

Eurasian rail and metro - **seizing the opportunity**

ALSO INCLUDES A GUIDE TO



**SMART
RAIL &
METRO
EURASIA**

26-27 January 2016 • Istanbul, Turkey



SMARTRAIL
WORLD



Welcome

Dear colleague,

Many thanks for
downloading
*Eurasian rail and
metro – seizing the
opportunity*

A new era is dawning for rail and metro in Eurasia. The regions rapidly emerging economies are increasingly look towards rail rather than road or air to transport people and cargo. Never before has there been such rapid development of transnational connectivity within the region or such potential for businesses within the sector.

From Turkey in the west to China in the east, the development of new rail links within Eurasia are growing markets, weaving new relationships and offering huge business opportunities. Direct rail routes are faster and cheaper than cargo ships and trucks, and less costly than air transport. Whilst as highlighted recently at COP21 in Paris, rail is a great mode for sustainable and carbon free mobility. Regional problems of reliability and security are also being seriously addressed.

With the Eurasian rail and metro network undergoing this rapid period of modernisation and growth - signalling, telecommunications, rolling stock and IT technology must all be developed to take advantage of this opportunity. There has been no better time to enter the Eurasian market and some figures from Turkey alone underline this opportunity:

- **\$46 billion** allocated to rail and metro investment by 2023
- **3500 km** high-speed line projects
- **1000km** of mainline projects
- **24000km** of the network undergoing upgrades that will require technology investment

As a result of these developments, SmartRail World has dedicated its 14th e-book to focus on developments in Eurasian rail and metro. And the themes and some of the contributors of this e-book are a key focus of **SmartRail Metro & Eurasia 26-27 January 2016** held at the Radisson Blu Hotel Istanbul Sisli in Istanbul, Turkey. This event is a unique business and development platform covering the entire value chain within Eurasia's leading authorities, rail and metro operators, international contractors and solutions providers. It's an event not to be missed, further details are on the last page of this e-book. For industry suppliers, an early low-price to attend is available until 9th January 2016. And if you work for a railway, metro or government it's completely free!

Most of the features within this e-book were first published in an abridged form on **SmartRail World** which offers a truly global perspective on rail technology with a strong focus on Eurasia. Make sure you become a free subscriber today!

Many thanks to all the contributors who took time to speak to me and help make this book happen.

Hope to see some of you in Istanbul in January.

Regards and thanks,



Luke Upton
Editor
SmartRail World

www.smartrailworld.com
www.smartraileurasia.com

Contents

- 1 Editor's welcome
- 2 Turkish rail receives further boost with €13bn investment announced.
- 3 Project focus: Baku-Tbilisi-Kars railway
- 4 Expert views: Transporting goods from Asia to the EU – What role for intermodality?
- 5 Istanbul transport boom continues as two new metro lines planned
- 6 Crossing Eurasia seen as key as Chinese predicts rail exports of \$102bn by 2020
- 7 EBRD arranges US\$ 300 million syndicated loan for Kazakh Railways.
- 8 Introducing SmartRail Eurasia
- 9 Meet the SmartRail Eurasia speakers
- 10 SmartRail Eurasia Agenda in focus

Turkish rail receives further boost with €13bn investment announced.

A further indicator of major rail development in Eurasia arrived earlier this year with the announcement by Turkey's Interim Science, Industry and Technology Minister, Fikri İDİK that €13 Billion is to be invested into the purchasing of new tram cars and metro vehicles. The report in the Daily Sabah has İDİK seeing these investments as a big step towards the completion of Turkey's ambitious plans for the expansion of its rail and metro systems due to be finished in 2023.

This announcement is the latest in a steady stream of contracts and plans coming out of Turkey that hope to modernise and develop the current transportation system and connect the whole of the country. In July 2014 plans for the high-speed rail link between Istanbul and Ankara, YHT, were completed, the line now offers a faster and safer alternative to car travel between Turkey's two principal cities. Completed by Turkish Railways (TCCD) it has successfully reduced the journey from six hours down to just over three.

Successful projects and future development plans have seen companies making huge investments in Turkey, all in the hopes of winning tenders and being involved. In fact Global Rail News recently published an article about Siemens' planned investment in a €30 million tram production facility on the outskirts of Istanbul. Jochen Eickholt, head of Siemens' rail business, stating

on the announcement: "We are now aiming at building on this success in the global market. We have the best chances of succeeding here with a factory in Turkey." There is no doubt that this is an exciting time for companies, in the country or who want to be involved in the development of Eurasian rail.

The funds for İDİK's National Rail Vehicle Systems Development Project – including the purchasing of tram cars and metro vehicles – have been given by the Marmara Research Centre of the Scientific and Technological Research Council of Turkey (TÜBİTAK). With their involvement Minister İDİK argued the aim of the project is to develop the CER motor and control unit, and therefore changing the management system of all urban trains, metros and trams in Turkey. It is hoped that the aforementioned project can be completed by 2016. Clearly, the €13 billion investment announced by Minister Fikri İDİK will be just one of many steps in the ongoing plans to change the face of Turkey's transport system. The plans will help revolutionise the movement of people across this vast country, increasing usability and efficiency.

Halil Korkmaz, General Manager TCDD Region 1 and Fatih Turan, General Manager, AYGM, (Ministry of Transport) are speakers at SmartRail Eurasia



Project focus: Baku-Tbilisi-Kars railway

The Kars–Tbilisi–Baku railway, or Kars-Akhalkalaki-Tbilisi-Baku railway, is a Eurasian rail link project to directly connect Turkey, Georgia and Azerbaijan and effectively open a new rail-only corridor from the Caspian Sea to Europe. This line will transport both freight and passengers and is expected to provide an alternative freight transport route to routes that transit through Iran. The project implementation began in 2007 and construction began in 2008. Previously beset by political problems, it was originally aiming to be completed by 2010, then by 2013, 2015 and is now currently on track to be operational by November 2016.

The total route will be 826km, in addition to the existing 721 km currently in use Baku-Tbilisi-Akhalkalaki line between Azerbaijan and Georgia, 105 km railway is under construction between Akhalkalaki in Georgia and Kars in Turkey. 76 km is in Turkey, between Kars and the border, where 29 km will be in Georgia, from the border to Akhalkalaki. Within the project the existing railway line from Akhalkalaki to Marabda and on to Tbilisi and Baku will be modernized. The peak capacity of the rail line will be 17 million metric tons of cargo per year. At the initial stage, this figure will be equal to one million passengers and 6.5 million metric tons of cargo.

"We plan to start cargo transportation by late 2016, to complete work on the electrification of railway and the creation of other railway infrastructure during the next year," Gurbanov said at the international conference titled Prospects of Development of Transit Potential of Azerbaijan on October 13 2015.

Switzerland based Stadler Rail Group has started the production of passenger cars for the line. Azerbaijan has ordered 30 new passenger trains for the BTK railway route, which is distinguishable in four categories: standard, comfort, business, and the on-board restaurant. The new 10, 20 and 32-seater passenger cars will have built-in Wi-Fi and Azerbaijani Railways will get the first batch of trains for BTK railway line in the summer of 2016.

These carriages are equipped with an automatically shifting wheelbase, to accommodate for changes in the width of railway track. This is essential as the route is made up of two different railway gauges: Broad gauge (1520mm) from Baku to Akhalkalaki and standard gauge (1435mm) from Akhalkalaki to Kars.

Financed by Azerbaijan's state oil fund SOFAZ, is being constructed in the framework of an agreement signed by the governments of Georgia, Azerbaijan, and Turkey. With the key objective of the project is to improve economic relations between the three countries and gaining foreign direct investment by connecting Europe and Asia. Befitting the largest benefactor of the project, Azerbaijan will likely get the biggest benefit of this line. As an oil products exporter Azerbaijan will directly being able to connect their products to Turkey and then into Europe via rail and port connections.

Although only involving three countries (Azerbaijan, Georgia and Turkey), Eurasia is seeing a number of other rail projects under construction or under discussion which could link into the Baku-Tbilisi-Kars line and create a wider network across the region.

Asghar Bahramali, Project Director, Iran Railways is a speaker at SmartRail Eurasia.



Expert views: Transporting goods from Asia to the EU – What role for intermodality?

On 24 February 2015 the Community of European Railway and Infrastructure Companies (CER) and the Latvian Presidency of the EU jointly organised a political debate on the role of intermodality in the transport of goods from Asia to the EU. The event was a good occasion to reflect upon current obstacles preventing rail and rail-road combined transport from realising their full potential, and on possible policy measures to reinforce the competitiveness of the terrestrial Euro-Asian link against the currently dominant maritime route.

The debate focused on how the terrestrial route from Asia to Europe may constitute a viable alternative to the maritime routes (via the Suez Channel or via the Cape of Good Hope). The terrestrial route can potentially cut transit time by up to two thirds compared to the maritime alternatives. In addition, the use of rail-road combined transport can decrease energy consumption by this same proportion compared to maritime transport and significantly more compared to transporting goods by air and thus contribute to the EU environment targets and the Transport White Paper ambitions.

Deputy State Secretary of the Latvian Ministry of Transport Dins Merirands said: "While most of the traffic between Asia and Europe uses maritime routes, I believe that further development of inland transport routes would provide additional credible and competitive transport options. I also truly believe that railway transport can be more competitive both in terms of time and cost when production areas are situated relatively far from the ports, such as in China and India, and cargo is destined for southern or eastern European countries. Therefore, it is important to stress that Euro-Asian rail transport, and its intermodal combination with maritime and road transport, has already proved that it is a feasible and competitive transport option."

CER Executive Director Libor Lochman added: "The projected increase of trade between Asia and Europe and the perspective of medium-term energy scarcity and rising energy prices urgently necessitate the development of a terrestrial alternative to maritime and air transport on the Euro-Asian axis. Rail-road combined transport and rail transport have strong assets, such as speed, safety, sustainability and energy efficiency. They are particularly suited to Euro-Asian traffic. However, the development of the terrestrial route requires political commitment from the countries concerned along its whole stretch. Within the European Union itself, CER calls on the European Commission to reinforce the East-West links by encouraging Central and Eastern European countries to invest in the necessary infrastructure."

Libor Lochman, Executive Director, CER is a speaker at SmartRail Eurasia



Istanbul transport boom continues as two new metro lines planned.

The development of public transport in the Turkish city is set to continue with an announcement of two major new metro lines. With a metropolitan population that is now topping approximately 14 million people and forecasts showing that it will continue its growth for the rest of the decade, ending up at 16.4 million, the city's transport network is needing to continue to expand to keep pace. As a result the Istanbul Metropolitan Municipality opened tenders in August for two new metro lines.

After London, Istanbul has the oldest underground urban line in the world, the funicular subway, Tünel, which still operating today first took passengers in 1875. Construction on the modern metro network began in 1989, with the Marmaray Tunnel (the Bosphorus undersea railway tunnel) connecting the Asian and European metro lines opening in October 2013. The Metro operates from 6 a.m. to approximately 0.30 a.m. every 7–10 minutes; during peak-hours the intervals reduce to 5 minutes.

Of the two new lines, the Ataköy-İkitelli line on Istanbul's European side will be 13.3km long and will carry around 45,000 passengers per hour in one direction, said the statement. Topbas also said the Ataköy-İkitelli line would be integrated with other rail systems, including the Marmaray and another metro line in Bağcılar.

Whilst the second, the Dudullu-Bostancı line on Istanbul's Asian side will be 14.2km in length and will also have the capacity to carry 45,000 passengers an hour with the journey between Dudullu and Bostancı taking 21 minutes.

Earlier in the Summer of 2015, the Minister of Transportation and Communication, Feridun Bilgin announced that the subway connecting Istanbul's new under-construction airport to the city's metro system will be put out to construction tender in 2016. The airport which is ultimately planned to be the largest airport in the world, with a 150 million passenger annual capacity will be connected with a metro system via a line starting from Gayrettepe station with the new line having a total length of 33 km will only be a 26-minute ride. The new under-construction airport in Istanbul is expected to be operational in 2018 with one terminal and two runways. There's plenty to keep Istanbul transport planners busy over the next few years!

Mehmet Ali Dagli, Senior Electronics Engineer, Istanbul Ulasim is a speaker at SmartRail Eurasia.

İstanbul Raylı Sistemler Ağ Haritası Istanbul Rail Transit Network Map



Crossing Eurasia seen as key as Chinese predicts rail exports of \$102bn by 2020.

The rail industry is increasingly dominated by China's actions, be they take-overs, low priced tenders or the sometimes remarkably quick delivery of major projects. And this trend shows little sign of abating with a government plan reported in local media predicting that China's rail manufacturing sector will over the rest of this decade expand to a point where it will sell 650 billion yuan (\$101.9 billion) worth of exports by 2020. The report from the Economic Information Daily, also predicts the rail market to grow globally by 3.3% annually in the next five years.

With Chinese domestic economic growth slowing, falling in the latest to a six-year low of 6.9% in the last quarter, an increase in exports are needed to pick up the slack. New markets and a more intensive targeting of existing ones are a key goal. And it's near neighbours in Eurasia with their flourishing economies that Beijing see as a key area for them. These nations form the largest chunk of the 'One Belt, One Road' initiative which focuses on connectivity and consists of two main components, the land-based "Silk Road Economic Belt" (SREB) and oceangoing "Maritime Silk Road" (MSR).

These new and expanded transport links will reduce China's dependence on Pacific sea routes and enable goods made in China to take three weeks by train, rather than six weeks by boat to reach Europe.

Major rail projects are proliferating across Eurasia, with an increasing focus on freight delivery. Whilst high-speed rail, a technology in which China excels is something which many countries are looking at, though the proposal to completion for these projects is still very low.

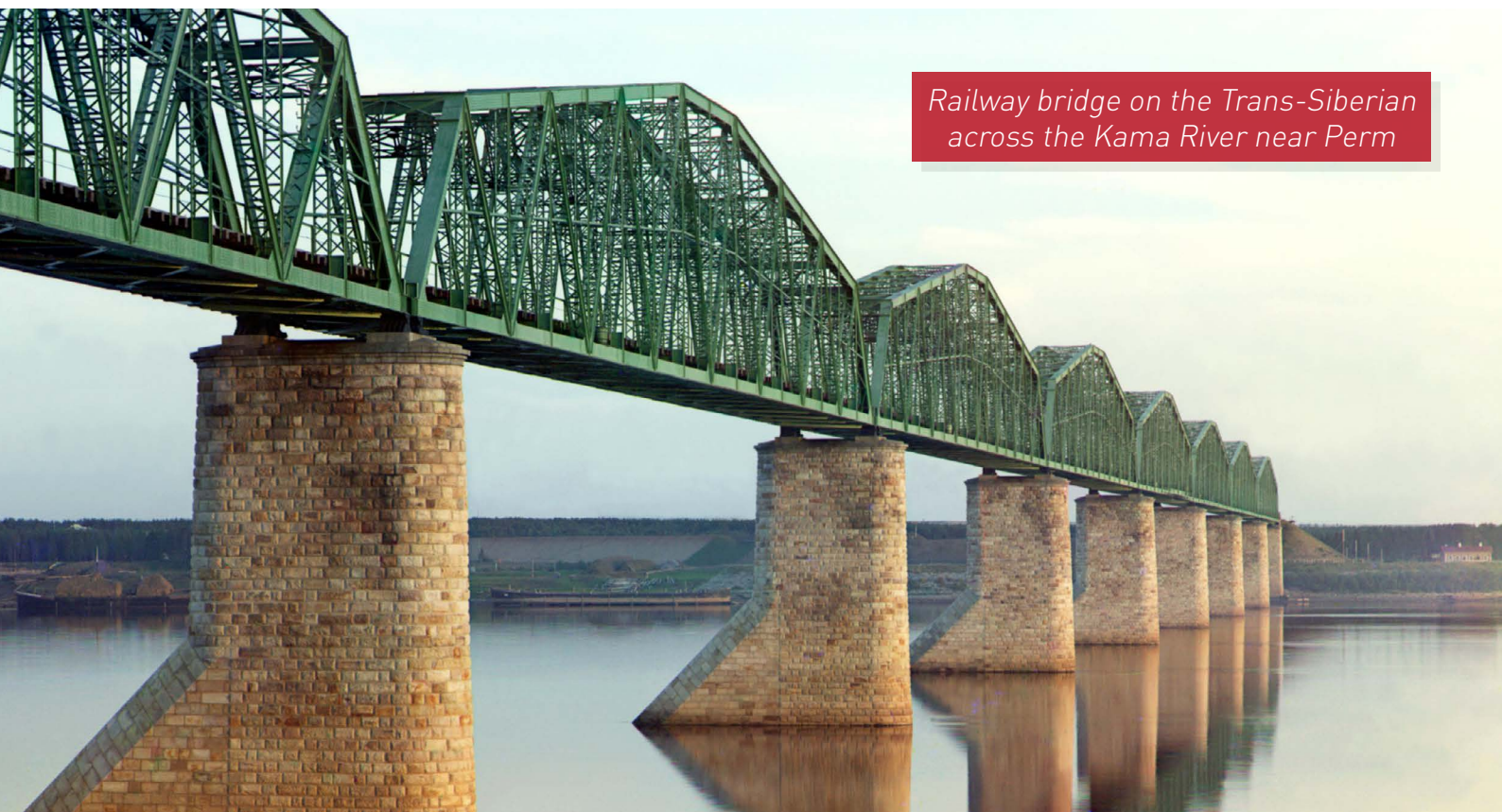
The Chinese government's roadmap, as reported in the Asia Times, also states that the country expects outbound sales of transportation equipment to further expand by 40% by 2025, and this growth will focus on developing 30-ton-axle-load electric locomotives as well as including high-speed trains of its own standard.

The projections from the Chinese government came just before the Chief Engineer of national rail operator China Railway, He Huawu, proposed a "Silk Road high-speed railway" to provide a single line connecting the Chinese network, central Asia and Iran. As reported in the Global Construction Review, the move would overcome the incompatibility between the standard gauge networks of China and Iran, and central Asia's system, which uses Russia's broad-gauge lines. With the current system China has to deploy breaks-of-gauge at its borders with Mongolia, Russia and Kazakhstan, while Iran has breaks at its borders with Azerbaijan, Turkmenistan and Pakistan. This however, would have to overcome a number of geopolitical concerns in the countries through which the line would potentially traverse.

Nikola Mishev, Head of International Affairs, National Railway Infrastructure Company Bulgaria

Vinod Bhatia, Director of Planning, Railway Board, Ministry of Railways India

Boguslaw Jankowski, Vice President, Society for Transport Integration are all speakers at SmartRail Eurasia.



Railway bridge on the Trans-Siberian across the Kama River near Perm

EBRD arranges US\$ 300 million syndicated loan for Kazakh Railways.

The European Bank for Reconstruction and Development (EBRD) and a group of international commercial banks earlier this year confirmed they are providing a syndicated financing package of US\$ 300 million in support of a comprehensive modernisation and restructuring programme of the Kazakhstani rail operator, Joint Stock Company National Company "Kazakhstan Temir Zholy" (KTZ).

KTZ is the national railway company which manages railway infrastructure and operates freight and a large share of passenger train services in the Central Asian republic. The EBRD will extend US\$ 150 million of this amount for its own account and syndicate the remaining US\$ 150 million to commercial banks. The syndicate comprises the following banks: Citibank, NA, London branch; Mizuho Bank, Ltd; Société Générale; Sumitomo Mitsui Banking Corporation; and the Bank of Tokyo-Mitsubishi UFJ, Ltd.

The signing ceremony took place in the EBRD headquarters in London in July 2015, in the presence of representatives of the EBRD, KTZ and the Embassy of the Republic of Kazakhstan in the UK. The proceeds of the loan will be used to refinance KTZ's eurobonds.

As part of the project, the EBRD will engage with KTZ on tariff system reform and the ongoing business transformation of the company. KTZ will also continue to implement sustainable energy technologies, which are a constant feature of its long-term cooperation with the EBRD.

Natalia Khanjenkova, EBRD Managing Director for Turkey and Central Asia, said at the signing at the Bank's Headquarters in London: "We are proud to further support railway sector reform in Kazakhstan with this syndicated financing package. International financiers' interest in the project demonstrates investor confidence in KTZ and Kazakhstan."

Sholpan Omarbekova, KTZ Managing Director for Finance and Economics, added: "With this new transaction the EBRD will not only provide financing, but also assist KTZ with advancing the reform of the regulatory framework in the sector." To date, the EBRD has invested over US\$ 7 billion in various sectors of the country's economy. The Bank is the largest investor in the non-oil and gas sectors of the Kazakhstani economy.



Introducing SmartRail Eurasia

MEET PROJECT DEADLINES | UNDERSTAND EVOLVING TECHNOLOGY NEEDS | ENSURE RELIABLE OPERATIONS

Dear Colleague,

We are delighted to be able to welcome you to Turkey for the first annual SmartRail Eurasia congress. This is the region's only dedicated, senior level rail and metro technology conference aimed at sharing best practice and uncovering new solutions that will help drive innovation on our rail and metro networks.

This is a time of great development on rail and metro networks across the region. In Turkey alone, we share a vision for development by 2023 that includes:

- \$46 billion allocated to rail and metro investment
- 3500 km high-speed line projects
- 1000km of mainline projects
- 24000km network upgrades that will require technology investment
- Extending urban networks in all of the countries major cities.

Obviously, with such vast projects and developments planned, there are also complex strategic and technical challenges that must be addressed. We look forward to using SmartRail Eurasia as a key forum to discuss these challenges. The show will deliver

a dynamic range of international speakers to share best practice strategies, provide 2 days of senior level networking opportunities and with a unprecedented range of case studies, workshops and masterclass panels, there is something for every member of your team to learn.

With FREE passes for railway operators, metros, Government officials and tramways, we hope you take this opportunity to learn from global counterparts and help your business to deliver projects successfully, understand changing needs and crucially, ensure a reliable and cost effective network.

We hope to see you at the Radisson Blu hotel for a couple of fantastic days in January.

Looking forward to supporting the show.



Murat Kavak
Deputy General Manager
TCDD



Fatih Turan
General Manager
AYGM

WHO ATTENDS:

SmartRail Eurasia offers an unique opportunity for senior level, intimate networking across the whole value chain

BUYERS

- ✓ Government bodies
- ✓ Railways
- ✓ Metros
- ✓ Tramways
- ✓ Turnkey suppliers
- ✓ Investment groups
- ✓ Consultants

SELLERS

- ✓ Turnkey suppliers
- ✓ Signalling suppliers
- ✓ IT and telecom suppliers
- ✓ Rolling stock manufacturers
- ✓ EPCs and project managers
- ✓ Component manufacturers
- ✓ Vehicle service and maintenance
- ✓ Network specialists
- ✓ Track suppliers
- ✓ Consultants

UNIQUE BLEND OF KEYNOTES, MASTERCLASSES AND PANEL DISCUSSIONS TO COVER KEY CHALLENGES:



Defining project and technology requirements and the role of localisation

With so many development plans and so much technology innovation, one of the key issues to arise is the need for collaboration and education on what technology is available and what the project requirements are. How can suppliers, operators and municipalities work together to better define requirements that not only consider initial capital expenditure, but also, long term costs?



Delivering projects on time and on budget

With such massive plans for network development, rules over tenders and the need for education over available technology, project management will be absolutely critical to the success of expansions and technology implementations. With ERTMS and CBTC having been delivered extensively now across Europe what can be learned from these projects and the challenges they faced? What is the key to delivering projects to deadlines and to cost?



Harmonisation of requirements and standards

Very much linked to the above issue is the need to harmonise standards and quality guidelines that, by their nature should be universal but are not necessarily always applied. Harmonising requirements and clearly stating quality guidelines ensures all suppliers on a set project are working to the same standard and makes sure that there are no time and cost delays because of issues over standards and certification.



Improving safety, reliability and capacity on urban rail networks

With growing urbanization and network growth, passenger demands have also increased. There is pressure on municipalities and metro operators to deliver a higher capacity and more reliable service. Technology such as CBTC can be deployed but how is it best implemented and what impact will this have on operations, cost and passenger safety?



Improving safety, reliability and capacity on mainline rail networks

With the Ministry committing to high-speed lines, network extensions and new routes, added pressure is put on the mainline network and solutions are needed across the telecom network and signaling systems. ERTMS, GSM/LTE technology offer the answers but new projects and implementations must be managed carefully to ensure that long term costs are minimised and operational safety is maximised.

MEET OUR EXPERT SPEAKER LINE UP

FEATURING:



Sönmez Alev
General Manager
Izmir Metro



Fatih Turan
General Manager
AYGM, (Ministry of Transport)



Necmettin Tahiroglu
General Manager
EGO



Renata Susa
President of Management Board
Croatia Railways (HZ)



Libor Lochman
Executive Director
CER



Duncan Cross
Deputy Director Operations
London Overground



Ashgar Bahramali
Project Director
Iran Railways



Nikola Mischev
Head of International Affairs
National Railway Infrastructure Company Bulgaria

KEY SPEAKERS INCLUDE:

Fatih Turan
General Manager
AYGM (Ministry of Transport)

Sönmez Alev
General Manager
Izmir Metro

Halil Korkmaz
General Manager
TCCD

Erhan Enbatan
Chairman of the Board
ESTRAM

Libor Lochman
Executive Director
CER

Andrea Giuricin
Head of Studies
CRIET

Enver Sedat Tamgac
General Manager
Malatya Transport

Duncan Cross
Deputy Director Operations
London Overground

Niyazi Turlu
General Manager
Denizli Transport

Alpaslan Kara
Rolling Stock Manager
TCDD Izmir

Feyzullah Gun
General Manager
Kayseri Transport

Hikmet Ozturk
Deputy General Manager
Tuvasas

Boguslaw Jankowski
Vice President
Society for Transport Integration

Huseyin Namli
General Manager
Mesin Ulasim

Mustafa Altay
General Manager
Kocaeli Ulasim

Nikola Mischev
Head of International Affairs
National Railway Infrastructure Company Bulgaria

Renata Susa
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HZ Infrastruktura

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Sebastian Jarczynski
System Performance Manager
London Underground

Necmettin Tahiroglu
General Manager, EGO

George Konstantinidis
Director of Thessaloniki Metro
Atiko Metro

Mehmet Ali Dagli
Senior Electronics Engineer
Istanbul Ulasim

Michal Zieba
Director of Rail Safety
Office of Rail Transport, Poland

Sabine Bund
Managing Director
Rail Cargo Operator - Austria GmbH

Harald Reisinger
CIO, RailNet Europe

Azmi Abdul Aziz
Managing Director, Prasarana Malaysia

Sudath Amarantunga
Technical Manager Alliances
Sydney Light Rail Delivery Office
Transport for New South Wales

Vinod Bhatia
Director of Planning, Railway Board
Ministry of Railways India

Frank Michelberger
Head of Institute for Integrated Mobility Research, St. Pölten University of Applied Sciences, Austria

Jim Baker
Founder & CEO
Xentrans

Hakan Murat Bayindir
General Manager
Eskisehir LR

Abdullah Fehmi Ökten
General Manager
Bursa LightRail

Omer Kofte
Deputy Head of Installations
TCDD

EXCLUSIVE SMARTRAIL EURASIA SPEAKER INTERVIEW: SMARTRAIL WORLD EDITOR LUKE UPTON SPEAKS TO CER EXECUTIVE DIRECTOR LIBOR LOCHMAN



LU: How are changing passenger demands, in particular with regard to technology, shaping your railways plans for the future?

LL: Adapting to changing trends in customers' behaviour is crucial for our members. Also evolution of technology has a significant impact on our members' services. One particularly good example of this can be found in the field of ticket distribution. Customers are increasingly technology-savvy, and expect to get all relevant information at their fingertips in a few clicks, through a wide variety of data channels offering real time and personalised information. The emergence of smartphones and new Information Technologies (IT) is driving this technological and behavioural revolution in the transport world. The rail sector itself is keen to embrace these solutions in order to better meet the needs and expectations of modern customers, and has already started doing so, with the development of door-to-door multimodal journey planners, smart apps, ticketless solutions and close partnerships with other modes.

LU: What excites you most about the future of rail?

LL: Technological developments, in terms of speed of rail connections, smart ticketing or innovative apps providing tailored and real-time information,

are all exciting developments. They will allow our sector to continue serving the needs of its customers, and will help rail attract an increasing number of passengers.

With increasingly pressing societal challenges, such as climate change, the rising price of petrol, congestion and fuel shortages, rail will have a very strong role to play, as the backbone of the sustainable transport system. The rail sector has the potential to become the essential land transport mode, the solution of choice for the future, by providing efficient solutions to both societal and individual mobility needs.

To a large extent, however, rail's future will depend a great deal on investment in infrastructure, which will drive, to a large extent, rail's performance, reliability and attractiveness. This is true for both the transport of passengers and freight – something we have not mentioned today, but which also constitutes a crucial part of rail current and future services. Red tape should also be limited to a minimum, in order to allow entrepreneurship and innovation to flourish. If these conditions are in place, I have no doubt that rail has a very bright future ahead.

Read the full interview and many more like this at www.SmartRailWorld.com

SMARTRAIL & METRO EURASIA DAY 1: 26TH JANUARY 2016

Day One Chairman: **Stefan Roseanu**, Owner, **ETL Business Plus**

Development and Procurement Plans in Turkey:

With \$46 Billion allocated to rail and metro investment by 2023, 3500km high-speed line projects, 1000km of mainline projects and 24000km of the network undergoing upgrades in Turkey alone, it is easy to see the importance of project management, defining technology and network requirements. This session will explore:

- Defining development plans and ensuring correct specifications.
- The role of localisation and international suppliers in meeting development plans.
- Delivering on the vision put forward for rail development.

8:00 **Registration Open and Networking Refreshments.**

8:50 **Huawei Lead Sponsor Welcome Address.**

Senior Representative, **Huawei**

9:00 **Delivering the 2023 vision for rail and metro transport.**

Fatih Turan, General Manager, **AYGM**

9:15 **Defining project requirements and delivering new projects successfully.**

Senior Representative, **TCDD**

9:30 **Collaboration to ensure long term success.**

Necmettin Tahiroglu, General Manager, **EGO**

9:45 **The Impact of a Turkey-Europe Railway Corridor.**

Sabine Bund, Managing Director,

Rail Cargo Operator – Austria GmbH

10:00 **PANEL: Meeting the vision for rail and metro projects and the role of localisation:**

Fatih Turan, General Manager, **AYGM**

Senior Representative, **Huawei**

Senior Representative, **TCDD**

Senior Representative, **Istanbul Metro**

Necmettin Tahiroglu, General Manager, **EGO**

Sönmez Alev, General Manager, **Izmir Metro**

Feyzullah Gun, General Manager, **Kayseri Transport (Kayseri Ulasim)**

Abdullah Fehmi Ökten, General Manager, **Bursa LightRail**

Hakan Murat Bayindir, General Manager, **Eskisehir LR**

10:30 **NETWORKING COFFEE** ☕

Learning lessons from European projects:

With so much network development planned across Eurasia there is plenty to be learnt from the mainline and urban projects underway and completed across Europe. This session looks at:

- Successful project management of technology and upgrades (ERTMS, CBTC and Rolling stock).
- Delivering new projects on time and on budget.
- Considering long term costs, as well as capital expenditure.
- Selecting the right technology to meet current and future needs.

11:00 **ERTMS: The Turkish Challenge.**

Omer Kofte, Deputy Head of Installations, **TCDD**

11:15 **Deployment of Single European Rail Area principles.**

Libor Lochman, Executive Director, **CER**

11:30 **Lessons learned in delivering new rail projects.**

Renata Suša, President of the Management Board,

HŽ Infrastruktura

11:45 **Defining technology requirements and implementing successfully.**

Duncan Cross, Deputy Director Operations, **London Overground**

12:00 **Increasing the efficiency of International rail.**

Harald Reisinger, CIO, **RailNet Europe**

12:15 **PANEL: Learning lessons from global rail projects:**

Renata Suša, President of the Management Board,

HŽ Infrastruktura

Duncan Cross, Deputy Director Operations

London Overground

Libor Lochman, Executive Director, **CER**

Harald Reisinger, CIO, **RailNet Europe**

Omer Kofte, Deputy Head of Installations, **TCDD**

12:45 **NETWORKING LUNCH** 🍴

14:00 **Telecoms, IT and Operations Masterclass – innovations for improving operational safety and reliability:**

Rapidly developing technology offers a host of new opportunities for the rail industry, in the masterclass led by industry leaders Huawei, participants will be guided through developments and innovations that can improve safety, reliability and commercial efficiencies.

Norman Frisch, GSM-R Business Development, **Huawei**



15:00 **NETWORKING COFFEE** ☕

Enhancing Urban Rail Operations:

With both digitisation and urbanisation increasing, there is more pressure on metro and urban rail networks than ever before. How can metro and urban operators respond and increase capacity, improve reliability and meet growing passenger demands. This session looks at:

- New technology for metros; how to define requirements
- Best practice for operations and upgrades
- Deployment of CBTC and building capacity

15:45 **Growing and integrating your network for seamless operations.**

Azmi Abdul Aziz, Managing Director, **Prasarana Malaysia**

16:00 **Using IT to help improve safety and performance.**

Mehmet Ali Dagli, Senior Electronics Engineer, **Istanbul Ulasim**

16:15 **The impact of CBTC on operations and safety.**

Sebastian Jarczyński, System Performance Manager,

London Underground

16:30 **Meeting passenger needs by advancing urban rail operations.**

Sönmez Alev, General Manager, **Izmir Metro**

16:45 **Effective project management in historical cities to meet modern metro needs.**

George Konstantinidis, Director of Thessaloniki Metro,

Attiko Metro

17:00 **PANEL: Increasing capacity and meeting demands on urban networks:**

Sönmez Alev, General Manager, **Izmir Metro**

George Konstantinidis, Director of Thessaloniki Metro,

Attiko Metro

Sebastian Jarczyński, System Performance Manager,

London Underground

Azmi Abdul Aziz, Managing Director, **Prasarana Malaysia**

17:30 **NETWORKING COCKTAILS RECEPTION** 🍷



19:00 **END OF DAY 1**

SMARTRAIL & METRO EURASIA DAY 2: 27TH JANUARY 2016

Day Two Chairman: **Andrea Giurcin**, Head of Studies, **CRIET**

International Technology Review:

With network expansion and modernisation comes increasing technology demands to ensure the network meets expectations and that the service is competitive and lifecycle maximised. This session looks at:

- Defining technology requirements.
- The next generation of rail and metro technology.
- Innovation and long term thinking to reduce cost.

8:30 **Registration Open and Networking Refreshments.**

9:00 **Huawei Technology Review.**

Senior Representative, **Huawei**

9:15 **US Perspective: Innovation in Smart Rail.**

Jim Baker, Founder & CEO, **Xentrans**

9:30 **Australian Perspective: Managing stakeholders in successful delivery of complex rail projects.**

Sudath Amaratunga, Technical Manager Alliances, **Sydney Light Rail Delivery Office Transport for New South Wales**

9:45 **Turkish Perspective: Reducing costs and improving operations with futureproof rolling stock.**

Hayri Avci, General Manager, **Tulomas**

10:00 **Indian Perspective: The use of technology in enhancing India's railways.**

Vinod Bhatia, Director of Planning, Railway Board, **Ministry of Railways India**

10:15 **PANEL: Ensuring technology meets growing demands in the Eurasian market:**

Senior Representative, **Huawei**

Jim Baker, Founder & CEO, **Xentrans**

Sudath Amaratunga, Technical Manager Alliances, **Sydney Light Rail Delivery Office Transport for New South Wales**

Vinod Bhatia, Director of Planning, Railway Board, **Ministry of Railways India**

Hikmet Ozturk, Deputy General Manager, **Tuvasas**

Hayri Avci, General Manager, **Tulomas**

10:45 **NETWORKING COFFEE** ☕

Enhancing mainline operations and reducing costs:

With the European deployment of ERTMS and increasing pressure on both the passenger and freight networks in Eurasia to be competitive and cost effective, an efficient and safe mainline network is imperative. This session looks at:

- New technology for mainline, highspeed and freight rail: how to define requirements.
- Improving service and operations to meet increasing needs.
- The role of ERTMS and new signalling systems.

11:15 **Defining requirements and implementing them successfully to improve operations.**

Halil Korkmaz, General Manager, **TCDD Region 1**

11:30 **Interoperability of trains between Iran and Turkey.**

Asgar Bahramli, Project Director, **Iran Railways**

11:45 **Understanding technology and delivering new projects on time and on budget.**

Nikola Mishev, Head of International Affairs, **National Railway Infrastructure Company Bulgaria**

12:00 **Meeting evolving standards to ensure railway safety.**

Michal Zieba, Director of Rail Safety, **Office of Rail Transport, Poland**

12:15 **PANEL: Ensuring reliable, cost effective and futureproof mainline rail operations:**

Halil Korkmaz, General Manager, **TCDD Region 1**

Asgar Bahramli, Project Director, **Iran Railways**

Nikola Mishev, Head of International Affairs, **National Railway Infrastructure Company Bulgaria**

Michal Zieba, Director of Rail Safety, **Office of Rail Transport, Poland**

12:30 **NETWORKING LUNCH** 🍴

Meeting technical requirements and changing needs:

As well as modernising systems to develop capacity and meet growing passenger demands. Transport across the region must also adapt to changing technical specifications and demands. This session invites a series of technical presentations that look at meeting next generation needs:

- Technical considerations for different rail modes
- Sustainability and engineering
- Reducing lifecycle cost and utilising technology

PART A: Integration and Projects

14:00 **Rail Development: Successfully constructing Lithuania's freight corridors.**

Julijus Glebovas, Deputy Head of Multimodal Transport and Development Division, **JSC Lithuania Railways**

14:15 **Passenger Development: Using high speed rail at the new Istanbul airport to meet passenger demands.**

Boguslaw Jankowski, Vice President, **Society for Transport Integration**

14:30 **Learning lessons from EU Rail Projects: How to meet intercontinental vision and local needs.**

Jana Pieriegud, Department of Transport, Warsaw School of Economics and Professor Wojciech Paprocki, Department of Transport, **Warsaw School of Economics**

14:45 **Speaker Q&A - a chance for the audience to get key questions answered:**

Boguslaw Jankowski, Vice President, **Society for Transport Integration**

Jana Pieriegud, Department of Transport, **Warsaw School of Economics**

Professor Wojciech Paprocki, Department of Transport,

Warsaw School of Economics

Julijus Glebovas, Deputy Head of Multimodal Transport and Development Division, **JSC Lithuania Railways**

15:00 **NETWORKING COFFEE** ☕

PART B: Technology and Technical Requirements

15:30 **Human Resources Innovation: The importance of HR in making rail Competitive.**

Frank Michelberger, Head of Institute for Integrated Mobility Research, **St. Pölten University of Applied Sciences, Austria**

15:45 **Technology Innovation: Energy Saving and cost reduction on rolling stock.**

Alpaslan Kara, Rolling Stock Manager, **TCDD Izmir**

16:00 **CLOSING LOCAL PANEL: Fulfilling technology and technical requirements for Turkish transport:**

Alpaslan Kara, Rolling Stock Manager, **TCDD Izmir**

Sönmez Alev, General Manager, **Izmir Metro**

Enver Sedat Tamgaci, General Manager, **Malatya Ulasim**

Niyazi Turlu, General Manager, **Denizli Transport**

Feyzullah Gun, General Manager, **Kayseri Ulasim**

Huseyin Namli, General Manager, **Mesin Ulasim**

Mustafa Altay, General Manager, **Kocaeli Ulasim**

Erhan Enbatan, Chairman of the Board, **ESTRAM**

16:45 **END OF SMARTRAIL EURASIA**