InnoTrans 2018 – more innovative and successful than ever

More than 400 innovations, 155 world premieres, 155 vehicles and midsummer temperatures – all this awaited the 153,421 trade visitors during the four days of the trade fair at the Berlin exhibition grounds.

The guests attending the trade fair had travelled from 149 countries to get informed by the 3,062 exhibitors from 61 countries about the entire repertoire of products and services of the mobility sector. Numerous exhibitors benefited from InnoTrans as a high-profile stage to launch their world premieres.

155 vehicles were tightly packed at the Outdoor Display. Among the vehicles presented were the new Berlin S-Bahn from the manufacturer consortium Siemens/Stadler, the train of ideas from DB Regio, the low-floor train Coradia Stream from Alstom, a shunting locomotive with a hybrid AC traction equipment from the Chinese CRRC Corporation Limited and the four-axle DE 18 locomotive from Vossloh Locomotives.

A highlight for the trade visitors was the Bus Display that was again presented this year and on which a total of ten electric buses turned their rounds. Among them were the manoeuvrable VDL Cita SLFA Electric of VDL Bus & Coach, the Aptis from Alstom or the Trollino 12 from Solaris celebrated its premiere. It convinced, among others, by its silent and environment-friendly drive.

The InnoTrans Convention – the high-level supporting programme of the trade fair – also presented fascinating new formats. When the International Bus Forum made its debut, the participants of the panel discussed about the level of operational maturity of electric buses in public transport. The first Onboard Hospitality Forum drew the attention of the participants to the comfort and well-being of passengers. For the first time a technology marathon was held at the InnoTrans with the 'HackTrain Hackathon'. 80 developers worked during four days at smart IT solutions for the railway sector. The winner was a concept for an efficient control of bordering green areas along the tracks.

After the visit to the fair, exhibitors and trade visitors gave a throughout positive feedback on the InnoTrans. According to a representative survey, 90 per cent of the trade visitors declared to be satisfied with the success of their visit to the trade fair. The same percentage of trade visitors as well as of exhibitors would recommend the visit of the trade fair to the comfort and well-being of passengers.

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As the leading international trade fair for transport technology, InnoTrans is much more than a platform for the latest products and expert discussions at the highest level.

At the Berlin ExpoCenter City, trade visitors and exhibitors are offered the unique opportunity to get to talk to industry colleagues from all over the world and, above all, to do business. This year, 90 per cent of the trade visitors declared to be highly satisfied with the business success of their attendance at the trade fair. During the four days of the event, a high number of domestic and international contracts and co-operations were concluded again: GE Transportation, for example, announced an order of 300 shunting locomotives from the Kazakh railway Kazakhstan Temir Zholy (KTZ).

More international co-operation

Siemens Mobility and Deutsche Bahn AG also signed an agreement for future co-operation. Furthermore a co-operation between the German and the Chinese railway industries was concluded: Volker Schenk, President of the German Railway Industry Association (VDDB) and Zhou Xiaojing, Executive Vice President of the China Association of Metros, signed a Memorandum of understanding on the Chinese-German cooperation in urban rail transport that provides for a joint coordination in planning, building, construction and standardisation of rail transport systems in metropolitan regions.

Young, creative and highly innovative: HackTrain Hackathon celebrates its premiere

How can smart IT solutions enrich the railway sector or even revolutionise it?

This is a question that the railway sector has to face like others in times of an increasing digitisation – and to which 80 young developers from 30 countries tried to find an answer at InnoTrans. The participants tinkered during four days in small teams to find digital solutions to problems of the railway sector in the framework of a HackTrain Hackathon. Among them were: How can the main factors for booking processes become more customer-friendly and how can the work of the track workers become safer? At the end of the event that had been organised by HackPartners Ltd. the three teams that had presented the most promising solution concepts were honoured. Ranked number one at the first InnoTrans Hackathon was the ‘Veggie on Rails’ team with a GPS- and video-based solution to supervise the vegetation along the tracks – the team members were awarded a prize amounting to several hundred euros. Ranked second was a concept for a and video-based solution to supervise the vegetation along the tracks – the team members were awarded a prize amounting to several hundred euros. Ranked second was a concept for a and video-based solution to supervise the vegetation along the tracks – the team members were awarded a prize amounting to several hundred euros. Ranked second was a concept for a and video-based solution to supervise the vegetation along the tracks – the team members were awarded a prize amounting to several hundred euros. Ranked second was a concept for a and video-based solution to supervise the vegetation along the tracks – the team members were awarded a prize amounting to several hundred euros. Ranked second was a concept for a and video-based solution to supervise the vegetation along the tracks – the team members were awarded a prize amounting to several hundred euros. Ranked second was a concept for a and video-based solution to supervise the vegetation along the tracks – the team members were awarded a prize amounting to several hundred euros. Ranked second was a concept for a and video-based solution to supervise the vegetation along the tracks – the team members were awarded a prize amounting to several hundred euros. Ranked second was a concept for a and video-based solution to supervise the vegetation along the tracks – the team members were awarded a prize amounting to several hundred euros. Ranked second was a concept for a and video-based solution to supervise the vegetation along the tracks – the team members were awarded a prize amounting to several hundred euros. Ranked second was a concept for a and video-based solution to supervise the vegetation along the tracks – the team members were awarded a prize amounting to several hundred euros. Ranked second was a concept for a and video-based solution to supervise the vegetation along the tracks – the team members were awarded a prize amounting to several hundred euros. Ranked second was a concept for a and video-based solution to supervise the vegetation along the tracks – the team members were awarded a prize amounting to several hundred euros.
The SPITZKE SE Group looks back at InnoTrans 2018 as a highly successful event. Fully focused on their own vision of ‘Creating connected dimensions’, their booth was a meeting point for trade visitors and furthermore a contact point for suppliers and interested young talents.

One of the highlights of the framework programme was the panel discussion on the second day of the trade fair that was moderated by Dr. Alexander von Lieven, Director Equipment/Electrical Engineering Division of SPITZKE SE and speaker of the management of SPITZKE FAHRWEGSYSTEME GmbH. Dr. Volker Hentschel, Board Member for Production of DB Netz AG, Dr. Michael Bernhardt, Managing Director of Rail Power Systems GmbH, as well as Dirk Flege, Executive Director of ProRail Alliance (Allianz pro Schiene) and Ingolf Leithoff, Managing Director of QLX GmbH discussed how Deutsche Bahn AG can increase its civil engineering activities when at the same time the operational performance has to be increased and the railway sector will not be able to count on more human resources.

There were also numerous ceremonial highlights at InnoTrans. SPITZKE SE was nominated supplier of the year of DB in the category infrastructure. Furthermore, the SPITZKE employee Simone Bauer was awarded the distinction of ‘Mobility Creator 2018’ by Pro-Rail Alliance for the development of an extraction system for welding operations.

SPITZKE received and awarded various distinctions

Before the trade fair was successfully concluded with the start of the SPITZKE student competition on the career day, the focus was also set on the suppliers of the group. SPITZKE brought its partners together to thank them for the successful co-operation and conferred the SPITZKE supplier award to NKT GmbH & Co. KG, Rail- und Signaltchnik Grün GmbH, Lehmer Maschinentec GmbH and DATENGUT Leipzig GmbH & Co. KG.

The railway infrastructure enterprise enjoyed a high level of interest even when no awards were conferred. As an example the German Federal Minister of Transport Andreas Scheuer and the Parliamentary State Secretary at the Federal Ministry of Transport and Digital Infrastructure Enak Ferlemann did not miss the opportunity to drop in. Dr. Richard Lutz, CEO of Deutsche Bahn AG as well as the head of infrastructure procurement of DB AG, Dr. Torsten Latz were also guests of the enterprise.

The visitors huddled close together on the stand.

Quieter urban life

Urbanisation is progressing further and it is estimated that nearly 70 per cent of the world’s population will live in cities by 2050 with quite some challenges linked to each other. Rock wool mats bend when subjected to forces and take back their initial shape afterwards, so that they effectively act as a spring. The spring effect efficiently decouples the dynamic behaviour of the track infrastructure from the ground. Rockdelta products are used in three main areas of application: to absorb vibration for ballasted superstructures and for slab tracks as well as for the protection of buildings with all types of track. Rock wool mats are resistant to weather conditions and chemical impacts as well as extremely rugged and not sensitive to temperature variations and ultraviolet radiation. They also withstand temperatures up to 1,000 degrees Celsius. They can therefore be easily stored and are at the same time safe even with spark emitting building activities.

Rockdelta products from Rockwool B.V., a subsidiary of Lapinus, have been specifically developed to solve such problems and have found great interest at InnoTrans 2018. They consist of mats from rock wool from an extremely durable volcanic stone that can be fully recycled. Depending on the application, different modifications – single or multi-layer with or without a geotextile layer – can be used.
**Intelligent brakes**

KES GmbH & Co KG has presented the intelligent braking system KES IBS 300 at InnoTrans 2018. Further to the hybrid brake control (KES EDS 300) that combines a UIC approved electronic brake control valve with a purely pneumatic fall-back level in a single device, the system offers the innovative compact brake unit (KES CBU 300) and the driver brake valve (KES DBV 300).

The capabilities of the system in the area of predictive maintenance have aroused a very special interest among the numerous visitors of the KES stand. One of the examples is the electronic retrieval of the brake pad wear by sensors in the compact brake unit. The captured data are transferred to the brake control system or the train bus and enable the operator an early information when brake pads have to be changed.

The enhanced safety that the KES IBS 300 system offers, has produced numerous positive reactions at InnoTrans 2018. The safety of the system is substantially increased by the fact that there are sensors to retrieve the braking force reporting it to the brake control system. This allows to supervise the functionality of the braking system in a closed loop that not only records the output pressure but also gives a feedback on whether the required force is also applied.

A future-oriented system also for freight transport

The use of the KES IBS 300 system in modern freight wagons has also found a positive resonance. Further to the autonomous energy supply of the system via an axle generator, the integrated GPS/GSM interface, the integrated wheel-slide protection as well as the possibility of automatic brake tests are well prepared for the freight wagons of the future.

Beyond this application the system can also be used in multiple units, metros and passenger coaches. The modular design of the system was particularly acclaimed. This allows for a quick system maintenance that may be carried out by the customer on request and that leads to low lifecycle costs (LCC). Furthermore the modular design opens numerous possibilities for adaptations to new rolling stock as well as for the obsolescence management. This has been demonstrated by KES when the brake control for the Alstom Lint 41 vehicles had to be replaced while form, fit and function of the old system had to be maintained and carried out with modern KES technology. KES draws a positive balance of InnoTrans 2018 and looks forward to coming back in 2020.

**NEWS**

**En passant – measuring in passing**

Althen GmbH Mess- & Sensorsotechnik has presented the 3D wheel measurement system to measure railway vehicles automatically and without contact in real-time. It combines five laser scanners that are installed in the track area and calibrated so as to form a system. Measurements are being carried out at an average speed of 50 kilometres per hour when trains pass by or before they roll into the station or the maintenance area respectively. An RFID code allows to individually identify each wheel. An additional camera also identifies the vehicle by its RFID code. As soon as the code of the wheel has been recognised, the measuring cycle starts. While the wheel passes the laser scanners, the diameter, profile as well as the wheel distance are measured and the corresponding tolerances are indicated. The data are automatically transferred to the operators. The necessary software can be integrated into an existing solution such as for example Aura.

**Multilayer conduits**

Improved performance and safety for the rail industry.

Multilayer conduit with inner and outer layer for improved safety and performance. Our new innovative railway engineering multilayer product line provides protection and safety for cables on intercarriage jumper connections, bogies, roof installations and undercarriage installations. The new PMA multilayer technology allows combinations of materials for optimal product characteristics in rail applications. 

Condition-based data from systems are nowadays indispensable, and this applies to brake systems as well. As a matter of fact it is not only for safety reasons but also for the savings potential.

**ABB**

Multilayer conduit with inner and outer layer for improved safety and performance. Our new innovative railway engineering multilayer product line provides protection and safety for cables on intercarriage jumper connections, bogies, roof installations and undercarriage installations. The new PMA multilayer technology allows combinations of materials for optimal product characteristics in rail applications. 

**PMA**

3D wheel measurement system installed in the track area.
For more safety and comfort

Safer and more efficient railway traffic is only possible through a continuous supervision of trains and infrastructure.

The sensors of ASC GmbH detect even the slightest variations on vehicles and structures. They record the position of trains and ensure a high comfort of travel. This year the enterprise located in Pfaffenhofen, Germany, presented its broad railway technology product program for the first time at InnoTrans.

The very wide frequency range in combination with their extremely robust and durable construction make the capacitive acceleration sensors and inertial measurement units (IMU) outstandingly suitable for the extremely harsh operational conditions in railway traffic.

The acceleration sensors ASC 4421MF (uni-axial) and ASC 5525MF (tri-axial) with a frequency range of 0 hertz to 7 kilohertz (typ. ± 3 decibels) and a high impact resistance of up to 6,000 g are used for the analysis of the structural durability of bogies as well as for complete trains. The sensors ASC 4311LN and ASC 4411LN furthermore allow to improve the riding comfort of railway vehicles. Many users utilise sensors of the ASC CS-series for the supervision of bridge structures as they ensure a loss-free signal transmission over very big distances. On the other hand, the light, robust and high-frequency piezo-electric acceleration sensors ASC F203A11 that operate in the measuring ranges of ±50, ±100, ±500 and ±2,000 g are proven.

Tests with a broad detection spectrum

The detection of track bed vibrations is also mandatory for the operational safety. For applications in this field, ASC offers the acceleration sensors of the ASC OS-series that are extremely durable and furthermore hermetically sealed.

The measuring range lies between ±2 and ±200 g and they are supplied in a rugged stainless steel casing with an impact resistance of up to 6,000 g (ASC OS 125MF). The tri-axial acceleration sensors ASC OS-315MF furthermore feature the lowest spectral and broadband noise as well as an excellent signal-noise-relation.

In railway technology applications the sensors ASC IMU 7.x.y. are used. They are composed of a tri-axial capacitive MEMS acceleration sensor as well as a tri-axial angular rate sensor and include six degrees of liberty. The range of acceleration lies between ±2 and ±50 g, the rotational range between ±75 and ±900 degrees per second. All ASC sensors are used for test and approval rides but not for the use in big series.

Protecting infrastructures against overvoltage

The electric sub-distribution of ‘non-railway power’ to critical infrastructures or the ‘last mile’ to railway stations but also to workshops, operations control centres and interlockings is endangered by lightning strikes.

There is a danger for electronic devices of any kind even if the lightning hits at a distance of up to two kilometres. Furthermore all electric switching operations are potential sources of danger for the electronics; possible sources of damage are also short circuits and earth faults as well as temporary overvoltages (TOV).

Among others, Raycap GmbH has developed the ProTec systems T1HS, T1H and T2H that were presented at InnoTrans 2018. These systems are so-called surge protection devices (SPDs) and are able to reliably extinguish lightnings (T1) and overvoltages (T2). The more powerful HS variant is dimensioned for a discharge capacity of up to 100 kiloadamperes (10/350 microseconds). ProTec T2H is installed as an overvoltage protection in the sub-distributions or in the main junction boxes. In conjunction with varistors, gas arrestors (GDT) guarantee that even high current peaks can be quickly handled; furthermore this construction improves the durability. In addition to this, Raycap has optimised the resistance against vibrations and shocks with its patented locking mechanism. Contacts are coded according to their SPD type and network voltage in order to prevent erroneous connections. A new thermal separation was developed for the ProTec product range. The ‘ADV solution’ that is the so-called ‘traffic light indicator’ gives an early warning for the need of an exchange while the protection still remains active.

The enterprise offers further solutions in their portfolio of railway applications such as for example for the protection of turnouts and signalling equipment with an improved TOV stability as well as voltage limitation cabinets to be installed directly near the track.

Air technology on track

Design, application properties, durability - rolling stock manufacturers must be able to count on the best product performance when choosing a coating system.

At InnoTrans 2018, the paint manufacturer Mankiewicz Gebe. & Co. (GmbH & Co. KG) presented the experiences it has gained among others in the aviation industry. These coatings are meanwhile also adopted for exterior and interior coatings of railway rolling stock.

In the base coat-clear coat system for exterior coatings, it is sufficient to apply a single layer of the base coat that acts as colouring layer with the advantage of very short waiting times for re-coating. This layer – and with it the shade – is then sealed by a clear coat that ensures a high resistance against UV radiation, chemicals as well as big temperature differences and mechanical loads. For interior applications manufacturers are facing challenges to match the fire protection standard EN 45545-2 that must also be considered in the composition of the coating. In this field Mankiewicz also benefits from its experiences in the aviation industry. It has to be remembered that the coating is an important factor for the perception of a brand.
InnoTrans 2018 presents products and companies but focuses on communication and exchange as well. While the leading trade fair of the industry is receiving much attention on the exhibition grounds, it is also well reflected in the media. More than ever, InnoTrans 2018 has been reflected in the social networks – frequent occasions were the presentation of new products, the awarding of prizes and the series of lectures at the InnoTrans Convention. A look back in tweets.
in inner-city Berlin. According to Transdev’s Marc Vanhoutte their buses cover an annual distance between 70,000 and 105,000 kilometres. He claimed that their availability exceeds that of diesel vehicles. However, they are charged by direct cable connections. Vanhoutte qualified his statement claiming a higher investment in e-mobility. The lower ranges between recharging made it necessary to buy more buses than for diesel operations. Furthermore maintenance needs more employees and investment per unit is higher while the consumed energy is cheaper.

Siegfried Balleis, coordinator of the ‘Special Clean Air Programme’ of the German Federal Government pointed out that there is still money for subsidies in municipalities and said: “The change is expensive but the money is well invested.” Frank Steinert, team leader at the Fraunhofer Institute for Transportation and Infrastructure Systems IVI, emphasised that many synergy effects could still be generated when the various components such as air conditioning systems could be interconnected.

The International Bus Forum, an element of the InnoTrans Convention was organised by the Association of German Transport Companies (VDV). It complemented the Bus Display for the first time in terms of contents. The exhibition space for electric buses that was introduced in 2016 and the related charging infrastructure again enjoyed great popularity with trade visitors at InnoTrans 2018. This is where the Trollino 12 from Solaris, as an example, celebrated its premiere. It convinces thanks to its silent and environment-friendly drive. Trade visitors were able to take a ride in the manoeuvrable VDL Citea SLFA Electric from VDL Bus & Coach, in the Aptis from Alstom or in the Sileo S18 from the manufacturer of the same name.

It seems that, among others, there was a big need to discuss the maturity for commercial operations of electric buses within this new format of the InnoTrans Convention. While the French Transdev group presented the daily operations of around 500 buses in and around Eindhoven and Amsterdam, the head of Berlin’s BVG, Sigrid Evelyn Nikutta questioned the operational readiness with regard to the inductive charging, hinting at the experience of line traffic in the city.
Even simpler, more intuitive and flexible. IRMA 6, the sixth generation of sensors for automatic passenger counting from iris-GmbH, made its debut from September 18 to 21 at InnoTrans 2018 in Berlin, the home and birthplace of the company.

The hardware has been re-developed from scratch and features increased storage and computing performance while retaining the robust and proven time-of-flight (TOF) technology. The increased resolution of 80,000 pixels generates more intuitive and easy to understand video images (HD / TOF image streaming). To allow more flexible mounting positions and heights, the counting sensor was fitted with an advanced technical feature in lighting technology. The implementation of the ITxPT sensor communication achieves maximum standardisation. IRMA 6 = Plug&Play.

User-friendly web interface
Apart from technology development, iris GmbH is also committed to product design. Cleverly devised details save time and therefore installation costs. Overall, IRMA 6 is designed for modularity – this allows the use of numerous different physical interfaces such as Ethernet, Ethernet with PoE and various other future IOs. A user-friendly web interface allows direct access to the system by browser. With the development of the sixth generation of IRMA sensors, iris GmbH not only intends to expand the options of the technology, but also aims at creating an intuitive product which shortens maintenance staff can work safely away from the line during manual operations of the point machine, whereas the unit can be installed at the wall or horizontally under the service desk.

Safe, green and highly versatile
Both variants can be deployed for almost all types of turnouts in urban transport – whereas the in-track version can be particularly easily and flexibly arranged. It is therefore recommended to use this model to help introduce the innovative IoT sensor technology even when there is limited available space. The freely programmable sensors are now already prepared for 5G. They will in future communicate in a bi-directional way and in real time on the 3.5 or 28 gigahertz frequency bands of the coming mobile telephone standard respectively. With the help of a microprocessor, the IoT sensors carry out a prequalification or a first analysis of the raw data respectively. This ensures on the one hand that the requirements on bandwidths for data transmission are kept as low as possible and that on the other hand the status data that are sent to the central maintenance and signalling systems. In the inverse sense, the sensor configurations. This makes the communication of the Vossloh sensors completely independent from the control and signalling systems for the urban transport infrastructure. Vossloh also independent from an external power supply. Furthermore, the system is virtually maintenance-free; there is no need for cabling, battery exchange etcetera.

Energy for realistic real-time simulations in public transport
Data-driven innovations such as the new IoT sensor technology or the Smart Rail Maintenance app exemplify how intelligent data analysis sustainably reduce maintenance costs and improve the reliability and the operational safety in urban transport at the same time.

Sensor-based remote monitoring as well as predictive maintenance concepts are highly promising, particularly in difficult to access areas such as, for example, underground railway tunnels. For this reason, Vossloh has selected the Easydrive-i point machine as a pioneering application for its IoT sensor technology. The new IoT sensor generation that will equip the premium point machines from Vossloh in future demonstrates that the development of additional data sources is a significant driver for the digitisation in the railway sector. In a first step the sensors can be available at the Easydrive-i point machine – and this because of the high flexibility of this modularly constructed electro-hydraulic actuator. All Easydrive models are fully compliant with the EU safety standard EN 50129 SIL4. Thanks to its external hydraulic unit, maintenance staff can work safely away from the line during manual operations of the point machine, whereas the unit can be installed at the wall or horizontally under the service dock.

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Irma 6 – makes it easy

Image: Oleg Totskyi, Adobe Stock/Vossloh

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Irma 6 – Sensors for automatic passenger counting.

Photo: Iris GmbH

IRMA 6 – makes it easy

Image: Iris GmbH
Enjoy the Italian way

More than just on-board catering: the diversity Italcarrelli and partners.

Italcarrelli di P. Lopez s.r.l. and its partners offer innovation and technology for on-board travelling comfort.

- Italcarrelli and Spinel, both from Italy, have presented the new OnBoard trolley with an integrated espresso machine at InnoTrans 2018. Powered by a lithium battery the machine supplies espresso and other coffee specialities at the push of a button. The trolley also provides for cold snacks: insulated drawers in the lower part keep all sensitive products cool and fresh – even on long trips. Cold snacks as well as hot and fresh coffee specialities are therefore available directly at the seat. Durable materials, an easy utilisation, a stylish functionality as well as a high level of performance with at the same time a reduced weight are the main characteristics of this unique espresso trolley.

On the joint booth the enterprise Fas International presented its new 3-in-1 self-service dispenser Combi T300 for hot beverages, soups and fresh tea products in its upper part as well as for fresh foodstuffs, snacks and cold beverages in the lower part. The produced waste can be directly disposed of and shredded in the Fas Tritech recycling machine, thus reducing the number of rubbish bags from seven to one. As a full service provider Italcarrelli completes the offer of snacks and foods both in the railway car and in the vending machine thanks to the partnership with six outstanding enterprises of the brand 'Made in Italy'.

Onboard Hospitality Forum – focus on the customer

- It was all about customer comfort and well-being in the new Onboard Hospitality Forum. The speakers of several European railway operators gave the audience a broad overview over the related possibilities such as exclusive passenger lounges in stations, high-class menus or diverse booking classes with selected extra services. As an example, Deutsche Bahn AG was able to increase the customer satisfaction in their lounges from 69 to 87 per cent with a new design of the lounge and special catering offers. This was announced by Christine Stockmann, in charge of onboard services with the group.

Claire Ansley from Virgin Trains East Coast gave an insight into the cooperation with TV cooking show presenter James Martin to revolutionise the onboard gastronomy. How to make a travelling experience from a rail trip was in the focus of the explanations of Creative Manager Manoj Pridhianani from Kaelis, Chief Customer Officer Marc Noarni from Eurostar as well as Nicola Webb, Commercial Director of Rail Gourmet UK. Simon Pont, CEO of ECR Retail Systems spoke about the increase of receipts generated on board and about the improvement of the passenger comfort with the help of a mobile point-of-sale technology.

The well-attended event clearly showed up that nowadays it is not enough any more to bring customers from A to B. Service to the customer has meanwhile become a decisive factor for success in business. The Onboard Hospitality Forum was organised by the International Rail Catering Group (IRCG) and the Onboard Hospitality magazine. Thermatically, the format content is attached to the exhibition halls for Travel Catering & Comfort Services and the products that are presented here.

Enhancing the customer experience

- LSG Group supports train operators in the design and implementation of on-board service concepts.

Under the motto ‘Indulge your passengers with an enriched customer experience’, the LSG Group (Lufthansa Service Holding AG) presented its integrated approach to the upgrading of the concept and the related customer experience that includes the various expert brands of the group: LSG Sky Chefs for Catering & Hospitality, Evertaste for Convenience Food, SPIRIANT for Equipment and Retail Inflation for IT.

“We are prepared in the best way to offer train operators tailor-made solutions thanks to our know-how in concept design and menu development, our high quality standards, our logistic expertise as well as the related support by a consistent IT platform” says Peter Rebelo Coelho, Head of Train Services Europe with LSG Group.

The experts of LSG Group informed on their concrete experiences with regard to the development and implementation of completely diversified on-board service concepts by case studies on the subjects of on-board sales, restaurant service as well as operations.

The LSG group has supported train operators in Europe with the development and implementation of on-board catering concepts for almost 15 years. Renowned enterprises such as Eurostar, Thalys, TGV Lyria, TGV in France, Italy and the Intercity 2 trains of Deutsche Bahn AG in the network North are part of the customer portfolio. With the liberalisation of the railway market in Europe in 2020, operators will have to re-evaluate their strategic positioning in a more competitive market. “Products are important for our existing and potential customers, but they have even bigger interest – with regard to the on-board service – in an all-embracing management of the whole”, explained Peter Rebelo Coelho.

A well reflected concept that is adapted to the travelling class would stand out as a decisive point of differentiation for many operators in the framework of the liberalisation, if professionally and profitably implemented, he added.
The tunnel project of Rhaetian Railways in Switzerland reaches an important milestone. Operations are due to start in early 2022.

The newly constructed Albula tunnel was holed through on October 2, 2018. It took a good three years for the miners to break out the 5,860 metres long tunnel distance between the Albula valley and the Upper Engadine. It will serve the narrow-gauge trains of Rhaetian Railways (RhB) to replace the existing building from the year 1903. With the breakthrough one of the major milestones of the project has been reached. A total of 250,000 cubic metres of rock were broken out. The excavated material serves as raw material for the production of concrete and ballast and is being processed in Preda. Lower quality material has been transported via conveyor belts to an on-site landfill to be deposited in a manner compatible with the natural landscape.

The construction of the interior of the tunnel is now due to start with the last layer of shotcrete of the tunnel lining, the tunnel floor will be laid open and then the substructure will be carried out. Furthermore, twelve transverse connections between the old and the new tunnel will be completed. After this the track construction and the cabling of the railway technology will start. The total investment amounts to 345 million Swiss Francs.

Railway stations will also be renovated

The new Albula tunnel is foreseen to be taken into service by the end of 2021 or early in 2022. The old tunnel will then be rebuilt to become a safety tunnel. In combination with the new construction of the tunnel the two stations at the Albula tunnel will also be renewed. Both Preda and Spinas will be brought to the current state of technology and equipped with facilities for the disabled in the years 2020 and 2021.

The present Albula tunnel that was taken into service in 1903 is today classified UNESCO World Heritage. In 2006 its conditions were surveyed and a considerable need for renovation and upgrade in terms of safety was detected. After a thorough evaluation of the alternatives to restore the old tunnel or to build a new one, Rhaetian Railways decided in 2010 for a new construction. The decisive arguments for this were the relatively small cost difference, the very limited restrictions on timetables during the construction phase and the substantially higher safety level of a new construction. The new tunnel guarantees not least a high quality in the long term and is advantageous in terms of sustainability.

Digitisation and its influence was also an issue in the two Tunnel Forums of InnoTrans 2018.

Chaired by Dr. Roland Leucker, the Research Association for Tunnels and Transport Facilities (STUV) organised the International Tunnel Forum during the second and third day of the trade fair. The first event dealt with long-term targets in tunnel construction. The range of topics on digitisation and the European Train Control System (ETCS) was given a great deal of attention during the panel discussion. “The future on rails is digital”, emphasised Prof. Dr.-Dirk Rompf from DB Netz AG. He called the first German ETCS-equipped line between Berlin and Munich a successful example since the achieved effects were even better than expected. The second Tunnel Forum was introduced by Leucker with the following words: “A modern infrastructure is an important factor for the quality of life and represents the basis for a reliable transport network”.

This block of conferences concentrated on the current challenges in planning and construction of tunnels.

The speakers looked at international projects and outlined the current problems. All lecturers agreed on the fact that there was no backlog in investment but that planning processes were delayed, above all due to the difficult approval procedures and the lack of professional employees. Dr.-Ing. Stefan Degas called for an efficient deployment of the few resources and Chris Dulake from Mott MacDonald emphasised that a view into other business sectors might be helpful.

The speakers of the Tunnel Forums could count on a high level of interest. with the following words: “A modern infrastructure is an important factor for the quality of life and represents the basis for a reliable transport network”. This block of conferences concentrated on the current challenges in planning and construction of tunnels.

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Inspiring Technology for Generations
The winners of this year’s Career Awards: Brunella Cocca, Jonas Ludwig, Daniel Manichello, Luke Cunningham, Dr. Elena Queck, Nadine Rössig, Lorenza Giletti, James Donovan, Michele Bellavia, William Mongeau, Lorenzo Pestana (from left to right).

The prize is highly gratifying: a visit to InnoTrans including all-round support. Since 2016 the trade fair calls for competing for the Career Award. The related competition is organised by domestic and foreign associations and institutions that honour native students for outstanding performances in the studies with relation to railway transportation and public transport. A total of eleven students from Australia, Germany, Italy, Canada and the USA won a trip to Berlin. At InnoTrans they receive the best overview of the sector and are able to make targeted contacts for their professional future. Six award winners describe their impressions:

Michele Bellavia, Italian Railway Engineers Association (CIFI) / Italy:
"InnoTrans 2018 is an extraordinary and innovative international railway fair. It was an honor and a wonderful experience to be a guest and to be able to compare myself with the big names in the sector."

Brunella Cocca, Italian Railway Engineers Association (CIFI) / Italy:
"InnoTrans – a global network looking towards transport and mobility innovation!"

Daniel Manichello, Railway Engineering-Maintenance Suppliers Association (REMSA) / USA:
"My entire view of rail transportation evolved after my visit to InnoTrans as a Career award winner since I was in front of all of the industry’s dynamic leaders who so generously shared insights, knowledge and the wealth of opportunities available to early-career professionals like myself."

William Mongeau, Canadian Association of Railway Suppliers (CARS) / Canada:
"InnoTrans 2018 was an incredible and diverse experience that presented the other attendees and I with many different career opportunities covering a vast range of fields within the railroad and public transport industries, as well as many interesting technological innovations. Many thanks for the extraordinary experience."

Nadine Rössig, German Railway Industry Association (VDB) / Germany:
"For me InnoTrans was marked by networking. It was exciting, huge and innovative as well as an excellent possibility to meet existing customers and to get to know new potential customers."

Luke Cunningham, John Holland Rail / Australia:
"An unforgettable experience that opens up the vast possibilities of the world of rail and transport."

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