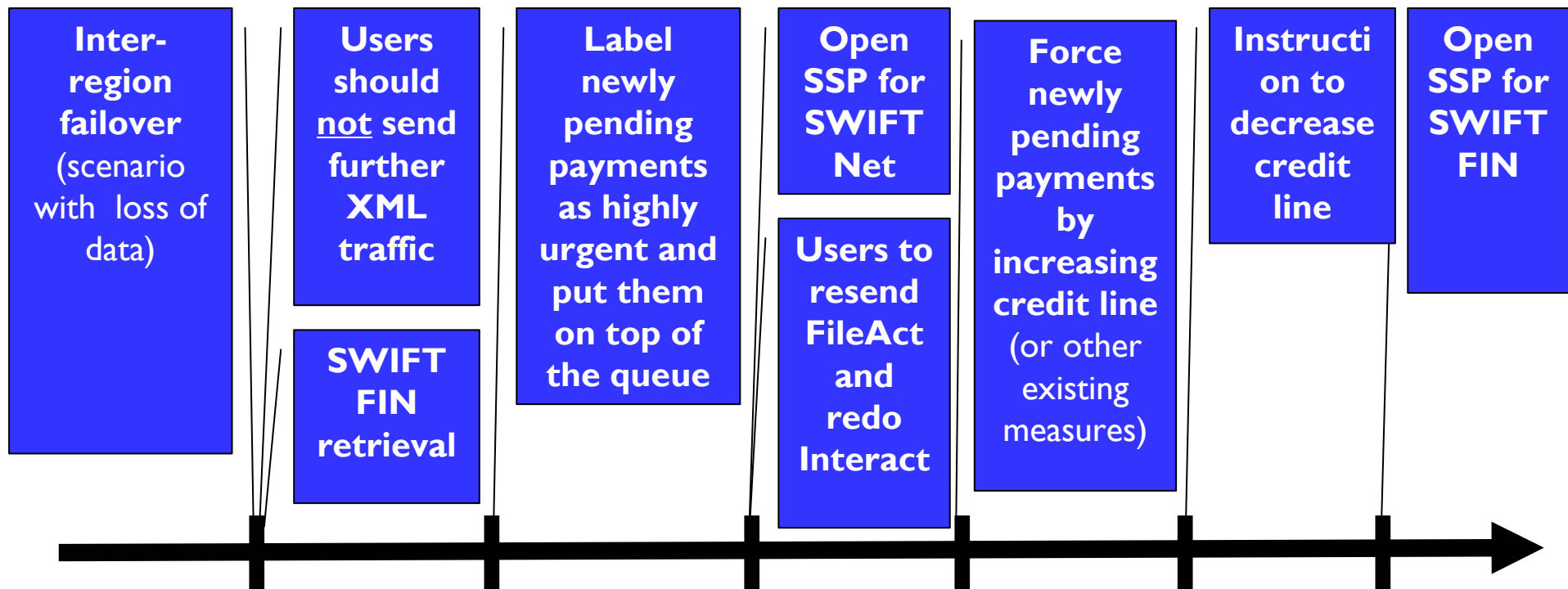


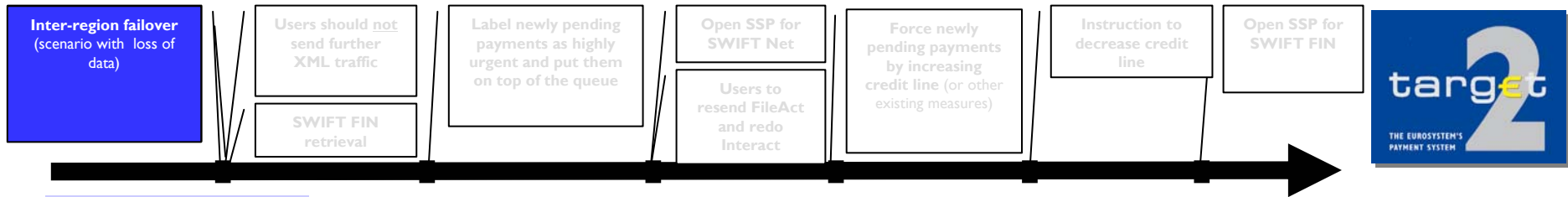


TARGET2

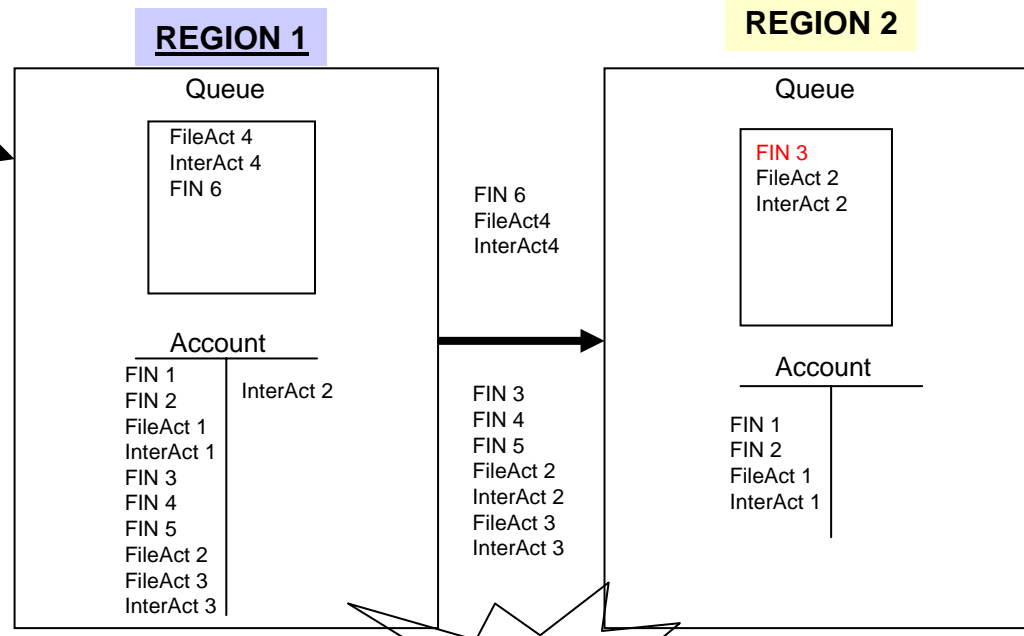
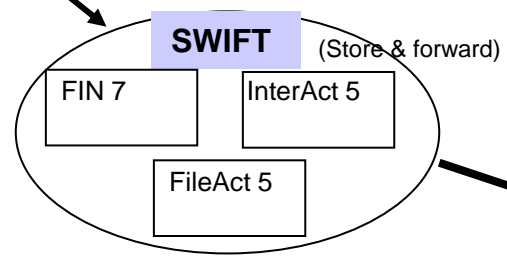
- Inter-region failover -

Inter-region failover - Proposed handling





Participant / AS

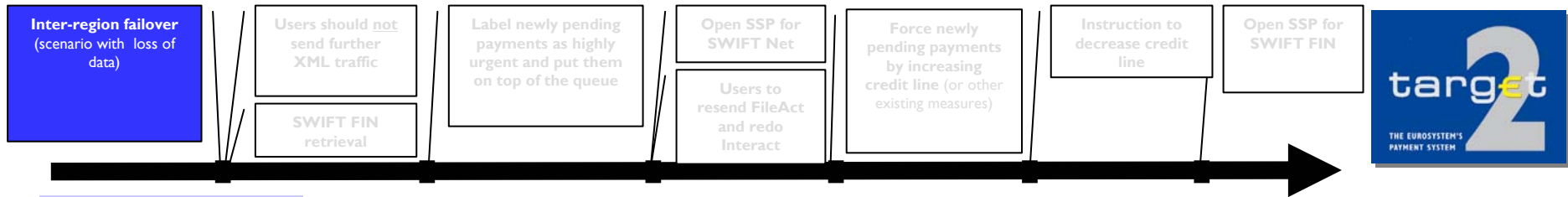


Balance = +100

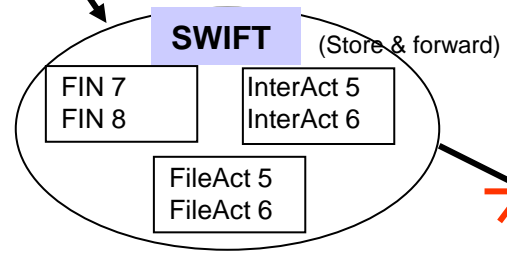
Crash REGION 1

Balance = 50

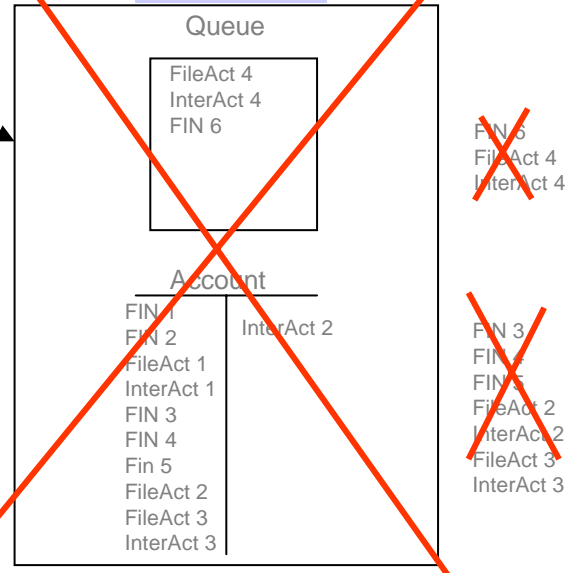
- Participant has sent messages Fin 7, InterAct 5 and FileAct 5 which are stored in the SWIFT queues
- In Region 1, messages FIN 1, 2, 3, 4 & 5 InterAct 1,2 & 3 and FileAct 1,2 & 3 are processed and booked
- Messages Fin 6, FileAct 4 and InterAct 4 are queued
- Due to asynchronous remote copy, the messages FIN 4, 5 & 6, InterAct 3 & 4 et FileAct 3 & 4 are not copied in Region 2 and the message FIN 3 is not settled but queued



Participant / AS

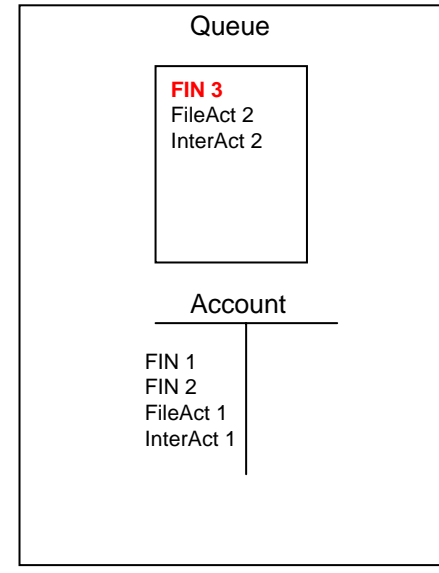


REGION 1



Balance = +100

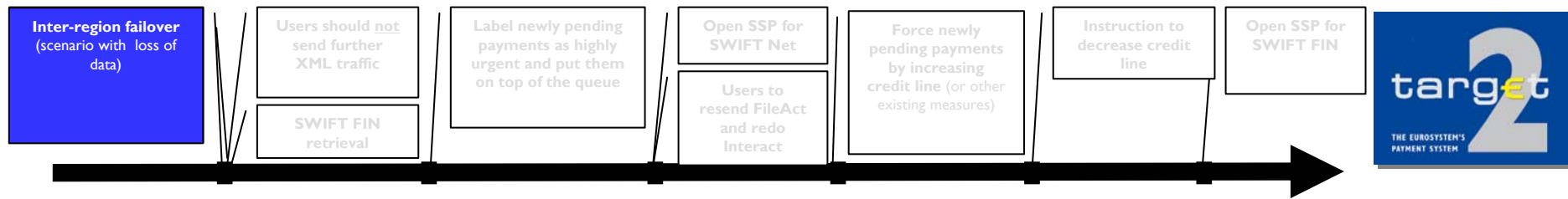
REGION 2



Balance = 50

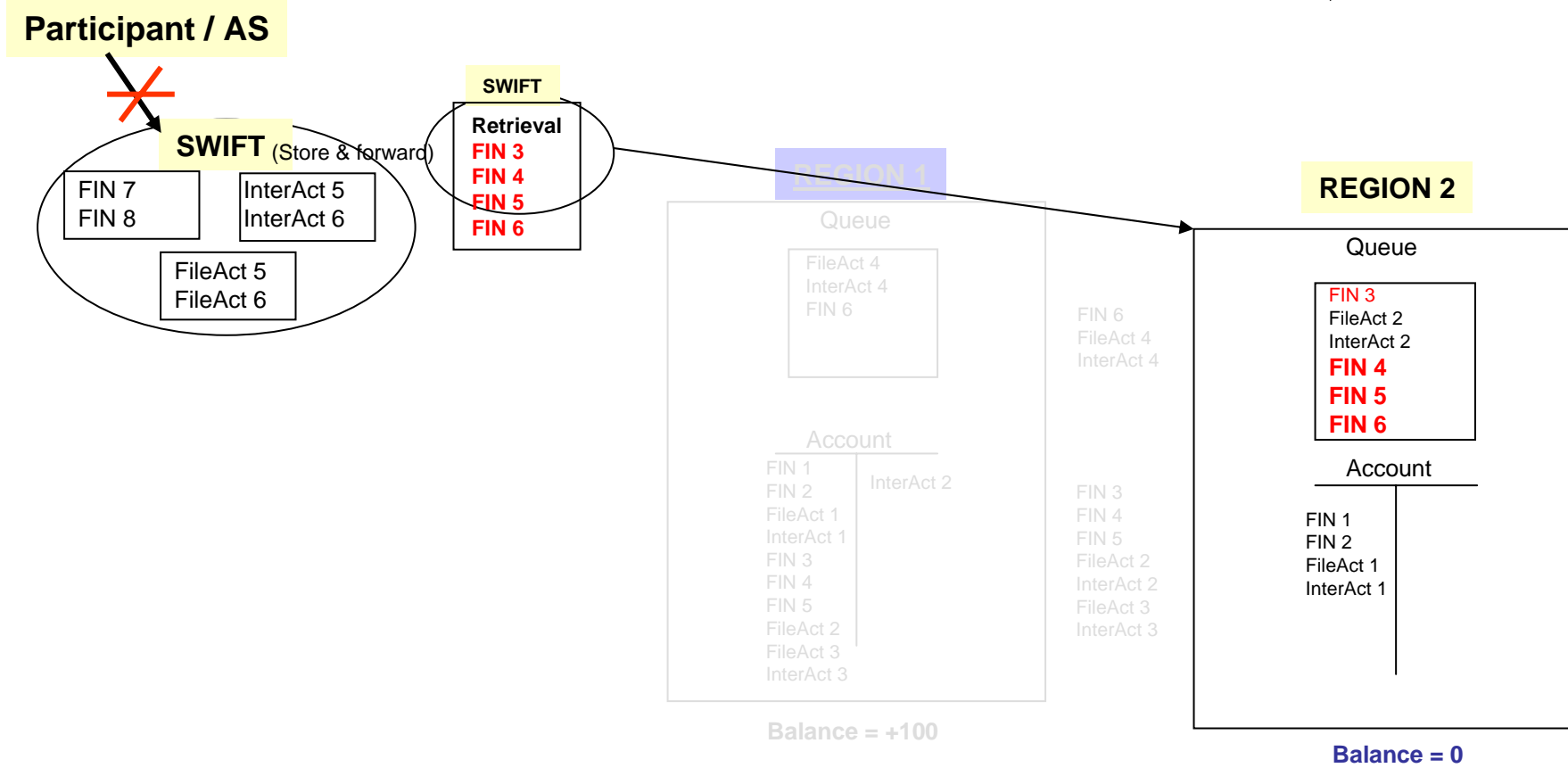
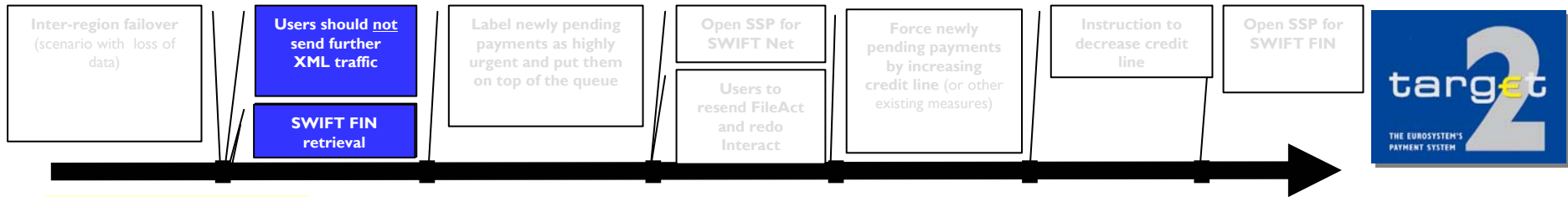
- Lost Messages :
- Payments settled
 - FIN 3, 4 & 5
 - InterAct 2 and 3
 - FileAct 2 and 3
 - Payment queued
 - FIN 6
 - InterAct 4
 - FileAct 4

FIN 3 payment settled in Region1 is queued in Region2
 Participants send messages Fin 8, InterAct 6 and FileAct 6

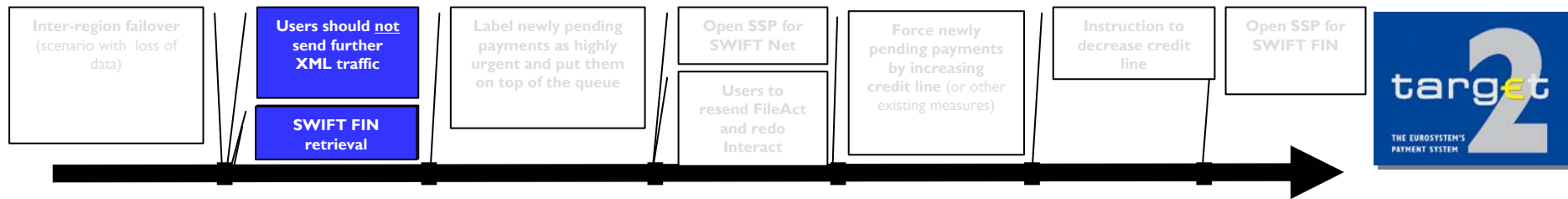


Status and technical roles of the stakeholders

	Status	Roles
SSP operator	Alert	Information delivery Start of the failover to the second region
CBs	No access to ICM, no answers to FIN	No action required
Participants	No access to ICM, no answers to FIN	No action required
AS	No access to ICM, no answers to FIN	No action required



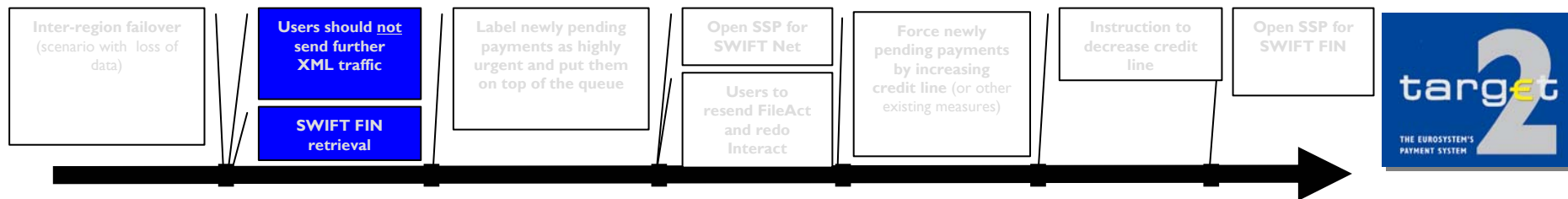
Process of reconstruction of SSP : - retrieval SWIFT FIN : messages retrieved FIN 3, 4, 5 & 6
 First step of resettlement, FIN 3 is settled and FIN 4, 5 & 6 are queued because of lack of liquidity



- HAM payments :

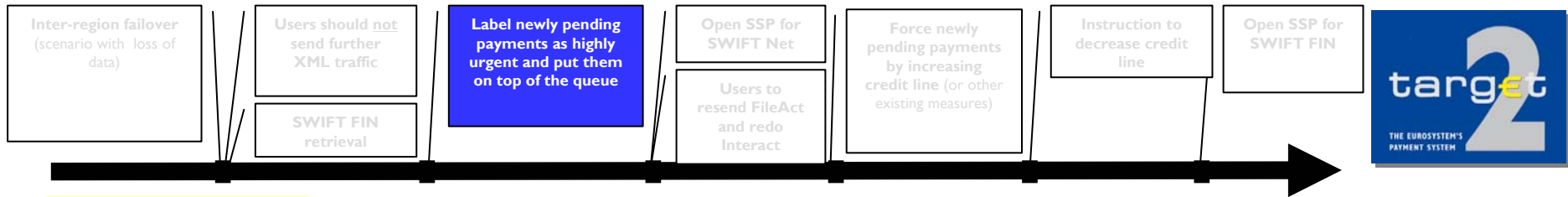
- Based on retrieval of FIN messages MT202, MT103, MT103+, MT012 and MT019 => no loss of data
- Only liquidity transfers sent through the ICM (U2A or A2A) have to be checked in R2 through ICM
- As for PM FIN payments, after the re-settlement process, payments are :
 - Either settled in R2
 - Or queued in R2 in case of lack of liquidity

nb : payments already settled in R2 before the crash are rejected thanks to double entry check

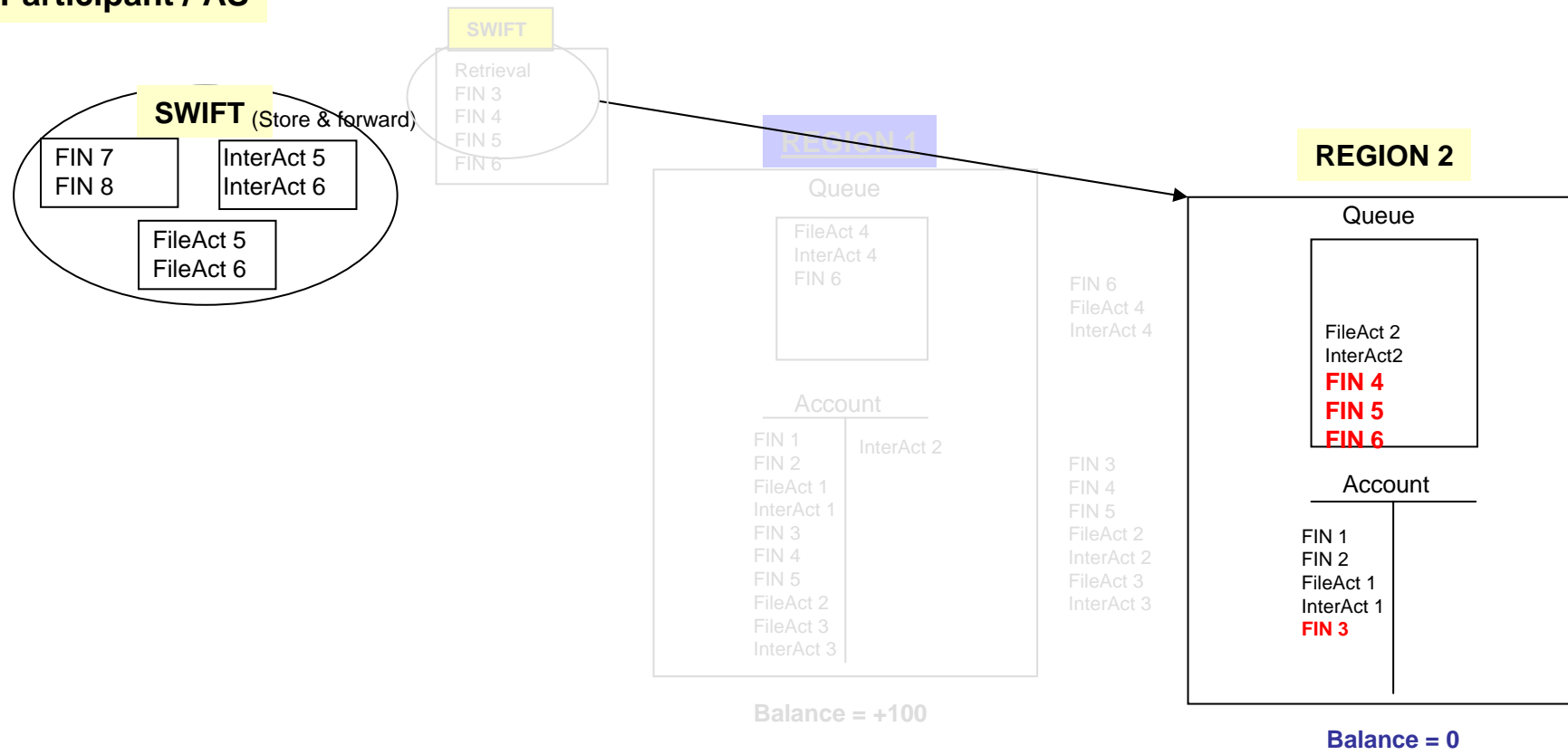


Status and technical roles of the stakeholders

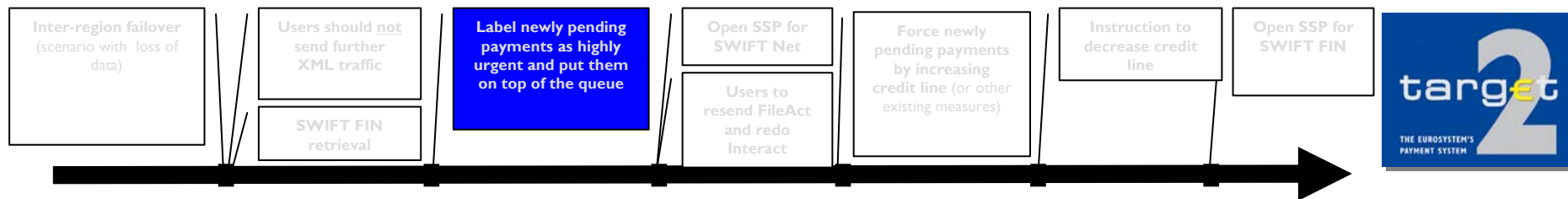
	Status	Roles
SSP operator	Swift FIN retrieval ongoing	Initiate and monitor the retrieval and reconciliation (FIN)
CBs	No access to ICM, no answers to FIN	Information to the users
Participants	No access to ICM, no answers to FIN	Participants asked to stop their XML traffic
AS	No access to ICM, no answers to FIN	AS asked to stop their XML traffic



Participant / AS

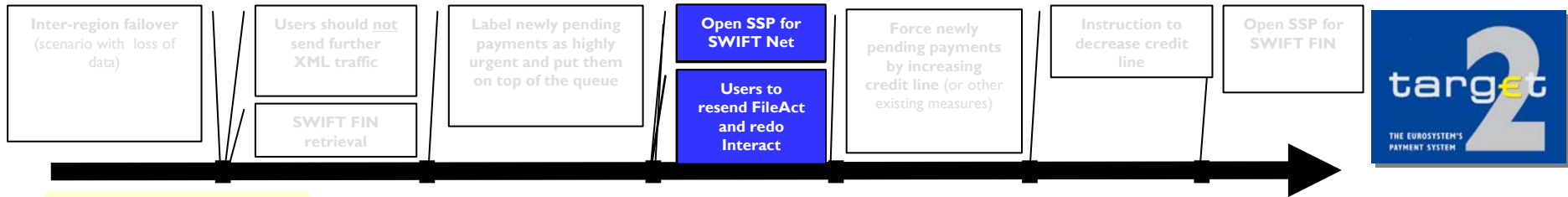


- Retrieval of payments settled in Region 1
- FIN 3 booked in Region 2
 - FIN 4 & 5 put on the top of the highly urgent queue



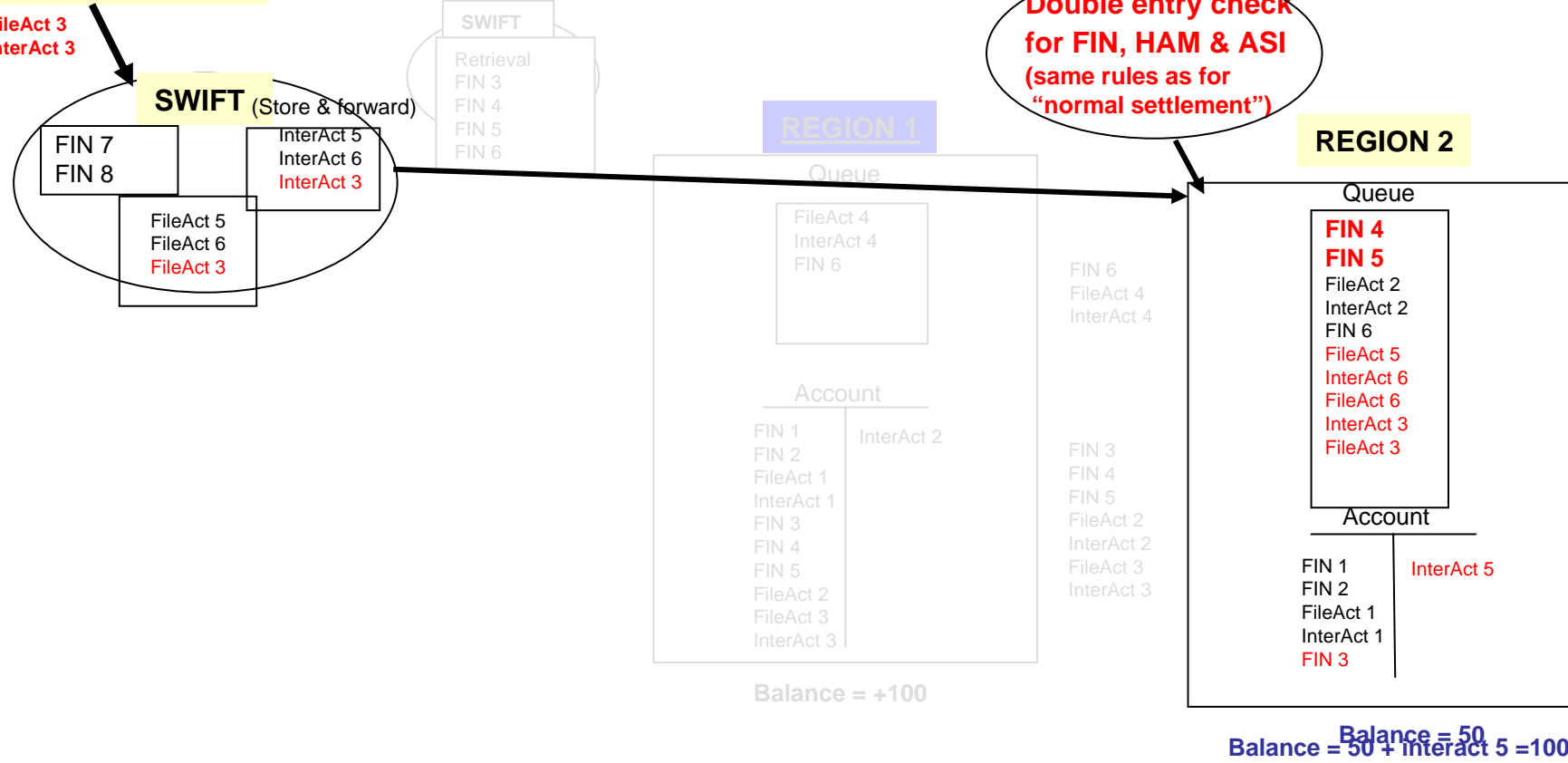
Status and technical roles of the stakeholders

	Status	Roles
SSP operator	Swift FIN retrieval ongoing	Monitor the retrieval and reconciliation process
CBs	No access to ICM, no answers to FIN	Information to the users
Participants	No access to ICM, no answers to FIN	No specific action required
AS	No access to ICM, no answers to FIN	No specific action required

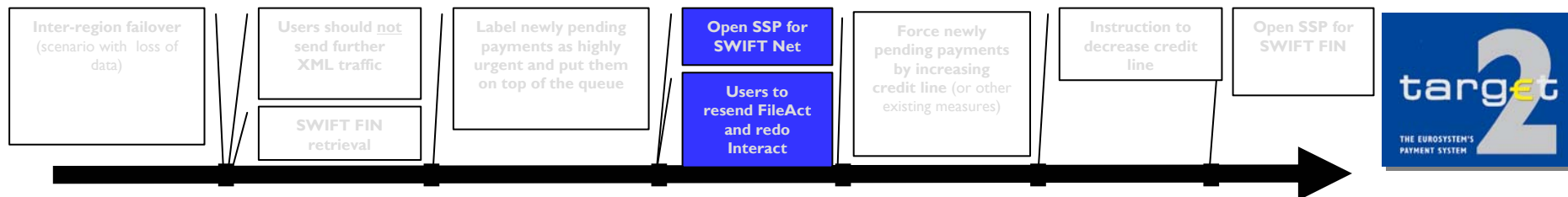


Participant / AS

FileAct 3
InterAct 3

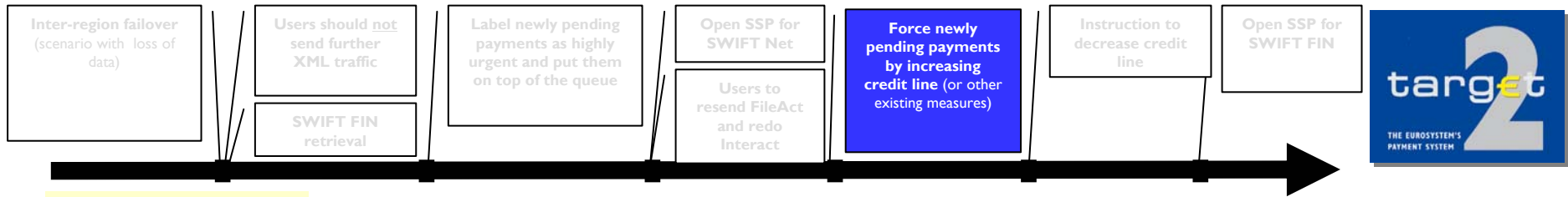


Participants resend messages InterAct 3 and FileAct 3
 Open SSP for SWIFT net : the messages in SWIFT queue InterAct 5 and 6 and FileAct 5 and 6 are processed
 InterAct 5 is booked and FIN 4 can be booked.

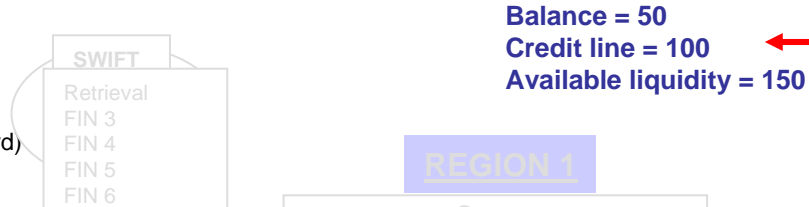
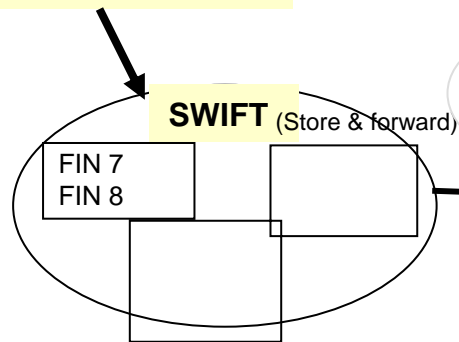


Status and technical roles of the stakeholders

	Status	Roles
SSP operator	Swift FIN retrieval over	Confirm the end of the retrieval Open the SWIFTNET services (not FIN)
CBs	ICM open, no answers to FIN	Information to the users
Participants	ICM open, no answers to FIN	Resend the FileAct and Interact traffic already settled in R1
AS	ICM open, no answers to FIN	Resend the FileAct and Interact traffic already settled in R1

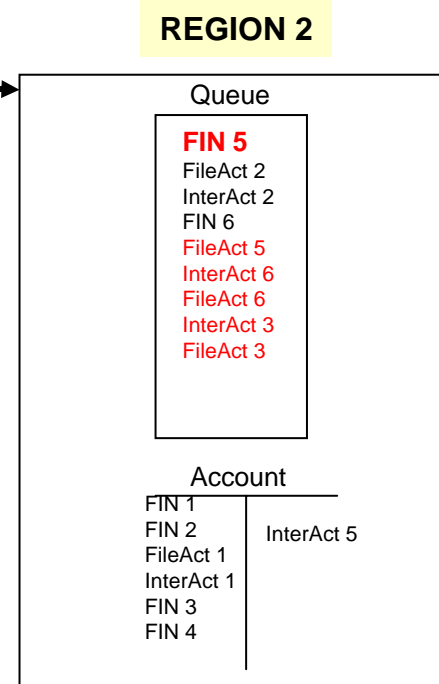
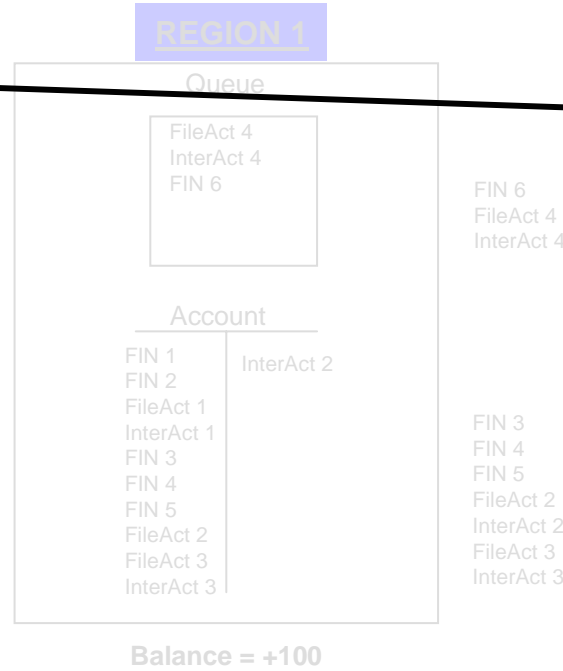


Participant / AS



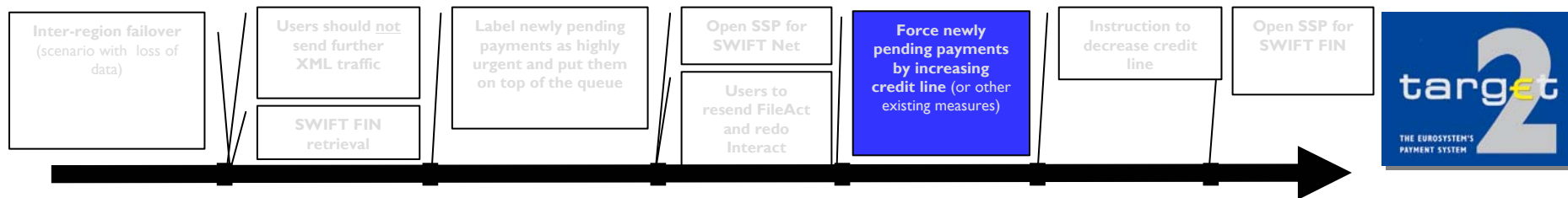
Balance = 50
Credit line = 100
Available liquidity = 150

Increase of credit line (ICM) or repo transaction (ICM - backup payment)



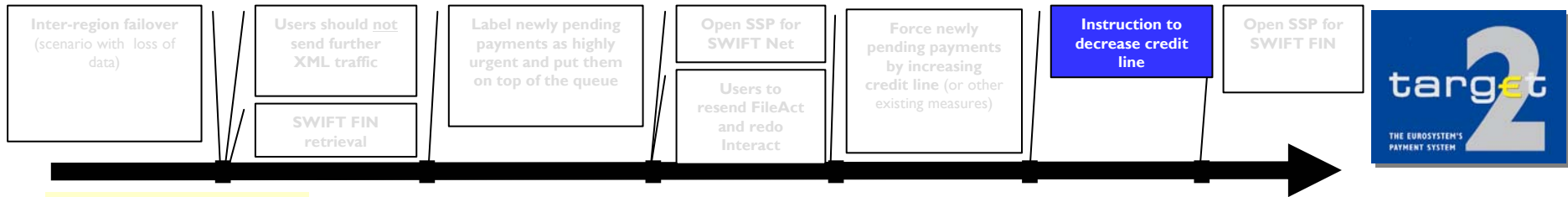
Balance = -100
Credit line = 100
Available liquidity = 0

CBs will increase adequately the credit line or perform a repo transaction to make sure that payment settled in Region 1 and not in Region 2 are settled (FIN 5). It is also considered to apply the same principle for the AS transactions, provided that the AS can give evidence of the operations already settled in Region 1.

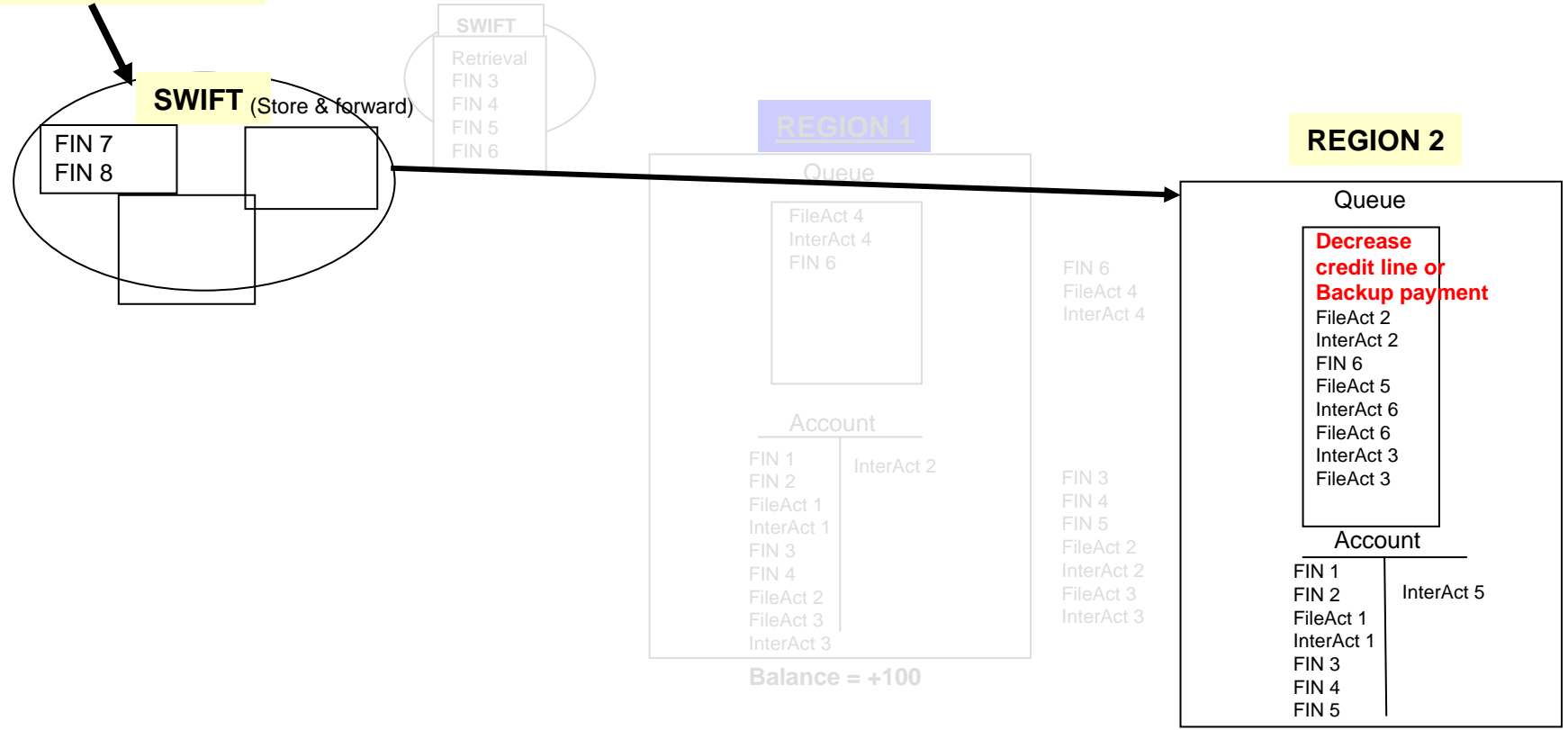


Status and technical roles of the stakeholders

	Status	Roles
SSP operator	Swift FIN retrieval over	Monitoring the SSP
CBs	ICM open, no answers to FIN	Increase adequately the credit lines or repo transaction
Participants	ICM open, no answers to FIN	No action required
AS	ICM open, no answers to FIN	No action required

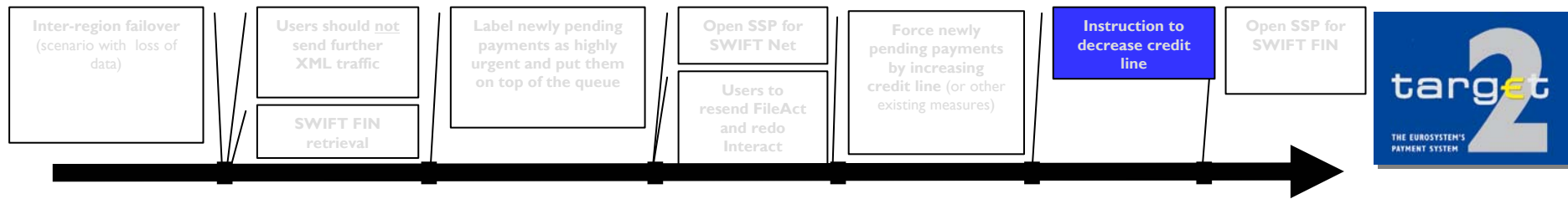


Participant / AS



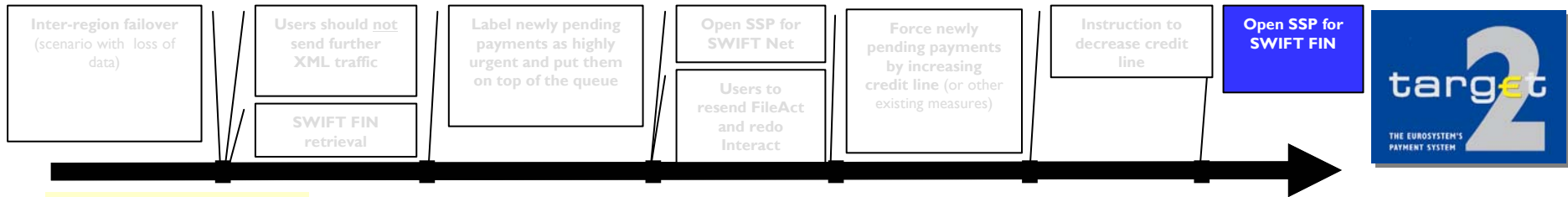
Balance = -100
Credit line = 100, decrease when balance >= 0

Then after settlement CBs send an instruction to decrease the credit line when balance is >= 0

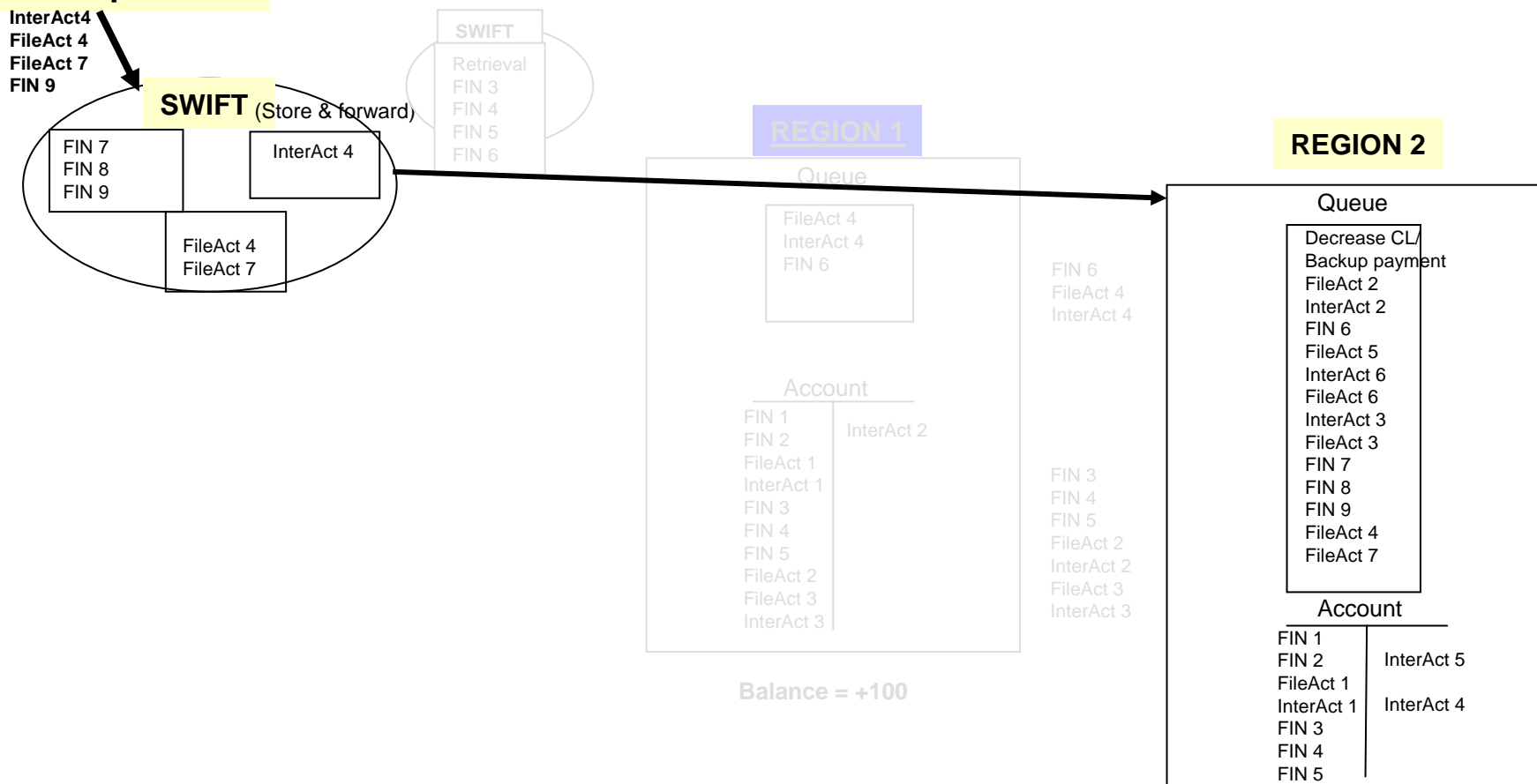


Status and technical roles of the stakeholders

	Status	Roles
SSP operator	Swift FIN retrieval over	Monitoring the SSP
CBs	ICM open, no answers to FIN	Decrease the credit lines or repo transaction ?
Participants	ICM open, no answers to FIN	No action required
AS	ICM open, no answers to FIN	No action required



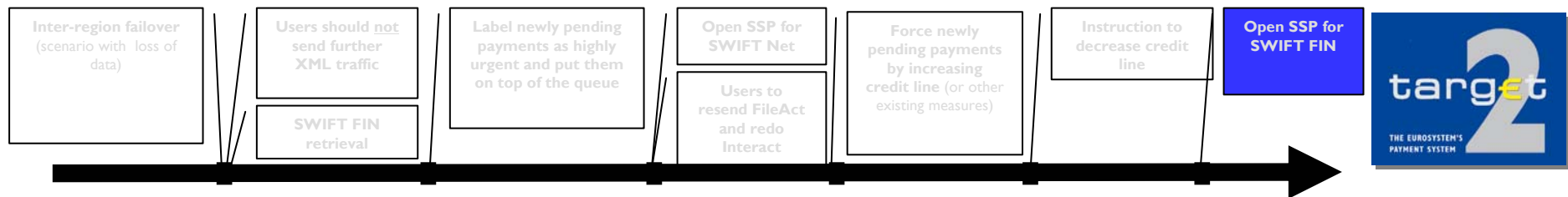
Participant / AS



Balance = +100

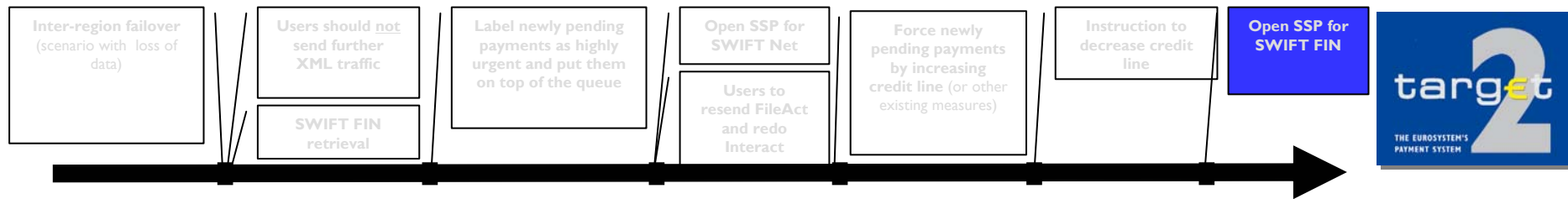
Balance = 0
Credit line = 100, decrease when balance >=0

Participants send messages FIN 9, InterAct 4 and FileAct 4 & 7



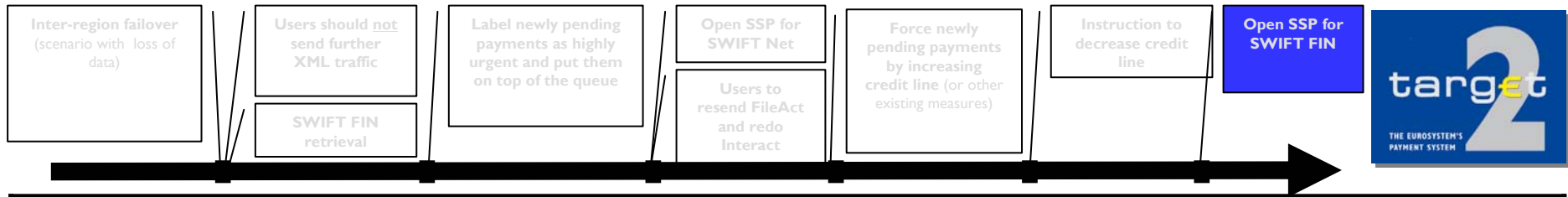
Status and technical roles of the stakeholders

	Status	Roles
SSP operator	Swift FIN retrieval over	Monitoring the SSP Opening the SSP (FIN)
CBs	ICM open, no answers to FIN	Information to users
Participants	ICM open, no answers to FIN	Send normal traffic (FIN + SWIFTNet Services)
AS	ICM open, no answers to FIN	Send normal traffic (FIN + SWIFTNet Services)

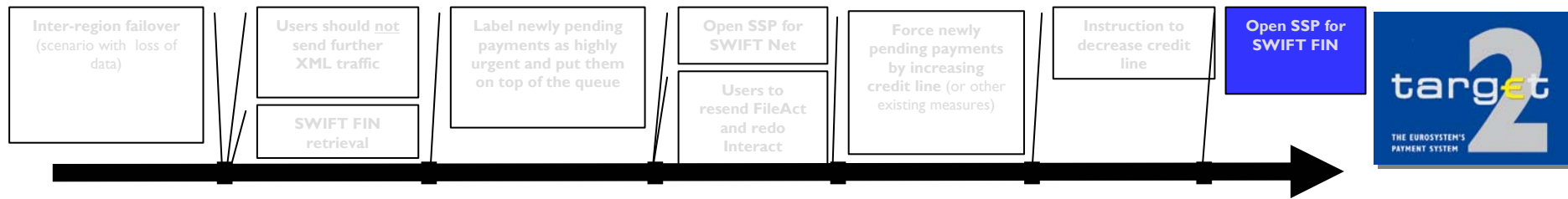


AS SETTLEMENT - RULES

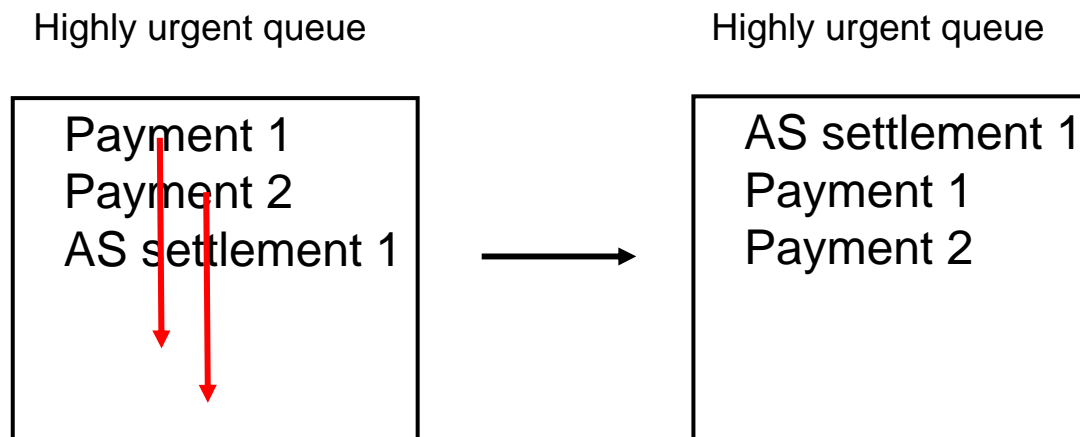
- 1- No retrieval for InterAct and FileAct services
- 2- Whatever the settlement procedure a xml message or a xml file is either :
 - Not fully copied in region 2
 - In this case the AS will be asked to send the XML message or the XML file again
 - Fully copied in region 2
 - In the case the processing of the file is only partial in Region 2, it will continue with the processing of rebuilding of the system (no new sending of the message or file is required).
- 3- The way to force the AS operations already settled in region 1 is described in the next slides



Settlement model	Description	Settled in region1 Queue status in region2
Procedure 1	-Liquidity transfer from mirror account to settlement bank RTGS account (XML message coming from AS)	- Not applicable (settled immediately)
	-Liquidity transfer from settlement bank RTGS account to mirror account (MT202)	- In highly urgent queue
Procedure 2	Real - time settlement Accounts of 2 PM participant or between PM participant and As technical account	In highly urgent queue
Procedure 3	Bilateral settlement AS sends simultaneously debits and credits to PM Transactions processed independently	In highly urgent queue
Procedure 4	Standard multilateral settlement AS sends simultaneously debits and credits. All debits booked before credits	Debits are queued In highly urgent queue
Procedure 5	Simultaneous multilateral settlement AS sends simultaneously debits and credits. All debits and credits are simultaneously checked and if ok are booked simultaneously	Not queued (if the file is not settled immediately, the transactions are earmarked)
Procedure 6 integrated	-Liquidity transfer from mirror account to settlement bank RTGS account, standing orders, current orders	- Not queued
	-Liquidity transfer from settlement bank RTGS account to mirror account (MT202)	- In highly urgent queue
Procedure 6 interfaced	-MT202 to sub accounts, standing orders, back transfers, current orders, liquidity adjustment transactions	- Not queued
	-Settlement on sub account	- Queued, the liquidity posted in the sub account normally allows the settlement of the related operations

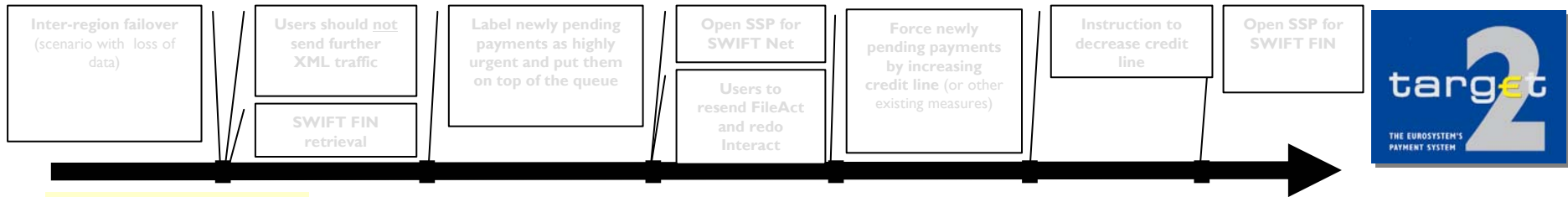


- No possibility to re-order manually the AS transactions in queue
- Re-ordering queue to allow AS settlement :

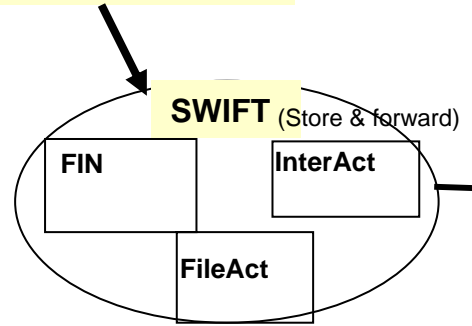


Reminder :

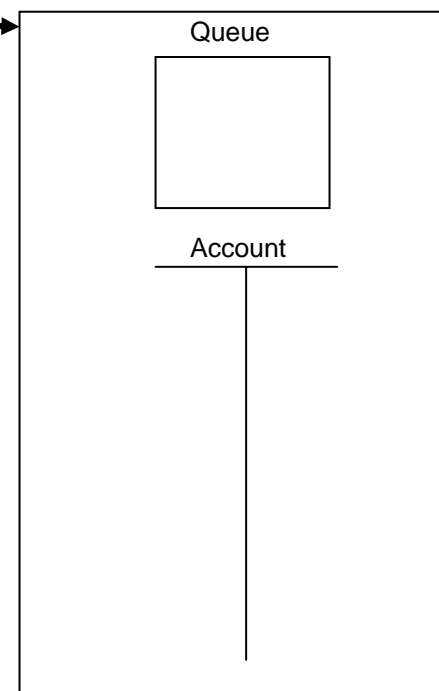
- AS asked to stop their XML traffic
- AS resend the FileAct and InterAct traffic already settled in Region1



Participant / AS



REGION 2



SSP operational