

Save lives with railway embankments monitoring

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over **10.000**
 sensors located
 along the length
 of the railway

over **5**
 years on battery
 for wireless
 sensors work

?
 of lives saved
 thanks to early
 warning



The Idea

The main goal of Findlay Irvine was to develop a solution to provide warnings for earthworks failures causing potential danger to traffic. They wanted to have all information immediately available in the control room allowing Engineers to make quick decisions about how serious an event is and if any action is required.



The Solution

Earthworks system consists of

- 1) multiple wireless tilt sensors monitoring railway embankments,
- 2) automatic alerts sent through a huge wireless mesh network to a central server,
- 3) auto triggered onsite day/night IR cameras sending images to a central office.



The Results

As the result, the system provides a comprehensive early warning system of slippages at railways. Remotely gained information reduce the need to send staff to site which prevents staff having to be put in potentially dangerous circumstances. The system is deployed in the United Kingdom.



The IQRF Benefits

IQRF provides extra low power communication which enables over 5 years of battery life time. More over thanks to full bi-directional communication sensors could be debugged and upgraded over-the-air without extra service costs. IQRF also provides secure and reliable communication even in cases of water or snow layer on the ground thanks to a reliable mesh network.