



EUROPEAN CENTRAL BANK

EUROSYSTEM

T2S CHANGE REQUEST		
<b>General Information (Origin of Request)</b> <input type="checkbox"/> User Requirements (URD) or GUI Business Functionality Document (BFD) <input checked="" type="checkbox"/> Other User Functional or Technical Documentation (SYS)		
<b>Request raised by:</b> Eurosystem	<b>Institute:</b> 4CB	<b>Date raised:</b> 28/11/2024
<b>Request title:</b> T2S should process settlement instructions with ISD in the future outside the Start of Day period		<b>Request No.:</b> T2S 0844 SYS
<b>Request type:</b> Common	<b>Classification:</b> Scope Enhancement	<b>Urgency:</b> Normal
<b>1. Legal/business importance parameter:</b> Medium <sup>1</sup>		<b>2. Market implementation efforts parameter:</b> Low <sup>2</sup>
<b>3. Operational/Technical risk parameter:</b> Low <sup>3</sup>		<b>4. Financial impact parameter:</b> Medium <sup>4</sup>
<b>Requestor Category:</b> 4CB		<b>Status:</b> Allocated to a Release

**Reason for change and expected benefits/business motivation:**

Start Of Day (SoD) period is a critical phase where T2S platform processes a number of highly consuming tasks to be performed in less than two hours, including:

- Revalidation of pending transactions (on average, 650,000 transactions, including 110,000 with Intended Settlement Date (ISD) higher than Current Business Day (CBD), i.e., D+N transactions).
- Receipt and validation of new instructions (CORP,..) (on average, 82 000 transactions, including 26,000 D+N transactions).

This change request was proposed in the context of the T2S Strategic Evolution initiative (Proposal 1.18) and aims to reduce the pressure on the platform during SoD period and especially to reduce CPU consumption and avoid risks of a delay.

During SoD period, there are two main events that run in parallel, with the following scope:

- Start of Day Communication to Settlement (SCST). This process aims to process:
  - A. all Settlement Instructions and Settlement Restrictions that have not yet reached their ISD and therefore are not eligible for settlement, i.e., those with ISD > CBD.
  - B. all Settlement Instructions and Settlement Restrictions that have reached their ISD, and, therefore, are eligible for settlement, i.e., those with ISD = CBD.
- Start of Day Revalidation of Recycled Settlement Instructions (SODR). This process aims to revalidate:
  - C. all Settlement Instructions and Settlement Restrictions that failed to settle the previous day(s) on their ISD, and, therefore, are eligible for settlement, i.e., those with ISD < CBD.
  - D. The potential applicable realignment chain and/or a conditional settlement against all revalidated Settlement Instructions (this complex type of revalidation leads to high CPU consumption)

This process starts immediately after the change of the business date and must finish before the NTS starts since there is a precedent link. This is needed to make sure that only those transactions that are still valid can go through a settlement attempt.

The process consists in:

- performing again the Business Validation,

<sup>1</sup> Legal/business importance parameter was set to 'Medium' since with this change a better usage of the CPU capacity during Start of Day (SOD) period will be achieved what will help to reduce delays that could impact the timely start of the NTS period.

<sup>2</sup> Market implementation effort parameter was set to "LOW" since this change will only require a short testing campaign from the users.

<sup>3</sup> Operational/technical risk parameter was set to "LOW" since the change is expected not to threaten the Service Level for Participating CSDs or CBs or to have no or insignificant operational impact on the Participating CSDs, CBs or 4CB.

<sup>4</sup> Low < 100kEUR < Low-Medium < 200 kEUR < Medium < 400kEUR < High < 700kEUR < Very high

- cancel all the instructions identified as invalid, and
- inform the T2S Actor accordingly.

Due to the fact that the parallel running of SCST and SODR implies a high use of CPU capacity and that the revalidation of transaction with a future ISD can be processed outside the SoD because they are not eligible for settlement in the next NTS, this change request aims to reorganize the SoD period in order to:

- decrease the CPU consumption, and
- avoid reaching a CPU PEAK at this critical period.

The impact on user side would be that, if following revalidation, a previously valid instruction with future value date becomes invalid, the participant will be informed at a later point in time after the SoD period when this process will be scheduled. An example of the impact on the user side would be as follows:

- i. Realignment Chain recalculation:  
A transaction matches and is validated in the system on Business Day (BD) = D, with ISD = D+10. This transaction also covers a realignment instruction in the Delivering CSD and another one in the Receiving CSD. On BD= D+1, during SoD, this transaction is revalidated and cancelled because there was a change in the realignment path (E.g., due to change of technical issuer CSD). When this change is implemented, this notification will be deferred and sent to the users at a later point in time during the business day.

#### **Description of requested change:**

---

The change consists in deferring the revalidation process of instructions with a future settlement date (A transactions on previous section) to a suitable less critical period after SoD.

- 1- Give priority to the instructions with the current business day as intended settlement day, i.e., CBD = ISD, including failing instructions recycled from previous days;
- 2- Postpone the revalidation of instructions with a future settlement date to another period in the scheduler (to be defined in the context of the preliminary assessment).

The new revalidation event (SCSF) for instructions with a future ISD will have the following details:

At the End of SoD period, before NTS start: It is a less critical period, with no other processes running, minimising the risk of conflicts.

- It will succeed event SODR, in order to not run in parallel with the processes triggered by SRR2 and SCST.
- It will not have any dependency with any critical NTS events, allowing it to run without blocking the start of NTS in case it fails.
- It will not have any dependency with the end of NTS (ENTS), allowing it to run without blocking the start of RTS in case it fails.

There will be an impact on the scheduler to be considered.

#### **Submitted annexes / related documents:**

---

#### **Outcome/Decisions:**

---

\*CRG on 8 January 2025: the CRG agreed to launch the preliminary assessment of CR-0844.

\*CRG on 20 May 2025: the CRG agreed that option 1 should be the preferred one and agreed to reflect this in the CR Scope section.

\*CRG on 18 June 2025: the CRG agreed to recommend CR-0844 for authorisation by the Steering Level.

\*AMI-SeCo on: the AMI-SeCo agreed with the CRG recommendation of CR-0844 for T2S Steering Level Authorisation.

\*CSG on 27 June 2025: the CSG agreed to authorise CR-0844.

\*NECSG on 27 June 2025: the NECSG agreed to authorise CR-0844.

\*MIB on 4 July 2025: the MIB agreed to authorise CR-0844.

\*PMG on 15 October 2025: the PMG agreed to launch the detailed assessment of CR-0844 with a view of scoping in R2027.NOV.

- \*CRG on 11 February 2026: the CRG agreed to change the scope of CR-0844, while remaining with option 1 as reflected in the CR Scope section. With the approved scope change, the “SCSF” event will not have any dependency with other events like the End of Night-Time Settlement to avoid the risk of a delayed Real-Time Settlement start.
- \*CRG on 23 February 2026: the CRG agreed to recommend to the PMG the inclusion of CR-0844 in the scope of R2027.JUN.
- \*OMG on 25 February 2026: the OMG identified no operational impact from the inclusion of CR-0844 in R2027.JUN.
- \*PMG on 03 March 2026: the PMG agreed to recommend the inclusion of CR-0844 in the scope of R2027.JUN.
- \*CSG on 13 March 2026: the CSG approved the inclusion of CR-0844 in the scope of R2027.JUN.
- \*NECSG on 13 March 2026: the NECSG approved the inclusion of CR-0844 in the scope of R2027.JUN.
- \*MIB on 27 March 2026: the MIB approved the inclusion of CR-0844 in the scope of R2027.JUN.

**Documentation to be updated:**

**\*\*\* The current wording proposal is not to be considered as final. An exhaustive analysis of the changes required in the Scope Defining Documents will be conducted during the implementation phase of the Change Request. \*\*\***

**GFS:**

**UDFS:**

**SETT**

**1.4.3.2 Settlement Day high level processes**

*Update of Table 37: include a mention of deferred revalidation process for instructions with a future settlement date*

**TABLE 37 – SETTLEMENT DAY HIGH LEVEL PROCESSES**

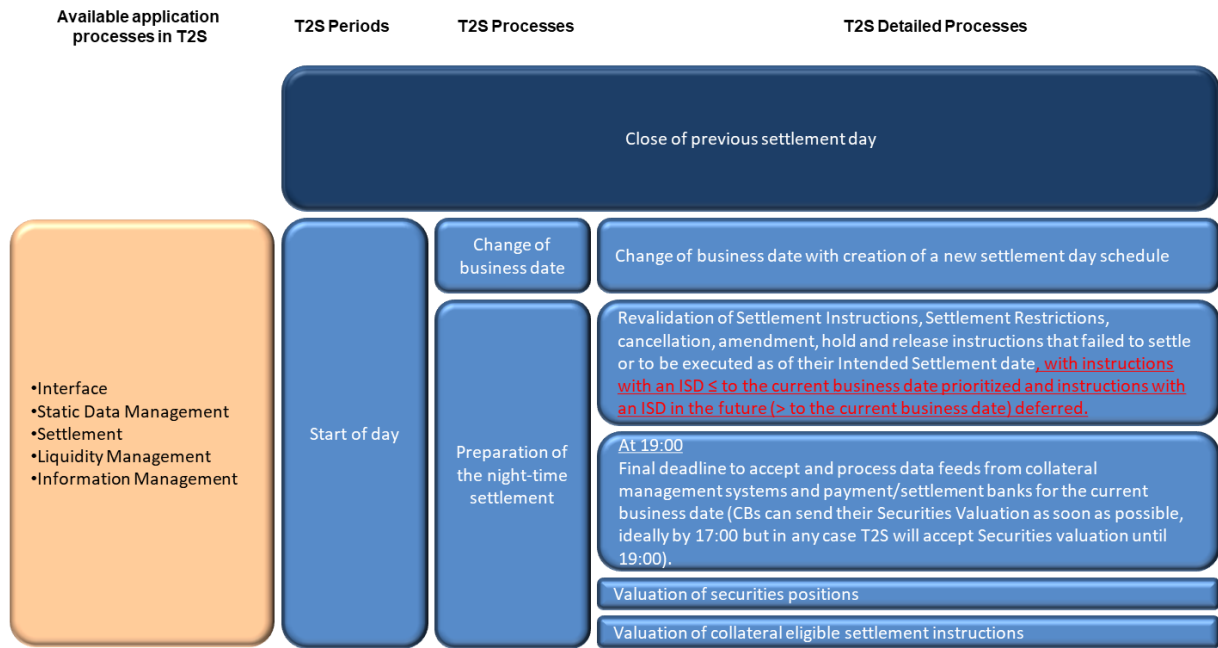
T2S TIME-LINE	T2S PERIODS	HIGH LEVEL DESCRIPTION
18:45 – 20:00	Start of day (SOD)	The start of day period including:   Change of business date in T2S;   Taking the common Snapshot (T2S and T2);   Preparation for night-time settlement: - Revalidation of Settlement Instructions/Settlement Restrictions/amendments/hold and release instructions that failed to settle or to be executed as of their Intended Settlement date, <u>prioritizing instructions with an ISD ≤ to the current business date, and deferring revalidation of instructions with an ISD in the future.</u> - At 19:00, final deadline to accept data feeds 131, effective for the current business date, from collateral management systems and payment/settlement banks; CBs and Payment Banks can send their Securities Valuation as soon as possible, ideally by 17:45, but in any case T2S will accept Securities Valuations until 19:00. - At 20:00, final deadline to accept settlement instructions for processing in the sequence 1 of the first night time cycle. - Valuation of securities positions; - Valuation of collateral eligible Settlement Instructions.
...		

...

**1.4.4.1.2 Start of day schedule**

*Update of Diagram 40: include a mention of deferred revalidation process for instructions with a future settlement date*

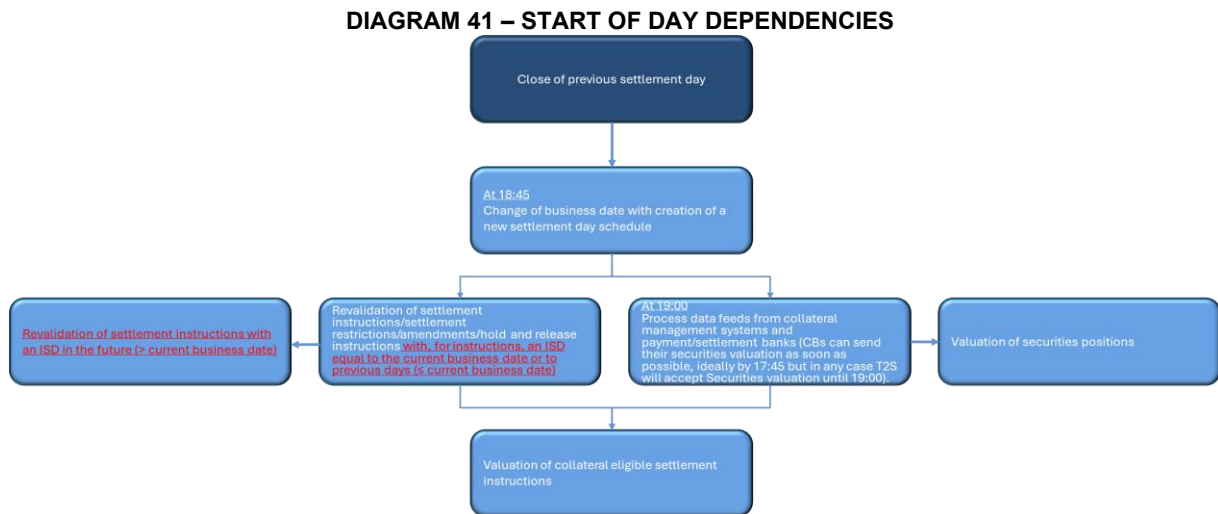
**DIAGRAM 40 – START OF DAY SCHEDULE**



...

**1.4.4.1.3 Start of day dependencies**

Update of Diagram 41: include a new process for revalidation of instructions with an ISD in the future, positioned outside of the SOD critical path



Update of Table 38: add a new subprocess for revalidation of instructions in the future and include dependency of collateral valuation only to ISD ≤ CBD revalidation

**TABLE 38 – DEPENDENCIES BETWEEN PROCESSES DURING THE START OF DAY PERIOD**

DEPENDENCIES		
T2S DETAILED PROCESSED	TYPE OF DEPENDENCY	DESCRIPTION
Change of business date with creation of a new settlement day schedule	Previous settlement day successfully closed and Time: 18:45	This process starts after the successful close of the previous settlement day. In addition this process does not start before 18:45

Revalidation of Settlement Instructions/Settlement Restrictions/cancellation/amendments/hold and release instructions that failed to settle or to be executed as of their Intended Settlement date <u>and/or instructions with an Intended Settlement date ≤ to the current business date</u>	After the change of business date	This process starts after the change of the business date
<u>Revalidation of Settlement Instructions with an Intended Settlement date in the future (&gt; to the current business date)</u>	<u>After the revalidation of instructions with an intended settlement date ≤ to the current business date</u>	<u>This process starts after the revalidation of instructions with an intended settlement date ≤ to the current business date</u>
Process data feeds from CMS and payment/settlement banks	Time: 19:00	This process does not start before the “start time for processing of data feeds”
Valuation of securities positions	After the data feeds processing	This process starts after the end data feeds
Valuation of collateral eligible Settlement Instructions	After the data feeds processing and the revalidation	This process starts after the end of revalidation of Settlement Instructions/Settlement Restrictions/amendments/hold and release instructions and after the end data feeds processing <u>and/or with an Intended Settlement date ≤ to the current business date</u>

...

1.4.4.1.4 Start of day processes

Update Table 39: add a mention of the now split revalidation process, between prioritized and deferred instructions based on ISD

TABLE 39 – START OF DAY PROCESSES

T2S PROCESSES	DESCRIPTION OF THE PROCESSES
Change of business date	T2S changes the business date according to the T2S operating day calendar by currency.
	T2S creates the new settlement day schedule on the basis of the default schedule of events and its planned times.
Preparation of the night-time settlement	T2S revalidates against the static data valid as of the new business date (see section Revalidation process [257]): <u>Are prioritized:</u>   The Settlement Instructions and Settlement Restrictions that failed to settle as of their Intended Settlement date and which are recycled for the current settlement day; <u>and/or Settlement instructions with an Intended Settlement date ≤ to the current business date.</u>   The Amendment Instructions, Cancellation Instructions and Hold/Release Instructions remaining as not executed from the previous settlement <u>Are deferred but also revalidated:</u>   <u>The Settlement Instructions with an Intended Settlement date in the future (&gt; to the current business date).</u> The Settlement Instructions, Settlement Restrictions, Amendment Instructions, Cancellation Instructions and Hold/Release Instructions under four eyes processing in the status “awaiting for approval”, are not submitted to revalidation.
	...
	...

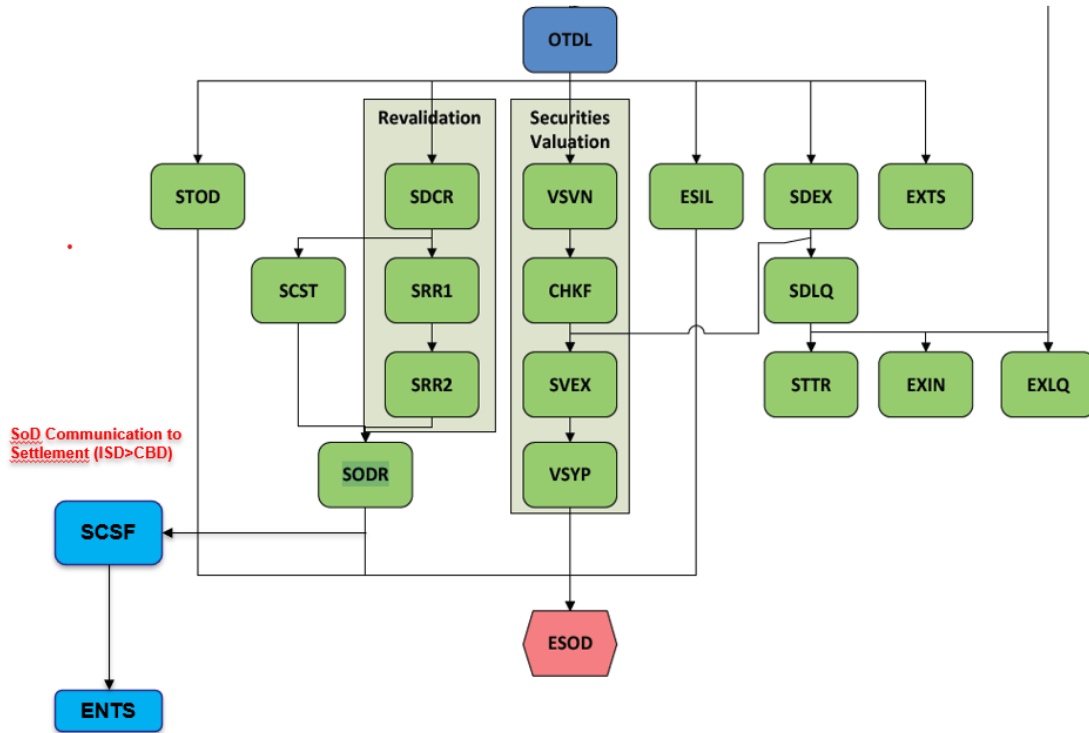
**Preliminary assessment:**

---

- **Financial impact: Medium**
- **Impacted modules: SETT, BDM, LCMM**
- **Impact on other Eurosystem Services or Projects: No impact on other Services or Projects**
- **Risk analysis: No risks have been identified during preliminary assessment**
- **Findings:**
  - The target of the CR is to postpone the revalidation of instructions with an Intended Settlement Date (ISD) in the future and prioritize the settlement instructions with ISD <= Current Business Date during the current revalidation period.
  - To meet the requirement, the Settlement Day will be updated so as to trigger the revalidation of instructions to be settled in the future (the ones with ISD > Current Business Date) upon the reception from the Scheduler of a new event "SCSF" (SoD Communication to Settlement – Future), instead of the "SRR1"/"SRR2" currently.
  - A new event will trigger the process SoD Communication to Settlement (ISD>CBD), which selects matched Settlement Instructions and Settlement Restrictions with ISD > CBD and sends them to SETT for further processing.
  - The new event "SCSF" will be triggered at the end of the "SODR" event which will still be triggering the revalidation of settlement instructions which have reached their ISD.
  - The consequence of the proposed change will consist of delaying the revalidation of settlement instructions in the future for approximately 1h15min.
  - Support in the configuration of the new event "SCSF" as successor of "SODR".
  - The new SCSF event should run at a less critical period after SoD.
  - Analysis of the options:
    - At the End of SoD period, before NTS start → **Recommended**, since it is a less critical period, with no other processes running, minimising the risk of conflicts.
      - **Should succeed event SODR**, in order to not run in parallel with the processes triggered by SRR2 and SCST.
      - **Should not precede** any critical NTS events, allowing it to run without blocking the start of NTS in case it fails.
      - **Should precede the end of NTS (ENTS)**, allowing it to complete before RTS.
    - After NTS start (in parallel) → **Not recommended**, since it may conflict with system resources during other critical processes the NTS.
    - After NTS, at the restart of RTS → **Strongly discouraged**, since it adds complexity and monitoring load, extending the settlement day.



# Proposed change (TO BE) target | T2S



SoD Communication to Settlement (ISD>CBD)

- Open issues/ questions to be clarified by the originator:

None

**Detailed assessment:**

T2S Specific Components		Common Components	
<b>LCMM</b>		<b>Common Reference Data Management</b>	
X	Instructions validation		Party data management
	Status management		Securities data management
	Instruction matching		Cash account data management
	Instructions maintenance		Securities account data management
	Penalty Mechanism		Rules and parameters data management
			Access rights management
<b>Settlement</b>		<b>CRDM business interface</b>	
X	Standardisation and preparation to settlement		Report management
	Night-time Settlement		Query management
	Daytime Recycling and optimisation		Communication
	Daytime Validation, provisioning & booking		Outbound Processing
	Auto-collateralisation		Inbound Processing
<b>Liquidity Management</b>			
	Outbound Information Management		
	NCB Business Procedures		
	Liquidity Operations		
<b>Statistics and archive</b>			

	Short term statistical information		Legal archiving
			Data Warehouse
<b>T2S Interface</b>		<b>Eurosystem Single Market Infrastructure Gateway</b>	
	Communication		Communication
	Outbound Processing		Outbound Processing
	Inbound Processing		Inbound Processing
<b>T2S information management</b>			
	Report management		
	Query management		
<b>Operational Services</b>			
	Data Migration (T2S DMT)		Data Migration (CRDM DMT)
	MOP Contingency Templates		Business Day Management
	Omega Tool		Business Day Management business interface
	AID Tool		Billing
			Billing business interface
			Operational and Business Monitoring

Impact on major documentation		
Document	Chapter	Change
Impacted GFS chapter		
Impacted UDFS chapter	1.4.3.2 Settlement Day high level processes	Update - Table 37 – Settlement Day high level processes - Diagram 40 – Start of day schedule With the new prioritization or deferral logic of instructions revalidation based on ISD
	1.4.4.1.2 Start of day schedule	Update - Diagram 40 – Start of day schedule With the new prioritization or deferral logic of instructions revalidation based on ISD
	1.4.4.1.3 Start of day dependencies	Update - Diagram 41 – Start of day dependencies - Table 38 – Dependencies between processes during the start of day period With the new dependence of collateral valuation to the sole completion of prioritized instructions revalidation
	1.4.4.1.4 Start of day processes	Update - Table 39 – Start of day processes With the new prioritization or deferral logic of instructions revalidation based on ISD
Impacted URD chapter	--	No impact.
Additional deliveries for Message Specification (UDFS, MyStandards, MOP contingency templates)	--	No impact.
UHB	--	No impact.

External training materials	--	No impact.
Other impacted documentation (FA Sch. 05, FA Sch. 07)	--	No impact.
Impacted GDPR message/ screen fields	--	No impact.
Links with other requests		
Links	Reference	Title

#### OVERVIEW OF THE IMPACT OF THE REQUEST ON THE T2S SYSTEM AND ON THE PROJECT

##### Summary of functional, development, infrastructure and migration impacts

###### SETT

- The main modification required in Settlement is to adapt the functional processes in order to handle the revalidation of settlement instructions with an Intended Settlement Date (ISD) in the future (the ones with ISD > CBD) upon reception of the new event "SCSF" (SoD Communication to Settlement – Future) instead of "SRR1"/"SRR2".
- The solution agreed upon at PA stage (new event "SCSF" triggered by the event response "SODR" and set up as predecessor of the event "ENTS") will allow the revalidation of settlement instructions with an ISD in the future to be deferred but still performed before the Real-Time preparation phase, while, in any case, not delaying the NTS Start. However, after further analysis, the proposed solution is to have SCSF without successor, since the risk if the event is not closed can be a blocked scheduler and business day, which is considered to have a higher impact than the fact that the revalidation of settlement instructions with a future ISD would be delayed. Instead, the usual monitoring would be used to detect any long running SCSF, and to manage the situation through the incident management process if necessary. Having a hard dependency to the end of NTS would create an unnecessary risk to block the business day. Still, any issue needs to be managed before the end the business day, since the event needs to be closed before the change of business day, or else the scheduler will be stuck.

###### LCMM:

- The arrival to LCMM of the SCST event will now only trigger the SoD Communication to Settlement (ISD=CBD) process, which selects matched Settlement Instructions and Settlement Restrictions with ISD = CBD and sends them to SETT for further processing.
- The new event "SCSF" (SoD Communication to Settlement – Future) will trigger the process SoD Communication to Settlement (ISD>CBD), which selects matched Settlement Instructions and Settlement Restrictions with ISD > CBD and sends them to SETT for further processing.
- A specific testing campaign will be conducted to verify that the affected processes regarding the Validation module run without any negative impact after the implementation of this CR, especially the revalidation triggered at SOD.
- Functional tests should also verify that the communication to the SETT domain related to the revalidation of instructions with a future settlement date is triggered only once the new SCSF event is reached on the settlement day. In this regard, it should also be checked that the SOD phase can end while SCSF is still running, as it must be ensured that there is no dependency between the SOD closure period and the communication to SETT of instructions with ISD>CBD, given that this process is not considered critical for the current business day.

###### BDM:

- Support in the business day configuration.

##### Main Cost Drivers

- Update of internal specifications and external documentation: 11%
- Software development and changes: 25%
- Functional validation and non-regression testing: 46%
  - Execution of comprehensive test campaign to validate that new event SCSF only takes ISDs in the future (SI/SR, REAL), with Static data changes (default cash account, realignment chain, instructions, cancellations), SOD tests with ISD in the past and = to current BD.
  - Execution of comprehensive non-regression testing campaign.

<b>Impact on other TARGET Services and projects</b>
No impact on T2, TIPS or ECMS.
<b>Summary of project risk</b>
No risks on the stability or performance of T2S has been identified during the detailed assessment.
<b>Security analysis</b>
No adverse effect has been identified during security assessment.
<b>Other impacts (yes/no)</b>
No

DG - MARKET INFRASTRUCTURE &amp; PAYMENTS



30 January 2026

## Cost assessment on Change Requests

<b>T2S-844-SYS – T2S should process settlement instructions with ISD in the future outside the Start of Day period</b>			
One-off	Assessment costs*		
	- Preliminary	2,000.00	Euro
	- Detailed	10,000.00	Euro
One-off	Development costs	222,449.91	Euro
Annual	Operational costs		
	- Maintenance costs	-	Euro
	- Running costs	-	Euro

\*The relevant assessment costs will be charged regardless of whether the CR is implemented (Cf. T2S Framework Agreement, Schedule 7, par. 5.2.3).