



EUROPEAN CENTRAL BANK

EUROSYSTEM

<b>General Information (Origin of Request)</b>		
<input type="checkbox"/> User Requirements (URD) <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> 28/02/2019
<b>Request title:</b> T2-T2S Consolidation Business Day Management – T2S Migration		<b>Request ref. no:</b> T2S 0707 SYS
<b>Request type:</b> Common	<b>Classification:</b> maintenance	<b>Urgency:</b> Normal
<b>1. Legal/business importance parameter:</b> Medium		<b>2. Market implementation efforts parameter:</b> Low
<b>3. Operational/Technical risk parameter:</b> Medium		<b>4. Financial impact parameter:</b> No financial impact
<b>Requestor Category:</b> Eurosystem		<b>Status:</b> Implemented

This Change Request is one of the T2S Change Requests related to the T2-T2S Consolidation Project. The tentative distribution of these Change Requests per functional area and T2S release is summarised in the table below (as of 26 June 2020):

	R4.0 (Jun 2020)	R4.2 (Nov 2020)	R4.3 (Feb 2021)	R5.0 (Jun 2021)	R5.2 (Nov 2021)	R6.0 (Jun 2022)
					<b>CSLD go-live</b>	<b>T2S&gt;ESMIG</b>
ESMIG (Connectivity)						<a href="#">CR-701</a>
CRDM (Reference data)	<a href="#">CR-719</a>	<a href="#">CR-721</a>		<a href="#">CR-704</a> <a href="#">CR-696</a>	Migration RTGS a/c → CLM a/c	<a href="#">CR-705</a>
BILL (Billing)				<a href="#">CR-697</a>	NCBs use BILL also for T2S	<a href="#">CR-706</a>
BDM (Business day)		<a href="#">CR-698</a>				<a href="#">CR-707</a>
DWH (Historical data)						<a href="#">CR-699</a>
LEA (Legal archiving)						<a href="#">CR-700</a>
T2-T2S communication		<a href="#">CR-702</a> (ICL) <a href="#">CR-703</a> (camt.050)		<a href="#">CR-729</a>		<a href="#">CR-734</a>
Liquidity management				<a href="#">CR-708</a> (Outbound LT) <a href="#">CR-709</a> (Cash sweep)		
Maintenance window				<a href="#">CR-710</a>		

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

The T2-T2S Consolidation project envisions that, a common Business Day Management (BDM) component will allow managing the calendars and the operating days of the different TARGET services. T2S Scheduling functionality will be provided by BDM.

The BDM Common Component will be built as an enhancement of the T2S Operational Services Scheduling module and reuse many of the concepts and principles that govern the concept of business day and event schedule in T2S. For a detailed description of the current T2S Scheduling module please refer to GFS (v6.0 pp571-ff).

The innovations introduced by BDM are described in the separate Change Request “T2-T2S Consolidation Business Day Management Development”. BDM functions result from adaptations to the existing T2S design; BDM is built as an enhancement of T2S Scheduling, partially overlapping with the current Scheduling application perimeter but centralizing these functions to a common component with its own U2A and A2A interfaces. Therefore, T2S interfaces related to the same backend functions covered by BDM may be decommissioned from T2S so that users will interact with a single component.

This Change Request described the impact expected on T2S with the decommissioning of screens and messages due to the full T2S migration to T2-T2S Consolidation.

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**Description of requested change:**

The new features of BDM are described in the separate CR "T2-T2S Consolidation Business Day Management Development". The main improvement from T2S Scheduling to BDM is the introduction of a "Service" dimension to allow the single central Business Day Management common component to manage Service-specific calendar and event data that will in turn be the basis for Service-specific business day plans.

A set of GUI screens and messages will be developed to cover the centralized BDM functionalities.

The following screens will be decommissioned from T2S following their implementation in BDM:

- Daily Schedules – Search/List Screen
- Daily Schedule – New/Edit Screen (only relevant for the Operator)
- Calendar Screen

The following messages will be decommissioned from T2S following their implementation in BDM:

- camt.018 – GetBusinessDayInformation

The camt.019 – ReturnBusinessDayInformation message will be implemented in BDM but kept also on T2S side for specific usages (i.e. Final NTS message and Status of the T2S Settlement Day Notification).

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**Submitted annexes / related documents:**

- Annex 01 – UHB updates
- Annex 02a – UDFS updates
- Annex 02b – UDFS updates

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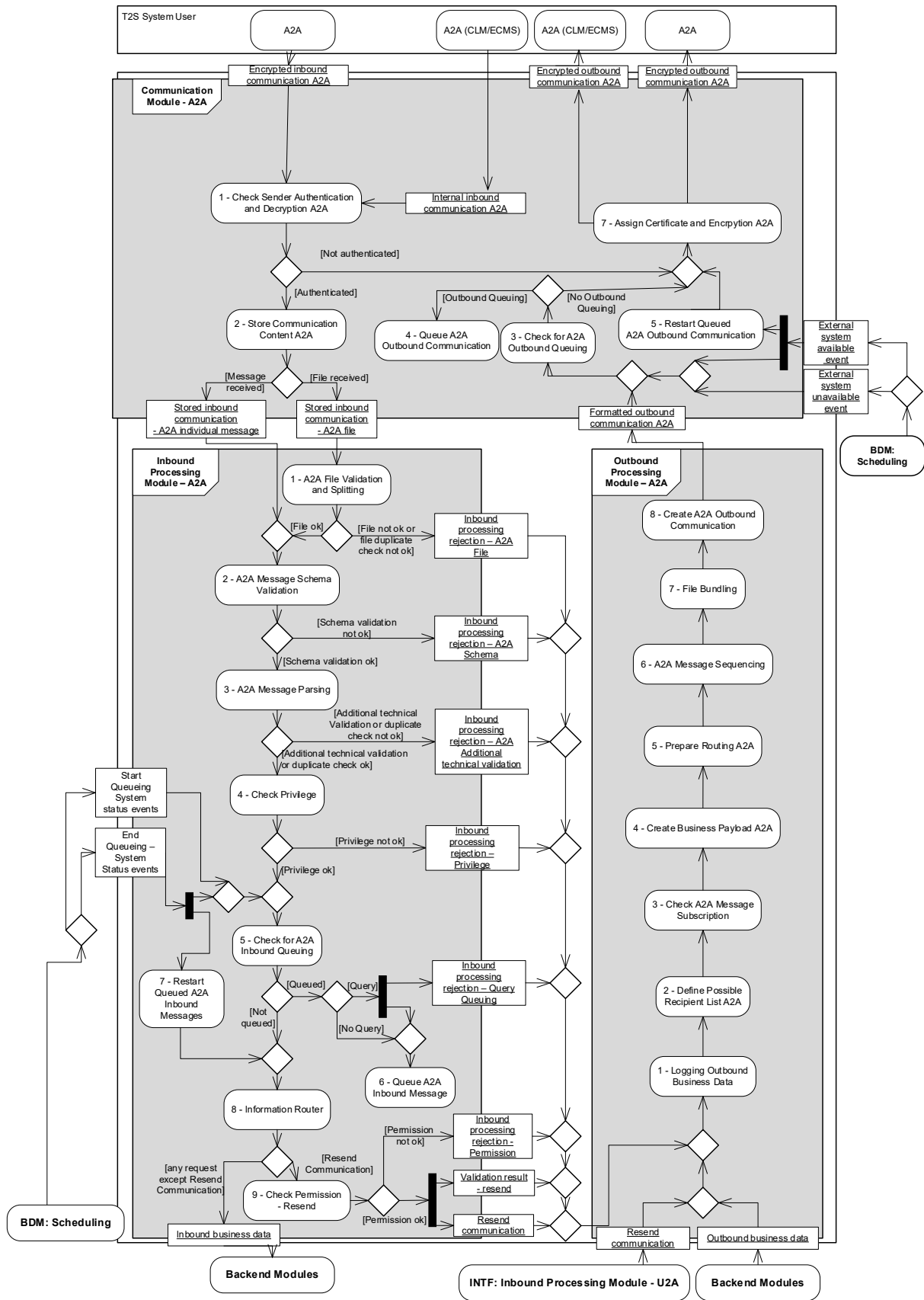
**Proposed wording for the Change request:**

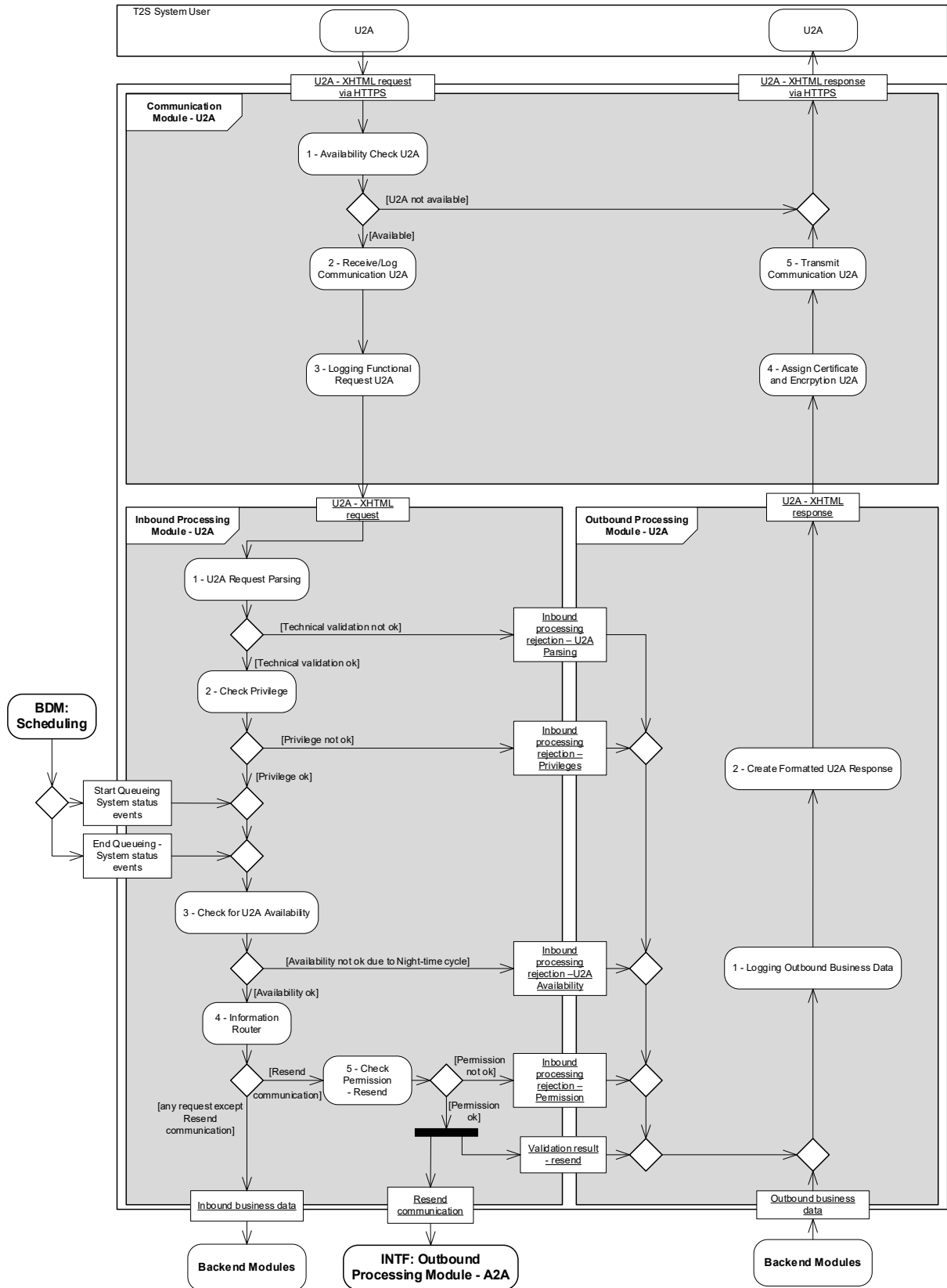
The development of the BDM component and its initial impact on T2S are described in the separate CR "T2-T2S Consolidation Business Day Management Development". The above listed changes will take place when T2S fully migrates to T2-T2S Consolidation, leading to the listed screens/messages (by then already implemented in BDM) being decommissioned from the T2S Interface.

.As a general approach, changes to the existing T2S Scope-Defining Documents will be minimized; GUI and message descriptions that apply to T2S business will still be kept in the T2S documentation, with only the specific changes needed to guarantee consistency with the application changes within T2-T2S Consolidation.

Updates of the GFS, UDFS and UHB chapters will refer to the above-listed screens and messages as well as the general replacement of T2S Scheduling module with BDM.

**GFS****3.2.1 General Introduction**





### 3.2.2 Dynamic data managed by the domain

#### Inbound Individual Message:

This entity is used to store the relevant information about a single inbound message after a positive technical message validation by the U2A Request Parsing function or by Message Parsing function. Also, the target Processing Module attribute as a result of the Information Router function is stored.

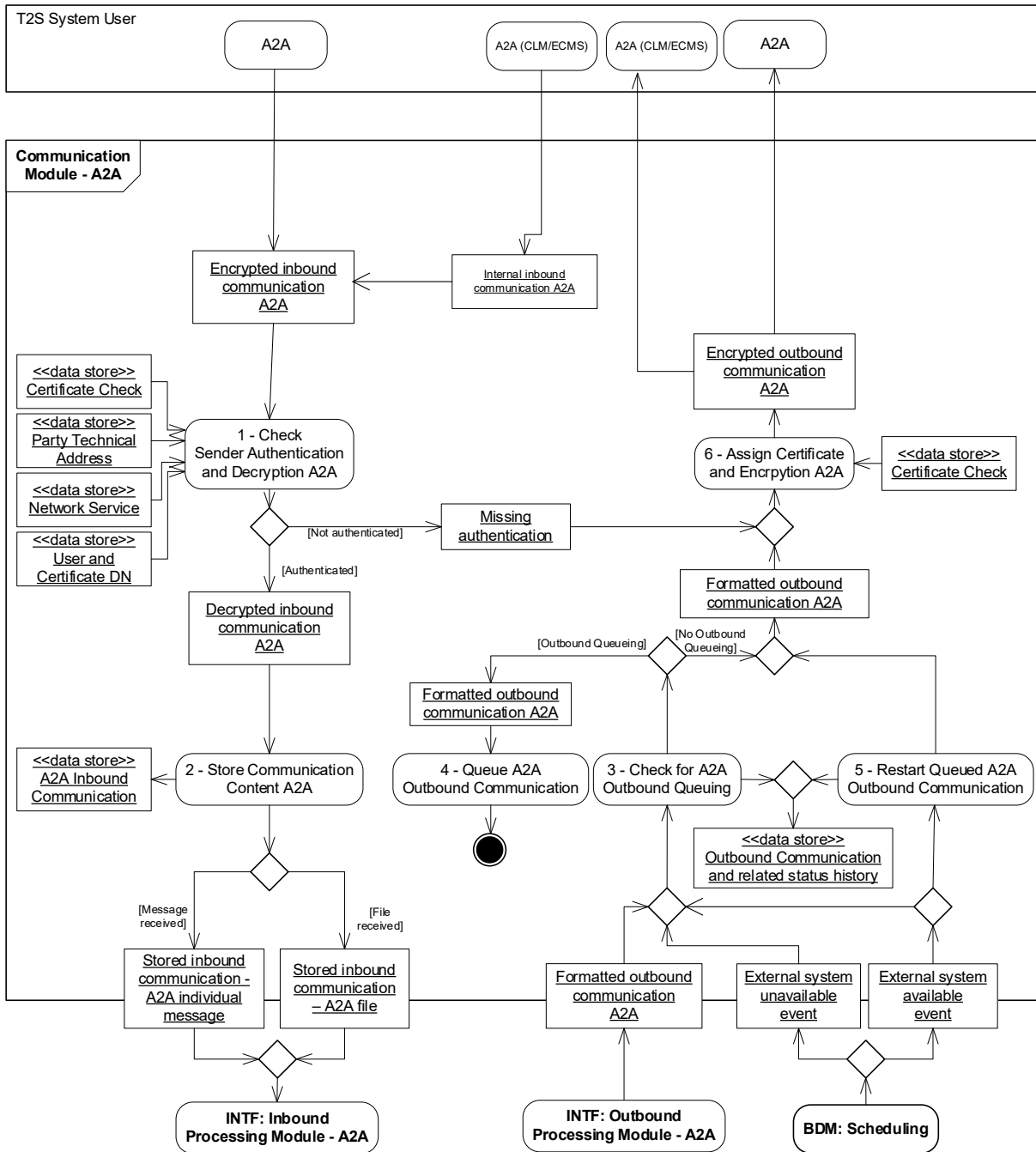
ATTRIBUTE	DESCRIPTION
Sender Message Reference	This attribute stores the identification of the message, which is delivered by the sender.
Entry Business Date	The attribute stores the business day, when T2S received the message.
Processing Module	This attribute stores the module (component) to which the message is forwarded. Possible values are (exhaustive list): <ul style="list-style-type: none"> <li>- Inbound Processing Module (INTF)</li> <li>- Outbound Information Management (LQMG)</li> <li>- Liquidity Operations (LQMG)</li> <li>- Query Management (SRQA)</li> <li>- Instruction Validation (LCMM)</li> <li>- Operational Monitoring (OPSR)</li> <li>- <del>Scheduling (OPSR)</del></li> <li>- Billing (OPSR)</li> <li>- Party Data Management (SDMG)</li> <li>- Security Data Management (SDMG)</li> <li>- Securities Account Data Management (SDMG)</li> <li>- T2S Dedicated Cash Account Data Management (SDMG)</li> <li>- Rules and Parameters Data Management (SDMG)</li> </ul>

#### Outbound Individual Message:

The entity is created by Create Business Payload function to store the request type, processing module and payload of the outbound communication.

ATTRIBUTE	DESCRIPTION
Request Type	This attribute stores the request type for the message according to ISO 20022 standard.
Processing Module	This attribute stores the module (component) from which the message has been received. Possible values are (exhaustive list): <ul style="list-style-type: none"> <li>- Inbound Processing Module (INTF)</li> <li>- Outbound Information Management (LQMG)</li> <li>- Liquidity Operations (LQMG)</li> <li>- Query Management (SQRA)</li> <li>- Report Management (SQRA)</li> <li>- Status Management (LCMM)</li> <li>- Instructions Matching (LCMM)</li> <li>- Instruction Maintenance (LCMM)</li> <li>- Operational Monitoring (OPSR)</li> <li>- <del>BDM Scheduling (OPSR)</del></li> <li>- Billing (OPSR)</li> <li>- Party Data Management (SDMG)</li> <li>- Security Data Management (SDMG)</li> <li>- Securities Account Data Management (SDMG)</li> <li>- T2S Dedicated Cash Account Data Management (SDMG)</li> <li>- Rules and Parameters Data Management (SDMG)</li> </ul>

### 3.2.3.2 Diagram of the module



3.2.3.3 Description of the functions of the module

6 – Restart Queued A2A Outbound Communication

Reference Id	<b>INTF.COM-A2A.ROM.1.1</b>
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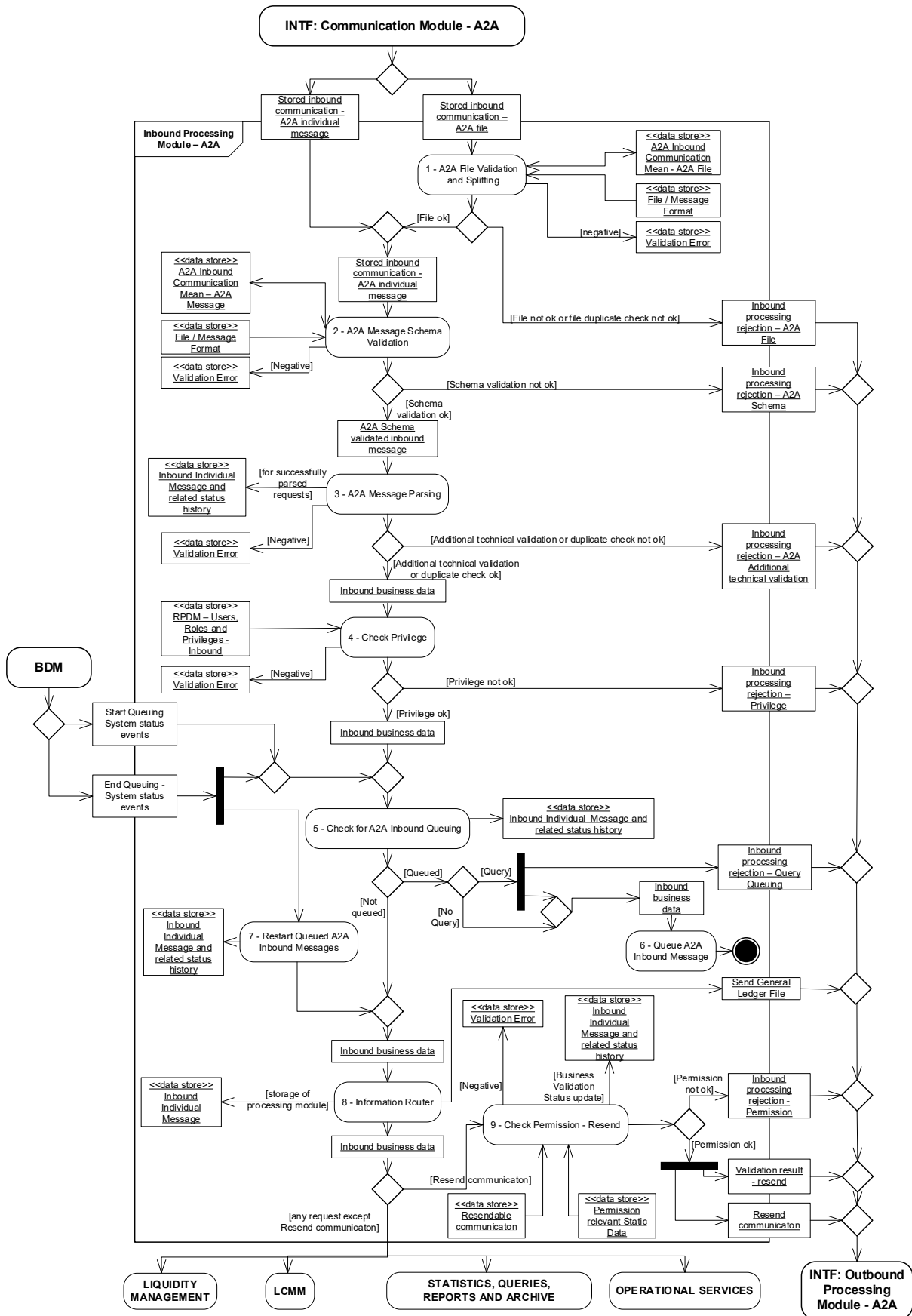
This function receives an event (*External systems available event*), which is delivered by **BDM** the *Scheduling* module. Afterwards this function retrieves all the queued communication for the activated external system, stores the *Outbound Communication* and the related status history with Status Type

*"Outbound Queuing Status"* and Status Value *"False"* and submits them as the *Formatted outbound communication A2A* flow to the function *Assign Certificate and Encryption A2A*.

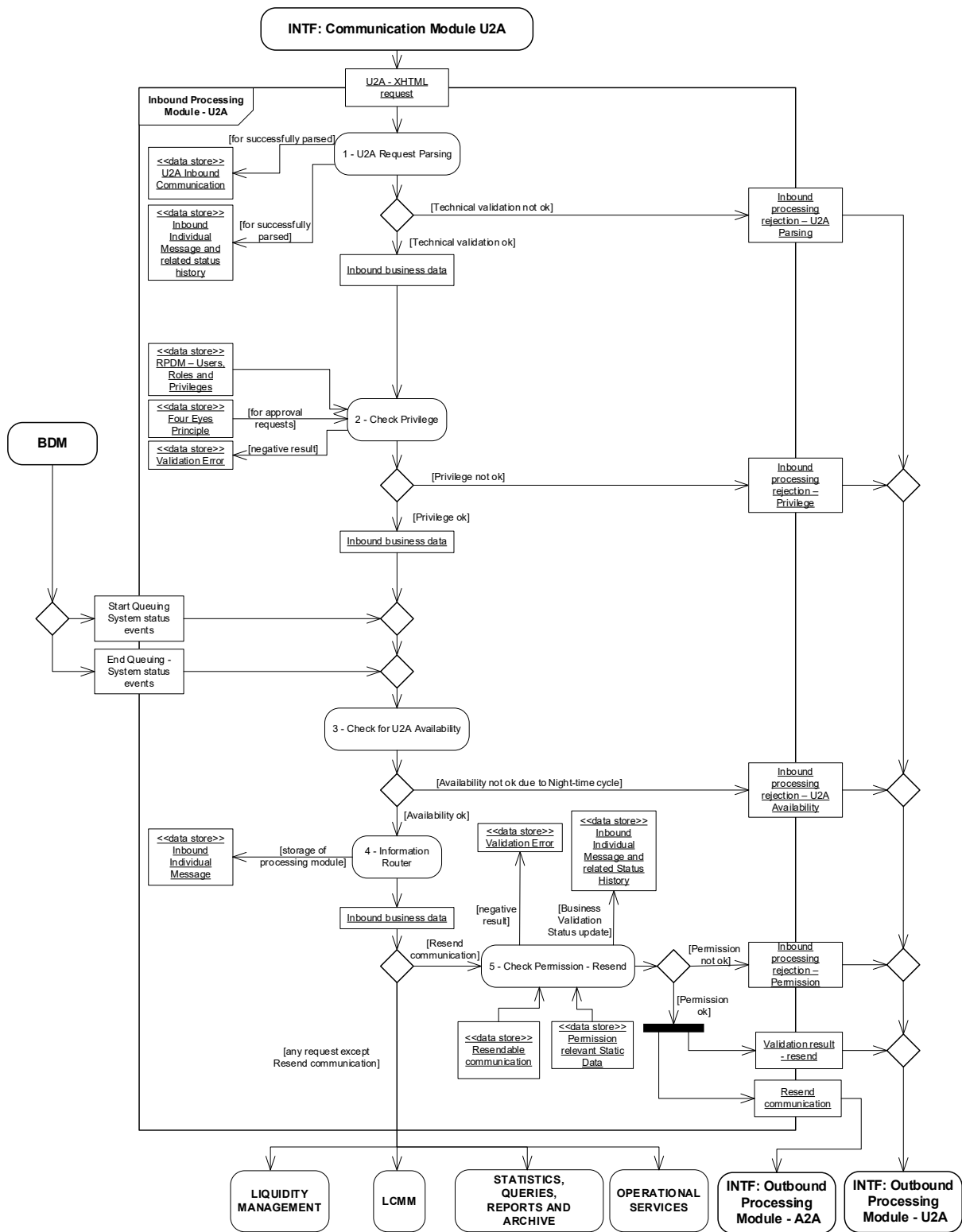
#### 3.2.3.4 Description of the Input/Output of the module

FLOW	IN/OUT	DESCRIPTION	FROM	TO
...				
Formatted outbound communication A2A	IN		INTF: Outbound Processing Module	
External system available events	IN		<u>BDM</u> OPSR: Scheduling	
External system unavailable events	IN		<u>BDM</u> OPSR: Scheduling	
...				

#### 3.2.4.2 Diagram of the module







**3.2.4.3 Description of the functions of the module**  
 5 - Check for A2A Inbound Queuing

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The T2S *Interface* domain receives the respective events from BDM the ~~*Scheduling*~~ module. The function *Check for A2A Inbound Queuing* processes single messages accordingly. The following alternatives may occur:

- I Delivery: the function forwards the requests to the *Information Router* function and set the Inbound Queuing Status in *Inbound Individual Message* and related status history to "False";
- I Queuing: the function starts the queuing mechanism to allow a restart after the end of the maintenance window or the end of the night-time settlement in case of Balance Queries and set the Inbound Queuing Status in *Inbound Individual Message* and related status history to "True".

7 – Restart Queued A2A Inbound Messages

This function is triggered by an event (*End Queuing – System status events*) received from BDM the ~~*Scheduling*~~ module. When activated, this function retrieves all the queued single messages, stores the Inbound Queuing Status in *Inbound Individual Message* and related status history to "False" and submits them as the *Inbound business data* flow to the *Information Router* function.

8 – Information Router

The *Information Router* function receives the *Inbound business data* flows.

It is responsible for identifying the respective processing module and for the routing of the business data related to the messages listed in the following table:

MODULE	MESSAGE	FLOW (INTERNAL FORMAT)	REMARKS	URD REFERENCES
LQMG: Outbound Information Management	Receipt	RTGS answer		
LQMG: Liquidity Operations	Liquidity Credit Transfer	Immediate / inbound liquidity transfer	Immediate liquidity transfer originally coming from T2S actors or Inbound Liquidity Transfer coming from RTGS actors	{T2S.06.195} {T2S.13.083} {T2S.16.170}
		Liquidity transfer approval request	Only U2A	
OPSR: Billing		Invoice processing request		
		Invoice approval	Only U2A	

MODULE	MESSAGE	FLOW (INTERNAL FORMAT)	REMARKS	URD REFERENCES
		request		
SQRA: Query Management	User Query	User query		{T2S.14.010} {T2S.14.020}
SDMG: Static Data Modules		Static Data Maintenance approval request	Only U2A	{T2S.12.170}
...				
OPSR: Scheduling		Event maintenance request	Only U2A	<del>{T2S.11.040}</del>
INTF: Outbound Processing Module	Resend communication	Resend communication		

### 3.2.4.4 Description of the input/output of the module

The *Inbound Business Data* flow described before is used as place holder for the various different business flows, which have to be delivered to the back end modules (special case is the *Resend Message* flow, which is sent to the *Outbound Processing Module*).

FLOW	IN/OUT	DESCRIPTION	FROM	TO
...				
Stored inbound communication – file	IN	File received in A2A	INTF: Communication Module	
Start Queuing System status events	IN		<u>BDM OPSR: Scheduling</u>	
End Queuing System status events	IN		<u>BDM OPSR: Scheduling</u>	
Inbound processing rejection U2A- Parsing	OUT	Rejection of a single inbound message delivered in U2A due to parsing error		INTF: Outbound Processing Module
...				
Event maintenance	OUT	Only available in U2A		OPSR: Scheduling

FLOW	IN/OUT	DESCRIPTION	FROM	TO
request				

**3.2.5.3 Description of the functions of the module**

4 – Create Business Payload A2A

In detail, the function creates the following messages out of flows from other modules:

MODULE	MESSAGE	FLOW (INTERNAL FORMAT)	REMARKS	URD REFERENCES
...				
OPSR: Scheduling		Event Maintenance response	Only available in U2A	<del>{T2S.11.040}</del>

**3.2.5.4 Description of the Input/Output of the module**

The *Outbound Business Data* flow described before is used as place holder for the various different business flows, which have to be received from the back end modules (special case is the *Resend Communication* flow, which is received from the *Inbound Processing Module*).

FLOW	IN/OUT	DESCRIPTION	FROM	TO
...				
Event Maintenance response	IN		BDM OPSR: Scheduling	
...				

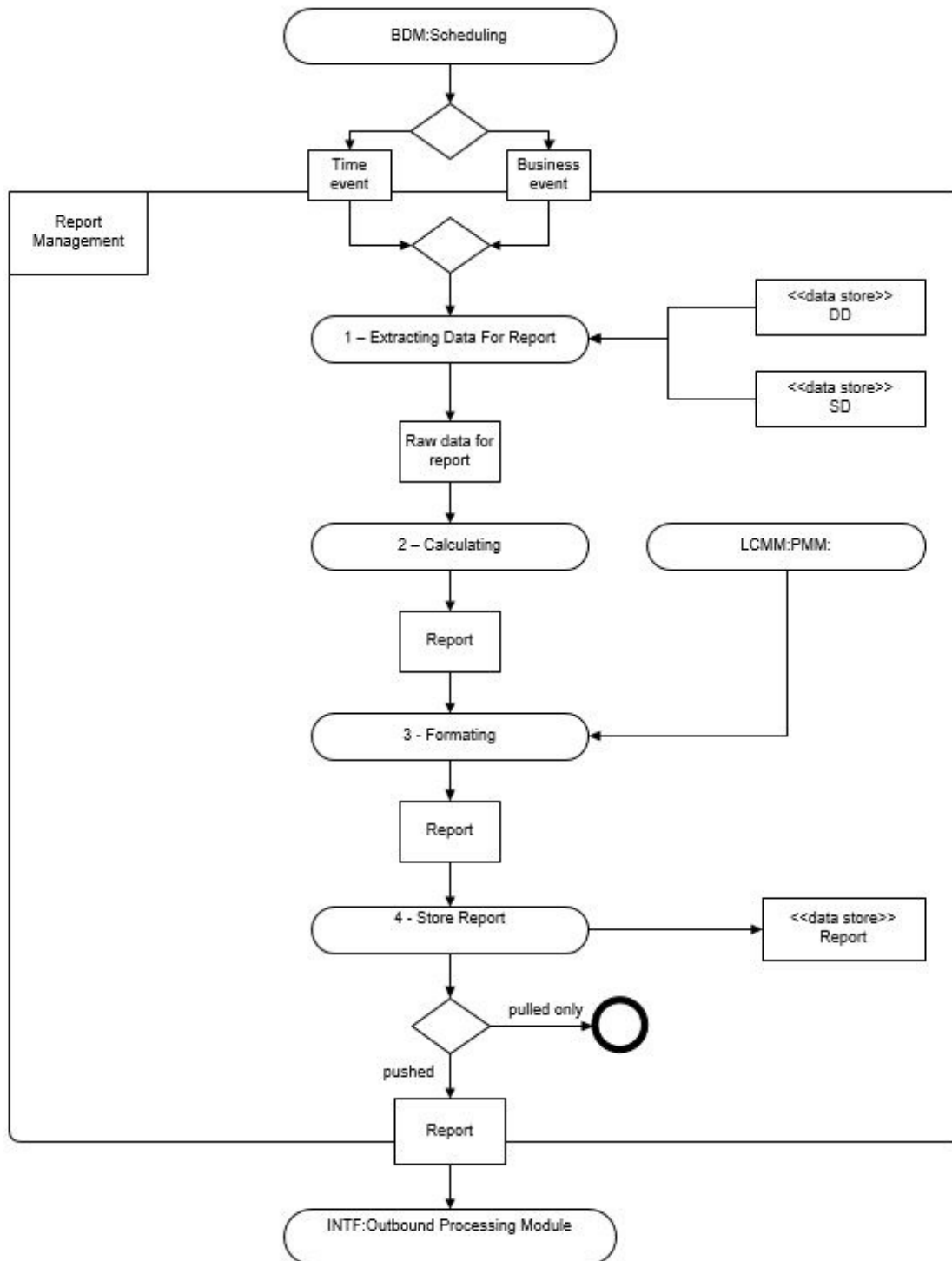
**3.2.6.1 General aspects**

The T2S GUI supports the following non-exhaustive list of maintenance and querying functions **{T2S.12.250}**. It enables users to:

- | Issue online query requests to T2S (e.g. such as balance requests, status requests, valid list of codes for an attribute of a static data entity **{T2S.11.330}**);
- | Display results in a readable and standardised way;
- | Export a query result by using common industry-wide standard formats (The extract includes exactly the same information, which is provided by the query without update, including the query parameters and the query timestamp.);

- | Input and maintain settlement instructions and liquidity transfer orders;
- | Maintain static data for parties, securities, securities and cash accounts, users, roles, privileges, system configuration rules and parameters;
- | ~~Maintain calendar and diary;~~
- | Maintain eligible assets, collateral value of securities and close links.

#### 3.7.4.2. Static Functional Description



UDFS:

1.6.4.2.3 Report generation process

The creation of a report is always triggered at a certain point in time by T2S. This point in time can be a specific time, e. g. 10:00 am or a specific event of the T2S Settlement Day, e. g. End of Day. T2S Scheduling functionality will be provided by BDM.

For the following list of reports for which a currency specific configuration is possible and that are configured for a currency-specific event the data extraction starts when the event for the currency specified in the report configuration is triggered.

#### 1.6.4.4.3 Query management process

QUERY TYPE	INITIATION VIA GUI (U2A MODE)	INITIATION VIA XML MESSAGES (A2A MODE)
Liquidity Transfer Order of a Liquidity Transfer Order Link Set Query	x	x
T2S Calendar Query	x	x
T2S Diary Query	x	x
Current Status of the T2S settlement day	x	x
System Entity Query	x	

#### 4.1 Index of Business Rules and Error Codes

BR NAME	DESCRIPTION	INBOUND MESSAGE	REPLY MESSAGE	CODE USE	REASON CODE	
...	...	...	...	...	...	
QMPC015	In case the Date is stated as a range, the Date From has to be before or equal to the Date To.	semt.025	sese.022	<Rjctd>	OTHR	The
QMPC015	In case the Date is stated as a range, the Date From has to be before or equal to the Date To.	camt.018	camt.019		Q014	The
QMPC015	In case the Date is stated as a range, the Date From has to be before or equal to the Date To.	reda.015	reda.017		Q014	The
...	...	...	...	...	...	
QMPC016	The Date From must not be older than three calendar months.	camt.018	camt.019		Q015	The enc

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#### High level description of Impact:

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#### Outcome/Decisions:

\* CRG on the 20 March 2019: The CRG has agreed to launch the preliminary assessment of CR-707.

\* CRG on the 3 September 2019: The CRG agreed to recommend the CR for authorisation by the T2S Steering Level.

- \* CRG on the 8 October 2019: The CRG confirmed its recommendation for authorisation by the T2S Steering Level.
- \* AMI-SeCo on 16 October 2019: The AMI-SeCo agreed with the recommendation of the CRG.
- \* CSG on 25 October 2019: The CSG authorised the CR for allocation to a T2S release.
- \* NECSG on 28 October 2019: The NECSG authorised the CR for allocation to a T2S release.
- \* MIB on 8 November 2019: The MIB authorised CR-707.
- \* PMG on 27 March 2020: The PMG proposed to allocate this CR to T2S release 6.0.

**Preliminary assessment:**

- **Impacted modules:** INTF, QUM
- **Release:** 6.0
- **Findings:**

Some changes to elements of the BDM business interface (specifically to the consolidated XML schemas) may be relevant for T2S users once T2S migrates to T2-T2S Consolidation. The specific items are listed in CR698, which describes the development phase of the BDM component before the T2S migration. **Open issues/ questions to be clarified by the originator:**

None.

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		
	Night-time Settlement		
	Daytime Recycling and optimisation		
	Daytime Validation, provisioning & booking		
	Auto-collateralisation		
<b>Liquidity Management</b>			
	Outbound Information Management		
	NCB Business Procedures		
	Liquidity Operations		
<b>T2S Interface</b> (as of June 2022 without Static Data Management, Communication for SDMG, Scheduler, Billing)			
x	Communication		
x	Outbound Processing		
x	Inbound Processing		
<b>Static Data Management</b> (until June 2022)		<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>	
x	Report management		Report management
x	Query management		Query management
			Communication
			Outbound Processing
			Inbound Processing
<b>Operational Services</b>			
	Data Migration (T2S DMT)		Data Migration (CRDM DMT, from R6.0)
X	Scheduling (until June 2022)	X	Business Day Management (from R6.0)
		X	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
	OMEGA Templates		

Impact on major documentation		
Document	Chapter	Change
Impacted GFS chapter	3.2.1 General Introduction	Update of diagrams
	3.2.2 Dynamic data managed by the domain	Update Processing Module
	3.2.3.2 Diagram of the module	Update of diagram
	3.2.3.3 Description of the functions of the module 6 – Restart Queued A2A Outbound Communication	Renaming
	3.2.3.4 Description of the Input/Output of the module	Renaming
	3.2.4.2 Diagram of the module	Update of diagrams
	3.2.4.3 Description of the functions of the module 5 - Check for A2A Inbound Queuing 7 – Restart Queued A2A Inbound Messages 8 – Information Router	Renaming
	3.2.4.4 Description of the input/output of the module	Renaming
3.2.5.3 Description of the functions of the module: 4 – Create Business Payload A2A	Update	

	3.2.5.4 Description of the Input/Output of the module  3.2.6.1 General aspects  4.1.5 QU: Queries	Update  Deletion of query reference  Deletion of BDM related Queries
Impacted UDFS chapter	1.1.5.2 T2S calendar management 1.1.5.3 T2S settlement day management 1.5.2 T2S calendar management 1.5.3 T2S settlement day management 1.6.5.2 T2S calendar management 1.6.5.3 T2S settlement day management  3.3.3.9 GetBusinessDayInformationV03 (camt.018.001.03) 3.3.3.10 ReturnBusinessDayInformationV04 (camt.019.001.06)  4.1 Index of Business Rules and Error Codes  1.6.4.2.3 Report generation process  1.6.4.4.3 Query management process	Editorial updates to correctly reference BDM.  Updates for BDM.  Deletion/Update of IIMP business rules (IIMP116,117,118)  Updates for BDM.  Adaption of all affected queries in the table
Additional deliveries for Message Specification	Message specifications for camt.018 and camt.019	Updates for BDM.
UHB	2.4.1.24 Daily Schedules – Search/List Screen 2.4.1.31 T2S Calendar Screen (Operator Only) Daily Schedule – New/Edit Screen	Updates for BDM.
Links with other requests		
Links	Reference	Title
<b>OVERVIEW OF THE IMPACT OF THE REQUEST ON THE T2S SYSTEM AND ON THE PROJECT</b>		
<b>Summary of functional, development, infrastructure and migration impacts</b>		
<p>Portions of T2S interface (U2A and A2A) related to Scheduling will be decommissioned and covered by newly developed, corresponding functionalities in the BDM common component.</p> <p>Decommissioning of above mentioned messages/message usages and screens from T2S INTF. This includes the deletion of camt.018 related business rules, input and output flows and editorial changes with respect to Scheduling module.</p> <p>Decommissioning of all above-mentioned screens related to BDM from QUM module. Furthermore updating the affected UDFS, GFS and UHB chapters according to the above mentioned points.</p> <p>Testing the correct decommission of the impacted screens and messages.</p> <p><b>Main Cost Driver:</b> Decommissioning of screens and messages.</p>		
<b>Impact on other TARGET Services and projects</b>		

T2-T2S CSLD: development of business interface components for BDM functions (already covered in CSLD offer). No further impact. No impact on TIPS. No impact on ECMS.
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<b>Summary of project risk</b>
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<b>Security analysis</b>
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Based on the information currently available no adverse effect has been identified during the security assessment. A final check will be conducted in the context of the CSLD PPSA by 21/03/2021.
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