

<b>T2S CHANGE REQUEST</b>		
<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> 25/02/2025
<b>Request title:</b> RTS Enhancements: Minimising the sending of SETT/LCMM internal messages		<b>Request No.:</b> T2S 0849 SYS
<b>Request type:</b> Common	<b>Classification:</b> Scope Enhancement	<b>Urgency:</b> Fast-track <sup>1</sup>
<b>1. Legal/business importance parameter<sup>2</sup>:</b> High	<b>2. Market implementation efforts parameter<sup>3</sup>:</b> Low	
<b>3. Operational/Technical risk parameter<sup>4</sup>:</b> Low	<b>4. Financial impact parameter:</b> Medium <sup>5</sup>	
<b>Requestor Category:</b> 4CB		<b>Status:</b> Allocated to a release

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

This change request focuses on reducing the number of messages exchanged internally in T2S, especially when it comes to messages exchanged between Settlement (SETT) and Life cycle Management and Matching (LCMM) domains. With an increase in transaction volumes in general, and also an expected increase of peak volumes for Corporate Actions events, it is necessary to optimise the internal communication in T2S, in order to better handle peaks of high volumes and better manage the usage of T2S CPU during high-volume conditions.

With the onboarding of additional end-investor markets in T2S, and specifically the planned change of Euronext Copenhagen to become an end-investor market, it is necessary to introduce this change in order to improve the T2S performance, especially related to corporate actions peak volumes.

**Minimising the sending of internal messages SETT/LCMM**

For each settlement attempt in failure, the Settlement Engine sends a 'T2S internal' message to LCMM to report the instruction status and the Error Code linked to the Business Rule triggered, enabling in particular LCMM to forward it to the end client.

Such internal messages are sent even if there is no change in the status or the applicable Business Rule. This results in massive information exchanged with limited value for the participant, as the messages with no status or Error Code change are filtered by LCMM and are never sent to the clients in A2A mode. In U2A mode, they are only used to refresh the latest settlement attempt timestamp on the GUI.

Such internal messages with no status change represent significant volumes and CPU consumption

- 320 000 daily messages
- 50% of failure reasons in RTS
- 34% of failure reasons in NTS
- 37% of communications from SETT to LCMM
- Millions of internal IMS messages and DB2 data base updates
- Up to 140 update messages with no status change can be sent for a single transaction during the day

<sup>1</sup> Fast-track justification: A fast-track approach is requested due to the urgent need to implement this change in view of the onboarding of additional end-investor markets in T2S and to accommodate for the increase in transaction volumes and peaks for Corporate Action events, foreseen already in 2027.

<sup>2</sup> Legal/business importance parameter was set to "High" because the change is needed to better handle peaks of high volumes and better manage the usage of T2S CPU during high-volume conditions.

<sup>3</sup> Market implementation effort parameter was set to "Low" as the change does not imply significant changes to T2S Actors.

<sup>4</sup> Operational/technical risk parameter was set to "Low" because it is not expected that this change will have an operational impact on the T2S Actors.

<sup>5</sup> Low < 100kEUR < Low-Medium < 200kEUR < Medium < 400kEUR < High < 700kEUR < Very high

**Description of requested change:****Minimising the sending of internal messages SETT/LCMM (Related to proposal 1.16 in the T2S Strategic Evolution Report)**

The change will consist for the Settlement module to stop informing LCMM when recycling status/Error Code linked to the applicable Business Rule of a transaction remains unchanged.

- During RTS, SETT will implement a 'filtering' in real time.
- This CR will also impact the NTS phase: during this period, the filtering will be done per sequence.

T2S will still keep;

- one daily reporting at the first settlement attempt of the day;
- a second reporting at EOD cut-off if it is still in failure.

The expected client impact is that the timestamp on the GUI will not be refreshed when the settlement attempt does not change the status (the timestamp will remain the one of the first settlement attempt of the day, or the most recent status change)

Example:

Business day	Calendar day	Period	Time	Action	Status message A2A	Status timestamp on the GUI	
						Today	After CR impl.
D	D-1	NTS	21.30	First Settlement attempt	Yes	21.30 of BD=D 1st Settlement attempt	21.30 of BD=D 1st Settlement attempt
D	D	RTS	11.00	Settlement attempt Failure reason <u>unchanged</u>	No	11:00 of BD=D	Unchanged 21:30 still shown
D	D	RTS	11:15	Query via GUI of SI status	Not applicable.	11:15 of BD=D	Unchanged 21:30 still shown
D	D	RTS	13.00	Settlement attempt Failure reason <u>changed</u>	Yes	13:00 of BD=D (new failure reason)	13:00 of BD=D (new failure reason)
D	D	RTS	15.00	Settlement attempt Failure reason <u>unchanged</u>	No	15:00 of BD=D	Unchanged 13:00 still shown
D	D	RTS Closure	16.00	Settlement attempt Failure reason <u>changed</u> <u>due to cut-off</u>	Yes	16.00 of BD=D (Settlement attempt in RTSC)	16.00 of BD=D (Settlement attempt in RTSC)
D+1	D	SOD	19:00	Query via GUI of SI status	Not applicable.	16.00 of BD=D (Settlement attempt in RTSC of BD=D)	16.00 of BD=D (Settlement attempt in RTSC of BD=D)
D+1	D	NTS	22.00	First Settlement attempt of the new BD	Yes	22.00 of BD=D + 1	22.00 of BD=D + 1

The benefit of this proposal will be to

- Avoid the sending a significant number of message by SETT to LCMM;
- Harmonise U2A process and A2A process.

**Submitted annexes / related documents:****Outcome/Decisions:**

\*CRG on 5 March 2025: the CRG agreed to recommend CR-0849 for authorisation by the T2S Steering Level, following a fast-track approach.

\*AMI-SeCo on 14 March 2025: the AMI-SeCo agreed with the CRG recommendation of CR-0849 for T2S Steering Level Authorisation.

\*CSG on 14 March 2025: the CSG agreed to authorise CR-0849.

\*NECSG on 14 March 2025: the NECSG agreed to authorise CR-0849.

\*MIB on 27 March 2025: the MIB agreed to authorise CR-0849.

\*PMG on 10 April 2025: the PMG agreed to launch the detailed assessment of CR-0849 with a view of scoping in R2026.NOV.

\*CRG on 20 May 2025: the CRG agreed to recommend to the PMG the implementation of CR-0849 with R2027.JUN.

\*OMG on 25 June 2025: the OMG did not identify any operational impact from the inclusion of CR-0849 in R2027.JUN.

\*CSG on 17 June 2025: the CSG approved the inclusion of CR-0849 in the scope of R2027.JUN.

\*NECSG on 17 June 2025: the NECSG approved the inclusion of CR-0849 in the scope of R2027.JUN.

\*MIB on 27 June 2025: the MIB approved the inclusion of CR-0849 in the scope of R2027.JUN.

#### Documentation to be updated:

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##### GFS:

###### 3.5.1 General introduction

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The result of every settlement attempt is reported, either to the Lifecycle Management and Matching Domain<sup>133</sup>, when related to Settlement Instructions and Settlement Restrictions, or to the Liquidity Management domain, when related to liquidity transfers.

133 In case the failure reason is the same as during the last reporting, no reporting is made to the Lifecycle Management and Matching Domain, with the following exceptions:

- There will be a reporting during the first settlement attempt of the settlement day, regardless if it is equal to the previous one.
- There will be a reporting during the relevant cut-off in RTS Closure period, regardless if it is equal to the previous one.
- There will be a reporting if the Partial Differ 'PATD' reason code has changed compared to the previous reporting, regardless if the failing reason code has changed compared to the previous one.

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###### 3.5.6.3 Description of the functions of the module

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###### 5 – Failure Management and Settlement Outcome

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The function manages the failure in order to prepare the collection and its related Settlement Transactions to further processing. It informs the following modules and domains with the settlement results:

I The Daytime Recycling and Optimisation module of the Settlement domain;

I The Status Management module of the Lifecycle Management and Matching domain<sup>170</sup>;

I The Outbound Information Management module of the Liquidity Management domain.

170 In case the failure reason is the same as during the last reporting, no reporting is made to the Lifecycle Management and Matching Domain, with the following exceptions:

- There will be a reporting during the first settlement attempt of the settlement day, regardless if it is equal to the previous one.
- There will be a reporting during the relevant cut-off in RTS Closure period, regardless if it is equal to the previous one.
- There will be a reporting if the Partial Differ 'PATD' reason code has changed compared to the previous reporting, regardless if the failing reason code has changed compared to the previous one.

##### UHB:

###### 2.2.2.20 Status History - Details Screen

### Screenshot

Status History

Instruction

Effective

1810150291929194

2018-12-21 17:42:57

Rows per page:

10

<=<

<<

page 1 of 2 - lines 1 to 10 of 14

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Go to page:

1

Date and Time	Status Type	Status Value	Settled Settlement Amount	Settled Settlement Quantity
2018-10-19 09:13:43	Settlement Status	Settled		1
2018-10-18 19:39:16	Settlement Status	Unsettled - Failing		
2018-10-18 19:33:26	Settlement Status	Unsettled - Failing		
2018-10-18 19:19:41	Settlement Status	Unsettled - Failing		
2018-10-15 11:23:28	Settlement Status	Unsettled - Pending		
2018-10-15 11:23:26	Match Status	Matched		
2018-10-15 11:23:25	Match Status	Unmatched		
2018-10-15 11:23:25	Settlement Status	Unsettled - Pending		
2018-10-15 11:23:25	Cancellation Status	Not cancelled		
2018-10-15 11:23:25	Approval Status	Approved		

Close

Illustration 1: Status history - details screen

**Preliminary assessment:**

n.a.

**Detailed assessment:**

EUROSYSTEM ANALYSIS – GENERAL INFORMATION			
T2S Specific Components		Common Components	
<b>LCMM</b>			
	Instructions validation		
	Status management		
	Instruction matching		
	Instructions maintenance		
	Penalty Mechanism		
<b>Settlement</b>			
	Standardisation and preparation to settlement		
X	Night-time Settlement		
	Daytime Recycling and optimisation		
X	Daytime Validation, provisioning & booking		
	Auto-collateralisation		
<b>Liquidity Management</b>			
	Outbound Information Management		
	NCB Business Procedures		
	Liquidity Operations		
<b>T2S Interface</b>		<b>Eurosystem Single Market Infrastructure Gateway</b> (from R6.0 June 2022)	
	Communication		Communication
	Outbound Processing		Outbound Processing
	Inbound Processing		Inbound Processing
<b>Static Data Management (until June 2022)</b>		<b>Common Reference Data Management</b> (from R6.0 June 2022)	
	Party data management		Party data management

	Securities data management		Securities data management
	Cash account data management		Cash account data management
	Securities account data management		Securities account data management
	Rules and parameters data management		Rules and parameters data management
<b>Statistics and archive</b>		<b>Statistics and archive</b>	
	Statistical information (until June 2022)		Short term statistical information
	Legal archiving (until June 2022)		Legal archiving (from R6.0)
			Data Warehouse (from R6.0)
<b>Information (until June 2022 containing reference data)</b>		<b>CRDM business interface (from R6.0 June 2022)</b>	
	Report management		Report management
	Query management		Query management
			Communication
			Outbound Processing
			Inbound Processing
<b>Operational Services</b>			
	Data Migration (T2S DMT)		Data Migration (CRDM DMT, from R6.0)
	Scheduling (until June 2022)		Business Day Management (from R6.0)
			Business Day Management business interface (from R6.0)
	Billing (until June 2022)		Billing (from R6.0)
			Billing business interface (from R6.0)
	Operational Monitoring		Operational and Business Monitoring
	MOP Contingency Templates		

<b>Impact on major documentation</b>		
<b>Document</b>	<b>Chapter</b>	<b>Change</b>
Impacted GFS chapter	3.5.1 General introduction 3.5.6.3 Description of the functions of the module	Clarify that not every settlement attempt is reported to LCMM
Impacted UDFS chapter	-	No impact
Impacted RDFS chapter	-	No impact
Additional deliveries for Message Specification (UDFS, MyStandards, MOP contingency templates)	-	No impact
UHB	2.2.2.20 Status History - Details Screen	Update screenshot, since the reflected example could not take place after this CR.
External training materials	-	No impact
Other impacted documentation (FA Sch. 05, FA Sch. 07)	-	No impact
Impacted GDPR message/ screen fields	-	No impact
Other documentations	-	No impact
Links with other requests		

Links	Reference		Title	
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OVERVIEW OF THE IMPACT OF THE REQUEST ON THE T2S SYSTEM AND ON THE PROJECT	
<b>Summary of functional, development, infrastructure and migration impacts</b>	
<p>In order to reduce the internal messaging from SETT domain, functionality will be introduced that eliminates status update and status information flows from SETT to LCMM when the failure reason is the same as the last time an update was sent.</p> <ul style="list-style-type: none"> <li>The CR does not cover any flows between SETT and LQMG, since the liquidity transfers are not recycled and will have their final status at the first settlement attempt.</li> <li>If there is a need to report a difference in the partial settlement indicator with the new reason code 'PATD' Partial Differ , the flows will be sent even if there is no change when it comes to error code linked to the Business Rule triggered.</li> <li>This change request does not entail any software changes in LCMM.</li> <li>The Status History - Details Screen will no longer show one row for each settlement attempt. In particular, it will not show records where the status/failure reason remains unchanged with respect to the previous one.</li> <li>User Handbook screenshots need to be updated according to the new filtering of updates from SETT.</li> <li>Ad hoc testing will be conducted to ensure that updates from Settlement domain are received or not received as corresponds, in all the different possible scenarios.</li> <li>A comprehensive non-regression testing campaign will be conducted in order to verify that the filtering on SETT side of status update and status information flows to LCMM do not have any undesired effects on the lifecycle of instructions.</li> <li>With the changes introduced by this status update, the Settlement Instruction Status Audit Trail Query (U2A) will no longer report the Status History updates that had no actual status transition. Before the change request, there were empty updates in the Status History (meaning there was no actual change in the status of the Settlement Instruction) which could be queried using the Search criteria on the screen. Now, the query only delivers results for actual status transitions, with the potential exception indicated on the CR:</li> </ul> <p>T2S will still maintain:</p> <ul style="list-style-type: none"> <li>One daily report at the first settlement attempt of the day;</li> <li>A second report at the end-of-day cut-off if it is still in failure.</li> <li>There will be a reporting if the Partial Differ 'PATD' reason code has changed compared to the previous reporting, regardless if the failing reason code has changed compared to the previous one.</li> </ul>	
<b>Main Cost Driver</b>	
<ul style="list-style-type: none"> <li>- Analysis and update of functional documentation: 5%</li> <li>- Software updates for settlement periods RTS and NTS: 46%</li> <li>- Testing in order to check the minimisation of internal messaging during RTS and NTS undesired effects on the lifecycle of instructions. 37%</li> </ul>	
<b>Impact on other TARGET Services and projects</b>	
No impact on other TARGET Services or projects	
<b>Summary of project risk</b>	
No risk has been identified	
<b>Security analysis</b>	
No adverse impact has been identified during security assessment	



15 May 2025

## Cost assessment on Change Requests

T2S-849-SYS – RTS Enhancements: Minimising the sending of SETT/LCMM internal messages			
One-off	Assessment costs* - Preliminary - Detailed	not charged 10,000.00	Euro Euro
One-off	Development costs	300,681.03	Euro
Annual	Operational costs		
	- Maintenance costs	31,014.72	Euro
	- Running costs	0.00	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).