

# EU funds rail cybersecurity research

The Safety4Rails research programme to improve the resilience of railways and metros to cyber and physical attacks is one of five projects that will share €38m in funding from the EU's Horizon 2020 research budget.

The package announced by Commissioner for Innovation, Research, Culture, Education & Youth Mariya Gabriel on June 15 also includes the 7Shield project to improve prevention, detection, response and mitigation of cyber and physical threats to space infrastructure and the Ensures project covering e-commerce and delivery services.

The Impetus and S4AllCities projects are respectively aimed at enhancing the resilience of cities' infrastructure and services and at protecting citizens in the event of security incidents in public spaces. All five are due to start by October 2020 and run for two years.

Horizon 2020 is contributing €7.7m towards the €9.6m Safety4Rails project, which will be co-ordinated by Germany's Fraunhofer Institute.

Recognising that railways and metros could be an attractive target for cyber and/or physical attacks, Safety4Rails is intended to 'deliver methods and systems to increase the safety and recovery of track-based inter-city railway and intra-city metro transport'. This could range from cyber attacks such as the WannaCry virus or physical attacks like the Madrid commuter train bombings in 2014 to combined cyber-physical attacks, which the promoters suggest are 'an important emerging scenario given increasing IoT infrastructure integration'.

The research will focus on rush-hour scenarios where many

passengers are using metros and railways to commute or attend mass events, including multi-venue sporting tournaments. In the event of an incident, operators have to consider many aspects of passenger safety and security, ranging from threat analysis and situation awareness to the establishment of crisis communication and communicating any responses to passengers and other organisations.

The project aims to take a holistic approach to incident handling, analysing the cyber-physical resilience of metro and railway systems and providing mitigation strategies for an efficient response, as well as facilitating continuous adaptation to address 'ever-changing novel emerging risks'. Various proposals will be validated by two rail transport operators and fed back into the design of the final recommendations.

'Securing network and information systems and enhancing cyber resilience are key for shaping Europe's digital future', said Internal Market Commissioner Thierry Breton. 'As we are faced with a diverse array of cybersecurity threats, the EU is taking concrete measures to protect critical infrastructure, cities and citizens. More investments at EU and national level in innovative cybersecurity technologies and solutions are of paramount importance to strengthen EU's resilience to cyberattacks.'

Source: [railwaygazette.com](http://railwaygazette.com)