



Open Day 2015

The Clearstream T2S Implementation Project

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30 September 2015

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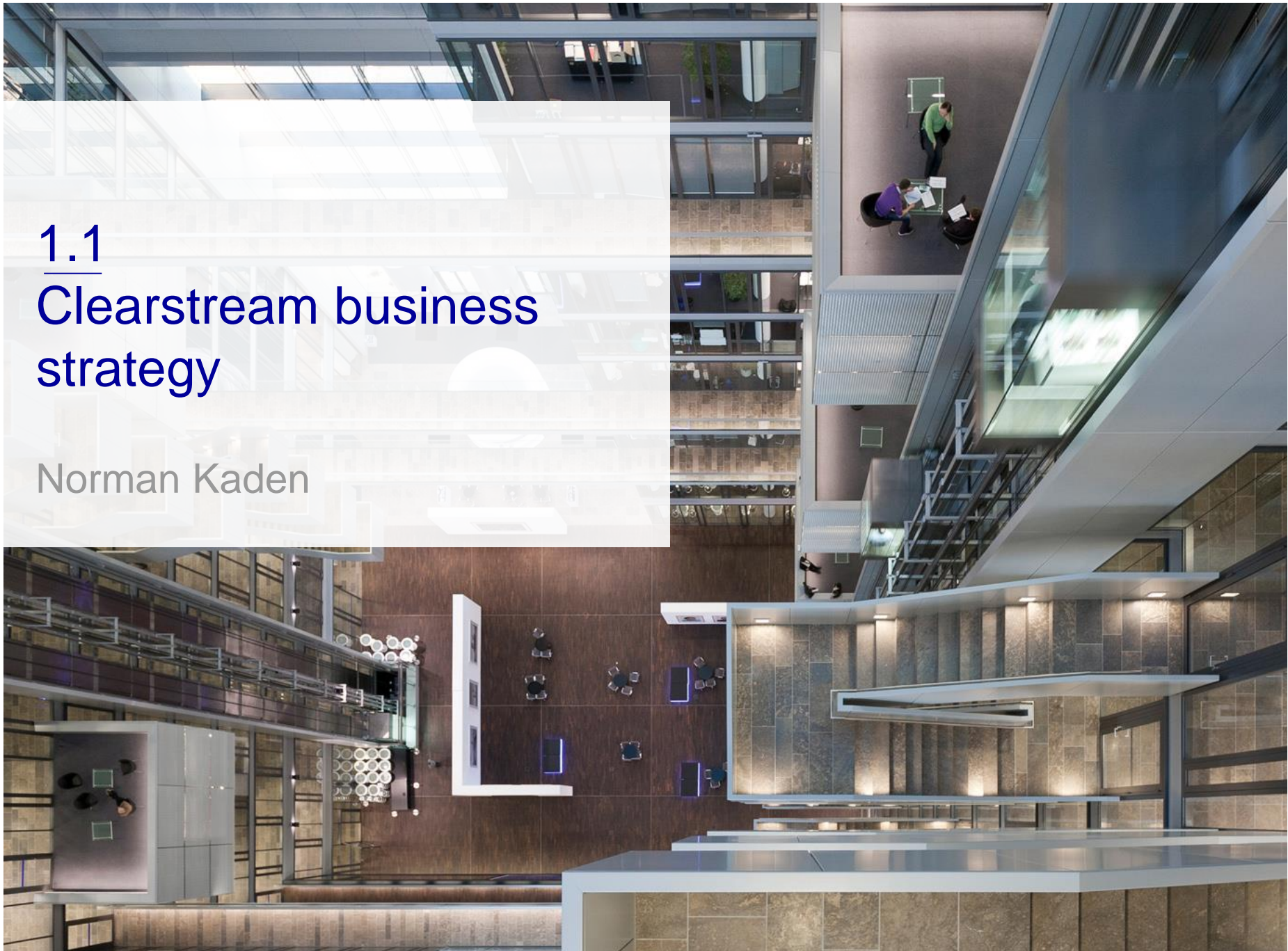


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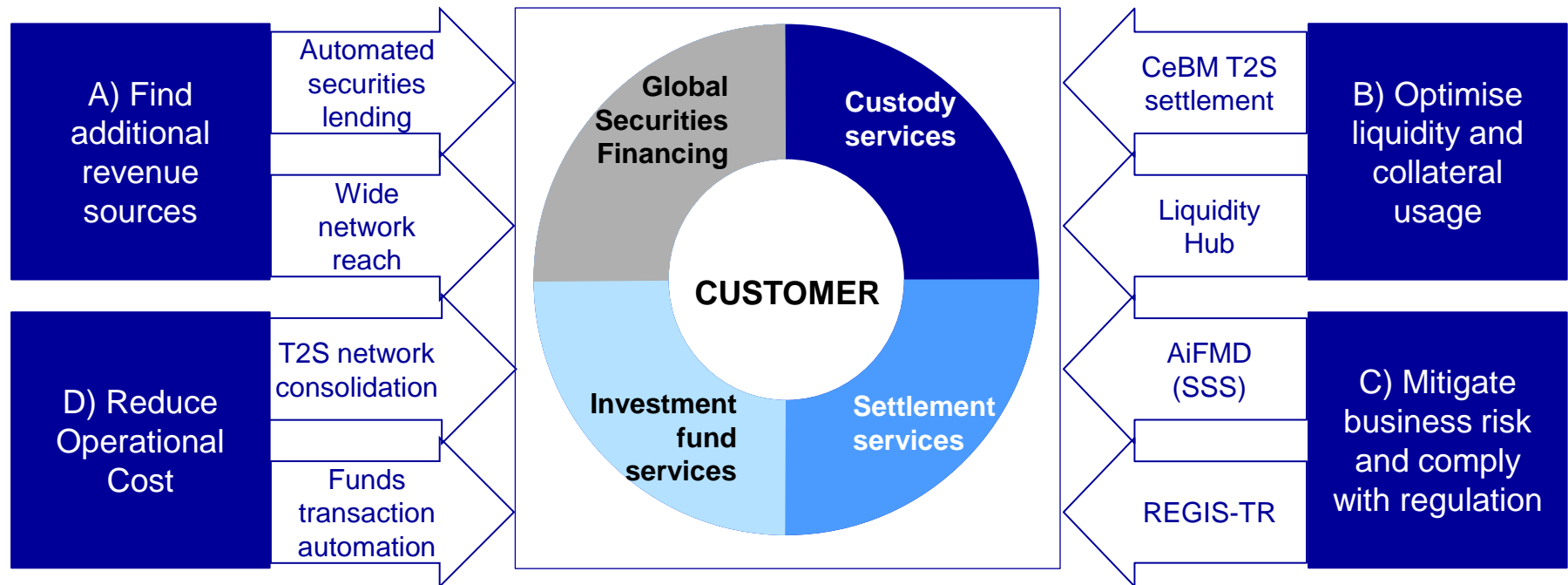
T2S implementation and Clearstream strategy

1.1 Clearstream business strategy

Norman Kaden

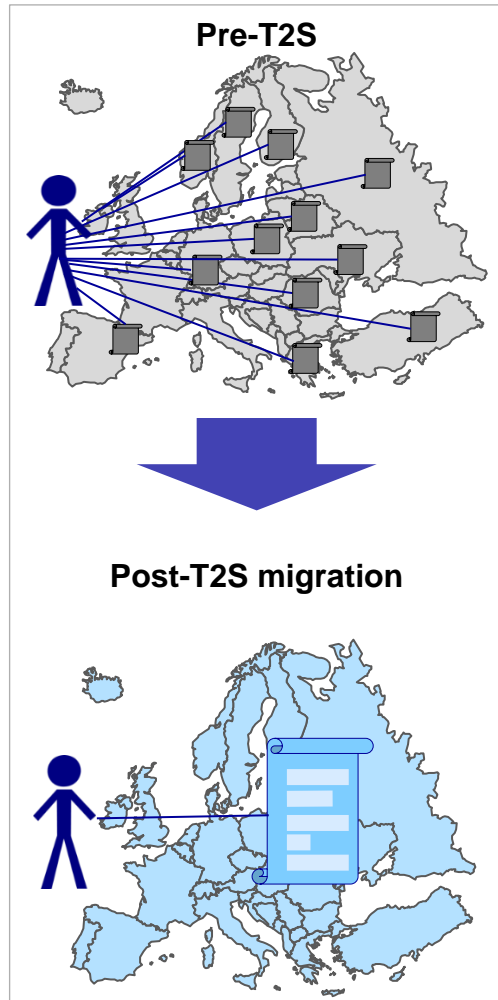


Clearstream business strategy – service offering built on customer key priorities



Leverage T2S to boost settlement liquidity, increase the appeal of collateral management and custody products and position Clearstream's unique funds business

Leading market position: T2S enables Clearstream to benefit from volume consolidation among participating markets



TARGET2-Securities (T2S) is a central technical platform for securities settlement in Euro and foreign currency in central bank money that will replace existing models and redesign the post-trade landscape

Savings of €30 to €70 million organisation of collateral management and other benefits of using T2S systems depending on the type and size of financial institutions:¹⁾

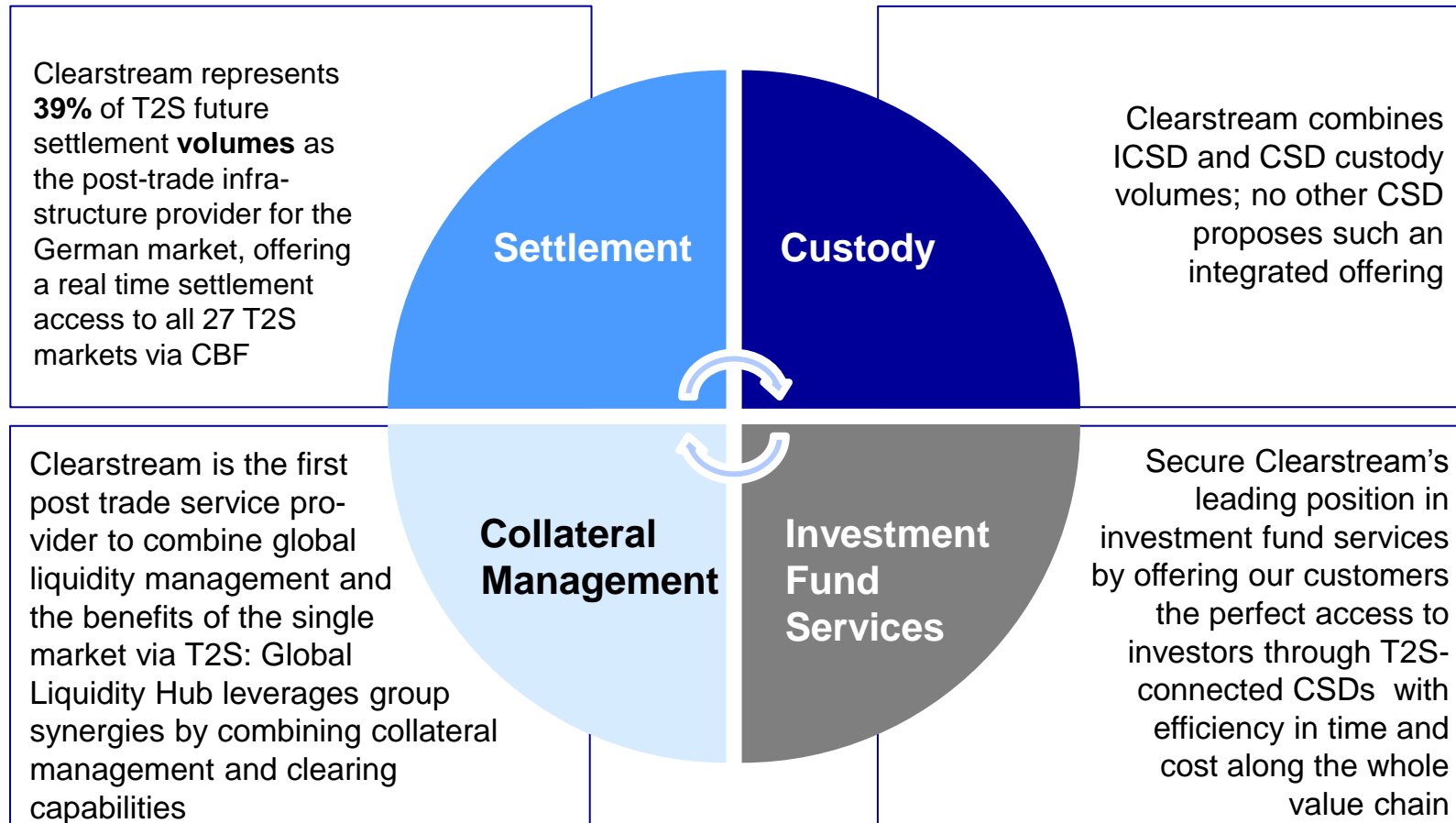
- **Lower cross-border settlement costs** (today €2–5²⁾, with T2S €0.25³⁾)
- **Cash and securities pooling:** central funding account and safekeeping of assets enables settlement netting, reduces funding and eliminates friction cost associated with today's fragmented pools
- **Central collateral management and auto-collateralisation** will create financing efficiencies and drastically reduce securities realignments and collateral consumption and thus support settlement credit
- National central banks will provide **intraday settlement credit** facilities for free while commercial banks are expected to start charging; cash deposits at national central banks attract no regulatory charge

1) Outcome of Oliver Wayman study "The T2S Opportunity-Unlocking the hidden benefits of TARGET2-Securities"

2) Average charged by agent banks and ICSDs

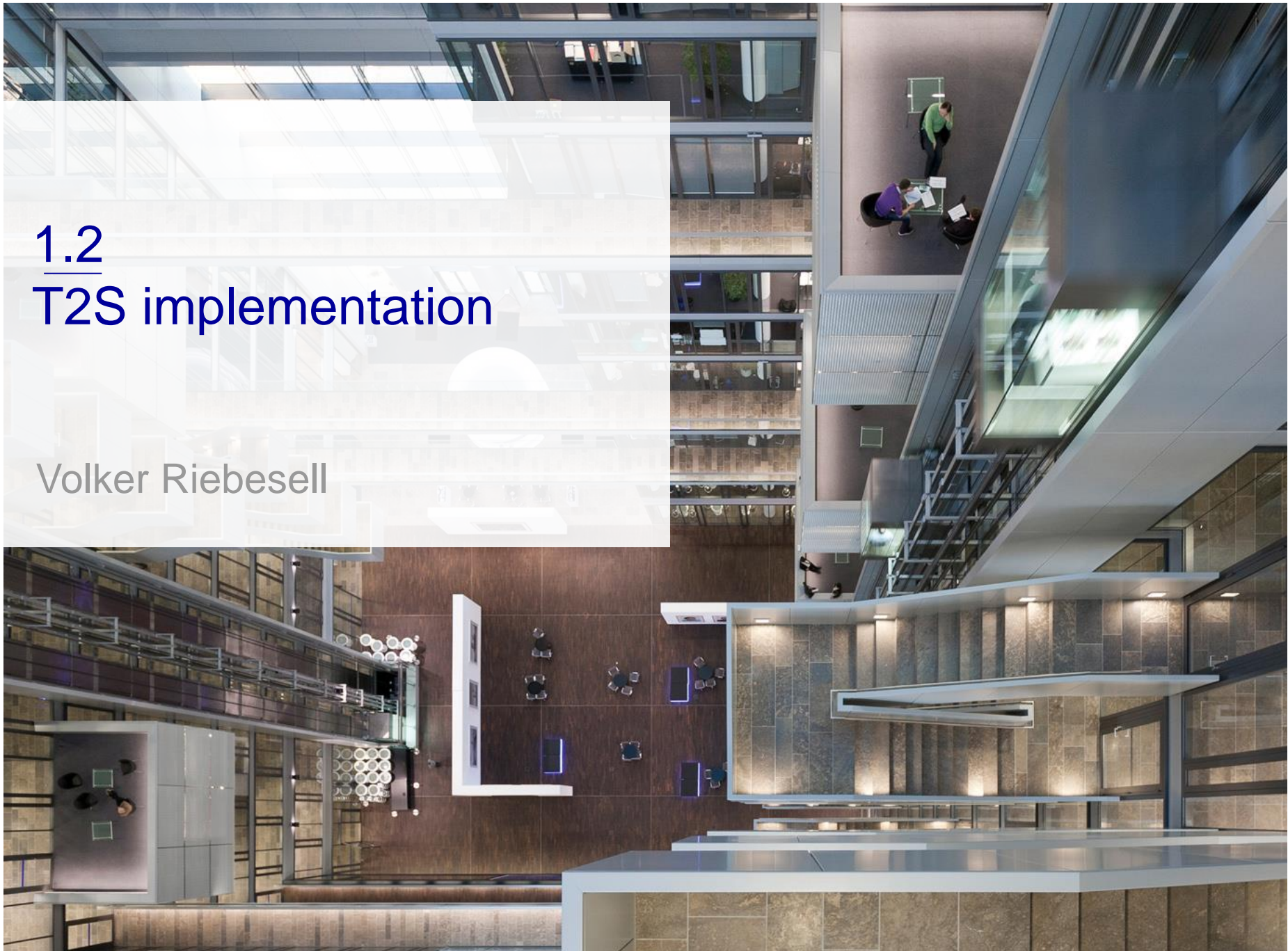
3) Average cost calculated by ECB

Clearstream T2S strategy statement – secure a leading market position



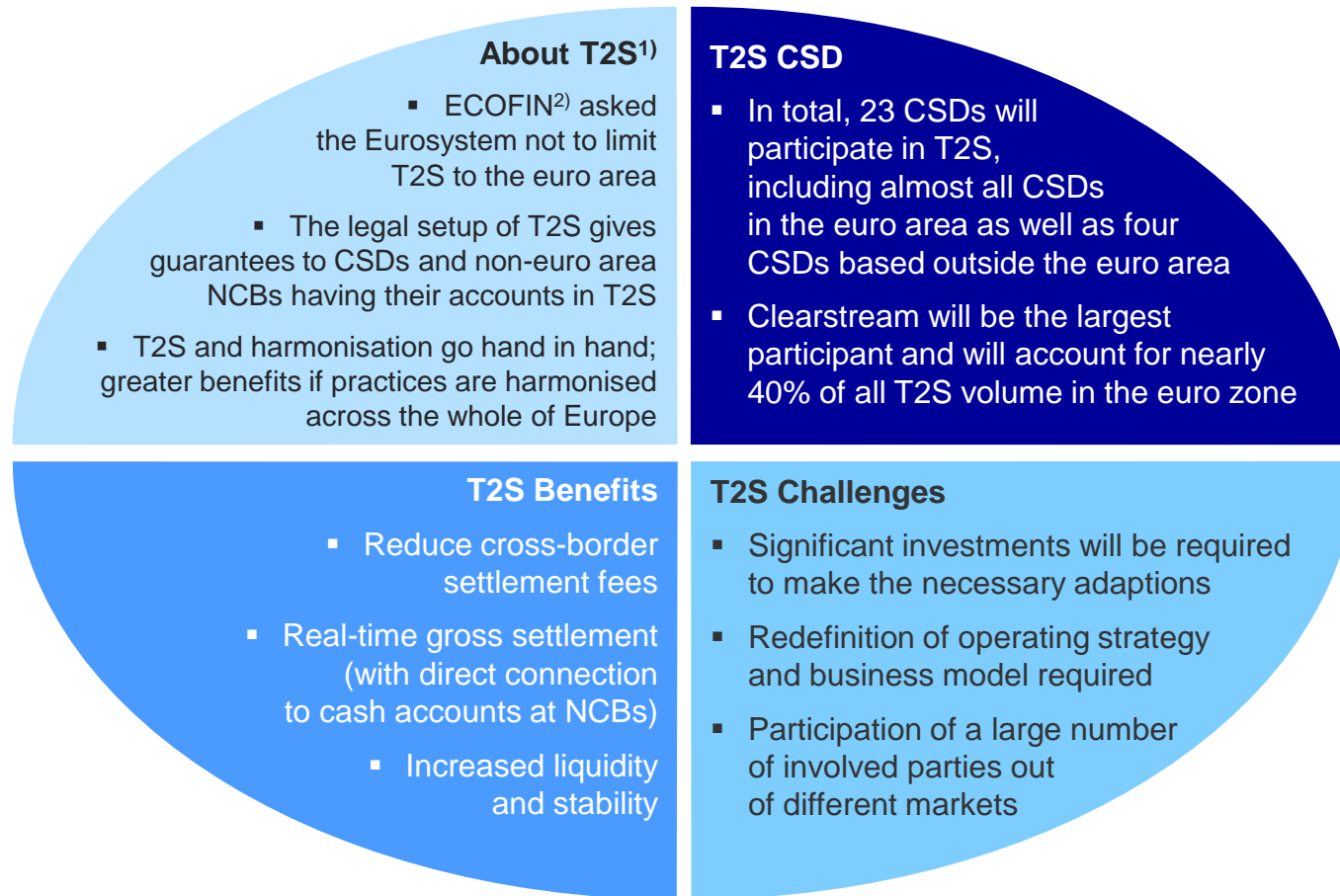
1.2 T2S implementation

Volker Riebesell



T2S – common European settlement platform

In April 2012, CBF signed the framework agreement



1) Source: European Central Bank presentation „T2S: Settling without borders in Europe“, January 2012

2) ECOFIN – Economic and Financial Affairs Council

T2S service scope

T2S service scope

- Provide **core settlement against CeBM** for all securities denominated in euro and foreign currency if supported by the NCB
- Real-time gross settlement (**RTGS**)
- **Lifecycle management** (incl. validations) and matching
- **Instruction interface**
 - instruct settlement transactions
 - query the settlement transaction status
 - maintain settlement instructions
- Bookings and **master of the securities accounts**
- **DCP access** (must be authorised by the resp. CSD)
- CSD **authorisation** interface – set up, change and maintain **static data** of
 - participants
 - securities
 - rules (e.g. subscription services)

Services remaining at CSDs

- Settlement functions due to special national requirements and all non-settlement business via customer interface
 - **notary** function
 - **asset** servicing
 - **primary markets activities**
 - **collateral management**
 - **securities lending** services
- **Legally responsible** for fulfilling obligations under their national laws and regulations
- **Admission** of securities and participants to settlement including
 - maintenance of the **securities accounts**
 - provision of static user and **securities data**
- Involved as the **primary place of deposit**
- Attending CSDs can offer settlement services for all securities
- CSD will require relations with all relevant CSDs acting as the primary place of deposit for those securities
- **Provisioning and invoicing** of T2S services

Participating CSDs will outsource their core settlement service in central bank money to T2S while ensuring their non-settlement services

CSD Commitment towards T2S

T2S Migration Wave Composition

Country ¹⁾	CSD	Wave 1 22 June 15	Wave 2 28 Mar. 16	Wave 3 12 Sep. 16	Wave 4 6 Feb. 17
Austria	OeKB			✓	
Belgium	Euroclear Belgium		✓		
Belgium	National Bank of Belgium NBB-SSS		✓		
Denmark	VP SECURITIES A/S			✓	
Estonia	AS Eesti Väärtpaperikeskus				✓
Finland	Euroclear Finland Oy				✓
France	Euroclear France S.A.		✓		
Germany	Clearstream Banking Frankfurt			✓	
Greece	Bank of Greece SSS (BOGS)	✓			
Hungary	Központi Elszámolóház és Értéktár Zrt. – KELER			✓	
Italy ²⁾	Monte Titoli S.p.A.	✓			
Latvia	LCD – Latvian CSD				
Lithuania	Lietuvos centrinis vertybinių popierių depozitoriumas				✓
Luxembourg	LuxCSD			✓	
Luxembourg	VP Lux			✓	
Malta	Malta Stock Exchange PLC		✓		
Netherlands	Euroclear Nederland		✓		
Portugal	INTERBOLSA		✓		
Rumania	Depozitarul Central S.A.	✓			
Slovakia	Centrálny depozitár cenných papierov SR, a.s.				✓
Slovenia	KDD – Central Securities Clearing Corporation Inc.				✓
Spain	Iberclear – BME Group				✓
Switzerland	SIX SIS LTD	✓			

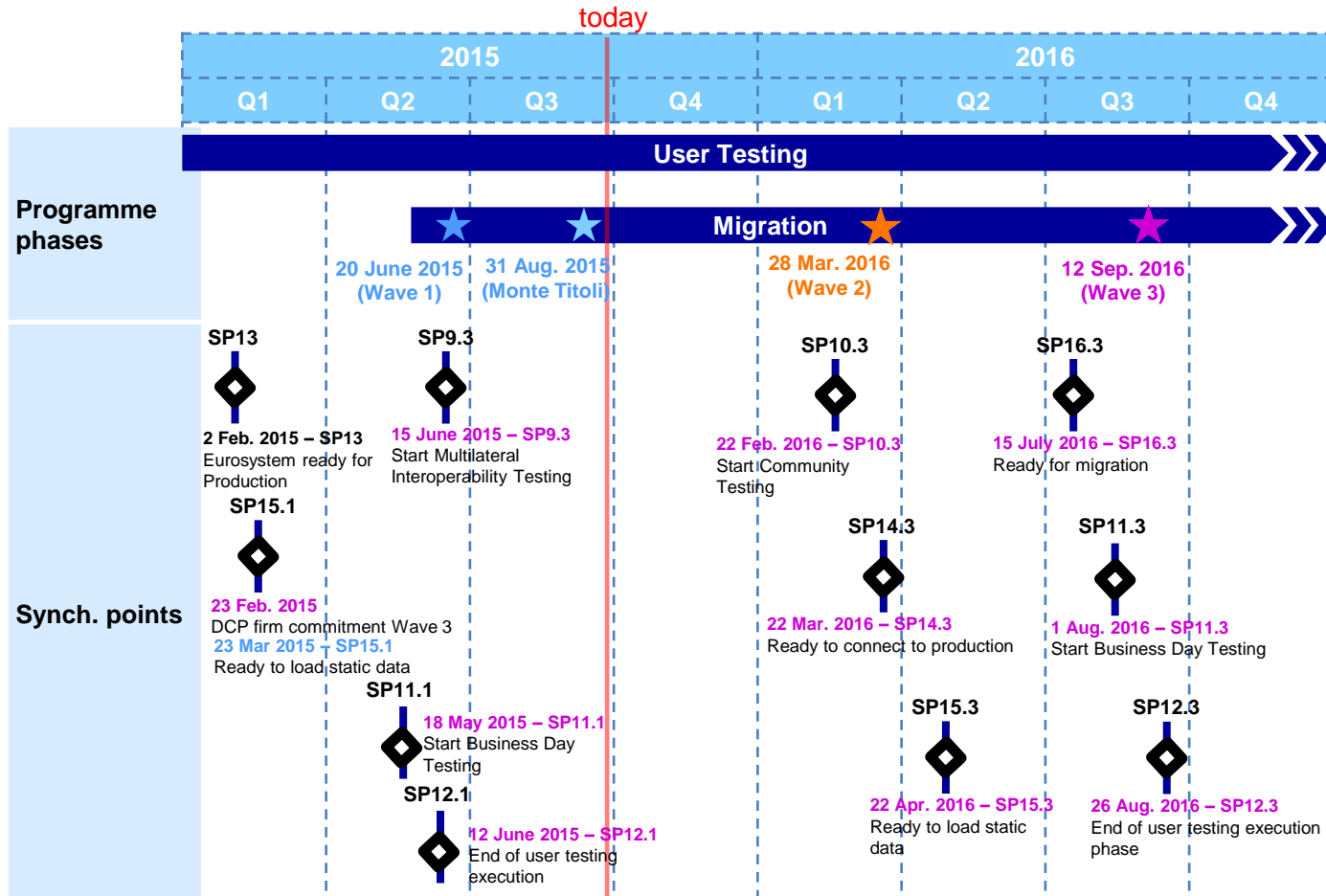
- Clearstream will be the largest participant and will account for nearly 40% of all T2S volumes in the euro zone
- CBF and LuxCSD were among the very first to sign the T2S framework agreement on 30 April 2012
- On 21 March 2013, the Governing Council of the ECB approved the plan for four migration waves of central securities depositories (CSDs) to T2S
- CBF and LuxCSD will migrate in Wave 3 dated on **12 September 2016**

1) Established CBF-Investor CSD links are marked in **dark blue**

2) Monte Titoli CSD migration on 31.08.2015 in an extra Wave1.MOTI

Status on ECB project – milestones

T2S Wave 1 has been launched successfully

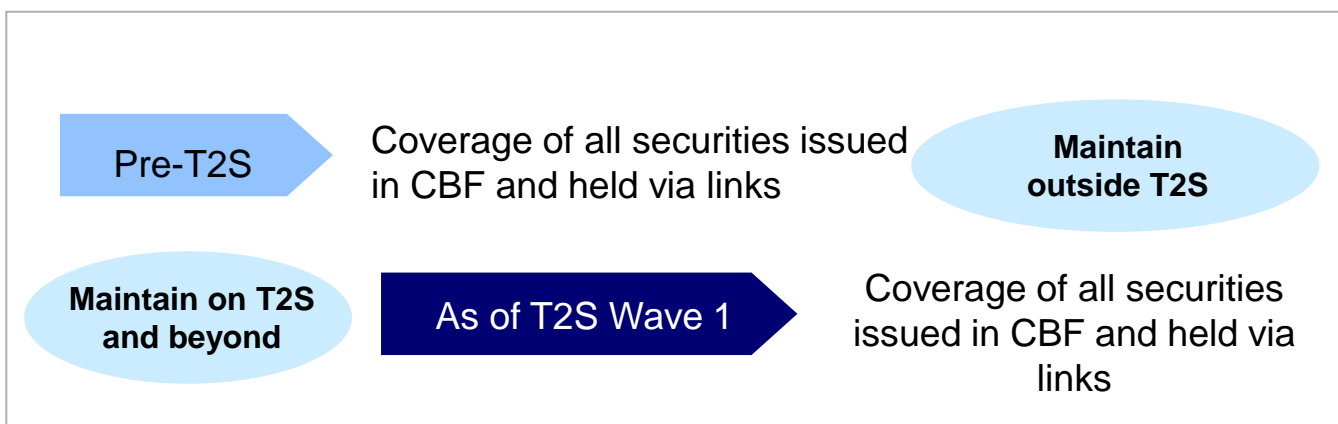


- With the successful migration of Switzerland, Greece, Malta and Romania, the SPs of Wave 1 are considered as met by these CSDs
- Monte Titoli's migration on 31 August 2015

CBF's roles in T2S

Summary of core elements

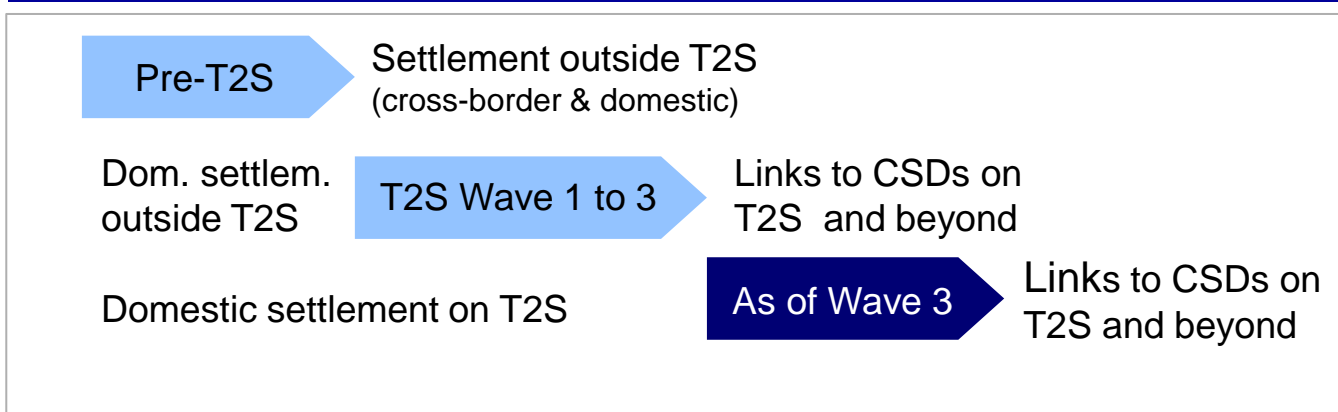
Securities reference data/securities maintaining entity



SME principles

- SME is responsible for **maintaining securities reference data** in T2S
- An issuer CSD becomes SME for his own issued ISINs in T2S
- An investor CSD may take over role as SME for other securities that have been issued outside of T2S (e.g. for US issued securities)

Settlement



T2S Wave 1 go-live 22 June 2015

SIX SIS and MSE started successfully with T2S

SIX SIS (Switzerland)

- In its role as SME, SIX SIS makes all Swiss securities available at T2S
 - SIX SIS offers settlement against CHF via its internal settlement system SECOM only, SIS remains T2S-Out-CSD for this business
 - CBF keeps the existing link against CHF by using SNB cash account and SIX SIS securities accounts for DvP settlement
 - The existing link setup for Swiss securities remains unchanged
- The existing CBF cross-link setup was not impacted. All related procedures are conducted as agreed

MSE (Malta Stock Exchange)

- MSE maintains its securities as Issuer CSD on T2S
 - The settlement chain between CBF and MSE remains unchanged
- BF, no functional adaptations were needed and the business flows are conducted as planned

T2S Wave 1 Go-live


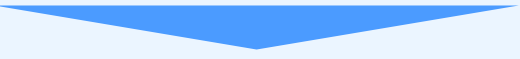

Monte Titoli migrated on 31 August 2015 to T2S

CBF's Reflection of Monte Titoli's Migration to T2S

- The assigned asset classes agreed on between Monte Titoli and CBF remain with T2S Wave 1. The renewed link setup supports these ISINs.
- With the migration of Monte Titoli to T2S any instruction provided by CBF are processed via Monte Titoli's pre-matching system X-TRM.
- Monte Titoli processes all CBF FoP instructions via a participant account and forwards CBF's settlement instructions to T2S. As these FoP instructions are transmitted to T2S for settlement, the T2S requirements for matching and settlement or cancellation apply.
- Specific T2S functionality (i.e. "Partial Settlement", "Linkage", "Already matched") will be supported when CBF migrates to T2S.
- At CBF the existing mirror account "7245" was closed and a new mirror account "4851" was established for the instruction management of Italian securities. The account management procedures were completed during the migration weekend on 30 August 2015.

Internal view: CBF T2S implementation status report

Overview on CBF T2S plan and deliverables towards Wave 3

Concept phase Aug. 2011 – Jan. 2012	Specification phase Jan. 2012 – Q2 2015	Build/test phase Jan. 2013 – Q3 2016
<ul style="list-style-type: none"> ▪ CBF T2S concept phase activities to identify and validate CBF high level requirements <input checked="" type="checkbox"/> ▪ Strategic planning and budgeting process for 2012 <input checked="" type="checkbox"/> ▪ Start T2S Customer Task Force activities <input checked="" type="checkbox"/> ▪ T2S communication set up via restricted and open website <input checked="" type="checkbox"/> ▪ Conduct workshops for Task Force 1 „Settlement/Lifecycle” <input checked="" type="checkbox"/> 	<ul style="list-style-type: none"> ▪ Validate with updated UDFS v1.2 and with updated UDFS v1.2.1 <input checked="" type="checkbox"/> ▪ Validate with updated UDFS 2.0 <input checked="" type="checkbox"/> ▪ Shaping CBF technical and functional requirements <input checked="" type="checkbox"/> ▪ Adapt and verify CBF planning <input checked="" type="checkbox"/> ▪ Work out release approach for the CBF Implementation <input checked="" type="checkbox"/> ▪ CSD/CB Feasibility Assessment¹⁾ <input checked="" type="checkbox"/> 	<ul style="list-style-type: none"> ▪ Implement CBF T2S technical and functional requirements <input checked="" type="checkbox"/> ▪ Internal test of CBF T2S technical and functional requirements <input checked="" type="checkbox"/> ▪ Rollout of T2S functionality in CBF production <input checked="" type="checkbox"/> ▪ T2S Connectivity and Bilateral Interoperability Test (functional test between CSD, NCB and T2S) <input checked="" type="checkbox"/> ▪ Multilateral Interoperability Test <input type="checkbox"/> ▪ Community/Business Day Test <input type="checkbox"/> ▪ Conduct workshops “Summary Session in 2015/16” “Task Force 4 - Migration/Testing” <input checked="" type="checkbox"/> ▪ Deliver Detailed Functional Descriptions (DFDs) <input checked="" type="checkbox"/>
 Completed	 Completed	 Progress on track

Done
 Partly done
 In progress / in time

1) Version 2.0 delivered to ECB by end of May 2013

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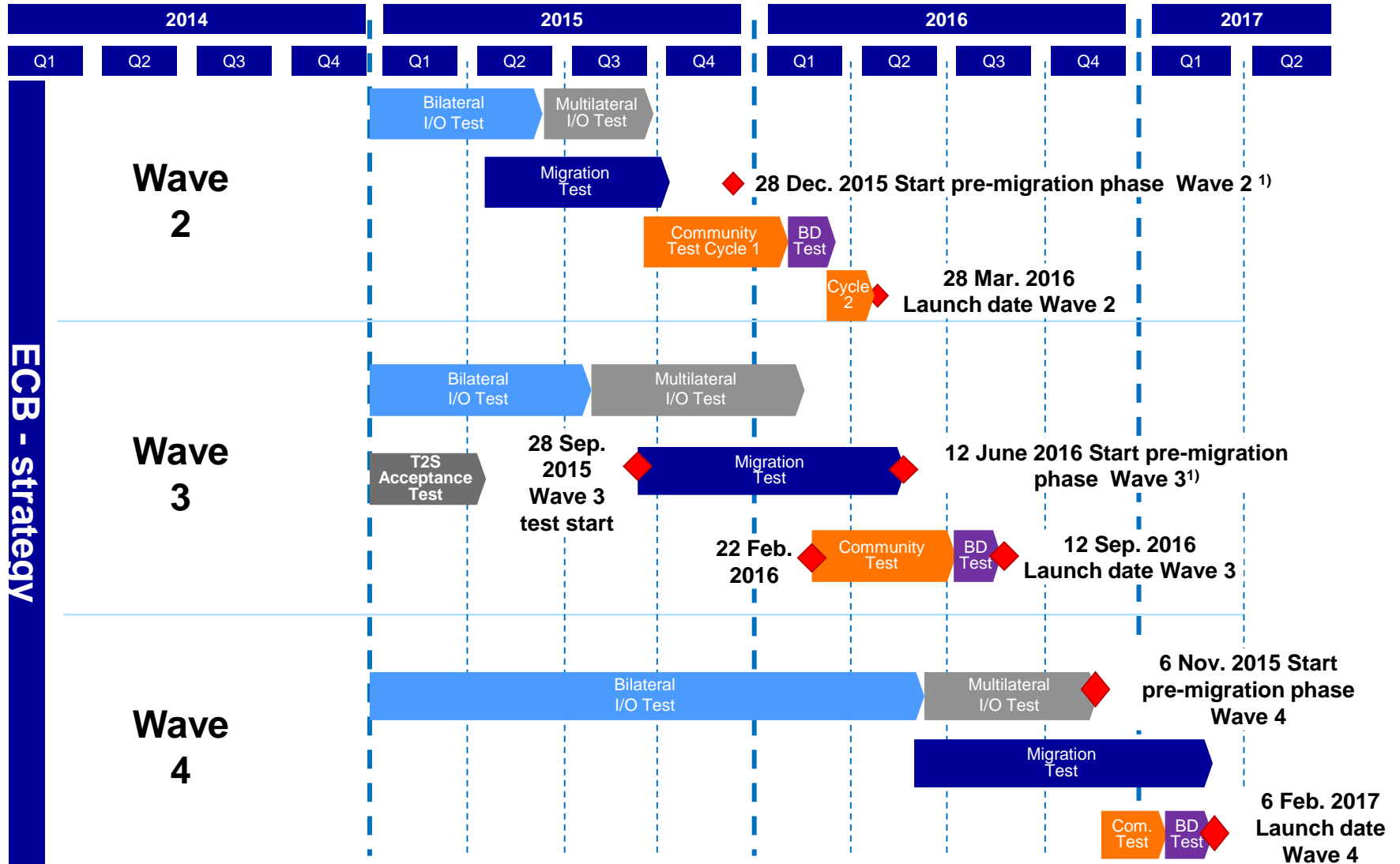
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readiness
documentation



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Getting ready for the T2S migration waves

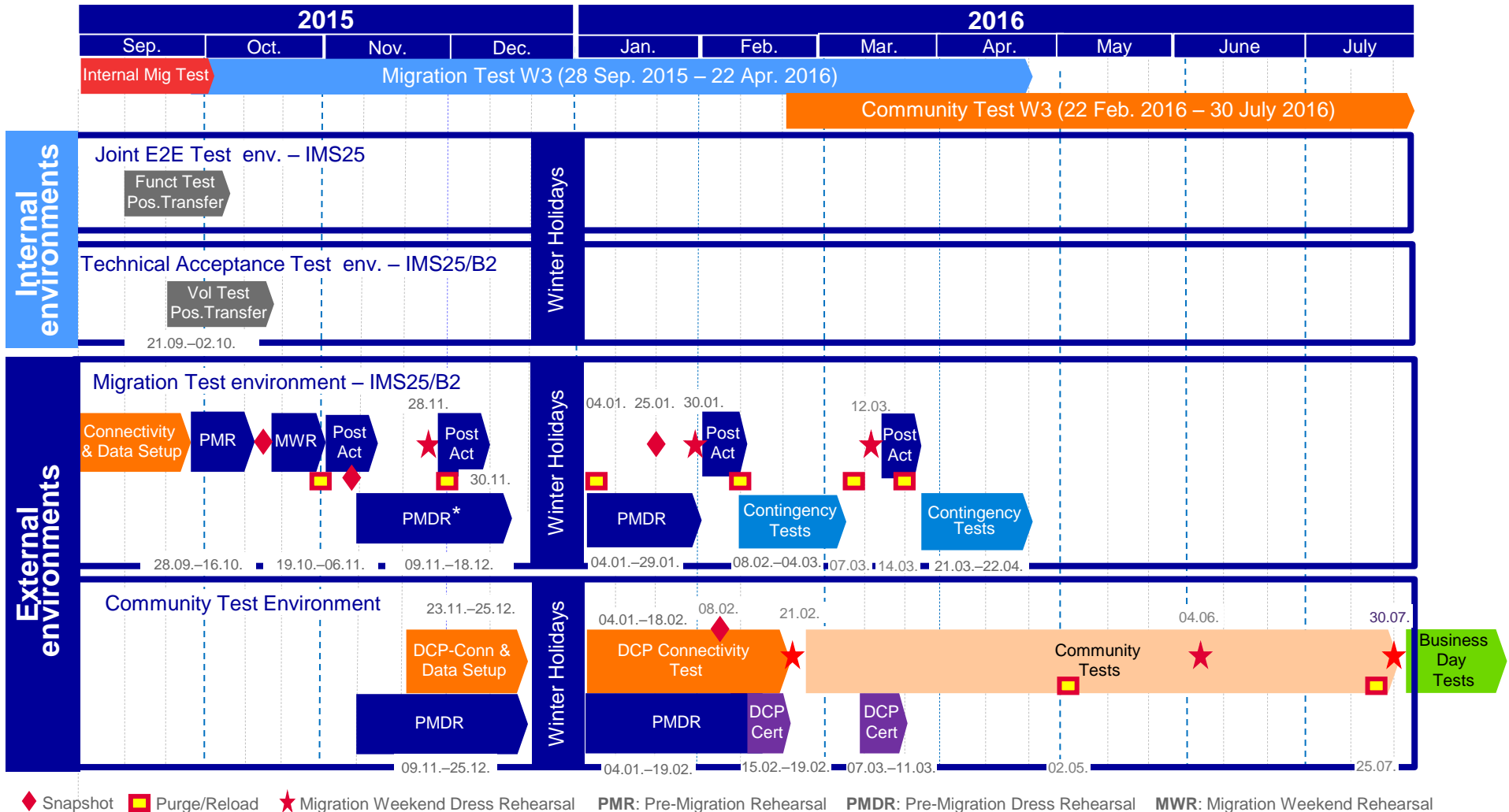
Calendar & timing (1/2)



Abbreviations: - BD Test: Business Day Test

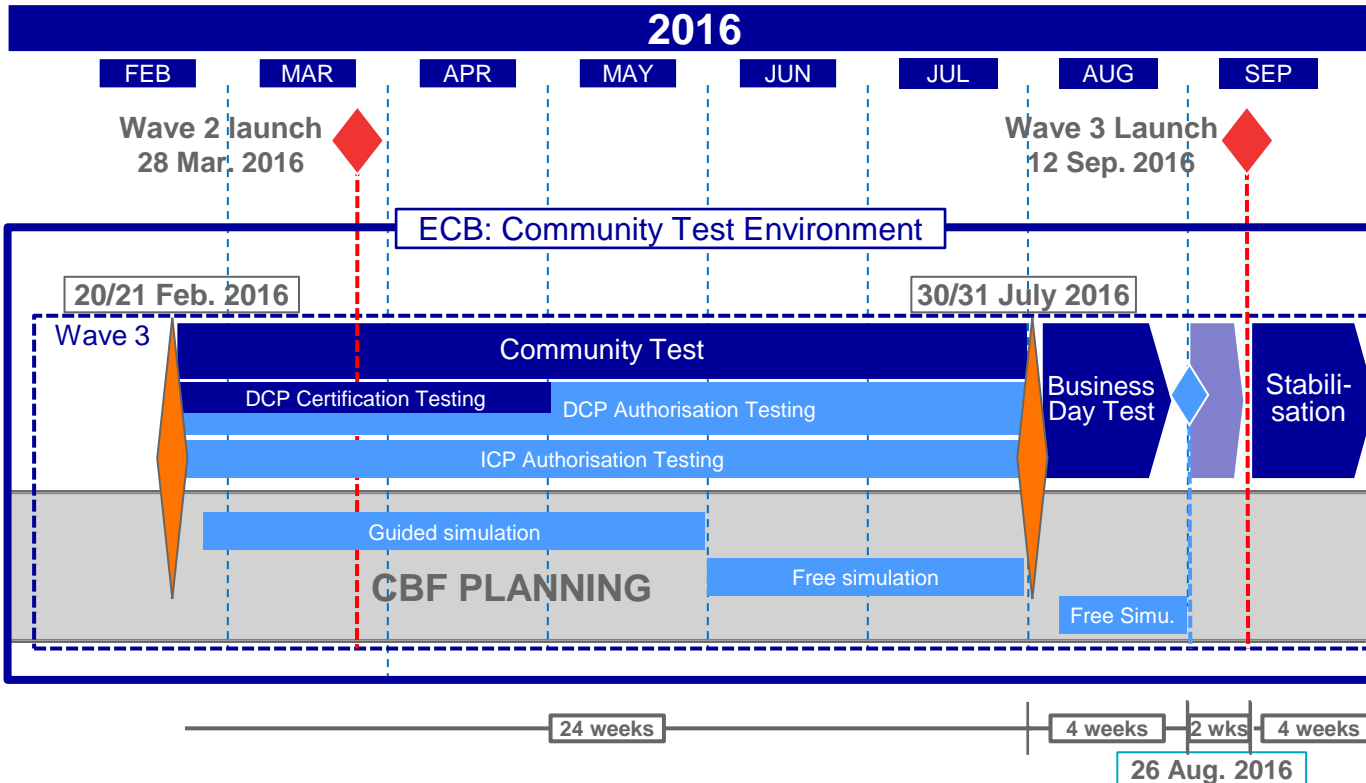
Calendar & timing (2/2)

Migration testing Wave 3: internal & external view



CBF Customer Simulation T2S Wave 3

High-level timeline



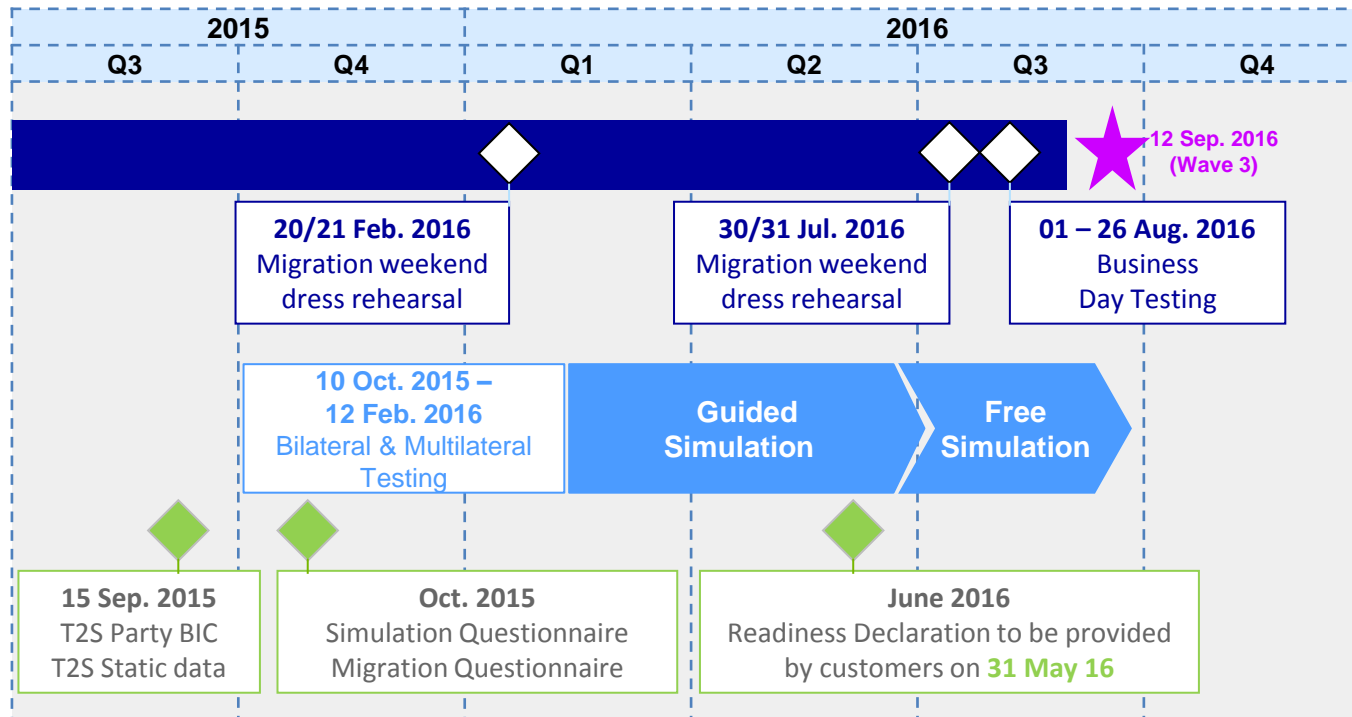
Please note:

- Migration weekend dress rehearsals for Wave 3 take place:
 - 20/21 Feb. 2016
 - 30/31 July 2016

- CBF planning follows the framework given by the T2S Operator

CBF Customer Readiness Timeline

T2S Wave 3 readiness activities are structured by guiding documents



Documents to be populated and submitted by CBF customers upon delivery from CBF

- ✓ T2S Party BIC form
- T2S Static Data form
- Simulation Questionnaire
- Migration Questionnaire
- Readiness Declaration

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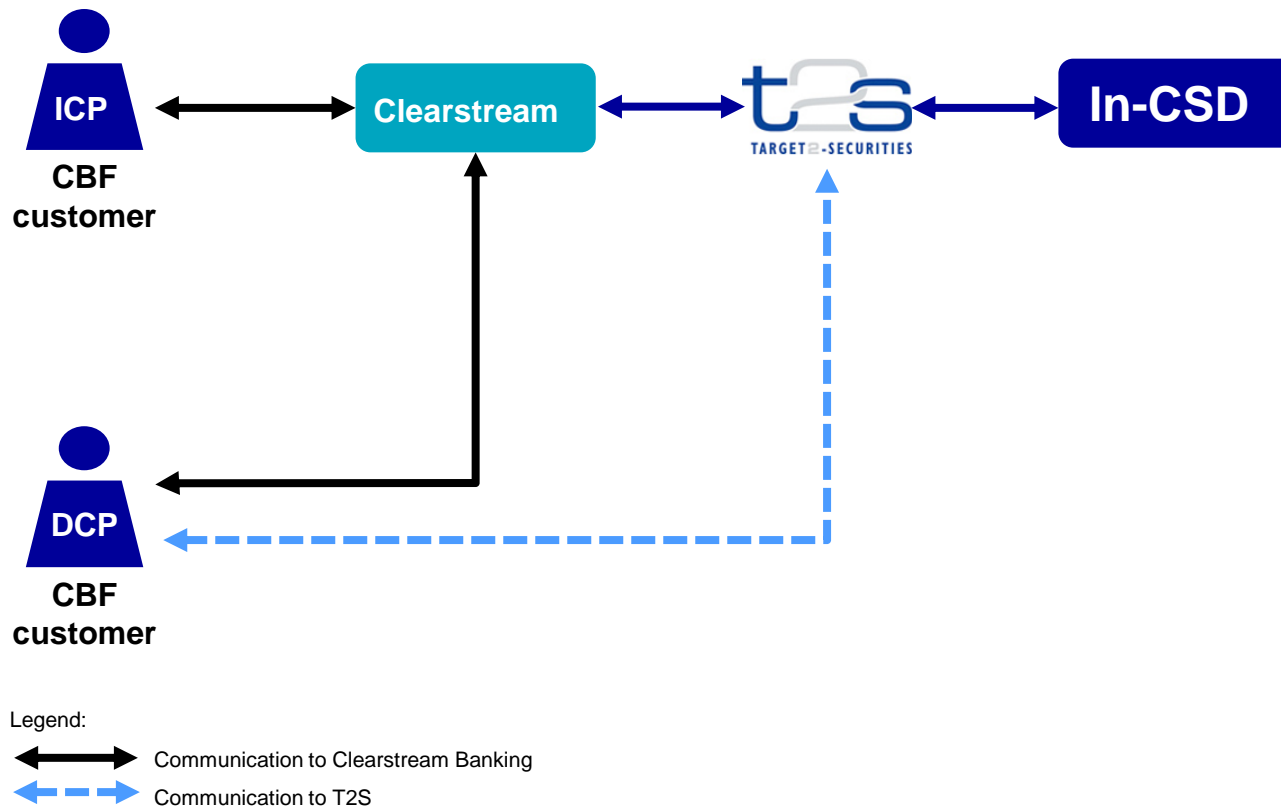


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Connectivity-related aspects

T2S Connectivity Modes¹⁾

Customers can be connected via ICP or DCP mode

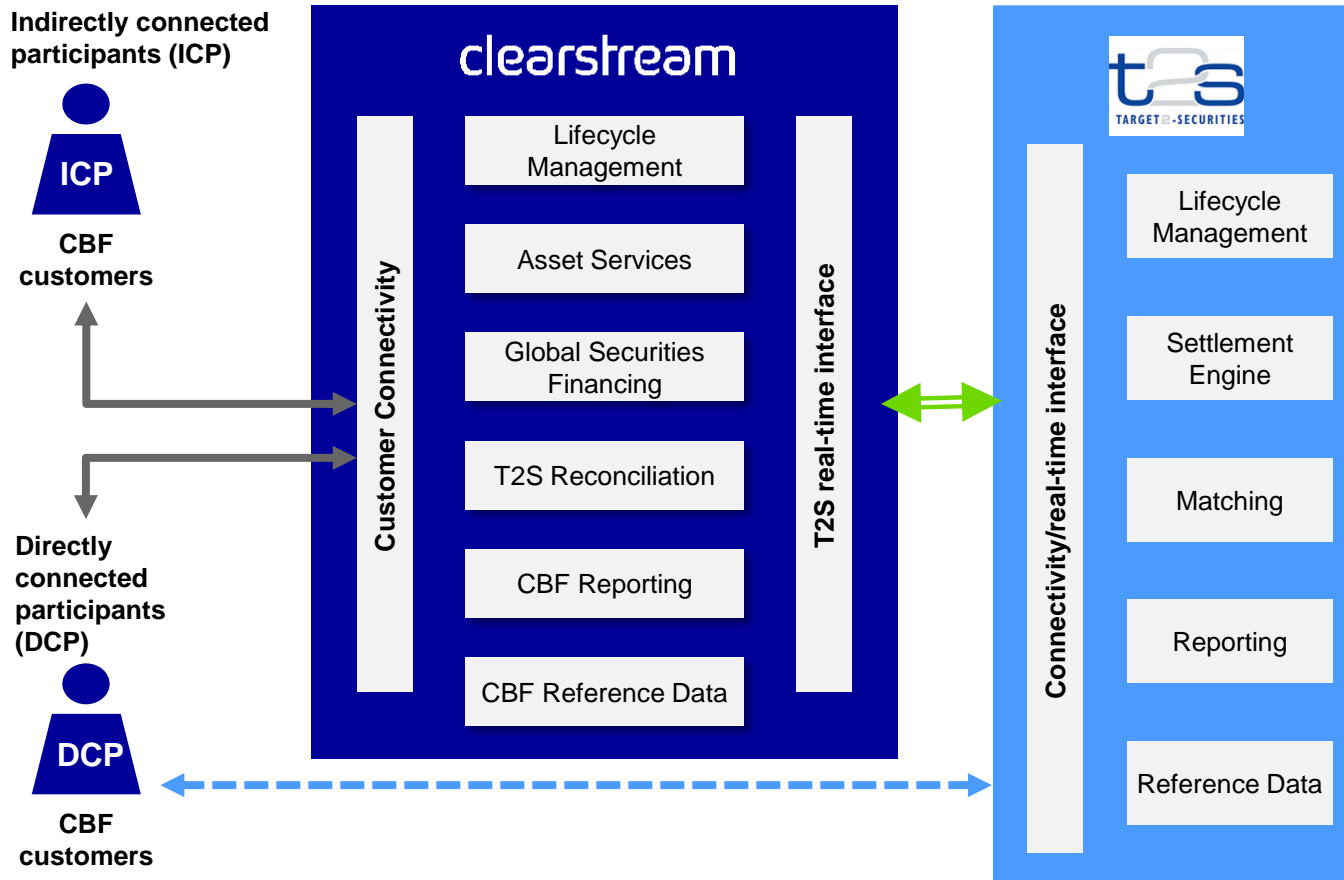


- **ICP customers**
CBF ICP customers send their messages to CBF. CBF is responsible for managing the connectivity with T2S
 - **DCP customers**
CBF DCP customers can send instructions:
 - in DCP mode directly to T2S. CBF receives copies of messages exchanged between T2S and the DCP customer from T2S
- and / or**
- in ICP mode to CBF. CBF is responsible for managing the connectivity with T2S

1) The changing infrastructure environment allows CSDs' customers to choose between more opportunities. In every model the customer has the possibility between direct (DCP) and indirect (ICP) connection to T2S.

T2S functionality overview

ICP and DCP functions



Please refer for further information to chapter 3.2 „Connectivity / CBF Interface“ and Appendix

- Legend:
- Communication in ICP mode
 - Communication in DCP mode
 - Clearstream Interface to T2S

About TARGET2-Securities:

- T2S is a central technical platform for securities settlement in central bank money (currently only in euro)
- T2S aims to harmonise domestic and cross-border settlement processes
- T2S is to be built and operated by the Eurosystem
- CSDs will remain legally responsible for securities settlement but for technical reasons outsource the settlement infrastructure (positions and accounting) to T2S

Implementation strategy

Clearstream follows a risk based deployment approach

CBF follows a risk based approach for T2S migration

For the migration to T2S three main migration paths must be coordinated

- Settlement Functionality adaptation
 - Deployment of T2S adaptations in a stepwise approach **AND** as early as possible implementation into production to allow early user involvement
- Static data
 - Migration of static data to T2S as early as possible (with Wave 1 the maintenance of securities master data will start)
- Dynamic data (mostly pending instructions and positions)
 - Migration inevitable in a “big-bang” approach for Wave 3

In November 2013, CBF started to introduce T2S functional requirements within its regular releases

To mitigate migration risk for the whole market, CBF has opted for a decoupling of the migration paths

Implementation Strategy

Next step: November release 2015

The scope of the CBF November release 2015 will deliver:

a) The decommissioning of CBF modules regarding the cross border link for Monte Titoli that could not be removed in order to cover fall back and/or contingency scenarios

b) The changes with regards to the cross-border link to ESES. ESES will migrate to T2S in Wave 2. With this approach a dedicated CBF Release for T2S Wave 2 shall be avoided. Customers will benefit from this solution as the software modules for the T2S Wave 2 customer simulation are intended to be deployed at the earliest time possible

c) Which supports the harmonisation of settlement procedures (see following page)

Please note:

T2S Wave 2 will be implemented on **28 March 2016**

Implementation Strategy

Preparatory measures for T2S Wave 3 at a glance

CASCADE Settlement	CASCADE Reporting ¹⁾	CBF STP ²⁾ Processing	Value Added Services
<ul style="list-style-type: none"> ▪ Harmonisation with the T2S matching rules ▪ Stop processing of OTC settlement instructions from/to RegÜber accounts ▪ Settlement of domestic instructions from securities issued by SIX-SIS in CHF 	<ul style="list-style-type: none"> ▪ Changed delivery time for Regulierungsliste ▪ Changes in display for Depotbuch persönlich ▪ Changes in display for Depottagesauszüge ▪ Changes in naming of LION Instruktionslisten ▪ Further identifying flags in the settlement reporting ▪ New fields in custody account turnover for instruction type AA10 	<ul style="list-style-type: none"> ▪ In- and outbound communication (MT54x) will be enhanced to support additional information ▪ Enhancement of CBF Status Reporting (MT548 /MT537) regarding status information ▪ The distribution timeline of MT564 will be updated ▪ Validation procedure of ISO transaction codes ▪ Verification of BIC against the BIC directory 	<ul style="list-style-type: none"> ▪ Introduction of transaction flags: <ul style="list-style-type: none"> ▪ Opt/Out ▪ Ex/Cum ▪ Account Master Data will be enriched by new fields ▪ Deactivation of the LION Gesamt-Rückstellung ▪ Implementation of the new redemption model for Danish bonds

More details can be found in CBF's Advance Release Announcement that was published on 8 June 2015

1) Affects changes in CASCADE Online (HOST / PC) and list layouts

2) STP = Straight Through Processing

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Customer readiness documentation

Outlook – next steps

Schedule for customer readiness documentation

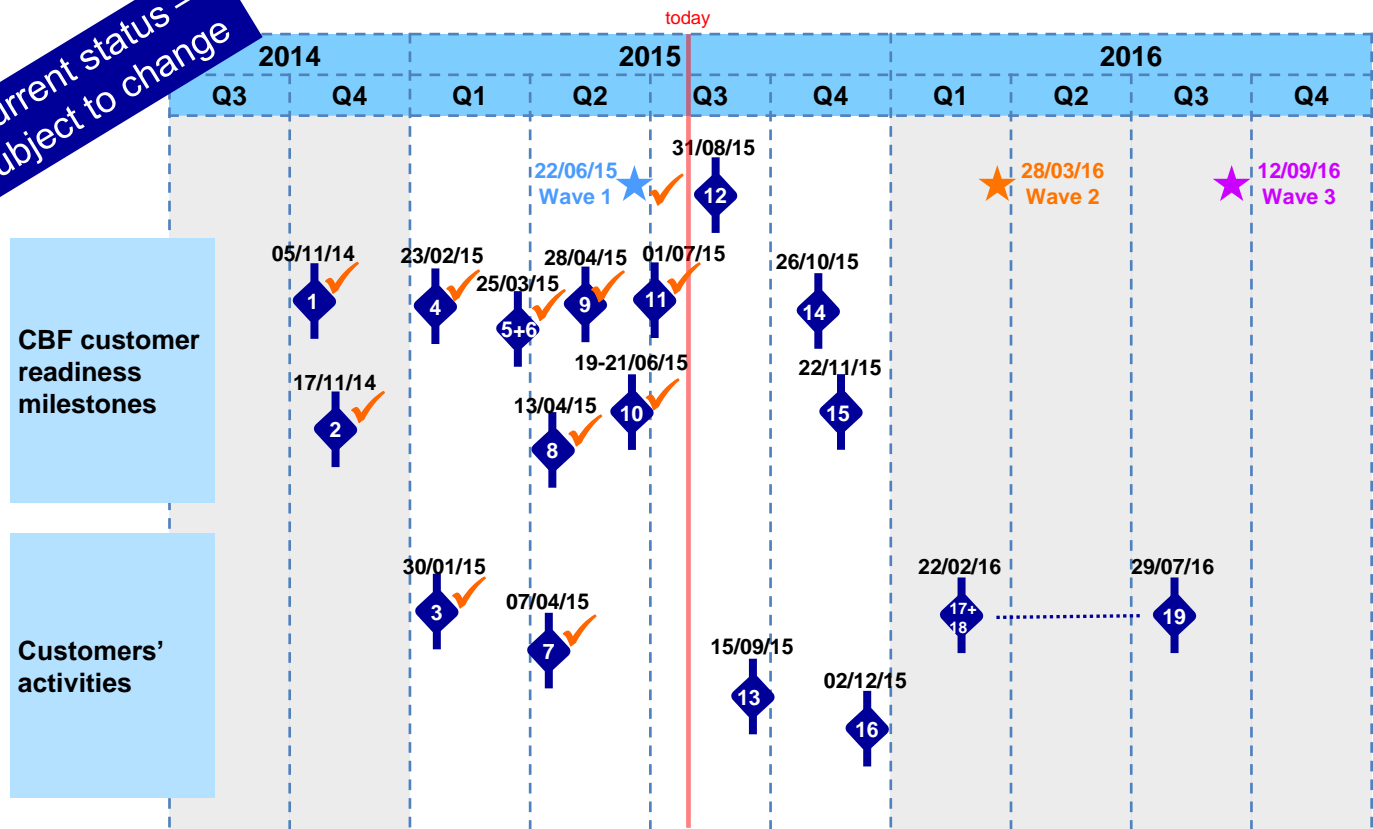
Detailed Functional Description (DFD) for CBF launch on 12 September 2016 within T2S Wave 3				Please note:
Release 1 Published ✓	Release 2 Published ✓	Release 3 Published ✓	Release 4 Publication planned for first half of 2015	<ul style="list-style-type: none"> ▪ The DFDs describe the advanced functions and services of CBF in the context of the migration to T2S ▪ These documents are intended to help our customers to assess the possible need for adjustments of their internal systems and operational processes ▪ CBF started updating the customer documentation to reflect the latest changes initiated by the ECB/Eurosystem ▪ DFD ICP Connectivity and DFD Custody have been updated and published
<ul style="list-style-type: none"> ▪ Static data ▪ Domestic OTC settlement ▪ Connectivity ICP 	<ul style="list-style-type: none"> ▪ Connectivity DCP ▪ Stock exchange settlement ▪ CBF Business Day 	<ul style="list-style-type: none"> ▪ Cash management ▪ CBF settlement reporting ▪ Custody 	<ul style="list-style-type: none"> ▪ New issues and vaults processing ✓ ▪ GSF¹⁾ services ▪ Cross-border settlement 	
Release 3				
DFDs GSF services and cross-border settlement are being prepared and will be delivered in the course of Q3/2015				

1) GSF = Global Securities Financing covering Collateral Management and Lending Services

Customer Readiness Schedule – overview

Major target dates before migration of Wave 3

Current status – subject to change



Please note:

- This schedule highlights the most important target dates to be considered in the CBF customers' planning
- More details can be found on next page

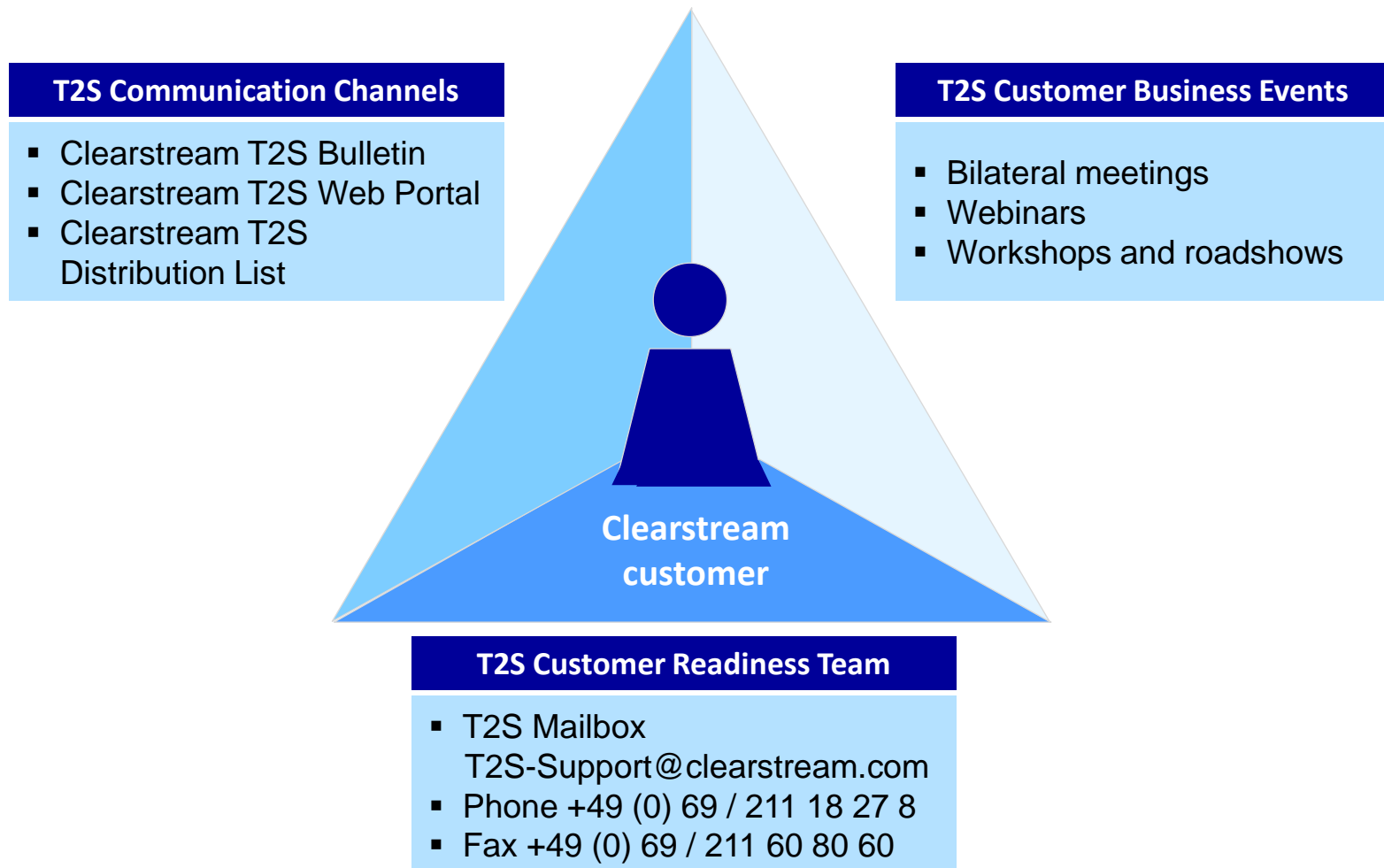
Customer Readiness Schedule – Overview

Most important target dates to be considered in the CBF customers' planning listed by date

No.	Date			No.	Date		
1	05/11/2014	CBF information session introduction Wave 1	✓	11	01/07/2015	T2S summary session – T2S Wave 2	✓
2	17/11/2014	CBF November release	✓	12	31/08/2015	Monte Titoli – migration to T2S	
3	30/01/2015	Account setup CBF customer Wave 1	✓	13	15/09/2015	Account setup CBF customer Wave 3	
4	23/02/2015	DCP firm commitment	✓	14	26/10/2015	Start customer simulation for November release 2015	
5	25/03/2015	T2S summary session spring 2015	✓	15	22/11/2015	CBF November Release 2015	
6	25/03/2015	Introduction Wave 1 simulation/migration	✓	16	02/12/2015	Introduction Wave 2 simulation/migration	
7	07/04/2015	Start CBF customer 'simulation	✓	17	22/02/2016	Start community testing Wave 3	
8	13/04/2015	Go-live CBF as T2S SME	✓	18	22/02/2016	CBF customer simulation Wave 3	
9	28/04/2015	CBF April release 2015	✓	b	28/03/2016	Launch Wave 2	
10	19-21/06/2015	Go-live CBF as T2S – final migration	✓	19	29/07/2016	Finalisation CBF customer simulation Wave 3	
a	22/06/2015	Launch Wave 1	✓	c	12/09/2016	Launch Wave 3	

Thank you

We are looking forward to supporting and guiding you

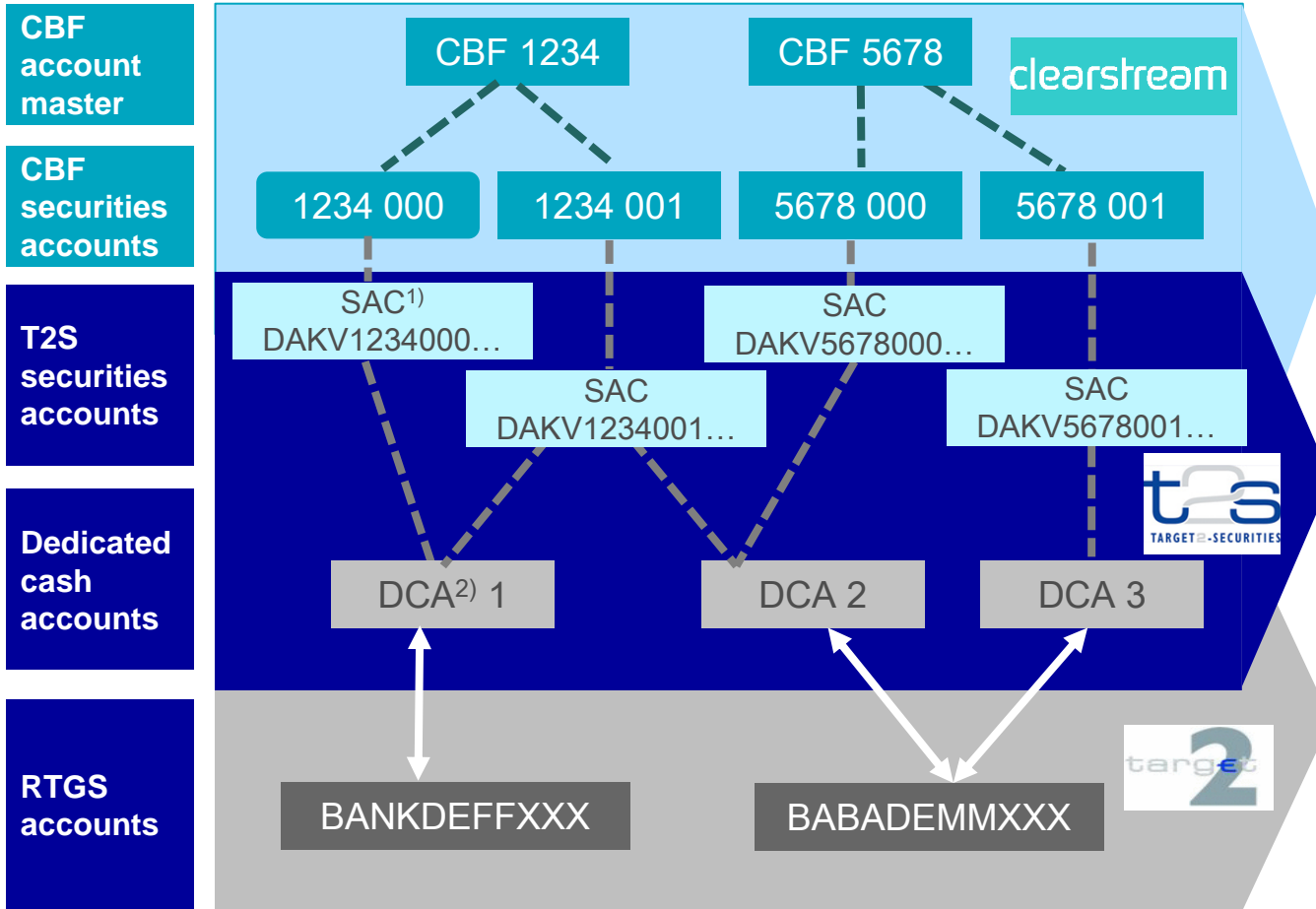




Appendix

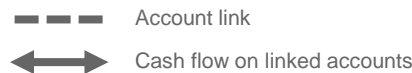
T2S functional model: overview of accounts

Securities and cash accounts: future account relations



- Each CBF (sub-) account of an account master is linked to one SAC in T2S (1:1)
- One SAC can be linked to multiple DCAs (n:m), however for each SAC one default DCA has to be defined
- DCAs need to be linked to one RTGS account in TARGET2. This default RTGS account is used for EoD³⁾ cash sweep from DCA
- One RTGS account can be linked to multiple DCAs (1:n)

1) SAC: Securities Account
 2) DCA: Dedicated Cash Account
 3) EoD: End of Day





Thank you for your attention

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inhouse-networks (Zweizeilige E-Mail-Ansicht)

Hilfe

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