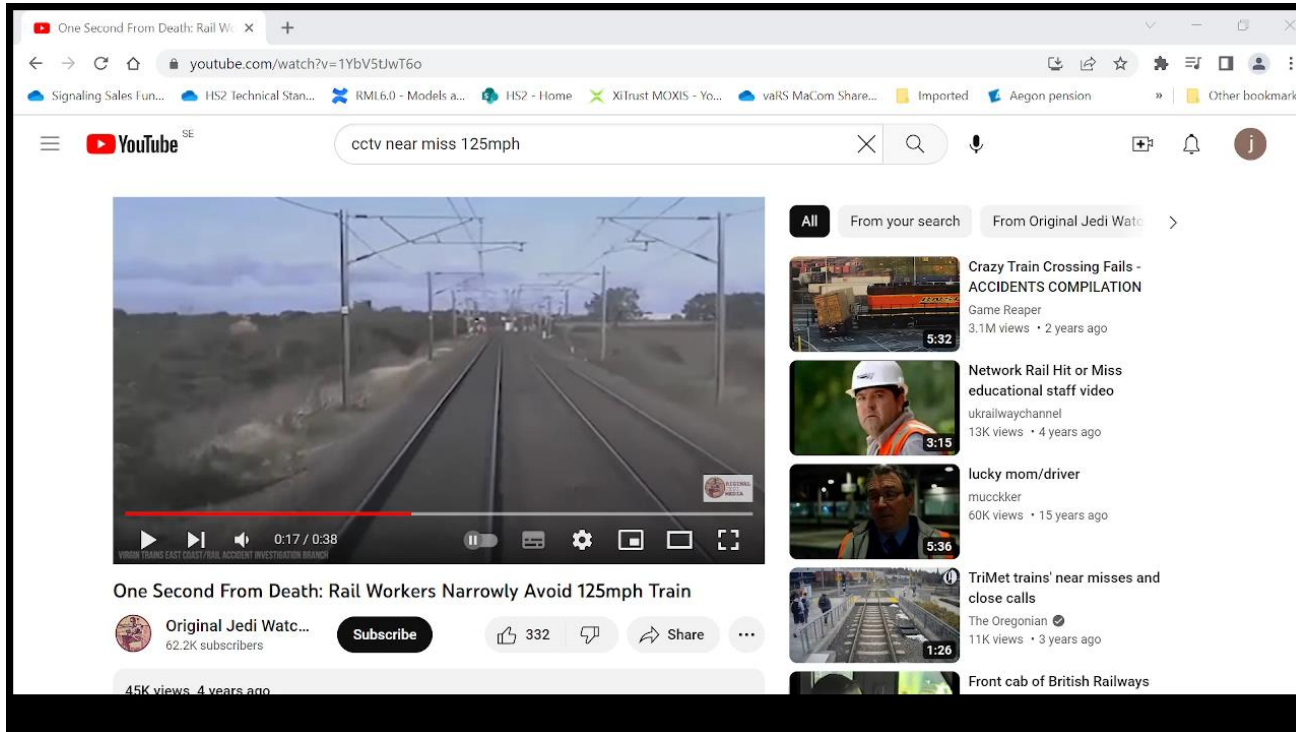


Safety & Asset Management in Rail Planning



John Smith
CEO, voestalpine Signaling UK Ltd.
June 13th 2023

VIDEO – Near miss from FFCCTV



Worst Case Scenario



- » 3rd July 2019
- » Fatalities of 2 experienced Network Rail staff
- » Conducting scheduled maintenance on switches

Railroad worker safety

- » Each year, hundreds of employees are killed on the world's railroads
- » Tens of thousands are seriously injured
- » We should never accept these tragic statistics in our industry
- » Planning of rail infrastructure **MUST** consider safety, not only during construction, but for the whole lifecycle of the assets

Challenge for all Railroads

- » Increasing demand for both passenger and freight transport by rail is good – by far the most sustainable mode of transport (CO_2 / km)
- » But this places ever increasing demands on infrastructure
- » Need for availability and reliability is therefore increasing, but....
- » Opportunity to maintain the infrastructure is decreasing

- » How can we manage this situation and most importantly, protect the safety of our workforce?

Planning for less “boots on ballast”

- » Remote Condition Monitoring provides 24/7/365 real time monitoring of asset health
 - » Reduced need for on-site inspection
 - » Reduced failures – un-planned track access
 - » Better information
 - » Planned interventions (preventative maintenance)
 - » Improved right-first-time fixes

Asset Digitization

Sensors



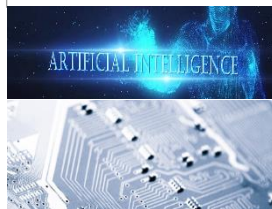
Data Acquisition



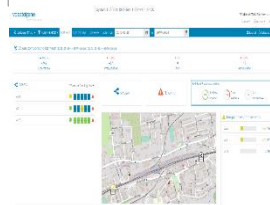
Connectivity



Analytics



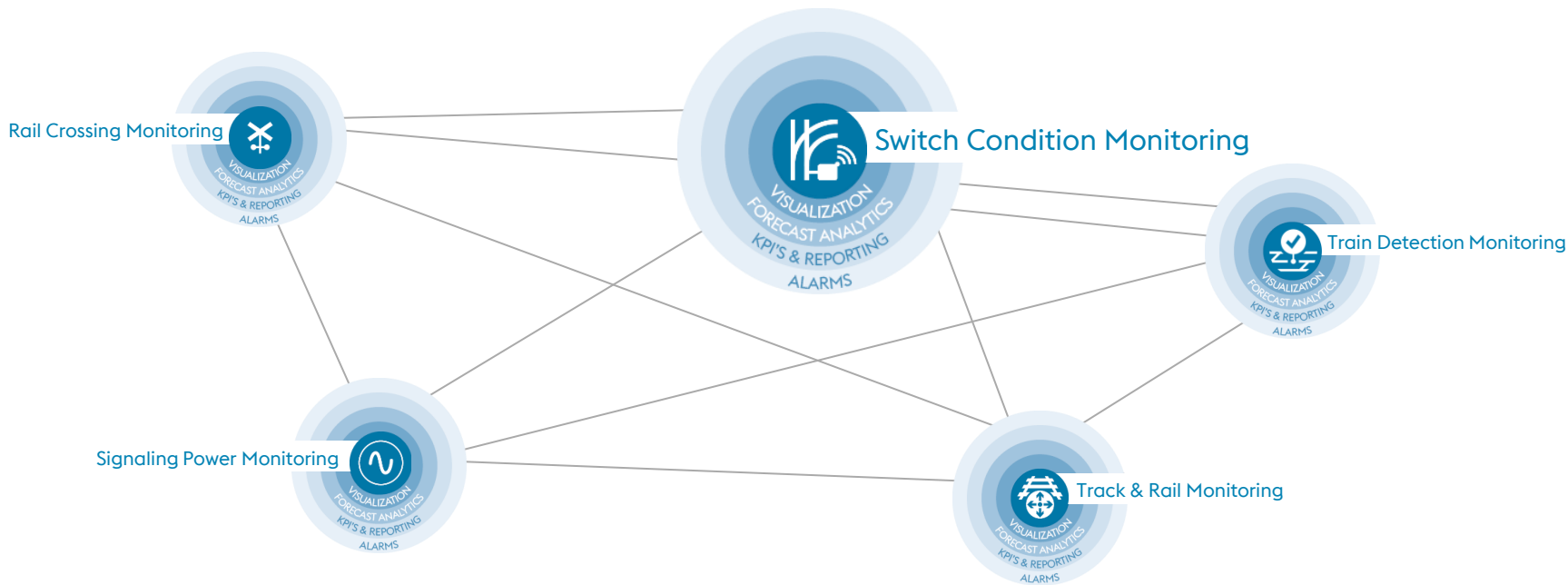
Presentation



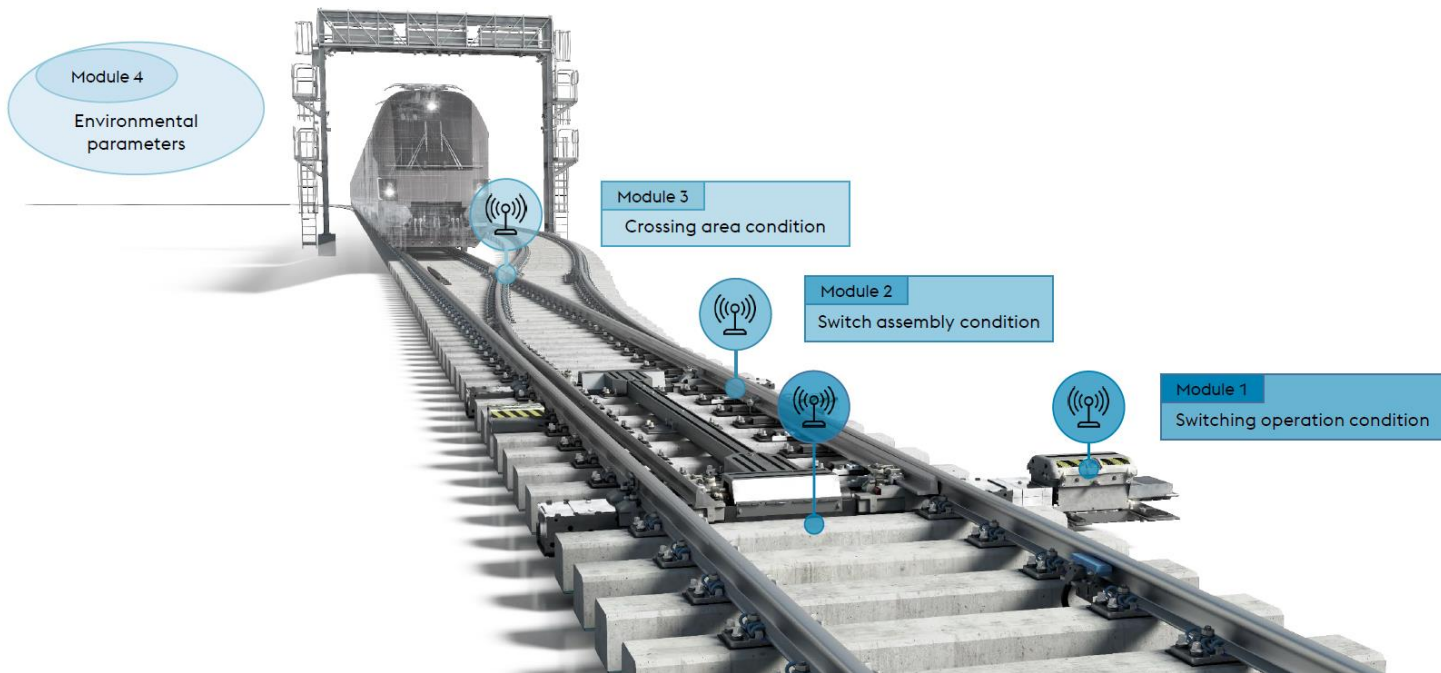
Domain Know How



Monitoring Categories



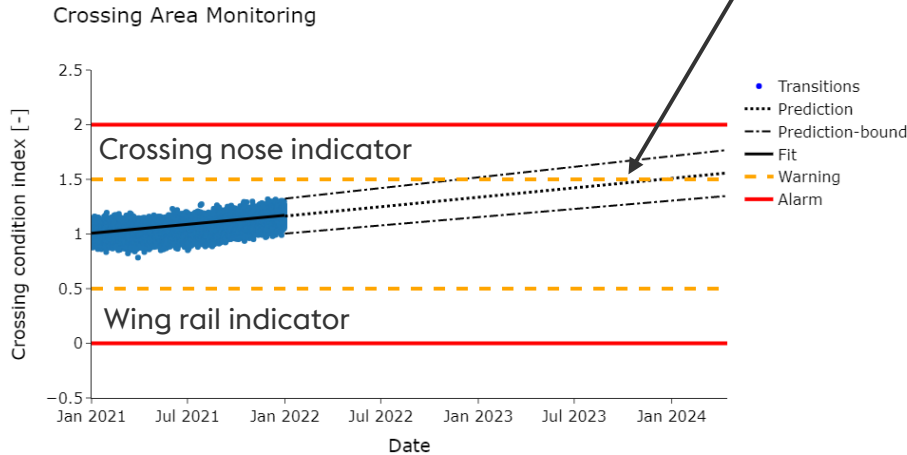
Example – Intelligent Turnouts



Example - Intelligent Turnouts



Crossing nose threshold level will be exceeded in Jul. 2023 → **Inspection** and **corrective action** proposed between Jan. 2023 – Sept. 2023



ROADMASTER® Diagnostic & Monitoring system



Diagnostic and monitoring technologies for infrastructure

- » More than 30 years of experience
- » Extensive expertise and reference in the international diagnostic business
- » Comprehensive system know-how

Highest availability, **safety** and reliability

"The railway industry as a whole must not leave the business area of intelligent networked products to companies from outside the industry."

Reinhold Hundt, Managing Director of Astran Business Consulting GmbH

Thank you for listening!

John Smith

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