

# **Trigger Solution** User Requirements Document

Last updated: 26 June 2024

Only for own use.

A circulation to unauthorised third persons is not allowed.

# Versions

Version	Chap- ter	Change information	Date	Name and departmental ID num- ber
1.0	All	Created	10/11/23	Deutsche Bundesbank
1.1	All	Publication	13/12/23	Deutsche Bundesbank
<u>1.2</u>	<u>All</u>	Minor changes for needed clarifi- cation detected during testing and onboarding process; Adding an annex providing an overview of the status values of a payment instruction	<u>26/06/24</u>	<u>Deutsche Bundesbank</u>

# **Table of contents**

Versions2		
Table o	of contents	3
1	Overview	4
1.1	Business Process	4
1.2	Participants and Business Case	4
2	Functional Requirements	6
2.1	Connectivity	6
2.2	Access Rights Management (incl. 4-eyes principle)	7
2.3	Dashboard (Content, Sorting Order)	8
2.4	Audit log	9
2.5	Create Payment Instruction	9
2.6	Modify Payment Instruction1	1
2.7	Cancel Payment Instruction1	2
2.8	Approve Payment Instruction (incl. approval by Third Party)1	3
2.9	Submit Payment Instruction1	4
2.10	Check Signature1	5
2.11	Send pacs.010 to T21	6
2.12	Send pacs.009 to T21	7
2.13	Send Pacs.004 to T21	9
2.14	Receiving an admi.0072	0
2.15	Status Payment Instruction	0
Annex	1 "Overview of the status values of a payment instruction"2	2

## 1 Overview

#### 1.1 Business Process

The business process consist of the following steps:

- Step 1: Agreement on the trade in the Eligible Market DLT Platform
- Step 2: Initialisation of the trade in the Eligible Market DLT Platform and blocking of the assets
- Step 3: Creation of a payment instruction in the Trigger Solution
- Step 4: Approval of the payment instruction in the Trigger Solution
- Step 5: BBk-node receives the created and approved payment instruction and validates the payment instruction
- Step 6: The Trigger Solution sends the direct debit (pacs.010) to T2
- Step 7: The Trigger Solution sends the credit transfer (pacs.009) to T2
- Step 8: Status change of the payment instruction
- Step 9: Transfer the status of the payment instruction to the Eligible Market DLT Platform and transfer of the assets

For further details, please refer to the "Trigger Solution – Process Description Document".

#### **1.2 Participants and Business Case**

- As described in the Trigger Solution Process Description Document, the following actors are allowed to participate in the Trigger Solution:
  - Eligible Market Participants according to the Eurosystem definition<sup>1</sup>.
  - o Eligible Market DLT Operators according to the Eurosystem definition.<sup>2</sup>
- In Eligible Market DLT Platforms, Eligible Market Participants as well as companies might depending on the decision of the Eligible Market DLT Operator participate.

<sup>&</sup>lt;sup>1</sup> Eligible Market Participant means any entity with access to TARGET, within the meaning of Article 4 and Article 7, Annex 1 Part I of the TARGET Guideline

<sup>&</sup>lt;sup>2</sup> Eligible Market DLT Operator means (i) CSDs, authorised under the CSDR, operating a Securities Settlement System based on DLT, DLT / operating a DLT platform (incl. CSDs subject to a derogation of the contractual and regulatory framework of T2S) (ii) operators of a DLT settlement system or a DLT trading and settlement system as authorised under the DLT Pilot Regime Regulation, (Regulation 2022/858) and (iii) Investment firms and market operators and other licensed financial institutions operating a DLT platform, as duly licensed under the national law transposing MiFID II or under other relevant national legal frameworks and subject to assessment.

 In case an actor is active in the Eligible Market DLT Platform and it is not (allowed to be) part of the Trigger Solution, there needs to be a legal agreement between that actor and the respective Participant in the Trigger Solution. Bundesbank as Solution Provider for the Trigger Solution is not verifying the existence of such an agreement. This needs to be ensured by the participants in the Trigger Solution and the participants on the Eligible Market DLT Platform.

As described in the Trigger Solution Process Description Document the following underlying business transactions are possible within the Trigger Solution:

 The Trigger Solution is agnostic with regard to the assets in the Eligible Market DLT Platform and does not impose technical requirements on Eligible Market DLT Platforms. However, for the purpose of the Eurosystem exploratory work related to ntw CeBM settlement (new technologies for wholesale Central Bank Money settlement) only Eligible Delivery versus Payment transactions over Eligible Assets<sup>3</sup> and Eligible Payments<sup>4</sup> will be allowed.

<sup>&</sup>lt;sup>3</sup> Eligible Assets means financial instruments, denominated in euro, listed and unlisted alike, within the meaning of Article 4(1), point (15), of the MiFID II, that could be either issued as a native digital assets or as tokenised representation of an existing asset.

<sup>&</sup>lt;sup>4</sup> Eligible Payments means Wholesale Payments between euro central bank money and euro or non-euro central bank money or euro or non-euro commercial bank money, including in the form of token

# 2 Functional Requirements

## 2.1 Connectivity

ld	TRI.UR.CON.001
Name	Connectivity via peer
Description	It shall be possible for all participants to connect via their own node to the
	Trigger Solution.

ld	TRI.UR.CON.002
Name	Connectivity via non-peer A2A
Description	It shall be possible for all participants to connect via API (without its own
	node) to the Trigger Solution using an A2A communication.

ld	TRI.UR.CON.003
Name	Connectivity via non-peer U2A
Description	It shall be possible for all participants to connect via API (without its own
	node) to the Trigger Solution using an U2A communication. For this kind of
	connectivity there shall be a graphical user interface provided by the Trigger
	Solution.

ld	TRI.UR.CON.004
Name	Full scope of functionality independent from chosen connectivity
Description	Independent from the chosen connectivity (peer, non-peer A2A, non-peer
	U2A) the full scope of functionality shall be available.

ld	TRI.UR.CON.005
Name	Connectivity via multiple modes possible
Description	It shall be possible for all participants to connect with more than one connec-
	tivity mode to the Trigger Solution (peer, non-peer A2A, non-peer U2A).
	That means, that e.g. one participant can create a payment instruction via
	non-peer A2A and as a next step, the same payment instruction is approved
	(by the same participant) via non-peer U2A.

#### 2.2 Access Rights Management (incl. 4-eyes principle)

ld	TRI.UR.ARM.001
Name	Only registered participants gain access
Description	Only participants that have provided a valid registration form and whose data
	are captured in the course of the onboarding process for the Trigger Solution
	will gain access.

ld	TRI.UR.ARM.002	
Name	Data scope - participants	
Description	The participants shall only see its own payment instructions, that means	
	<ul> <li>payment instructions that they have captured by themselves</li> </ul>	
	<ul> <li>payment instructions where they are involved in.</li> </ul>	
	<ul> <li>payment instructions where they have a mandate to see them (as</li> </ul>	
	third party). The third party shall only see the own created payment in-	
	structions.	

ld	TRI.UR.ARM.003
Name	Data scope – central banks
Description	Central banks in its monitoring role shall see all data where participants are
	involved which belong to their TARGET component.

ld	TRI.UR.ARM.004
Name	Data scope – solution provider
Description	The Trigger Solution provider shall see all data in the Trigger Solution.

ld	TRI.UR.ARM.005
Name	Privileges
Description	A registered and authorised user has the full scope of functionality available.
	A distinction to restrict the scope is not required.

ld	TRI.UR.ARM.006
Name	User is linked to a participant
Description	There is a 1:1 link between a user and a participant. One user belongs al-
	ways to only one participant.

ld	TRI.UR.ARM.007
Name	2-eyes or 4-eyes principle for the approval of a payment instruction

Description	A payment instruction shall be approved in 2-eyes or 4-eyes mode.
	In case of 4-eyes mode the approval shall be done by two different users of
	the payer bank or by two different users of the third party (that is authorised to
	act for the payer bank).
	In case of a modification after the initial approval, the approval process shall
	start again (i.e. two different users shall approve).

#### 2.3 Dashboard (Content, Sorting Order)

ld	TRI.UR.DSB.001
Name	Transaction overview provided as Dashboard
Description	In the Graphical User Interface (GUI) of the Trigger Solution there shall be a
	dashboard providing an overview of all payment instructions.
	The data scope is defined under TRI.UR.ARM.002, TRI.UR.ARM.003,
	TRI.UR.ARM.004

ld	TRI.UR.DSB.002
Name	Content of the Dashboard
Description	The Dashboard shall include the following columns in the following order:
	<ul> <li>Correlation ID</li> </ul>
	<ul> <li>Creation Date</li> </ul>
	– Payer Bank
	– Receiver Bank
	– Amount
	– Status

ld	TRI.UR.DSB.003
Name	Default Sorting
Description	The content of the Dashboard shall by default be sorted by "Creation Date".
	The newest payment instruction shall be listed on top.

ld	TRI.UR.DSB.004
Name	Navigation to the Details
Description	It shall be possible to navigate to the details of a selected payment instruction
	by clicking
	either on the button at the end of the row.
	or on the row itself.

#### 2.4 Audit log

ld	TRI.UR.AUL.001
Name	Audit log
Description	It shall be possible to identify who did what when with the payment instruc-
	tion. That means which user created, modified, approved, submitted, trans-
	ferred (in case of HTLC) or cancelled a payment instruction and when.

#### 2.5 Create Payment Instruction

ld	TRI.UR.CRP.001
Name	Create a payment instruction function
Description	It shall be possible to create a payment instruction in the Trigger Solution via
	peer, non-peer U2A and non-peer A2A.

ld	TRI.UR.CRP.002
Name	Creation of a payment instruction by participants
Description	All participants in the Trigger Solution shall be able to create a payment in-
	struction.

ld	TRI.UR.CRP.003
Name	Participants allowed to create a payment instruction
Description	The participant allowed to create a payment instruction shall be
	<ul> <li>either one of the counterparts of the trade, i.e. the payer bank or the</li> </ul>
	receiver bank of the trade or
	<ul> <li>a third party (i.e. another participant in the Trigger Solution).</li> </ul>

ld	TRI.UR.CRP.004
Name	Error message with error description
Description	In case an error occurs while creating a payment instruction, the Trigger Solu-
	tion shall provide a meaningful error message with an understandable error
	description.

ld	TRI.UR.CRP.005.01
Name	Content of a payment instruction – without using HTLC
Description	During the creation of a payment instruction the following information shall be
	provided:
	Mandatory data:
	– Payer bank
	<ul> <li>Receiver bank</li> </ul>

	– Amount
	– Currency
	<ul> <li>Correlation ID</li> </ul>
	Creation date and time <u>(automatically provided by the system)</u>
	<ul> <li><u>Creator Institution (automatically provided by the system)</u></li> </ul>
	Optional data:
	<ul> <li>Ordering customer</li> </ul>
	<ul> <li>Beneficiary customer</li> </ul>
ld	TRI.UR.CRP.005.02
Name	Content of a payment instruction – with using HTLC
Description	During the creation of a payment instruction the following information shall be
	provided:
	Mandatory data:
	– Payer bank
	<ul> <li>Receiver bank</li> </ul>
	– Amount
	– Currency

- Correlation ID
- Creation date and time (automatically provided by the system)
- Creator Institution (automatically provided by the system)
- HTLC Hash
- HTLC Time Out Date and Time

#### **Optional data:**

- Ordering customer
- Beneficiary customer

ld	TRI.UR.CRP.005.03
Name	Requirements regarding the HTLC Time Out
Description	<ul> <li>The HTLC Time Out time has to be at least 15 minutes in the future,</li> </ul>
	15 minutes after the start of day (SoD: 9:00) and before the close of
	the trial settlement window (EoD: 14:00).

ld	TRI.UR.CRP.006
Name	Automatic generation of information by the Trigger Solution
Description	When the create function is started, the Trigger Solution adds automatically
	the following data to the payment instruction:
	<ul> <li>ID to uniquely identify a payment instruction in the Trigger Solution,</li> </ul>
	which shall be randomly generated.
	– Status

– Creator	
– Signature	

ld	TRI.UR.CRP.007
Name	Status of created payment instructions
Description	The status of the created payment instruction is "Prepared".

#### 2.6 Modify Payment Instruction

ld	TRI.UR.MOP.001
Name	Modify a payment instruction function
Description	It shall be possible to modify a payment instruction in the Trigger Solution via
	peer, non-peer U2A and non-peer A2A.

ld	TRI.UR.MOP.002
Name	Modification of a payment instruction by participants
Description	All participants in the Trigger Solution shall be able to modify a payment in-
	struction.

ld	TRI.UR.MOP.003
Name	Participants allowed to modify a payment instruction
Description	The creator of a payment instruction shall beparticipant allowed to modify a
	payment instruction <del>shall be</del>
	<ul> <li>the creator of a payment instruction,</li> </ul>
	— the payer bank or
	– the receiver bank.

ld	TRI.UR.MOP.004
Name	Latest modification
Description	An update of the already created payment instruction is possible until its ap-
	proval.
	In case the 4-eyes mode is used, a modification is possible before the ap-
	proval by a second user.

ld	TRI.UR.MOP.005
Name	Possible modifications of a payment instruction
Description	The following information shall be modifiable (independent of using HTLC or
	not):

<sup>5</sup> When connected via API A2A the status value is "PREPARE".

– Amount
– Currency.
In addition it is possible to change the interoperability mechanism used from
basic approach to HTLC.
In case of using HTLC it shall also be possible to modify
– HTLC Hash
– HTLC Timeout.
The Payment Instruction has to have either both attributes, HTLC Hash and
HTLC Timeout, or none.
It is not possible to modify all other information of a payment instruction. In
It is not possible to modify all other information of a payment instruction. In
case of a mistake here the cancellation and new creation is necessary.

ld	TRI.UR.MOP.006
Name	Error message with error description
Description	In case an error occurs while modifying a payment instruction, the Trigger So-
	lution shall provide a meaningful error message with an understandable error
	description.

ld	TRI.UR.MOP.007
Name	Status of modified payment instructions
Description	The status of the modified payment instruction does not change and remains
	as "Prepared".

## 2.7 Cancel Payment Instruction

ld	TRI.UR.CAP.001
Name	Cancel a payment instruction function
Description	It shall be possible to cancel a payment instruction in the Trigger Solution via
	peer, non-peer U2A and non-peer A2A.

ld	TRI.UR.CAP.002
Name	Cancellation of a payment instruction by participants
Description	All participants in the Trigger Solution shall be able to cancel a payment in-
	struction.

ld	TRI.UR.CAP.003
Id	TRI.UR.CAP.003

Name	Participants allowed to cancel a payment instruction
Description	The participant allowed to cancel a payment instruction shall be
	<ul> <li>the creator of the payment instruction,</li> </ul>
	<ul> <li>the payer bank or</li> </ul>
	<ul> <li>the receiver bank.</li> </ul>

ld	TRI.UR.CAP.004
Name	Latest cancellation
Description	A cancellation of the already created payment instruction is possible until its
	approval. In case the 4-eyes mode is used, a cancellation is possible before
	the approval by a second user.

ld	TRI.UR.CAP.005
Name	Error message with error description
Description	In case an error occurs while cancelling a payment instruction, the Trigger
	Solution shall provide a meaningful error message with an understandable er-
	ror description.

ld	TRI.UR.CAP.006
Name	Status of a cancelled payment instructions
Description	The status of the cancelled payment instruction is "Cancelled".

# 2.8 Approve Payment Instruction (incl. approval by Third Party)

ld	TRI.UR.APP.001
Name	Approve a payment instruction function
Description	It shall be possible to approve a payment instruction in the Trigger Solution
	via peer, non-peer U2A and non-peer A2A.

ld	TRI.UR.APP.002
Name	Approval of a payment instruction by participants
Description	All participants in the Trigger Solution shall be able to approve a payment in-
	struction.

ld	TRI.UR.APP.003
Name	Participants allowed to approve a payment instruction
Description	The participant allowed to approve a payment instruction shall be
	<ul> <li>either the payer bank of the trade or</li> </ul>

<ul> <li>a third party (that is authorised to act for the payer bank).</li> </ul>
A third party can only approve a payment instruction created by itself.

ld	TRI.UR.APP.004
Name	Error message with error description
Description	In case an error occurs while approving a payment instruction, the Trigger
	Solution shall provide a meaningful error message with an understandable er-
	ror description.

ld	TRI.UR.APP.005
Name	Status of approved payment instructions
Description	In case of 4-eyes mode (please refer to TRI.UR.ARM.007), the status of the
	payment instruction changes to "Initially approved" after the approval of the
	first user.
	When the second user has approved the payment instruction the status
	changes to "Approved".

#### 2.9 Submit Payment Instruction

ld	TRI.UR.SUP.001
Name	Submit a payment instruction function
Description	It shall be possible to submit a payment instruction in the Trigger Solution via
	peer, non-peer U2A and non-peer A2A.

ld	TRI.UR.SUP.002
Name	Submission of a payment instruction by participants
Description	All participants in the Trigger Solution shall be able to submit a payment in-
	struction.

ld	TRI.UR.SUP.003
Name	Participants allowed to submit a payment instruction
Description	The participant allowed to submit a payment instruction shall be
	<ul> <li>The creator of a payment instruction,</li> </ul>
	<ul> <li>the payer bank or</li> </ul>
	<ul> <li>the receiver bank.</li> </ul>

ld	TRI.UR.SUP.004
Name	Error message with error description

Description	In case an error occurs while submitting a payment instruction, the Trigger
	Solution shall provide a meaningful error message with an understandable er-
	ror description.

ld	TRI.UR.SUP.005
Name	Status of submitted payment instructions
Description	The status of the submitted payment instruction is "Submitted".

ld	TRI.UR.SUP.006
Name	Provision of a value date by the Trigger Solution
Description	As soon as the status changes to "Submitted" the Trigger Solution shall start
	processing the payment instruction. This includes the provision of a value
	date. During the business hours of the Trigger Solution this date shall equal
	the same business day. Outside of the business hours of the Trigger Solution
	the value date shall be the next business day.

ld	TRI.UR.SUP.007
Name	Status of the payment instruction after the provision of a value date
Description	The status of the payment instruction shall change to "Triggered" as soon as
	the value date is provided.

## 2.10 Check Signature

ld	TRI.UR.CSI.001
Name	The signature is created during the approval process
Description	During the approval of the payment instruction a signature of the payment in-
	struction is created and added with the certificate <sup>6</sup> of the approving partici-
	pant.

ld	TRI.UR.CSI.002
Name	The signature covers the whole content of the payment instruction
Description	The signature is the signed Hash of the following fields of the payment in-
	struction:
	• ID,
	Payer Bank,
	Receiver Bank,
	Amount,
	HTLC Hash,

<sup>&</sup>lt;sup>6</sup> The necessary certificates will be provided during the onboarding process.

• HTLC Timeout.

ld	TRI.UR.CSI.003
Name	Signature check while processing the payment instruction
Description	The Trigger Solution shall check the signature while processing the payment
	instruction. This also includes the check, if the participant is allowed to ap-
	prove the payment instruction.

#### 2.11 Send pacs.010 to T2

ld	TRI.UR.SDD.001
Name	Send a direct debit to T2 (RTGS)
Description	The Trigger Solution shall be able to send a direct debit (pacs.010) to T2
	(RTGS) in A2A-mode to transfer liquidity from the RTGS DCA of the payer
	bank to the Deutsche Bundesbank's interim account.
	If the settlement in T2 has not taken place within a predefined period of time,
	the direct debit shall be rejected by T2. The definition of the period shall be
	done in the Trigger Solution operator.

ld	TRI.UR.SDD.002
Name	Store and process positive answer from T2 (RTGS)
Description	The Trigger Solution shall be able to store and process the positive answer
	from T2 (pacs.002) and trigger the next process step.

ld	TRI.UR.SDD.003
Name	Store and process negative answer from T2 (RTGS)
Description	The Trigger Solution shall be able to store and process negative answers
	from T2 (pacs.002 or admi.007) and trigger the next process step depending
	on the error description and error code provided by T2.

ld	TRI.UR.SDD.004
Name	Status of payment instructions after positive answer from T2
Description	After receiving a positive response (positive pacs.002) from T2, the status of
	the payment instruction changes to "Payment Locked" when using HTLCz.
	In case HTLC is not used, the status of the payment instruction remains "Trig-
	gered".

Id TRI.UR.SDD.005

<sup>7</sup> When connected via API A2A the status value is "PAYMENTLOCKED".

I

Name	Status of payment instructions after negative answer from T2
Description	After receiving a negative response (negative pacs.002) from T2, the status
	of the payment instruction changes to "Failed".

## 2.12 Send pacs.009 to T2

ld	TRI.UR.SCT.001
Name	Send a credit transfer to T2 (RTGS)
Description	The Trigger Solution shall be able to send a credit transfer (pacs.009) to T2
	(RTGS) in A2A-mode to transfer liquidity from the Deutsche Bundesbank's in-
	terim account to the RTGS DCA of the receiver bank.
	If the settlement in T2 has not taken place within a predefined period of time,
	the credit transfer shall be rejected by T2. The definition of the period shall be
	done in the Trigger Solution operator.
	As soon as the pacs.009 has been sent, the payment instruction is flagged.
	This flag has the purpose to ensure that the automatic sweep at the end of
	the day does not return payments automatically that have not been confirmed
	(positively or negatively). Deutsche Bundesbank will check the reason for the
	open response and will manually process the remaining steps.

ld	TRI.UR.SCT.002
Name	Timing of sending the credit transfer to T2 without using HTLC
Description	Directly after receiving the positive pacs.002 of the direct debit the Trigger
	Solution creates the respective pacs.009 and sends it to T2.

ld	TRI.UR.SCT.003
Name	Timing of sending the credit transfer to T2 with using HTLC
Description	Only in case the following conditions are fulfilled, the Trigger Solution shall
	send the pacs.009 to T2:
	<ul> <li>The Timeout T<sub>2</sub> has not yet passed.</li> </ul>
	• The correct pre-image to the hash has been provided with the HTLC
	transfer-function.
	The status of the payment instruction changes to "HTLC Ready" <sup>a</sup> .

ld	TRI.UR.SCT.004
Name	Conditions for sending the credit transfer to T2 with using HTLC not fulfilled
Description	In case the conditions in TRI.UR.SCT.003 are not fulfilled, the Trigger Solu-
	tion shall retransfer the liquidity from the interim account to the RTGS DCA of
	the payer bank by sending a pacs.004 (payment return).

<sup>8</sup> When connected via API A2A the status value is "HTLCREADY".

#### The status of the payment instruction changes to "Failed".

ld	TRI.UR.SCT.005
Name	Store and process positive answer from T2 (RTGS)
Description	The Trigger Solution shall be able to store and process the positive answer
	(pacs.002).

ld	TRI.UR.SCT.006
Name	Store and process negative answer from T2 (RTGS)
Description	The Trigger Solution shall be able to store and process negative answers
	(pacs.002 or admi.007) and trigger the next process step depending on the
	error description and error code provided by T2.

ld	TRI.UR.SCT.007
Name	Status of payment instructions after positive answer from T2
Description	After receiving a positive response (positive pacs.002) from T2, the status of
	the payment instruction changes to "Completed"

ld	TRI.UR.SCT.008
Name	Without HTLC: Sending of payment return and status of payment instructions
	after negative answer from T2
Description	After receiving a negative response from T2 (negative pacs.002 or admi.007)
	it is checked whether the error code is "E076" (Reject time reached).
	<ul> <li>If yes, a resend of the pacs.009 is triggered.</li> </ul>
	<ul> <li>If no or the resend is also not successful, the Trigger Solution shall</li> </ul>
	send a pacs.004 (payment return) to retransfer the liquidity from the
	Deutsche Bundesbank's interim account to the RTGS DCA of the
	payer bank and the status of the payment instruction changes to
	"Failed" and the additional information about the error code and error
	description are included into the payment instruction.

ld	TRI.UR.SCT.009
Name	With HTLC: No sending of payment return and status of payment instructions
	after negative answer from T2
Description	After receiving a negative response from T2 (negative pacs.002 or admi.007)
	it is checked whether the error code is "E076" (Reject time reached).
	<ul> <li>If yes, a resend of the pacs.009 is triggered.</li> </ul>

<sup>9</sup> When connected via API A2A the status value is "SUCCESS".

I

• If no or the resend is also not successful, the Trigger Solution shall not
send a pacs.004 (payment return) to retransfer the liquidity from the
Deutsche Bundesbank's interim account to the RTGS DCA of the
payer bank. In this case, Deutsche Bundesbank will contact the re-
ceiver bank in order to be able to complete the credit transfer.
The status of the payment instruction remains "HTLC Ready".

#### 2.13 Send Pacs.004 to T2

ld	TRI.UR.SPR.001
Name	Send a payment return to T2 (RTGS)
Description	The Trigger Solution shall be able to send a payment return (pacs.004) to T2
	(RTGS) in A2A-mode to retransfer liquidity from the Deutsche Bundesbank's
	interim account to the RTGS DCA of the payer bank.

ld	TRI.UR.SPR.002
Name	Reasons for sending a payment return to T2 (RTGS)
Description	In the following cases a payment return shall be sent by the Trigger Solution
	to T2:
	- TRI.UR.SCT.004 (Conditions for sending the credit transfer to T2 with
	using HTLC not fulfilled)
	- TRI.UR.SCT.008 (Without HTLC: Sending of payment return and sta-
	tus of payment instructions after negative answer from T2) and
	- TRI.UR.SPR.006 (Automatic payment return in case of liquidity on the
	Deutsche Bundesbank's interim account at the end of day).

ld	TRI.UR.SPR.003
Name	Store and process positive answer from T2 (RTGS)
Description	The Trigger Solution shall be able to store and process the positive answer
	(pacs.002).

ld	TRI.UR.SPR.004
Name	Store and process negative answer from T2 (RTGS)
Description	The Trigger Solution shall be able to store and process negative answers
	(pacs.002 or admi.007) and inform the Operator of the failed retransfer. The
	Operator shall - depending on the error code and the error description pro-
	vided by T2 - manually retransfer the liquidity from the Deutsche Bundes-
	bank's interim account to the payer bank.

Name	Status of payment instructions when sending a pacs.004
Description	As soon as the pacs.004 is sent following a negative pacs.002 the status of
	the payment instruction shall change to "Failed".

ld	TRI.UR.SPR.006
Name	Automatic payment return in case of liquidity on the Deutsche Bundesbank's
	interim account at the end of day
Description	At the end of the business day the Trigger Solution shall check for payment
	instructions with the status "Payment Locked". It shall then initiate the pay-
	ment return in order to transfer the liquidity from the Deutsche Bundesbank's
	interim account to the RTGS DCA of the payer bank. As soon as the payment
	return was successfully booked (positive pacs.002), the status of the payment
	instruction changes to "Failed".

## 2.14 Receiving an admi.007

ld	TRI.UR.RAD.001	
Name	Store and process admi.007 from T2 (RTGS)	
Description	The Trigger Solution shall be able to store and process an admi.007 and in-	
	form the Operator. The Operator shall check the reason for this error mes-	
	sage and manually correct and initiate the original process again.	

#### 2.15 Status Payment Instruction

ld	TRI.UR.SPI.001		
Name	Status of the payment instruction		
Description	Every payment instruction shall have one of the following status (Annex 1		
	provides an additional overview of the status values that are provided via the		
	Trigger Solution either via the graphical user interface or via API A2A):		
	- Prepared		
	- Cancelled		
	- Initially approved		
	- Approved		
	- Submitted		
	- Triggered		
	- Payment Locked [only in case of using HTLC]		
	- HTLC Ready [only in case of using HTLC]		
	- Completed		
	- Failed.		

Name	Notifications on status updates of the payment instruction	
Description	Participants in the Trigger Solution operating an own node shall receive a no-	
	tification about the status update of payment instructions.	

ld	TRI.UR.SPI.003	
Name	Queries on the status of the payment instruction	
Description	The participants in the Trigger Solution that use the API shall be able to query	
	status information of the payment instruction.	

ld	TRI.UR.SPI.004	
Name	No forwarding of status information to the Eligible Market DLT Platform	
Description	No direct connection to the Eligible Market DLT Platform shall be established.	
	The Trigger Solution shall not sent any status information to the Eligible Mar-	
	ket DLT Platform. The participants in the Trigger Solution (i.e. the creator of a	
	payment instruction, the payer bank or the receiver bank) shall transfer the	
	status of the payment instruction to the Eligible Market DLT Platform.	

# Annex 1 "Overview of the status values of a payment instruction"

The description of the following statuses can be found in the main part of the document. This table provides as an additional overview of the status values that are provided via the Trigger Solution either via the graphical user interface or via API A2A.

Status value in API U2A	Status value in API A2A	<u>Remark</u>
<u>"Prepared"</u>	<u>"PREPARE"</u>	
"Initially Approved"	<u>"INITIALLY APPROVED"</u>	<u>4E use case only</u>
<u>"Approved"</u>	<u>"APPROVED"</u>	
<u>"Submitted"</u>	<u>"READY"</u>	submitted step
<u>"Triggered</u>	<u>"TRIGGERED"</u>	settlement date defined step
"Payment locked"	<u>"PAYMENTLOCKED"</u>	HTLC use case only
<u>"HTLC Ready"</u>	<u>"HTLCREADY"</u>	HTLC use case only
<u>"Completed"</u>	<u>"SUCCESS"</u>	
<u>"Failed"</u>	<u>"FAILED"</u>	
<u>"Canceled"</u>	<u>"CANCELED"</u>	

#### Deutsche Bundesbank

Wilhelm-Epstein-Straße 14 60431 Frankfurt am Main Deutschland