

Change Request form

General Information (Origin of Request)		
<input checked="" type="checkbox"/> User Requirements Document (URD) <input type="checkbox"/> Other User Functional or Technical Documentation (SYS) <input type="checkbox"/> Other TIPS Documentation (OTD)		
Request raised by: TIPS Consultative Group	Date raised: January 2020	
Request title: Broadcasts	Name of Central Bank: European Central Bank	Request ref. no: TIPS CR.0014.URD
Categorisation of changes		
1. Functional/technical importance parameter: tbd	4. Legal importance parameter: tbd	
2. Operational importance parameter: tbd	5. Financial importance parameter: tbd	
3. Stakeholder importance parameter: tbd		
Status: Draft		

Description of requested change:

TIPS shall allow the Operator, Central banks and L3 Parties¹ to create and send broadcasts through the Application-to-Application (A2A) channel² and the User-to-Application (U2A) channel. The Operator shall have the possibility to decide whether to send Broadcast messages to all parties or to parties belonging to a specific national community. Central banks and L3 Parties shall have the possibility to decide whether to send Broadcasts to all parties or to parties belonging to their national community.

Such messages shall be pushed to TIPS parties in U2A and, if the TIPS party has subscribed for A2A broadcast messages, in A2A as well.

Reason for change and expected benefits/business motivation:

TIPS participants need prompt notice in case of insolvency or unavailability of a party, but there is currently no broadcasting mechanism covering the full TIPS business hours.

The objective of change request TIPS-0014-URD is to introduce the possibility for TIPS Actors to create, send and receive Broadcasts in TIPS. They can either be general notifications or operational notifications regarding the suspension/unavailability either planned or due to an incident of a party in TIPS.

In the latter case, the same Broadcast mechanism would be used by TIPS Actors to send a subsequent broadcast message to inform on the availability or the lifting of the suspension of that party.

The Broadcast mechanism shall be available in TIPS on a 24/7/365 basis.

¹ The party model of CRDM is based on a hierarchical three-level structure. The CRDM Operator is the only party on the top level of the hierarchy and it is responsible for the setup of each party of the second level, i.e. each Central Bank. Similarly, each party belonging to the second level (i.e. a Central Bank) is responsible for the setup of all parties of its community (i.e. Payment Banks), represented by parties of the third level (L3). A Payment Bank can participate in TIPS as a TIPS Participant or as a reachable Party.

² A2A broadcast communications shall be based on the System Event Notification (admi.004.001.02) message.

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Submitted annexes / related documents:

Proposed wording for the Change request:

TIPS UDFS v3.0

1) §1.2.5 Graphical user interface (Amendment of Table 1 – TIPS U2A Functions)

Table 1 – TIPS U2A functions

Function	Actor
[...]	[...]
Initiate Outbound Liquidity Transfer	TIPS Participant, Instructing Party ³ , CB, TIPS Operator
<u>Query Broadcast</u>	<u>TIPS Participant, Instructing Party, CB, TIPS Operator</u>
<u>Create Broadcast</u>	<u>TIPS Participant, Instructing Party⁴, CB, TIPS Operator</u>

2) §3.3.1 List of messages – table will be updated to include the broadcast message

Table 53 – List of messages

ISO Message	Message Name	Scenario
[...]	[...]	[...]
Reference Data (reda)		
reda.016.001.01	PartyStatusAdviceV01	Reference Data management
reda.022.001.01	PartyModificationRequestV01	Reference Data management
<u>Administration (admi)</u>		
admi.004.001.02	<u>SystemEventNotificationV02</u>	<u>Broadcast</u>

3) §3.3.2.5 Administration (admi) §3.3.2.5.1 SystemEventNotificationV02

SystemEventNotificationV02 (admi.004.001.02)

³ An Instructing Party acting on behalf of a TIPS Participant may be authorised to instruct Liquidity Transfers.

⁴ An Instructing Party acting on behalf of a TIPS Participant may be authorised to create and send Broadcasts.

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The SystemEventNotification message is used to provide broadcast information regarding immediate/planned downtime or in case of insolvency. Free text broadcasts are also allowed.

Table xx – adm.004.001.02

<u>Reference Name</u>	<u>Description</u>	<u>XML path</u>	<u>Mand.</u>	<u>TIPS Usage</u>
<u>Event Code</u>	<u>The broadcast type</u>	<u>Document/SysEvtNtfctn/EvtInf/EvtCd</u>	<u>Yes</u>	<u>Broadcast Type:</u> - <u>IDWS (Immediate Downtime Start)</u> - <u>IDWE (Immediate Downtime End)</u> - <u>PDWN (Planned Downtime)</u> - <u>INSL (Insolvency)</u> - <u>FREE (Free text)</u>

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<u>Reference Name</u>	<u>Description</u>	<u>XML path</u>	<u>Mand.</u>	<u>TIPS Usage</u>
<u>Event Parameters</u>	<u>Parameters reported for each type of broadcast</u>	<u>Document/SysEvtNtfctn/EvtInf/EvtParam</u>	<u>No</u>	<p><u>Parameters for event code IDWS:</u></p> <ul style="list-style-type: none"> parameter 1: BIC object of the <u>Immediate Downtime</u>; parameter 2: BIC of the <u>broadcast sender</u>. <p><u>Parameters for event code IDWE:</u></p> <ul style="list-style-type: none"> parameter 1: BIC object of the <u>Immediate Downtime</u>; parameter 2: BIC of the <u>broadcast sender</u>. <p><u>Parameters for event code PDWN:</u></p> <ul style="list-style-type: none"> parameter 1: BIC object of the <u>Planned Downtime</u>; parameter 2: calendar date of the start of the planned downtime, expressed with format YYYY-MM-DD; parameter 3: calendar date of the end of the planned downtime, expressed with format YYYY-MM-DD; parameter 4: BIC of the <u>broadcast sender</u>. <p><u>Parameters for event code INSL:</u></p> <ul style="list-style-type: none"> parameter 1: BIC object of the <u>Insolvency</u>; parameter 2: BIC of the <u>broadcast sender</u>. <p><u>Parameters for event code FREE:</u></p> <ul style="list-style-type: none"> parameter 1: BIC of the <u>broadcast sender</u>.
<u>Event Description</u>	<u>Additional free text included in the broadcast</u>	<u>Document/SysEvtNtfctn/EvtInf/EvtDesc</u>	<u>No</u>	<u>Always reported for event code FREE.</u>
<u>Event Time</u>	<u>Timestamp to the broadcast production</u>	<u>Document/SysEvtNtfctn/EvtInf/EvtTm</u>	<u>Yes</u>	<u>Date and time related to the production of the broadcast, expressed in UTC.</u>

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4) §2.3 Overview of the Graphical User Interface (Amendment of Table 2 – Functions available in TIPS GUI)

Table 2 – Functions available in TIPS GUI

Type	Description
Query	Account balance and status query
Query	CMB limit and status query
<u>Query</u>	<u>Broadcast</u>
Local reference data	Blocking/Unblocking of a Participant
Local reference data	Blocking/Unblocking of an Account
Local reference data	Blocking/Unblocking of a CMB
Local reference data	Increase/Decrease of a CMB limit
Task Management	Task List
Liquidity management	Enter Liquidity transfer Order ⁵
<u>Broadcast</u>	<u>Enter Broadcast</u>

5) §2.3.1 Sitemap (Amendment of the illustration of GUI screens under §2.3.1.1 Homepage)

The new illustration will include an additional screen related to Broadcast.

6) §2.3.1 Sitemap (New illustration under new section §2.3.1.7 Broadcast)

The new illustration will show the Broadcast GUI screen following its business logic, starting with search/list screen, following with details and enter.

7) §2.3.3.1 Menu Structure

The screenshot included in this section will be updated

8) §2.3.3.2 Screen Structure

In general, each screen of the TIPS GUI follows the same layout containing a header and a content area.

Header The header appears at the top of every screen. It contains ~~four~~ **five** main elements providing useful information and helping the users to navigate between the different screens as shown in the illustration below

The screenshot “Screenshot with header elements” will be updated.

⁵ Outbound liquidity transfers are allowed during the operating times of the respective RTGS.

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Table 3 – GUI header elements

Position	Element	Description
1	<i>TIPS logo</i> button	The element links to the welcome screen. While using the <i>new/edit</i> screens, the <i>TIPS logo</i> button is locked in order to ensure a safe and complete submission process.
2	Information panel	It displays the login name, the <i>logout</i> and <i>help</i> buttons as well as date and time of last data access.
3	Menu bar	It presents the menu items and allows the user to navigate to the screens.
4	TIPS Actor logo	It displays the respective logo in accordance with the chosen TIPS Actor in line with the white-labelling approach.
5	<u>Broadcast box</u>	<u>It displays a preview of the most recent unread broadcast and the Broadcast button indicating the number of unread broadcasts.</u>

The TIPS GUI consists of the following types of screens, each with a different function:

Welcome screen

Search/List screen

Details screen

Enter screen

Welcome screen The *welcome* screen is the entrance into the TIPS GUI. It also contains a ticker line providing the user with the latest information. The ticker is managed by the TIPS Operator.

[...]

[...]

Enter screen Similar to the *details* screens, the user can only access the *enter* screens through the main menu. This type of screen is used to enter reference data modification, inject an Outbound Liquidity Transfer, ~~and Approve/Revoke tasks~~ and send broadcasts.

9) (New Section) §4.1.5 Query Broadcast

The Broadcast query allows the authorised actor to search for broadcasts, which are still available in the system.

10) (New Section) §4.1.5.1 Broadcast – Search/List screen

Context of Usage This screen contains a number of search fields. By inputting the relevant data, the user can look up and display the list of broadcast messages that are currently available in TIPS. The search results will be displayed in a list, which is sorted by the values of the Timestamp related to the creation of the broadcast in descending order. Users belonging to Central Banks, TIPS Participants and Reachable Parties are entitled to view broadcasts addressed to all users and to users of their national community. The Operator can

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view all broadcasts.

Screen Broadcast box >> Click on the *Broadcast* button >> *Search/List* Screen
Access

Privileges To access this screen, the following Privilege is needed:

- Display Broadcast

Screenshot

(The screenshot of the Broadcast – Search/List screen will be included)

Field description

<u>Broadcast: Search criteria</u>	
<u>Status</u>	<u>Select the status of the broadcast from the possible values:</u> <u>All;</u> <u>Unread (Default Value);</u> <u>Read.</u>
<u>Timestamp of creation from</u>	<u>Enter the lower bound of the date and time from which the broadcast was created or use the calendar icon.</u> <u>Required format is: YYYY-MM-DD hh:mm:ss</u> <u>(References for error messages will be included)</u>
<u>Timestamp of creation to</u>	<u>Enter the upper bound of the date and time from which the broadcast was created or use the calendar icon.</u> <u>Required format is: YYYY-MM-DD hh:mm:ss</u> <u>(References for error messages will be included)</u>
<u>Sender</u>	<u>Enter or select the BIC of the sender. Format is BIC11.</u> <u>(References for error messages will be included)</u>
<u>Recipients</u>	<u>Select the recipients of the broadcast from the possible values:</u> <u>All (Default Value)</u> <u>All Users;</u> <u>Users of the National Community.</u>
<u>Broadcast Type</u>	<u>Select the type of broadcast from the possible values:</u> <u>All (Default Value)</u> <u>Immediate Downtime Start</u> <u>Immediate Downtime End</u> <u>Planned Downtime</u> <u>Insolvency</u> <u>Free Text</u>

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<u>Party BIC</u>	<u>Enter or select the BIC of the party to which the broadcast refers. Format is BIC11.</u> <u>(References for error messages will be included)</u>
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<u>Broadcast: List</u>	
<u>Status</u>	<u>Shows the status of the broadcast. Possible values are:</u> <u>Unread;</u> <u>Read.</u>
<u>Timestamp of creation</u>	<u>Shows the timestamp at which the broadcast was created.</u> <u>Displayed format is: YYYY-MM-DD hh:mm:ss</u>
<u>Sender</u>	<u>Shows the BIC of the sender. Displayed format is: BIC11</u>
<u>Recipients</u>	<u>Shows the recipients of the broadcast. Possible values are:</u> <u>All Users;</u> <u>Users of the National Community.</u>
<u>National Community</u>	<u>Shows the country code of the national community to whom the broadcast was sent.</u>
<u>Broadcast Type</u>	<u>Shows the type of broadcast.</u> <u>Possible values are:</u> <u>Immediate Downtime Start</u> <u>Immediate Downtime End</u> <u>Planned Downtime</u> <u>Insolvency</u> <u>Free Text</u>
<u>Party BIC</u>	<u>Shows the BIC of the party to which the broadcast refers.</u> <u>Displayed format is: BIC11</u>

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Buttons

<u>Search</u>	<u>This function enables the user to start a search according to the criteria entered. The results are displayed in a list on the same screen. If the search retrieves a single record, the details screen is displayed.</u> (References for error messages will be included)
<u>Reset</u>	<u>This function enables the user to set all fields to default value and blanks out all optional fields.</u>
<u>Details</u>	<u>This function enables the user to display the details of the selected broadcast.</u>
<u>New</u>	<u>This function enables the user to access the Broadcast – New screen.</u>

11) (New Section) §4.1.5.2 Broadcast – Details screen

Context of

This screen allows the authorised actor to get detailed information on the selected broadcast. The status of the broadcast is updated automatically when details are displayed to the user. The broadcast status is then set to 'Read'.

Usage

Screen

Broadcast box >> Click on the *Broadcast* button >> Search/List Screen >> List screen

Access

>> Click on the *Details* button

Broadcast box >> Click on the preview of the unread broadcast displayed in the Broadcast box.

Privileges

To access this screen, the following Privilege is needed:

- Display Broadcast

Screenshot

(The screenshot of the Broadcast – Details screen will be included)

Field description

<u>Broadcast - Details</u>	
<u>Object</u>	<u>Description</u>
<u>Status</u>	<u>Shows the status of the broadcast. Possible values are:</u> <u>Unread (Default Value);</u> <u>Read</u>
<u>Timestamp of creation</u>	<u>Shows the timestamp at which the broadcast was created.</u> <u>Displayed format is: YYYY-MM-DD hh:mm:ss</u>
<u>Sender</u>	<u>Shows the BIC of the sender. Displayed format is:</u> <u>BIC11</u>
<u>Recipients</u>	<u>Shows the recipients of the broadcast. Possible values are:</u> <u>All Users;</u> <u>Users of the National Community.</u>

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<u>National Community</u>	<u>Shows the country code of the national community to whom the broadcast was sent.</u>
<u>Broadcast Type</u>	<u>Shows detailed information about the type of broadcast.</u> <u>Possible values are:</u> <u>Immediate Downtime Start</u> <u>Immediate Downtime End</u> <u>Planned Downtime</u> <u>Insolvency</u> <u>Free Text</u>
<u>Party BIC</u>	<u>Shows the BIC of the party to which the broadcast refers.</u> <u>Displayed format is: BIC11</u>
<u>Planned Downtime Start Date</u>	<u>If the type of the selected broadcast is 'Planned Downtime', the field shows the start date of the downtime.</u> <u>Displayed format is: YYYY-MM-DD</u>
<u>Planned Downtime End Date</u>	<u>If the type of the selected broadcast is 'Planned Downtime', the field shows the end date of the downtime.</u> <u>Displayed format is: YYYY-MM-DD</u>
<u>Text</u>	<u>Shows the text content of the broadcast.</u>

12) (New Section) §4.7 Broadcast

Broadcasts are information messages that TIPS simultaneously provides to users through the A2A (upon subscription) and U2A interfaces. The Broadcast functionality is used by a TIPS Actor to send general notifications or operational notifications. It enables a TIPS Actor to inform other participants in TIPS about the suspension or the unavailability of a party.

13) (New Section) §4.7.1 Broadcast – Functionality

14) (New Section) §4.7.1.1 Broadcast – New screen

Context of Usage This screen contains a number of fields regarding broadcasts. The user can enter new data. Afterwards the user can proceed further by clicking on the buttons below and send manual broadcasts to all TIPS Actors or to those belonging to their national community.

The screen allows the user to enter a message and to broadcast it to all TIPS Actors or to those belonging to a specific national community.

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Screen Access Broadcast box >> Click on the *Broadcast* button >> Search/List Screen >> Click on the *New* button

Privileges To access this screen, the following Privilege is needed:

- New Broadcast

Screenshot (The screenshot of the Broadcast – New screen will be included)

Field description

<u>Broadcast - New</u>	
<u>Object</u>	<u>Required Format</u>
<u>Sender</u>	<u>This field is read-only and is automatically filled with the BIC of the party the user belongs to.</u>
<u>Recipients</u>	<u>Select the recipients of the broadcast from the possible values:</u> <u>All Users (Default Value):</u> <u>Users of the National Community.</u> <u>This field is mandatory.</u> <u>(References for error messages will be included)</u>
<u>National Community</u>	<u>The field enables the user to select the country code of the national community to whom the broadcast will be sent.</u> <u>The behaviour of this field depends on the chosen recipients.</u> <u>It is disabled when the user selects "All Users" as recipients.</u> <u>If the user entering the broadcast belongs to a Central Bank, TIPS Participant or Reachable Party, the only country code the user can select is the one of the country to which the party belongs.</u> <u>(References for error messages will be included)</u>
<u>Broadcast Type</u>	<u>The field enables the user to specify the type of broadcast.</u> <u>Possible values are:</u> <u>Immediate Downtime Start</u> <u>Immediate Downtime End</u> <u>Planned Downtime</u> <u>Insolvency</u> <u>Free Text</u> <u>This field is mandatory.</u> <u>(References for error messages will be included)</u>
<u>Party BIC</u>	<u>Enter the BIC of the Party to which the broadcast refers. Required format is: BIC11.</u> <u>The field is disabled when the user selects "Free Text" as Broadcast Type. It is enabled and mandatory in all other cases.</u> <u>(References for error messages will be included)</u>

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<u>Planned Downtime Start Date</u>	<p><u>Enter the start date of the planned downtime or use the calendar icon. Required format is: YYYY-MM-DD</u></p> <p><u>The 'Planned Downtime Start Date' must be equal or greater than the current business date.</u></p> <p><u>The field is enabled and mandatory if the user selects "Planned Downtime" in Broadcast Type field. It is disabled otherwise.</u></p> <p><u>(References for error messages will be included)</u></p>
<u>Planned Downtime End Date</u>	<p><u>Enter the end date of the planned downtime or use the calendar icon. Required format is: YYYY-MM-DD</u></p> <p><u>The 'Planned Downtime End Date' must be equal to or later than the 'Planned Downtime Start Date' and the current business date.</u></p> <p><u>The field is enabled and mandatory if the user selects "Planned Downtime" in Broadcast Type field. It is disabled otherwise.</u></p> <p><u>(References for error messages will be included)</u></p>
<u>Text</u>	<p><u>Enter the message content of the broadcast.</u></p> <p><u>If the user selects "Free Text" as Broadcast Type, the field is mandatory.</u></p>

Buttons

<u>Submit</u>	<p><u>This function enables the user to create a new broadcast. Upon clicking on the submit button the user will be asked to enter their PIN for digital signature purposes (NRO). With the entry of the PIN, TIPS attaches a digital signature to the instruction entered by the TIPS actor.</u></p> <p><u>Once submitted, the broadcast will be sent to the intended recipients through the A2A (upon subscription) and U2A interfaces. In the latter case, the preview of the broadcast is displayed in the broadcast box on GUI screens of the recipient users.</u></p> <p><u>(References for error messages will be included)</u></p>
<u>Reset</u>	<p><u>This function enables the user to set all fields to default value and blanks out all optional fields.</u></p>
<u>Cancel</u>	<p><u>This function enables the user to cancel the process</u></p>

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16) (New Section) §5.5.1 Enter Broadcast

<u>Context of</u>	<u>This business scenario describes how to enter a message and broadcast it to all</u>
<u>Usage</u>	<u>TIPS Actors. This functionality is needed every time a TIPS Actor needs to inform other participants about the suspension or unavailability of a party.</u>
<u>Privileges</u>	<u>To carry out this business scenario, the following Privilege is needed:</u> <ul style="list-style-type: none"> • <u>New Broadcast</u>
<u>Reference</u>	<u>Further information on screens involved can be found in the screen reference part:</u> <u>4.7.1.3 Broadcast - New screen</u>
<u>Instructions</u>	<ol style="list-style-type: none"> 1. <u>Go to the <i>Broadcast - new</i> screen</u> 2. <u>Enter the broadcast data (Recipients, Broadcast Type, Party BIC, Text, Planned Downtime Start/End Date – if needed)</u> 3. <u>Click on the <i>Submit</i> button</u> <u>The Broadcast is sent</u>

17) (New Section) §5.5.2 Query Broadcast

<u>Context of</u>	<u>This business scenario describes how to search and get detailed information regarding broadcasts that are currently available in TIPS.</u>
<u>Usage</u>	
<u>Privileges</u>	<u>To carry out this business scenario, the following Privilege is needed:</u> <ul style="list-style-type: none"> • <u>Display broadcast</u>
<u>Reference</u>	<u>Further information on screens involved can be found in the screen reference part:</u> <u>4.7.1.1 Broadcast – Search/List screen</u> <u>4.7.1.2 Broadcast – Details screen</u>
<u>Instructions</u>	<ol style="list-style-type: none"> 1. <u>Go to the Broadcast – Search/List screen</u> 2. <u>Enter the Recipients, Broadcast Type or Party BIC as Search criteria</u> 3. <u>Click on the Search button</u> <u>The list, containing the search result, is displayed on the same screen.</u> 4. <u>Select the broadcast of interest.</u> 5. <u>Click on the <i>Details</i> button</u> <u>The <i>Broadcast – Details</i> screen, containing the message content, is displayed on the screen.</u>

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18) §6.1.1 Error Codes

The list of references for error messages will be updated with all the necessary entries related to Broadcast.

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19) §1.2.2.1.2 Privilege

Inclusion of two new privileges in table "Other":

PRIVILEGE	USER FUNCTION	DATA SCOPE
[...]		
<u>New Broadcast</u>	<u>Allows submit a new Broadcast message</u>	n/a
<u>Display Broadcast</u>	<u>Allows to look up for Broadcasts and display the relevant details</u>	n/a

20) §1.2.3.2 Message Subscription Parameter Types – Table 30

Table 30 (Message subscription parameter types) to be amended as follows:

PARAMETER TYPE	APPLICABLE SERVICE	DESCRIPTION
Message Type	TIPS, T2 (CLM/RTGS)	<p>It specifies the type of message, depending on the service. Possible values depend on the specific service for which messages are being subscribed and are listed below.</p> <p>For TIPS:</p> <ul style="list-style-type: none"> • <u>SystemEventNotification</u> (admi.004) • BankToCustomerDebitCreditNotification (camt.054) • BillingReport (camt.077) <p>For CLM:</p> <ul style="list-style-type: none"> • SystemEventNotification (admi.004) • ReturnBusinessDayInformation (camt.019) • BankToCustomerDebitCreditNotification (camt.054) • BillingReport (camt.077) • PaymentStatusReport (pacs.002) <p>For RTGS:</p>

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PARAMETER TYPE	APPLICABLE SERVICE	DESCRIPTION
		<ul style="list-style-type: none"> • SystemEventNotification (admi.004) • ReturnBusinessDayInformation (camt.019) • ResolutionOfInvestigation (camt.029) • BankToCustomerDebitCreditNotification (camt.054) • PaymentStatusReport (pacs.002) <p>For CRDM:</p> <ul style="list-style-type: none"> • AccountRequestAcknowledgement (acmt.010) • PartyStatusAdvice (reda.016) • Receipt (camt.025)

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High level description of Impact:

Impacts on other projects and products:

Outcome/Decisions:

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General Information	
Impact on TIPS	
Business Interface	
x	A2A Interface
x	U2A Interface
Settlement Engine	
	Payment Transaction
	Liquidity Transfer
	Recall
Queries and Reports	
x	Queries
	Reports
Other functions	
x	Local Reference Data Management
	Statistics
	Complex Queries and Reports
	Mobile Proxy Look-up
	Testing Tool
	Contingency message application
Common Components	
	ESMIG
x	CRDM
	Archiving
	Billing
	DMT
Operational Tools	
	SLA Reporting
	TMS
	Technical Monitoring
	Change Management
	Capacity Management

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Infrastructure request		
x	Application components impacted	
	Application components not impacted	
Operational activities		
	Business activities impacted	
	Technical activities impacted	
New functionalities		
x	Broadcaster (new component)	
Impact on documentation		
Document	Chapter	Change
TIPS UDFS	<ul style="list-style-type: none"> §1.2.5 Graphical user interface §3.3.1 List of messages §3.3.2.5 Administration (admi) §3.3.2.5.1 SystemEventNotificationV02 	<ul style="list-style-type: none"> Update of Table 1 – TIPS U2A Functions Addition of the Broadcast message New section New section for message specifications
CRDM UDFS	<ul style="list-style-type: none"> §1.2.2.1.2 Privilege §1.2.3.2 Message Subscription Parameter Types 	<ul style="list-style-type: none"> New privileges New subscription for admi.004
TIPS UHB	<ul style="list-style-type: none"> §2.3 Overview of the Graphical User Interface §2.3.1 Sitemap §2.3.3.1 Menu Structure §2.3.3.2 Screen Structure §4.1.5 Query Broadcast §4.1.5.1 Broadcast – Search/List screen §4.1.5.2 Broadcast – Details screen §4.7 Broadcast §4.7.1 Broadcast - Functionality §4.7.1.1 Broadcast – New screen §5.5 Broadcast §5.5.1 Enter Broadcast §5.5.1 Query Broadcast §6.1.1 Error Codes 	<ul style="list-style-type: none"> Update of Table 2 – Functions available in TIPS GUI Update of the illustration of GUI screens under §2.3.1.1 Homepage) New section related to Broadcast functionality Inclusion of the Broadcast box in the header of the related screenshot. Amendment of the Table 3 – GUI header elements. Update of the description of the Header and Enter screen New section for Query Broadcast New section for Broadcast – Search/List screen New Section for Broadcast – Details

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		<p>screenNew section for Broadcast</p> <ul style="list-style-type: none"> • New section for Broadcast functionality • New section for Broadcast New screen • New sections for Broadcast screen user guide • New section for Broadcast screen user guide on how to enter a broadcast message • New section for Broadcast screen user guide on how to query broadcast messages • Update of the list of references for error messages related to broadcast
Training documentation	<ul style="list-style-type: none"> • 02. FN.010_TIPS overview_v1.2_0 – FINAL • 08. FN.070_Queries, reports and notifications_v1_2_1 - FINAL 	<ul style="list-style-type: none"> • Update of available functionalities • Update to describe broadcast functionality
Other documents		

Overview of the impact of the request on TIPS
Summary of functional, development, infrastructure, operational and security impacts
<p><u>Summary of functional impact:</u></p> <p>The new broadcast functionality implies the creation of a new customized A2A schema for admi.004 and the creation of the related U2A functionalities.</p> <p>New privileges have to be defined in CRDM and propagated to TIPS in order to allow the sending of the broadcast; message subscription has to be amended in order to support the admi.004 subscription for TIPS.</p> <p>An update of the TIPS functional documentation is required in the following areas:</p> <ul style="list-style-type: none"> • TIPS UDFS (message documentation);

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- TIPS UHB (broadcast U2A functionality);
- CRDM UDFS (new privileges and update of the message subscription);
- Message schema and example for admi.004;
- TIPS Training material (adaptation of the current presentations).

Summary of application development impact:

The broadcast functionality as assessed in this CR is supposed to be “self-consistent” and it does not rely on any implementation in common with the other Target services, as the CSLD-CR-0008 is not supposed to be implemented anymore.

As long as the A2A broadcast notification (admi.004) is concerned, it is worth to consider that:

- 1) Sending the message through the same channel the TIPS service adopts for the rest of A2A exchanges lead to the risk that communication is not possible in the event of major failure affecting such an infrastructure, at TIPS platform level, at NSP level or at participant level. To adopt a different channel, such as emails as for CR-0035, would constitute a better alternative.
- 2) TIPS A2A message exchange protocol adopt the “*at-most-once*” paradigm, different from the “*at-least-once*” paradigm typical of the store-and-forward messages exchanged in T2 and T2S communities. This implies that there is no certainty that the admi.004 is delivered to the recipient and, some admi.004 messages could be lost without possibility to trace or investigate the reason of such a failure. These events when one or more admi.004 get lost and are not delivered to one or more of their recipients, cannot be considered as malfunction as they are unavoidable for the instant messaging protocol.

Impacted components:

- TIPS-GUI (for broadcast notification):
 - Every main screen of the TIPS GUI (not including the ESMIG portal) will be amended to have a section (banner) dedicated to the broadcast preview. Such a section will show the first part of the most recent broadcast message and the total number of messages, that meet the following conditions:
 - “active” status
 - directed to the user who logged-in to the application, i.e. that are directed to all users, to her/his national community, or to her/his party or directly to the user
 - Not read yet by the user who logged-in to the application.
 - Inclusion and exclusion of broadcasts will trigger the update of the preview banner, i.e. it will automatically refresh.
 - The user reading the full text of a broadcast via a dedicated “details screen”, will mark the message and its status will change from “unread” to “read” for the given user. Then the message will disappear from the preview banner.
- Broadcaster (new component):
 - Broadcast messages set-up:

A new section of the TIPS GUI will include screens to enter new broadcast, to list and search all broadcasts (deletion of a broadcast is never allowed). Access to this section will be limited

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to users belonging to the TIPS operator and to NCBs. Both creation and browse of broadcasts will be allowed according to the user privileges, e.g. an NCB user will be only allowed to create and browse broadcasts directed to her/his national community or to all parties, to the linked parties or to users belonging to her/his NCB and linked parties.

Allowed combination of “scope” and “user level” are:

Level	Scope	U2A	A2A
Operator	All	All users see the message	All parties subscribing for the admi.004 will be notified by TIPS
Operator	National community xx	All users belonging to parties under the NCB of country xx will see the message	All parties under the NCB of country xx and subscribing for the admi.004 will be notified by TIPS
NCB	All	All users see the message	All parties subscribing for the admi.004 will be notified by TIPS
NCB	National community of the NCB	All users belonging to parties under the NCB will see the message	All parties under the NCB and subscribing for the admi.004 will be notified by TIPS
Payment bank	All	All users see the message	All parties subscribing for the admi.004 will be notified by TIPS
Payment bank	National community of the bank	All users belonging to parties under the same NCB of the payment bank will see the message	All parties under the same NCB of the payment bank and subscribing for the admi.004 will be notified by TIPS

- Push notification to GUI:
When a broadcast message changes its status, i.e. it becomes active or it expires, the TIPS-GUI have to be notified in order to refresh the preview accordingly.
- Push notification to TIPS-Router:
When a broadcast message becomes active, the TIPS-Router have to be notified in order to send the correspondent admi.004 message to the subscribers.

- TIPS-GUI (for A2A broadcast notification):

When notified by the Broadcaster, the TIPS-Router has to:

Get all the subscribers to the admi.004

Filter those subscribers according to the “scope” of the new broadcast (“all”, “NCB”, Party,..)

Send all the admi.004 messages through the relevant NSP.

- TIPS-Reference Data (for storing into TIPS router all data needed to A2A broadcast notification):

New data have to be:

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- hosted by the in-memory data structures;
- loaded daily/on request with the other Reference Data arriving from CRDM.
- CRDM (for collecting, browsing, storing and communicating to TIPS all data needed to U2A and A2A broadcast notification):
 - A user must be able to subscribe an admi.004 message.

Summary of infrastructure impact:

Assuming CR-0042 TIPS RACE (Resilience And Continuity Enhancements) has introduced the new database Cockroach, then it is just a matter of configurations. Nodes (hypervisors, VMs, storage, ...) have already been implemented with CR-0042, thus the infrastructural capacity is already there. Capacity post-CR-0042 is adequate. CR-0014 would then focus on configuration only.

Summary of operational impact:

No operational impact.

Summary of security impact:

See Change Request Analysis.