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Enhancing Cooperation between the Operations Centre and Intervention Service in Railway Operations

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A wild animal is run over, an embankment is on fire, a train derails - a lot can happen on a railway network. Incident management in increasingly complex railway operations places high demands on the skills and competences of employees. Efficient inter-professional cooperation between the operations centre and the intervention service is crucial. The tasks of the operations centre encompass all parts of operational management (dispatching, signaling, customer information, technical control centre), while those of the intervention service include the coordinated management of an incident within the railway infrastructure on site. On the one hand, it is important to ensure the ability of individual employees to safely manage incidents in railway operations.

On the other hand, employees need specific cognitive skills and competences for cross-divisional, interprofessional cooperation so that they can work together attentively, proactively and efficiently in the complex and often time-critical phases of incident management. As too little attention has so far been paid to the joint training of interpersonal and cross-role skills, the aim of this project was to promote the cognitive, social and self-competences of employees for successful interprofessional cooperation. To this end, a team of the University of Applied Sciences and Arts Northwestern Switzerland (FHNW) developed a cross-divisional training course to improve the relevant cognitive skills of employees in the operations centre and the intervention service in a joint project with a Swiss railway company. In the first of three project phases, the analysis phase, the relevant cognitive skills and competences for interprofessional collaboration were first identified by means of literature research and structured interviews. The resulting key training topics are: (1) communication, (2) role understanding and perspective taking, and (3) shared mental models.

Based on the insights gained, methods for training the identified cognitive skills and competences were developed and tried in the second phase. In the final phase, the creation and implementation of training courses, a training concept for interprofessional training for employees of the operations centre and the intervention service was developed and tested in a pilot implementation. Two types of training were developed for each training topic: Off-the-job training and on-the-job exercises. The off-the-job training consists of a joint training course for employees from both the Operations Centre and the Intervention Service. This off-the-job training includes theoretical input, interprofessional exercises, discussion and critical reflection on past incident management as well as simulation of an incident to apply the newly acquired skills.

In addition to this training, the on-the-job exercises serve as practical training to consolidate the relevant skills and transfer them to everyday working life. They can be completed by employees individually and flexibly whenever they have time in their jobs. Overall, participating in the off-the-job training and carrying out the on-the-job exercises enables employees to promote cooperation between the operations centre and the intervention service and thus ensure that the relevant cognitive skills, communication, understanding of roles and perspective-taking as well as shared mental models are effectively trained for their work.