



**Integrated help reaction chains  
for enhancement of security in public transport**

Just imagine: you need help....  
and no-one notices!

## MOTIVATION

The public transport is a central component in the urban infrastructure. Incidents involving violence, malicious damages, and vandalism in busses, trams and at stops, particularly at night and at low frequency schedules, could result in passengers to feel uneasy, therefore avoiding public transportation altogether.

But also public transport drivers, ticket inspectors and security staff can easily get involved in security-critical situations.

## INNOVATION

To enhance security within the public transport, in the framework of InREAKT an innovative self-learning and self-optimising technical system is designed to automatically detect security-critical situations and emergencies

on the public transport, therefore initiating the appropriate measures for swift reaction. Such a help reaction chain consists of:

- Detecting somebody needing help
- Reporting a detected situation
- Notifying the response forces
- Intervening directly at the scene

The system should function without data storage or identifying individuals. By involving this unproblematic method regarding data protection issues, the perspective for public acceptance should increase. Furthermore, all technical developing will be assisted by a comprehensive applied psychological research.

Through InREAKT both the objective security of passengers and employees from public transport companies should be enhanced and their feeling of security.

## AIMS

### Detecting

The project InREAKT pursues the aim to detect security-critical situations and emergencies in the public transport by using a combination of optical, acoustic and mechanical sensors. Additional data will be considered, e.g. the dynamic customer information system and the vehicle's electronic data transmission, for the avoidance of false alarms.

### Reporting

Detecting a security-critical situation or an emergency will be transferred to an incident management system within the transportation company's control centre which contains action recommendations for the operators. This database is based on a self-learning structure, enabling to use the provided arbitrations which are continuously improvable.

### Notifying

To assert a quicker intervening of response forces (police, rescue service, private security service), substantial considerations to improve the communication channels are being examined. Therefore, an employee app will be integrated into the incident management system which will contain relevant information to inter-exchange.

### Intervening

Using technical systems, e.g. loudspeakers and light control systems, gives the opportunity to influence security-critical situations through remote controlled operation. Therefore, certain de-escalation strategies are conceptualized, offering various options that can be presented to different employee groups from transportation companies (drivers, ticket inspectors and security staff as well as control centre operators).



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