



Safety recommendation no. 157

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Safety deficit	<p>At approximately 4.30am on Friday, 15 November 2019, on the section of track with ETCS Level 2 in-cab signalling, an infrastructure shunting movement ran without movement authority on the in-service tracks 513-512-511-510 between Rivaz and Cully.</p> <p>Operations were endangered because a vehicle from the engineering worksite made a return journey at the end of the works without authorisation to move on the five kilometres of the ETCS Level 2 line between Rivaz and Cully, while the tracks were in service.</p> <p>The following contributed to the incident:</p> <ul style="list-style-type: none">- A lack of planning and coordination in preparing the works so that there was no agreed definition of the operating restrictions to be applied on the same site.- The complexity, number of operating regimes and various ways of conveying approval on this portion of the line.- The lack of information to staff on the ground on the status of the operations that would allow them to know unequivocally which operating mode was active on the section of track concerned. <p>Centralisation of traffic management, the widespread development of automation and computerisation of systems represent a challenge for the persons who must interact with these systems. There is an increased risk of human error when a person has to at some point take over and assume certain system functions that are no longer active or run by the system. Without planned support, humans cannot take over part of the operation of an automated application and ensure a level of safety equal to the system's. In current systems, not all persons involved have the same level of information on the state of the system and the resulting operating situation.</p>
Safety recommendation	<p>The STSB recommends that, in the development of centralised traffic management and widespread automation, the Federal Office of Transport (FOT) ensure that when humans are required in certain situations to take control of safety functions assigned to the system these functions automatically default to predefined substitute processes.</p>
Addressees	Bundesamt für Verkehr
Stage of the implementation	<p>Implemented. The FOT is of the opinion that the current specifications in the RSR R 300.1 section 2.1.6 are sufficient. This paragraph prescribes the cases in which checklists for rail services (CL-F) are to be used. The RSR form the basis for the creation of the checklists. There are no explicit specifications for the creation of checklists. Thus, it is theoretically conceivable that the suppliers of technical systems create such checklists. The responsibility for the</p>

preparation and application of the checklists lies with the transport companies, which have the expertise to create specific checklists tailored to their technical systems. The FOT therefore assumes that the transport companies will also involve their suppliers in the preparation of checklists where necessary.

**Investigation report concerning
the safety recommendation**

Rapport de première information
Rapport final
