instruction Audit Trail Query	sese.021.001.03	sese.022.001.03	semt.022.001.01
Securities Account Position (History) Query	semt.025.001.01	sese.022.001.03	semt.040.001.01
T2S Dedicated Cash Account Balance Query	camt.003.001.05	camt.004.001.05	camt.004.001.05
T2S Dedicated Cash Account Posting Query	camt.005.001.05	camt.006.001.05	camt.006.001.05
Immediate Liquidity Transfer Order List Query	camt.005.001.05	camt.006.001.05	camt.006.001.05
Immediate Liquidity Transfer Order Detail Query	camt.005.001.05	camt.006.001.05	camt.006.001.05
Outstanding Auto-Collateralisation Credit Query	camt.003.001.05	camt.004.001.05	camt.004.001.05
T2S Overall Liquidity Query	camt.003.001.05	camt.004.001.05	camt.004.001.05
Cash Forecast Query	camt.003.001.05	camt.004.001.05	camt.004.001.05
Limit Query	camt.009.001.05	camt.010.001.05	camt.010.001.05
Limit Utilisation Journal Query	camt.064.001.01	camt.065.001.01	camt.065.001.01
Limit Utilisation Query	camt.009.001.05	camt.010.001.05	camt.010.001.05
Total collateral value per T2S Dedicated Cash Account query	colr.001.001.01	colr.002.001.01	colr.002.001.01
Collateral Value per T2S Dedicated Cash Account query	colr.001.001.01	colr.002.001.01	colr.002.001.01
Collateral value of a security query	colr.001.001.01	colr.002.001.01	colr.002.001.01
Static Data Audit Trail Query for Party Data	reda.042.001.01	reda.043.001.01	reda.043.001.01
Static Data Audit Trail Query for Securities Account Data	reda.036.001.01	reda.037.001.01	reda.037.001.01
Static Data Audit Trail Query for Securities Data	reda.033.001.01	reda.034.001.01	reda.034.001.01
Static Data Audit Trail Query for T2S Dedicated Cash Account Data	reda.039.001.01	reda.040.001.01	reda.040.001.01
Securities Reference Data Query	reda.010.001.01	reda.012.001.01	reda.012.001.01
ISIN List Query	reda.010.001.01	reda.012.001.01	reda.012.001.01
Securities Deviating Nominal Query	reda.010.001.01	reda.012.001.01	reda.012.001.01

Receiving a Query Response (2/2)

Query Type	Query Message	Query Response Message for Operational Error	Query Response Message for Business Data
Securities CSD Link Query	reda.010.001.01	reda.012.001.01	reda.012.001.01
Party Reference Data Query	reda.015.001.01	reda.017.001.01	reda.017.001.01
Party List Data Query	reda.015.001.01	reda.017.001.01	reda.017.001.01
Restricted Party Query	reda.015.001.01	reda.017.001.01	reda.017.001.01
Securities Account Reference Data Query	reda.019.001.01	reda.021.001.01	reda.021.001.01
Securities Account List Query	reda.019.001.01	reda.021.001.01	reda.021.001.01
T2S Dedicated Cash Account Reference Data Query	acmt.025.001.01	acmt.026.001.01	acmt.026.001.01
Cash Account List Query	acmt.025.001.01	acmt.026.001.01	acmt.026.001.01
Liquidity Transfer Order List Query	camt.069.001.01	camt.070.001.01	camt.070.001.01
Liquidity Transfer Order Detail Query	camt.069.001.01	camt.070.001.01	camt.070.001.01
Total Amount of Predefined and Standing Liquidity Transfer Orders Query	camt.069.001.01	camt.070.001.01	camt.070.001.01
Liquidity Transfer Order Link Set Query	camt.069.001.01	camt.070.001.01	camt.070.001.01
Liquidity Transfer Order of a Liquidity Transfer Order Link Set Query	camt.069.001.01	camt.070.001.01	camt.070.001.01
T2S Calendar Query	camt.018.001.03	camt.019.001.04	camt.019.001.04
T2S Diary Query	camt.018.001.03	camt.019.001.04	camt.019.001.04
Status of the T2S Settlement day Query	camt.018.001.03	camt.019.001.04	camt.019.001.04
Report Details Query	admi.005.001.01	admi.007.001.01	admi.007.001.01 or Any message used for reports
Cumulative Billing Data Query	camt.076.001.01	camt.077.001.01	camt.077.001.01
Itemised Billing Data Query	camt.076.001.01	camt.077.001.01	camt.077.001.01
Amendment Instruction Query for Intra-Balance Movements	camt.080.001.01	camt.081.001.01	camt.081.001.01
Amendment Instruction Query for Intra-Position Movements and Settlement Instructions	semt.030.001.01	sese.022.001.03	semt.031.001.01
Cancellation Instruction Query for Intra-Balance Movements	camt.082.001.01	camt.083.001.01	camt.083.001.01
Cancellation Instruction Query for Intra-Position Movements and Settlement Instructions	semt.032.001.01	sese.022.001.03	semt.033.001.01
Intra-Balance Movements Query	camt.078.001.01	camt.079.001.01	camt.079.001.01
Intra-Position Movements Query	semt.028.001.01	sese.022.001.03	semt.029.001.01

Processing Queries (1/3)

T2S Dedicated Cash Account Balance Query

T2S allows T2S Actors to query the current balance of T2S Dedicated Cash Accounts. This query does not only give information on the available cash balance but also on restricted cash balances (including restriction type and restriction processing type) set-up for the account when such restricted balances exist.

T2S Dedicated Cash Account Posting Query

T2S provides T2S Actors with the possibility to query the postings, which were booked at a specific date on T2S Dedicated Cash Accounts. For each posting, the Instructing Party reference, the transaction reference of the underlying Settlement Instruction or liquidity transfer, as well as the settlement time are provided.

Immediate Liquidity Transfer List Query

The query request is responded with all liquidity transfers having been settled on either one or all cash accounts of a party taking into account the selection parameters specified by the T2S Actor.

Immediate Liquidity Transfer Order Detail Query

T2S provides the details of the Immediate Liquidity Transfer Order having been referenced in the query request with the Immediate Liquidity Transfer Order Identifier.

Processing Queries (2/3)

Outstanding Auto-Collateralisation Credit Query

This query returns information regarding the auto-collateralisation limit defined for the accounts for a party set by the responsible NCB and its utilisation by the party.

T2S Overall Liquidity Query

This query returns overall liquidity information aggregated over all T2S Dedicated Cash Accounts of one party. It includes information about the auto-collateralisation limit, the limit utilisation, the available liquidity, the collateral value of eligible securities on stock, the available cash, the blocked cash and the reserved cash. Liquidity information for RTGS accounts have to be queried within the respective RTGS and are not available via T2S.

Cash Forecast Query

The Cash Forecast Query provides information on cash needs for a specific party for the (current or following) settlement day. The forecast is based on the current T2S Dedicated Cash Account balance, liquidity transfer orders and Settlement Instructions as well as the amount of outstanding intraday credit. The projected balance may vary during the T2S Settlement Day.

Limit Query

The Limit Query returns information on all the limits the requester has defined or on limits that have been defined for him in T2S.

Processing Queries (3/3)

Limit Utilisation Journal Query

CBs, payment/settlement banks and clients of payment/settlement banks (i.e. CSD Participants) are able to request the T2S limit utilisation journal. This query provides detailed information regarding the limit utilisation changes during a specific Settlement Day.

Limit Utilisation Query

CBs, payment/settlement banks and clients of payment/settlement banks are able to request the current utilisation of limits they have defined in T2S for parties to which they provide credit in central bank money.

Total collateral value per T2S Dedicated Cash Account Query

This query enables T2S System users of CBs, payment/settlement banks and clients of payment/settlement banks to receive information on the current collateral value of securities on stock per T2S Dedicated Cash Account.

Collateral Value per T2S Dedicated Cash Account Query

This query informs about the collateral value of securities on stock for T2S Dedicated Cash Accounts which are eligible for auto-collateralisation.

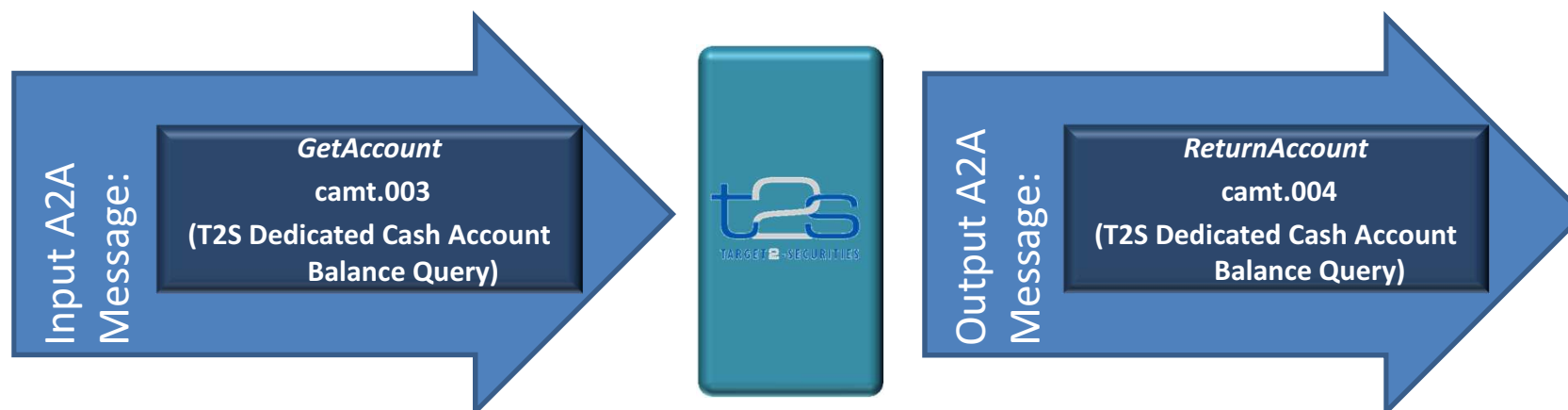
Collateral Value of a Security Query

This query provides information about the collateral value of a security. It considers securities on stock only. Securities on flow are not taken into consideration.

T2S Dedicated Cash Account Balance Query - Case

T2S Dedicated Cash Account Balance Query

The T2S Actor can obtain current balances on T2S Dedicated Cash Accounts. Additionally he is provided with information on restricted cash balances on a T2S Dedicated Cash Account.



T2S Dedicated Cash Account Balance Query – Case U2A Screen

SECURITIES	CASH	SERVICES	STATIC DATA	MONITORING
Cash > Cash Account > Cash Account Balances				
<div> <div>Search Criteria: Cash Balances</div> <div> <div> Party BIC * FADVLVP1000 </div> <div> Parent BIC * FAAGLVP1000 </div> <div> T2S Dedicated Cash Account * 370932 </div> <div> Business Date 2013-03-20 </div> <div> Restriction Type Reservation </div> <div> Currency EUR </div> <div> Zero Cash Balance included <input type="checkbox"/> </div> </div> <div> Search Reset </div> </div>				
Party BIC / Parent BIC		Drop down Menu : Balance Type/Earmarking Blocking Deliverable Rejection Reservation		Business Date
T2S Dedicated Cash Account				Check box for: Zero Cash Balance Included
Currency				
Details Create Intra Balance Movement				

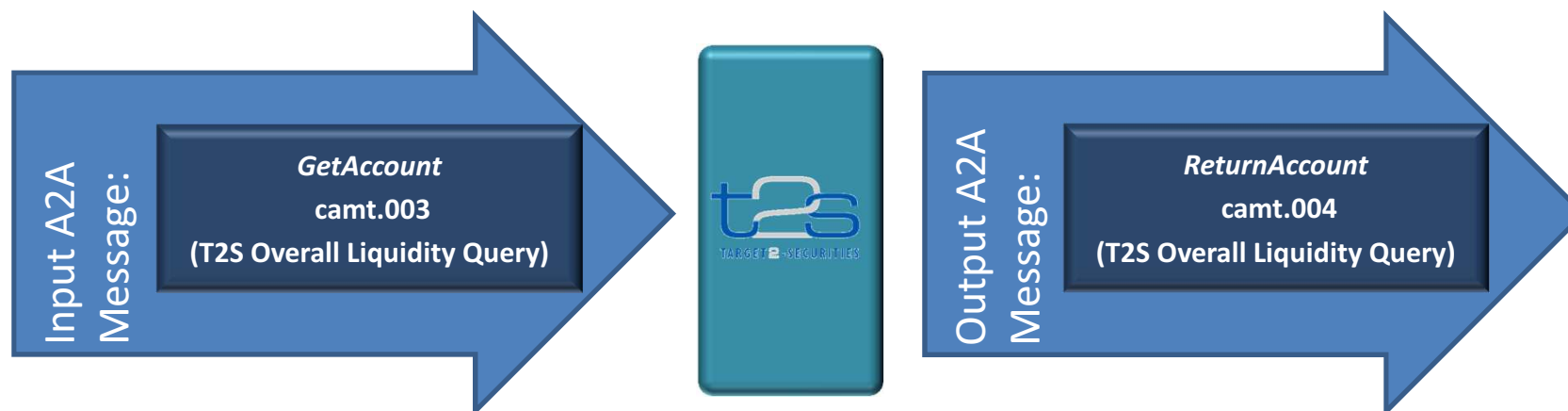
T2S Dedicated Cash Account Balance Query – Case Detail Screen

SECURITIES	CASH	SERVICES	STATIC DATA	MONITORING	
Cash » Cash Account » Cash Account Balances » T2S Dedicated Cash Account Balance – Details					
Identification of Cash Balances					
T2S Dedicated Cash Account Number 1-NCB1		Restriction Type All	Date 2012-09-24	Currency EUR	
				Total Amount 102,710,224.02080	
Cash Balance per Restriction Type					
5 (1 of 1)					
Restriction Type		Date	Currency	Amount	To be Pre-Empted
Code	Name			Total	
CAB1	Cash Balance #1	2012-09-24	EUR	100,710,224.02080	0
CAB2	Cash Balance #2	2012-09-24	EUR	2,000,000.00000	0
5 (1 of 1)					
Identification of Cash Balances		Total Amount			
Restriction Type		Total Amount split up restriction types			

T2S Overall Liquidity Query - Case

T2S Overall Liquidity Query

- The T2S Actor can obtain current information on overall liquidity information aggregated over all T2S Dedicated Cash Accounts of one party



T2S Overall Liquidity Query – Example Output Screen

Search Criteria - T2S Overall Liquidity

Party BIC: TESTDEM1001
Parent BIC: All

Search Reset

T2S Overall Liquidity - Overview List

Party	CUR	Auto-Coll Limit	Limit Utilisation	Available Liquidity
TESTDEM1001 MARKDEFFOXX Sample Bank	EUR	70,000,000.00	58,256,258.25	21,260,509.48

T2S Overall Liquidity - Detailed List

Party	CUR	Collateral Value	Available Cash	Blocked Cash	Reserved Cash
TESTDEM1001 MARKDEFFOXX Sample Bank	EUR	95,258,256.55	6,258.25	248,258.25	9,268,264.27

Showing 1 to 1 of 1 entries

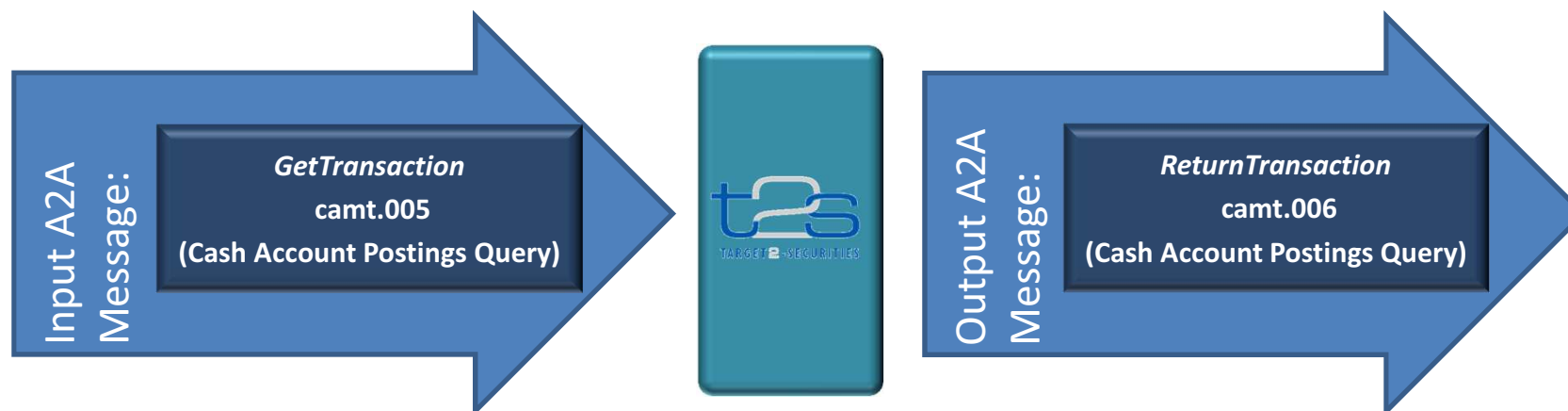
Minimum of

1. Auto-Collateralisation Limit – Limit Utilisation
11,743,741.75
2. Collateral Value
95,258,256.55

Cash Account Postings Query - Case

Cash Account Postings Query

- The T2S Actor can obtain current information on the postings, which were booked at a specific date on T2S Dedicated Cash Accounts.



Cash Account Postings Query – Example Output Screen

Cash » Cash Account » Cash Account Postings

Search Criteria - Cash Postings

NCB Parent BIC *

BITAITRRXXX

Party BIC *

MOTIITMXXX

T2S Dedicated Cash Account Number

Restriction Type

All

Currency

all

Business Date *

2014-10-23

Date and Time

from

to

Search

Reset

Rows per page: 10

page 1 of 1 - lines 1 to 4 of 4

Go to page: 1

T2S Dedicated Cash Account Number	RT	Date	Impacted Amount		Instruction		Restriction Reference	Timestamp
			Dbt/Crd	Cur.	Amount	Type	Internal Reference	
CITEURMOTIITMXXXCD6	DLVR	2014-10-23	Credit	EUR	1,000,000,000.00	LT	0000000000036629	2014-10-22 17:02
CITEURMOTIITMXXXRE0	DLVR	2014-10-23	Credit	EUR	1,000,000,000.00	LT	0000000000036646	2014-10-22 17:02
CITEURMOTIITMXXXTD5	DLVR	2014-10-23	Credit	EUR	1,000,000,000.00	LT	0000000000036647	2014-10-22 17:02
CITEURMOTIITMXXXCD0	DLVR	2014-10-23	Credit	EUR	1,000,000,000.00	LT	0000000000036648	2014-10-22 17:02

Rows per page: 10

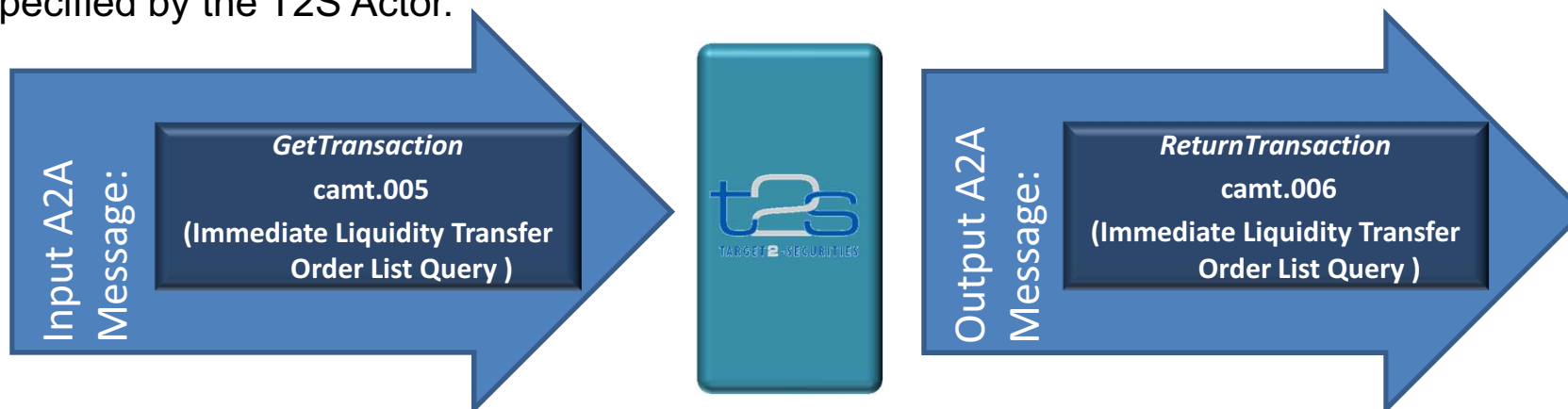
page 1 of 1 - lines 1 to 4 of 4

Go to page: 1

Immediate Liquidity Transfer Order List Query - Case

Immediate Liquidity Transfer Order List Query

The T2S Actor can obtain current information on all liquidity transfers having been settled on either one or all cash accounts of a party taking into account the selection parameters specified by the T2S Actor.



Immediate Liquidity Transfer Order List Query – Case U2A Screen

SECURITIES

CASH

SERVICES

STATIC DATA

MONITORING

Cash > Liquidity > Immediate Liquidity Transfers

Search Criteria - Liquidity Transfer Order

Party Search Criteria

Parent BIC

FAAGLVP1000

BIC

FADVLVP1000

Other Search Criteria

T2S Dedicated Cash Account Number

370932

Currency

EUR

Settlement Date and Time

from

to

RTGS Status *

RTGS Confirmation

Credit / Debit Code *

Credit

Value Date

Sending Time

from

to

Sort by

☒ T2S DCA No.
 ☐ Party BIC
 ☐ Currency
 ☐ Settlement Status
 ☐ RTGS Status
 ☐ Unsorted

Search

Reset

Parent BIC / BIC

Settlement Date and Time

RTGS Status

T2S Dedicated Cash Account Number

Sending Time

Credit / Debit Code

Currency

Value Date

Sort by

53

Immediate Liquidity Transfer Order List Query – Example Output Screen

Cash > Liquidity > Immediate Liquidity Transfers version 0.91-00

Search Criteria - Immediate Liquidity Transfers

Party - Search Criteria

Parent BIC: Party BIC:

Other Search Criteria

T2S Dedicated Cash Account Number: Currency: Settlement Date and Time: from to External RTGS Status:

Credit/ Debit Code: Value Date: Sending Time: from to

Sort by:
☐ T2S DCA No. ☐ Party BIC ☐ Currency ☐ Settlement Status ☐ RTGS Status ☒ Unsorted

T2S Reference	Users Reference	Generated LT	Parent BIC	Party	Party Short Name	Debit Cash Account Number	Credit Cash Account Number	Amount	Currency	Settlement Status	Settlement Date and Time	Sending Time	External RTGS Status	Value Date
18916	0000000028090600	No				IXZYAEITROXXXPM	CITEURMOTIITHMX	1,000,000,000.0	EUR	Settled	2014-07-30 17:3	---	Not applicable	2014-07-31
18917	0000000028090499	No				IXZYAEITROXXXPM	CITEURMOTIITHMX	1,000,000,000.0	EUR	Settled	2014-07-30 17:3	---	Not applicable	2014-07-31
18919	0000000028090497	No				IXZYAEITROXXXPM	CITEURMOTIITHMX	1,000,000,000.0	EUR	Settled	2014-07-30 17:3	---	Not applicable	2014-07-31
18927	0000000028090498	No				IXZYAEITROXXXPM	CITEURMOTIITHMX	1,000,000,000.0	EUR	Settled	2014-07-30 17:3	---	Not applicable	2014-07-31
18936	0000000028090808	No				IXZYAEITRO4CRPM	CITEURMOTIITHMX	1.00	EUR	Settled	2014-07-30 18:5	---	Not applicable	2014-07-31
19153	NONREF	Yes	BITAITRXXX	MOTIITHMXXX	Monte Titoli	CITEURMOTIITHMX	ITMOTIITHMXXXPM	1,000,000,000.0	EUR	Settled	2014-07-31 17:1	---	Not executed	2014-07-31
19154	NONREF	Yes	BITAITRXXX	MOTIITHMXXX	Monte Titoli	CITEURMOTIITHMX	ITMOTIITHMXXXPM	1,000,000,001.0	EUR	Settled	2014-07-31 17:1	---	Not executed	2014-07-31
19156	NONREF	Yes	BITAITRXXX	MOTIITHMXXX	Monte Titoli	CITEURMOTIITHMX	ITMOTIITHMXXXPM	1,000,000,000.0	EUR	Settled	2014-07-31 17:1	---	Not executed	2014-07-31
19194	NONREF	Yes	BITAITRXXX	MOTIITHMXXX	Monte Titoli	CITEURMOTIITHMX	ITMOTIITHMXXXPM	1,000,000,000.0	EUR	Settled	2014-07-31 17:1	---	Not executed	2014-07-31
19679	0000000028101527	No				IXZYAEITROXXXPM	CITEURMOTIITHMX	1,000,000,000.0	EUR	Settled	2014-08-01 17:0	---	Not applicable	2014-08-04

Rows per page: 10 page 1 of 34 - lines 1 to 10 of 332 Go to page: 1

Immediate Liquidity Transfer Order List Query – Case : Details Screen 1/2

SECURITIES	CASH	SERVICES	STATIC DATA	MONITORING									
Cash » Liquidity » Immediate Liquidity Transfer – Details													
General Information <table border="1"> <tr> <td>Instructed Settlement Amount 3,000,000,000.00000</td> <td>Currency EUR</td> <td>T2S Dedicated Cash Account Number Debit 2-NCB1</td> </tr> <tr> <td>Transferred Settlement Amount ---</td> <td>Settlement Date and Time 2012-04-03 07:00:02:01234</td> <td>T2S Dedicated Cash Account Number Credit 1-NCB1</td> </tr> <tr> <td>Value Date 2012-04-03</td> <td colspan="2"></td> </tr> </table>					Instructed Settlement Amount 3,000,000,000.00000	Currency EUR	T2S Dedicated Cash Account Number Debit 2-NCB1	Transferred Settlement Amount ---	Settlement Date and Time 2012-04-03 07:00:02:01234	T2S Dedicated Cash Account Number Credit 1-NCB1	Value Date 2012-04-03		
Instructed Settlement Amount 3,000,000,000.00000	Currency EUR	T2S Dedicated Cash Account Number Debit 2-NCB1											
Transferred Settlement Amount ---	Settlement Date and Time 2012-04-03 07:00:02:01234	T2S Dedicated Cash Account Number Credit 1-NCB1											
Value Date 2012-04-03													
Technical Information <table border="1"> <tr> <td>T2S Reference 1-LT</td> <td>User Reference REF-2012-L-1</td> </tr> <tr> <td>T2S generated No</td> <td></td> </tr> </table>					T2S Reference 1-LT	User Reference REF-2012-L-1	T2S generated No						
T2S Reference 1-LT	User Reference REF-2012-L-1												
T2S generated No													
Party Information <table border="1"> <tr> <td>Parent BIC NCB1FRPPXXX</td> <td>Party BIC PAR1FRPPXXX</td> <td>Party Short Name PAR1</td> </tr> </table>					Parent BIC NCB1FRPPXXX	Party BIC PAR1FRPPXXX	Party Short Name PAR1						
Parent BIC NCB1FRPPXXX	Party BIC PAR1FRPPXXX	Party Short Name PAR1											

Immediate Liquidity Transfer Order List Query – Case : Details Screen 2/2

Current Status Information

Settlement Status
Settled

External RTGS Status

Status History Information

5 (1 of 1)			
Date and Time	Status Type	Status Value	User ID
2012-04-03 07:00:02:01234	Settlement Status	Settled	---
5 (1 of 1)			

Rejection Reasons

Date and Time	Rejection Code	Rejection Description
---	---	---

Information Management through Target2 Value Added Services

Liquidity Information through Target2

- Default view of screen after entry via menu in Target2

RTGS

Home Account

Services

Static Data

Payments & Messages

Liquidity

Limits & Reservations

Ancillary Systems

target2

Log Out

Home

Profile Selection

Work as BIC: ZYBMDEF0MD6

Last Update: 10:02:07

Broadcast

RTGS : Liquidity : Current Liquidity : Display Current Liquidity RTGS Account

User: John Doe Last Update 10:30:18

RTGS Account ZYBLDEF0LD1 (EUR)

Start balance	222,000,000.00
▶ Liquidity transfers final	28,000,000.00
▶ Debits final	-27,300,000.00
▶ Credits final	77,300,000.00
Current Balance	300,000,000.00
Credit line	20,000,000.00
Available Liquidity	320,000,000.00
▶ Liquidity transfers pending	10,000,000.00
▶ Debits pending	-40,000,000.00
▶ Credits pending	22,000,000.00
Changes of Credit Line pending	-2,000,000.00
Projected Liquidity	310,000,000.00
Timed Payments	
▶ Debits	10,000,000.00
▶ Credits	15,500,000.00
Reservations	
Highly urgent	10,000,000.00
Urgent	15,500,000.00
Pending Reservations	
Highly urgent	1,000,000.00
Urgent	0.00

Aggregated View (EUR)

Liquidity RTGS account	320,000,000.00
Liquidity RTGS sub account (s)	50,000,000.00
Total RTGS Liquidity	370,000,000.00
Liquidity HAM Account	70,000,000.00
Total TARGET2 Liquidity	440,000,000.00
+ Display Liquidity T2S Dedicated Cash Account(s)	
Overall Liquidity	440,000,000.00

Liquidity Transfer

Credit Line

Proprietary Home Account

Interbank Transfer other HAM accounts

Liquidity Transfer Dedicated Cash Account

Liquidity Information through Target2

- Participants will be provided with information about T2S DCA liquidity (in right frame 'Aggregated View').
- Only DCA linked to the RTGS account will be displayed
- Fees for Display Liquidity T2S DCAs will only be charged if this part of screen is opened (by click on '+' → result see next slide).

Current Liquidity

RTGS

Payments & Messages

Liquidity

Home Account

Services

Static Data

RTGS : Liquidity : Current Liquidity : Display Current Liquidity RTGS Account

User: John Doe Last Update 10:30:18

RTGS Account ZYBLDEF0LD1 (EUR)

Start balance	222,000,000.00
▶ Liquidity transfers final	28,000,000.00
▶ Debits final	-27,300,000.00
▶ Credits final	77,300,000.00
Current Balance	300,000,000.00
Credit line	20,000,000.00
Available Liquidity	320,000,000.00
▶ Liquidity transfers pending	10,000,000.00
▶ Debits pending	-40,000,000.00
▶ Credits pending	22,000,000.00
Changes of Credit Line pending	-2,000,000.00
Projected Liquidity	310,000,000.00
▶ Timed Payments	
▶ Debits	10,000,000.00
▶ Credits	15,500,000.00
Reservations	
Highly urgent	10,000,000.00
Urgent	15,500,000.00
Pending Reservations	
Highly urgent	1,000,000.00
Urgent	0.00

Aggregated View (EUR)

Liquidity RTGS account	320,000,000.00
Liquidity RTGS sub account (s)	50,000,000.00
Total RTGS Liquidity	370,000,000.00
Liquidity HAM Account	70,000,000.00
Total TARGET2 Liquidity	440,000,000.00
- Display Liquidity T2S Dedicated Cash Account(s)	
▶ Liquidity T2S Dedicated Cash Account(s)	30,000,000.00
Overall Liquidity	470,000,000.00

Log Out

Home

Profile Selection

Work as BIC: ZYBMDEF0MD6

Last Update: 10:02:07

Broadcast

Liquidity Transfer

Credit Line

Proprietary Home Account

Interbank Transfer other HAM accounts

Liquidity Transfer Dedicated Cash Account

Current Liquidity

RTGS

Payments & Messages

Liquidity

Home Account

Services

Static Data

RTGS : Liquidity : Current Liquidity : Dedicated Cash Accounts : Display Current Liquidity On Linked Dedicated Cash Accounts

User: John Doe

Last Update 10:30:18

Log Out

Home

Profile Selection

Work as BIC: ZYBMDEF0MD4

Last Update: 10:02:07

Broadcast

Overview Liquidity on linked Dedicated Cash Account(s) in T2S (EUR)

Current Liquidity on RTGS Account in TARGET2 (EUR) ▶ 20,763,125.12

Dedicated Cash Account	Current DCA Balance (EUR)	Defined Standing Orders to DCA (EUR)	Settled Standing Orders to DCA (EUR)	Pending RTGS Debits to DCA (EUR)	Settled RTGS Debits to DCA (EUR)	Settled RTGS Credits from DCA (EUR)
○ CZT2SDCAZYBMDEF0MD4000000000000001	13,515,000.00	- 2,000,000.00	- 1,600,000.00	▶ 0.00	▶ - 13,000,000.00	▶ 0.00
○ CZT2SDCAZYBMDEF0MD4000000000000002	1,211,188.09	- 1,000,000.00	- 800,000.00	▶ 0.00	▶ - 1,211,188.09	▶ 0.00
○ CZT2SDCAZYBMDEF0MD4000000000000003	17,000.00	- 2,000,000.00	- 1,600,000.00	▶ 0.00	▶ - 1,600,000.00	▶ 1,000,000.00
○ CZT2SDCAZYBMDEF0MD4000000000000004	0.00	- 1,000,000.00	- 800,000.00	▶ - 1,000,000.00	▶ - 800,000.00	▶ 0.00
● CZT2SDCAZYBMDEF0MD4000000000000005	0.00	- 1,000,000.00	- 800,000.00	▶ - 4,000,000.00	▶ - 800,000.00	▶ 0.00
Sum	14,743,188.09	- 10,000,000.00	- 5,600,000.00	▶ - 5,000,000.00	▶ - 17,411,188.09	▶ 0.00

Page 1 of 1

Entries 1 to 5 of 5

Liquidity Transfer T2S Dedicated Cash Account

Only Value Added Service:

Function available for single participants and group of accounts (GoA) manager.

Provisioning of information about:

- aggregated RTGS liquidity,
- the liquidity on the DCA linked to the participant's RTGS account,
- the ordered and executed amount of standing order transfers from RTGS to DCA,
- pending RTGS transfers to DCA, i.e. RTGS debits to DCA and
- settled RTGS transfers to DCA, i.e. RTGS credits from DCA and RTGS debits to DCA will be displayed.

Button: Opening function Liquidity Transfer T2S DCA (see next slide).

Next Steps (1/3)

2° Incontro: L'autocollateral in T2S e la gestione del collateral con la Banca d'Italia (26 novembre 2014)

- L'autocollateralizzazione con la Banca d'Italia
- La Client Collateralisation
- Movimentazione del collateral per il conto pool
- Movimentazione del collateral per operazioni CCBM e altre operazioni

Next Steps (2/3)

3° Incontro: Aspetti operativi, normativi e amministrativi (12 gennaio 2015)

- Procedure in “normal e abnormal situations”
- Il processo di *billing* di T2S (profili cash)
- I contratti per l’apertura dei conti DCA e per l’accesso all’autocollateral
- L’iter amministrativo per la partecipazione a T2S
- I formulari per il censimento dei dati statici

Next Steps (3/3)

- **4° Incontro: Organizzazione dei collaudi e della migrazione (5 febbraio 2015)**
- Le fasi di test e calendario dei collaudi
- Presentazione dei casi di test
- Pre-migration, migration week end e stabilisation period
- Le attività previste nella fase di pre-migrazione (Pre-Migration Schedule) con riferimento ai DCAs
- Le attività previste per il migration week end (Migration Weekend Playbook) per i DCA holders
- Impatti del processo di migrazione delle waves successive alla prima



Training T2S - aspetti funzionali

Liquidity Transfers

Roma, 28 Ottobre 2014
Centro Congressi della Banca d'Italia

Disclaimer

The T2S Training Materials are dedicated to teaching the various relevant aspects of T2S in a precise, clear and easily understandable manner.

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Furthermore, the Eurosystem reserves the right to revise the currently proposed T2S Training Materials and to introduce changes or amendments from time to time without any obligation to notify any person or organisation of such amendments or changes.

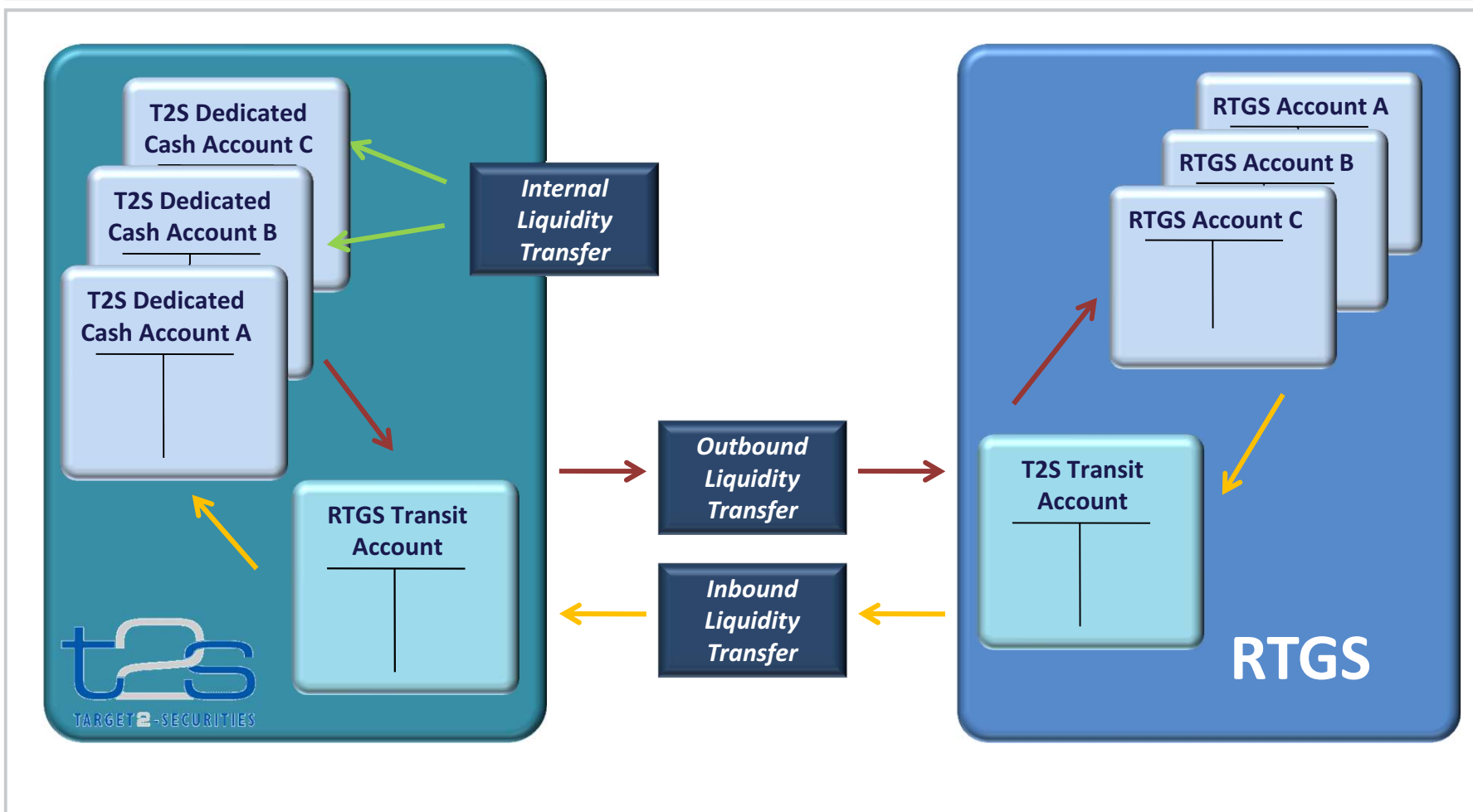
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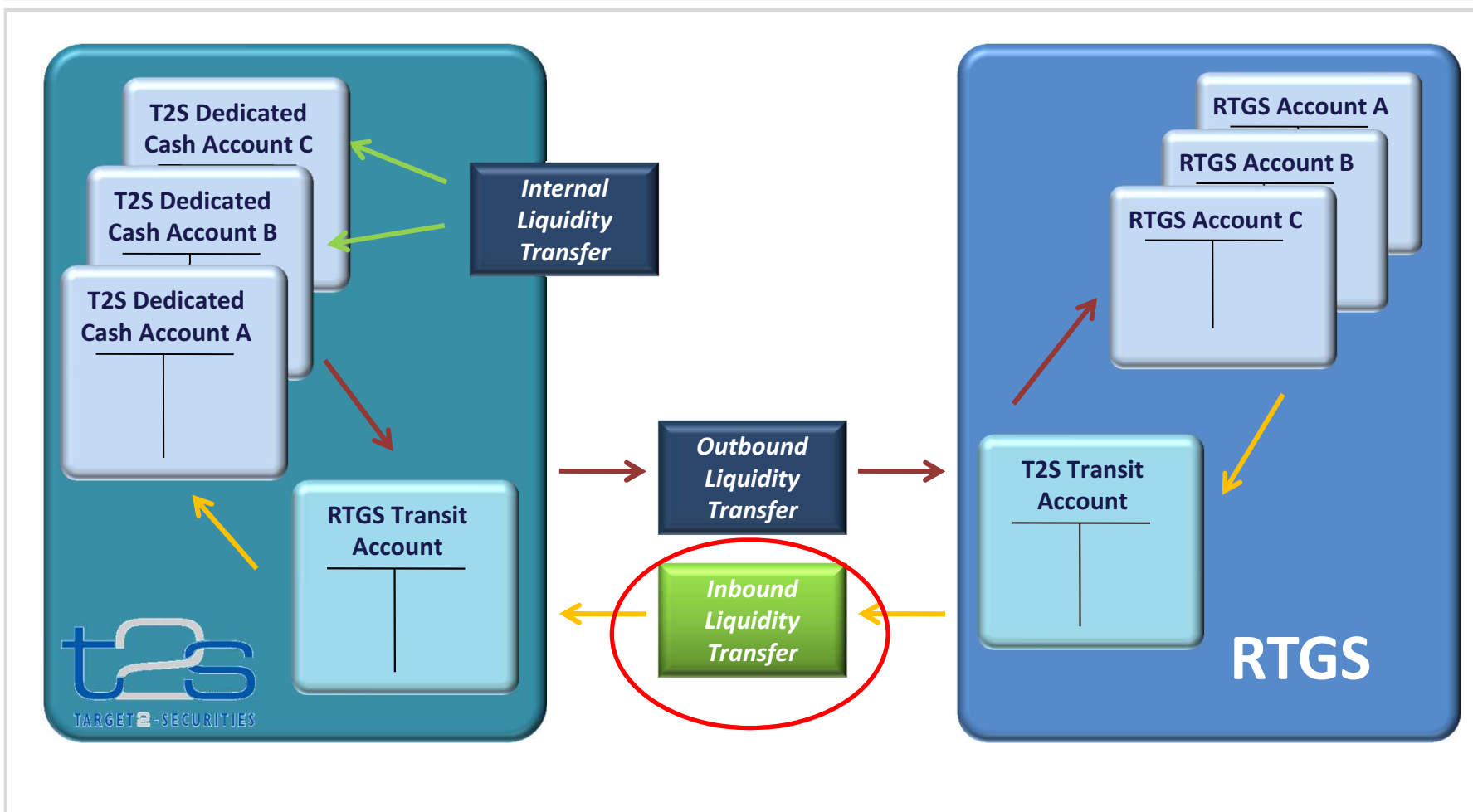
Agenda

- Definition of Liquidity Transfers (differentiation by direction/by execution time)
- Corporate Actions in cash
- Multiple Liquidity Providers
- Liquidity Transfers and Settlement Day
- Communication of Liquidity Transfers

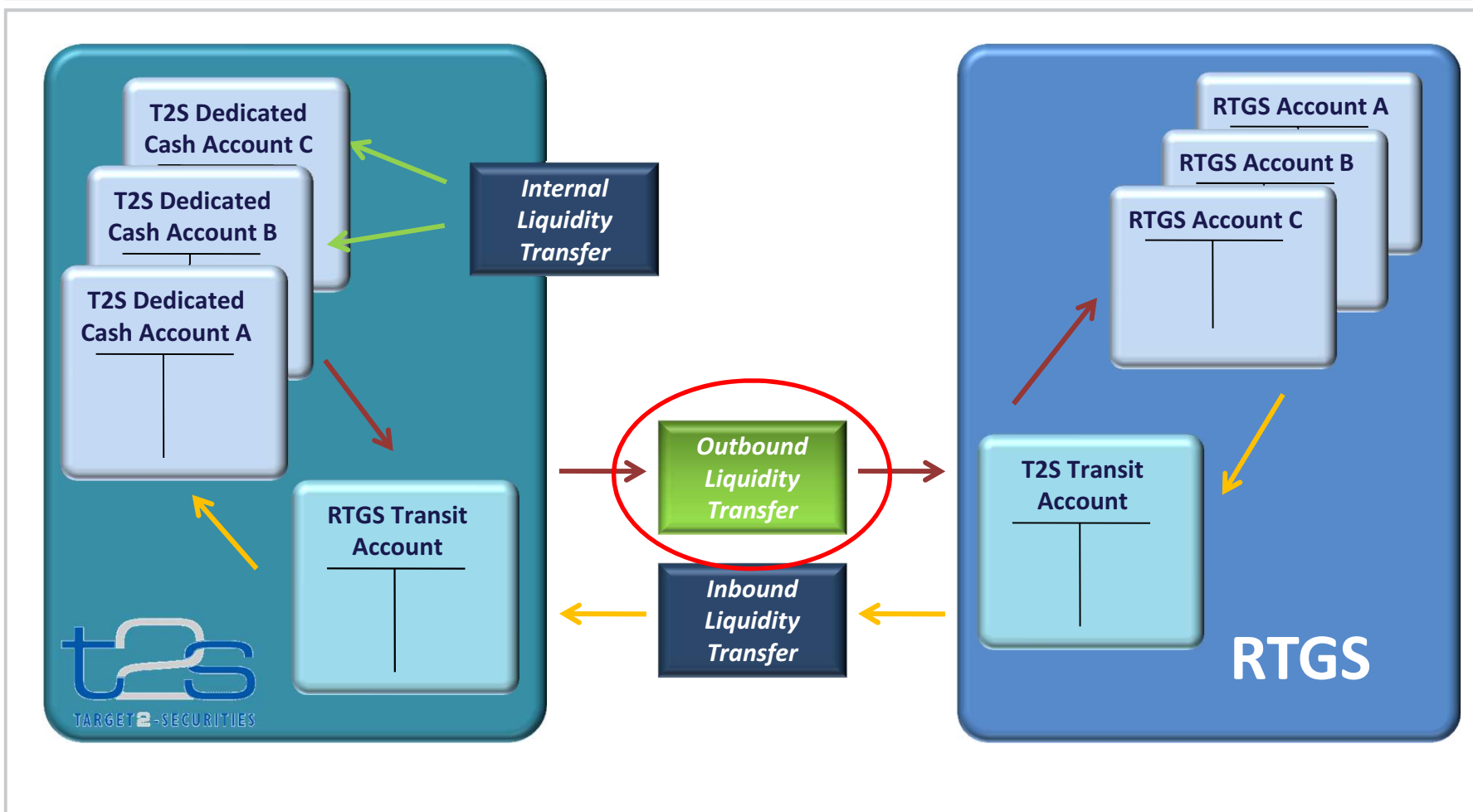
Direction of Liquidity Transfers



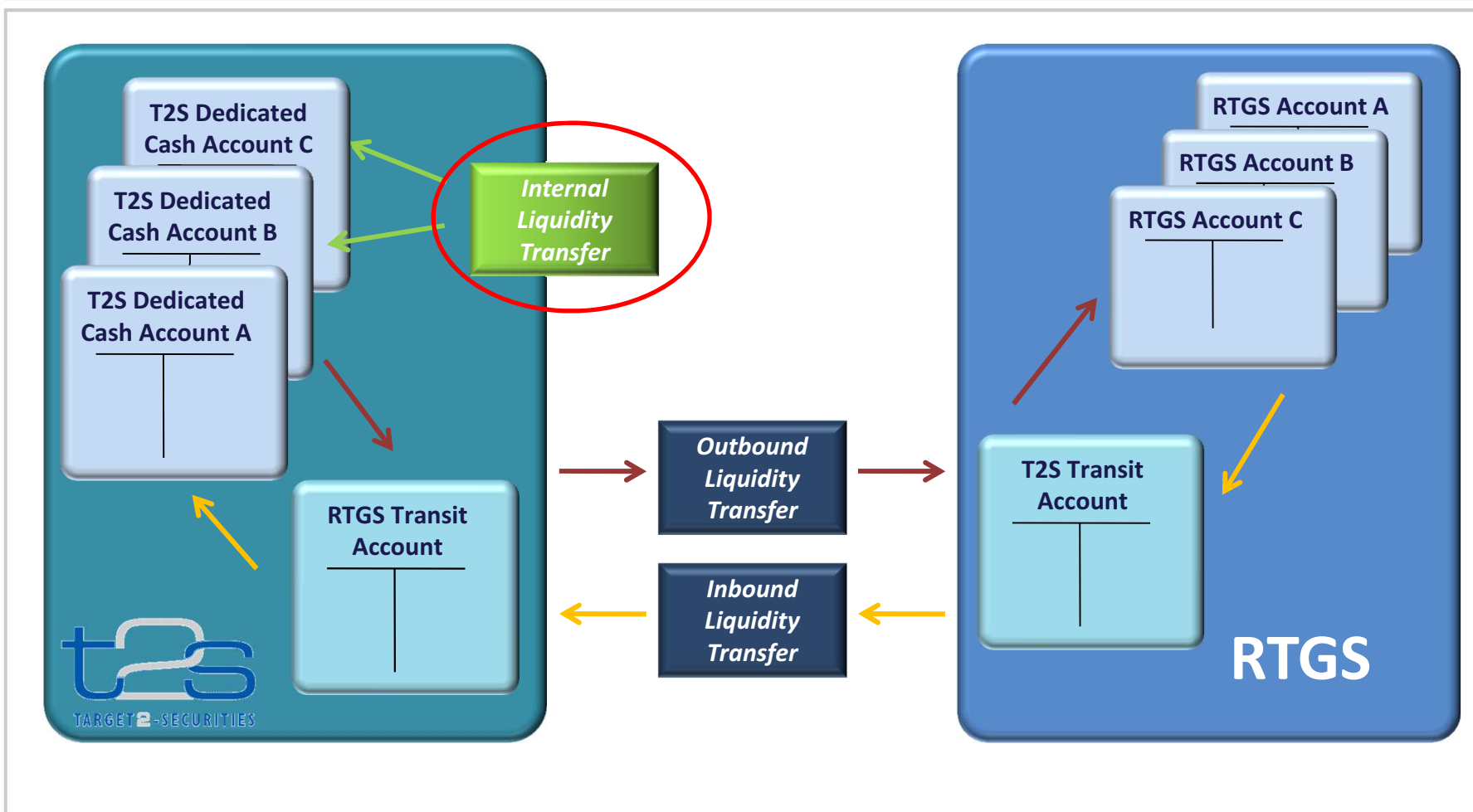
Inbound Liquidity Transfers (1/3)



Outbound Liquidity Transfers (2/3)



Internal Liquidity Transfers (3/3)



Inbound Liquidity Transfers

- Inbound liquidity transfers are transfers of cash from the RTGS account to the DCA. They are initiated in the respective RTGS system
- Inbound LT are possible **from any RTGS Account** to a certain T2S Dedicated Cash Account
- Incoming Liquidity Transfers (in euro) are executed via TARGET2:
 - **Core services: via U2A, via A2A** (*LiquidityCreditTransfer message (camt.050.001.003)*) Possible submission of liquidity transfer by 3rd party (e.g. CSD) *via A2A*. This feature will require the ex ante consent of the RTGS account holder in the form of a mandate, which will be stored in the static data
 - **Optional services: via MT 202**

Liquidity Transfers via ICM

The screenshot shows the T2S Liquidity Transfer interface. The top navigation bar includes 'RTGS', 'Services', and 'Static Data'. The 'RTGS' section is active, showing 'Liquidity' and 'Transfer T2S Dedicated Cash Account'. The 'Transfer (EUR)' section is highlighted with a red circle, containing fields for 'Amount (EUR)' and 'Payment Reference'. The 'Dedicated Cash Account' section is also highlighted with a red circle, showing a dropdown for 'Account No.' and a 'Submit' button. The 'RTGS Account' section on the left shows 'BIC' (ZYAEITR06P1), 'Account No.' (ITZYAEITR06P1PM), 'Name' (DIRETTO PM CO-MANAGER ROMA), and 'Available Liquidity (EUR)' (55,724,962.76). The right sidebar contains a 'Log Out' button and a 'Profile Selection' section with radio buttons for 'as SWIFT-based Participant', 'as Internet-based Participant', 'as Group of Accounts', 'as Co-Manager', 'as Ancillary System', 'as CCBM2', and 'as Central Bank'.

Dedicated Cash Account

Possibility to either:
i) select a DCA from the list of DCAs **linked to the RTGS account** (drop-down list) or
ii) to enter the account number of any other DCA

Standing orders liquidity transfers to DCA (1/2)

- Possibility to create/amend standing order liquidity transfers to T2S via the ICM in U2A mode or A2A mode (*camt5 GetStandingOrder (camt.069.001.01) and ReturnStandingOrder (camt.070.001.01)*) (core service in TARGET2)
- The execution of the standing orders will exclusively be event-driven and the only event considered is the start of the night-time settlement in TARGET2 at 19:30.
- In case the liquidity on participant's account is not sufficient to execute all standing orders, the pro-rata rule would apply. No distinction will be made between the T2S and the non-T2S standing orders.

Standing order liquidity transfers to DCA (2/2)

Browser: https://trgt-papss-cust.ssp.swiftnet.sipn.swift.com | TARGET 2 | europa.eu

RTGS | Home Account | Services | Static Data

Payments & Messages | Liquidity | Limits & Reservations | Ancillary Systems | Backup

RTGS : Liquidity : Standing Order Liquidity Transfer : Dedicated Liquidity for T2S : Display and Enter Standing Orders to Dedicated Cash Accounts

User: supervisor-test | Last Update 09:27:50

Participant
Participant BIC: ZYAEITR0XXX
Participant Name: BANCA D'ITALIA T2S

Liquidity Injection to Dedicated Cash Accounts(EUR)

Dedicated Cash Account Owner BIC	Dedicated Cash Account Number	Standing Order Amount(EUR)	Information
		Defined	New
BITAIRRXXX	C IT EUR BITAIRRXXX AUTOCOL	1,000,000,000.00	
BITAIRRXXX	C IT EUR BITAIRRXXX DVP	1,000,000,000.00	
PASCITMMXXX	C IT EUR PASCITMMXXX 0001	1,000,000,000.00	
UNCRITMMXXX	C IT EUR UNCRITMMXXX 0001	1,000,000,000.00	
CROPITRXXX	C IT EUR CROPITRXXX 0001	1,000,000,000.00	
BCITITMMXXX	C IT EUR BCITITMMXXX 0001	1,000,000,000.00	
TWOSITMMXXX	C IT EUR TWOSITMMXXX 0001	1,000,000,000.00	
CITIITMXSEC	C IT EUR CITIITMXSEC 0001	1,000,000,000.00	
CCEGITRXXX	C IT EUR CCEGITRXXX 0001	1,000,000,000.00	
ICRAITRXXX	C IT EUR ICRAITRXXX 0001	1,000,000,000.00	
BAPPIT22XXX	C IT EUR BAPPIT22XXX 0001	1,000,000,000.00	
BITAIRRXXX	C IT EUR BITAIRRXXX TDSC	1,000,000,000.00	
ZYAEITR04CF	C IT EUR ZYAEITR04CF 0001	1,000,000,000.00	
ZYAEITR04CH	C IT EUR ZYAEITR04CH 0001	1,000,000,000.00	
ZYAEITR04CH	C IT EUR ZYAEITR04CH 0002	1,000,000,000.00	
ZYAEITR04CH	C IT EUR ZYAEITR04CH 0003	1,000,000,000.00	
ZYAEITR04CP	C IT EUR ZYAEITR04CP 0001	1,000,000,000.00	
ZYAEITR04CR	C IT EUR ZYAEITR04CR 0001	1,000,000,000.00	
ZYAEITR05CP	C IT EUR ZYAEITR05CP 0001	1,000,000,000.00	
MOTIITMMXXX	C IT EUR MOTIITMMXXX REO	1,000,000,000.00	
MOTIITMMXXX	C IT EUR MOTIITMMXXX TDS	1,000,000,000.00	
MOTIITMMXXX	C IT EUR MOTIITMMXXX CD5	1,000,000,000.00	
MOTIITMMXXX	C IT EUR MOTIITMMXXX CD0	1,000,000,000.00	
ZYAEITR04CH	C IT EUR ZYAEITR04CH 0004	1,000,000,000.00	
PARBFRPHXXX	C FR EUR PARBFRPHXXX 0001	1,000,000,000.00	
PARBFRPHXXX	C FR EUR PARBFRPHXXX 0001	1,000,000,000.00	

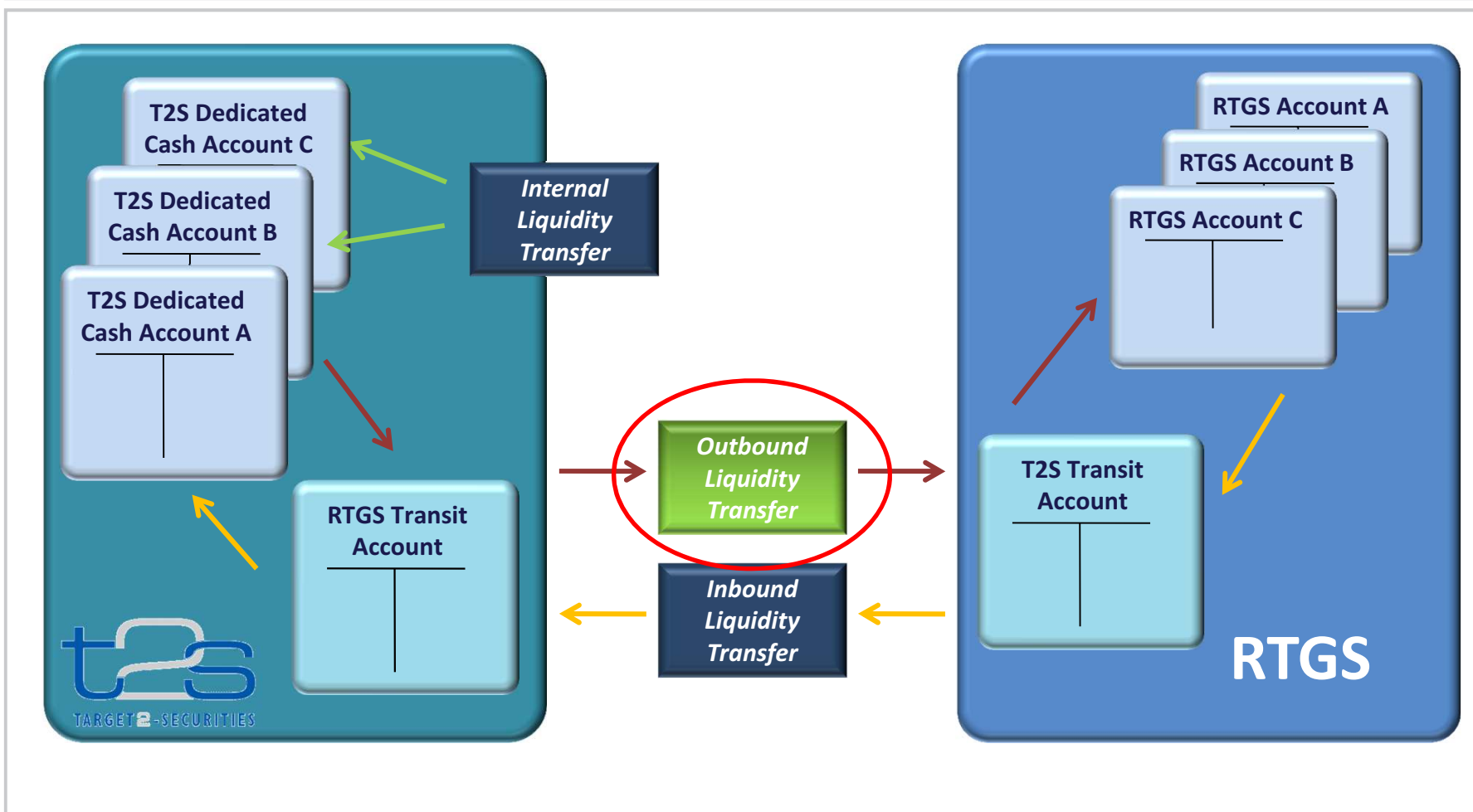
Amount → Change the value of an existing standing order

New → Define a new standing order

Save

EUROSISTEMA

Outbound Liquidity Transfers



Outbound Liquidity Transfers (1/4)

Outbound Liquidity Transfers

- Outbound liquidity transfers are used to transfer liquidity from T2S Dedicated Cash Accounts to External RTGS Accounts
- Initiated in T2S by the DCA account holder or any other authorised party or, in TARGET2 (via Optional Services) by the “linked” RTGS account holder
- Outbound liquidity transfers can either be executed via A2A or U2A
- In T2S immediate and standing/predefined execution possible

Full or partial execution for Outbound Liquidity Transfer

- Liquidity transfers in general are executed on an all or nothing basis
- In case of insufficient liquidity on the source account and under the following conditions an outbound liquidity transfer can be settled partially
 - Liquidity transfer is initiated by a third party (with the respective privileges) authorised by the account holder or
 - It is a standing or predefined liquidity transfer
- In case the liquidity transfer is settled partially, there is no further settlement attempt to transfer the remaining amount

Outbound Liquidity Transfers - via T2S GUI (2/4)

In the following example an immediate outbound liquidity transfer is entered in U2A

The screenshot shows the 'T2S - New Immediate Liquidity Transfer' form in a Mozilla Firefox browser. The form is titled 'Immediate Liquidity Transfer' and contains several sections: 'Debit Cash Account', 'Liquidity Transfer', and 'Credit Cash Account'. The 'Debit Cash Account' section has a dropdown for 'Account Number' (105026) and a text field for 'Account Owner' (PMBKDEFFL04). The 'Liquidity Transfer' section has a text field for 'User Reference' (121024124636bg) and a text field for 'Amount' (17,000.00 EUR). The 'Credit Cash Account' section has a radio button for 'Outbound Liquidity Transfer' (selected) and a text field for 'RTGS Account' (DENCEBYGNGL). Annotations with callouts point to these fields: 'Account Number' (Permission of the User, Debit account existing and active), 'Account Owner', 'User Reference', 'Amount', and 'RTGS Account' (Active and known in T2S). The form also includes 'Submit', 'Cancel', and 'Reset' buttons at the bottom.

Outbound liquidity transfers - via T2 Optional services (3/4)

Liquidity transfers from T2S to T2 can also be executed via TARGET2 Optional services:

- via MT 202
- via U2A (ICM screen)
- Via A2A (*camt5 LiquidityCreditTransfer* without using the BAH – while for messages sent directly to T2S the BAH is used)

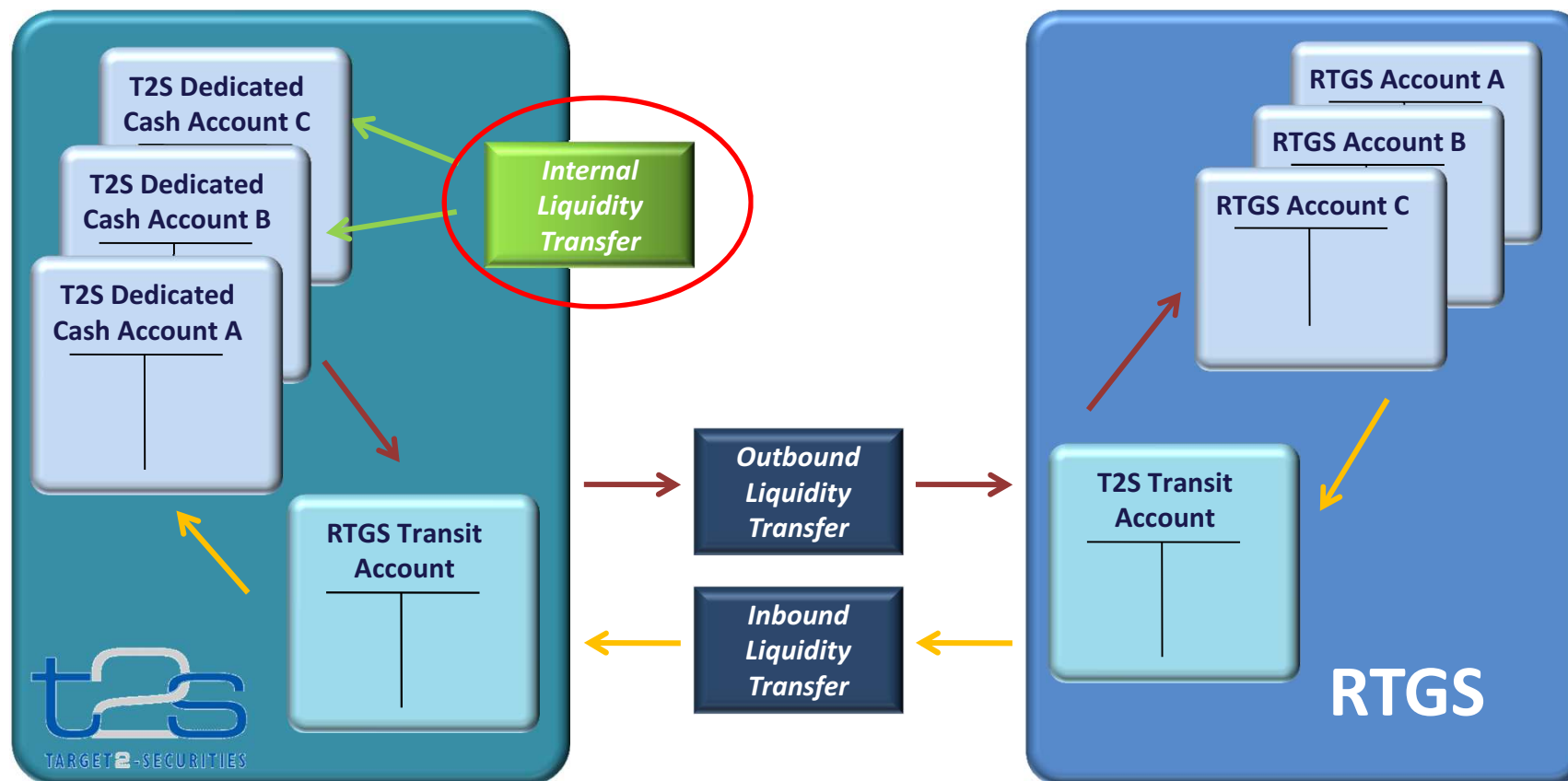
In case of liquidity transfers from T2S to T2, it is only possible to debit the DCAs that are linked to the RTGS account. However these pulled liquidity transfers can credit any existing RTGS accounts i.e. is not restricted to the RTGS account to which the DCA is linked.

Outbound Liquidity transfers - via ICM (4/4)

The screenshot displays the 'Transfer (EUR)' form in the TARGET2-SECURITIES system. The form is divided into several sections: 'RTGS Account' (containing a BIC field), 'Dedicated Cash Account' (containing an Account No. dropdown), 'Amount (EUR)' (with a text input), and 'Payment Reference' (with an 'End to End ID (opt.)' field). A red circle highlights a back arrow button located between the 'RTGS Account' and 'Dedicated Cash Account' sections. Below the form, two callouts provide additional information: 'RTGS Account' is linked to the text 'Any RTGS account can be credited', and 'DCA' is linked to the text 'Only DCAs linked to the RTGS account can be debited'.

Note!: TARGET2 Optional services are not made available to Internet-based participants (no business case to justify this investment). Also, according to the Guideline, Internet-based participants cannot become “Main RTGS Account” for a DCA in T2S)

Internal Liquidity Transfers (1/3)



Internal Liquidity Transfers (2/3)

Internal Liquidity Transfers

- Internal LT can be executed only via T2S
- Only immediate execution (i.e. no execution via predefined or standing order)
- Both T2S Dedicated Cash Accounts have to belong to the same payment bank or
both T2S Dedicated Cash Accounts have to be linked to the same RTGS Account

Full or partial execution for Internal Liquidity Transfers

- Liquidity transfers in general are executed on an all or nothing basis
- In case of insufficient liquidity on the source account and under the following condition an internal liquidity transfer can be settled partially
 - Liquidity transfer is initiated by a third party (with the respective privileges) authorised by the account holder
- In case the liquidity transfer is settled partially there is no further settlement attempt to transfer the remaining amount

Internal Liquidity Transfers – via U2A (3/3)

In the following example an internal liquidity transfer is entered in U2A

T2S - New Immediate Liquidity Transfer - Mozilla Firefox

File Edit View History Bookmarks Tools Help

s2b2.tssp.sif.net:17067/ICMWeb/pages/lmg/liquidity/immediateLiquidityTransfer/immediateLiquidityTransferEnter.icm?windowId=308

Welcome to T2S-Implementation, **bg09078** » Logout | » Help | 2012-10-24 12:48:25

Session ID: b300024f-bd5-4605-628-a130-09f Stage: Internal Acceptance Version: 00.09.34 (2012-10-02_17:23:48)

SECURITIES CASH SERVICES STATIC DATA MONITORING

Cash » Liquidity » Immediate Liquidity Transfers » New Immediate Liquidity Transfer

Immediate Liquidity Transfer

Debit Cash Account

Account Number * 105026 Account Owner PMBKDEFFL04

Liquidity Transfer

User Reference * 121024124636bg Amount * 17,000.00 EUR

Credit Cash Account

☒ Outbound Liquidity Transfer ☒ Internal Liquidity Transfer

RTGS Account * DENCEBYGNGL Account Number * 105097

Submit Cancel Reset

Account Number (only applicable for internal Liquidity Transfers)

Credit account existing and active

only possible between T2S Dedicated Cash Accounts

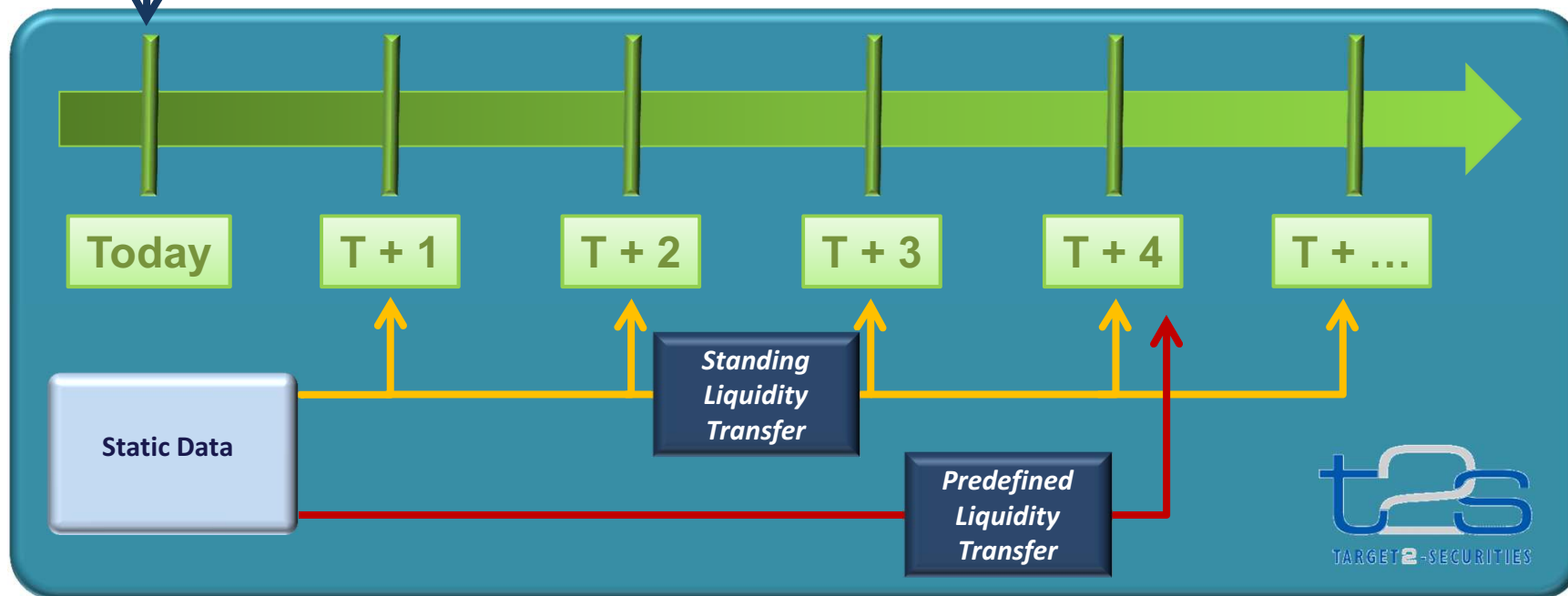
- linked to the same RTGS account or
- belonging to the same payment bank

Differentiation by Time of Execution

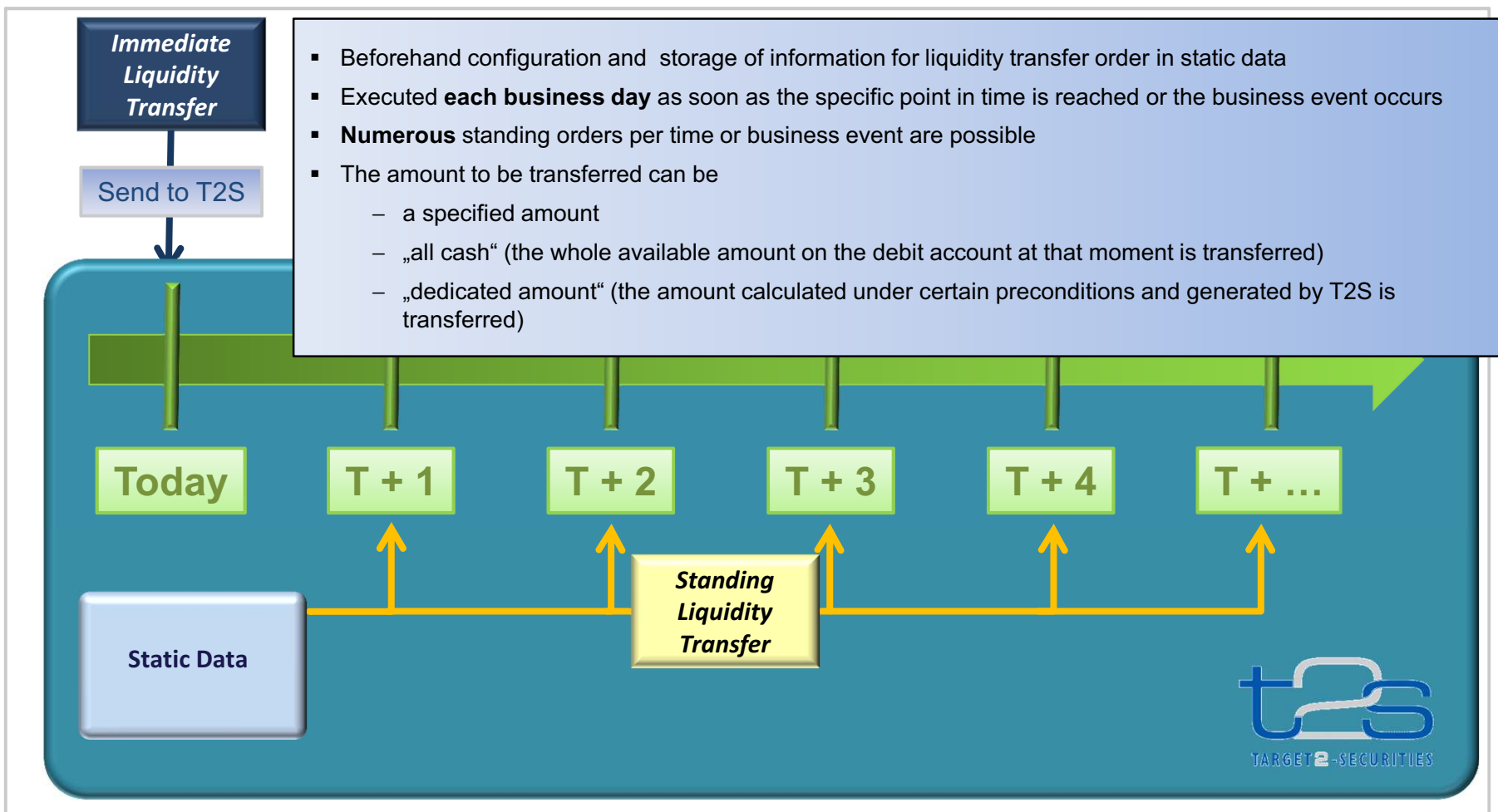
**Immediate
Liquidity
Transfer**

Send to T2S

- Inbound, outbound and internal liquidity transfers can be executed immediately
- Immediate liquidity transfers are executed
 - as soon as they enter T2S and
 - as soon as they are validated
- A value date specified for future execution is not valid



Future Execution – Standing Liquidity Transfer



Future Execution – Predefined Liquidity Transfer

**Immediate
Liquidity
Transfer**

Send to T2S

- Beforehand configuration and storage of information for liquidity transfer order in static data
- Executed **once** as soon as the specific point in time is reached or the business event occurs
- **Only** one predefined order per time or business event is possible
- The amount to be transferred can be
 - a specified amount
 - „all cash“ (the whole available amount on the debit account at that moment is transferred)
 - „dedicated amount“ (the amount calculated under certain preconditions and generated by T2S is transferred)

Today

T + 1

T + 2

T + 3

T + 4

T + ...

Static Data

**Predefined
Liquidity
Transfer**

t2s
TARGET2-SECURITIES

Standing Order–Predefined Order - U2A

T2S - New Liquidity Transfer Order - Mozilla Firefox

File Edit View History Bookmarks Tools Help

T2S - New Liquidity Transfer Order

s2b2.tssp.sif.net:17067/ICMWeb/pages/sdmg/cashaccount/lqtoEnter.icm?windowId=308

Welcome to T2S-Implementation, **bg09078** » Logout | » Help | 2012-10-24 12:46:25

Session ID: b300024f-bed5-4905-628a-f30c9f Stage: Internal Acceptance Version: 00.09.34 (2012-10-02_17:23:48)

SECURITIES CASH SERVICES STATIC DATA MONITORING

Cash » Liquidity » Liquidity Transfer Orders » New Liquidity Transfer Order

The Liquidity Transfer Order was successfully saved.

Liquidity Transfer Order

Order Reference *
Reference123

Valid
from * 2012-11-07
to *

Amount
EUR

Order Type
Standing Order

Credited External RTGS Account *
DE44 2512 0510 0002 9002 9

Dedicated Amount
☐

Event Type
CIP0

Debited T2S Dedicated Cash Account *
200029

All Cash
☒

Execution Time

Order Reference

Valid from .. to

Amount/Dedicated Amount/All Cash

Order Type: Standing or Predefined

Credited External RTGS Account

Debited T2S Dedicated Cash Account

Event-based or time-based

Same currency as T2S Dedicated Cash Account

Account existing and active

Submit Cancel Reset

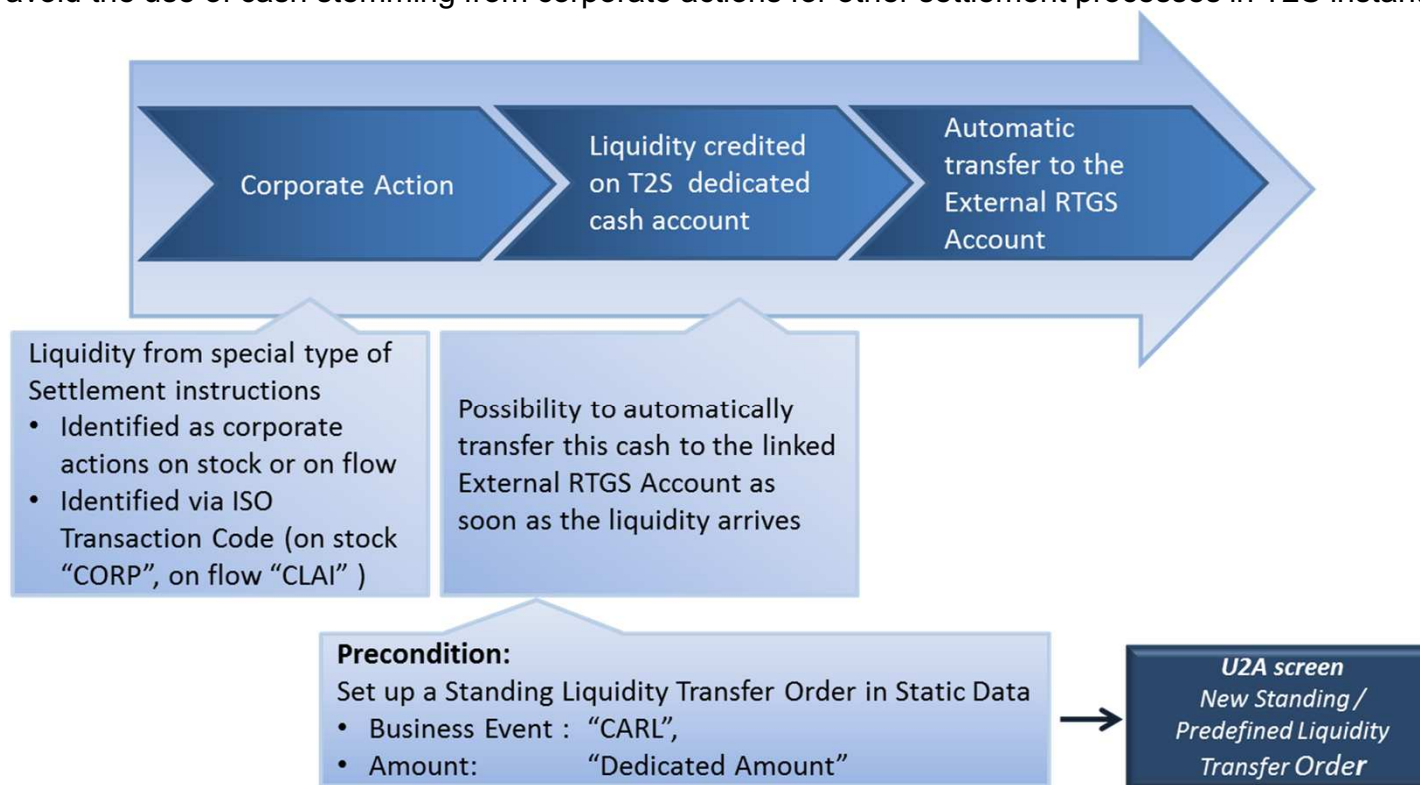
Valid from: equal or later than current date
Valid to: later than current date and "Valid from"

One field needs to be filled

Concept

Corporate Actions in Cash is the process of **automatically transferring the cash proceeds of corporate actions** from a T2S Dedicated Cash Account to an RTGS account.

Purpose: avoid the use of cash stemming from corporate actions for other settlement processes in T2S instantly



GUI Screen

SECURITIES

CASH

SERVICES

STATIC DATA

MONITORING

Cash » Liquidity » Liquidity Transfer Orders » New Liquidity Transfer Order

Liquidity Transfer Order

Order Reference *

123456789

Valid

from *

2012-11-21

to

Amount

Order Type *

Standing Order

Credited External RTGS Account *

RTGS Account DE-EUR-GNGN-002

Dedicated Amount

☒

Event Type

CARL

Debited T2S Dedicated Cash Account *

105082

All Cash

☐

Execution Time

Submit

Cancel

Reset

**Order Type: Standing
or Predefined**

Dedicated Amount

Event Type : CARL

Definition

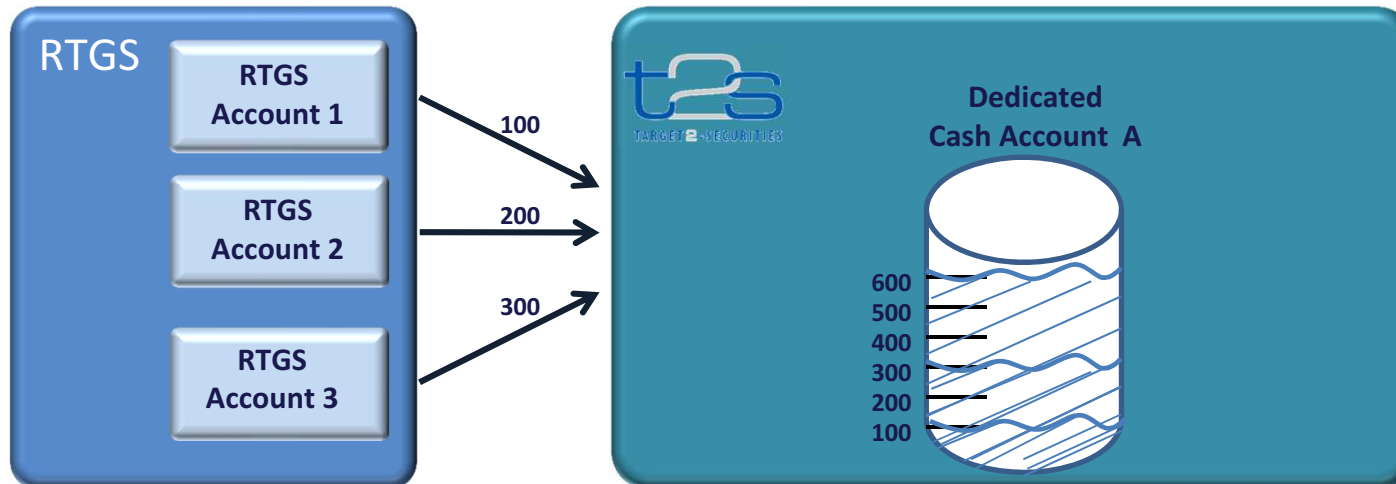
T2S enables its T2S Actors to **receive liquidity from different RTGS accounts** (i.e. from different liquidity providers) to **a single T2S Dedicated Cash Account**.

The Multiple Liquidity Provider functionality

- Is an optional function
- **Automatically retransfers the liquidity** remaining at the **end of the Night-time settlement phase** from the T2S Dedicated Cash Account of the T2S Actor to the RTGS accounts of its liquidity providers
- Is initiated by a T2S Actor having **privileges** of debiting a certain T2S Dedicated Cash Account

Example

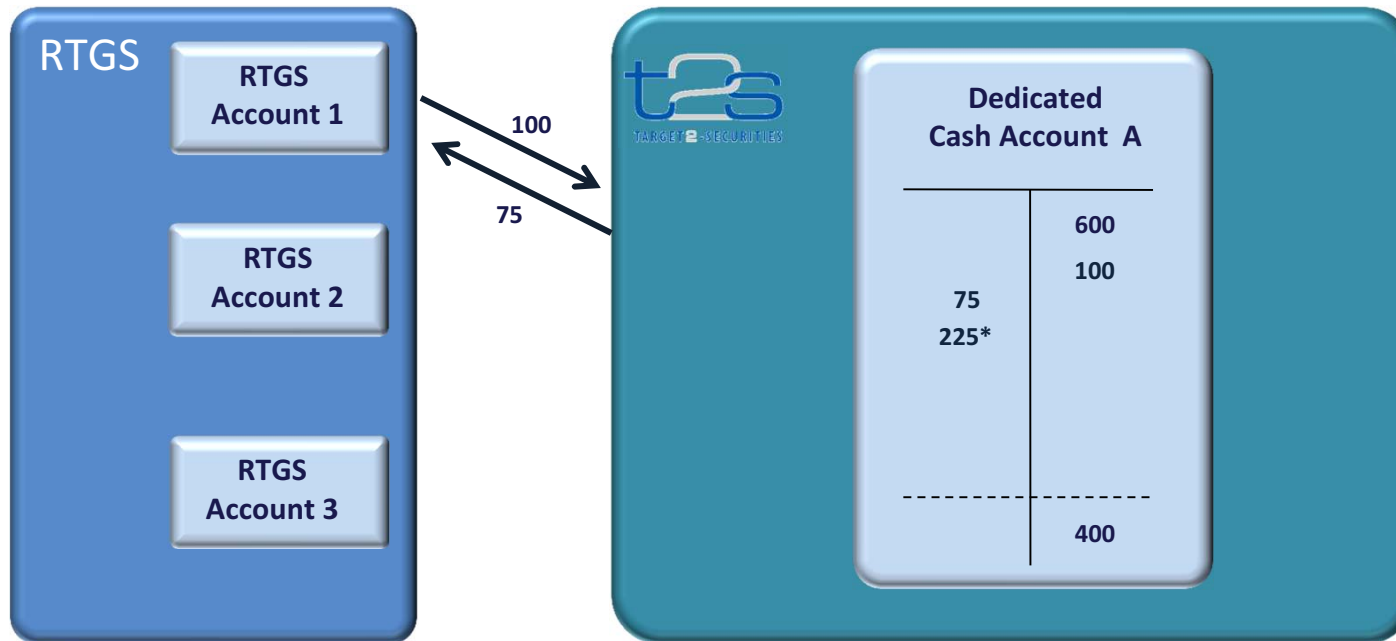
Injection of liquidity Transfers during sequence 0 of the Night-time settlement period



UDFSv1.2.1 §1.6.2.6 Example 189

Example

Liquidity Transfers during the Night-time Settlement period

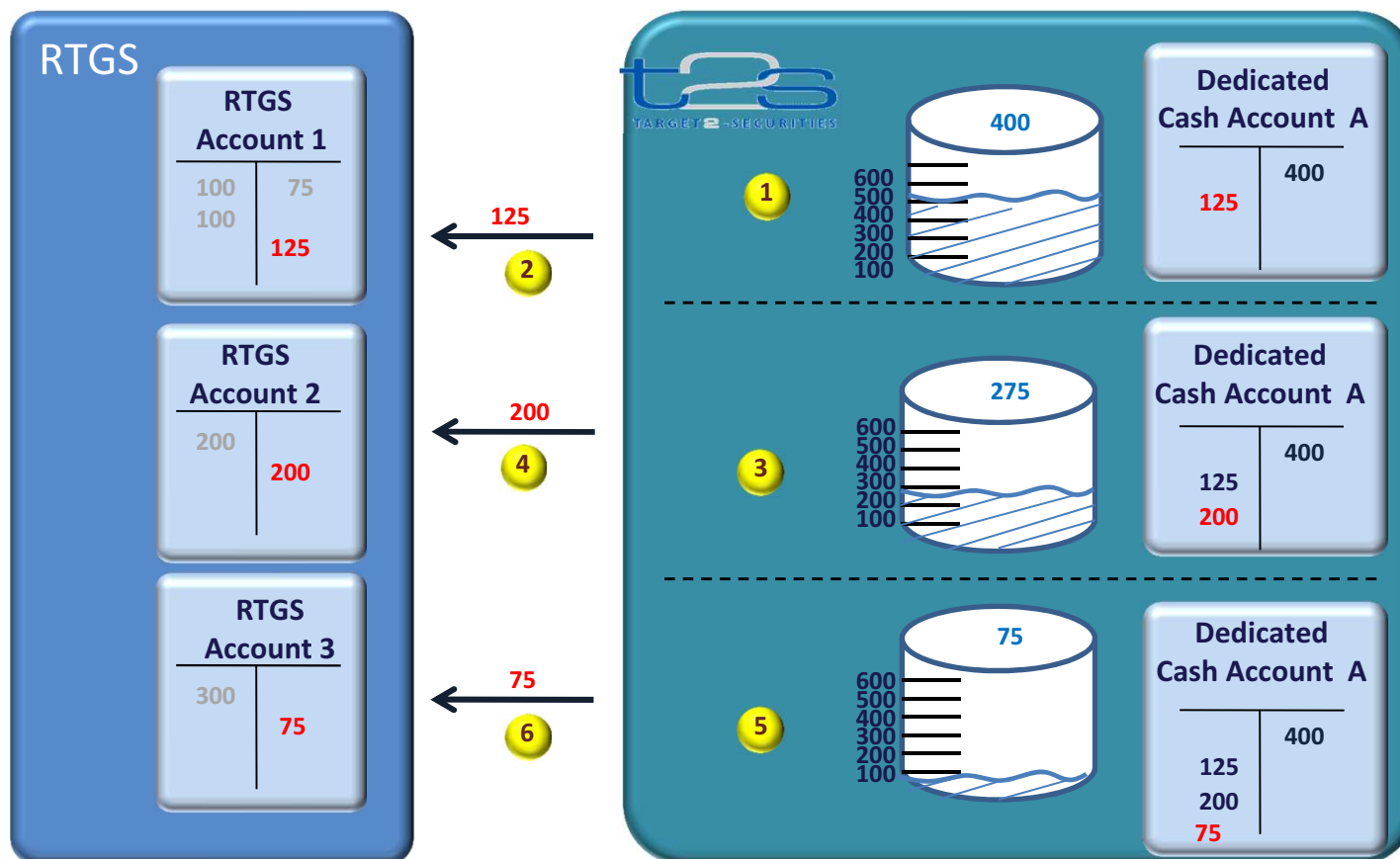


UDFSv1.2.1 §1.6.2.6 Example 189

* Further transfers occur on the account, which are not reflected in the picture, because they are not interrelated with the 3 shown RTGS accounts. Due to these additional transfers the amount on the account reduces to 400.

Example

Reimbursement of the remaining liquidity



Setup of Multiple Liquidity Provider

To use the Multiple Liquidity Transfer Order functionality the T2S Actor has to perform two separate steps

1. Setup of separate **Liquidity Transfer Orders** in T2S for each Liquidity Provider
 - with Event Trigger ,C2PY' → "Start of cycle 2 / preparation of sequence Y"
 - Only in U2A
2. Link all needed Liquidity Transfer Orders via a ,**Liquidity Transfer Order Link Set**' to define the sequence of execution
 - Only in U2A

On the following slides an example for the creation of Multiple Liquidity Provider Orders is shown based on the GUI-screens.

Standing Liquidity Transfer Order – GUI screens 1/2

SECURITIES

CASH

SERVICES

STATIC DATA

MONITORING

Cash > Liquidity > Liquidity Transfer Orders > New Liquidity Transfer Order

Liquidity Transfer Order

Order Reference *

Transfer RTGS Account 1

Valid from *

2012-11-21

Valid to *

Amount

EUR

Order Type *

Standing Order

Credited External RTGS Account *

RTGS Account DE-EUR-GNGN-002

Dedicated Amount

☒

Event Type

C2PY

All Cash

☐

Execution Time

Debited RTGS Dedicated Cash Account

105082

Standing Order for reimbursement of Liquidity Provider

RTGS Account 1

RTGS Account 2

Dedicated Amount

Event Type : C2PY

Submit

Cancel

Reset

Standing Liquidity Transfer Order – GUI screens 2/2

SEcurities CASH SERVICES STATIC DATA MONITORING

Cash > Liquidity > Liquidity Transfer Orders > New Liquidity Transfer Order

Liquidity Transfer Order

Order Reference *
Transfer RTGS Account 3 (MAIN)

Valid
from * 2012-11-21
to

Amount
EUR

Order Type *
Standing Order

Credited External RTGS Account *
RTGS Account DE-EUR-CNGN-003

Dedicated Amount
☐

Event Type
C2PY

All Cash
☒

Execution Time

Dedicated T2S Dedicated Cash Account
105002

Submit Cancel Reset

Standing Order for
reimbursement of
**Main Liquidity
Provider**

RTGS Account 3

All Cash

Event Type : C2PY

Liquidity Transfer Order Link Set – GUI screens

Liquidity Transfer Order Link Set

Parent BIC * Party BIC *

Valid From * Valid To

T2S dedicated cash account number *

Liquidity Transfer Order Links

Order Sequence *	Liquidity Transfer Order Reference *	Options
1	Transfer RTGS Account 1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
2	Transfer RTGS Account 2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
3	Transfer RTGS Account 3 (MAIN)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

+ 8 changes left

Different Settlement Day Periods in T2S

Night-time settlement
(19:30* – maximum 03:00)

First night-time settlement cycle

- Settlement Sequence 0
-> Settlement of Inbound Liquidity Transfers
-> Settlement of Internal Liquidity Transfer
- Settlement Sequence 1, 2, 3, 4
-> Settlement of all Types of Liquidity Transfers

Last night-time settlement cycle

- Settlement Sequence 4, X
-> Settlement of all Types of Liquidity Transfers
- Settlement Sequence Y
-> Reimbursement of Liquidity via „Multiple Liquidity Provider Functionality“
- Settlement Sequence Z
-> Settlement of all Types of Liquidity Transfers

* Start of night time settlement could be moved to 20.00 (CR in discussion)

Different Settlement Day Periods in T2S

Real-time settlement
(05:00 – 18:00)

Real-Time Settlement

-> Settlement of all Types of Liquidity Transfers

Real-Time Settlement Closure (16:00-18:00)

- Optional automated cash sweep
 - > Process any accepted Liquidity Transfers
 - > Create and settle Outbound Liquidity Transfers to transfer all cash to a specified RTGS Account
- Liquidity Transfer cut-off (17:45)
 - > Settlement of all accepted Inbound Liquidity Transfers received prior the cut-off
- Automated cash sweep
 - > Create and settle Outbound Liquidity Transfers to transfer all cash to the linked RTGS Account – no cash remains

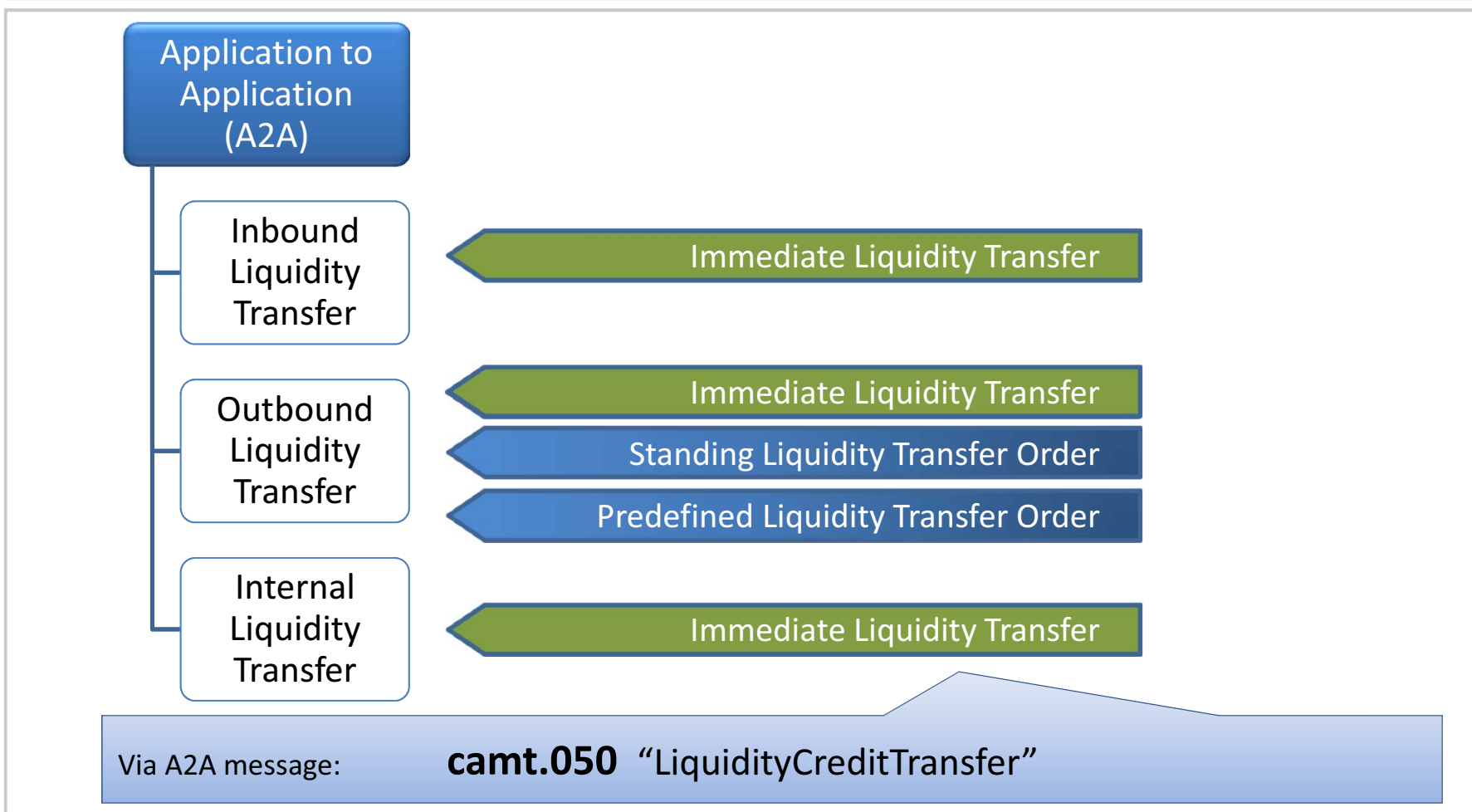
Liquidity Transfer Order Events (exhaustive list)

- For the set up of Standing or Predefined Liquidity Transfer orders in static data only the following subset of Events can be used

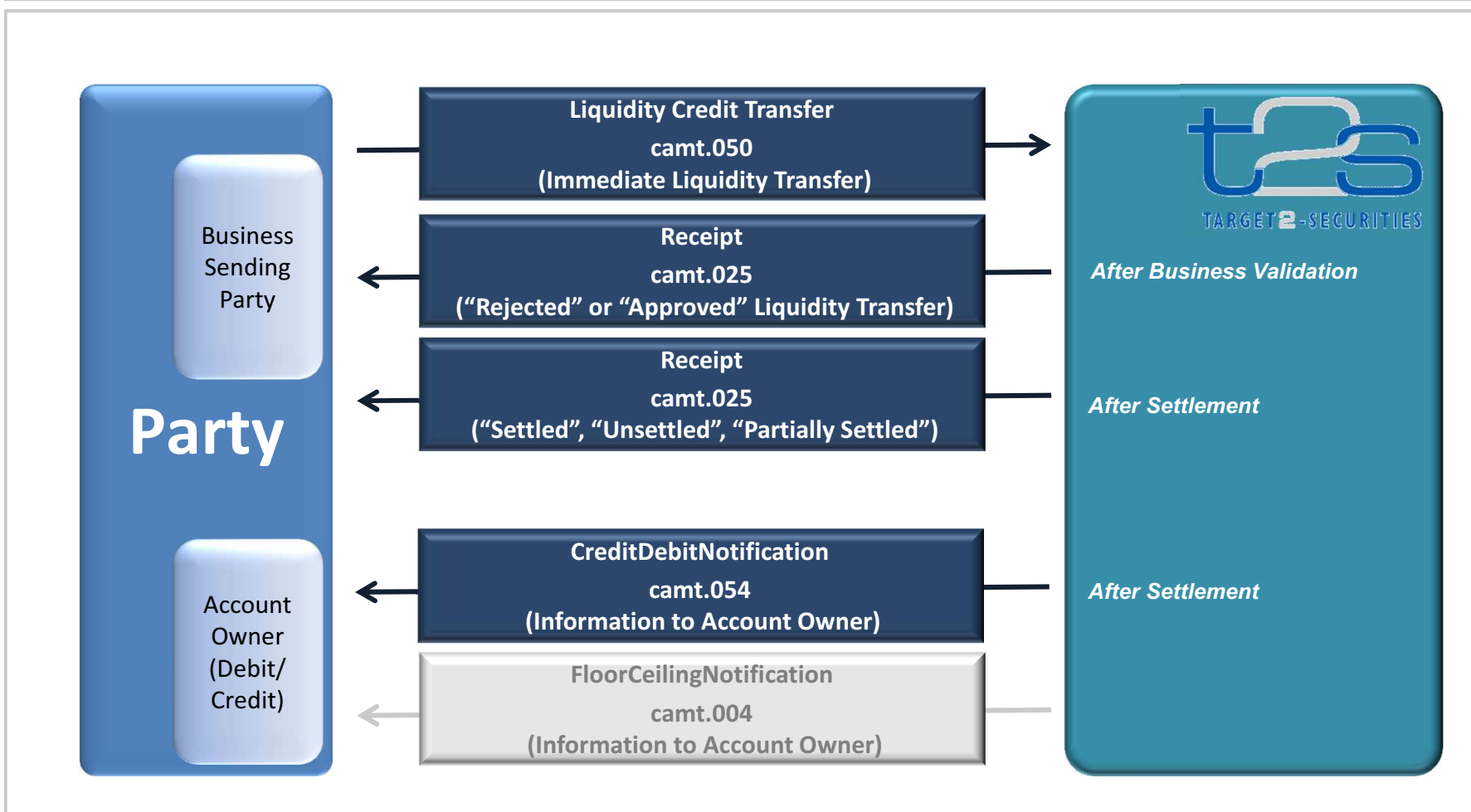
Code	Name	Definition
C1P0	Start of cycle 1 / preparation of sequence 0	Start of cycle 1 / preparation of sequence 0
C1P1	Start of cycle 1 / preparation of sequence 1	Start of cycle 1 / preparation of sequence 1
C1P2	Start of cycle 1 / preparation of sequence 2	Start of cycle 1 / preparation of sequence 2
C1P3	Start of cycle 1 / preparation of sequence 3	Start of cycle 1 / preparation of sequence 3
C1P4	Start of cycle 1 / preparation of sequence 4	Start of cycle 1 / preparation of sequence 4
C2P4	Start of cycle 2 / preparation of sequence 4	Start of cycle 2 / preparation of sequence 4
C2PX	Start of cycle 2 / preparation of sequence X	Start of cycle 2 / preparation of sequence X
C2PY	Start of cycle 2 / preparation of sequence Y	Start of cycle 2 / preparation of sequence Y
C2PZ	Start of cycle 2 / preparation of sequence Z	Start of cycle 2 / preparation of sequence Z
CARL	Corporate Action Rebalancing Liquidity	
OCSW	End of day Liquidity Transfers – optional	End of day Liquidity Transfer - optional

Multiple
Liquidity
Provider

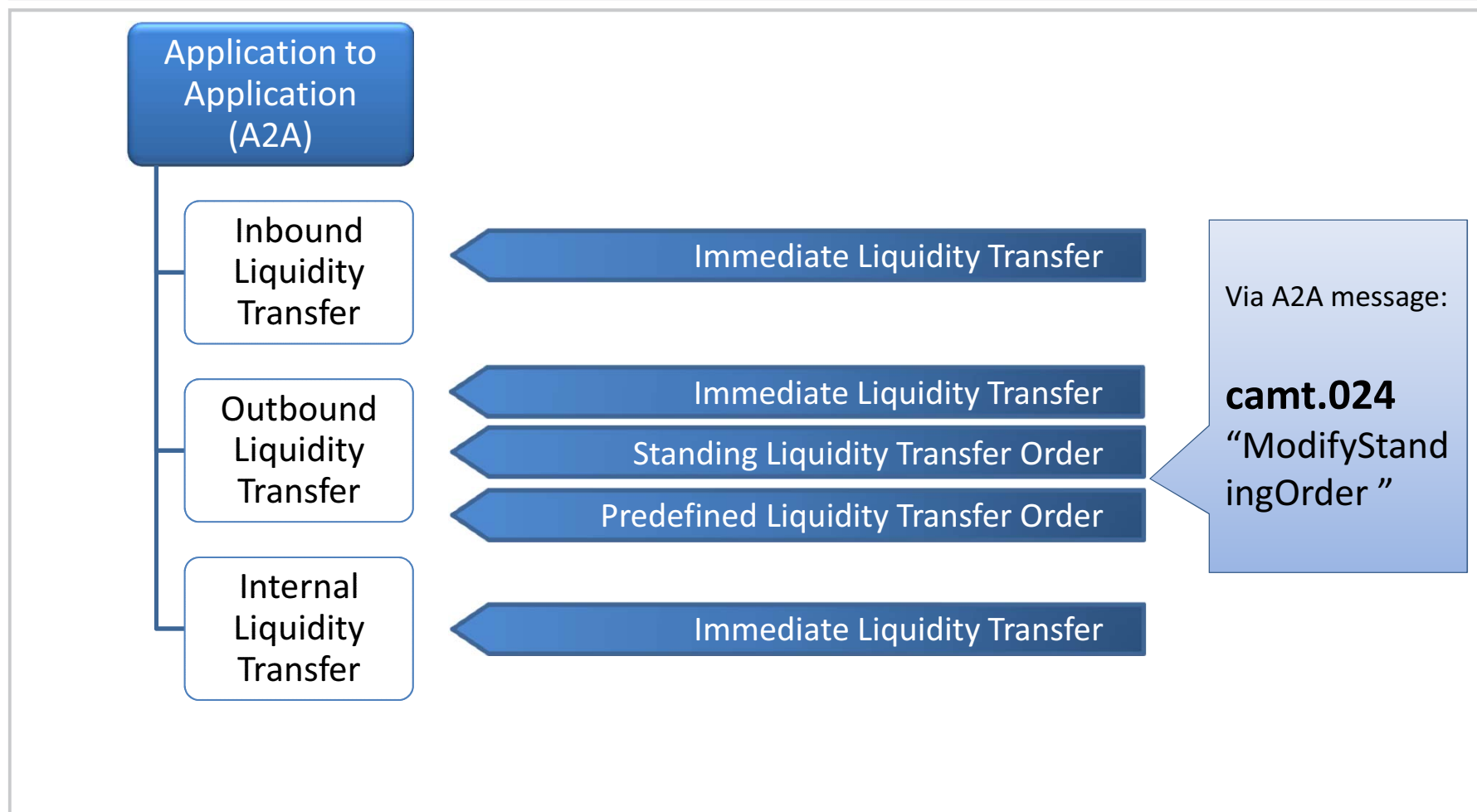
Communication of Liquidity Transfers



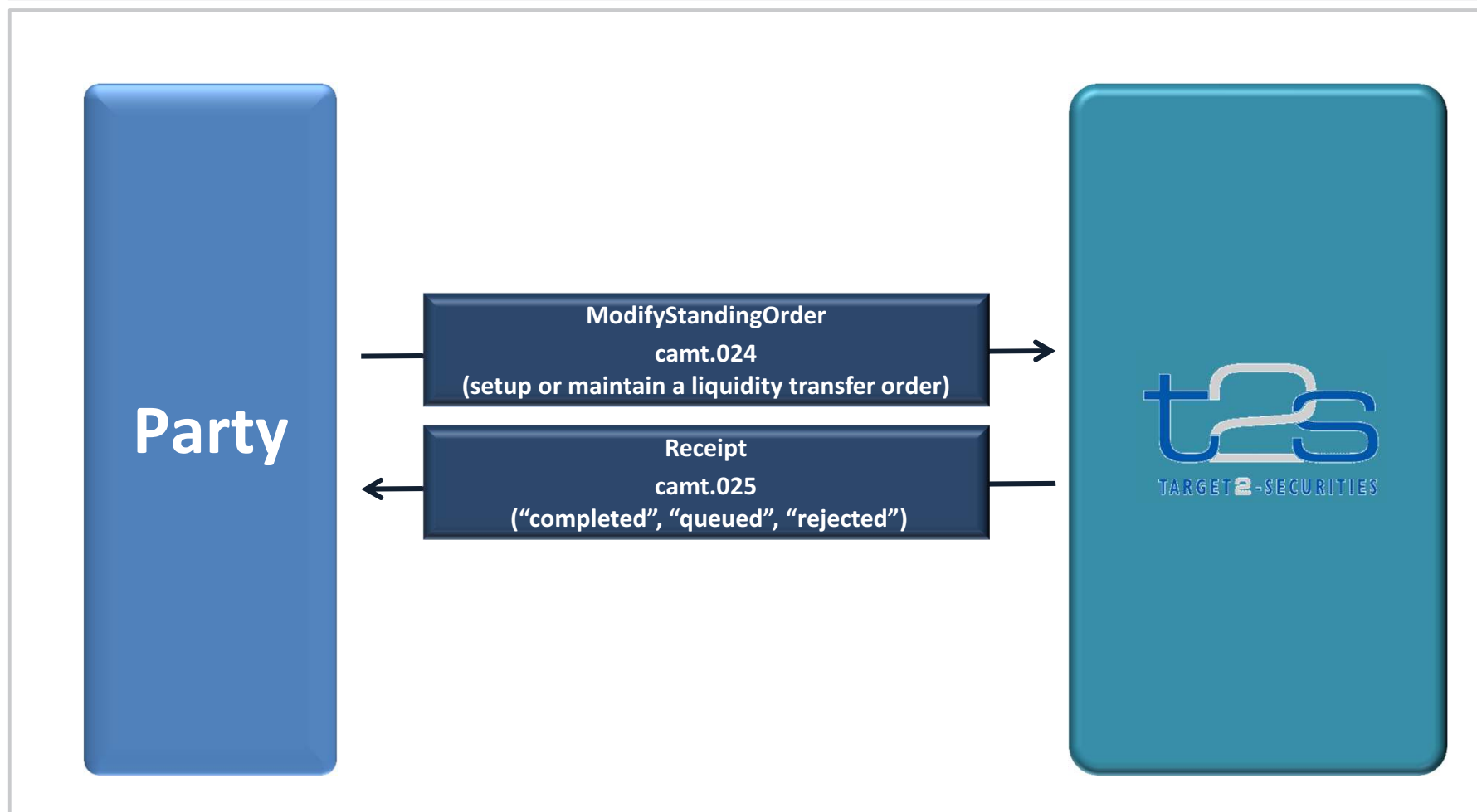
Immediate Liquidity Transfers



Communication of Liquidity Transfers



Predefined- / Standing Liquidity Transfer Order



Notifications in TARGET2 (core services)

- LT from T2 to T2S (including standing orders) in U2A/A2A: possibility to opt for i) notification in the MX form *BankToCustomerDebitNotification* (camt.054.001.02), ii) notification in the MT form (MT900) or no notification. The MX optional notification and the debit notification using MT are mutually exclusive. LT from T2 to T2S via MT202: MT012/019
- LT from T2S to T2 (via U2S, A2A, MT202): possibility to opt for i) notification in the MX form *LiquidityCreditTransfer* (camt.050.001.003), ii) notification in the MT form (MT202) or no notification. The MX optional notification and the debit notification using MT are mutually exclusive.



Thank you for your attention



Roma, 28 Ottobre 2014

Centro Congressi Banca d'Italia

Training Session: Message Subscription

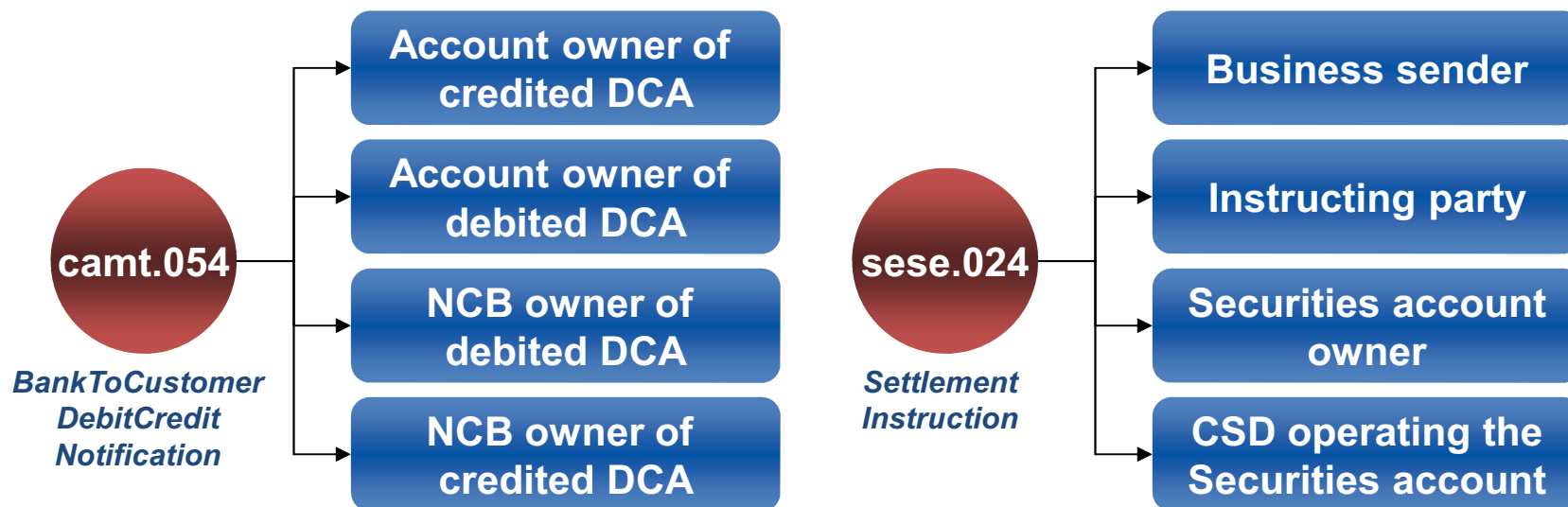
Message Subscription – Main Concepts (1/3)

- The Message Subscription model allows CSDs and CBs to configure the specific set of messages they want T2S to forward to them and to their directly connected parties
- Directly connected parties may setup a configuration for themselves if their CSD/CB grants them with the correct privilege
- Each party may receive a message from T2S
 - As **interested party**, depending on the business case (e.g. the account owner)
 - setup via Message Subscription rule-based model
 - As **third party**
 - setup via Access Rights configuration and Message Subscription rule-based model

Static Data Objects

Message Subscription – Main Concepts (2/3)

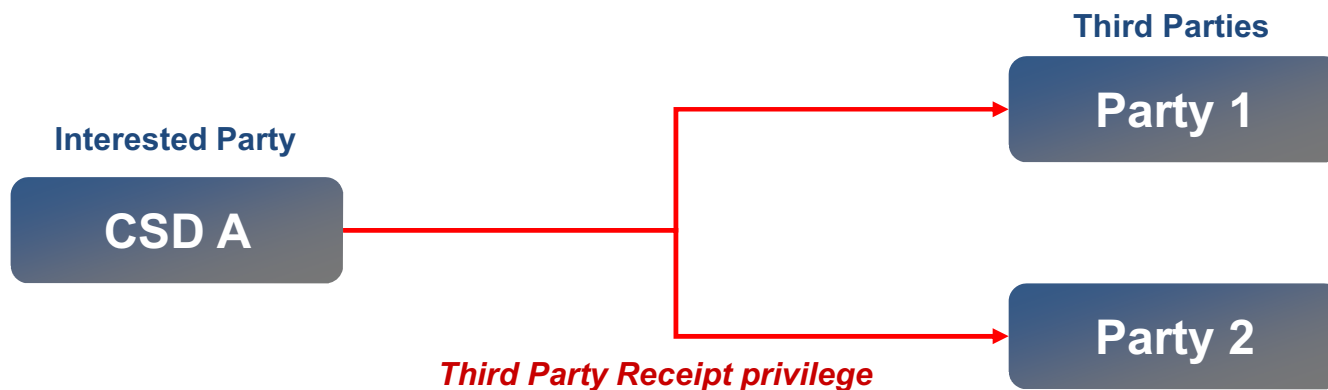
- The list of Interested Parties depends on the type of message and the specific business case
- Some examples:



- Not all messages are subject to copies (e.g. Static Data messages from T2S are always sent to the T2S actor who sent the related SD request message)

Message Subscription – Main Concepts (3/3)

- Interested Parties may set up “**Third Parties**” to receive copies of the same messages
- This configuration is achieved by granting the target Party the object privilege “**Third Party Receipt**” on the desired Third Parties



- Both Interested Parties and Third Parties are required to set up a **Message Subscription configuration** in order to specify which messages they wish to receive.

Static Data Objects

Message Subscription Rule Set Entity

Message Subscription Rule Set

Message Subscription Rule Set Party

Message Subscription Rule

Message Subscription Rule Parameter

- Container for rules triggering the sending of messages
- Defined by a name, description, and valid from/to dates
- Contains a positive/negative parameter:
 - If “positive” it means that any message satisfying a rule will be sent to the interested parties
 - If “negative” it means that any message satisfying a rule will not be sent to the interested parties

Static Data Objects

Message Subscription Rule Set Party Entity

Message Subscription Rule Set

Message Subscription Rule Set Party

Message Subscription Rule

Message Subscription Rule Parameter

- Link between the Rule Set and the recipient parties (Interested Parties or Third Parties)
- Contains the list of Parties that will receive copies of messages that satisfy Rules contained in the Rule Set

Static Data Objects

Message Subscription Rule Entity

Message Subscription Rule Set

Message Subscription Rule Set Party

Message Subscription Rule

Message Subscription Rule Parameter

- Rules defining conditions for the subscription of messages
- Each rule contains one or more parameters grouped together
- A message is sent when it satisfies all the conditions within a group of parameters

Message Subscription Rule Parameter Entity

Message Subscription Rule Set

Message Subscription Rule Set Party

Message Subscription Rule

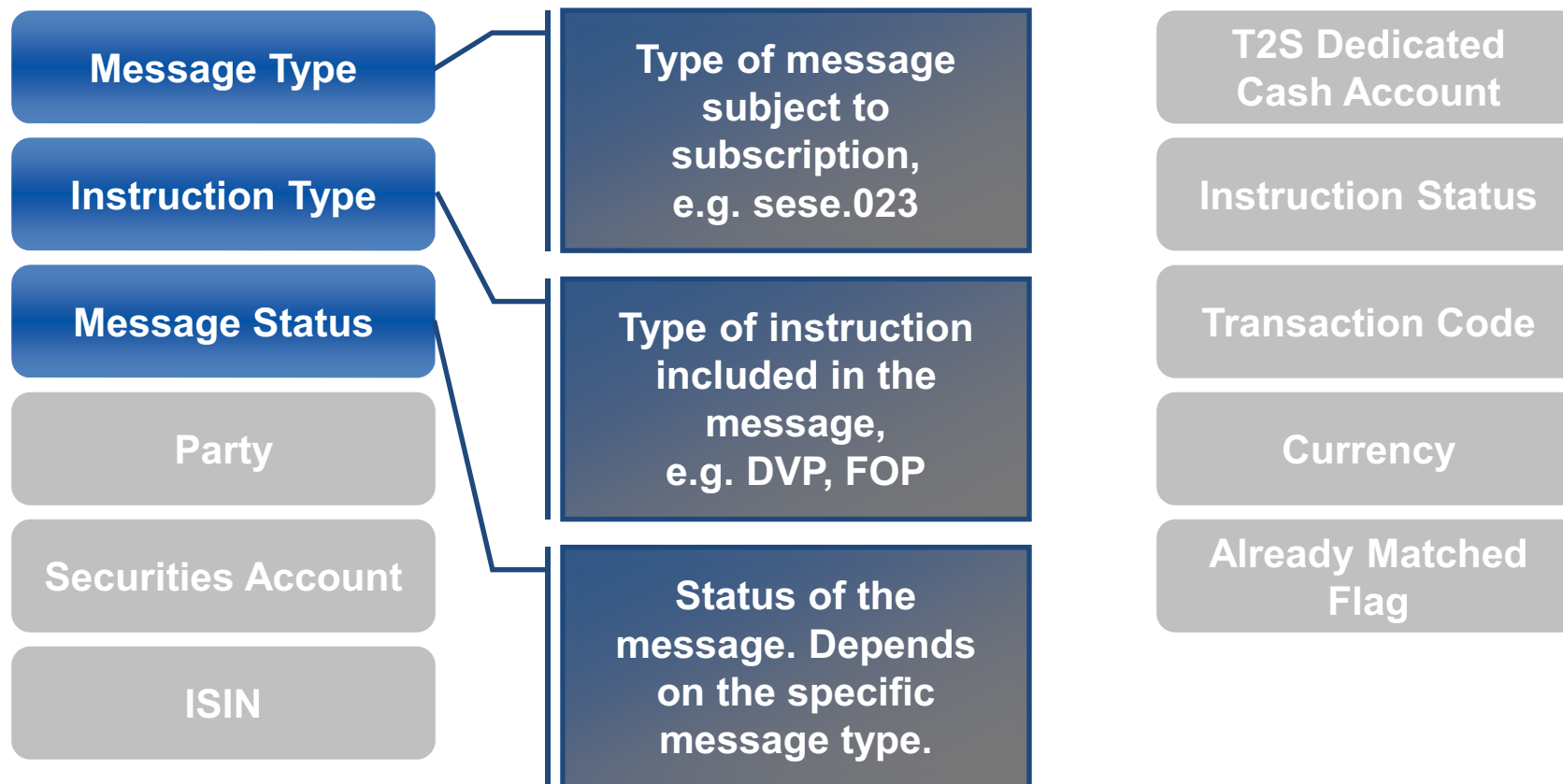
Message Subscription Rule Parameter

- Parameters for a rule
- Parameters define the conditions according to which a message should be sent
- Each rule may have several values for each parameter type, and parameter values may be grouped
- A message is sent when it satisfies all the conditions within a group of parameters

Static Data Objects - Self-Review

Message Subscription Parameters (1/3)

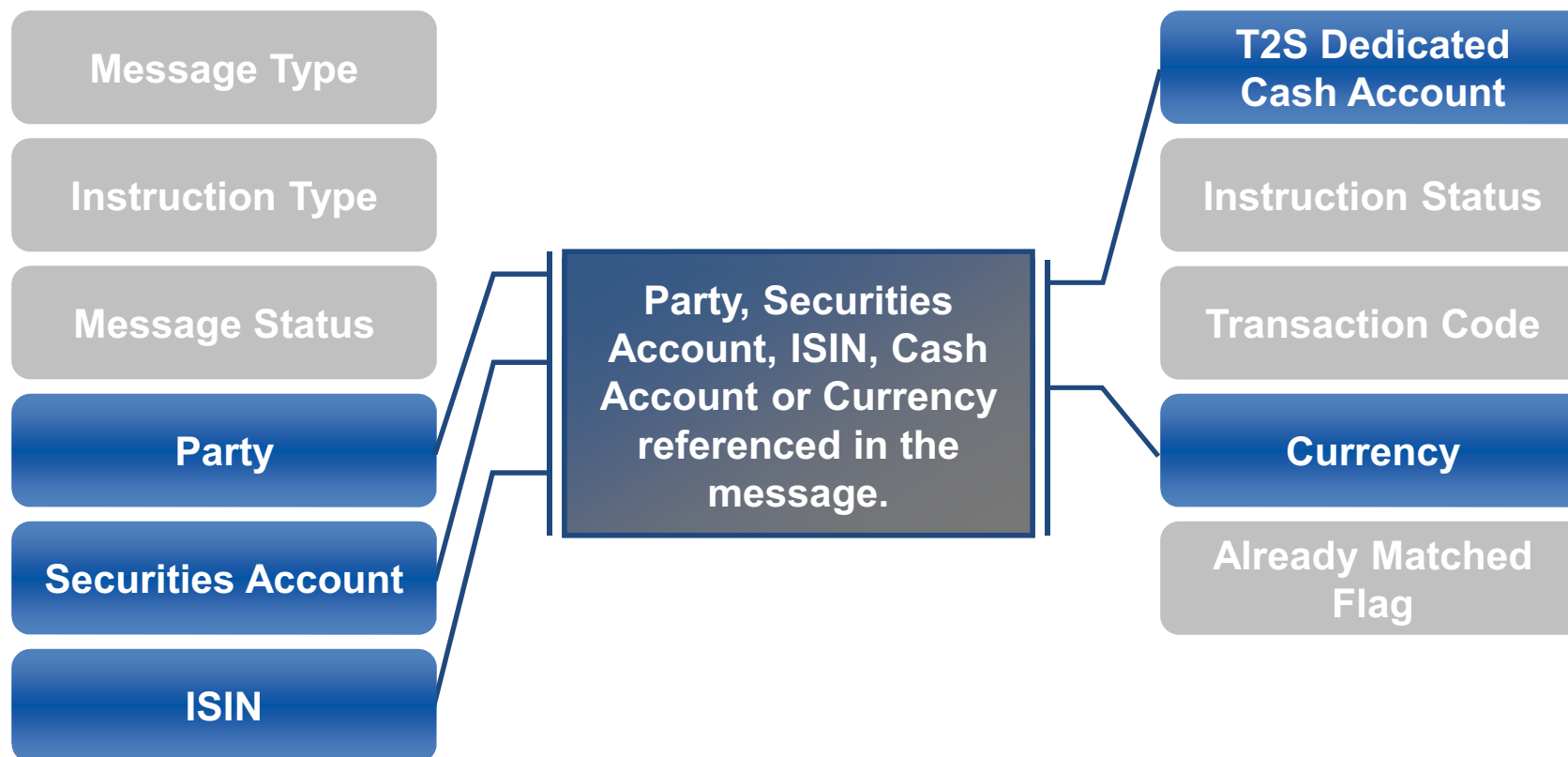
- Possible parameter types for Message Subscription configuration:



Static Data Objects

Message Subscription Parameters (2/3)

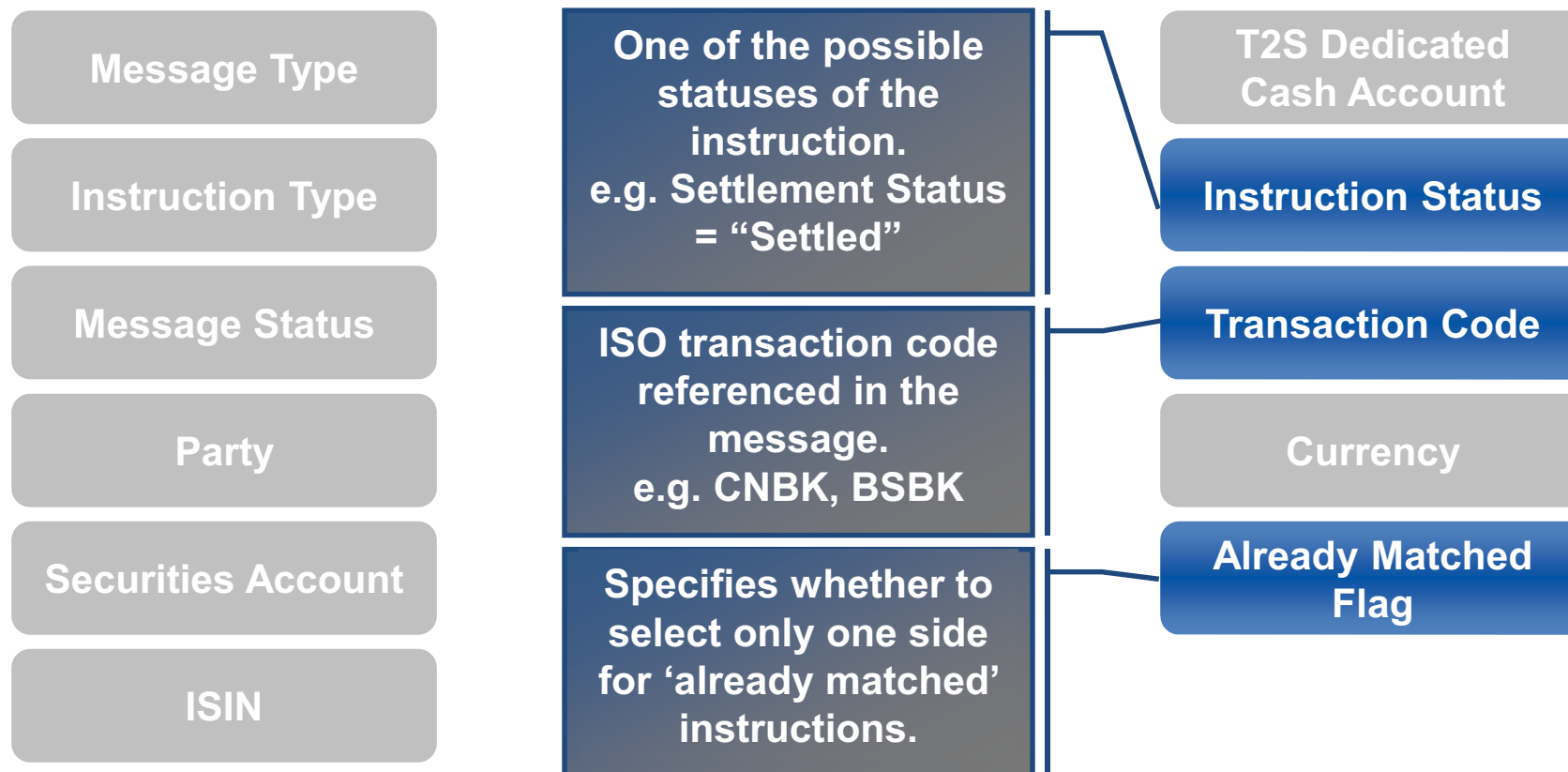
- Possible parameter types for Message Subscription configuration:



Static Data Objects

Message Subscription Parameters (3/3)

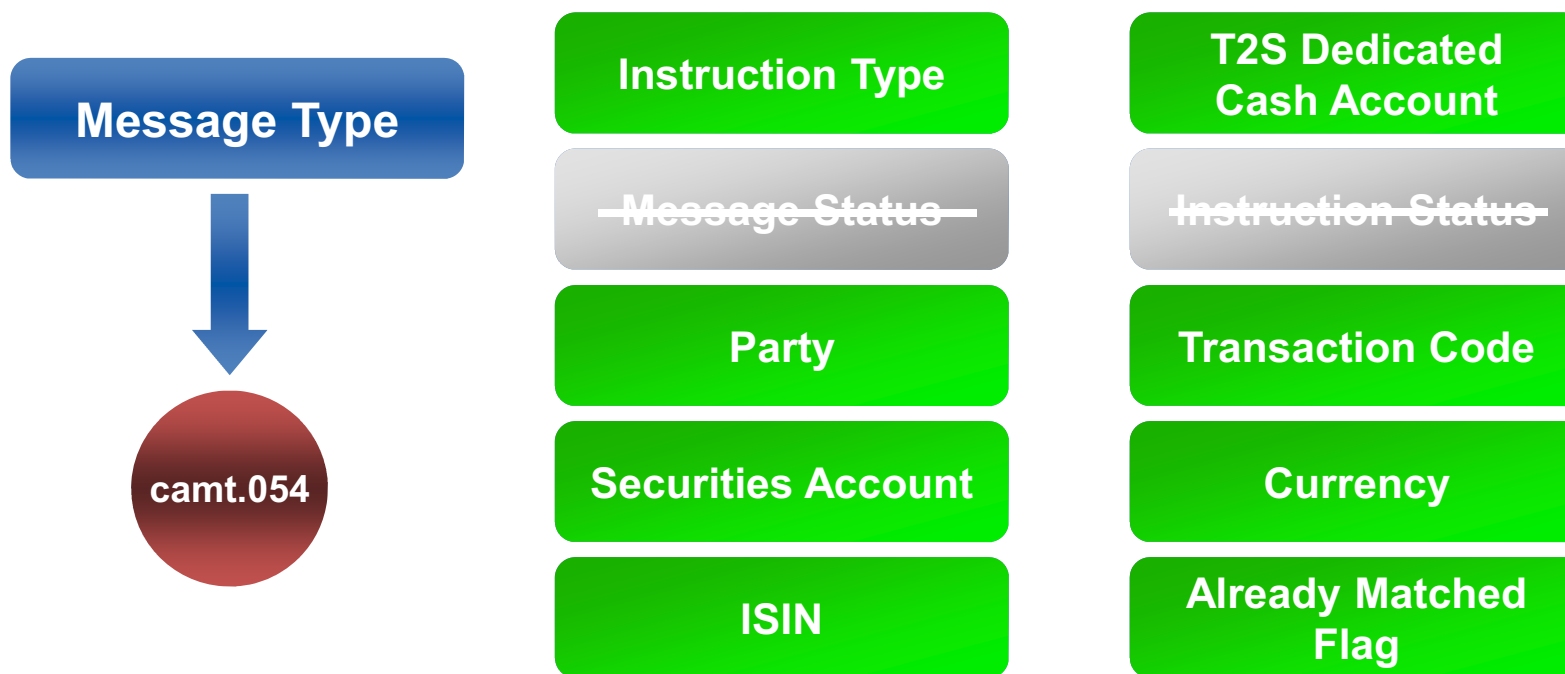
- Possible parameter types for Message Subscription configuration:



Static Data Objects

Message Subscription

- Depending on the Message Type, not all the other Parameter Types may be used

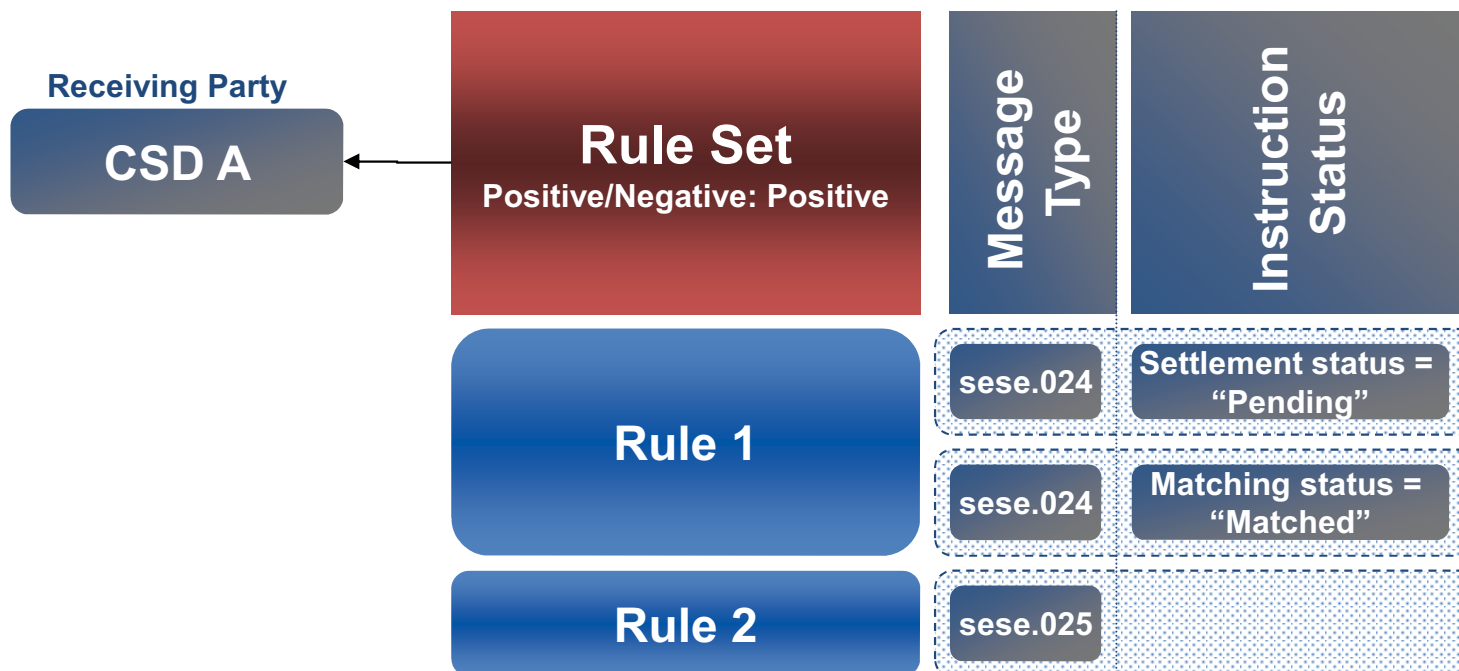


- The value assigned to each parameter in the configuration corresponds to a specific field within the message

Static Data Objects

Message Subscription – Examples (1/3)

- The following rule set allows CSD A to receive all status advices related to matched and partially settled Instructions, plus settlement confirmations for Settlement Instructions for all its participants



Static Data Objects

Message Subscription – Examples (2/3)

- The following rule set allows CSD A to receive copies of Settlement instructions submitted by directly connected participants X and Y



Static Data Objects









Message Subscription – Examples (3/3)

- The following rule set allows NCB A to receive Status Advices for Party maintenance only when they are in a final state (“rejected” or “final”) and to not receive “queued” Status Advices (when operating during night-time settlement)











Static Data Objects

Message Subscription Rule Set – U2A/A2A

	U2A	A2A
Creation		
Update		
Deletion		
Restore		

Static Data Objects

Message Subscription Rule – U2A/A2A

	U2A	A2A
Creation		
Update		
Deletion		
Restore		



Training T2S - aspetti funzionali

Static Data

Roma, 28 Ottobre 2014

Centro Congressi della Banca d'Italia

Disclaimer

The T2S Training Materials are dedicated to teaching the various relevant aspects of T2S in a precise, clear and easily understandable manner.

The Training Materials (including descriptions, diagrams, examples, notes) are subject to change as the T2S User Training Programme is delivered.

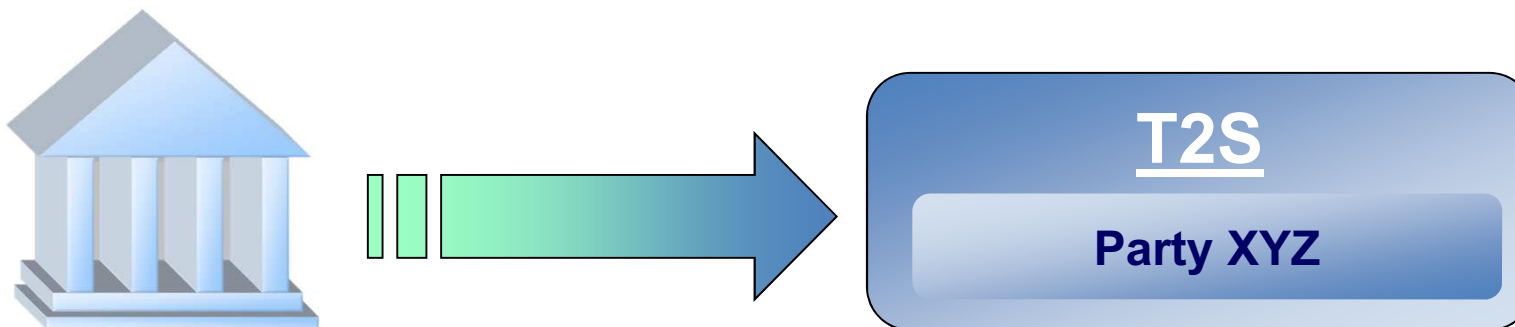
Furthermore, the Eurosystem reserves the right to revise the currently proposed T2S Training Materials and to introduce changes or amendments from time to time without any obligation to notify any person or organisation of such amendments or changes.

The T2S Training Materials, as provided by the Eurosystem, may be copied and distributed in relation to T2S Training within the limits of copyright protection.

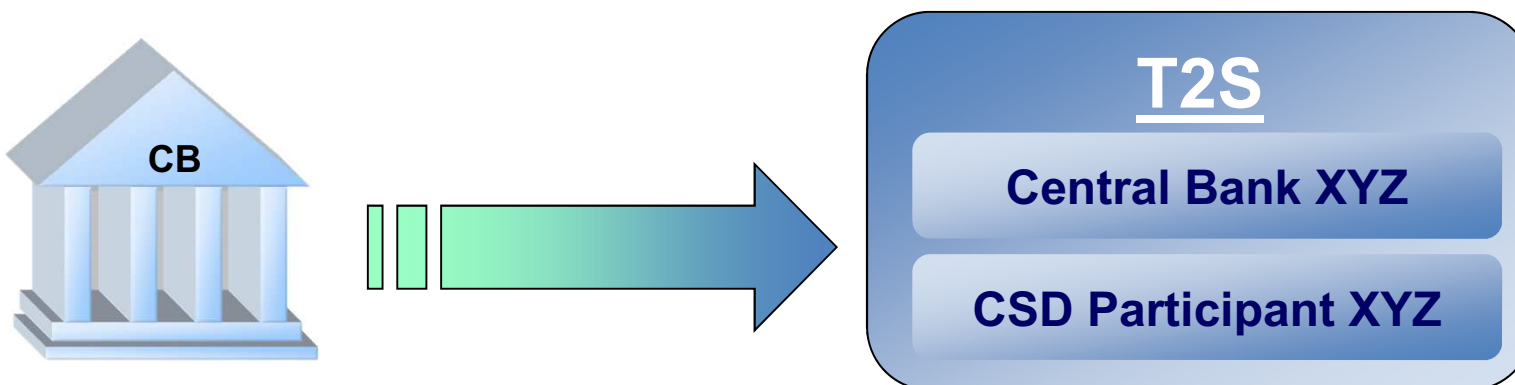
The Eurosystem is declining any responsibility for any kind of changes not authorised in writing by the Eurosystem.

Parties

- Each T2S Actor is represented by one or more Parties in T2S

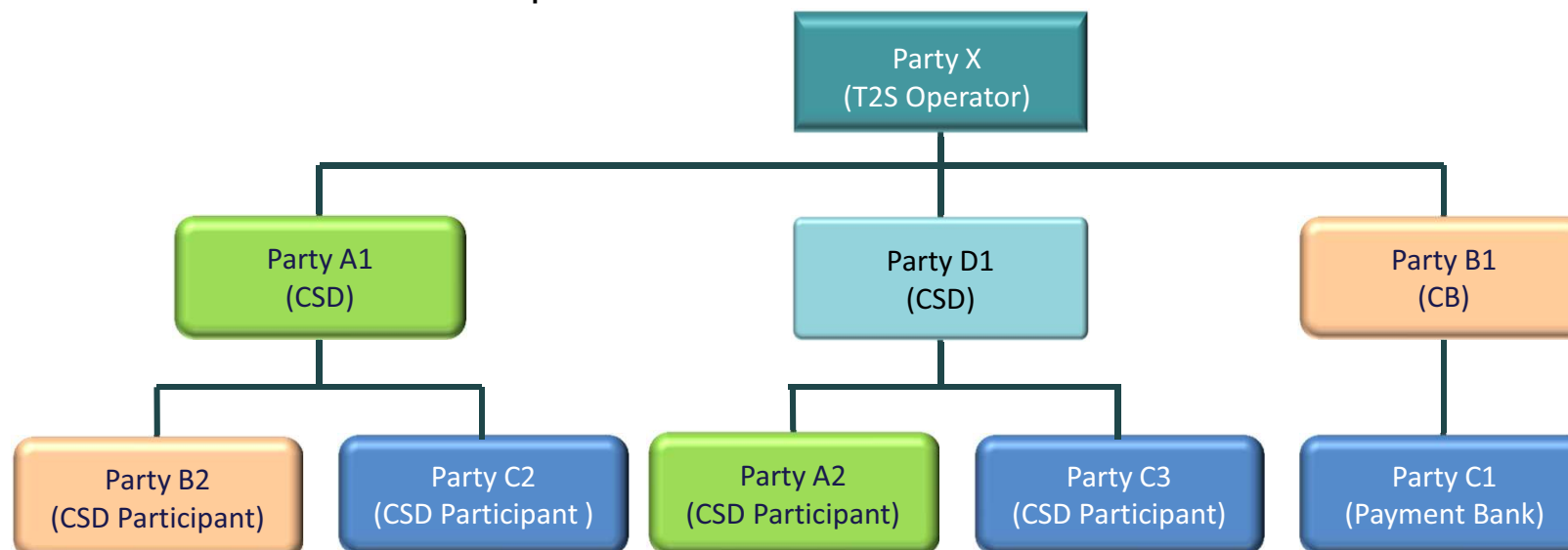


- If a T2S Actor plays multiple roles in T2S, they are identified by multiple parties



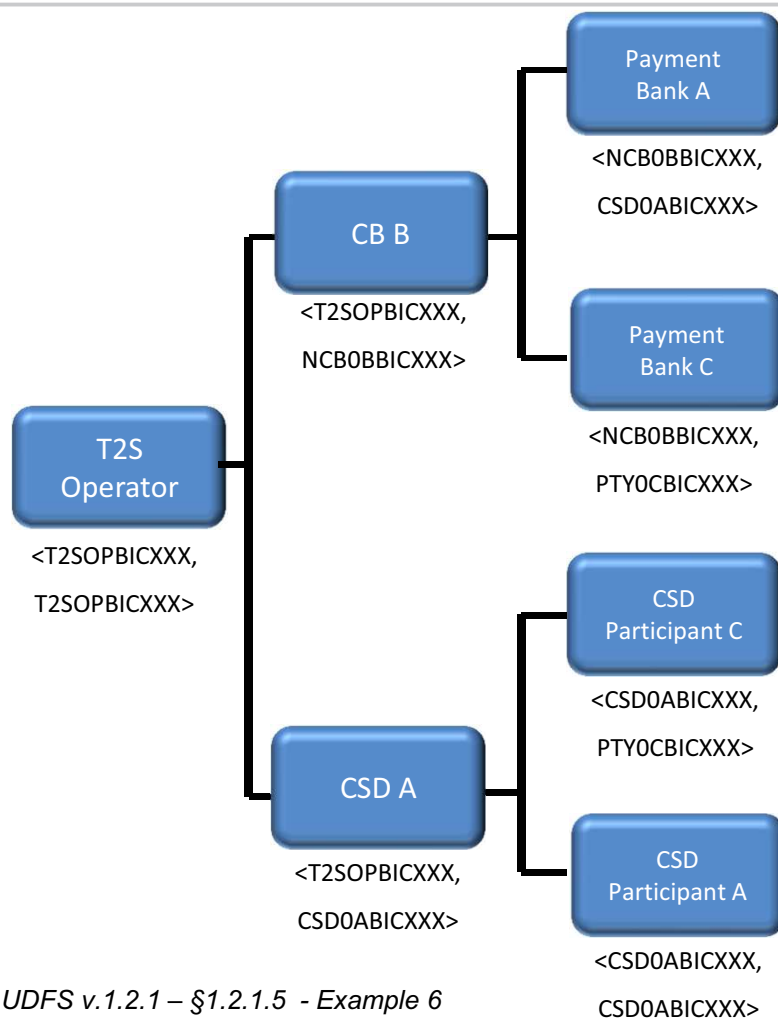
Hierarchical Party Model Structure

- The hierarchical model determines the static data scope, i.e. the area of responsibility of each party in T2S
- Three levels of responsibility: each CSD, each CB and the T2S Operator are responsible for their own static data scopes



UDFS v.1.2.1 – §1.2.1.4 - Example 5

Examples of Party Identification



- Each CSD and CB is identified by the BIC of the T2S Operator plus its own BIC
- Each CSD participant is identified by the BIC of its CSD plus its own BIC
- Each payment bank is identified by the BIC of its CB plus its own BIC
- A CSD acting as payment Bank under a given CB is identified by the BIC of the CB plus its own BIC
- A CSD/CB which needs to define itself as its own CSD participant/payment bank is identified using a pair of identical BICs

T2S Dedicated Cash Account

- Each payment bank can open one or more DCAs
- Each DCA is identified via a user-defined **account number** which must be unique within the system.

Name	Format	Content	Purpose
Account type	1 char. exactly	'C' for cash account	Helps differentiating between cash and securities accounts.
Country code of the Central Bank	2 char. exactly	ISO country code	Helps identifying the Central Bank in the books of which the account is held.
Currency code	3 char. exactly	ISO currency code	Helps differentiating between accounts in different currencies.
Account holder	11 char. exactly	BIC	Identifies the holder of the account.
Sub-classification of the account	Up to 17 char.	Free text	Description provided by the account holder for the sub classification of the account.

e.g. C DE EUR BICBICBICBI FOROWNOPERATIONS

1 1 2 1 2 3 1 2 3 4 5 6 7 8 9 10 11 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

- Each DCA must be linked to an external RTGS account for cash-sweep at End of Day

Credit Memorandum Balance – Main Concepts

DCAs are linked to Securities Accounts via a Credit Memorandum Balance (CMB)

T2S dedicated cash accounts and securities accounts and may be linked in T2S for three reasons:

- To specify, for a given securities account, the T2S dedicated cash account(s) that can be used for the settlement of the cash leg of the Settlement Instructions related to the given securities account;
 - To specify, for a given T2S dedicated cash account, the securities account(s) holding positions earmarked as collateral that can be used for auto-collateralisation operations
 - To specify, for a given T2S dedicated cash account, the securities account for receiving collateral from clients of the payment bank in collateralisation operations
-
- CMBs for Central Bank collateralisation are defined as **Primary CMBs**
 - CMBs for Client collateralisation are defined as **non-Primary CMBs**

Set up of routing configuration

- The setup of routing configuration includes the configuration of: network services, party technical address, links between network services and technical address, default and conditional routing
- Network Services are defined by the T2S Operator in Static Data. T2S supports the following options:

- Message-based / File-based
- Real-time / Store and Forward

T2S Network Provider

Message-based real-time

Message-based store and forward

File-based real-time

File-based store and forward

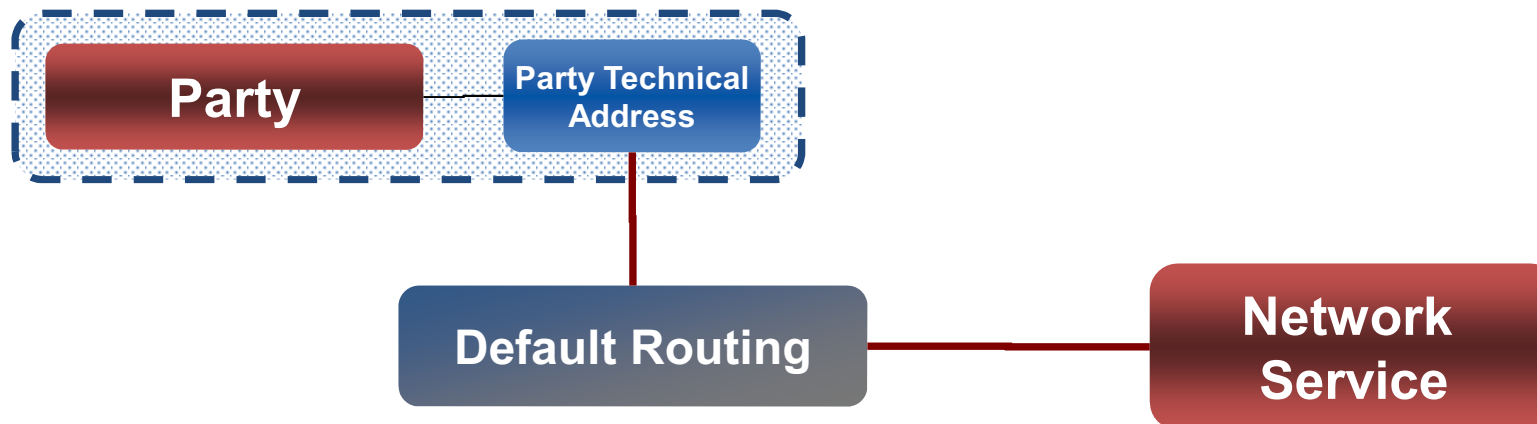
- Each network service uses a technical address to identify the sender and the receiver for each exchange of data

Routing (1/2)

- T2S applies **mandatory routing** for:
 - Replies to erroneous inbound messages
 - Query results
- In all these cases the outbound message is sent to the same technical address/network service combination through which the corresponding inbound message was received
- For all other types of outbound communication, parties may define their own specific routing configurations

Routing (2/2)

- For each type of outbound communication (message-based/file-based, real-time/SnF) each Party may define a **default routing** configuration and, optionally, one or many conditional routing configurations



- Default routing includes a compression flag, specifying whether or not T2S should compress the data before sending it

Conditional Routing

- **Conditional routing** allows to specify different rules to override the default routing configuration by using a series of parameters:

- Sequence number
- Conditions
 - message type
 - max/min size limit
 - currency code
- Positive/negative flag

