METIS

RAIL INFASTRUCTURE & ASSET MANAGEMENT

SUMMIT AND EVENT WRAP

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EVENT SUMMARY

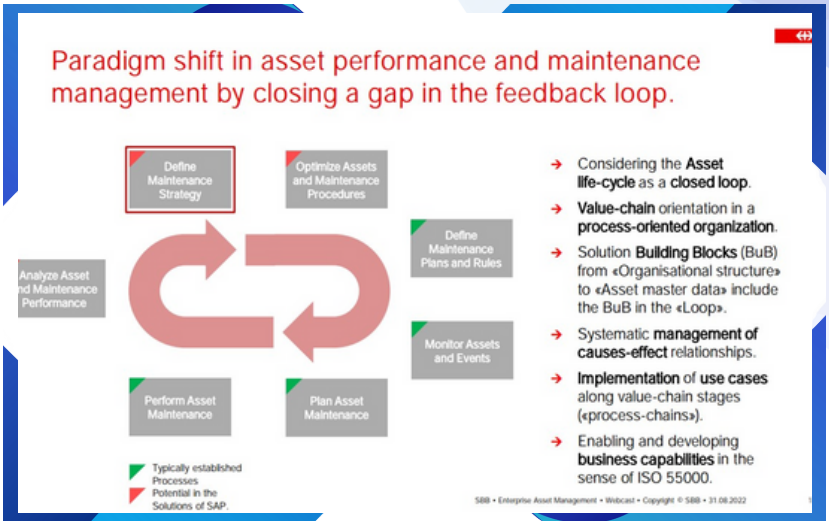
RAIL INFASTRUCTURE & ASSET MANAGEMENT

This year Metis Conferences hosted the Rail Infrastructure Asset Management Summit with more than 120 delegates assembled in Central London and on-line over one day to hear presentations from international presenters including, infrastructure owners, regulators, train operators and asset management systems suppliers.

Whilst the focus of the summit was improving the integration of asset management systems within the railways to increase efficiencies in business processes and asset life cycle management, there were several other interesting topics including implementing digital twins, building asset resilience and climate change impact on rail networks. As most European Railways are publicly funded, there is a growing recognition of the importance of infrastructure owners demonstrating that their investment regimes are functioning and delivering the intended benefits to give confidence to stake holders and government institutions that current forecast and projections in running and maintaining existing railways are accurate. This underpins the importance of having good asset management systems that gives owners a complete picture of asset inventories across the entire rail network, infrastructure owners are now implementing digital tools to improve organisational knowledge of the whole life cost of each individual asset set to optimise accuracy in forecasting and budgeting
Across the day many speakers emphasised the importance of leadership, management and taking people along on the journey, making the point that these are business process change projects and not simply I.T projects. We had several case study presentations highlighting the benefits of using intelligent and integrated asset management strategies across the whole asset lifecycle to reduce the costs of building and maintaining railways.

In the morning, Urs Gehrig, Head of SAP Enterprise Asset Management at SBB CFF FFS, and Johann Schachtner, Industry Solution Manager, Industry Business Unit Travel and Transportation at SAP delivered a joint presentation on Future-Proofing Railway Infrastructure Asset with SAP and demonstrated the clear benefits of implementing an enterprise asset management approach at SBB to improve the way they manage critical assets

Johann spoke about the critical nature of rail infrastructure to our daily lives and the increasing challenges of maintaining rail infrastructure as evidenced by data from Mckinsey showing emerging and advanced economies are facing an infrastructure challenge with a looming infrastructure cliff estimated to be caused by an 18trillion dollar under investment problem, with large construction projects on average typically taking 20% longer to finish than scheduled and delivered 80% over budget.



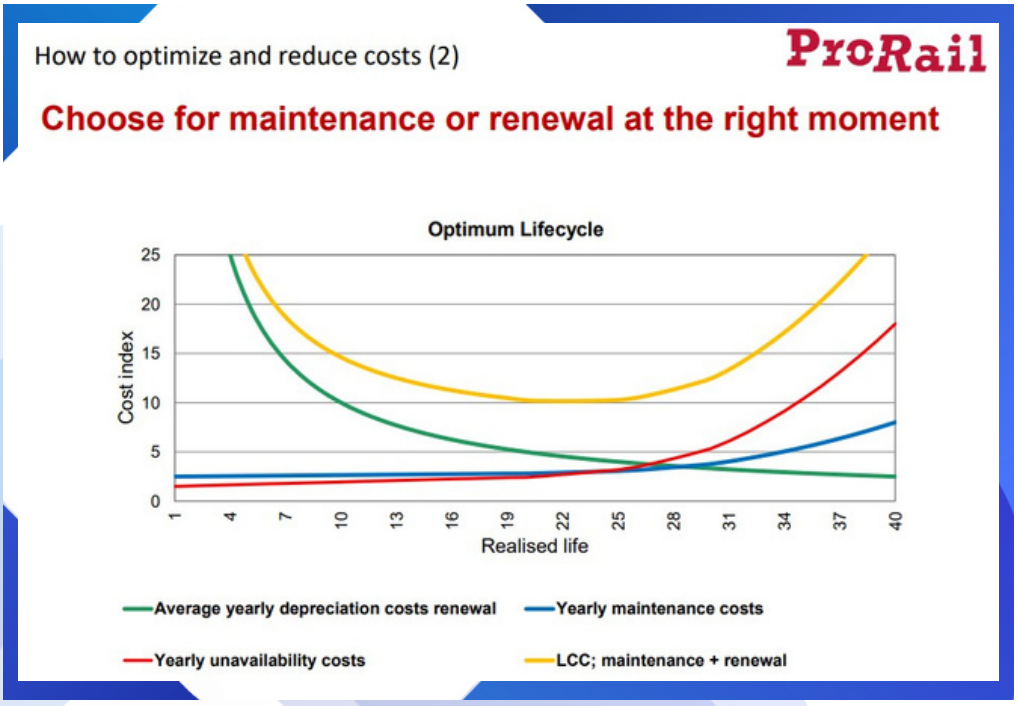
Urs discussed the initiation of SBB's enterprise management approach which was triggered by the availability of standardised SAP solutions which allowed SBB to make a paradigm shift in the scalability of their asset management solutions by allowing maintenance to be managed on failure mode level giving the organisation new insights on data allowing them to optimise maintenance scheduling.

MARTIJN VAN NOORT

MAINTENANCE MANAGEMENT EXPERT

Martijn Van Noort, Maintenance Management Expert, Lifecycle Management at ProRail shared a case study on how life cycle management is applied within ProRail and how they developed a tool to make cost calculations during the life cycle of assets at ProRail.

Martijn summarised the key pillars needed to deliver world life cycle management, "you need good leadership from management the acceptance from employees who must use these systems, having one database where information is transparent and allows you to monitor the benefits of life cycle management in your organisation. You need good in-put data, failure rates etc...good quality systems and qualified people checking the life cycle calculations"



KEY TAKEAWAYS, LESSONS LEARNED AND NEXT STEPS

WITH PETER BOOM & JOAO ROCHA

Collaboration and work order management is a key element in the transformation, but this takes time so, start early, start step by step, use-case by use case and trigger that business change to achieve the transformation. Establish processes to analyse implementation examples and use-cases heavily based on failure-data as this gives the organisation a chance to learn to deal with the new features and finally “Weaving a digital thread” across solution areas and infrastructure stakeholders will drive high performing infrastructure assets

The RIAM Summit Co-chairs Peter Boom, Director Rail Asset Management and Digitisation at Royal HaskoningDHV and Joao Rocha, Head of Asset Management & Maintenance at East West Rail opened proceeding by speaking about the importance of implementing a digital way of working, EW Rail are working on the East West project using digitalisation to improve services for their customers and freight operators with the aim of delivering projects on time and within budget with sustainability at the heart of the process.

They are currently implementing digital twins to help deliver these outcomes. A Digital Twin is a dynamic virtual representation of real-world physical assets, processes, and systems.

They allow us to better understand, and better interact with, the increasing complex and fast paced data driven world we live in. Digital twins allow the vast amounts of data that being generated to be managed, contextualised, and converted to predictions that can informed and guide our decision making.

Peter and Joao explained how they intend to use digital twinning to close the loop from Capex to Opex by being able to change the physical assets based on simulation and scenario analysis with the virtual replicas. They addressed how East West Rail and Royal HaskoningDHV have approached the implementation of digital twinning, gradually creating an ecosystem of digital twins. In this journey and to build a solid business case, the identification of the areas – so-called use cases - where a digital twin would add the most value is key. To get a better understanding of the business requirements, engaging with stake holders to refine the requirements, and measuring the added the value of digital twins to ascertain the objectives to improve outcomes and capabilities will be met.

A HOLISTIC VIEW TO RAIL INFRASTRUCTURE MANAGEMENT, WHAT DOES THE CUSTOMER WANT?

STEVE DENNIS
HEAD OF ASSET MANAGEMENT

Steve Dennis, Head of Asset Management at ORR (Office of Rail and Road) discussed ORR's roles in the periodic review process for the railways which sets out the level of funding delivered into the railways, this included the four core objectives in the review process including business drivers, strategic plan, asset policies, life cycle delivery and outputs. He also highlighted the fact that in the whole the UK rail industry was incredibly safe. Steven set out some of the key challenges, including the relations ship between spend and performance, freight vs passenger services demands on the infrastructure, what's affordable today vs implications for the future, will new technologies and modern materials change norms of expected asset life and how might investment in one asset area benefit another or vice versus so for example if we spend more money on drainage does it improve the condition of the embankments so taking a wholistic view rather than looking at an individual asset as an isolated asset.

USING TECHNOLOGY TO DEMONSTRATE RAIL INVESTMENT REGIMES ARE FUNCTIONING AND DELIVERING THE INTENDED BENEFITS

SIN SIN HSU
REGIONAL ENGINEER

Sin Sin Hsu, Regional Engineer – Track at Network Rail shared Network Rail's perspective on technology and asset management, she discussed how COVID-19 had led to unprecedented levels of innovation in terms of communications and digital technology. She explained how this had led to a rapid digital transformation for the business, forcing the organisation to re-imagine the business model. In addition to this, site access changes in their operating model further accelerated the use of technology to reduce time spent by staff on track.

Key take aways from Sin Sin were, understanding the deterioration rate and failure modes to identify the most appropriate technologies to improve asset performance and reliability and utilising in-service trains and appropriate recording and monitoring technologies alongside working more collaboratively with suppliers, universities, and train operating companies to deliver further improvements in maintenance.

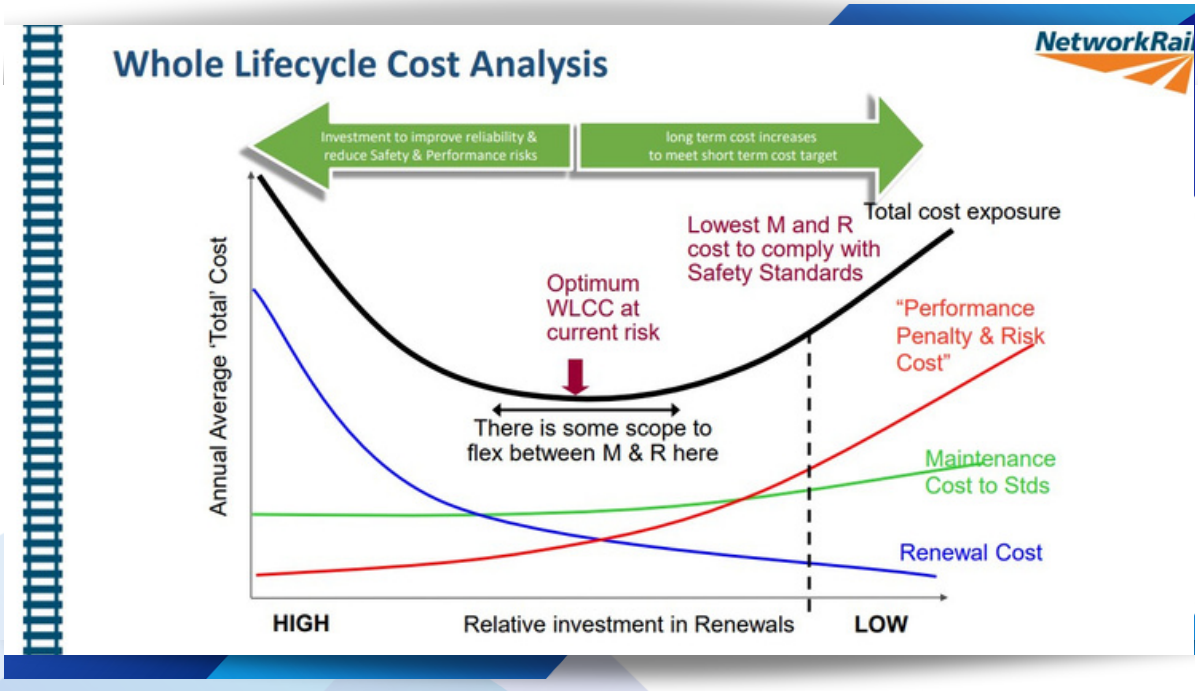
TIM KERSLEY

HEAD OF ASSET MANAGEMENT STRATEGY

Tim Kersley, Head of asset management strategy at Network Rail built on some of the themes that Martijn covered in his presentation. Network Rail have a diverse set of assets and are also the oldest railway in the world which presents a unique set of challenges on how they manage the network moving forward. The requirement for managing life cycle interventions and using technology to manage that varies quite differently depending on their stake holders' perspectives.

Tim acknowledged that although they have come a long way, there's still a bit to do to get that panacea of really having transparent visual analytics that shows owners the things they wish to see and then being able to do that on a regular and consistent basis across all assets

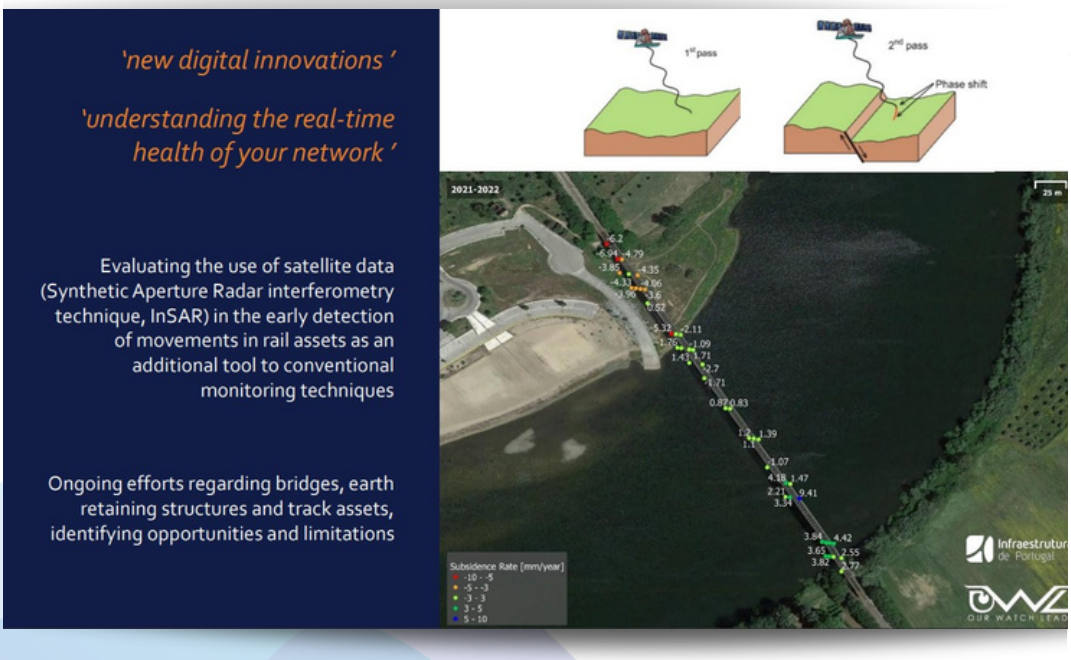
He concluded by adding, "We are forecasting asset condition and linking that to asset failure but now they are new questions around social benefits, carbon, environmental implication and integrating that into one platform which is something we are actively researching right now and will again be looking at new technologies to support the way we illicit and understand the data we use. There's a broad number of questions, number of technologies we need to exploit to gather data and collate and analyse that data and the platforms that come with that".



JOAO MORGADO
ASSET INFORMATION MANAGER

Joao Morgado, Asset Information Manager at Infraestruturas de Portugal presented a case study focused more on examples of implementing a clear process map and modelling the impact and deliverable of investment on the network. He explained that when assessing performance and defining priorities at a higher level, the need for a standardised approach arose, the data had to be transformed into management information that could be easily understood, achieving this outcome and the pursuing challenge would allow them to share, communicate and measure the impact of investment in a clear way within the organisational hierarchy and highlighted the importance of speaking the same language in terms of having a clearer visibility of all assets managed using the same scales, so you can look and see how specific asset groups are performing over time not only for historic purposes but to forecast and communicate how the organisation expects the network to behave in the future.

“The challenge was building new asset inventories from scratch, which technology solutions would offer the best results in terms of cost and resources required, we developed a risk-based approach to prioritise the inspections without knowing the condition of significant amounts of assets. We used this risk-based approach to plan the inspections, selecting areas with higher impacts on network operability”



THE HOLY GRAIL OF DIGITAL TWIN

LÉA LOUCAS
BIM MANAGER & HEAD OF BIM AND 2D SYNTHESIS UNIT

Léa Loucas, BIM Manager and Head of BIM and 2D Synthesis Unit at SNCF Réseau presented a case study on the benefits of BIM on the SNCF project EOLE, a complex railway infrastructure project that concerns the extension of the RER E line to the west of Paris and will benefits 9 million passengers with 400 trains serving customer every day and 56km of redesigned tracks. The part of project being managed using BIM is 10km long and currently 33% of the clashes are detected using BIM although this number is increasing as the model is becoming more elaborate. The main reason for using BIM on this project was to identify these clashes more efficiently than before to improve clash management.

“Having one single model for design phase or execution allowed us to identify the clashes sooner which saved time estimated to be several months but also delivered a saving of 5.4 million in just a few months and of course we also made quality gains as the studies have become reliable which has given impetus to using BIM on other projects at SNCF. The key is to adapt the methods to each project’s specific needs and budget”

MALCOLM TAYLOR
EXPERT ADVISOR DIGITAL

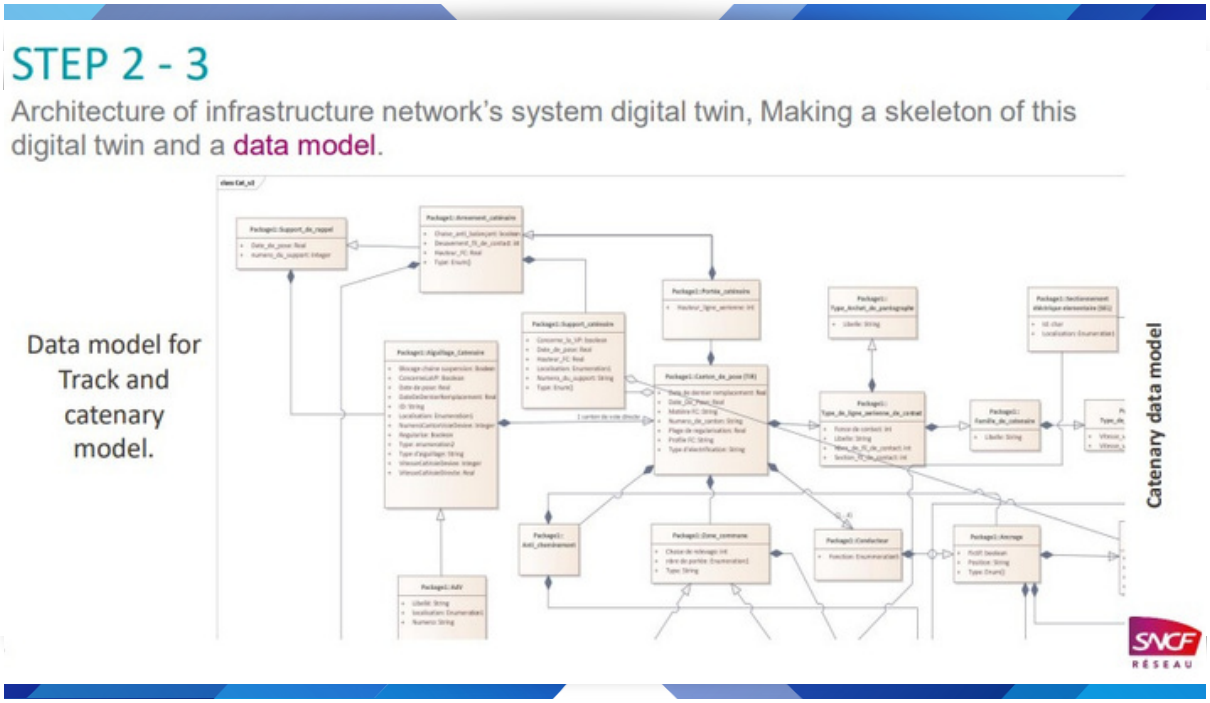
Malcolm Taylor, Expert Advisor Digital at Crossrail International struck a more cautious tone in his presentation as he spoke about the issue and challenges of digital twins to infrastructure owners and highlighted some of the issues in creating digital twins. He discussed the need of all the basic asset data to build a digital twin, the importance of applying structure to that data and information to build an effective digital twin. Malcom explained, Digital Twin it isn’t really about technology but understanding what type of information you need, understanding the performance indicators to understand what you need in terms of digital twin. He went further by suggesting that we can’t monitor everything, so we need think about risk management, the criticality of certain assets and bringing carbon cost into the mix so we can start to understand those aspects within projects

MOUSSA ISSA

PHD RESEARCHER

Moussa Issa, PhD Researcher at SNCF Réseau delivered a case study on the steps needed to set up an effective railway system digital twin for intelligent asset management and presented some use case studies from SNCF on implementing asset management. He explained, “A digital twin is a digital replica of a physical system that connects with the railway infrastructure and working practices. Its input comes from the reference databases and sensors fitted in the infrastructure that serve to keep this data up to date in real time throughout the systems lifecycle”

Moussa discussed the steps required in the architecture of the infrastructure network’s system digital twin, making a skeleton of this digital twin and a creating a data model. At SNCF they have divided their digital twin into three levels to make it simpler, first the information level in which they collect all data on the real system, the second level is the analytical level whereby they analyse the data to derive useful information for the maintainers and operators and lastly the configuration level which they use to run simulations based on the historical data, this information is then used to avoid any failure of the system,



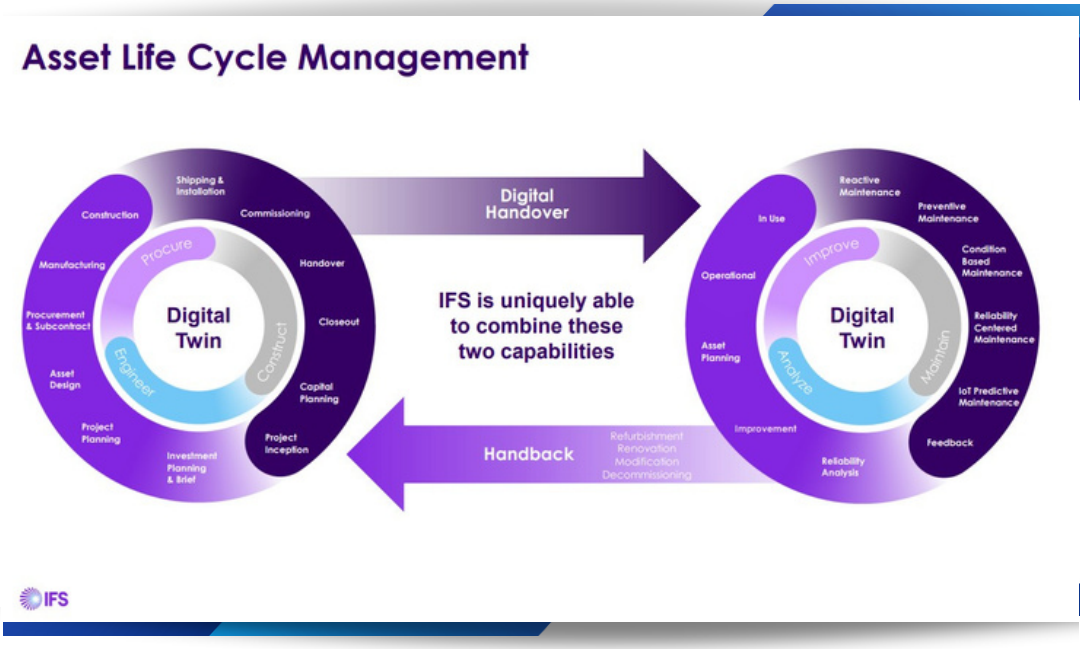
ABEL MACIEL

SENIOR RESEARCH ASSOCIATE

Abel Maciel, Senior Research Associate at UCL discussed how UCL are working to create the digital architecture for digital twin at East West Rail and looking specifically at how digital practices should be consolidated within the enterprise architecture they are developing so that the transfer of knowledge and lessons learned from the digital vison can be shared within the enterprise architecture to drive improvements in systems engineering. So, looking at things like systems thinking, processes, people and tools, the system approach to infrastructure delivery, having transparent processes and breaking away from data silo’s

BAS BEEMSTERBOER
EAM EVANGELIST

Bas Beemsterboer, EAM Evangelist at IFS shared some of his observations of the infrastructure sector from a client perspective and laid bare some of the challenges and opportunities for infrastructure owners from IFS's perspective of digital twin and asset investment in rail. Bas spoke about the new normal being the new reality post covid, personnel shortages, the trend of companies moving to cloud-based applications to reduce risk and increase resilience in their I.T networks and to allow remote working for their employees. He also discussed the impact in the change in people's travelling patterns on public transport infrastructure and the implications for funding, finance, maintenance, asset management and supply chains. So, in essence organisations are having to change their business models to match this new reality and in rail the critical technology enablers for this change will be, implementing automation & Robotics, drones, IoT & predictive Maintenance, AI & Intelligent Workforce Scheduling, Digital design Tools (BIM), and integrated business systems

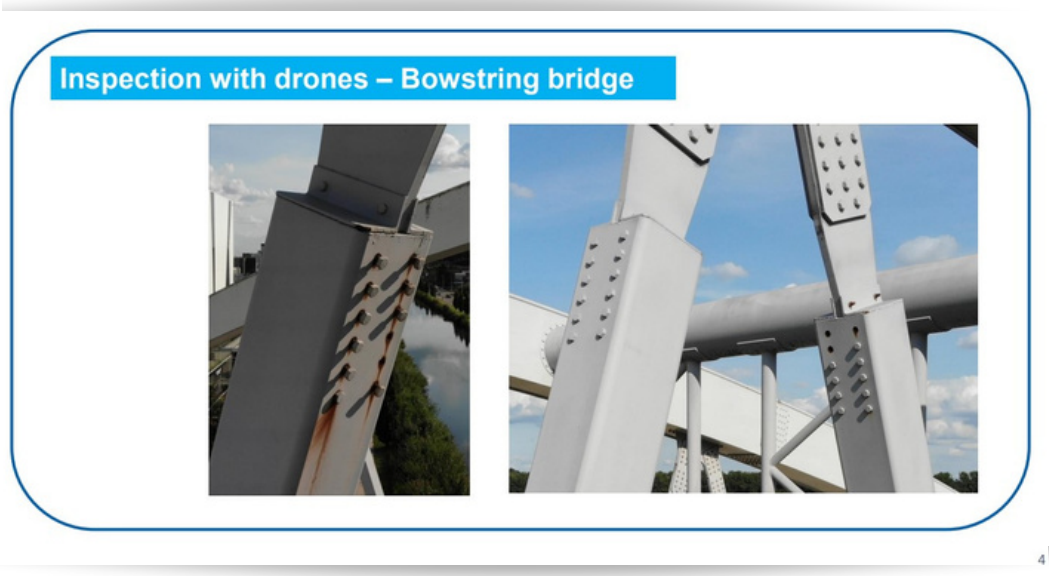


"Digital transformation is hard for everybody, but we need this to provide the outcome that society and business requires" Bas Beemsterboer, EAM Evangelist at IFS

DIDIER VAN DE VELDE

MANAGER OF CIVIL ENGINEERING AND SYLVAIN BERTEN

Didier Van De Velde, Manager Civil Engineering and Sylvain Berten, Railway Track Data Engineer at Infrabel presented a joint case study on Rail Infrastructure drone inspections and automating inspections of switches, digital solutions that are helping Infrabel improve safety by taking boots off ballast. Infrabel organise an inspection-based maintenance which means, they inspect every bridge every 4 years, in the last few years they have used drones to help with bridge inspections, these can be flying or underwater drones. He presented a series of case studies of bridge inspections with drones, one of which was a bow string bridge with a span of over 1,000 meters. The aim was to inspect the connection between the inclined hangars and the arch of the bridge, they also wanted to look at the corrosion protections systems on top of the arch, Didier explained, the design engineers gave very specific instructions to the drone pilot and inspectors to focus on these parts of the bridge and these instructions are very important to a successful bridge inspection.



On closer inspections they could see traces of rust on the left picture and indeed some bolts that are cracked. On the right picture there are three bolts missing.

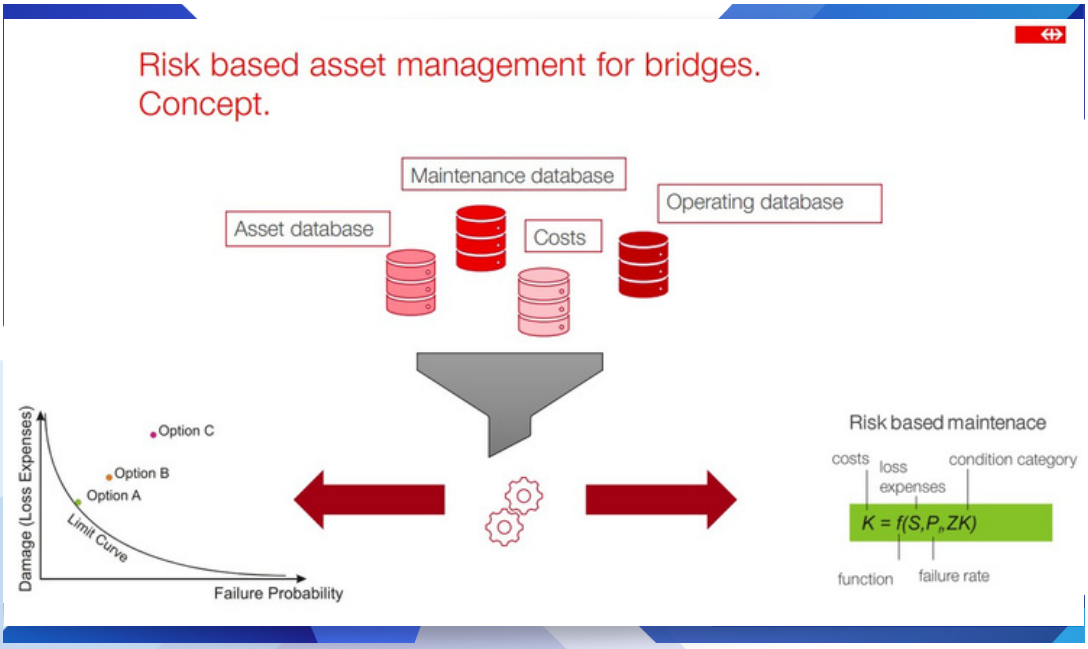
Sylvain shared the evolution of track inspections at Infrabel and said that up until recently visual inspections on tracks and switches had to be done manually, track geometry was measured using their measurement train, the EM130. Their ambition was to automate these processes to have less people on the track for safety reasons and for efficiency as a measuring train can measure much

SYLVAIN BERTEN
RAILWAY TRACK DATA ENGINEER

more in one day than a crew of workers. They have installed camera systems under their measurement train which consist of 10 cameras which in theory means they can automate the visual inspections of switches, but to achieve that they had to first design a process to compliment the technology. With a network coverage of just less than 10,000 switches at Infrabel, they decided to take the 3,000 most important switches in the scope to start with, these 3,000 thousand switches were then divided into 50 measurement runs of 60 switches each, so in one night they could measure approximately 60 switches with their measuring train. Their goal is to measure the branches of every selected switch, the output of this first phase is they have raw data and images with no useful insights. That is the role of Sylvain's team the track data cell to transform that raw data into useful information that is then transmitted to the local crews who then must decide when to intervene

HERBERT FRIEDL
HEAD OF DEPARTMENT ASSET MANAGEMENT

Herbert Friedl, Head of Department Asset Management in Civil Engineering at SBB Infrastruktur discussed SBB's maintenance strategies for civil structures including their decision to move from condition-based maintenance to risk-based maintenance which means considering the probability of failure, unavailability of life and the consequences of failure. To do this they had to establish a formula for risk which they achieved by multiplying failure probability multiplied by the consequence of loss. To define these two parameters, they needed different data sets and individual attributes from assets like bridges to calculate this failure probability accurately



SBB are now using this tool for the most at-risk bridges with safety standards being triggered according to these standards, they are also using the tool to prioritise planned maintenance. In the future they are looking at implementing a differentiated approach to the monitoring of engineering structures, this will allow them to divide between high risk and low risk, for high-risk assets they intend to use structural health monitoring methods to optimise monitoring cycles and for low-risk assets their aim is automating inspections using drones to also optimise monitoring cycles.

SEASONALLY AGNOSTIC RAILWAY MODEL

BRIAN HADDOCK

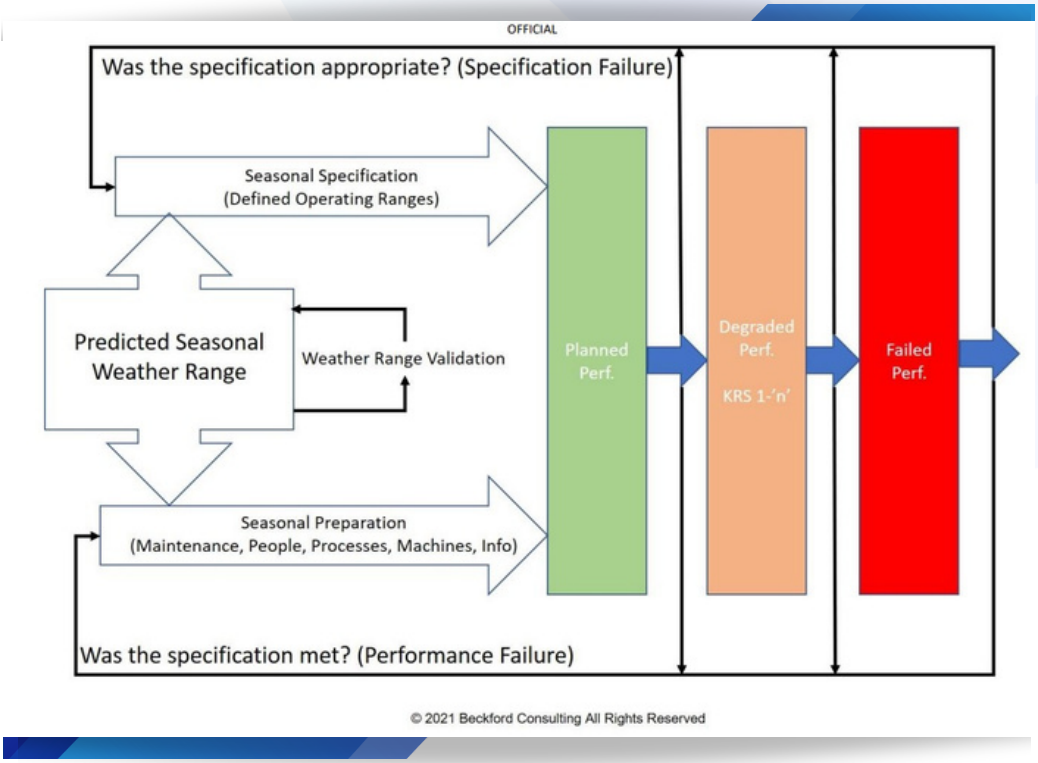
HEAD OF SEASONAL AND WEATHER RESILIENCE

Brian Haddock, Head of Seasonal and Weather Resilience at Network Rail and John Beckford, Visiting Professor, Department of Civil, Environmental and Geomatic Engineering at University College London co-presented on the work they are conducting to model the impact of climate change on the rail network. Brian opened the presentation by explaining that in the UK we are very much dependent on delay attribution which is based on a number of codes which are highly dependent on the controls received in the information in that instance, most of which isn't direct asset information, generally it's the driver reporting they've seen something and that is the data that is actually collected but for weather almost entirely all of it is under what we call an ex code so it is actually external to the railway system itself which makes it extremely difficult to quantify the impact of any weather parameter on our network. They set about trying to understand the impact of weather events and to create a system to unify all the various systems of information.

JOHN BECKFORD

PROFESSOR, DEPARTMENT OF CIVIL, ENVIRONMENTAL AND GEOMATIC ENGINEERING

John followed up by laying out the challenge of building a seasonally agnostic railway model to inform customers, operators, and help infrastructure owners anticipate, prepare, and prevent unintended consequences. To build the model they had to understand the three key parameters, firstly what are the meteorologist saying will happen and how accurate are their weather predictions. If they are plus or minus a degree, we can understand the accuracy of the weather which is very important as we move to the second parameter, which is to feed that weather data into the model to understand what the specification of the railway should be based on the expected weather. Do we have a seasonal specification for the railway that matches the seasonal weather? critically the third parameter was, can we then build a seasonal preparation plan and maintenance plan to maintain the railway in accordance with the specification we've set which matches the weather we have created for it. They are now able to impact the effects of weather on service at varying temporal and spatial levels, "we now have a better understanding of the impact of seasonal planning and maintenance and can pre-empt failures, alert passengers to potential delays and assess the service impact change to the network"



HERBERT FRIEDL

HEAD OF DEPARTMENT ASSET MANAGEMENT

Lawrence Chapman, Lead Digital Information Manager at HS2 (High Speed Two) shared best practice in reintegrating new assets and information into the existing maintenance systems to keep maintenance records up to date. The key challenge is how quickly can asset owners reintegrate new asset information into existing asset management systems to improve operational processes and how can we work more effectively with our supply chain to make sure we can use common standards to get information back into the asset owners. Lawrence spoke about the software systems requirements, the level of information needed for the asset register, locational hierarchies and the need for improved asset classification and grouping of common assets. In closing, he encouraged participants to look at the IFC open rail project as it shows how as an industry rail can use open data standards to unlock productivity in rail.

MARK NORRIS

DIRECTOR – STRATEGIC ADVISORY SERVICES, ASSET MANAGEMENT & RELIABILITY

Mark Norris, Director – Strategic Advisory Services, Asset Management & Reliability at The Institute of Asset Management laid out the key pillars needed to unlock value in rail organisations, understanding the wider purpose of your organisation, using excellent asset management approaches, and increasing maturity in asset management understanding. Mark explained that asset management maturity is a journey and shared the IAM's take on the pathway to excellence and the three main characteristics that define excellence, Asset systems criticality, scale and complexity of asset portfolio and volatility of business environment. Mark remarked that IAM is a knowledge transfer organisation and complimented the conference organisers Metis Conferences for bringing an international flavour to discussions as it was particularly interesting to hear what people are doing in other parts of the work as it was reassuring that there are similarities in the challenges faced by all.

PETER BOOM

HEAD OF DEPARTMENT ASSET MANAGEMENT

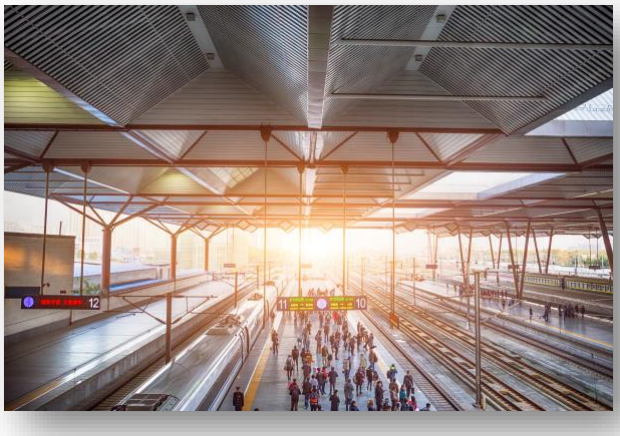
Peter Boom in closing the conference, observed that it's all about the value, mission and the purpose to deliver a better public transport and railway system. He concluded, "there is a lot of room for improvement as the demand for capacity is high and will only get higher especially related to sustainability issues. Do we embrace the technology available? Yes, but we have to move faster! We can deliver more and quicker by sharing applications and knowledge as an ecosystem, like we did today. Hopefully we can meet next year again in a good spirit of collaboration and engage with each other on the topic of rail asset management"

MATURITY

In producing these conferences over the years, Mets Conferences has noticed a certain maturity evolving across the industry in respect to the importance of asset management and the integration of these systems. In previous years, the challenge of managing data was always seen as a huge task, but with the advance of asset management systems we have seen the growth of asset management teams within the rail enterprises. Today, they are seen as valuable members of the rail operations and maintenance organisations who can genuinely deliver improved performance and reduced costs through implementing best practice in asset management across the entire enterprise. We heard a lot of very interesting use case studies over the day and ideas as an industry we all can learn from which should make us more active in the pursuit of making the changes to successfully innovate the railway system.

Maximize the value of your Enterprise Asset Management solution.

Gain complete asset lifecycle control with IFS.



Companies needs a trustful, and long-term partner with industry expertise and a solution that can help:

- Understand the complete view of your asset position to improve asset availability and reliability
- Ensure maximum uptime of these assets across their entire value chain without impacting costs
- Quickly repair failures without impact to productivity, improving day-to-day efficiencies

IFS EAM is built on a single composable cloud platform with native mobile capabilities, embedded AI and the use of IoT data for predictive maintenance. It automates the management of assets from the cradle to the grave in one solution with the distinct advantage to combine Engineering & Project phase and Operate & Maintain phase of the asset life in one platform.

By enabling control of asset maintenance and optimizing asset performance, EAM helps orchestrate the delivery of the right people, tools and equipment to an asset. Learn more.

And by improving asset availability, utilization, reliability and the services that you provide, you can be your best when it matters most – at your Moment of Service™. Every business has those moments when they get judged, when they either delight or disappoint. Bringing together all the decisions and the processes to deliver at those moments, is what it's all about.

Delivering value through our technology and our unrivaled commitment to our customers makes IFS unique. With over 40 years' experience, IFS is recognized as an EAM market leader by industry analyst firm, and most recently is positioned number one in the Gartner EAM market share analysis based on revenue*, with 18% share and 29.1% growth YoY. Moreover IFS have once again been recognized as a Gartner Peer Insights Customers' Choice for Enterprise Asset Management (EAM) Software.*

Learn more

For general information about Asset Management in IFS cloud, visit this page.
Discover 10 reasons to choose IFS Enterprise Asset Management.

*Gartner Peer Insights 'Voice of the Customer': Enterprise Asset Management Software, Peer Contributors, 30 June 2022
Gartner, Market Share: Enterprise Resource Planning Worldwide, 2021, Chris Pang, Abhilash Khalkar, 5 May 2022

DIGITALISED RAILWAY INFRASTRUCTURE

...and how SAP technology can improve the way we manage these critical assets

RAILWAY INFRASTRUCTURE

Critical for transportation of people and goods


TRACKS


STATIONS


CARGO HUBS


ELECTRICAL


SIGNALING


TUNNELS


BRIDGES


EQUIPMENT

SAFETY is a priority

BUILDING AND RENEWING RAIL INFRASTRUCTURE

BEFORE

20% longer to finish than scheduled

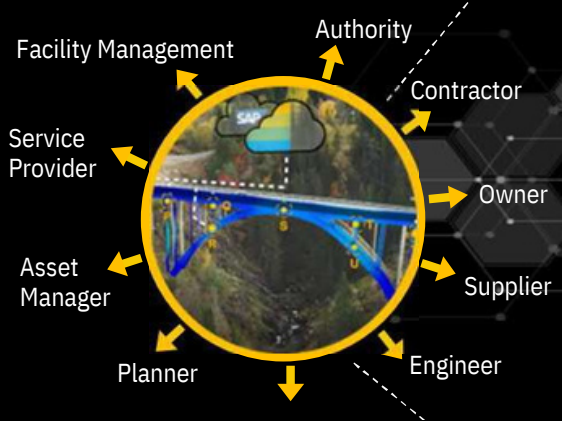
80% over budget

SAP's digitalisation approach is based on three core pillars:
COLLABORATION, DIGITAL TWIN AND DIGITAL THREAD

1. Asset Collaboration Platform connects different parties through intelligent business networks where partners collaborate the common projects, each of them sharing relevant data/documents as part of a business process flow.

2. Build a live geographically enabled Digital Twin with key data inputs from the project brief.
Enhance the digital twin progressively with detailed design data relating time, cost, schedule and design attributes.

3. Weave a Digital Thread that spans all the asset lifecycle stages from Plan to Retire. Enabling this digital thread takes more than collaboration between teams, it requires end-to-end integration of business processes and the



systems involved, covering Engineering and Enterprise data sets.

Sub Contractor

Portfolio and Project Management; Design, Build and Construction; Resource Planning; Enables Digital Engineering (Technologies, Digital Twin, Ways of Working, Procurement, Skills and Resourcing); BIM integrated with GIS and geotechnical data; BIM integrated with virtual and augmented reality; nD BIM capability

Digital leaders achieve earnings growth1.8x higherthan digital laggards

Source: BCG, Flipping the Odds of Digital Transformation Success, 2020

MAINTAINING RAIL INFRASTRUCTURE

SAP's digitalisation approach is still based on the same pillars: COLLABORATION, DIGITAL TWIN and DIGITAL THREAD, but adding capabilities for Intelligent Asset Management

BEFORE

Multiple systems storing asset information, often outdated and not integrated

Intelligent Asset Management supports transportation infrastructure maintenance and operations in a number of key focus areas

A central repository of information to have complete knowledge about each of your assets including a cloud based architecture to grow the digital twin and enable collaboration.
Know the importance of every asset, define the maintenance strategy and measure its performance through

ASSET REGISTER

ASSET PERFORMANCE MANAGEMENT

Embedded methodologies such Risk and Criticality Analysis, RCM, FMEA
Closes the loop between maintenance strategy definition and maintenance execution.

Enable Condition Based Maintenance and Predictive/Prescriptive Maintenance. Perform AI based Visual Inspections.

GENERATE DYNAMIC DEMAND

PLAN, APPROVE AND ORCHESTRATE

Long, medium and short term maintenance planning. Single backlog for all work types, orchestrated with supply chain, procurement and finance. Inventory Optimization.

Intelligent optimization and prioritization of work with capacity management and resource assignment.

SCHEDULE AND DISPATCH

MOBILE EXECUTION

Provides maintenance applications on mobile device to keep technician close to the maintenance activity with all information needed at hand.

Closed-loop maintenance strategy, planning and execution processes to optimize asset performance; Adopt new collaborative processes and across networks; Manage asset health with condition-based and predictive maintenance; AI based visual intelligence; Optimize maintenance and service with intelligent scheduling and crowd sourced resource management

Significantcost and risk reduction by adopting condition-based and predictive maintenance, digital inspection and simulation and AI based visual intelligence

SUPPORT SUSTAINABLE OPERATIONS

SAP supports the circularity in infrastructure management, efficient operations of transportation hubs and infrastructure and associated social responsibilities

Real Estate Management

Energy Management

Integrated inflow/outflow of recycled / waste materials in the infrastructure site

Facilities Management

Equipment repair and refurbishment

Environment, Health and Safety

Incident Management

CEOs are making sustainability a strategic priority

Our vision is to promote intra industry collaboration by bringing together people, processes and technologies to deliver a single digital source of truth and transparency across the entire asset lifecycle

SAP Technology

SAP S/4HANA
SAP Business Network
SAP Intelligent Asset Management
SAP Enterprise Product Development
SAP Cloud for Real Estate
SAP Business Technology Platform

Software Partners

Cogniac
Evolution Energy
Honeywell
Nextspace
Rizing
Trinov

Engineering and Consultant Partners

ARUP
DBM
Vircon
DEOS
Digital

THE BEST RUN SAP

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RAIL SERIES 2023

SMART FLEET MAINTENANCE

ROLLING STOCK PROCUREMENT

INFRASTRUCTURE ASSET MANAGEMENT

RSP 360

Rolling Stock Design, Procurement & Requirement Management Summit

SMART FLEET MAINTENANCE

WEDNESDAY 1ST & THURSDAY 2ND FEBRUARY 2023

ATTENDIES

ROLES

HEADS OF FLEET ENGINEERING
DIRECTORS OF FLEET PRODUCTION
ROLLING STOCK MAINTENANCE DIRECTORS
ROLLING STOCK TECHNICAL MANAGERS
FLEET PLANNING MANAGERS
DIRECTORS OF MAINTENANCE PROCUREMENT
SOURCING MANAGERS PARTS & MATERIALS
HEAVY WORKS MANAGERS (OVERHAUL)
DEPOT MANAGERS
CHIEF DATA SCIENTISTS
HEADS OF MAINTENANCE MODERNISATION
DIRECTORS TRAINING & CONTINUOUS IMPROVEMENT
ROLLING STOCK & TECHNOLOGIES ENGINEERS
SAP EAM ROLLING STOCK ASSET MANAGERS

COMPANIES

TRAIN OPERATING COMPANIES
INFRASTRUCTURE OWNERS
ORIGINAL EQUIPMENT MANUFACTURERS (OEMS)
TRAIN OPERATING COMPANIES (TOCS)
3RD PARTY SUB-SYSTEMS EQUIPMENT MANUFACTURERS
DATA MANAGEMENT SOFTWARE PROVIDERS
BUSINESS PROCESS IMPROVEMENT COMPANIES
HR TRAINING COMPANIES
CYBER SECURITY SERVICES
MANUFACTURERS OF MATERIALS AND CONSUMABLES
ENGINEERING/ MAINTENANCE COMPANIES

VIRTUAL ROUNDTABLES

STRATECIC MANAGEMENT

WEDNESDAY 25TH JAN 2023 AM

1.

PEOPLE AND PROCESSES,
COLLABORATION: A HOLISTIC RAILWAY SYSTEM,
TRAINING & PROCESS MANAGEMENT,
I.T AS AN IMPROVEMENT DRIVER,
MAINTENANCE REGIMES TO INCREASE EFFICIENCIES,
DIGITAL TRANSFORMATION,
DELIVERING ORGANISATIONAL CHANGE,
OPTIMISING DATA MANAGEMENT PLATFORMS.

MAINTENANCE& TECHNOLOGY

THURSDAY 26TH JAN 2023 AM

2.

SMART MAINTENANCE STRATEGIES,
DATA & TECHNOLOGY TO REDUCE COSTS,
DATA MONITORING,
PATTERN RECOGNITION & MACHINE LEARNING,
RELIABILITY CENTRED MAINTENANCE,
OPTIMISING MATERIALS MANAGEMENT,
FORECASTING & STORAGE MANAGEMENT.

INNOVATION

FRIDAY 27TH JAN 2023 AM

3.

ADOPTING NEW TECHNOLOGIES,
PREDICTIVE MAINTENANCE,
PROGNOSTIC EXPERT SYSTEMS,
FUTURE VEHICLE MAINTENANCE,
CONDITION-BASED & AUTOMATED ASSET MANAGEMENT,
CYBERSECURITY & IOT TRAINS,
ROADMAP TOWARDS A GREENER RAIL,
DIGITAL SUPPLY CHAIN

RSP 360
Rolling Stock Procurement & New Train Introduction

ROLLING STOCK PROCUREMENT

THURSDAY 30TH MARCH 2023

ATTENDIES

ROLES

HEADS OF ROLLING STOCK PROCUREMENT
FRANCHISE DIRECTORS
HEADS OF ENGINEERING
FINANCE & COMMERCIAL DIRECTORS
HEADS OF OPERATIONS
DIRECTORS OF TESTING & ACCEPTANCE
HEADS OF SYSTEM COMPATIBILITY
ROLLING STOCK MAINTENANCE DIRECTORS
DRIVER TRAINING PROJECT MANAGERS
DIRECTORS OF SUSTAINABILITY
DESIGNER SPECIFICATION PROJECT MANAGERS
FLEET DIRECTORS

COMPANIES

ROLLING STOCK COMPANIES (ROSCOS)
ORIGINAL EQUIPMENT MANUFACTURERS (OEMS)
TRAIN OPERATING COMPANIES (TOCS)
3RD PARTY EQUIPMENT MANUFACTURERS
INFRASTRUCTURE OPERATORS
CONSULTING/ DESIGN / ENGINEERING

VIRTUAL ROUNDTABLES

STRATECIC MANAGEMENT

WEDNESDAY 22ND MARCH 2023 AM

1.

PEOPLE AND PROCESSES
PROJECT MANAGEMENT
BUILDING A STRONG PROJECT TEAM FOR A
SUCCESSFUL PROCUREMENT STRATEGY
DIGITAL TRANSFORMATION
DELIVERING ORGANISATIONAL CHANGE
OPTIMISING DATA MANAGEMENT PLATFORMS

DESIGN & TECHNOLOGY

THURSDAY 23RD MARCH 2023 AM

2.

DESIGN AND SPECIFICATION
OBSOLESCENCE MANAGEMENT
SOFTWARE CHALLENGES IN NEW TRAINS
DELIVERING ORGANISATIONAL CHANGE
SOFTWARE CHALLENGES
COSTS & LONG TERM MAINTENANCE

INNOVATION

FRIDAY 24TH MARCH 2023 AM

3.

NEW TRAIN DESIGNS, IOT TRAINS
HOMOLOGATION & ACCEPTANCE TESTING
CYBERSECURITY
DELIVERING ORGANISATIONAL CHANGE
DECARBONISATION
ROADMAP TOWARDS A GREENER RAIL
DIGITAL SUPPLY CHAIN

RIAMS
Rail Infrastructure Asset Management Summit

METIS

riamsummit.com

RAIL INFRASTRUCTURE ASSET MANAGEMENT

THURSDAY 25TH & FRIDAY 26TH MAY 2023

ATTENDIES

ROLES

HEADS OF INFRASTRUCTURE/OPERATIONS
CHIEF TRACK ENGINEERS
S&C ENGINEERS
HEADS OF ASSET MANAGEMENT
INFRASTRUCTURE MAINTENANCE DIRECTORS
PROJECT DIRECTORS ERTMS
PROGRAMME MANAGER BIM
HEADS OF INNOVATION
HEADS OF TELECOMS
ASSET DATA & ANALYSIS MANAGERS
HEAD OF TRACK GEOMETRY

COMPANIES

INFRASTRUCTURE OWNERS/ UNDERTAKERS
RAIL REGULATORY & STANDARDS ORGANISATIONS
ORIGINAL EQUIPMENT MANUFACTURERS (OEMS)
TRAIN OPERATING COMPANIES (TOCS)
3RD PARTY EQUIPMENT MANUFACTURERS
TELECOMS OPERATORS
DATA MANAGEMENT SOFTWARE PROVIDERS
CONSULTING/ DESIGN / ENGINEERING

VIRTUAL ROUNDTABLES

STRATECIC MANAGEMENT

WEDNESDAY 17TH MAY 2023 AM

1.

PEOPLE, PROCESSES & PROJECT MANAGEMENT
BUILDING IN-HOUSE DATA STRATEGIES
ORGANISATIONAL CHANGE ACCELERATING DIGITAL TRANSFORMATION
DELIVERING ORGANISATIONAL CHANGE
TURNING DATA INTO VALUE
OPTIMISING DATA MANAGEMENT PLATFORMS

DATA & DIGITAL TECHNOLOGY

THURSDAY 18TH MAY 2023 AM

2.

MAINTAINING A HIGH SPEED LINE
MAINTAINING THE NETWORK SENSORS TO PREDICT FAULTS & IMPROVE RELIABILITY
OPTIMISING MONITORING OF SWITCHES & CROSSINGS
CONDITION MONITORING USING IN-SERVICE TRAINS
LIDAR DATA TO FEATURE EXTRACT RAILWAY ASSETS
DIGITAL TWIN IN INFRASTRUCTURE PROJECTS
ERTMS & FRMCS

INNOVATION

FRIDAY 19TH MAY 2022 AM

3.

NEW TECHNOLOGIES: ACCELERATION & DISPLACEMENT MEASUREMENT
MONITORING POINTS MACHINES TO PREDICT FAILURES
FUTURE COMMUNICATIONS STRATEGIES TO DEVELOP INFRASTRUCTURE TRACKSIDE
PREDICTIVE PLATFORMS FOR MAINTAINING INFRASTRUCTURE
DATA DIGITAL SUPPLY CHAIN

RAIL SERIES 2023
EVENT CALENDAR

SMART FLEET MAINTENANCE

VIRTUAL ROUNDTABLES			IN- PERSON SUMMIT
STRATECIC MANAGEMENT	**DATA & DIGITAL TECHNOLOGY**	**INNOVATION**	**SFM360 SUMMIT**
WEDNESDAY 25TH JAN 2023 AM	THURSDAY 26TH JAN AM	FRIDAY 27TH JAN AM	1TH & 2ND FEBRUARY

ROLLING STOCK PROCUREMENT

VIRTUAL ROUNDTABLES			IN- PERSON SUMMIT
STRATECIC MANAGEMENT	**DESIGN & TECHNOLOGY**	**INNOVATION**	**RSP360 SUMMIT**
WEDNESDAY 22ND MARCH 2023 AM	THURSDAY 23RD MARCH 2023 AM	FRIDAY 24TH MARCH 2023 AM	30TH MARCH

RAIL INFRASTRUCTUR ASSET MANAGEMENT

VIRTUAL ROUNDTABLES			IN- PERSON SUMMIT
STRATECIC MANAGEMENT	**DATA & DIGITAL TECHNOLOGY**	**INNOVATION**	**DATA & DIGITAL TECHNOLOGY**
WEDNESDAY 17TH MAY 2023 AM	THURSDAY 18TH MAY 2023 AM	FRIDAY 19TH MAY 2023 AM	25TH & 26TH MAY

SPONSORSHIP PRICING

KEYNOTE SPONSORSHIP

PACKAGE	VIRTUAL ROUNDTABLE	IN-PERSON SUMMIT	VIRTUAL ROUNDTABLE PACKAGE X3	VIRTUAL & IN-PERSON PACKAGE X3
KEY NOTE PRESENTATION AT ONE VIRTUAL ROUNDTABLE	✓		✓	✓
LOGO & PROFILE ON ALL MATERIALS	✓	✓	✓	✓
VIRTUAL STAND 'BOOTH' ON PLATFORM	✓		✓	✓
PARTICIPATION IN ROUNDTABLE DISCUSSIONS	✓		✓	
ACCESS TO PARTICIPANTS LIST & 1 TO 1 MEETINGS WITH SELECTED ATTENDEES	✓	✓	✓	✓
EXHIBITION STAND		✓		✓
KEY NOTE PRESENTATION AT ONE IN - PERSON SUMMIT		✓		✓
PRICE +VAT	£6,000	£10,000	£15,000	£20,000

EXHIBITOR

PACKAGE	VIRTUAL ROUNDTABLE	IN-PERSON SUMMIT	VIRTUAL ROUNDTABLE PACKAGE X3	VIRTUAL & IN-PERSON PACKAGE X3
PANEL PARTICIPATION AT ONE IN-PERSON SUMMIT		✓		✓
LOGO & PROFILE ON ALL MATERIALS	✓	✓	✓	✓
VIRTUAL STAND 'BOOTH' ON PLATFORM	✓		✓	✓
PARTICIPATION IN ROUNDTABLE DISCUSSIONS	✓		✓	
ACCESS TO PARTICIPANTS LIST & 1 TO 1 MEETINGS WITH SELECTED ATTENDEES	✓	✓	✓	✓
EXHIBITION STAND		✓		✓
PARTICIPATION IN THREE VIRTUAL ROUNDTABLES				✓
PRICE +VAT	£2,000	£5,000	£7,000	£10,000

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