

International Conferences



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International fire and security exhibition and conference

IFSEC (International Fire and Security Exhibition and Conference) which was held at ExCel in London from 18th to 20th June 2019 is the largest annual security industry event in Europe. The history of IFSEC goes back to 1972. This year 528 exhibitors of IFSEC presented the biggest developments in security and fire safety industries to more than 27,000 visitors from 113 countries. The threat to security is one of the biggest challenges to modern society. IFSEC brought world leading security professionals and companies manufacturing security equipment under one roof to show the latest technologies, products and best practices.

There were many presentations and keynote speeches from recognised security experts.

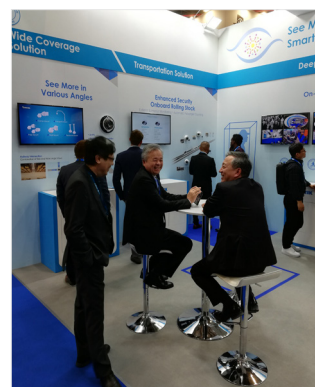
The chair of the panel sessions on security topics was Frank Gardener OBE, broadcaster and security journalist. Seminar sessions covered a large range of topics including:

- Cost vs safety and security for the transport industry - Which is the most important? What is the right balance?
- Using drones to secure the future
- Is the security world ready for 5G?
- Crime reduction - Overcoming the disruptive effects of criminality
- Social media and internet Security - A new opportunity
- Physical and cyber risks posed to transport systems.

One of the topics of day one was "Cost vs safety and security for the transport industry- Which is the most important? What is the right balance?"

The panel participants were Andy Billings, Head of Security and Contingency Planning for Southampton Port, Nick Orwin, Emergency Planning Manager, London Luton Airport and Chris Stevens, Technical Security Director of an independent security consultancy. For the past seven years Chris Stevens has been security advisor on the Crossrail London project.

The representatives from the three transport industries discussed how organisations should find the balance between costs and the most appropriate safety and security level. Andy Billings shared his experience in using security contractors to reduce the cost of providing security in Southampton port. The number of cruise ships are not stable during the year. In winter it can be 3-4 per week but in summer it can be 4-5 per day and to keep a large number of staff throughout the year is not economically viable.



Chris Stevens admitted that the goal of airports is to deliver a product to meet the expectation of customers whilst tolerating some amount of risk to achieve this. Chris Stevens stated that safety and security are linked, and it is cheaper to invest in safety and security at the design stage.

Another session that attracted lots of attention from the participants of IFSEC was "Using drones to secure the future." Participants of this panel session agreed it is important to understand the purpose of drones. In many cases the use of drones is a very good tool for reducing risks to personnel. The flying time of drones is increasing to three and a half hours and in the near future drones will fly autonomously. The most important thing is to improve the reliability of drones so they will be used widely. The next movement in the drone industry will be development of very small drones with a wider area of flying.

The last panel session of day one was "Crime reduction - overcoming the disruptive effects of criminality." Participants of the panel were Dr Gary Buck, Andy Palmer and Warren Stein who emphasised the huge impact that crime causes in everyday life and the necessity to develop new technological solutions to prevent crime. One of the new developments is face recognition software. This software can identify 4800 faces in one second. Advanced software can recognise if people carry knives or other weapons, but at this moment it is still not accurate enough and gives too many false alerts. On the Converged Security Panel advanced software was demonstrated that will help to understand and analyse the complex physical and cyber risk posed to transport systems. This software can help to improve network flow and passenger experiences.

The three days of IFSEC were intensive with debates, networking and collaboration. The IFSEC is a good platform for sharing knowledge, latest technologies and tools that will secure and protect citizens and businesses. The next IFSEC will take place at ExCel, London, 19-21 of May 2020.

UK rail station development and regeneration conference

Travelling by railway is becoming an increasingly important mode of transportation, because it offers many advantages compared to other modes and it is set to increase. With the growth in population of UK to 70 million by 2030, the number of railway journeys, will grow to around 3.5 billion annually. The growing number of passengers, increases the pressures on the railway network and stations. There are around 2500 railway stations in UK welcoming over 4 million people daily. Some of the stations were built more than a hundred years ago. There is a need to redevelop and modernise these stations. They must reflect the modern requirements of transport and meet local needs whilst also contributing to economic and social benefits.

The 5th Annual UK Rail Station Development and Regeneration Conference was held on 4th July 2019 in London to discuss the plans and lessons for improving the stations. This conference brought together around 80 professionals in the rail, property, business industries as well as representatives from local authorities. The conference programme was split into three parts:

- Plans and updates on station development
- Practical insight on how to deliver station improvements
- Lessons learned for delivering station improvements.

The Conference was opened by the Chair, Mr Norrie Courts, Director of Stations, Network Rail. In his speech Mr Norrie Courts talked about the importance of collaboration in delivering railway projects. The first presentation of the day was given by Mr Stuart Kirkwood, Development Director, Network



Rail. Mr Kirkwood gave an overview of achievements of Network Rail Property. In the past five years land sales generated around £285m from the sale of non-operational land that will be reinvested in the railways.

The second presentation was delivered by Mr Tim Wood, Northern Powerhouse Rail Director, Transport for the North. Mr Wood in a passionate speech talked about the positive changes that the North of UK will have with the development of HS2. It will increase the capacity of the railway, reduce journey times, improve the connectivity between regions, create new jobs and will create opportunities for new businesses.



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In the second part of the conference Mrs Kate Cohen, Project Director, Euston, Department for Transport talked about the regeneration of Euston station. The Euston Station redevelopment will transform the station, becoming a transportation and economic hub which will connect rail, buses and taxi services, improve the walking and cycling facilities and create thousands of new jobs in the area.

The railway station will be in the centre of a regeneration project for the whole area and will connect communities, new business, commercial, leisure and residential areas. This will make the London Borough of Camden economically stronger. The area surrounding the station and the station itself will be a new destination offering new services and new experiences. To make the project successful it is important to have collaboration between railway industry and community stakeholders.

In the third part of the conference one of the presentations was delivered by Mr Mark Lahiff, Director and Partner of IJM Land. Mr Lahiff shared his experience in the delivery of the regeneration project of a 2.7-acre site in Royal Mint Street. This unique project was characterised by the fact that it was just a few inches from an operational railway track. The additional challenge for this project was safety. There were some concerns about risks to the track geometry, to falling objects onto the railway track, to railway operations and delays to passengers. To mitigate these risks there was very close collaboration between the developers and Network Rail to impose railway industry safety standards on the contractors.

In 2030, 75% of the population will be living in urban areas. Lack of vacant land in cities for housing development and business will only increase. Mr Fred Beltrandi showed some examples from other countries of how they are solving this problem. For example, in Chongqing, (China), the new light rail line is routed directly through a residential tower. In the Netherlands they will expand an underground bicycle park at Utrecht Central railway station from 7500 to 12500 spaces. Developers around the world are looking for solutions how to use space more effectively around railway stations; both above and below. The Chair in his closing remarks summarised the main points of the presentations and panel discussions. He said that the station is not only a transportation and economic hub but also a gateway to the city and stations should be a desirable place for residents and visitors. The conference was an excellent opportunity to interact, discuss and exchange visions on the future sustainable solutions in development and regeneration of railway stations.

Future of Infrastructure Conference 2019

On 18 July 2019 the "Future of Infrastructure Conference 2019" was held at Queen Elizabeth II Conference Centre in London. 300 delegates attended from transport industries, local authorities and policymakers. The speakers covered a wide range of topics from cybersecurity to the future growth of the transport industry.

There were six key themes: workforces of the future, investment in infrastructure, supply chain collaboration, infra tech, low carbon infrastructure and investment in 'green' initiatives.

The conference was opened by the Chair, Emer Murnaghan, Vice President of ICE and head of Responsible Sustainable Business GRAHAM. Ms Murnaghan admitted there are challenges facing the transport infrastructure to adapt to an increasing population, weather change and future skills shortages. A focus on improvements through the use of technology, better use of data and artificial intelligence is required to tackle these challenges. The UK government is focussing on innovation and transport. This will support economic growth, creating new workplaces and helping the UK to prosper.

The first presentation was delivered by Professor Lord Robert Mair, Head of Cambridge Centre for Smart Infrastructure and Construction. In an outstanding presentation the Professor spoke about benefits that fibre optic sensors bring to the construction industry and transport. These sensors can be used on structures such as tunnels, bridges, roads and other constructions and help to monitor their stability. The sensors collect and transmit data and they are safe and cheap to use. They can be embedded in tunnel walls or in road surfaces and will monitor the vibrations and displacements.

The topic of Ms Susannah Clements, Group Director of People, Anglian Water was "How Anglian Water is developing workforces for the future". Anglian Water Services employ



around 4000 staff and provide drinking water and recycled wastewater to millions of households in UK. Anglian Water is introducing new ways to maintain their assets; instead of being reactive they are moving to proactive maintenance. This is possible through the introduction of real time sensors that monitor the condition of water supply systems. The company is investing in engineering and automation of hazardous jobs that were previously undertaken by human labour.

This assists in the retention of older staff and attracts more young people and women to join the company. The growing diversity of labour leads to the increase in productivity of the company. Another challenge that is facing the industry is an aging of labour force; currently 50 percent of staff are age 40+.

Anglian Water has an individual approach to staff offering split shifts, flexible working hours and working days of the week.

Mr Phil Graham, Chief Executive, National Infrastructure Commission in his presentation "Meeting the infrastructure needs of the 21st Century-Where are we?" talked about the aim of the UK Government to generate 50% of electricity from renewable sources by 2030 and by 2050 to reach net zero emissions. Reducing costs and improving technology, increasing the amount of renewable and localised energy sources will in turn support an increase in the number of electric vehicles. To reach zero emissions by 2050, the UK government is investing in electric vehicles and the infrastructure to support them. A £43bn funding between now and 2040 has been allocated to this initiative. The net zero

emission target will create new businesses and job opportunities; there will be a reduction in pollution and an improvement in air quality. Another important change that faces society is the introduction of 5G coverage across all of UK by 2033. This will create new commercial opportunities, boost productivity and transform communications and support more effective operation of complex systems.

There were several more presentations that covered topics such as weather and climate change, unlocking the private investments in developing infrastructure, workforces of the future and current policies and regulations. The conference was a splendid place for networking, debate with outstanding presentations from business and government leaders.

CALL FOR PAPERS

PWI TECHNICAL SEMINAR



2020 ELECTRIFICATION PROJECT CHALLENGES

The third PWI electrification seminar will be held in Glasgow on 28 April 2020.

The Scottish Government has recognised the benefits of a rolling programme of electrification and Network Rail Scotland is developing those plans. Electrifying an existing railway requires the electrification system to be integrated into the broader railway system: the configuration of the traction system and its constituent parts has implications for the operation, maintenance, and performance of the railway.

The challenge facing engineers of all disciplines is to simplify the systems integration task so that it supports a rolling programme of electrification rather than impedes it. This seminar will help engineers across the railway disciplines understand the implications of converting a route to electric traction, and explore ways in which system specification, design, and implementation can support a rolling plan.

Proposals for papers are requested covering the following areas.

- 25kV traction feeding system architecture
- Earthing and bonding of 25kV electric traction infrastructure
- Isolation and earthing for the issue of permits to work
- Designing and testing new traction electrical systems, and overhead lines
- Development and operation of railway plant for use on the electric railway
- Practical challenges presented by a rolling programme including the application of lessons learnt in Projects in UK and Abroad
- Performance criteria, robustness and temperature resilience
- Structural clearance innovations
- Power Management and Rolling Stock
- High Output Construction
- Track Design for Electrification (Plain Line and S&C)

ABSTRACT SUBMISSION DEADLINE
6 January 2020

SEMINAR DATE
28 April 2020

ROYAL CONCERT HALL
GLASGOW

Papers should focus on the technical aspects of the topics mentioned here; solutions, lessons and best practice learned.

Abstracts to be submitted by 6 January 2020 to Brian Counter:
technicaldirector@thepwi.org

To submit a paper please email a short introduction for the proposed paper with the focus of the paper and a minimum of 8 bullet points listing the areas to be covered. Any questions should be directed to Brian Counter.

TECHNICAL ARTICLE

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