



ERJU SYSTEM PILLAR

Subtopics OD and Traffic CS: Traceability Report



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Preamble












The work within the **OD and Traffic CS domain** is organized around a consolidated set of operational scenarios, structured into distinct subtopics.









The prioritization of these topics is guided by the introduction of **baselines**, each representing an incremental expansion of the functional scope.








Each baseline ensures that System Pillar outputs are already applicable to defined use cases, while progressively enabling broader applications over time. Currently, **three baselines** have been defined.










The subtopics included in this **release of the OD & Traffic CS Factory** are those with the status “In Progress.” For each subtopic within the scope of this release, the corresponding **Operational Processes** have been derived. Operational Processes have so far been identified only for these subtopics.












Traceability Report











Baselines	Description		Subtopics	Description		Status	Operational Processes
 SPP-30522 - Baseline 0 (MVP - Minimum Viable Product)	Target application	Simple lines	 SPP-11764 - 102B - t02 - Next operational step unknown	Purpose / Scope of topic	Update the production plan to resume or end the train mission.	 In Progress	 SPP-6154 - Next operational step unknown
		Included			Relationship between topics		
				Pre-Condition	The train is at a standstill but not in a depot or at a stabling track. The timetable does not contain further operations.		
				Post-Condition	The train is moving according to plan.		
				Category	Degraded operation		
	Excluded	<ul style="list-style-type: none">• normal and degraded situations for usual operation on simpler lines• trackside/on-board train detection• centralised configuration• working area handling (simple)	 SPP-11766 - 102C - t03 - Observations while driving	Purpose / Scope of topic	Ensure observations of infrastructure or train conditions are reported.	 In Progress	 SPP-16066 - Observations while driving process
				Relationship between topics	NB: this subtopic could also be regarded as just one operational activity that is part of regular driving of a train. For the moment, it is retained as a separate subtopic.		
				Pre-Condition	A driver has assumed command of a train and is driving the train.		
				Post-Condition	A driver has stopped controlling a train. However, this process will trigger other subtopics when something relevant has been observed.		
				Category	Normal operation		
	Purpose	Enable potential pilot line to show feasibility of harmonised SERA application with certain key new features and have return of experience	 SPP-11767 - 102D - t04 - Resume driving after stopping short of scheduled stopping location	Purpose / Scope of topic	To enable the train driver to move the train from the actual stopping location to the scheduled stopping location.	 In Progress	 SPP-6065 - Resume driving after stopping short of scheduled stopping location
				Relationship between topics	Triggers  SPP-11781 - 107 - t15 - Arrival at scheduled stop		
				Pre-Condition	The train has stopped short of the scheduled stopping location. An MA to advance to the scheduled stopping location may or may not be available. If present, ATO is disengaged.		










Baselines	Description	Subtopics	Description		Status	Operational Processes
			Post-Condition	The train is moving again and is approaching the intended stopping location in SR - or the train has obtained an MA and has stopped at the intended stopping location.		
			Category	Degraded operation		
		 SPP-11768 - 101B - t05 - Train departure	Purpose / Scope of topic	Start a planned movement by using Start and receiving FS or OS MA.	 In Progress	→ SPP-21718 - Technical preparation of the train
		Relationship between topics	Is preceded by  SPP-18219 - 101 - txx - Enter onboard train data / SoM-1 if train data is not yet complete Triggers:  SPP-21160 - 102G - t68 - Regular execution of planned train movement	→ SPP-21872 - Start of Mission with manual operation		
		Pre-Condition	A train is at standstill in No Power mode.	→ SPP-22004 - SoM after pressing start, with text messages		
		Post-Condition	Train has departed and is either driving according to plan on an MA or moving in SR.	→ SPP-22036 - Train departure with not valid and ambiguous position		
		Category	Normal operation	→ SPP-27055 - Train departure with valid and unambiguous position		
		 SPP-11769 - 108A - t06 - Revoke Movement Permission	Purpose / Scope of topic	Shorten the MA for operational purposes.	 In Progress	→ SPP-6673 - Revoke Movement Permission / Co-operative shortening of MA
		Relationship between topics				
		Pre-Condition	The train has been granted an FS, SM or OS MA. The Signaller has the need to co-operatively shorten the movement authority.			
		Post-Condition	The MA is shortened and the train is supervised to the new EoA, or the train is continuing running according to the existing MA, if the COSMA was rejected by the CCS on-board.			
		Category	Degraded operation			
		 SPP-11770 - 403A_on - t07 - Activate planned temporary speed restriction	Purpose / Scope of topic	To <u>activate a previously planned</u> temporary speed restriction and ensure all supervised trains comply. Out of Scope: Planning and introducing the speed restriction in the system.	 In Progress	→ SPP-6961 - Activate Temporary Speed Restriction without Signaller Confirmation

Baselines	Description	Subtopics	Description		Status	Operational Processes
				Method or actors that trigger the activation of the Temporary Speed Restriction.		<div>→ SPP-8809 - Activate Temporary Speed Restriction with Signaller Confirmation</div>
			Relationship between topics			
			Pre-Condition	A temporary speed restriction has been planned in the signalling system.		
			Post-Condition	The speed restriction has been activated and is included in the authorisation for all trains moving on the affected infrastructure.		
			Category	Degraded operation		
		<div> SPP-11771 - 403A_off - t08 - Deactivate temporary speed restriction</div>	<div>Purpose / Scope of topic</div>	<div>To deactivate the temporary speed restriction and ensure the Signaller log is updated.</div> <div>Out of Scope: Method or actors that trigger the deactivation of the Temporary Speed Restriction.</div>	<div> In Progress</div>	<div>→ SPP-8655 - TSR deactivation without Signaller Confirmation</div> <div>→ SPP-16001 - TSR deactivation with Signaller Confirmation</div>
		Relationship between topics				
		Pre-Condition	There is no longer a need for a temporary speed restriction.			
		Post-Condition	No temporary speed restriction is included in the authorisation of any train moving on the affected infrastructure.			
		Category	Degraded operation			
		<div> SPP-11776 - 403C - t11 - Handling an unplanned speed restriction</div>	<div>Purpose / Scope of topic</div>	<div>Ensuring that the unplanned speed restriction is activated in the Trackside CCS as a TSR, and that all Train drivers of supervised and unsupervised trains are informed, if relevant.</div>	<div> In Progress</div>	<div>→ SPP-7412 - Handling an unplanned speed restriction</div>
		Relationship between topics	<div>Can be triggered by  SPP-21213 - 307 - txx - Dealing with track defects / driving on sight / examining the line or people along the tracks and can trigger  SPP-11770 - 403A_on - t07 - Activate planned temporary speed restriction or  SPP-21157 - 102M - t72 - Activation and deactivation of automatic route setting</div>			
		Pre-Condition	<div>An incident has unexpectedly occurred that requires lowering the allowed speed for trains passing a certain part of the infrastructure. The Signaller is informed about the needed TSR parameters. The Signaller has disabled automatic mode of operation.</div>			








Baselines	Description	Subtopics	Description		Status	Operational Processes
			Post-Condition	The TSR is activated by the Trackside CCS and trains running in the affected area have reduced their speed accordingly.		
			Category	Degraded operation		
		 SPP-11779 - 103A - t13 - End of mission	Purpose / Scope of topic	To end train movements as operated from the current cab.	 In Progress	→ SPP-20688 - Train arrival (ending journey): Functional number de-registered from voice communication mobile (BL4)
			Relationship between topics	 SPP-11781 - 107 - t15 - Arrival at scheduled stop		→ SPP-25175 - Shutdown (with CR1350 'always connected always reporting' implemented) (BL4)
			Pre-Condition	Train has come to standstill at a planned location for ending the train movement. The train is at standstill in a mode that allows driving.		→ SPP-25311 - Shutdown (CR1350 'always connected always reporting' not implemented) (BL3)
			Post-Condition	There are two possible post-conditions: the cab will be in SB mode (if another movement is planned for this consist) or in NP mode if the rolling stock will remain stabled for a longer time.		
			Category	Normal operation		
		 SPP-11781 - 107 - t15 - Arrival at scheduled stop	Purpose / Scope of topic	Performing a scheduled stop.	 In Progress	→ SPP-7478 - Arrival at scheduled stop - GoA1
			Relationship between topics	 SPP-11779 - 103A - t13 - End of mission		→ SPP-15477 - Arrival at scheduled stop - GoA2
			Pre-Condition	A train path has been created. The train is moving with an MA onboard and is approaching its scheduled stop.		→ SPP-24329 - Train doors opening - GoA1
			Post-Condition	The train has come to a standstill at the scheduled stop location and is in the proper condition to be unloaded / allow disembarking of passengers.		→ SPP-24336 - Train doors opening - GoA2
			Category	Normal operation		
		 SPP-11785 - 112 - t16 - Platform start	Purpose / Scope of topic	Prepare the train for departure from a platform: ensure that passengers have properly boarded the train, closing doors.	 In Progress	→ SPP-21529 - Platform start without optimizations
			Relationship between topics	 SPP-18219 - 101 - txx - Enter onboard train data / SoM-1		→ SPP-29775 - Train doors closing - GoA2
			Pre-Condition	A passenger train is at standstill at a platform and the doors are open.		
			Post-Condition	A passenger train is at standstill at a platform and is in a safe condition to depart; doors are closed.		
			Category	Normal operation		







Baselines	Description	Subtopics	Description		Status	Operational Processes
		 SPP-11791 - 106 - t22 - Change of train orientation	Purpose / Scope of topic	Changing the train orientation in order to be able to perform train movements at full line speed in the opposite direction.	 Open	
			Relationship between topics	Preceded by  SPP-11781 - 107 - t15 - Arrival at scheduled stop Followed by  SPP-18219 - 101 - txx - Enter onboard train data / SoM-1		
			Pre-Condition	Train has come to a standstill at the planned location for changing direction. Train driver is informed about the intended change of direction.		
			Post-Condition	Train is moving according to plan in the opposite direction.		
Category	Normal operation					
		 SPP-17089 - 108B - t62 - Reducing Movement Permission by signaller action for a specific location in case of imminent danger	Purpose / Scope of topic	Handling a situation that presents imminent danger for a single train at a specific location on the infrastructure, for which the Signaller needs to take action	 In Progress	 SPP-21290 - Reducing Movement Permission by Signaller action for a specific location in case of imminent danger
Relationship between topics						
Pre-Condition	A situation has occurred that presents imminent danger for a single train at a specific location on the infrastructure, which the CCS system cannot automatically detect and mitigate.					
Post-Condition	The train moving towards or on the affected infrastructure has been stopped.					
Category	Calamity operation					
		 SPP-18234 - 314 - t57 - Handling of an undetected point that is not trailed	Purpose / Scope of topic	Handling of an undetected point that is not trailed	 Open	
Relationship between topics						
Pre-Condition	The status of a point is no longer detected.					
Post-Condition	Normal operation has resumed.					
Category	Degraded operation					
		 SPP-18255 - 302 - t67 - Authorised passing of the end of authority	Purpose / Scope of topic	Allowing a train to proceed without MA	 Open	






Baselines	Description	Subtopics	Description		Status	Operational Processes
			Relationship between topics			
			Pre-Condition	A train has come to a standstill. No MA can be provided to continue. The train has a radio connection.		
			Post-Condition	The train has regained an MA and has resumed normal operation.		
			Category	Degraded operation		
		 SPP-18263 - 305 - t76 - Overrunning/routed in wrong direction	Purpose / Scope of topic	Handle a train that was routed incorrectly or has inadvertently passed its operational stopping point, creating the operational wish to move the train backwards.	 Open	
			Relationship between topics	May trigger:  SPP-21162 - 305 - txx - Use of RV mode: fast and controlled backwards movement  SPP-21160 - 102G - t68 - Regular execution of planned train movement  SPP-11791 - 106 - t22 - Change of train orientation  SPP-21166 - 101 - txx - Movement with a special vehicle profile (loading gauge)  SPP-11843 - 150K - t57 - Shunting on a route in SH mode without signaling indication  SPP-11805 - 150A - t25 - Prepare shunting movement / Enter SM		
			Pre-Condition	The driver notices that his train has proceeded to far. For instance because an operational stopping has been passed, or it has been routed in the wrong direction (the train has already passed the last point on which the train could have gone in the correct direction).		
			Post-Condition	The train has returned to its planned route.		
			Category	Degraded operation		
			 SPP-18265 - 306 - t61 - Handling of TR-mode	Purpose / Scope of topic		
Relationship between topics						
Pre-Condition	A train passes its EOA.					
Post-Condition	The train has resumed normal operation and is moving on a valid MA again.					
Category	Calamity operation					
					 Open	







Baselines	Description	Subtopics	Description		Status	Operational Processes
		 SPP-18267 - 312 - t53 - Reset of axle counter section	Purpose / Scope of topic	If an underlying TVP system is present, the situation can occur that the TVP system cannot confirm that the track is actually free, while it is supposed to be free in operational context. In those situations, typically a train should pass the involved track while driving on sight to 'sweep' the infrastructure and restore proper TVP functionality.		
			Relationship between topics			
			Pre-Condition	The TVP system incorrectly indicates that the track is not free, while it is actually free		
			Post-Condition	The TVP system functions correctly and regular, planned train traffic has resumed.		
			Category	Degraded operation		
		 SPP-18271 - 308 - txx - Assisting a disabled train	Purpose / Scope of topic	Handling a train that cannot continue under its own traction.	 Open	
			Relationship between topics	May trigger  SPP-11766 - 102C - t03 - Observations while driving		
			Pre-Condition	A train has experienced a failure that does not allow to continue under its own traction o a train has lost onboard CCS functionality and towing away the train is a better option than to have the train run in IS mode.		
			Post-Condition	Disabled train has been moved to a location where it can be unloaded/ disembarked and/or where it can be repaired.		
			Category	Degraded operation		
		 SPP-18272 - 309A - t52 - Handling of a train after loss of communication session	Purpose / Scope of topic	Handling a loss of radio connection to the CCS trackside	 Open	
			Relationship between topics	May trigger  SPP-21214 - 309B - t73 - Losing connection with the RBC and driving in SR without radio connection		
Pre-Condition	Train has lost radio connection.					
Post-Condition	Train has stopped.					
Category	Degraded operation					
 SPP-18273 - 310 - txx - Proceed after TIMS unknown			 Open			








Baselines	Description	Subtopics	Description		Status	Operational Processes
			Purpose / Scope of topic	Handling a situation in which train integrity was first confirmed and no longer confirmed after some time.		
			Relationship between topics			
			Pre-Condition	Train integrity has been confirmed by a certain train. The integrity of this train has been used in providing an MA to a following train. The train suddenly stops confirming train integrity.		
			Post-Condition	The following train runs on a safe MA that is no longer dependent on train integrity of the previous train.		
			Category	Degraded operation		
		📄 SPP-18287 - 307 - txx - Signaller protected area requested by staff	Purpose / Scope of topic	Arranging an area in which train traffic has been halted to allow calamity handling on request of field staff	👤 Open	
			Relationship between topics	May trigger 📄 SPP-21205 - 120A - t27 - Individual operation of a movable trackside element		
			Pre-Condition	Field staff has a need to request a protected area for calamity handling		
			Post-Condition	Traffic has been halted to allow safe access for operational staff		
			Category	Calamity operation		
		📄 SPP-18288 - 307 - txx - Signaller protected area requested by Emergency services	Purpose / Scope of topic	Arranging an area in which train traffic has been halted to allow calamity handling on request of emergency services.	👤 Open	
			Relationship between topics	May trigger 📄 SPP-21205 - 120A - t27 - Individual operation of a movable trackside element		
			Pre-Condition	Emergency services have a need to request a protected area for calamity handling		
Post-Condition	Traffic has been halted to allow safe access for emergency services					
Category	Calamity operation					
📄 SPP-18289 - 307 - txx - Impact with object and/or derailment				👤 Open		








Baselines	Description	Subtopics	Description		Status	Operational Processes
			Purpose / Scope of topic	Handling a situation in which a train collides with an object and/or derails		
			Relationship between topics	May trigger  SPP-17089 - 108B - t62 - Reducing Movement Permission by signaller action for a specific location in case of imminent danger or  SPP-21673 - 108C - t64 - Reducing Movement Permission by signaller action for an area in case of imminent danger or  SPP-17090 - 307 - t63 - Optimised stopping of other trains initiated by driver		
			Pre-Condition	A situation occurs in which a collision and/or derailment cannot be avoided.		
			Post-Condition	Train traffic in the affected area has been stopped, passengers have been evacuated and no imminent danger remains.		
			Category	Calamity operation		
		 SPP-21142 - 400 - t35 - Activate Configuration Data	Purpose / Scope of topic	Handling a situation in which trackside CCS system configuration data need to be updated during operation, while unintended impact on train operation needs to be avoided.	 Open	
			Relationship between topics			
			Pre-Condition	Trackside CCS system configuration data need to be updated during operation by asset management staff. The signaller has not been informed yet.		
			Post-Condition	Trackside CCS system configuration data has been modified and is used for train operation.		
			Category	Maintenance operation		
			Assign to	401 Working areas		
		 SPP-21157 - 102M - t72 - Activation and deactivation of automatic route setting	Purpose / Scope of topic	Handling automatic vs manual operation by the signaller i.e. activation and deactivation of automatic route setting.	 Open	
			Relationship between topics			
			Pre-Condition			











Baselines	Description	Subtopics	Description		Status	Operational Processes
				Automatic route setting is performed and the signaller wants to assume manual control.		
			Post-Condition	Automatic route setting has been reactivated.		
			Category	Normal or degraded operation		
			Assign to	307 Handling of emergency situations		
		 SPP-21160 - 102G - t68 - Regular execution of planned train movement	Purpose / Scope of topic	Creating a safe train path triggered by the actual situation of infrastructure and train, based on the plan as actualised by Traffic Management. Includes release of infrastructure as soon as the train has passed.	 In Progress	 SPP-23605 - Regular supervised train movement based on extension of the movement permissions
			Relationship between topics			
			Pre-Condition	Train has departed and is moving according to plan on an MA. The train is approaching the braking curve and requires extension of the MA to keep driving on full line speed.		
			Post-Condition	MA has been extended in time, infrastructure that the train has passed has been released for other trains.		
			Category	Normal operation		
			Assign to	102 Movement A to B		
		 SPP-21205 - 120A - t27 - Individual operation of a movable trackside element	Purpose / Scope of topic	Having the option to manually change the position of an individual movable trackside element such as points or derailleurs. In general, the Signaller and the Field Force should have this functionality.	 Open	
			Relationship between topics			
			Pre-Condition	The user needs to operate a trackside element. The trackside element is not currently used by or reserved for any train movement. Field Force will only request operation for simple works not requiring to set a working area (e.g. greasing points).		
			Post-Condition	The user has successfully operated the trackside element.		
			Category	Degraded or Maintenance operation		
			Assign to	120 Operation of trackside elements (new topic)		
					 Open	









Baselines	Description	Subtopics	Description		Status	Operational Processes												
		 SPP-21206 - 120B - t28 - Individual blocking and unblocking of trackside elements	<table><tr><td>Purpose / Scope of topic</td><td>Having the option as a signaller to manually block the operation or inclusion in a route of an individual trackside element such as points, marker boards, level crossings. Topic also includes unblocking.</td></tr><tr><td>Relationship between topics</td><td></td></tr><tr><td>Pre-Condition</td><td>Block: There is a need to block a trackside element. The signaller needs to manually block operation of a specific trackside element. The trackside element is not currently used by or reserved for any train movement except when a movable element is already in the intended position of the block. Unblock: There is no longer a need to block a trackside element. The signaller needs to manually unblock operation of a specific trackside element. The trackside element may be currently used by or reserved for any train movement.</td></tr><tr><td>Post-Condition</td><td>The Signaller has successfully blocked/unblocked the trackside element.</td></tr><tr><td>Category</td><td>Degraded or Maintenance operation</td></tr><tr><td>Assign to</td><td>120 Operation of trackside elements (new topic)</td></tr></table>	Purpose / Scope of topic	Having the option as a signaller to manually block the operation or inclusion in a route of an individual trackside element such as points, marker boards, level crossings. Topic also includes unblocking.	Relationship between topics		Pre-Condition	Block: There is a need to block a trackside element. The signaller needs to manually block operation of a specific trackside element. The trackside element is not currently used by or reserved for any train movement except when a movable element is already in the intended position of the block. Unblock: There is no longer a need to block a trackside element. The signaller needs to manually unblock operation of a specific trackside element. The trackside element may be currently used by or reserved for any train movement.	Post-Condition	The Signaller has successfully blocked/unblocked the trackside element.	Category	Degraded or Maintenance operation	Assign to	120 Operation of trackside elements (new topic)			
Purpose / Scope of topic	Having the option as a signaller to manually block the operation or inclusion in a route of an individual trackside element such as points, marker boards, level crossings. Topic also includes unblocking.																	
Relationship between topics																		
Pre-Condition	Block: There is a need to block a trackside element. The signaller needs to manually block operation of a specific trackside element. The trackside element is not currently used by or reserved for any train movement except when a movable element is already in the intended position of the block. Unblock: There is no longer a need to block a trackside element. The signaller needs to manually unblock operation of a specific trackside element. The trackside element may be currently used by or reserved for any train movement.																	
Post-Condition	The Signaller has successfully blocked/unblocked the trackside element.																	
Category	Degraded or Maintenance operation																	
Assign to	120 Operation of trackside elements (new topic)																	
		 SPP-21212 - 306 - t74 - Managing a balise reading error	<table><tr><td>Purpose / Scope of topic</td><td>Restart the train after a braking intervention caused by a balise read error and informing maintenance organisation of the failure that occurred.</td></tr><tr><td>Relationship between topics</td><td></td></tr><tr><td>Pre-Condition</td><td>A train passes a balise group that is not read properly.</td></tr><tr><td>Post-Condition</td><td>The train has resumed normal operation, running on an MA.</td></tr><tr><td>Category</td><td>Degraded operation</td></tr><tr><td>Assign to</td><td>306 Continue After Trip Post Trip</td></tr></table>	Purpose / Scope of topic	Restart the train after a braking intervention caused by a balise read error and informing maintenance organisation of the failure that occurred.	Relationship between topics		Pre-Condition	A train passes a balise group that is not read properly.	Post-Condition	The train has resumed normal operation, running on an MA.	Category	Degraded operation	Assign to	306 Continue After Trip Post Trip	 Open		
Purpose / Scope of topic	Restart the train after a braking intervention caused by a balise read error and informing maintenance organisation of the failure that occurred.																	
Relationship between topics																		
Pre-Condition	A train passes a balise group that is not read properly.																	
Post-Condition	The train has resumed normal operation, running on an MA.																	
Category	Degraded operation																	
Assign to	306 Continue After Trip Post Trip																	
		 SPP-21213 - 307 - txx - Dealing with track defects / driving on sight / examining the line or people along the tracks			 Open													













Baselines	Description	Subtopics	Description		Status	Operational Processes	
			Purpose / Scope of topic	While initial recognition of a track defects or people along the tracks would be part of t03 - 102C Observations while driving, the follow-up for any following train could include an European Instruction 6 and unplanned speed restrictions.			
			Relationship between topics	Triggered by  SPP-11766 - 102C - t03 - Observations while driving			
			Pre-Condition	A driver (or a third party) reports track defects, people on the tracks or any other situations of or on the infrastructure that may pose dangers for any train crossing the affected infrastructure at full line speed.			
			Post-Condition	Trains can safely pass the affected area without any additional instruction (which might include setting a temporary speed restriction at a speed that has been proven to be safe).			
			Category	Degraded operation			
			Assign to	307 Handling of emergency situations			
		 SPP-21214 - 309B - t73 - Losing connection with the RBC and driving in SR without radio connection		Purpose / Scope of topic	Proceeding without movement authority and without radio connection. The train cannot be stopped by the RBC.	 Open	
				Relationship between topics	Triggered by  SPP-18272 - 309A - t52 - Handling of a train after loss of communication session		
				Pre-Condition	A train has lost radio communication and is at standstill. Radio communication cannot be restored and there is an operational need to move the train.		
				Post-Condition	The train has regained a radio connection to the trackside or has arrived at its (re)planned destination.		
				Category	Degraded operation		
				Assign to	309 Handling of a train after loss of communication session		
		 SPP-21215 - 101 - t70 - SOM when no route can be set		Purpose / Scope of topic	Departure in SR mode after SOM and receiving European Instruction 7.	 Open	
				Relationship between topics			
				Pre-Condition	A train performs start of mission and is planned to depart. The train has a valid position. A safe train path and hence also an MA cannot be provided by the safety system due to infrastructure conditions, but it is possible to create a safe train path under signaller's control and authorise departure.		










Baselines	Description	Subtopics	Description		Status	Operational Processes
			Post-Condition	The train has departed, passed the affected infrastructure and is moving with MA.		
			Category	Degraded operation		
			Assign to	101 Preparation to Train Departure		
		 SPP-21403 - 310 - txx - Proceed after TMS lost	Purpose / Scope of topic	Handling a situation in which train integrity was first confirmed and was reported to be lost after some time.	 Open	
			Relationship between topics			
			Pre-Condition	Train integrity has been confirmed by a certain train. The integrity of this train has been used in providing an MA to a following train. The train suddenly reports that train integrity has been lost.		
			Post-Condition	The following train runs on a safe MA that is no longer dependent on train integrity of the previous train.		
			Category	Degraded operation		
		 SPP-21673 - 108C - t64 - Reducing Movement Permission by signaller action for an area in case of imminent danger	Purpose / Scope of topic	Handling a situation that presents imminent danger in a certain area on the infrastructure, for which the signaller needs to take action	 In Progress	 SPP-21322 - Reducing Movement Permission by Signaller action for an area in case of imminent danger
			Relationship between topics			
			Pre-Condition	A situation has occurred that presents imminent danger in a certain area on the infrastructure, which the CCS system cannot automatically mitigate.		
			Post-Condition	Any train moving towards or on the affected infrastructure has been stopped or slowed down. No trains have been tripped as a result of the reduced movement permission.		
			Category	Calamity operation		
		 SPP-21674 - 108D - t65 - Automatic reduction of Movement Permission by the CCS system for a specific location in case of imminent danger	Purpose / Scope of topic	Handling a situation that presents imminent danger that can be handled automatically by the CCS system	 Open	
			Relationship between topics			









Baselines	Description		Subtopics	Description		Status	Operational Processes
				Pre-Condition The CCS detects imminent danger for a certain train on a certain location after the train has been granted an MA - for instance because of a failed point or an unexpected occupation of track			
				Post-Condition Any train moving towards or on the affected infrastructure has been stopped or slowed down.			
				Category Calamity operation			
 SPP-30524 - Baseline 1 (goal for 2027)	Target application Included in addition	Large share of railway lines, without big nodes	 SPP-11763 - 102A - t01- Driving into occupied track	Purpose / Scope of topic Allow a train to enter track that is regarded as occupied by the CCS system.		 Open	
				Relationship between topics This subtopic is used as a precondition to perform joining (105A)			
				Pre-Condition A movement into occupied track has been planned and the approaching train has reached the planned location at which this should take place.			
				Post-Condition The approaching train has come to a standstill at the intended location, which can be very close i.e. even touching the waiting train.			
				Category Normal or degraded operation			
	Excluded	<ul style="list-style-type: none"> • level crossings • handover inside SERA • transition in and out SERA • splitting and joining of train sets • enter occupied tracks with system support 	 SPP-11786 - 403E_on - t17 - Establish working area without handheld terminal	Purpose / Scope of topic Indicating that the Field Force is ready at the site and, if possible, establishing the possession as planned.		 Open	
				Relationship between topics			
				Pre-Condition The Field Force has arrived at the site and is ready to initiate a planned working area. It is not technically possible to use a handheld terminal. One or more trains may be present in the area.			
				Post-Condition A working area has been activated, providing safe conditions to execute maintenance activities on the railway infrastructure.			
				Category Maintenance operation			
	Purpose Provide functionality for wide-spread application	<ul style="list-style-type: none"> • change of train composition (except splitting/ joining of train sets) • pushed movement • Enhancements requiring TSI changes 	 SPP-11787 - 403E_off - t18 - End working area without handheld terminal	Purpose / Scope of topic Ensure that the responsibility of the infrastructure is handed back to the Signaller.		 Open	
				Relationship between topics			
				Pre-Condition Infrastructure work has been completed and information about any restrictions in the use of the infrastructure have been passed on to the Signaller. It is not			












Baselines	Description	Subtopics	Description		Status	Operational Processes
				technically possible to use a handheld terminal. One or more trains may be present in the area.		
			Post-Condition	The working area has been deactivated and the infrastructure is available for train traffic.		
			Category	Maintenance operation		
		 SPP-11789 - 104 - t20 - Planned splitting	Purpose / Scope of topic	Splitting a single train into two trains.	 Open	
			Relationship between topics	Followed by  SPP-18223 - 101 - txx - Update onboard train data  SPP-18219 - 101 - txx - Enter onboard train data / SoM-1		
			Pre-Condition	Splitting is included in the actualised plan. Train is at standstill on the planned location for splitting.		
			Post-Condition	Both parts of the original train are moving as planned.		
			Category	Normal operation		
		 SPP-11790 - 105 - t21 - Planned joining	Purpose / Scope of topic	Joining two separate trains/consists into a single train/consist.	 Open	
			Relationship between topics	Preceded by  SPP-11763 - 102A - t01- Driving into occupied track Followed by  SPP-18223 - 101 - txx - Update onboard train data		
			Pre-Condition	Waiting train is at standstill at the planned location. Approaching train is at standstill very close to the waiting train and has OS MA allowing the approaching train to couple with the waiting train.		
			Post-Condition	A single joined train is moving according to plan. Train data have been updated.		
			Category	Normal operation		
		 SPP-11803 - 21 - t60 - Unsupervised level transition into a level 2 area	Purpose / Scope of topic	Passing into a Level 2 SERA infrastructure area without an MA being available at the transition point.	 Open	
			Relationship between topics			
			Pre-Condition	A train is moving on the non-SERA infrastructure and approaching the Level 2 SERA infrastructure		









Baselines	Description	Subtopics	Description		Status	Operational Processes
			Post-Condition	A train is moving on an MA on the Level 2 SERA infrastructure		
			Category	Degraded operation		
		 SPP-11804 - 22 - txx - Unsupervised level transition from a level 2 area	Purpose / Scope of topic	Exiting from a Level 2 SERA infrastructure area without an MA being available to proceed beyond the transition point.	 Open	
			Relationship between topics			
			Pre-Condition	A train is moving on an MA on the Level 2 SERA infrastructure.		
			Post-Condition	A train is moving on the non-SERA infrastructure		
			Category	Normal operation		
		 SPP-11831 - 403T - t42 - Establish temporary shunting area with handheld terminal	Purpose / Scope of topic	Establishing a temporary shunting area with handheld terminal Original text: TSAs shall be handled analogue to the generic restriction handling process with dedicated parameters	 Open	
			Relationship between topics	 SPP-11832 - 403U - t43 - End temporary shunting area with handheld terminal		
			Pre-Condition	A temporary shunting area is planned to be activated and provided to a user and the planned time is approaching.		
			Post-Condition	A temporary shunting area is activated and has been provided to a single RU.		
			Category	Normal operation		
		 SPP-11832 - 403U - t43 - End temporary shunting area with handheld terminal	Purpose / Scope of topic	Deactivation of a temporary shunting area with handheld terminal, returning control of the infrastructure to the signaller. Original text: TSAs shall be handled analogue to the generic restriction handling process with dedicated parameters	 Open	
			Relationship between topics	 SPP-11831 - 403T - t42 - Establish temporary shunting area with handheld terminal		
			Pre-Condition	A temporary shunting area is activated and is planned to be deactivated and returned to direct control of the signaller. The planned time is approaching.		
			Post-Condition	A temporary shunting area has been deactivated and direct control of the infrastructure has returned to the signaller.		
			Category	Normal operation		









Baselines	Description	Subtopics	Description	Status	Operational Processes										
		<div> SPP-11833 - 403V - t44 - Establish temporary shunting area without handheld terminal</div>	<table><tr><td>Purpose / Scope of topic</td><td>Establishing a temporary shunting area without handheld terminal</td></tr><tr><td>Relationship between topics</td><td><div> SPP-11834 - 403W - t45 - End temporary shunting area without handheld terminal</div></td></tr><tr><td>Pre-Condition</td><td>A temporary shunting area is planned to be activated and provided to a user and the planned time is approaching. The HHT is not technically available.</td></tr><tr><td>Post-Condition</td><td>A temporary shunting area is activated and has been provided to a single RU.</td></tr><tr><td>Category</td><td>Normal operation</td></tr></table>	Purpose / Scope of topic	Establishing a temporary shunting area without handheld terminal	Relationship between topics	<div> SPP-11834 - 403W - t45 - End temporary shunting area without handheld terminal</div>	Pre-Condition	A temporary shunting area is planned to be activated and provided to a user and the planned time is approaching. The HHT is not technically available.	Post-Condition	A temporary shunting area is activated and has been provided to a single RU.	Category	Normal operation	<div> Open</div>	
Purpose / Scope of topic	Establishing a temporary shunting area without handheld terminal														
Relationship between topics	<div> SPP-11834 - 403W - t45 - End temporary shunting area without handheld terminal</div>														
Pre-Condition	A temporary shunting area is planned to be activated and provided to a user and the planned time is approaching. The HHT is not technically available.														
Post-Condition	A temporary shunting area is activated and has been provided to a single RU.														
Category	Normal operation														
		<div> SPP-11834 - 403W - t45 - End temporary shunting area without handheld terminal</div>	<table><tr><td>Purpose / Scope of topic</td><td>Deactivation of a temporary shunting area without handheld terminal, returning control of the infrastructure to the signaller.</td></tr><tr><td>Relationship between topics</td><td><div> SPP-11833 - 403V - t44 - Establish temporary shunting area without handheld terminal</div></td></tr><tr><td>Pre-Condition</td><td>A temporary shunting area is activated and is planned to be deactivated and returned to direct control of the signaller. The planned time is approaching. The HHT is not technically available.</td></tr><tr><td>Post-Condition</td><td>A temporary shunting area has been deactivated and direct control of the infrastructure has returned to the signaller.</td></tr><tr><td>Category</td><td>Normal operation</td></tr></table>	Purpose / Scope of topic	Deactivation of a temporary shunting area without handheld terminal, returning control of the infrastructure to the signaller.	Relationship between topics	<div> SPP-11833 - 403V - t44 - Establish temporary shunting area without handheld terminal</div>	Pre-Condition	A temporary shunting area is activated and is planned to be deactivated and returned to direct control of the signaller. The planned time is approaching. The HHT is not technically available.	Post-Condition	A temporary shunting area has been deactivated and direct control of the infrastructure has returned to the signaller.	Category	Normal operation	<div> Open</div>	
Purpose / Scope of topic	Deactivation of a temporary shunting area without handheld terminal, returning control of the infrastructure to the signaller.														
Relationship between topics	<div> SPP-11833 - 403V - t44 - Establish temporary shunting area without handheld terminal</div>														
Pre-Condition	A temporary shunting area is activated and is planned to be deactivated and returned to direct control of the signaller. The planned time is approaching. The HHT is not technically available.														
Post-Condition	A temporary shunting area has been deactivated and direct control of the infrastructure has returned to the signaller.														
Category	Normal operation														
		<div> SPP-11835 - 403X - t46 - Handover of a shunting area</div>	<table><tr><td>Purpose / Scope of topic</td><td>Direct handover of an activated temporary shunting area from one RU to another RU.</td></tr><tr><td>Relationship between topics</td><td></td></tr><tr><td>Pre-Condition</td><td>A temporary shunting area is activated and under the control of one RU.</td></tr><tr><td>Post-Condition</td><td>The temporary shunting area is activated and under the control of another RU.</td></tr><tr><td>Category</td><td>Normal operation</td></tr></table>	Purpose / Scope of topic	Direct handover of an activated temporary shunting area from one RU to another RU.	Relationship between topics		Pre-Condition	A temporary shunting area is activated and under the control of one RU.	Post-Condition	The temporary shunting area is activated and under the control of another RU.	Category	Normal operation	<div> Open</div>	
Purpose / Scope of topic	Direct handover of an activated temporary shunting area from one RU to another RU.														
Relationship between topics															
Pre-Condition	A temporary shunting area is activated and under the control of one RU.														
Post-Condition	The temporary shunting area is activated and under the control of another RU.														
Category	Normal operation														






Baselines	Description	Subtopics	Description	Status	Operational Processes										
		<div> SPP-11836 - 403Y - t47 - Handling of an unplanned speed restriction in a transition area</div>	<table><tr><td>Purpose / Scope of topic</td><td>Handling a situation in which a temporary speed restriction in a transition area is required and ensuring that trains can cross system borders without experiencing an immediate brake intervention.</td></tr><tr><td>Relationship between topics</td><td>Can be triggered by  SPP-21213 - 307 - txx - Dealing with track defects / driving on sight / examining the line or people along the tracksor be already included in the planning.</td></tr><tr><td>Pre-Condition</td><td>An incident has occurred that requires unplanned lowering the allowed speed for trains passing a certain part of the infrastructure which is near a transition location OR A temporary speed restriction has been planned in a transition area.</td></tr><tr><td>Post-Condition</td><td>A temporary speed restriction in the transition area has been activated and included in the authorisation for all trains moving on the affected infrastructure.</td></tr><tr><td>Category</td><td>Degraded operation</td></tr></table>	Purpose / Scope of topic	Handling a situation in which a temporary speed restriction in a transition area is required and ensuring that trains can cross system borders without experiencing an immediate brake intervention.	Relationship between topics	Can be triggered by  SPP-21213 - 307 - txx - Dealing with track defects / driving on sight / examining the line or people along the tracksor be already included in the planning.	Pre-Condition	An incident has occurred that requires unplanned lowering the allowed speed for trains passing a certain part of the infrastructure which is near a transition location OR A temporary speed restriction has been planned in a transition area.	Post-Condition	A temporary speed restriction in the transition area has been activated and included in the authorisation for all trains moving on the affected infrastructure.	Category	Degraded operation	<div> Open</div>	
Purpose / Scope of topic	Handling a situation in which a temporary speed restriction in a transition area is required and ensuring that trains can cross system borders without experiencing an immediate brake intervention.														
Relationship between topics	Can be triggered by  SPP-21213 - 307 - txx - Dealing with track defects / driving on sight / examining the line or people along the tracksor be already included in the planning.														
Pre-Condition	An incident has occurred that requires unplanned lowering the allowed speed for trains passing a certain part of the infrastructure which is near a transition location OR A temporary speed restriction has been planned in a transition area.														
Post-Condition	A temporary speed restriction in the transition area has been activated and included in the authorisation for all trains moving on the affected infrastructure.														
Category	Degraded operation														
		<div> SPP-11839 - 150D - t50 - Leaving a working area or shunting area</div>	<table><tr><td>Purpose / Scope of topic</td><td>Leaving a working area, a permanent shunting area or a temporary shunting area</td></tr><tr><td>Relationship between topics</td><td></td></tr><tr><td>Pre-Condition</td><td>A train is at standstill within a working area, a permanent shunting area or a temporary shunting area.</td></tr><tr><td>Post-Condition</td><td>A train has left the working area, permanent shunting area or temporary shunting area and is running on infrastructure that is directly controlled by the signaller.</td></tr><tr><td>Category</td><td>Maintenance operation</td></tr></table>	Purpose / Scope of topic	Leaving a working area, a permanent shunting area or a temporary shunting area	Relationship between topics		Pre-Condition	A train is at standstill within a working area, a permanent shunting area or a temporary shunting area.	Post-Condition	A train has left the working area, permanent shunting area or temporary shunting area and is running on infrastructure that is directly controlled by the signaller.	Category	Maintenance operation	<div> Open</div>	
Purpose / Scope of topic	Leaving a working area, a permanent shunting area or a temporary shunting area														
Relationship between topics															
Pre-Condition	A train is at standstill within a working area, a permanent shunting area or a temporary shunting area.														
Post-Condition	A train has left the working area, permanent shunting area or temporary shunting area and is running on infrastructure that is directly controlled by the signaller.														
Category	Maintenance operation														
		<div> SPP-11840 - 150E - t51 - Shunting between working areas or shunting areas</div>	<table><tr><td>Purpose / Scope of topic</td><td>Execute a shunting movement in which the border between shunting or working areas is passed</td></tr><tr><td>Relationship between topics</td><td></td></tr><tr><td>Pre-Condition</td><td>A train is at standstill within an activated working or shunting area.</td></tr></table>	Purpose / Scope of topic	Execute a shunting movement in which the border between shunting or working areas is passed	Relationship between topics		Pre-Condition	A train is at standstill within an activated working or shunting area.	<div> Open</div>					
Purpose / Scope of topic	Execute a shunting movement in which the border between shunting or working areas is passed														
Relationship between topics															
Pre-Condition	A train is at standstill within an activated working or shunting area.														







Baselines	Description	Subtopics	Description		Status	Operational Processes
			Post-Condition	A train is at standstill within an adjacent activated working or shunting area.		
			Category	Maintenance operation		
		 SPP-18206 - 403AA - txx - Working area handover without handheld terminal	Purpose / Scope of topic	Handover of an activated working area from one field force to another	 Open	
			Relationship between topics			
			Pre-Condition	An activated working area is under the control of a field force. The HHT is not technically available.		
			Post-Condition	An activated working area is under the control of another field force.		
			Category	Maintenance operation		
		 SPP-18209 - 150M - t59 - Supervised driving into a working area or shunting area	Purpose / Scope of topic	Entering a working area, a temporary shunting area or a permanent shunting area (which is regarded as similar to non-controlled area)	 Open	
			Relationship between topics			
			Pre-Condition	A train on infrastructure that is directly controlled by the signaller, is approaching an activated the working area, temporary shunting area or permanent shunting area. The trains is planned to enter the area.		
			Post-Condition	A train is at standstill within a working area, a permanent shunting area or a temporary shunting area.		
			Category	Normal or Maintenance operation		
		 SPP-18221 - 101 - txx - Awakening with invalid or unknown position	Purpose / Scope of topic	To perform a Start of Mission and actually starting a movement when no valid position is available. Includes both planned and unplanned departure and both controlled and non controlled track.	 Open	
			Relationship between topics	Preceded by  SPP-18219 - 101 - txx - Enter onboard train data / SoM-1 Replaces  SPP-11768 - 101B - t05 - Train departure in case of no valid position		
			Pre-Condition	Train is performing Start of Mission; data entry has finished and train is in state S20 as defined in SRS 5.4.4 Train has no valid position		
			Post-Condition	Train is moving on an MA		
			Category	Normal or Degraded operation		









Baselines	Description	Subtopics	Description		Status	Operational Processes
		 SPP-18225 - 101 - t71 - Signaller handover	Purpose / Scope of topic	Handover of signaller responsibility from one signaller to the next; including logging out and in of the signaller and providing all relevant information	 Open	
			Relationship between topics			
			Pre-Condition	A signaller is approaching the end of his shift and wants to log out		
			Post-Condition	The signaller beginning his shift has logged in and assumed responsibility for the signaller area.		
			Category	Normal operation		
		 SPP-18226 - 101 - txx - Train and/or onboard failure during a mission	Purpose / Scope of topic	Handling an onboard failure during a mission	 Open	
			Relationship between topics	May trigger  SPP-18262 - 302 - t69 - Isolate onboard ,  SPP-18221 - 101 - txx - Awakening with invalid or unknown position or  SPP-18221 - 101 - txx - Awakening with invalid or unknown position		
			Pre-Condition	Train is moving as planned when onboard failure occurs that affects movement of the train		
			Post-Condition	Train is moving again (may be with or without MA)		
			Category	Degraded operation		
		 SPP-18229 - 315 - txx - Supervised passing of failed level crossing	Purpose / Scope of topic	Passing a failed, non protected level crossing with an MA	 Open	
			Relationship between topics			
			Pre-Condition	A train approaches a level crossing that is not protected. The MA has not extended beyond the level crossing yet.		
			Post-Condition	The train has passed the level crossing and has resumed normal operation.		
			Category	Degraded operation		
		 SPP-18232 - 23 - txx - HO Handover between ETCS systems	Purpose / Scope of topic	Moving from one CCS control area to another one	 Open	
Relationship between topics						
Pre-Condition						











Baselines	Description	Subtopics	Description		Status	Operational Processes
				A train is moving under the supervision of one CCS trackside, and is approaching the border of another CCS trackside area.		
			Post-Condition	The train has crossed the border and is under control of the new CCS trackside.		
			Category	Normal operation		
		 SPP-18260 - 302 - txx - Passing a level crossing without a movement authority	Purpose / Scope of topic	Allowing the passage of a level crossing for a train without an MA (including level crossings that are activated based on constant warning time)	 Open	
			Relationship between topics	May be triggered by  SPP-18255 - 302 - t67 - Authorised passing of the end of authority or  SPP-21214 - 309B - t73 - Losing connection with the RBC and driving in SR without radio connection		
			Pre-Condition	A train is driving without MA and approaching a level crossing		
			Post-Condition	The train has passed the level crossing.		
			Category	Degraded operation		
		 SPP-18261 - 302 - txx - Handling of a trailed point	Purpose / Scope of topic	Handling of a trailed point	 Open	
			Relationship between topics			
			Pre-Condition	A point has been trailed and can no longer be passed normally		
			Post-Condition	The point has been restored, normal operation resumes		
			Category	Degraded operation		
		 SPP-18262 - 302 - t69 - Isolate onboard	Purpose / Scope of topic	Driving of trains with isolated ETCS on-board on SERA ETCS infrastructure	 Open	
			Relationship between topics			
			Pre-Condition	A train has lost ETCS functionality and can only move under its own power if the onboard is Isolated. There is an operational need to move the train under its own traction; towing away the train would result in unacceptable logistical consequences.		






Baselines	Description	Subtopics	Description		Status	Operational Processes
			Post-Condition	The train has reached an appropriate location where it can be parked or receive maintenance.		
			Category	Degraded operation		
		 SPP-18270 - 307 - txx - Detect and log trailed point	Purpose / Scope of topic	Stopping traffic in the affected area and ensure trailing and operational constraints are logged in the relevant electronic log.	 Open	
			Relationship between topics	Triggers  SPP-11820 - 403I - t31 - Changes in driving conditions		
			Pre-Condition	A point has been trailed.		
			Post-Condition	Traffic in the affected area has been stopped and the trailed point has been logged in the relevant electronic log.		
			Category	Calamity operation		
		 SPP-21141 - 400 - txx - Perform System Asset Diagnostic	Purpose / Scope of topic	PROPOSED TO BE REMOVED - is not or should not be relevant within scope of Operational Design. Any diagnostics should not have any effect on train operation.	 Open	
			Relationship between topics			
			Pre-Condition			
			Post-Condition			
			Category			
		 SPP-21161 - 109B - txx - Passing a Level crossings not fitted technical securing	Purpose / Scope of topic	Handling of a movement over LX without technical securing.	 Open	
			Relationship between topics			
			Pre-Condition	A train is approaching a level crossing that is not fitted with any trackside technical means of protection that can be triggered or activated.		
			Post-Condition	The train has passed the level crossing without technical securing.		
			Category	Normal operation		
			Assign to	109 Pass level crossing		
					 Open	











Baselines	Description	Subtopics	Description	Status	Operational Processes
		 SPP-21164 - 101 - txx - Modification of TRN by driver during a mission	Purpose / Scope of topic Modification of TRN by driver during a mission, for instance if the same rolling stock continues as a different train without performing EOM and SOM. To be detailed for both TRN's that are known and not known in the plan.		
			Relationship between topics		
			Pre-Condition A train arrives at a planned location and is planned to proceed on a different train running number.		
			Post-Condition The train has obtained the new TRN.		
			Category Normal operation		
			Assign to 101 Preparation to train departure		
		 SPP-21165 - 102H - txx - Passage of a tunnel	Purpose / Scope of topic Regular passage of a tunnel, including: - the operation of airtight mode in rolling stock - informing the driver on non stopping areas - Preventing passage of multiple opposite trains at high speed - integral route setting through whole tunnel if necessary or possible - non supervision of radio connection - restrictions due to specific transport (hazardous goods, unusual transports (out of profile))	 Open	
			Relationship between topics		
			Pre-Condition A train approaches a tunnel and is planned to move through the tunnel; its MA does not extend into the tunnel yet.		
			Post-Condition The train has completely passed the tunnel.		
			Category Normal operation		
			Assign to 102 Movement A to B		
		 SPP-21168 - 109A - txx - Regular passage of a level crossing	Purpose / Scope of topic Passing a functioning level crossing triggered by the approach of a train (for instance based on constant warning time) and released after passage of a train.	 Open	
			Relationship between topics		
			Pre-Condition A train is moving with an MA and is approaching a level crossing that needs to be activated to stop crossing road traffic. The train has no MA that allows passing the level crossing yet; the level crossing has not been activated.		











Baselines	Description	Subtopics	Description		Status	Operational Processes
			Post-Condition	The train has completely passed the level crossing.		
			Category	Normal operation		
			Assign to	109 Pass Level Crossing		
		 SPP-21172 - 21 - txx - Supervised level transition from level NTC into a level 2 area	Purpose / Scope of topic	Making the transition from a Level NTC into a Level 2 area authorised and supervised by the legacy CCS system and ETCS, preventing the entry of non-compatible ETCS version trains.	 Open	
			Relationship between topics			
			Pre-Condition	A train with compatible ETCS version approaches the Level 2 area. It has not obtained an MA (or a class B signal aspect) to enter this area yet.		
			Post-Condition	The train has completely entered the Level 2 only area.		
			Category	Normal operation		
			Assign to	21 Entry transition to L2 area		
		 SPP-21173 - 21 - txx - Supervised level transition from level 0 into a level 2 area	Purpose / Scope of topic	Making the transition from a Level 0 into a Level 2 area authorised by a legacy system if available and authorised and supervised by ETCS, preventing the entry of non-compatible ETCS version trains.	 Open	
			Relationship between topics			
			Pre-Condition	A train with compatible ETCS version approaches the Level 2 area. It has not obtained authorisation to enter this area yet.		
			Post-Condition	The train has completely entered the Level 2 only area.		
			Category	Normal operation		
			Assign to	21 Entry transition to L2 area		
		 SPP-21174 - 22 - txx - Supervised level transition from a level 2 area to LNTC	Purpose / Scope of topic	Making the transition from a Level 2 into a Level NTC area authorised and supervised by the legacy CCS system and ETCS.	 Open	
			Relationship between topics			
			Pre-Condition	A train is approaching a Level NTC area. The train is moving on an MA, but the MA does not allow leaving the Level 2 area yet.		
			Post-Condition	The train has completely left the Level 2 only area.		








Baselines	Description	Subtopics	Description		Status	Operational Processes
			Category	Normal operation		
			Assign to	22 Exit transition from L2 area		
		 SPP-21189 - 101 - txx - Start of mission with two trains in the same track	Purpose / Scope of topic	Two consecutive SoMs on the same TVP section followed by route setting.	 Open	
			Relationship between topics			
			Pre-Condition	Two trains make SoM on the same TVP section. Both trains will depart in the same direction. The train that is planned to be the second train to leave performs SoM first. Both trains may or may not have a valid position.		
			Post-Condition	Both trains have left the track on which SoM was performed.		
			Category	Normal operation		
			Assign to	101 Preparation to Train Departure		
		 SPP-21190 - 308 - txx - Use of NL mode for pushed movements	Purpose / Scope of topic	Selection of NL mode for pushed movements in which trains are not electrically coupled.	 Open	
			Relationship between topics	It is assumed this is not part of 900G Uncoupled pushing operations - otherwise this subtopic can be removed.		
			Pre-Condition	A train consisting of two or more traction units that are not electrically coupled needs to be pushed. The train is at standstill and has not obtained authorisation for any movement.		
			Post-Condition	A pushed movement of a not electrically coupled consist has been completed.		
			Category	Degraded mode		
			Assign to	308 Train assistance		
		 SPP-21441 - 103 - txx - Stopping at buffer stops	Purpose / Scope of topic	Although it could be regarded as part of  SPP-11781 - 107 - t15 - Arrival at scheduled stop or  SPP-21160 - 102G - t68 - Regular execution of planned train movement with an EOA at the buffer, it deals with a specific situation in which a fixed infrastructure location - buffer stop or stop marker cannot be reached fully due to the confidence interval of the train.	 Open	
			Relationship between topics	This is explicitly not covered in 102A, driving into occupied track, that deals with approaching movable trains rather than fixed elements on the infrastructure.		
			Pre-Condition			










Baselines	Description	Subtopics	Description		Status	Operational Processes
				A train is planned to arrive at a buffer stop or stop marker. The train has obtained MA up to the intended stopping location, but has projected its EOA on approach of the intended stopping location because of the confidence interval.		
			Post-Condition	The train has reached the intended stopping location.		
			Category	Normal operation		
			Assign to	103 Train arrival		
		 SPP-21589 - 307 - txx - Handling detections at trackside	Purpose / Scope of topic	Dealing with an alarm triggered by a trackside detection system (e.g. hot axle box, out of gauge, derailment) and ensuring that the train is inspected to determine if the train can be allowed to continue.	 Open	
			Relationship between topics	May trigger  SPP-21674 - 108D - t65 - Automatic reduction of Movement Permission by the CCS system for a specific location in case of imminent danger		
			Pre-Condition	A train has triggered an alarm in a trackside detection system.		
			Post-Condition	The train has been brought to a controlled standstill and inspected. Possible outcome of the inspection could be either to allow the train to continue or keep the train where it is for further error correction.		
			Category	Calamity operation		
			Assign to	307 Handling of emergency situations		
		 SPP-24019 - 150F - txx - Exit SH-mode	Purpose / Scope of topic	Making sure that no trains are left in SH-mode after shunting movements has been concluded in controlled areas.	 Open	
			Relationship between topics	Triggered by  SPP-11848 - 150J - t56 - Shunting on a route in SH mode with signaling information or  SPP-11843 - 150K - t57 - Shunting on a route in SH mode without signaling indication May trigger  SPP-18219 - 101 - txx - Enter onboard train data / SoM-1		
			Pre-Condition	A train has concluded shunting movements in a controlled area.		
			Post-Condition	The train has exited SH-mode and is now in SB-mode.		
			Category	Normal operation		
		 SPP-29771 - 101 - t77 - SOM when no radio connection is available prior to execution of Start			 Open	








Baselines	Description		Subtopics	Description		Status	Operational Processes																
				<table><tr><td>Purpose / Scope of topic</td><td>Departure after SOM in case no radio connection is available prior to execution of Start</td></tr><tr><td>Relationship between topics</td><td></td></tr><tr><td>Pre-Condition</td><td>A train performs start of mission and is planned to depart. The train does not have a radio connection available prior to execution of Start.</td></tr><tr><td>Post-Condition</td><td>The train has departed and is moving in SR under procedural authorisation (operational instruction).</td></tr><tr><td>Category</td><td>Degraded operation</td></tr><tr><td>Assign to</td><td>101 Preparation to Train Departure</td></tr></table>	Purpose / Scope of topic	Departure after SOM in case no radio connection is available prior to execution of Start	Relationship between topics		Pre-Condition	A train performs start of mission and is planned to depart. The train does not have a radio connection available prior to execution of Start.	Post-Condition	The train has departed and is moving in SR under procedural authorisation (operational instruction).	Category	Degraded operation	Assign to	101 Preparation to Train Departure							
Purpose / Scope of topic	Departure after SOM in case no radio connection is available prior to execution of Start																						
Relationship between topics																							
Pre-Condition	A train performs start of mission and is planned to depart. The train does not have a radio connection available prior to execution of Start.																						
Post-Condition	The train has departed and is moving in SR under procedural authorisation (operational instruction).																						
Category	Degraded operation																						
Assign to	101 Preparation to Train Departure																						
 SPP-30528 - Baseline 2 (beyond 2027)	<table><tr><th>Target application</th><th>Big nodes with complex operations</th></tr><tr><td>Included in addition</td><td><ul style="list-style-type: none">• shunting including pushed movements• train composition changes• working area handling (complex)• Enhancements requiring TSI changes</td></tr><tr><td>Excluded</td><td><ul style="list-style-type: none">• features beyond the current scope (e.g. GoA 3/4 or driving in relative braking distance)</td></tr><tr><td>Purpose</td><td>Provide functionality for network-wide application</td></tr></table>	Target application	Big nodes with complex operations	Included in addition	<ul style="list-style-type: none">• shunting including pushed movements• train composition changes• working area handling (complex)• Enhancements requiring TSI changes	Excluded	<ul style="list-style-type: none">• features beyond the current scope (e.g. GoA 3/4 or driving in relative braking distance)	Purpose	Provide functionality for network-wide application	 SPP-11772 - 403B_on - t09 - Establish working area with handheld terminal	<table><tr><td>Purpose / Scope of topic</td><td>Indicate that the field force is ready at the site and, if possible, establish the working area as planned.</td></tr><tr><td>Relationship between topics</td><td></td></tr><tr><td>Pre-Condition</td><td>The field force has arrived at the site and is ready to initiate a planned possession. It is technically possible to use a handheld terminal. One or more trains may be present in the area.</td></tr><tr><td>Post-Condition</td><td>A working area has been activated, providing safe conditions to execute maintenance activities on the railway infrastructure.</td></tr><tr><td>Category</td><td>Maintenance operation</td></tr></table>	Purpose / Scope of topic	Indicate that the field force is ready at the site and, if possible, establish the working area as planned.	Relationship between topics		Pre-Condition	The field force has arrived at the site and is ready to initiate a planned possession. It is technically possible to use a handheld terminal. One or more trains may be present in the area.	Post-Condition	A working area has been activated, providing safe conditions to execute maintenance activities on the railway infrastructure.	Category	Maintenance operation	 Open	
	Target application	Big nodes with complex operations																					
	Included in addition	<ul style="list-style-type: none">• shunting including pushed movements• train composition changes• working area handling (complex)• Enhancements requiring TSI changes																					
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	Purpose	Provide functionality for network-wide application																					
Purpose / Scope of topic	Indicate that the field force is ready at the site and, if possible, establish the working area as planned.																						
Relationship between topics																							
Pre-Condition	The field force has arrived at the site and is ready to initiate a planned possession. It is technically possible to use a handheld terminal. One or more trains may be present in the area.																						
Post-Condition	A working area has been activated, providing safe conditions to execute maintenance activities on the railway infrastructure.																						
Category	Maintenance operation																						
	 SPP-11775 - 403B_off - t10 - End working area with handheld terminal	<table><tr><td>Purpose / Scope of topic</td><td>Ensure that the responsibility of the infrastructure is handed back to the Signaller.</td></tr><tr><td>Relationship between topics</td><td></td></tr><tr><td>Pre-Condition</td><td>Infrastructure work has been completed and information about any restrictions in the use of the infrastructure is passed on to the Signaller. The Field Force has a handheld terminal available. One or more trains may be present in the area.</td></tr><tr><td>Post-Condition</td><td>The working area has been deactivated and the infrastructure is available for train traffic.</td></tr><tr><td>Category</td><td>Maintenance operation</td></tr></table>	Purpose / Scope of topic	Ensure that the responsibility of the infrastructure is handed back to the Signaller.	Relationship between topics		Pre-Condition	Infrastructure work has been completed and information about any restrictions in the use of the infrastructure is passed on to the Signaller. The Field Force has a handheld terminal available. One or more trains may be present in the area.	Post-Condition	The working area has been deactivated and the infrastructure is available for train traffic.	Category	Maintenance operation	 Open										
Purpose / Scope of topic	Ensure that the responsibility of the infrastructure is handed back to the Signaller.																						
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Pre-Condition	Infrastructure work has been completed and information about any restrictions in the use of the infrastructure is passed on to the Signaller. The Field Force has a handheld terminal available. One or more trains may be present in the area.																						
Post-Condition	The working area has been deactivated and the infrastructure is available for train traffic.																						
Category	Maintenance operation																						







Baselines	Description	Subtopics	Description		Status	Operational Processes
		 SPP-11788 - 403F - t19 - Handling of a low adhesion area	Purpose / Scope of topic	To compensate for the low adhesion factor in order to reduce the risk of the train overrunning the end of authority.	 Open	
			Relationship between topics			
			Pre-Condition	Trains are running under normal conditions. An area of the infrastructure has low adhesion. A driver, field force or train onboard system has detected low adhesion.		
			Post-Condition	All drivers of trains passing the affected infrastructure are informed on low adhesion and low adhesion is taken account while driving.		
			Category	Degraded operation		
		 SPP-11805 - 150A - t25 - Prepare shunting movement / Enter SM	Purpose / Scope of topic	Initiate SM mode, in order to allow a movement in which the cab is not a the front of the train	 Open	
			Relationship between topics	Triggers  SPP-11806 - 150B - t26 - Train Moves in SM		
			Pre-Condition	The train is connected, the cab is not at the front of the train, the train is at standstill. The train can be in SB mode or in FS/OS.		
			Post-Condition	Train has entered SM mode and may start moving		
			Category	Normal operation		
		 SPP-11806 - 150B - t26 - Train Moves in SM	Purpose / Scope of topic	Performing a supervised train movement when the operated cab is not at the front end of the train.	 Open	
			Relationship between topics	Preceded by  SPP-11805 - 150A - t25 - Prepare shunting movement / Enter SM		
			Pre-Condition	Train has entered SM mode		
			Post-Condition	Train comes to a standstill at the intended end of the supervised train movement when the operated cab is not at the front end of the train.		
			Category	Normal operation		
		 SPP-11818 - 150I - t55 - Shunting movement past the system border between working areas in the transition area	Purpose / Scope of topic	Execute a shunting movement in which the system border between working areas in the transition areas is passed	 Open	
Relationship between topics						









Baselines	Description	Subtopics	Description		Status	Operational Processes
			Pre-Condition	A train is at standstill within an activated working area near the system border.		
			Post-Condition	A train is at standstill within an activated working area a the other side of the system border.		
			Category	Normal operation		
		 SPP-11819 - 403H - t30 - Handling of wind restrictions	Purpose / Scope of topic	Handling of wind related restrictions is based on the generic restriction handling process with inputs and triggers from external detection systems or staff.	 Open	
			Relationship between topics	May trigger  SPP-11776 - 403C - t11 - Handling an unplanned speed restriction		
			Pre-Condition	Strong winds, that require adaptation of the allowed speed for safety reasons for some or all trains, have been detected or predicted.		
			Post-Condition	A speed restriction is included in the authorisation for all affected trains moving on the affected infrastructure.		
			Category	Degraded operation		
		 SPP-11820 - 403I - t31 - Changes in driving conditions	Purpose / Scope of topic	To ensure the Trackside CCS is always updated with the current capabilities of the infrastructure and log required information in the relevant electronic log.	 Open	
			Relationship between topics	May be triggered by  SPP-18234 - 314 - t57 - Handling of an undetected point that is not trailed or  SPP-21206 - 120B - t28 - Individual blocking and unblocking of trackside elements		
			Pre-Condition	An issue which affects driving conditions has been identified.		
			Post-Condition	The Trackside CCS and any relevant electronic log has been updated to reflect the current condition of the infrastructure.		
			Category	Degraded operation		
		 SPP-11823 - 403L - t34 - Removal of wind restrictions	Purpose / Scope of topic	Handling of wind restrictions is based on the generic restriction handling process with inputs and triggers from external detection systems or staff.	 Open	
			Relationship between topics	Required to remove a wind restriction that is the result of  SPP-11819 - 403H - t30 - Handling of wind restrictions		
			Pre-Condition	A wind related speed restriction is active. Wind detection systems measure winds below a certain safety value and/or lower wind speeds are predicted.		









Baselines	Description	Subtopics	Description		Status	Operational Processes
			Post-Condition	Wind related speed restrictions have been lifted; normal operation has resumed.		
			Category	Degraded operation		
		 SPP-11825 - 403N - t36 - Establish working area in a transition area	Purpose / Scope of topic	Indicate that the field force is ready at the site and, if possible, establish the working area in a transition area as planned.	 Open	
			Relationship between topics	Should be postponed until the transition regime is more stable and the handling of WAs/restrictions regarding the generic process is specified		
			Pre-Condition	The field force has arrived at the site and is ready to initiate a planned possession. One or more trains may be present in the area.		
			Post-Condition	A working area has been activated, providing safe conditions to execute maintenance activities on the railway infrastructure.		
			Category	Maintenance operation		
		 SPP-11826 - 403O - t37 - End working area in a transition area	Purpose / Scope of topic	Ensure that the responsibility of the infrastructure is handed back to the Signaller.	 Open	
			Relationship between topics	Should be postponed until the transition regime is more stable and the handling of WAs/restrictions regarding the generic process is specified		
			Pre-Condition	Infrastructure work has been completed and information about any restrictions in the use of the infrastructure is passed on to the Signaller. One or more trains may be present in the area.		
			Post-Condition	The working area has been deactivated and the infrastructure is available for train traffic.		
			Category	Maintenance operation		
		 SPP-11827 - 403P - t38 - Establish planned catenary isolation	Purpose / Scope of topic	Planned isolation of a catenary section. To be determined if there is any relation with the CCS system other than being linked to  SPP-11772 - 403B_on - t09 - Establish working area with handheld terminal. If not, it is outside of OD scope and can be removed.	 Open	
			Relationship between topics	Original text: It is suspected, that the catenary isolation is handled as a normal restriction, so it will be covered in the generic restriction handling process with dedicated parameters		
			Pre-Condition	Catenary is powered and planned to be isolated.		









Baselines	Description	Subtopics	Description		Status	Operational Processes
			Post-Condition	Catenary is isolated.		
			Category	Maintenance operation		
		 SPP-11828 - 403Q - t39 - End catenary isolation	Purpose / Scope of topic	Ending a planned isolation of a catenary section. To be determined if there is any relation with the CCS system other than being linked to  SPP-11775 - 403B_off - t10 - End working area with handheld terminal If not, it is outside of OD scope and can be removed.	 Open	
			Relationship between topics			
			Pre-Condition	Catenary is isolated and planned to be powered up again.		
			Post-Condition	Catenary is powered.		
			Category	Maintenance operation		
		 SPP-11829 - 403R - t40 - Emergency catenary isolation	Purpose / Scope of topic	Arrange unplanned catenary isolation in case of emergency. Original text: must be clarified, if this is needed or can be handled the same way as a normal catenary isolation restriction. It must also be clarified how the "fast lane" implementation of restrictions regarding the generic process is going to look like	 Open	
			Relationship between topics	May trigger  SPP-11772 - 403B_on - t09 - Establish working area with handheld terminal and/or  SPP-20536 - t64 - 108C Reducing Movement Permission by signaller action for an area in case of imminent danger		
			Pre-Condition	A calamity situation has occurred that requires immediate isolation of the catenary.		
			Post-Condition	Catenary has been isolated.		
			Category	Calamity operation		
		 SPP-11830 - 403S - t41 - End emergency catenary isolation			 Open	










Baselines	Description	Subtopics	Description		Status	Operational Processes
			Purpose / Scope of topic	End unplanned catenary isolation in case of emergency. Original text: must be clarified, if this is needed or can be handled the same way as a normal catenary isolation restriction. It must also be clarified how the "fast lane" implementation of restrictions regarding the generic process is going to look like.		
			Relationship between topics	 SPP-11829 - 403R - t40 - Emergency catenary isolation		
			Pre-Condition	The calamity situation required immediate isolation of the catenary no longer exists.		
			Post-Condition	Catenary is powered again or catenary is isolated as part of a planned catenary isolation.		
			Category	Calamity operation		
		 SPP-11837 - 403Z - t48 - Emergency catenary isolation requested by Emergency services	Purpose / Scope of topic	To isolate the power and ensure safe conditions in an area where the Emergency Services has to perform their work.	 Open	
			Relationship between topics	May be preceded by  SPP-17089 - 108B - t62 - Reducing Movement Permission by signaller action for a specific location in case of imminent danger or  SPP-21673 - 108C - t64 - Reducing Movement Permission by signaller action for an area in case of imminent danger		
			Pre-Condition	The Emergency services has the need for an emergency catenary isolation for the sake of their work.		
			Post-Condition	The power has been isolated and the Emergency Services can safely carry out their work (may include some sort of earthing arrangement).		
			Category	Calamity operation		
		 SPP-11843 - 150K - t57 - Shunting on a route in SH mode without signaling indication	Purpose / Scope of topic	Shunting in SH mode on controlled track on signaller authorisation	 Open	
			Relationship between topics			
			Pre-Condition	A train is at standstill and needs to make a movement in SH mode (for instance in case of a pushed movement and no support of SM mode)		







Baselines	Description	Subtopics	Description		Status	Operational Processes
			Post-Condition	Train has come to a standstill at the intended end of the train movement to be performed in SH mode.		
			Category	Degraded operation		
		 SPP-11848 - 150J - t56 - Shunting on a route in SH mode with signaling information	Purpose / Scope of topic	Moving in SH mode on controlled track while the signaling permission for shunting is provided via technical means such as a handheld device or a shunting signal	 Open	
			Relationship between topics			
			Pre-Condition	A train is at standstill and needs to make a movement in SH mode (for instance in case of a pushed movement an no support of SM mode).		
			Post-Condition	Train has come to a standstill at the intended end of the train movement to be performed in SH mode.		
			Category	Normal operation		
		 SPP-17090 - 307 - t63 - Optimised stopping of other trains initiated by driver	Purpose / Scope of topic	Allow a driver to inform other trains of imminent danger in order to reduce the speed of affected trains.	 Open	
			Relationship between topics			
			Pre-Condition	A driver has identified a situation on the infrastructure that presents imminent danger.		
			Post-Condition	Affected train drivers have been informed and affected trains have stopped or reduced speed.		
			Category	Calamity operation		
		 SPP-17273 - 150C - t29 - Exit SM-mode	Purpose / Scope of topic	Exit of SM mode and return to SB mode, either to close the cab or perform a train movement in SH, SR, OS or FS mode.	 Open	
			Relationship between topics			
			Pre-Condition	Train has come to a standstill at the intended end of the train movement to be performed in SH mode.		
			Post-Condition	Operated cabin is in SB mode.		
			Category	Normal operation		







Baselines	Description	Subtopics	Description	Status	Operational Processes										
		 SPP-18208 - 150L - t58 - Start shunting from SB-mode	<table><tr><td>Purpose / Scope of topic</td><td>Allow the start of a movement in SH mode for trains that are not executing a Mission.</td></tr><tr><td>Relationship between topics</td><td></td></tr><tr><td>Pre-Condition</td><td>A train has not performed Start of Mission and is in SB mode. A movement in SH mode is intended. The position of the train is invalid or unknown.</td></tr><tr><td>Post-Condition</td><td>Train is in SH mode and start shunting movement.</td></tr><tr><td>Category</td><td>Normal operation</td></tr></table>	Purpose / Scope of topic	Allow the start of a movement in SH mode for trains that are not executing a Mission.	Relationship between topics		Pre-Condition	A train has not performed Start of Mission and is in SB mode. A movement in SH mode is intended. The position of the train is invalid or unknown.	Post-Condition	Train is in SH mode and start shunting movement.	Category	Normal operation	 Open	
Purpose / Scope of topic	Allow the start of a movement in SH mode for trains that are not executing a Mission.														
Relationship between topics															
Pre-Condition	A train has not performed Start of Mission and is in SB mode. A movement in SH mode is intended. The position of the train is invalid or unknown.														
Post-Condition	Train is in SH mode and start shunting movement.														
Category	Normal operation														
		 SPP-18222 - 101 - txx - Handling of hazardous goods	<table><tr><td>Purpose / Scope of topic</td><td>Taking additional safety measures for trains transporting hazardous goods, like providing information on the goods that are transported, limitations for other train traffic, or to prevent unintended stops.</td></tr><tr><td>Relationship between topics</td><td></td></tr><tr><td>Pre-Condition</td><td>A train transporting hazardous goods is ready for planned departure.</td></tr><tr><td>Post-Condition</td><td>A train transporting hazardous goods has arrived at its destination.</td></tr><tr><td>Category</td><td>Normal operation</td></tr></table>	Purpose / Scope of topic	Taking additional safety measures for trains transporting hazardous goods, like providing information on the goods that are transported, limitations for other train traffic, or to prevent unintended stops.	Relationship between topics		Pre-Condition	A train transporting hazardous goods is ready for planned departure.	Post-Condition	A train transporting hazardous goods has arrived at its destination.	Category	Normal operation	 Open	
Purpose / Scope of topic	Taking additional safety measures for trains transporting hazardous goods, like providing information on the goods that are transported, limitations for other train traffic, or to prevent unintended stops.														
Relationship between topics															
Pre-Condition	A train transporting hazardous goods is ready for planned departure.														
Post-Condition	A train transporting hazardous goods has arrived at its destination.														
Category	Normal operation														
		 SPP-18246 - 401 - txx - Working area handover with handheld terminal	<table><tr><td>Purpose / Scope of topic</td><td>Handover of an activated working area from one field force to another using a handheld terminal</td></tr><tr><td>Relationship between topics</td><td></td></tr><tr><td>Pre-Condition</td><td>An activated working area is under the control of a field force.</td></tr><tr><td>Post-Condition</td><td>An activated working area is handed over and is now under the control of another field force.</td></tr><tr><td>Category</td><td>Maintenance operation</td></tr></table>	Purpose / Scope of topic	Handover of an activated working area from one field force to another using a handheld terminal	Relationship between topics		Pre-Condition	An activated working area is under the control of a field force.	Post-Condition	An activated working area is handed over and is now under the control of another field force.	Category	Maintenance operation	 Open	
Purpose / Scope of topic	Handover of an activated working area from one field force to another using a handheld terminal														
Relationship between topics															
Pre-Condition	An activated working area is under the control of a field force.														
Post-Condition	An activated working area is handed over and is now under the control of another field force.														
Category	Maintenance operation														
		 SPP-18266 - 311 - txx - Runaway vehicle	<table><tr><td>Purpose / Scope of topic</td><td>Handling a situation in which a railway vehicle, that is not controlled by any driver, suddenly starts moving on its own.</td></tr><tr><td>Relationship between topics</td><td></td></tr><tr><td>Pre-Condition</td><td>A railway vehicle, that is not controlled by any driver (or ATO) suddenly starts moving on its own.</td></tr></table>	Purpose / Scope of topic	Handling a situation in which a railway vehicle, that is not controlled by any driver, suddenly starts moving on its own.	Relationship between topics		Pre-Condition	A railway vehicle, that is not controlled by any driver (or ATO) suddenly starts moving on its own.	 Open					
Purpose / Scope of topic	Handling a situation in which a railway vehicle, that is not controlled by any driver, suddenly starts moving on its own.														
Relationship between topics															
Pre-Condition	A railway vehicle, that is not controlled by any driver (or ATO) suddenly starts moving on its own.														







Baselines	Description	Subtopics	Description		Status	Operational Processes
			Post-Condition	Train traffic in the affected area has been stopped, while also the runaway vehicle has been brought to a halt.		
			Category	Calamity operation		
		 SPP-18268 - 316A - t59 - INIT Trackside initialisation	Purpose / Scope of topic	Initiation of the trackside CCS system.	 Open	
			Relationship between topics			
			Pre-Condition	The trackside CCS system needs to be initiated.		
			Post-Condition	The trackside CCS system can operate normally.		
			Category	Maintenance operation		
		 SPP-18269 - 317 - txx - Obstacle detection	Purpose / Scope of topic	Allowing obstacle detection by an onboard system.	 Open	
			Relationship between topics	Could be regarded as part of  SPP-11766 - 102C - t03 - Observations while driving when using ATO GOA2		
			Pre-Condition	Onboard automatic obstacle detection has been activated and the train is approaching an obstacle on the track.		
			Post-Condition	Train has come to a standstill, either prior to a collision with the detected object or after collision.		
			Category	Calamity operation		
		 SPP-18277 - 307 - txx - Electrical rolling stock in earthed area	Purpose / Scope of topic	Informing the responsible Field Force and Catenary Manager and to ensure work is stopped immediately Ensuring that all earthing arrangements are checked and fit for purpose before work can continue.	 Open	
			Relationship between topics			
			Pre-Condition	Electrical rolling stock has entered into an earthed area.		
			Post-Condition	Safe working conditions has been restored and the work can continue.		
			Category	Degraded operation		
					 Open	







Baselines	Description	Subtopics	Description		Status	Operational Processes
		 SPP-18278 - 307 - txx - Triggering alarm from tunnel protection system	Purpose / Scope of topic	Handling a tunnel alarm, dealing with a (potential) calamity situation in the tunnel.		
			Relationship between topics			
			Pre-Condition	Alarm status has been triggered in the tunnel installation, either directly by sensor connected to a sensor inside or outside of a tunnel installation, or by operational staff present in the tunnel or at the control center (including the signaller).		
			Post-Condition	Trains that can be stopped prior to entering the tunnel have been stopped, trains that cannot avoid entering the tunnel or are already present in the tunnel but can leave the tunnel have left the tunnel, trains that cannot avoid entering the tunnel or are already present in the tunnel and cannot exit the tunnel have been brought to a stop inside the tunnel		
			Category	Calamity operation		
		 SPP-18279 - 307 - txx - Emergency brake activated by person	Purpose / Scope of topic	Dealing with an emergency brake activation by a passenger	 Open	
			Relationship between topics			
			Pre-Condition	A passenger has activated the emergency brake		
			Post-Condition	The train has come to a full stop		
			Category	Calamity operation		
		 SPP-18280 - 307 - txx - Bridge collision alarm	Purpose / Scope of topic	Dealing with a bridge collision alarm	 Open	
			Relationship between topics	May trigger  SPP-21674 - 108D - t65 - Automatic reduction of Movement Permission by the CCS system for a specific location in case of imminent danger		
			Pre-Condition	A bridge has been hit by a road vehicle or a ship.		
			Post-Condition	Train traffic passing the bridge has been stopped.		
			Category	Calamity operation		
		 SPP-18281 - 307 - txx - Emergency situation on a bascule bridge			 Open	







Baselines	Description	Subtopics	Description		Status	Operational Processes
			Purpose / Scope of topic	Dealing with an emergency situation on a bascule bridge		
			Relationship between topics	May trigger  SPP-21674 - 108D - t65 - Automatic reduction of Movement Permission by the CCS system for a specific location in case of imminent danger		
			Pre-Condition	An emergency has been detected on a bascule bridge.		
			Post-Condition	Train traffic passing the bridge has been stopped.		
			Category	Calamity operation		
		 SPP-18283 - 307 - txx - Call Emergency services	Purpose / Scope of topic	Calling the Emergency Services to an incident or accident. Ensuring that relevant information (e.g. hazardous goods) are provided to the Emergency Services.	 Open	
			Relationship between topics	Can follow  SPP-21673 - 108C - t64 - Reducing Movement Permission by signaller action for an area in case of imminent danger or  SPP-18289 - 307 - txx - Impact with object and/or derailment		
			Pre-Condition	An incident or other emergency requires Emergency Services to be alerted.		
			Post-Condition	The Emergency Services has been alerted and all relevant information has been provided to ensure the safety of Emergency Services staff.		
			Category	Calamity operation		
		 SPP-18284 - 307 - txx - Evacuation of train	Purpose / Scope of topic	Handling a calamity situation that requires evacuation of a train.	 Open	
			Relationship between topics	May be triggered by another calamity operation topic.		
			Pre-Condition	A calamity situation occurs that requires evacuation of a train.		
Post-Condition	The train has come to a standstill and the passengers and train staff have left the railway infrastructure.					
Category	Calamity operation					
 SPP-21143 - 102E - txx - Non stop area	Purpose / Scope of topic	In some industrial area is forbidden to stop, if the MA can be shortened, CCS will do it otherwise the train needs to pass through. For example, evacuation of contaminated area.	 Open			

Baselines	Description	Subtopics	Description		Status	Operational Processes
				Comment: although non stopping is included in the tunnel topics (900E) it is not included anywhere else		
			Relationship between topics			
			Pre-Condition	A train approaches an non stopping area		
			Post-Condition	A train has passed the non stopping area		
			Category	Normal operation		
			Assign to	102 Movement A to B		
		 SPP-21149 - 999A - txx - Virtual coupling and platooning	Purpose / Scope of topic	Virtual coupling and platooning - Placeholder, to be detailed based on Innovation Pillar input	 Open	
			Relationship between topics			
			Pre-Condition			
			Post-Condition			
			Category			
		 SPP-21151 - 102F - txx - Route suitability checks	Purpose / Scope of topic	Checking on route suitability and preventing access to non suitable trains	 Open	
			Relationship between topics	It is unclear if any suitability checks additional to those in traffic management should be performed, but it is not ruled out beforehand that some of these checks also need to be performed in the CCS system (PES/ETPS)		
			Pre-Condition	A train is approaching a certain part of SERA CCS infrastructure and route suitability has been checked in traffic management.		
			Post-Condition	Route suitability has been checked in the CCS domain. Non suitable trains have been brought to a halt prior to entering the infrastructure for which they are not suitable.		
			Category	Normal or degraded operation		
			Assign to	102 Movement A to B		
		 SPP-21162 - 305 - txx - Use of RV mode: fast and controlled backwards movement			 Open	

Baselines	Description	Subtopics	Description	Status	Operational Processes
			<div>Purpose / Scope of topic</div> <div>Allow fast and supervised backwards movement to remove a train from a dangerous location or area.</div>		
			<div>Relationship between topics</div> <div>May be triggered by  SPP-21673 - 108C - t64 - Reducing Movement Permission by signaller action for an area in case of imminent danger or  SPP-21674 - 108D - t65 - Automatic reduction of Movement Permission by the CCS system for a specific location in case of imminent danger</div>		
			<div>Pre-Condition</div> <div>A train has entered an area or location that presents danger. It is not possible to quickly leave that area or location by moving forward.</div>		
			<div>Post-Condition</div> <div>The train has performed a supervised reverse movement and has completely left the area or location that presents danger.</div>		
			<div>Category</div> <div>Calamity operation</div>		
			<div>Assign to</div> <div>305 Reversing</div>		
		 SPP-21163 - 109C - txx - Passing a supervised staff or passenger crossing	<div>Purpose / Scope of topic</div> <div>Handling of a movement over passenger / staff crossing (if not equal to normal LX) that guarantees warning the crossing users of any approaching trains.</div>	 Open	
			<div>Relationship between topics</div> <div></div>		
			<div>Pre-Condition</div> <div>A train approaches a passenger crossing that guarantees warning the crossing users of any approaching trains. Passengers or staff are also approaching or moving on the crossing.</div>		
			<div>Post-Condition</div> <div>The train has passed the passenger / staff crossing while passengers / staff have waited at a safe distance and can now use the crossing again.</div>		
			<div>Category</div> <div>Normal operation</div>		
			<div>Assign to</div> <div>109 pass level crossing</div>		
		 SPP-21166 - 101 - txx - Movement with a special vehicle profile (loading gauge)	<div>Purpose / Scope of topic</div> <div>Movement that requires specific conditions on the infrastructure, i.e. the absence of train traffic on adjacent tracks</div>	 Open	
			<div>Relationship between topics</div> <div></div>		
			<div>Pre-Condition</div> <div>A train that requires specific conditions on a certain part of the infrastructure is approaching or departing towards this part of the infrastructure. It has no MA that allows entering this part of the infrastructure.</div>		
<div>Post-Condition</div> <div></div>					

Baselines	Description	Subtopics	Description		Status	Operational Processes
				The train has passed the infrastructure for which it required specific conditions or has arrived.		
			Category	Normal operation		
			Assign to	101 Preparation to train departure		
		 SPP-21167 - 150N - txx - Uncoupled pushing operations	Purpose / Scope of topic	Pushing a train uphill without being coupled; releasing this pushed train, backwards movement of the pushing vehicle - for instance used in hump yard operation	 Open	
			Relationship between topics			
			Pre-Condition	A train / consist needs to be pushed and released over a hill to allow train assembly. The consist and the pushing engine are at standstill.		
			Post-Condition	The pushed consist has come to an intended stop at the receiving track. The pushing engine has returned to its original location.		
			Category	Normal operation		
			Assign to	150 Shunting inside controlled area		
		 SPP-21169 - 102I - txx - Train length dependent authorisation	Purpose / Scope of topic	In some cases, authorisation for train movement should be dependent on train length to prevent stopping a train at an unsuitable location, for instance in blocking a level crossing or point with the rear end of the train.	 Open	
			Relationship between topics			
			Pre-Condition	A train is approaching a location that is unsuitable for stopping for some trains depending on their train length. The train has not obtained MA up to this location.		
			Post-Condition	The train has completely passed the location without creating any deadlock for other trains in the area.		
			Category	Normal operation		
			Assign to	102 Movement A to B		
		 SPP-21170 - 102J - txx - Passage of locations where pantographs have to be kept down	Purpose / Scope of topic	Passage of a track location where all pantographs need to be lowered, as indicated by the signaling system.	 Open	
			Relationship between topics			

Baselines	Description	Subtopics	Description		Status	Operational Processes
			Pre-Condition	A train is approaching an area in which all pantographs need to be kept in lowered state. It has not obtained an MA to enter this area yet.		
			Post-Condition	The train has completely passed this area.		
			Category	Normal operation		
			Assign to	102 Movement A to B		
		 SPP-21171 - 102K - txx - Passage of locations without catenary power where traction power must be switched off	Purpose / Scope of topic	Passage of a track location where no traction power is available and may not be applied, as indicated by the signalling system.	 Open	
			Relationship between topics			
			Pre-Condition	A train is approaching an area in which no traction power may be applied. It has not obtained an MA to enter this area yet.		
			Post-Condition	The train has completely passed this area.		
			Category	Normal operation		
			Assign to	102 Movement A to B		
		 SPP-21175 - 22 - txx - Supervised level transition from a level 2 area to L0	Purpose / Scope of topic	Making the transition from a Level 2 into a L0 area authorised and supervised by ETCS and authorised by the legacy system.	 Open	
			Relationship between topics			
			Pre-Condition	A train is approaching a Level 0 area. The train is moving on an MA, but the MA does not allow leaving the Level 2 area yet.		
			Post-Condition	The train has completely left the Level 2 only area.		
			Category	Normal operation		
			Assign to	22 Exit transition from L2 area		
		 SPP-21191 - 22 - txx - Transition from Level 2 to Level 1	Purpose / Scope of topic	Making the transition from a SERA Level 2 area into a legacy Level 1 area authorised and supervised by the legacy CCS system and ETCS.	 Open	
			Relationship between topics			
			Pre-Condition	A train is approaching a Level 1 area and is running on a SERA Level 2 MA. It has not obtained MA to enter the Level 1 area yet.		

Baselines	Description	Subtopics	Description		Status	Operational Processes
			Post-Condition	The train has completely entered the Level 1 area.		
			Category	Normal operation		
			Assign to	22 Exit transition from L2 area		
		 SPP-21192 - 21 - txx - Transition from Level 1 to Level 2	Purpose / Scope of topic	Making the transition from a legacy Level 1 into a SERA Level 2 area authorised and supervised by the legacy CCS system and ETCS.	 Open	
			Relationship between topics			
			Pre-Condition	A train is approaching a SERA Level 2 area and is running on a Level 1 MA. It has not obtained MA to enter the SERA Level 2 area yet.		
			Post-Condition	The train has completely entered the Level 2 area.		
			Category	Normal operation		
			Assign to	21 Entry transition to L2 area		
		 SPP-21207 - 401 - txx - Guaranteed Warning Areas for maintenance work	Purpose / Scope of topic	Setting up, Driving through and quit Warning Areas, not to be mixed up with Working Areas; worksite protection interfaced to the CCS, e.g. via mobile devices	 Open	
			Relationship between topics			
			Pre-Condition	A field force is planned to perform activities on the infrastructure (such as inspections) that are considered safe enough to be performed between train passages. A train is approaching. The field force is not aware of the approaching train.		
			Post-Condition	The field force has been warned and awaits passage of the train at a safe location. The train has passed.		
			Category	Maintenance operation		
			Assign to	401 Working areas		
		 SPP-21210 - 308 - txx - Applying traction power to move out of a location without catenary power where pantographs have to be kept down	Purpose / Scope of topic	If a train is unintentionally stopped in an area where no traction power is available, sometimes the catenary status can be modified to allow traction power. The onboard may not permit this, however, if the CCS system provides a track condition to prevent this.	 Open	
			Relationship between topics			

Baselines	Description	Subtopics	Description		Status	Operational Processes
			Pre-Condition	An electrically powered train has come to an unintended standstill in a location in which the pantographs may not be raised. Catenary is present and it is possible to power the catenary.		
			Post-Condition	The train has left the area where pantographs need to be kept down on its own traction.		
			Category	Degraded operation		
			Assign to	308 Train assistance		
		SPP-21211 - 308 - txx - Applying traction power to move out of a location where traction power should be switched off	Purpose / Scope of topic	If a train is unintentionally stopped in an area where no traction power is available, sometimes the catenary status can be modified to allow traction power. The onboard may not permit this, however, if the CCS system provides a track condition to prevent this.	Open	
			Relationship between topics			
			Pre-Condition	An electrically powered train has come to an unintended standstill in a location in which traction power should be switched off. Catenary is present and it is possible to power the catenary.		
			Post-Condition	The train has left the area where power needs to be switched off on its own traction.		
			Category	Degraded operation		
			Assign to	308 Train assistance		
		SPP-21440 - 102L - txx - Expected loss of communication in a radio hole	Purpose / Scope of topic	Dealing with infrastructure locations that are known to provide unstable radio connections, also known as radio holes.	Open	
			Relationship between topics			
			Pre-Condition	A train is entering a radio hole and loses its connection with the trackside CCS system.		
			Post-Condition	The train has passed the radio hole without being stopped due to loss of contact.		
			Category	Normal operation		
			Assign to	102 Movement A to B		
		SPP-24086 - 316B - t60 - Trackside shutdown		Managing planned and unplanned shutdown of the trackside system.	Open	

Baselines	Description	Subtopics	Description		Status	Operational Processes
			Purpose / Scope of topic			
			Relationship between topics			
			Pre-Condition	The trackside is in on state and is regularly working. Trains are connected and are running the are controlled by the trackside system		
			Post-Condition	The trackside is in off state.		
			Category	Maintenance operation		

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