

Accessing support to improve your rail offer

BCRRE Team



Who we are: Birmingham Centre for Railway Research and Education (BCRRE)

- Largest university based centre for railway research and education in Europe, with more than 180 researchers and staff
- World-leading expertise in railway systems and infrastructure alongside renowned global higher education programmes
- Areas of particular expertise include:

Condition monitoring

Data integration and Cybersecurity

Environmental engineering

Modelling and computation

Power and energy

Risk and safety

Systems engineering

Railway capacity

Real-time traffic management

Railway education

Aerodynamics

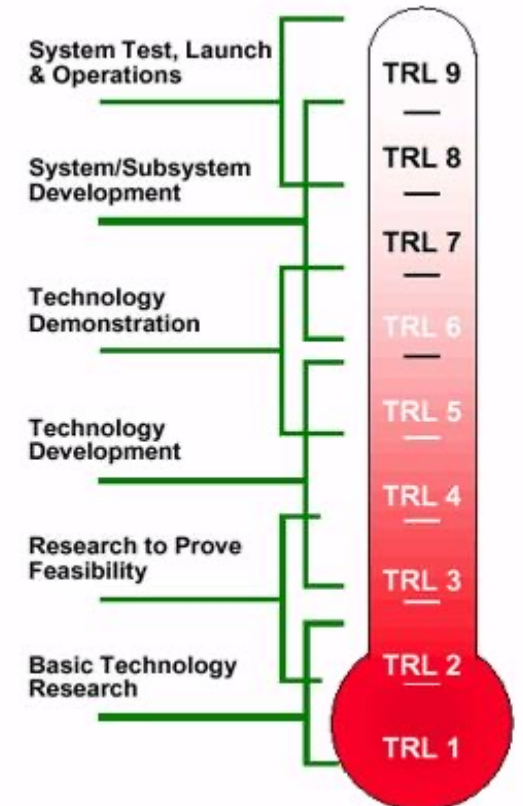
Benchmarking



THE QUEEN'S
ANNIVERSARY PRIZES
FOR HIGHER AND FURTHER EDUCATION
2017

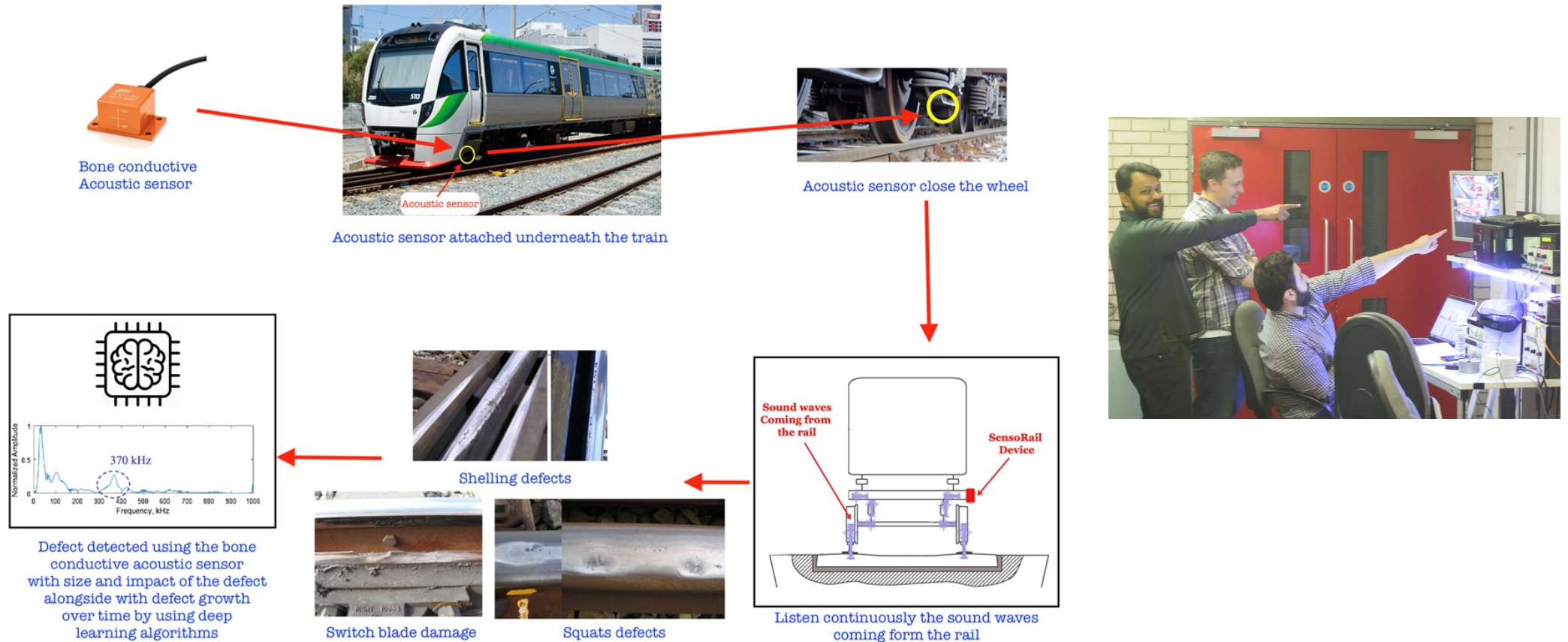
DIGI-RAIL Project Overview

- ERDF part-funded SME support programme
- DIGI-RAIL will bring together railway sector buyers with West Midlands businesses and research expertise.
- The aim of the initiative is to solve challenges within the railway sector and access the increasing number of digital rail commercial and research opportunities that currently exist in the UK and internationally.
- DIGI-RAIL will showcase and offer long-term innovation support to businesses looking to develop digital products and services for the rail industry.



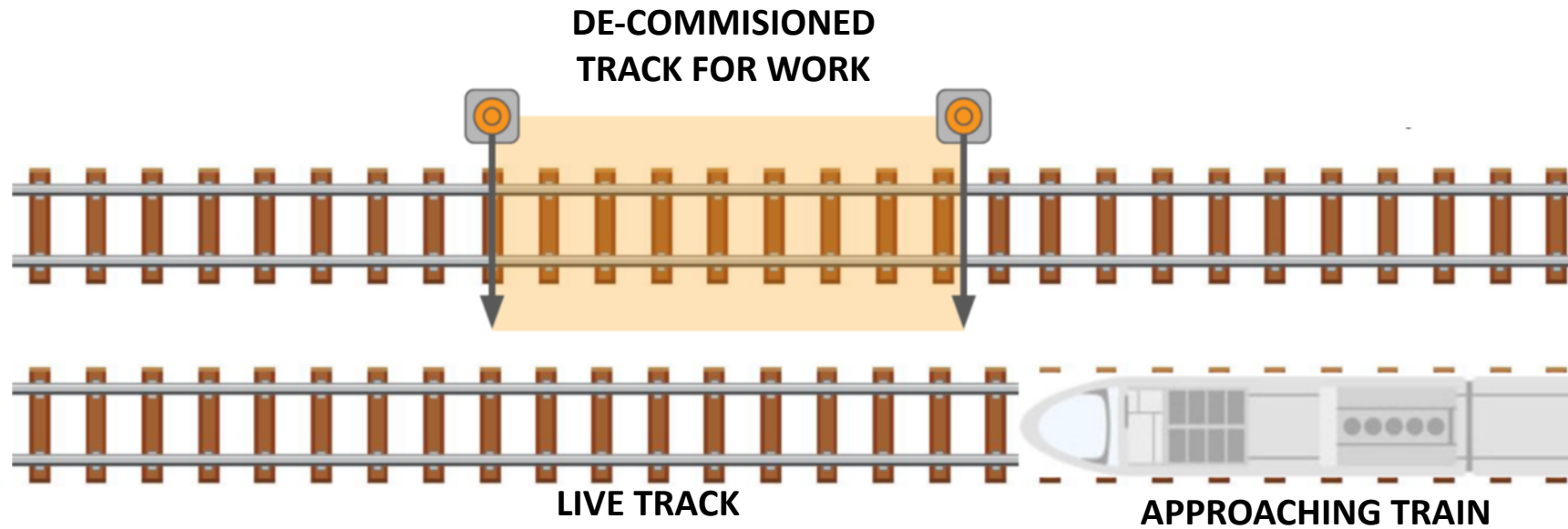
Case Study 1 – SensoRail

Project objective is to monitor vibration and sound in the rail slab, overhead lines and train axle which is translated into movement data; comparing this real-time data to a known baseline. The solution detects changes which can be used to identify defects.



Case Study 2 – Wearable Link

Project objective is to develop a collision warning system for railway workers



Alert based on a system clock to simulate "live timetable" information



"Train detected" - Send alert to helmet mounted device

A method of clearing the Alert through the keypad



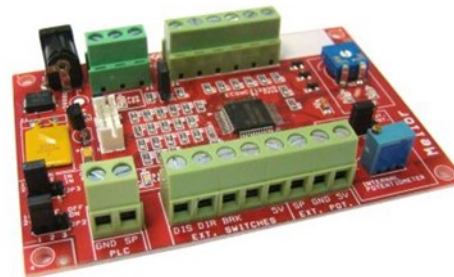
Case Study 3 – RSS Infrastructure Ltd

The design and development of a motorised maintenance trolley to reduce the rate of accidents on the railway



The IA trolley includes the features of a motorised trolley powered by the rechargeable battery, with an upgraded control system based on an intelligent algorithm (IA).

- **Modular torch light**
- **Collision Detection System**
- **Remote Controlled Driving: Wired Remote**



THANK YOU!!!

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