



Infrastructural developments in payments, securities & collateral

Conference on Payments and Market Infrastructures in Ohrid, North Macedonia
Nynke Doornbos, 3 June 2019

DeNederlandscheBank

EUROSYSTEEM



Outline – EU and ECB developments

- **EU Action Plan Capital Markets Union (2015) & actions to overcome barriers in post trade systems and markets**
 - Focus now on financial markets infrastructure
- **ECB VISION 2020:**
 - TIPS – already live in 2018
 - T2/T2S consolidation project (go live 2021)
 - ECMS project (go live 2022)
- **Fintech and post trade systems**

EU Action Plan Capital Markets Union (focus now on financial markets infrastructure)

Trigger: overcome barriers to EU post trade systems and collateral markets (Giovannini report) and Europe's slow recovery financial crisis

Fifteen main causes of fragmentation and inefficiency including (mentioned by Giovannini):

- Market inefficiencies
- Legal barriers
- Insufficient competition
- An unlevel playing field

Objective [CMU post-trade]: achieve an integrated, safe and efficient post-trade environment in the EU

Link Giovannini expert group reports (2001 – 2003):
https://ec.europa.eu/info/publications/giovannini-reports_en

Introduction Post trade landscape

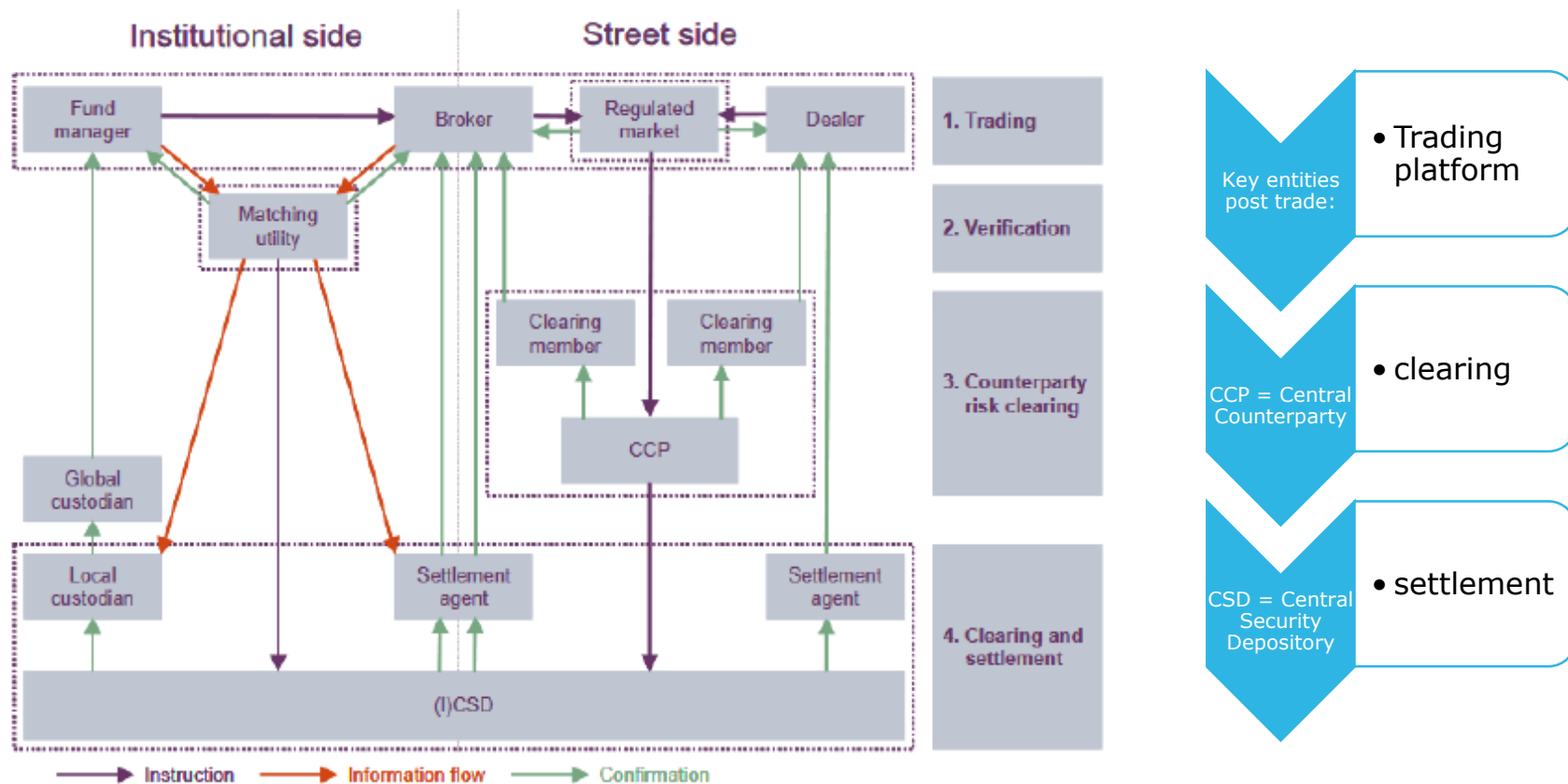
Securities chain



At the core: clearing & settlement:

- Transfer of ownership of securities from the seller to the buyer
- Transfer of the payment from the buyer to the seller

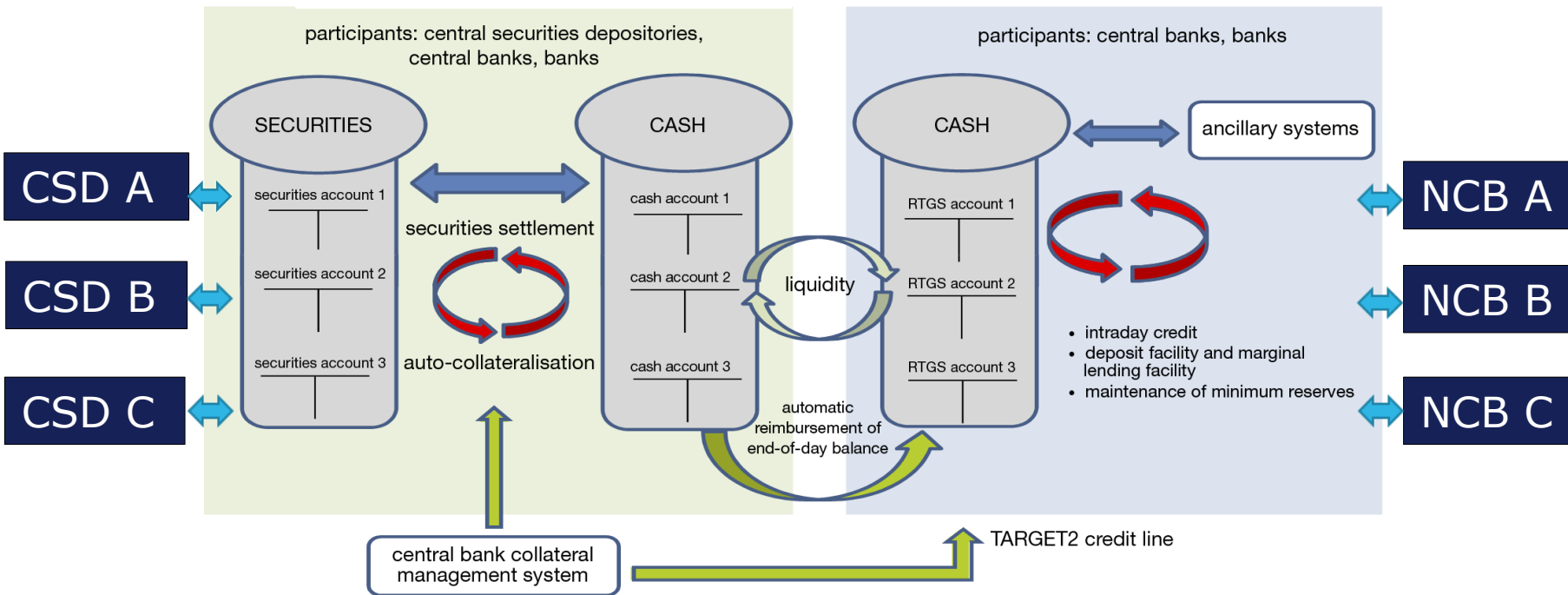
Post trade services ecosystem – example of involved entities



Source: OXERA report 2011 – Monitoring prices, costs and volumes of trading and post-trading services⁴.

Post trade – who is doing what focus on T2 and T2S

target | T2S services | target | T2 services |



At the core: Delivery vs Payment – delivery securities only when payment occurs

EU actions –post trade

- Rules for settlement systems
- Measures to regulate and facilitate the crossborder use of collateral
- Regulation on OTC derivatives, central counterparties and trade repositories (EMIR regulation)
- Stricter prudential rules for central securities depositories (CSD) (CSDR regulation)
- Legislation on the recovery and resolution of central counterparties (CCPs)

But: ECB T2S system project alone removes six out of 15 barriers to crossborder clearing and settlement ('Giovannini-barriers')!

EU Progress [slow but going]

Mid term review Action Plan CMU (2017)

- completing 20 out of 33 measures
- adding nine additional measures

Legislative initiatives:

- EU framework for covered bonds
- Capital markets supervision - strengthen powers of ESMA (consistency of supervision across the EU)

Slow progress in the following areas

- Harmonizing insolvency procedures
- Improving market infrastructure
- Harmonising taxation of financial products
- Legal certainty for crossborder securities ownership rights

Still no harmonised regime for safekeeping and record keeping of ownership of securities at EU level

Call for action – May 2019 – DE, FR, NL to complete CMU and speed up process

Harmonisation is key – T2S progress

T2S harmonisation progress

priority 1 activities	
T2S Messages	ISO 20022
Schedule of settlement day	
T2S corporate actions	
Legal harmonisation	Settlement finality
Settlement discipline	
Settlement cycle	
CDS account structures	
T2S account numbering	

Status dashboard for the T2S harmonisation activities

(as at 23 February 2013 and at 20 July 2018)

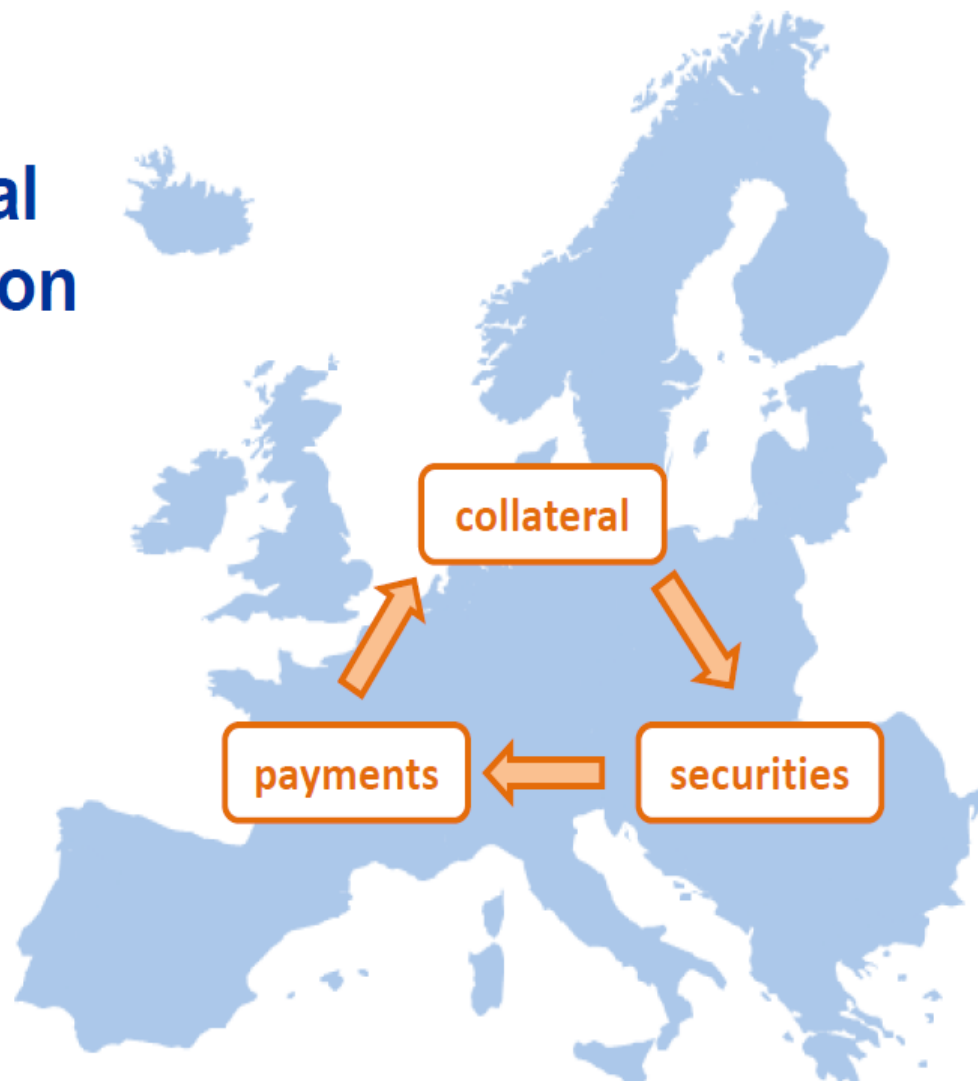
Priority 1 activities	Third progress report (26 February 2013)			This milestone report (20 July 2018)			
	Definition	Monitor	Compliance	Definition	Monitor	Compliance ¹	
1 T2S ISO 20022 messages	G	G	G	G	G	B	
2 T2S messages	G	G	Y	G	G	R (3)	
3 Interaction for registration	G	Y	X	G	G	B	
4 Interaction for tax info	G	Y	X	G	G	R (1)	
5 Schedule of settlement day/calendar ²	G	G	Y	G	G	N.A.	
6 T2S corporate actions standards	G	G	R	G	G	R (9)	
7 Settlement finality I (moment of entry)	Y	X	X	G	G	B	
8 Legal harmonisation	G	G	G	G	G	B	
9 Settlement finality II (irrevocability of transfer order)	G	G	G	G	G	B	
10 Settlement finality III (irrevocability of transfer)	G	G	G	G	G	B	
11 Outsourcing IT services	R	X	X	G	G	B	
12 Settlement discipline regime	R	X	X	G	X	X	
13 Settlement cycles	R	X	X	G	G	B	
14 CDS account structures	G	G	B	G	G	B	
15 Availability of omnibus accounts	G	G	G	G	G	R (1)	
16 Restriction of omnibus accounts	G	Y	X	G	G	B	
17 T2S account numbering	G	Y	X	G	G	B	
18 Dedicated cash accounts numbering	G	Y	X	G	G	B	
Priority 2 activities	Definition	Monitor	Compliance	Definition	Monitor	Compliance	
17 Legal harmonisation	Location of securities account/conflicts of law	R	X	X	G	X	X
18 Corporate actions market standards	CA market (CA/JWG) standards	G	G	R	G	G	G
19 Place of issuance		R	X	X	G	X	X
20 Tax procedures	Withholding tax procedures	Y	X	X	Y	X	X
21 Shareholder transparency – registration		Y	X	X	R	X	X
22 Market access		R	X	X	G	X	X
23 Securities amount data		G	G	G	G	G	R (1)
24 Portfolio transfers				Y	X	X	

Harmonisation is hard work but precondition integration/consolidation!

Part II - ECB Vision 2020

Objective for 2022:

**Achieving geographical
and business integration**



TARGET services en VISION 2020 project

target
services

target | T2
services

target | T2S
services

target | TIPS
services

TIPS

approved: 21 June 2017
Go live : November 2018



T2-T2S consolidation

approved: 6 December 2017
deadline: November 2021



ECMS

approved: 6 December 2017
deadline: November 2022



TARGET2 and T2S consolidation

Objectives

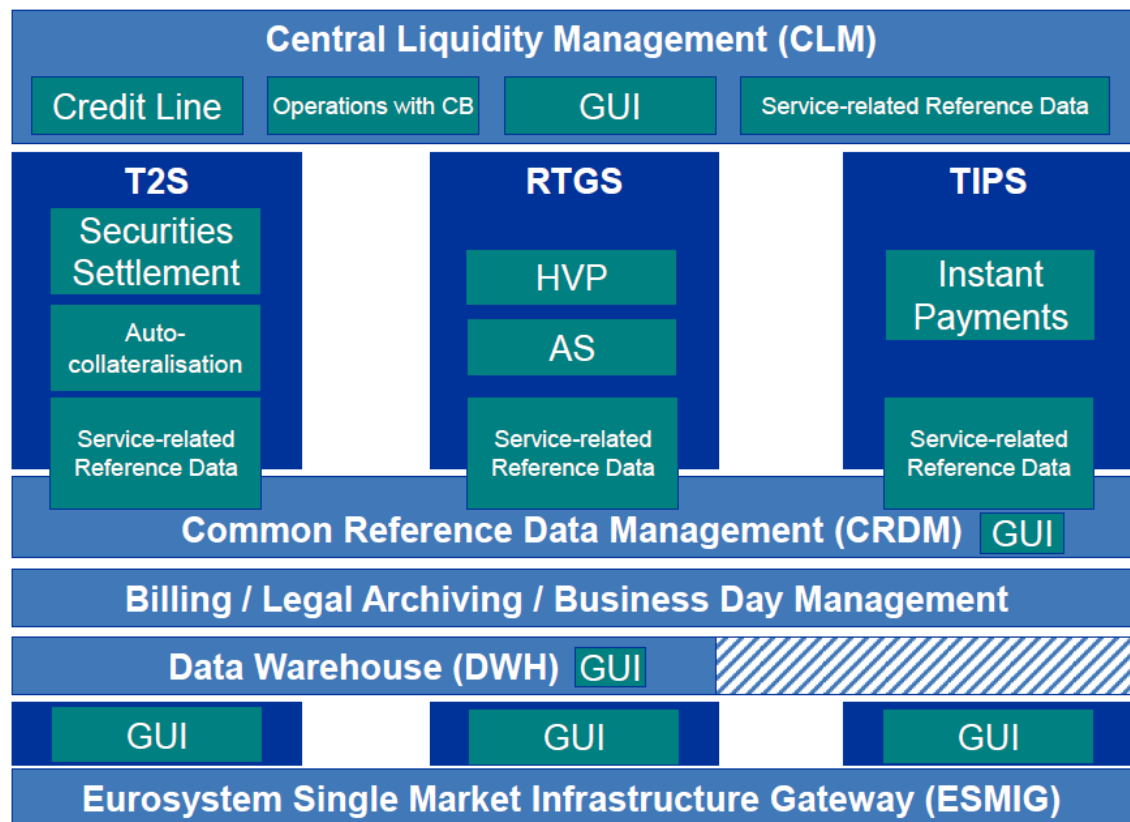
- ✓ improved efficiency
- ✓ optimised liquidity management
- ✓ easier access to services via harmonised interface
- ✓ enhancement of RTGS services
- ✓ aligned use of messaging standards
- ✓ reduced operational costs

TARGET2 and T2S consolidation main changes

- **Central Liquidity Management (CLM)** will replace Home Accounting Module (HAM), Standing Facilities and Reserve Management Module
- T2 network agnostic, **at least two network providers.**
- One common communication infrastructure for **T2, T2S, TIPS and ECMS** (both U2A and A2A-mode): **Eurosystem Single Market Infrastructure Gateway (ESMIG).**
- **Static data** of T2 will be shared with T2S, TIPS and ECMS (Common Reference Data Management (CRDM)).
- **Multi-currency**, but no conversion.
- Communication:
 - from MT-messages to **ISO20022-messages** (MX-messages).
 - SWIFT Y-copy mode becomes V-shape-mode, i.e. **payments to be addressed to T2** and not to beneficiary bank.

TARGET2 and T2S consolidation

High level functional domains



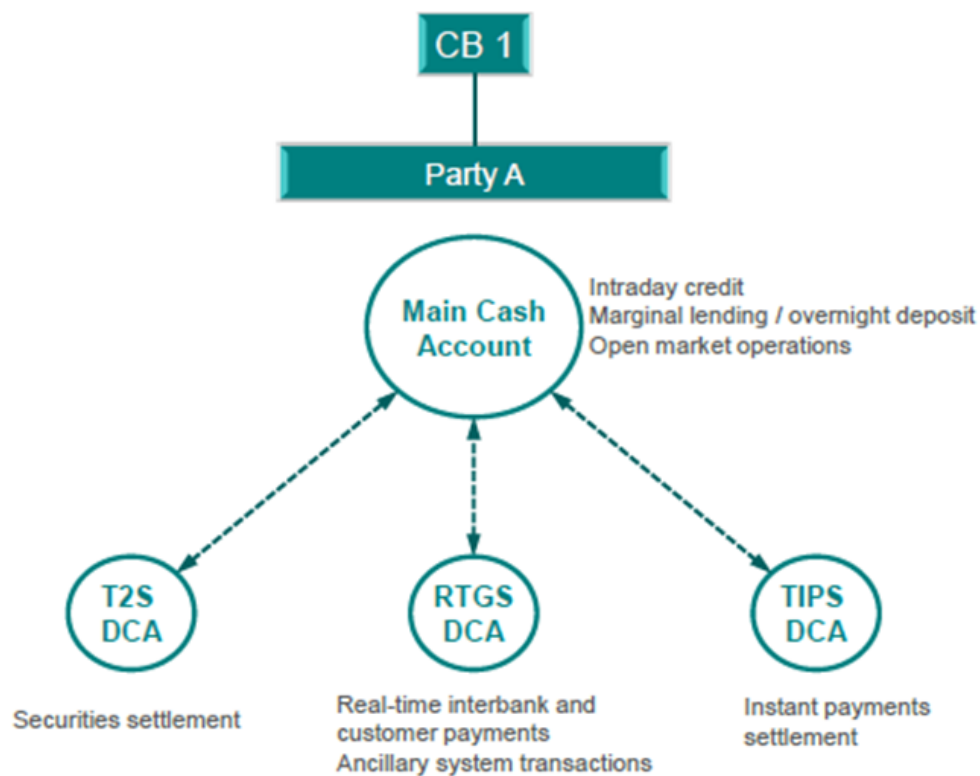
target
services

target | T2
services

target | T2S
services

target | TIPS
services

TARGET2 and T2S consolidation Central Liquidity Management (CLM) Account Structure



Basic account structure model

target
services

target | T2
services

target | T2S
services

target | TIPS
services

TARGET2 and T2S consolidation CLM - Main Cash Account (MCA)

The scope of operations of the MCA is:

- Credit line management.
- Cash withdrawals

- Holding of minimum reserves.
- Standing facilities (marginal lending and overnight deposits)
- Open market operations and any other monetary policy operation
- Interest payments related to standing facilities and minimum reserves

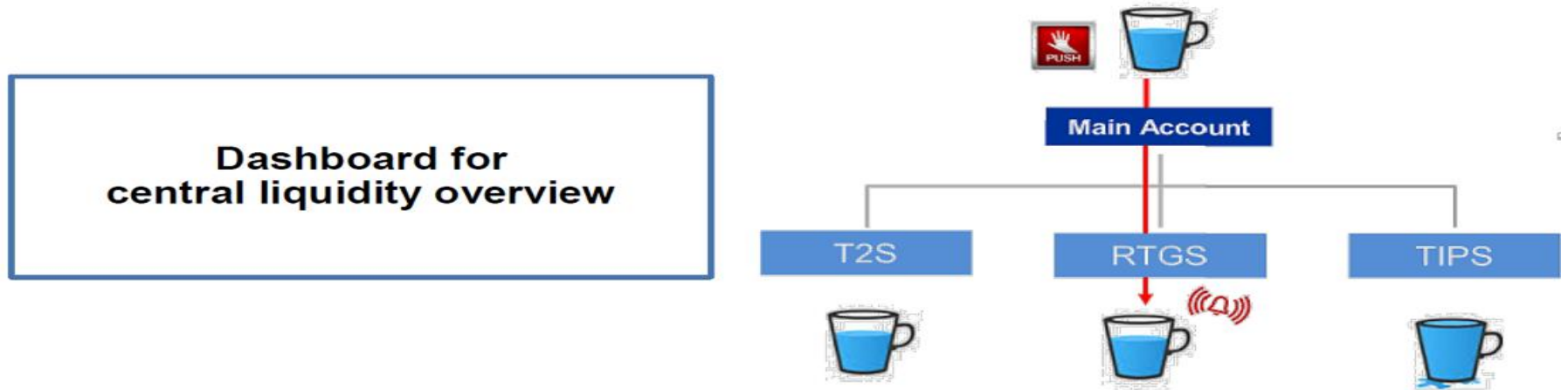
- Debiting of billing amounts
- Any other activity carried out by Central Banks (as Central Bank of Issue).

No payments between market participants are allowed on a MCA.

Liquidity transfers with other MCAs within the same Liquidity Transfer Group are allowed.

TARGET2 and T2S consolidation

Liquidity monitoring tools



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

TARGET2 and T2S consolidation

Liquidity management tools

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

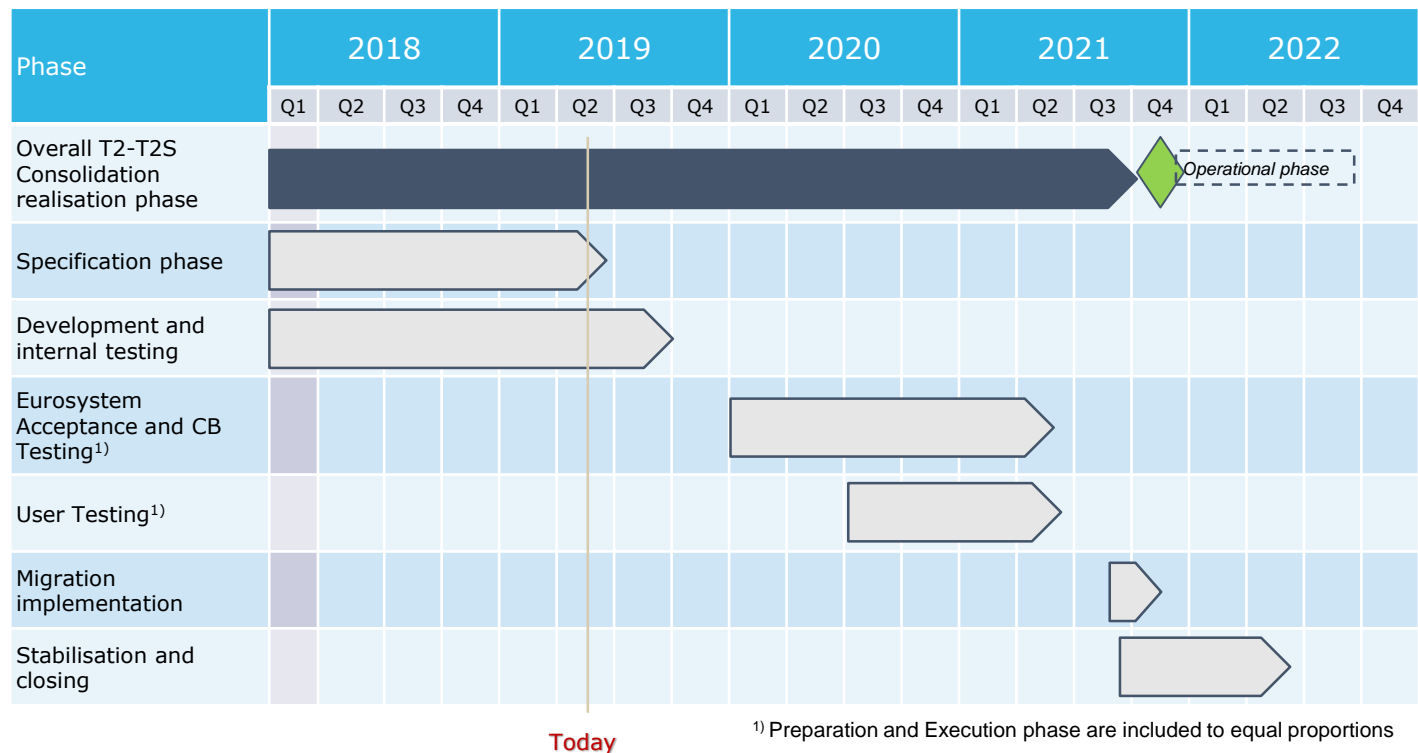
TARGET2 and T2S consolidation

Cash withdrawals

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

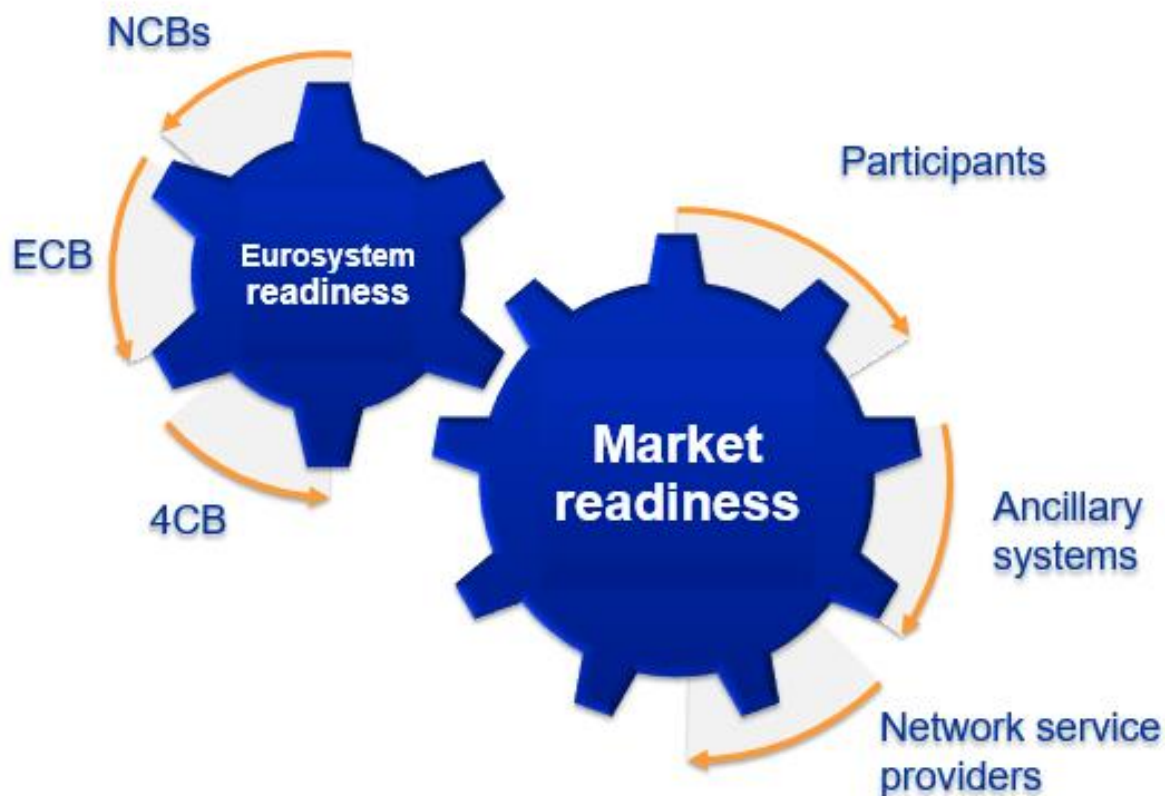
TARGET2 and T2S consolidation Planning

Agile approach



TARGET2 and T2S consolidation Planning

WHO needs to be ready?



TARGET2 and T2S consolidation Planning

WHAT are the main challenges for each T2 service participant?

Technical readiness

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

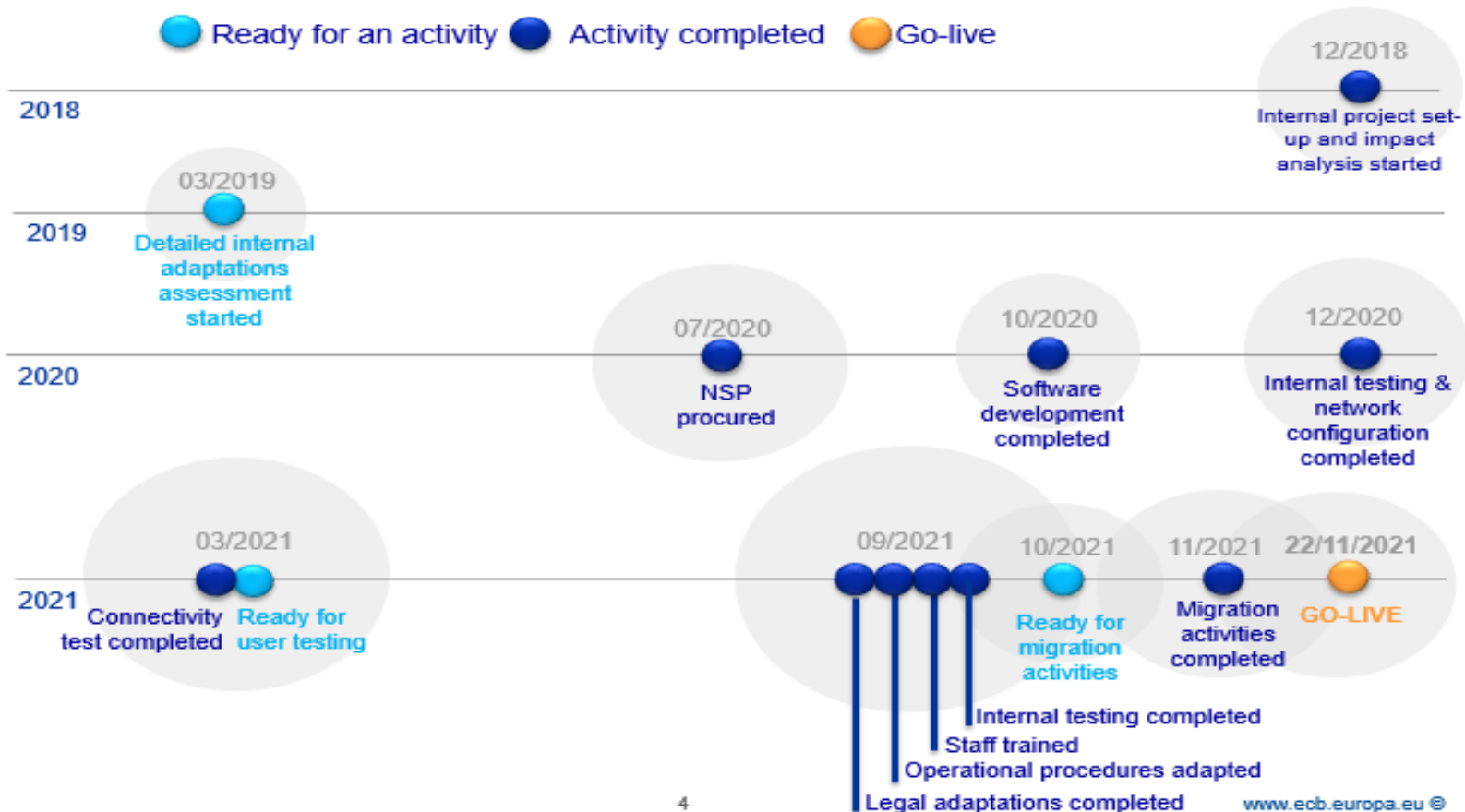
Business and operational readiness

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

TARGET2 and T2S consolidation Planning

WHAT are the main tasks and milestones?

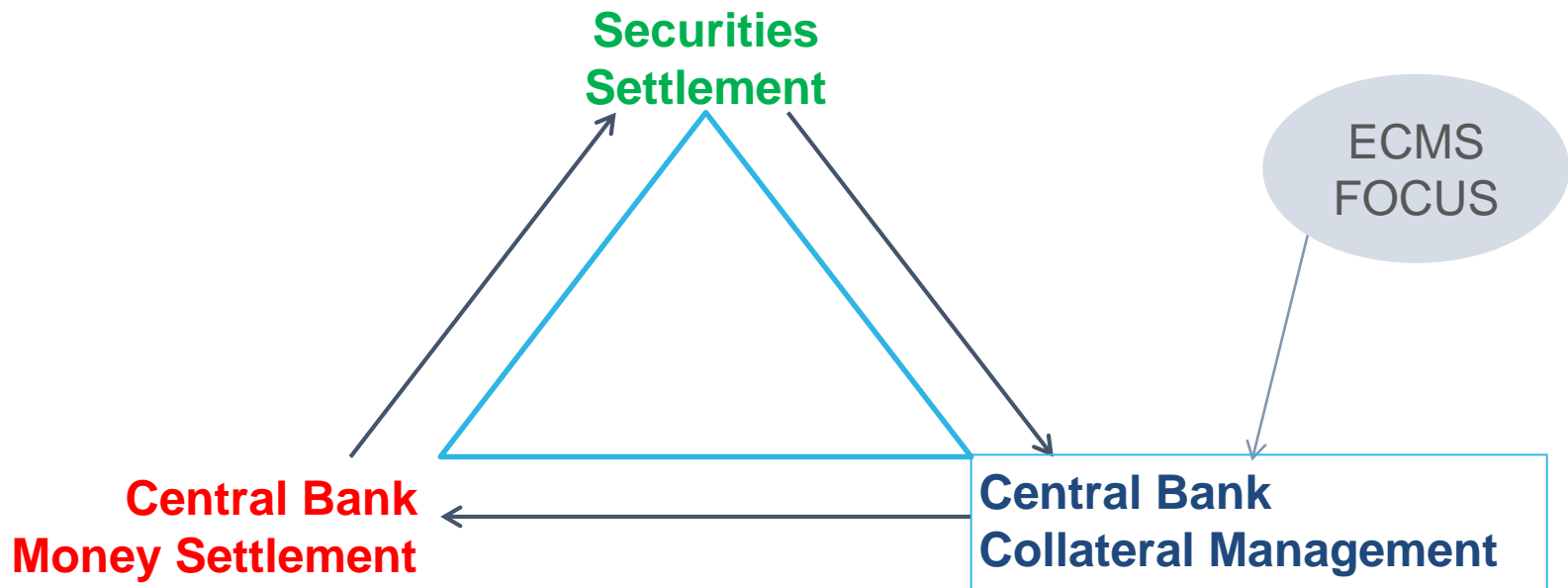
● Ready for an activity ● Activity completed ● Go-live



Part III

Fundamental drivers of the Eurosystem

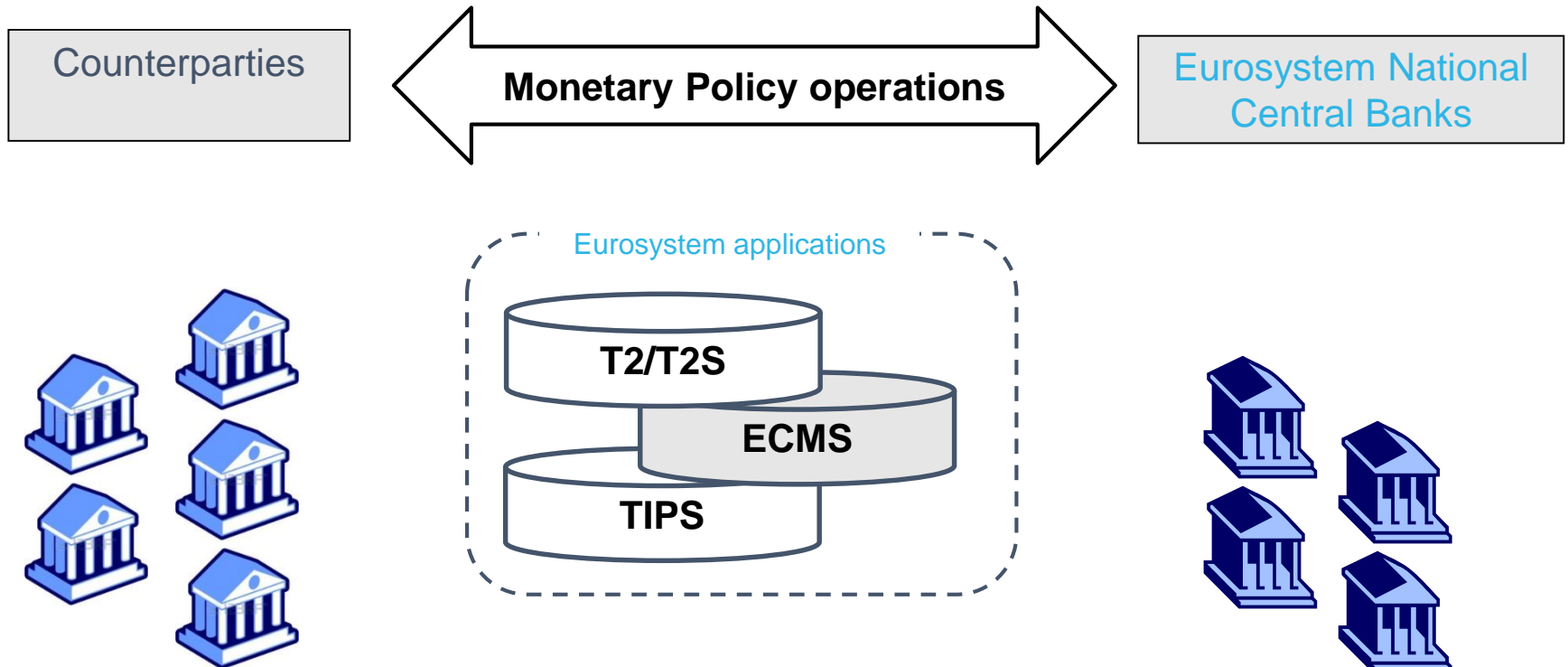
- The key function of Eurosystem market infrastructures is to ensure the exchange of **securities**, **collateral** and **liquidity** between financial market counterparties with liquidity being the fuel to effectively facilitate the exchange:



Eurosystem Collateral Management System

A single ECMS for managing **eligible assets as collateral** in Eurosystem monetary policy operations.

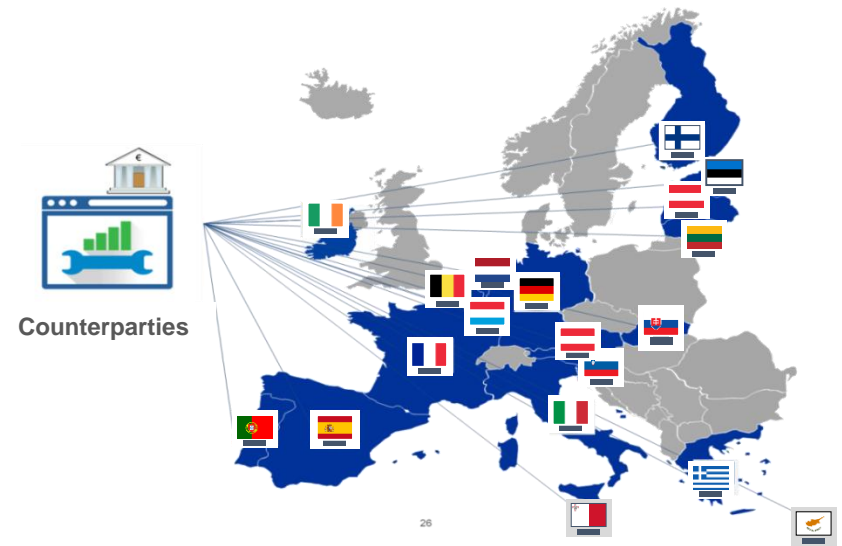
ECMS includes to the largest extent possible **harmonised functions and services**.



ECMS - introduction

Current situation

Currently, there are **19 different local systems** used for managing eligible assets mobilised as collateral in Eurosystem monetary policy operations.



With the ECMS, there will be a **single system** for managing those assets as collateral in Eurosystem monetary policy operations.

Future situation

Harmonisation: feeding into ECMS

- **Harmonisation work is important for the market and the ECMS**
- **Harmonisation proposals (sufficient level of detail):**
 - (i) Agree the business processes & workflows
 - (ii) Identify the critical data elements
 - (iii) Identify/define messaging (ISO 20022 standards)
- **Harmonisation proposals to be realised (with priority) by 28 June 2019:**
 - ✓ Triparty Collateral Management
 - ✓ Corporate Actions
 - ✓ Billing Processes
- **ECMS can also be a driver for harmonisation → weight of the Eurosystem as a user can contribute to harmonise market practices**

Harmonisation ECMS: Timeline

Certainty on harmonisation proposals required during the specification and development phase which started in January 2018.

2 July 2019: Harmonised specifications for business processes, workflows, data elements and (ISO 20022) messages for Triparty, Corporate actions and Billing to be presented to the AMI-SeCo.

ECMS to interact only based on harmonised processes (i.e. no national specificities) to ensure level playing field for counterparties and same market practices in the Eurozone.

Counterparties/CSDs/Triparty agents to implement harmonised proposals in time for ECMS go-live.

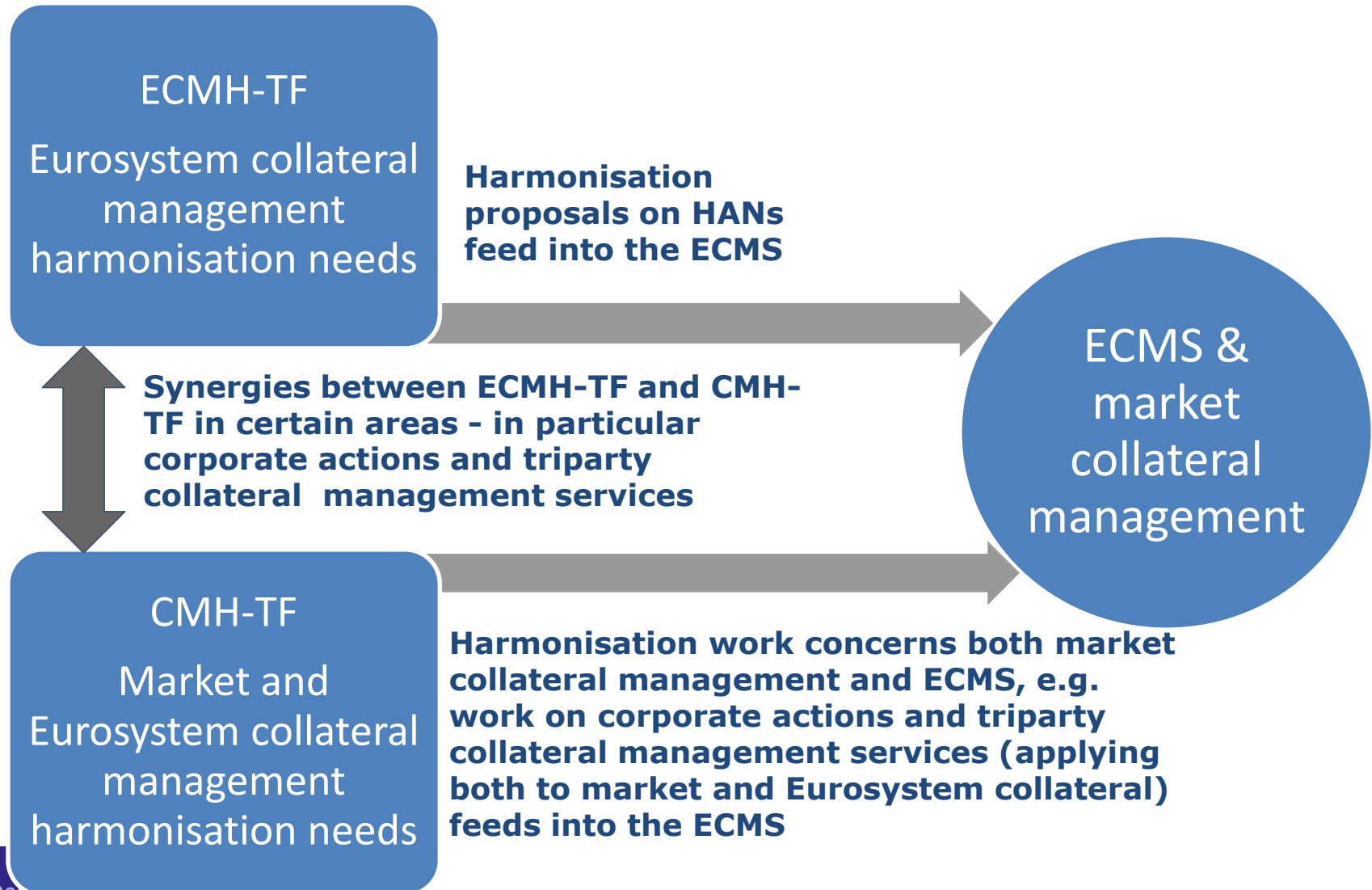
Collateral management harmonisation

Eurosystem collateral management harmonisation
ECMH-TF harmonisation proposals
Approved by MIPC and MOC

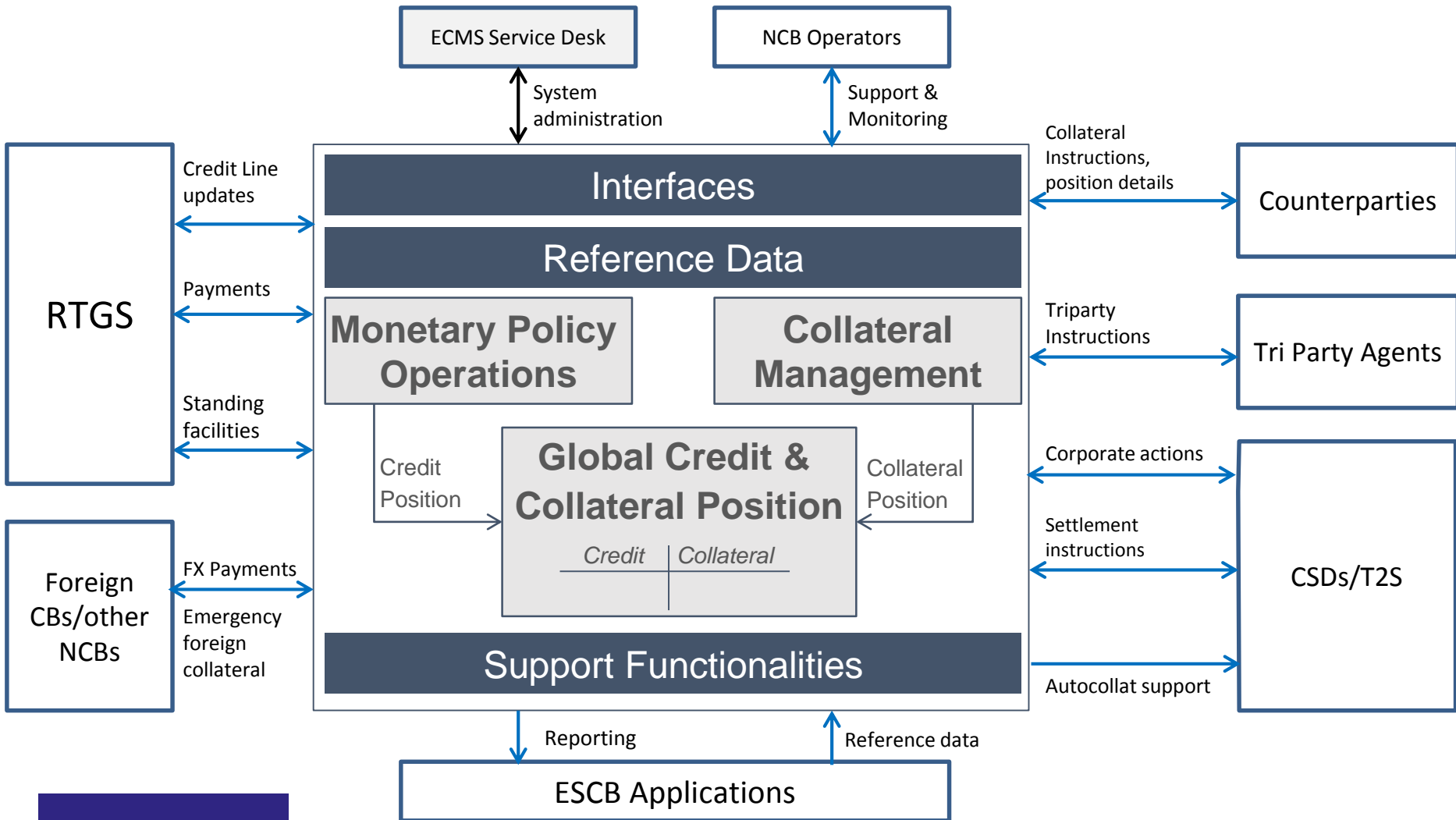
Market collateral management harmonisation
CMH-TF harmonisation proposals
Discussed at HSG
Approved at AMI-SeCo

- Major fact-finding exercises on existing Eurosystem & market practices – often complex and time-consuming
- For CMH-TF work in particular: input & proper market consultation are essential for soundness of proposals and for market buy-in for implementation
- Tight ECMS project schedule has a bearing on the work of the ECMH-TF (and CMH-TF) work

Flows of deliverables between ECMH-TF – CMH-TF – ECMS project and beyond



ECMS Components and interaction with the market



ECMS overview - functionality

- The ECMS scope covers the processing of marketable and non-marketable assets which are considered eligible assets, and therefore **accepted by the Eurosystem as collateral**.
- The ECMS also supports the settlement of:
 - Monetary Policy Operations (MPOs), like open market operations;
 - Other credit facilities provided via central bank money like intraday credit on a T2 CLM Main Cash Account.
- ECMS supports a collateral pooling system. The core of the ECMS Pool is the **credit & collateral position** which is fed by **monetary policy operations** and **collateral management transactions**.
- The ECMS design permits a **multi-pooling service**
- The ECMS records the total amount of credit and collateral provided for each counterparty.

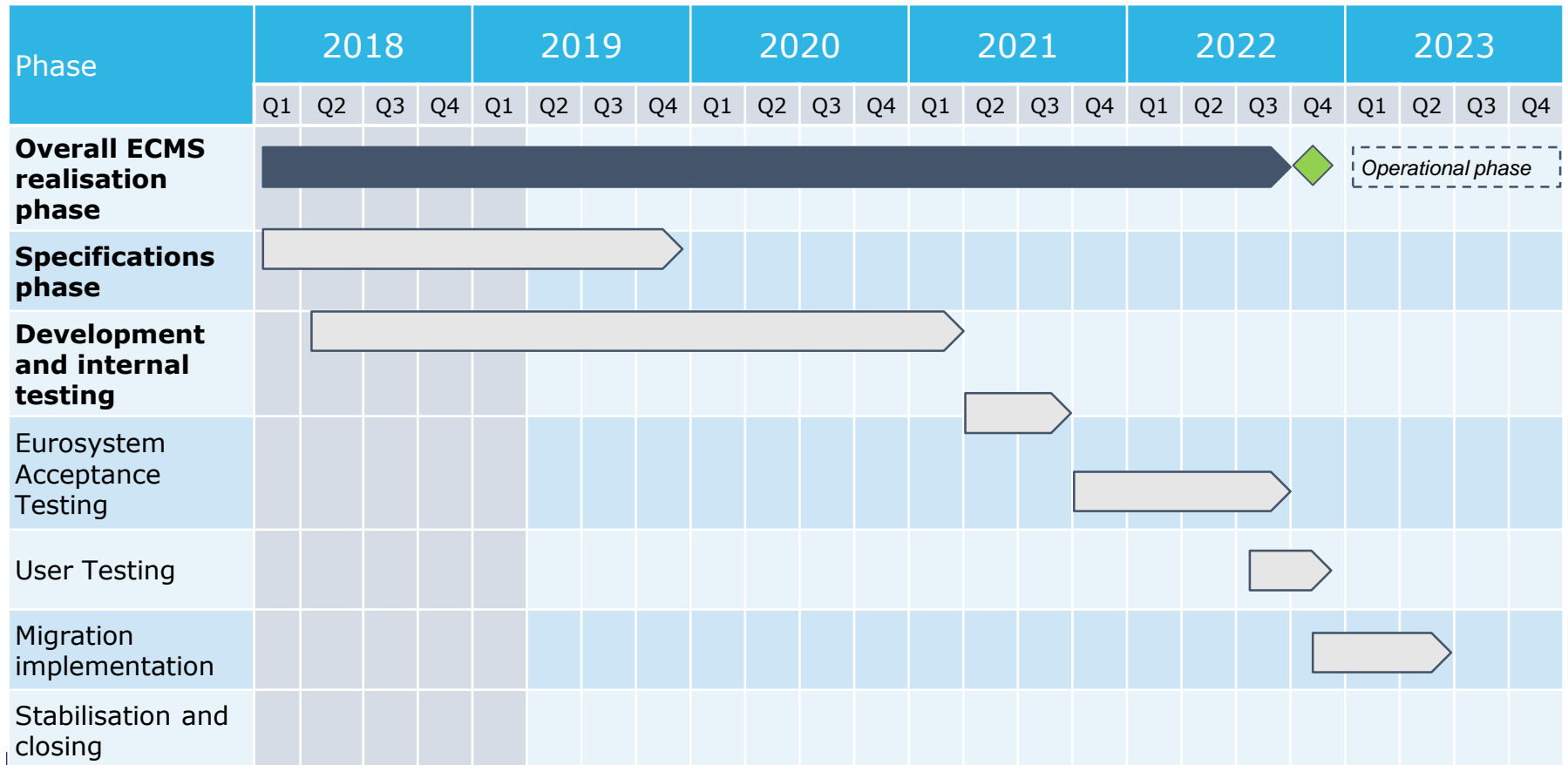
Status update ECMS project

- The Eurosystem-internal working group on ECMS (ECMS-WG), with the representatives of the 19 National Central Banks, has validated half of the 8 User Detailed Functional Specification (UDFS) iterations.
- It is planned to finalise the UDFS by Q4-2019.

ECMS project

High-level planning for the realisation phase

Go-live: November 2022



Part IV Fintech developments post trade

DLT – Distributed Ledger Technology (a shared digital record of transactions/balances)

- Use DLT to shorten settlement cycles
- Use a common DLT solution to solve interconnectivity issues (interoperability between clusters of market participants)

Smart contracts (contractual obligations in digital distributed ledger)

- To manage collateral and netting
- CCP to make margin calls
- Close out netting automatically upon predefined events

Conclusion:

- Coordination and agreement needed to prevent fragmented solutions
- Implementation of DLT a gradual and iterative process

Thank you for your attention!



**For more information,
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