

# GLOBAL FEATURES

Disseminating Information Across The Globe

*Incorporating*

**Global Technologies**

*Your Window To The Tech and Startup World*

**Global Destinations**

*A Guide To The World of MICE and Tourism*

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**Empowering Readers: Our Most Precious Asset**

# RENMAKCH



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Service Providers of  
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& HIGH SPEED  
WORKSHOP  
EQUIPMENT**

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## Dear Friends

InnoTrans, a biennial (conducted every two years) event, now in its 14th edition is expected to be more innovative and international. With around 3000 exhibitors from almost 56 countries attracting 140000 visitors from 137 countries, it remains the largest the world's leading trade show for transport technology and mobility will be held from 24 to 27 September 2024.

Covering a total of 200,000 square metres and featuring 42 halls, the rail track and outdoor display site as well as the Bus Display in the Summer Garden, the Berlin Exhibition Grounds are almost fully booked. Everything to do with transport technology – Railway Technology, Railway Infrastructure, Tunnel Construction, Public Transport and Interiors – is on show at InnoTrans. This year more than 70+ Indian companies will be participating from the above five areas.

Just before InnoTrans, Berlin, IAA TRANSPORTATION 2024 will be held in Hannover from September 17th to 22nd, 2024 and is the leading platform for logistics, commercial vehicles, and the transport sector. Over the years IAA has kept abreast of developments in every aspect of mobility – from the first motor car, via commercial vehicles and electromobility, right up to the future of autonomous driving. IAA TRANSPORTATION 2024, under the motto "People And Goods On The Move," is committed to promoting climate neutrality in logistics and transportation. This event offers a unique opportunity to showcase the latest developments and technologies that will shape the future of the industry.

REMAKCH India Pvt. Ltd. has already created a niche for itself for maintenance of critical railway machines globally. It was established for the purpose of supporting the Industry as a Comprehensive Solution Provider, in the field of maintenance services (repairs, reconditioning, modifications, retrofitting, automation, annual maintenance contracts, etc.), customised solutions to Industry needs, with high level of technical and reliable support. With Neelesh Dixit, MD, REMAKCH India Pvt. Ltd scheduled to be there at InnoTrans we thought it ideal to do an exclusive interview with this dynamic and innovative entrepreneur.

After more than a decade I connected with the dynamic Dasari Ramakrishna, CEO and MD, Efftronics Systems Pvt. Ltd. Was elated to hear that he and his team will be exhibiting at InnoTrans as I was also invited as media to cover the event. A successful and innovative entrepreneur, he launched Efftronics in 1985. With a strong focus on Research & Development today Efftronics with its Made-in-India products and solutions for Indian Railways, smart signalling, smart cities, smart buildings and other IoT domains has become a strong force to reckon with globally. To get more insights into Efftronics we interacted with him.

Konkan Railway Corporation Limited (KRCL), a Public Limited Company was formed under Build, Operate and Transfer (BOT) concept. Completing 26 years of operations it operates an average of 52 passenger trains and 18 freight trains daily, serving approximately 20,000 passenger services annually and carrying around 30 million passengers every year. With Santosh Kumar Jha, CMD, KRCL going to InnoTrans we thought it a great opportunity to interview him.

For the first time in history, the Consumer Technology Association (CTA) and CES have launched a shared brand identity. Also, CES.tech is transforming with a completely new design, offering an enhanced user experience.

Embodying the connection between technology and humanity, while paying homage to our roots, the new logos unify the brands and the power behind them. The intersecting elements symbolize our industry's connections with society, creating a frame to envision a world where technology seamlessly integrates with our lives to make it a better place. The space between the intersecting elements symbolizes the profound, yet often invisible, relationship of technology and humanity — a bond that CTA and CES have championed for decades.



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(Deemed to be University u/s 3 of UGC Act, 1956)



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guides us to  
fly beyond  
boundaries

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TIMES - I3RC ENGINEERING INSTITUTES RANKING SURVEY 2023

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# GLOBAL RECOGNITION

VERY GOOD



2021

2024



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NAAC A++  
ACCREDITED

2023



One among 75  
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SHANGHAI  
RANKING

One among 14 Universities  
from India in ARWU2022-  
Shanghai World University Rankings



RANKINGS 2023

University  
**18<sup>th</sup>** Rank

## nature index

Nature index ranking reflects SRMIST's  
Research excellence and institutional performance.

38

Overall

35

Chemistry

35

Physical  
Sciences

37

Natural  
Sciences

24

Earth &  
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## Cover Story

InnoTrans  
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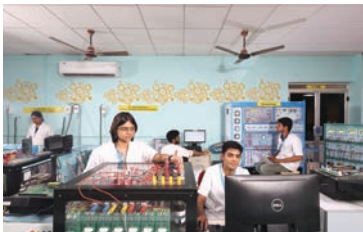
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# Refreshed. Recreated. Reimagined.

## CTA and CES Introduce New Brand Mark and Website



For the first time in history, the Consumer Technology Association (CTA) and CES have launched a shared brand identity. Also, CES.tech is transforming with a completely new design, offering an enhanced user experience.

“Today marks a significant milestone in the journey of CTA and CES as we unveil our new brand mark and CES website,” said Gary Shapiro, CEO, CTA. “This transformation is more than just a visual update; it represents the intersection of technology and humanity, where innovation solves some of our biggest challenges. It comes at a pivotal moment in our history – CTA’s 100th anniversary and a time of unprecedented momentum for CTA, CES, and the industry we support and represent.”

Embodying the connection between technology and humanity, while paying homage to our roots, the new logos unify the brands and the power behind them. The intersecting elements symbolize our industry’s connections with society, creating a frame to envision a world where technology seamlessly integrates with our lives to make it a better place. The space between the intersecting elements symbolizes the profound, yet often invisible, relationship of technology and humanity — a bond that CTA and CES have championed for decades.

“Just as the tech industry continually transforms so must our perspective, our approach and our vision for the future,” said Kinsey Fabrizio, President, CTA. “The launch of the redesigned and enhanced CES.tech — a new hub for tech innovation, is a testament to our commitment to representing the tech industry and producing the most powerful tech show in the world. We are excited to continue to innovate and inspire together.”

### Innovative CES

Igniting Innovation since 1924, CTA has played a leading role as an advocate for the technology industry and a catalyst for innovation. CES remains the only trade show that showcases the entire tech



landscape at one event. CES showcases companies including manufacturers, developers and suppliers of consumer technology hardware, content, technology delivery systems and more.

It also includes a conference program where the world’s business leaders and pioneering thinkers address the industry’s most relevant issues.

This fall leading up to the show, CTA will make stops in Paris, Tokyo, Amsterdam, Detroit, Los Angeles, San Francisco, and New York to make some major show announcements, discuss the latest innovations, and have meaningful dialogue on how technology can enrich and empower people worldwide.

“We are thrilled to host CES events around the globe that will offer a sneak peek into what’s coming in Las Vegas next January,” said Gary Shapiro, CEO, CTA. “Expect to see technology innovations from across the globe that are transforming industries, improving lives, and solving some of the world’s biggest challenges.”

The journey to CES started earlier than ever at the CTA CEO Summit in Stockholm, where CTA released a new artificial intelligence (AI) study. The next stop is the CES Tech Trends x FD Day 2024 event in Paris, continuing the partnership between CTA and France Digitale and offering the startup community the opportunity to network and discover local trends. Returning to Amsterdam, CES Unveiled will highlight European innovation through groundbreaking exhibitions and conference programming. Stay tuned for announcements on additional CES events this fall.

The road will lead to Las Vegas, where CES transforms the city into a bustling hub with visionaries, technology companies, and startups converging across categories like artificial intelligence, health, sustainability, mobility, enterprise, and more. As the technology landscape evolves, the representation of companies at the show does too. First-time CES exhibitors in 2025 include Oshkosh Corporation and Komatsu. CES will welcome back AdTech exhibitors like DoubleVerify and TripleLift.

“CES is the place for the technology industry to dive in on business and technology trends, with thousands of exhibitors across the show floor and the average executive hosting nearly 30 meetings in Las Vegas,” said Kinsey Fabrizio, President,

CTA. “We are expanding our show floor across new venues and can’t wait to welcome exhibitors and attendees from around the world to Las Vegas for the innovation and collaboration that we see at CES each year.”

## Tunnel Construction at InnoTrans 2024

Together with the goal of the mobility transition, tunnelling is becoming increasingly important in the rail sector. Innovations for better safety and environmental protection will be a major attraction at this year's InnoTrans.

InnoTrans, a biennial (conducted every two years) event, now in its 14th edition is expected to be more innovative and international. This year the world's leading trade show for transport technology and mobility will be held from 24 to 27 September 2024.

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### Tunnel Construction at InnoTrans 2024

Building underground links is crucial for shifting large volumes of road traffic onto rail tracks – because tunnels mean more efficient transport routes, with the added benefit of producing less



noise and environmental harm.

The Tunnel Construction segment at InnoTrans 2024 features over 30 exhibitors displaying the latest products and services which make building and operating tunnels safer and more efficient while minimising the environmental impact. In Hall 5.2 the focus is on tunnelling equipment and fire prevention, air-conditioning, ventilation, safety systems, engineering services and monitoring systems.

### InnoTrans: One-stop shop for tunnelling and rail infrastructure

Together with the Tunnel Construction displays, the Railway Infrastructure segment covers a further seven halls featuring building materials, rail track and overhead line construction, measuring systems as well as signalling and control systems. Exhibitors displaying products in both segments include the engineering company Schübler-Plan GmbH (Hall 5.2, Stand 640), which among other works is currently supervising construction of Hamburg's new U 5 metro line. Others in this category include Porr Bau GmbH (Hall 25, Stand 410) with its civil engineering competence centre, Amberg Technologies AG (Hall 25, Stand 455)

from Switzerland, DB Bahnau Gruppe (Hall 25, Stand 440), voelstalpine Railway Systems from Austria (Hall 21, Stand 150), and the railway system supplier SPITZKE SE (Hall 5.2, Stand 330).

### Brenner Base Tunnel: The world's longest underground rail link

The massive Brenner Base Tunnel project highlights the enormous potential of underground rail links. On Stand 620 in Hall 5.2 the operator BBT SE will present the project's aims, its technical implementation and the current state of progress. The Brenner Base Tunnel is due to be operational in 2032, when at 64 km in length it will be the world's longest underground rail link. A rail trip from Innsbruck to South Tyrol will take 25 instead of 80 minutes, and freight times will be reduced by two-thirds – from 105 to 35 minutes.

The Brenner Base Tunnel's main purpose is to shift a large amount of the goods traffic between Munich and Verona from roads onto tracks. The new rail section has almost no gradients, making it possible to deploy longer and much heavier trains. A single locomotive will be able to pull up to 2,000 tonnes of goods. Until now, two locomotives have been required for 1,400 tonnes.



### Niedax: Smart cable-laying solutions

Niedax GmbH & Co. KG manufactures cable-laying systems. Its largest product category is cable support systems which must match up precisely with each other. "One of the biggest challenges of our times is combining wide-ranging climate action with a full-scale mobility transition. With our innovative electro installation products we are making an important contribution to digitalising rail transport and supporting the future of mobility", said Bruno Reufels, CEO of the Niedax Group. "At InnoTrans 2024 our exhibits will include smart cable-laying solutions. At the Niedax Group every digitalisation project is based on an integrated concept. In addition to consultations, planning and construction we take over production, project-specific packaging and transporting cable-laying systems." (Hall 5.2, Stand 810)





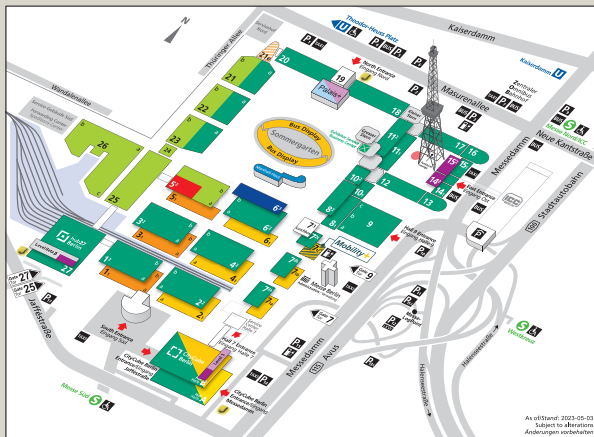


















# InnoTrans 2024

24–27 SEPTEMBER · BERLIN

International Trade Fair for Transport Technology

## Exhibition grounds



- |  |  |   |   |
|--|--|---|---|
|  | Railway Technology                                 |  | InnoTrans Campus  |
|  | Interiors incl. Travel Catering & Comfort Services |  | Opening Ceremony  |
|  | Railway Infrastructure                             |  | InnoTrans Convention  |
|  | Tunnel Construction                                |  | Speakers' Corner  |
|  | Public Transport                                   |  | Business Lounge (Marshall-Haus)   |
|  | Mobility+  |  | Press Center  |
|  | Outdoor Display                                    |  | FoodCourt   |
|  | Bus Display  |  | Jelbi hub shared mobility Pickup & Drop-off for rental two-wheeled vehicles |

## Contact

We look forward to seeing you in Berlin!

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# THE FUTURE OF MOBILITY



### **Orascom Construction S.A.E.: Groundbreaking products from Egypt for the home market**

Cairo-based Orascom Construction is one of the world's largest general construction companies. At InnoTrans 2024 it is highlighting its participation in current large-scale projects, including Egypt's first high-speed rail link, which when completed will be the sixth longest in the world. "We are also presenting our innovative ideas for a monorail project that will link key areas of Cairo – East Cairo, the new administrative capital and 6th of October city – which mark a significant step for urban transport", the company said. "In addition to demonstrating our technical expertise and commitment to a sustainable infrastructure it also highlights our successful collaboration with partner companies on state-of-the-art projects." (Hall 5.2, Stand 710)

### **FOGTEC: Innovative fire prevention solutions for rail vehicles**

FOGTEC Brandschutz GmbH markets fire prevention solutions for rail vehicles and water-mist systems for tunnels. At InnoTrans 2024 the company is presenting fire prevention modules whose weight has been further reduced by employing innovative composite pressure containers – this benefits system integration and allows a freer hand with vehicle design. Where certification up to SIL-2 is concerned, the latest product developments ensure maximum protection for staff, passengers and infrastructure. "We are especially looking forward to meeting our customers, friends and partners at InnoTrans along with colleagues from our international branches, and to developing rail products for a safe, mobile and sustainable future", said the FOGTEC management board. (Hall 5.2, Stand 735)

### **Valente S.p.A.: Custom rail transport systems**

Based in Lainate, Milan, Valente S.p.A. is a well-known manufacturer of equipment for rail vehicles, rail systems, tunnelling, mining and specialist steel structures. At InnoTrans 2024 the company is presenting its wide range of products for the tunnelling and mining sector. Valente also specialises in muck disposal vehicles, custom vehicles, mixers as well as high-performance diesel and electric locomotives. "Our participation in InnoTrans 2024 will open up new opportunities for collaboration and growth. We look forward to meeting with leading industry players and potential customers and to highlighting the success of our products and services with numerous projects such as the Port of Ravenna and Fincantieri Goliath Crane", the company said. (Hall 5.2, Stand 840)

### **International Tunnel Forum: Current challenges and sustainability efforts**

Trade visitors can delve further into the subject with the InnoTrans Convention programme. On 25 and 26 September the International Tunnel Forum will take a concentrated look at the latest industry topics.

### **World Innovation Guide**

In partnership with the DVV Media Group, Messe Berlin is publishing the exclusive World Innovation Guide. The guide presents world innovations from the five trade fair segments Railway Technology, Railway Infrastructure, Public Transport, Interiors and Tunnel Construction, which have never been seen before by trade visitors at any event.

In 2024 tours are offered several times a day, include ten stops and last around 90 minutes. International trade visitors and journalists are provided with headsets for simultaneous translations into English. Every participant can access a hand-out via a QR code with all relevant information.

Please register for the World Innovation Tours via [innotrans@spree-pr.com](mailto:innotrans@spree-pr.com).

### **International Press Circle**

InnoTrans are organising a press event for journalists and representatives of industry associations on the day before the opening, on 23 September 2024. The International Press Circle offers a one-hour networking brunch where journalists can exchange ideas for their media coverage with association representatives in short slots. Following the International Press Circle, the World Innovation Press Tour will take place exclusively for media representatives before the start of InnoTrans and will showcase new products at the world's only track and open-air exhibition centre.

### **The InnoTrans Opening Ceremony (24.09.2024, 10.00 a.m. - 11.30 a.m)**

More than 1,000 top national and international representatives from business, science and politics will gather at palais, Berlin for the opening of InnoTrans 2024. It will inaugurate by

- Dirk Hoffmann, COO, Messe Berlin GmbH
- Magda Kopczyńska, Director General (DG MOVE)
- Dr. Volker Wissing, Federal Minister for Digital and Transport

### **Also a panel discussions**

- Presented by Astrid Frohloff "From Hype to Reality - AI in the mobility sector"
- Susanne Henckel, State Secretary at the Federal Ministry for Digital and Transport
- Dr. Richard Lutz, Chairman of the Board & CEO, Deutsche Bahn AG
- Mohamed Rabie Khlie, Director General, Moroccan National Railways Office (ONCF)
- Henri Poupert-Lafarge, CEO, Alstom S.A.
- Michael Peter, CEO, Siemens Mobility GmbH
- Javier Martínez Ojinaga, CEO, CAF Construcciones y Auxiliar de Ferrocarriles S.A.

The official opening tour will take place after the opening event.



**KONKAN RAILWAY CORPORATION LTD.**

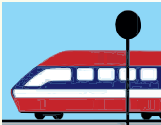
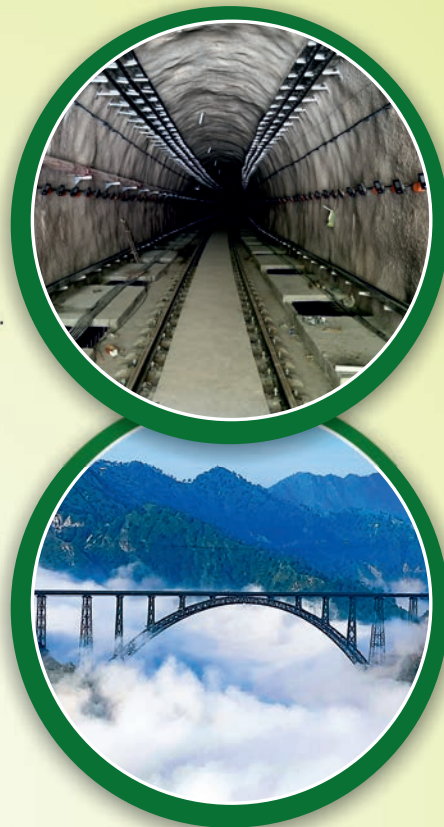
(A Government of India Undertaking)



**Projects are under execution:**

- Udampur-Srinagar-Baramulla Rail Link Project (USBRL): KRCL is executing 52.20 km of the USBRL project, which features the world's tallest railway bridge over the River Chenab and India's first cable-stayed railway bridge, the Anji Bridge. The project is nearing completion. Approximate cost of KRCL portion of this project is Rs.18,000 Cr..
- Construction of Rolling Stock Component Factory at Lote, near Chiplun for Central Railway at an estimated cost of Rs. 403 Cr.
- Execution of viaduct, major Bridge, ROBs and other allied works of Khurda Road-Bolangir new BG Rail link project in Odisha at an estimated cost of Rs.337 Cr.
- Construction of twin tube tunnel road project in Kerala at an approximate cost of Rs.2,300 Cr.
- Rail connectivity to Vizhinjam International Seaport in Kerala at an estimated cost of Rs. 1,000 Cr.
- Electrification works across various Zonal Railways at 10 locations, with a total project cost of Rs. 500 Cr.
- Operations and maintenance of Navi Mumbai Metro for a period of 3 years, starting from April 1, 2024.
- Currently, feasibility studies are being conducted for 37 projects, with Detailed Project Reports (DPR) being prepared for the same number. Project Management Consultancy (PMC) services are being provided for 9 projects, Design Consultancy for 14 projects, and third-party inspections for 54 projects. The total estimated cost for these efforts is Rs. 125 crore.
- Railway Siding for NTPC at Kudgi and Gadawara at an approximate cost of Rs. 1,200 Cr.
- **International Projects:**
  - 1) Operations and Maintenance of the Jayanagar to Kurtha Railway line in Nepal.
  - 2) Rehabilitation of Railway system in Magadi, Kenya for M/s Tata Chemicals Ltd.

## Enhancing Travel Experiences with Modern Rail Innovations



**Completed Major Projects:**

- 11 tunnels along Mumbai-Pune Expressway at a cost of Rs.213 Cr.
- 14 ROBs in Jharkhand State (Cost Rs.166 Cr.)
- Railway Siding for Adani Power-Udupi in Karnataka (Cost Rs.60 Cr.)
- Railway siding for Mangalore Refinery and Petrochemicals Ltd in Karnataka. (Cost Rs. 80 Cr.)
- Doubling of 47 km Roha-Veer section on KRCL at a cost of Rs. 550 Cr.
- Electrification of the entire Konkan Railway route (740 km) at a cost of Rs. 1,287 Cr.
- Successfully implemented Financial Accounting ERP in Mumbai Rail Vikas Corporation.
- Successfully completed feasibility studies for 17 projects, prepared Detailed Project Reports (DPR) for 9 projects, provided Project Management Consultancy (PMC) for 8 projects, delivered Design Consultancy for 13 projects, and conducted third-party inspections for 49 projects.
- **International Projects:**
  - 1) Successfully supplied and commissioned DEMU Train-sets to Nepal Railway.
  - 2) Final Location Survey work and DPR for new BG Line (136 Km) between Raxaul (India) and Kathmandu (Nepal) have been completed. Traverse Survey, Topographic Survey, Geological Mapping & Field Survey are completed for full stretch.

Like us on: [KonkanRailwayCorpnLtd](#)

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## “Our focus is on quality, innovation, and customer satisfaction”

RENMAKCH India Pvt. Ltd has already created a niche for itself for maintenance of critical railway machines globally. I was surprised to know that **Neelesh Dixit, MD, RENMAKCH India Pvt. Ltd.**, completed his Mechanical Engineering in 1995 and established his own business within a few months - in January 1996. He was conferred with several awards - the Prestigious “Rail Analysis” Award for “Innovation in Testing Systems” in 2019, Special Appreciation Award for “Achievement in Services to Railways” in 2020, Business Excellence Award at the MAHABIZ 2024 in Dubai, etc. In an exclusive interview this dynamic and innovative entrepreneur spoke about his company and their participation at innoTrans 2024.



### What was idea behind creating RENMAKCH?

RENMAKCH was established for the purpose of supporting the Industry as a Comprehensive Solution Provider, in the field of maintenance services (repairs, reconditioning, modifications, retrofitting, automation, annual maintenance contracts, etc.), customised solutions to Industry needs, with high level of technical and reliable support.

### You have always stressed on "Make in India". Can you elaborate?

India has been importing machines and equipment for almost all the industries since many decades. These imports involved many complications like; trade in foreign currencies, high shipment costs, high transport risks, high lead times for imports, high import duties. Indian Govt. introduced the Make in India Policy in 2017 to make the Indian Industry Atmanirbhar (self-reliant) which in turn would minimise the imports and increase job opportunities for the Indian youth.

We at RENMAKCH, were one of the first companies to adapt the Make in India Policy, by convincing our European Partners for Transfer of Technology and to contribute significantly in the Indian Govt.'s initiatives, with great success, which makes us and the country proud.

### What verticals do you cater to?

We have two main earning verticals in our company; Manufacturing and Service. The Manufacturing vertical is subdivided into Fabrication, Machining, Assembly, Testing & Commissioning and the Service vertical is subdivided into Design & Interface, Installation, Testing, Commissioning & Training on site, Warranty Maintenance and Post Warranty Annual Maintenance Contracts.



Both the verticals are for the purpose of supporting various industry segments like; Railways, Metros, High Speed Rail, Defence, Shipping, Automobile, Electrical, Irrigation, etc.

### Could you brief us on your range of services and solutions?

Our range of solutions for the Railway, Metro and High Speed Rail segments include; Design, Manufacturing, Supply, Installation, Commissioning, Testing and Comprehensive Annual Maintenance Contracts of Workshop / Depot Equipment like; Synchronised Mobile Lifting Jacks, Bogie Turn Tables, Pit Jacks, Roof Working Platforms, Battery Operated Rail Cum Road Shunters, Bogie Testing Machines, Spring testing Machines, Damper Testing Machines, Wheel & Rail Profile Measuring Systems, Painting Plants, Shot Blasting Plants, Drying Ovens, EOT Cranes, Jib Cranes, Goliath Cranes, Traversers and other similar customised solutions for Manufacturing, Fabrication, Maintenance and Testing Applications in these segments.

### What about your technology expertise and manufacturing set up?

We have been in the field of Maintenance Services since the inception of our company in 1996. This journey of almost three decades has taken us through the channels of almost all technological aspects like; Mechanical, Electrical, Electronics, Hydraulics, Pneumatics and Automation. The opportunities we came across through our experience journey, helped us to strengthen our domains in these core engineering aspects, which in turn is helping us in great ways in supporting the customer requirements with high level of competency.

Our Manufacturing setup includes four factories and one raw material storage yard at Atgaon on Mumbai Nasik Highway, about 70 Km from Mumbai. We have State-Of-The-Art in-house manufacturing facilities which include; Fabrication Machinery & Equipment, Machine Shop (for Turning, Milling, Drilling, Cutting, etc.), Material Handling Facilities, Quality Control / Inspection Facilities, Assembly Shop, Load Test Facilities, Test Track, etc. and lot of scope for expansion. Facilities in our nearby vicinity include surface finishing operations like shot blasting, painting, powder coating, galvanising, etc., as per the customer needs.

Our experience, core strengths, state-of-the-art infrastructure facilities and resources, have made us one of the leading comprehensive solution providers in our domain in India.



### Can you elaborate on some ambitious projects?

Infrastructure development is at its peak in India and growing rapidly. Business opportunities in every segment have been growing significantly. Introduction of Vande Bharat Trains in Indian Railways, has generated the immediate need for modernisation of old railway workshops and equipping them with the latest technologies for maintenance, testing and condition monitoring. Similarly, introduction of Metro Rail transport systems in metropolitan and two tier cities is taking pace. These ambitious projects demand train maintenance depots for each line. These infrastructure initiatives have increased the demand for state-of-the-art depot equipment and training facilities.



### Who and what type are your major customers both in India and abroad?

As far our Railway and Metro business vertical is concerned, Indian Railways has been our client since the beginning. We also cater to almost all the Metro Railways of India - Delhi Metro, Mumbai Metro, Bangalore Metro, Chennai Metro, Kolkata Metro, Nagpur Metro, Pune Metro, Gujarat Metro, etc.

Though we have yet to start exporting to foreign countries from India, its now under process and we will start exporting soon. Our target is to export to South East Asian Countries, Middle East and America.

### Training is vital for any organization. How does RENMAKCH fulfil these needs?

Training of our staff has been our regular initiative, be it technical or general. We have Internal and external faculties who conduct the trainings regularly. The specific desired curriculum / courses are planned and designed based on the detailed analysis of our internal requirements.

The technical training courses which are imparted regularly are for developing the skills in; Fabrication (Welding, Gas Cutting, Profile Cutting, etc.), Machining (Turning, Milling, Drilling, Tapping, etc.), Fitting (Dismantling & Assembly), Electrical Panel Assembly, Material Handling, Quality Control & Metrology, Industrial Safety, General Behaviour, Manners & Etiquettes, etc.

These periodic trainings help us in increasing and sustaining our core strengths and have also been very effective in getting various international standard certifications like EN 15085, ISO 3834, ISO 9001, etc.

### What is the main reason for participating at InnoTrans and other global events?

I have been visiting InnoTrans since almost 15 years now. The main purpose is to support our European partners on their Booths located in Hall No. 22 / 23, for catering to the visitors from India or nearby countries.

Subsequently getting a feel of latest technological and innovation is the key takeaway from the event. It

is the biggest exhibition event of the Transportation & Mobility Industry and cannot be missed.

I also make it a point to participate in other global events related to the Railway, Metro and High Speed Rail industry, mainly in Malaysia, Thailand, Abu Dhabi, Dubai, etc. We actively participate in the IREE Exhibition which is the biggest event for the Railway industry in India.



### Where do you see RENMAKCH in the next 3 years?

RENMAKCH is poised for success in the industrial machinery and after-sales services market, with a clear path to achieving our ambitious financial goals. We are committed to delivering value to our customers, shareholders, and employees, and we look forward to the journey ahead. We will strive to become a leading player in the manufacturing and after-sales services industry. Our focus is on quality, innovation, and customer satisfaction. Thus we are confident that we can achieve our goal and deliver value to our investors, customers, and stakeholders.

RENMAKCH plans to position its brand as a leader in the depot equipment market by highlighting the unique features and benefits of its products. The company will communicate its competitive advantages to potential customers through targeted marketing strategies, including digital advertising, trade shows, and industry publications.

Overall, RENMAKCH will use a multi-faceted approach to communicate its competitive advantages, aiming to position itself as the preferred choice for depot equipment among potential customers.

## “We are here to innovate, collaborate, and build a safer, smarter future together”



After more than a decade I connected with the dynamic **Dasari Ramakrishna, CEO and MD, Efftronics Systems Pvt. Ltd.** Was elated to hear that he and his team will be exhibiting at InnoTrans as I was also invited as media to cover the event. A successful and innovative entrepreneur, he launched Efftronics in 1985. With a strong focus on Research & Development today Efftronics with its Made-in-India products and solutions for Indian Railways, smart signalling, smart cities, smart buildings and other IoT domains has become a strong force to reckon with globally. To get more insights into Efftronics we interacted with Dasari Ramakrishna. **Excerpts**

### Can you provide a brief overview of Efftronics Systems Pvt. Ltd.?

The purpose of any business is to create value for customers and not just making profits. In today's economy, customer value creation is typically based on product and process innovation and on understanding the latent and future requirements of customer and implementing them with speed and precision. There should be always a win-win scenario between customer and manufacturer. With this vision, we have been developing niche products in various domains which create value to our customers.

We launched our company in 1985 with LED display system. It was a new concept at that time as microprocessor technology itself was in its early stages in India. Efftronics sold the display systems with marginal profit. There were no hidden costs and we even agreed to provide after sale services at free of cost. Apart from that, we took the responsibility of failures irrespective of the conditions that caused the failure.

Our vision is simple – “To provide actionable insights in real time for enhancing wealth”. At Efftronics, we always stress for fitting the right technology to the problem rather than using the technology for technology sake. This philosophy made us to pioneer another new product ‘Datalogger’, which shifted the paradigm in railway signaling in India. A datalogger is like a ‘black box’ which enabled railways to find the root cause for failures. While the railway environment is challenging and variant across India, Efftronics succeeded and came with this breakthrough and niche product. This altered the way signaling system is seen in Indian Railways.

After the development of Data logger, we shifted our focus on networking of data loggers. This eliminated person movement to individual stations and railways were able to access all stations information at divisional headquarters. This has paved way for many applications for train tracking, asset monitoring, faults monitoring etc. It has given a fresh lease of efficient working model to railways for effective operation of the trains, discipline adherence of the personnel and maintenance of signaling assets. As of today, we have our datalogger presence in 98% of Indian Rail Network monitoring 10million signaling elements across 9000 locations. This is living up to our vision of wealth creation.

### You spoke about your journey and emphasized on technology development in view of value creation. How you strategize and invest in R&D?

With emergence of datalogger, the business and size of efftronics expanded continuously in last two decades. We firmly believe that growth of organization is solely dependent on continuous R&D activities, and it is quite evident from the beginning itself. Our strength is total solution development under one roof i.e., hardware, embedded software, front application software, mobile apps, mechanical design, and testing etc. We invest around 10% of our annual turnover into R&D. We have developed our own methods, tools and systems that accelerates our R&D efforts and bring in efficiencies into development. We continuously visit international trade fairs, participate in technology symposiums and conferences every year. We also keep constant communication with technology providers to understand how technologies are evolving. We bring those learning into our R&D and implement into our solutions.

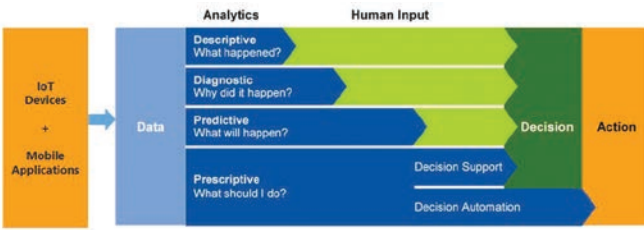
We put focus on acquiring domain expertise. Our current focus is on Industry 4.0 solutions which are system of systems in nature, particularly in the areas of railway signaling, water utilities, road traffic management, building management etc. We identify clear value by delving deep into domain challenges using data analytics. We believe listening to our customers sincerely and accepting challenges without hesitation has helped greatly in business. Our approach of extending scope beyond initial boundaries to ensure comprehensive problem-solving clearly differentiates Efftronics. We approach value creation by overseeing the entire product lifecycle—from ideation, creation, development, and manufacturing to deployment, maintenance, and upgrades—offering a seamless, one-roof solution that significantly reduces costs and guarantees reliability and usability, as all our processes are closely knit within Efftronics.

### 1) You recently came up with end-to-end IoT platform which is highly customizable. How do you re-imagine asset maintenance through your IoT platform?

Even though IoT systems generate asset data, the key is to translate data into actions which is possible through data analytics / algorithms. Value from our end-to-end IoT Platform

1. **Ensure availability of signaling system**
  - **Reduce MTTR** – insights of failures
  - **Increase MTBF** – insights into system through predictive alarms, real time simulation and health reports
2. **Deskilling** of maintenance activities
3. **Collaborative** of maintenance activities

4. Reduction of **maintenance effort**
5. Provide **data driven** decisions

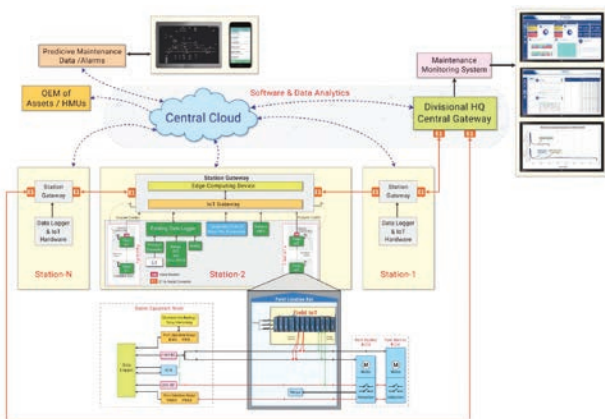


Reference: Analytics Spectrum, Gartner USA

The maintenance process through IoT system

1. Sensing parameters & generation of data
2. Communicating sensed data to central location
3. Applying algorithms to generate actionable decisions by IOT system
4. Assessment of maintenance staff
5. Taking decisions based on human input and output from IoT
6. Implementation of decision

Modern assets have intelligent diagnostics in-built, whereas legacy systems need augmentation of IoT sensors for real time capture of their behavior and health. Thus, Efftronics came up with different IoT devices like intelligent sensors, Edge devices, Processing Units and Gateways which will be deployed for monitoring of existing railway infrastructure making them intelligent and ready for advanced analytics. Based on the operational behavior of these railways assets, data generated will be both continuous time series and irregular and sporadic in nature. Data ingestion, stream processing/event processing and contextual analytical algorithms have been designed in our software platform to handle that event behaviors. Our platform is highly customizable which provides real time alerts and notifications, provides users with real time dashboards and live schematics, provides bi-directional collaborative working through digital forms.



Reference: Efftronics Solution Architecture

**You also have SIL4-certified products like LED signals and block instrument in your portfolio, what makes these products stand out in terms of technology, safety, and reliability?**

At Efftronics, our SIL4-certified products, like LED signals and

block instruments, exemplify our dedication to safety, reliability, and cutting-edge technology. Achieving SIL4 certification, the highest safety integrity level, reflects our rigorous R&D processes and our commitment to quality.

Our R&D capabilities are at the core of our innovation. We have a robust and experienced team focused on developing advanced technologies that enhance the safety and efficiency of railway operations. Our LED signals are designed with state-of-the-art components to ensure maximum visibility and reliability, while our block instruments leverage advanced microprocessor technology for precise control and monitoring.

What sets our products apart is the meticulous attention to detail in our design and testing processes. We conduct extensive testing under diverse environmental conditions to ensure our products perform reliably in the field. This is very much critical for Indian Railways network. Our Indian environment conditions are quite extreme as hot summer temperatures will reach up to 50°C. This holistic R&D approach and our continuous improvement mindset enables us to deliver products that are not only technologically superior but also incredibly dependable, making railways safer and more efficient.

**What is Efftronics roadmap particularly in the space of railway signaling, and how does it align with global technological trends?**

We are right now focusing on enhancing capabilities of our IoT platform. We are continuously adding more and more asset contextualized algorithms into our solution. In a couple of years, we would like to see our platform become mainstream in Indian Railways for asset maintenance and it seamlessly integrates into railway personnel day-to-day workflows.

One of our prime focus in R&D is to build digital twins for signaling and deepen our existing IoT platform in other railway infrastructure. We are also building algorithms to reduce journey time of trains by identifying bottlenecks in infrastructure, and operations. We are also working on Train Management System (TMS) for improving the train operations.

**Lastly, what message would you like to convey to your current and potential customers, partners and stakeholders attending InnoTrans 2024?**

As we showcase our innovations at InnoTrans 2024, I want to extend a heartfelt thank you to our current customers, partners, and stakeholders for their unwavering support and trust in Efftronics Systems Pvt. Ltd. Your belief in our vision and products fuels our commitment to excellence.

To our potential customers and partners, we invite you to join us on this journey of innovation and transformation. At Efftronics, we are dedicated to creating solutions that not only meet the highest standards of safety and reliability but also push the boundaries of what's possible in the railway industry.

Our message is simple: we are here to innovate, collaborate, and build a safer, smarter future together. Whether through our SIL4-certified products or our advanced IoT platform for asset maintenance, we are constantly evolving to meet the changing needs of the industry. We look forward to forging new partnerships and continuing to deliver groundbreaking solutions that drive progress and create lasting value.

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## “Konkan Railway is known for its innovations and we would like to explore sharing knowledge and initiate tie-ups at InnoTrans Berlin”

It was such a pleasure to know that **Santosh Kumar Jha, CMD, Konkan Railway Corporation Ltd (KRCL)** had received the invite from the InnoTrans, Berlin organisers to attend the event. Feeling elated that such a dynamic and forthcoming CMD is going to the event we thought it a great opportunity to interview him. **Excerpts**

**You and your team from KRCL are visiting InnoTrans, Berlin. What is the main purpose?**

Inno Trans is the world’s largest Rail Exhibition showcasing the latest technological development in train operations in both passenger and freight business areas. Purpose to visit InnoTrans will be to gain knowledge about such latest developments and also explore the possibilities of tying up with the firms engaged in such innovations. Focus area will be to freight trains carrying RORO operations, high speed trains and latest metro coaches.

Being a leading international trade fair on transport technology with segments specifically on railway technology, railway Infrastructure we felt it would be an ideal event to visit. InnoTrans is a global hub for seeing the mobility trends, interacting with experts from different specialties in same sector. There will be panel discussions and dialogue forums that give an opportunity to network. Konkan Railway is known for its innovations and would like to explore sharing knowledge and initiate tie-ups at InnoTrans, Berlin with relevant companies for betterment of its services to customers.

**How are KRCL global relations and major tie ups?**

At present KRCL is managing the entire operations and maintenance of Nepal Railway including supply of coaches and also is engaged in consultancy of Rehabilitation and maintenance of assets and operations with Tata Chemicals Ltd at Nairobi. KRCL is exploring possibility of engaging in major civil, electrical and signaling projects in Latin America, Africa and Middle East Countries and shall be bidding aggressively in various projects including O&M business.

**You mentioned about starting a training institute. Can you elaborate and how will it make a difference?**

Konkan Railway is a leader in executing challenging infrastructure projects. This includes the recent achievement of construction of the Chenab Railway Bridge in Jammu and Kashmir, recognized globally as the highest railway bridge ever built, showcasing our commitment to innovation and excellence in engineering. The project has established crucial rail connectivity to the



picturesque Kashmir Valley, traversing the young Himalayas with tectonic thrusts and faults.

Scores of tunnels and bridges have been constructed by Konkan Railway in treacherous ghats, in high seismic zones and other geological locations thus giving Konkan Railway the unique edge and unparalleled competence to share in-depth knowledge on tunneling and bridging works through difficult terrains. For this purpose, we have formed a Tunnel Training Institute at Goa with the aim to broaden the knowledge base of Senior engineers, Project planners, On-site engineers, and officials from Finance background and equip them with knowledge on core issues regarding Tunneling, viz. deciding on proper alignment, selection of tunneling methodology, costing and most importantly the construction of tunnels without cost or time overruns. Many projects fail or face cost and time over-runs if there is no proper selection of alignment or the right methodology is not selected. Our training Institute addresses these core issues.

We have a tie-up with reputed international Organizations and Institutes for giving a holistic experience to the trainees and we are also interested in expanding this tie-up with other reputed engineering organizations and institutes globally.

KRCL is trying to bring a paradigm shift in training department and is in process of converting training centers and training activities from cost center to profit center. Other than training its own employees and officers, KRCL has already trained officials and staff of Northern Railway, NTPC, CONCOR, Margaon Port Trust and several other organizations. KRCL had already engaged and signed MoU with MIT Pune, Goa Institute of Management & Hagerbach AG Flums, Switzerland, and the Swiss Federal Institute of Technology-ETH Zurich. We are shortly going to offer specialized tunnel construction training through the George Fernandes Institute of Tunnel Technology in Goa.



**Recently one of your team members visited Israel. Any highlights?**

Our team member’s visit to

Israel was quite productive. Israel is known for its technological advancements and innovative approaches, particularly in areas like smart transportation solutions and infrastructure development. The visit opened up potential opportunities for collaboration and we are looking forward to leveraging through joint ventures mainly city's light rail network.

### **Any innovations and unique projects that you would like to highlight?**

Our ongoing projects in sustainable rail infrastructure, which focus on reducing environmental impact and improving energy efficiency, are making significant strides.

Udhampur - Srinagar - Baramulla Rail Link (USBRL) Project is a National Project to provide rail connectivity from rest of the country to the beautiful valley of Kashmir. A part of this project from Katra - Dharam has been assigned to KRCL for execution. It comprises of about 45 km (86%) of route in tunnels, 4.6 km (9%) of route on bridges and balance 6% of route in cuttings and embankments.

Konkan Railway had made 172km of roads including road tunnels and many temporary Bailey bridges for execution of this work. Special bridge across the river Chenab for this project is built at height of 359m, from the bed level. Chenab Bridge is having the central span of 467 m and is the World's tallest railway arch bridge. The design of bridge also takes care of "Blast" load, which is internationally an unique feature. For construction of Arch portion of the bridge over the river, a novel method of construction using the cable car is designed and commissioned. This cable car runs on 54mm cables laid across the river valley and connected through 127 m high pylons (towers) on either side of river. The consumption of structural steel for the project is very huge and for Chenab Bridge the quantity is of the magnitude of 29,000 MT. Anji bridge of this project is first cable stayed Railway Bridge in the country which has length 725.5 m.

### **Your views on the impact of AI (Artificial Intelligence) on railways and allied industries.**

AI is changing the way in which we have been operating trains. The impact of the new technology is so astronomical that its various facets and usage in railways are yet not fully fathomed or implemented. This is the just the beginning. The AI is not just automating customer interface – AskDISHA is a chatbot that's



doing it – but also enabling streamlining booking processes, in predictive maintenance, examining track conditions and notifying to avert potential derailments. The AI is already being leveraged in train safety, scheduling and speed management. By analysing real-time data, AI algorithms can adjust train schedules to accommodate unforeseen disruptions. This results in reduced waiting time and improved punctuality and hence better passenger experience. Konkan Railway too is experimenting with the technology for its operational efficiency.



### **You are creating an excellent reputation in consultancy services. How did you start and any major projects?**

Our consultancy services began with a focus on delivering high-quality, specialized solutions in the railway sector. Over time, our commitment to excellence and innovation has built our reputation as a trusted partner. Major projects that highlight our expertise include the development of large-scale railway infrastructure projects and the implementation of cutting-edge technologies.

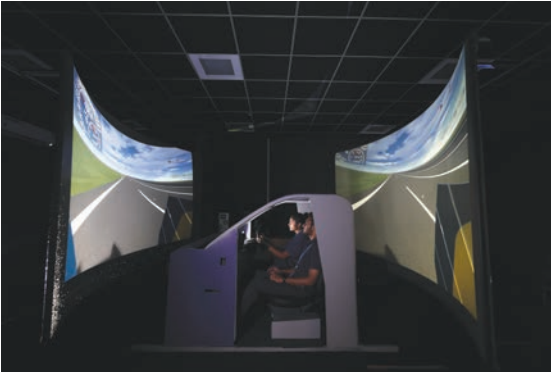
Government of India and Government of Nepal have cooperated for the preparation of Final Location Survey (FLS) for the proposed New Electrified Broad Gauge Railway line between Raxaul in India and Kathmandu in Nepal.

KRCL is currently offering Project Management Consultancy services for 16 projects and working with MMRDA, SMC, and the R&B Division of PWD in Anand, Rajkot, and GWSSB. Additionally, we are providing comprehensive Consultancy Services including Design, Drawing, Survey, and Inspection for various projects of Central Railway, NHA, Western Railway, and KWIL.

### **What are the major challenges faced by Railway sector? And how can we overcome them?**

The railway sector faces several challenges globally, including aging infrastructure, funding constraints, and the need for modernization. Addressing these challenges requires a multifaceted approach: investing in infrastructure upgrades, adopting new technologies for efficiency and safety, and exploring innovative funding models such as PPPs. Additionally, focusing on sustainability and reducing the environmental impact of rail operations is crucial. By prioritizing these areas and fostering collaboration between stakeholders, we can overcome these challenges and drive the sector forward.

## SRMIST's engineering programs endeavor to be at the forefront of innovation



With over 52,000 full time students and more than 3200 faculty across all the campuses SRM Institute of Science and Technology remains one of the top ranking universities in India. While they have programs in six faculties in this issue we focus on one of their main pillars - Engineering & Technology.

**A** dynamic and visionary Vice Chancellor Professor Dr. C. Muthamizchelvan, (who was recently conferred with the rank of Honorary Colonel in recognition of his services to the National Cadet Corps) has been steering SRMIST to glory. Today the institute has campuses across the country - Kattankulathur, Ramapuram, Vadapalani Campus – all in and around Chennai, Tiruchirappalli (in TN), Modinagar (in UP) & Sonapat (in Haryana) – both of which are located near Delhi NCR, Amaravati (in AP), Gangtok (in Sikkim). The university offers a wide range of undergraduate, postgraduate and doctoral programs in six Faculties – Engineering & Technology, Management, Medicine & Health sciences, Science & Humanities, Law and Agricultural Sciences.

### Engineering & Technology

SRMIST's engineering programs endeavor to be at the forefront of innovation. They also foster multi-disciplinary collaborations aimed at solving the most pressing global problems. The Engineering and Technology faculty comprises of 7 Schools and 19 Departments. Each school is headed by a Dean and comprises various Departments of Engineering, clubbed on the basis of their domain expertise.

With students in India seeking more inter-disciplinary program and flexibility in course curriculum, SRMIST addressed this demand by completely leaving the option of program path to the students. A student shall have the option of choosing any one of the following pathways (i) Major (ii) Major with Specialization (iii) Major with Minor or Major with specialization and a Minor. The core philosophy that is practised in SRMIST as part of teaching-learning process is Inter Disciplinary Experiential Active Learning (IDEAL).

The options that students can look to build their career in include Aerospace Engineering, School of Architecture and Interior Design, Automobile Engineering, Biomedical Engineering, Biotechnology, Civil Engineering, Chemical Engineering, Chemistry, Computational Intelligence, Computing Technologies,

Data Science & Business Systems, Electronics & Communication Engineering, Electrical & Electronics Engineering, Electronics & Instrumentation Engineering, English & Foreign Languages, Food Process Engineering, Genetic Engineering, Mathematics, Mechanical Engineering, Mechatronics Engineering, Networking & Communications, Physics and Nanotechnology.

### Department of Automobile Engineering

The Department of Automobile Engineering at SRMIST, KTR Campus, started the journey in 2004 with a vision of being recognized as a department of international repute. Over the last 20 years, they have built a strong undergraduate and postgraduate program in automobile engineering with industry connections. The primary focus of the curriculum is to impart technical know-how to students and promote their problem-solving skills and innovation of new technologies. The Department offers a large number of elective courses in different domains for the students to pursue their interests.

The department has 20 faculty members and two adjunct faculties, all with a broad area of expertise and interests. With over 300 graduate students, postgraduates, and research scholars, the department's strength is further reinforced by dedicated technicians and support staff. The department maintains active research groups to carry out collaborative and interdisciplinary research. They also have state-of-the-art research facilities to support their academic programs and research.

They have signed MoU with various organizations such as Automotive Research Association of India (ARAI), Global Automotive Research Centre (GARC), Non Ferrous Materials Technology Development Centre (NFTDC), and Valeo India Ltd for conducting joint UG/PG programs, and with Apollo Tyres, Mahindra & Mahindra, ASDC for joint research and skill development. This provides diverse opportunities for the students to work with industry projects, interns, etc, thereby bridging the gap between the industry and the Institute.

## Infrastructure

Infrastructure plays a vital role and The Department of Automobile Engineering has some of the best labs - Automotive Design Laboratory, Driving Simulator Laboratory, Automotive Electrical systems Laboratory, Automotive Electronics Laboratory, Electric and Hybrid Vehicle Laboratory, Artefact Dissection Laboratory, Centre for Automotive Materials Laboratory, Automotive Components Laboratory, Machine Shop Laboratory, Green Vehicle Technology Research Centre, Engine Testing Laboratory, Vehicle Dynamics Laboratory.

Currently the department provides the following courses -

- B. Tech – Automotive Engineering (ARAI)
- B.Tech – Automobile Engineering
- B.Tech – Automobile Engineering with Specialization in Vehicles Testing (GARC)
- B.Tech – Automobile Engineering with Specialization in Automotive Electronics
- M.Tech – Automotive Hybrid Systems Engineering
- M.Tech – Automotive Technology (ARAI)
- PhD in Automobile Engineering

## SRM-BRIN Centre: Centre of Excellence in Automation Technologies

SRMIST, has established the SRM – Bosch Rexroth India (SRM-BRIN) “Centre of Excellence in Automation Technologies”

in Collaboration with Bosch Rexroth, Germany the market leader in drives and control equipment with the primary objective of producing trained personnel for automation in industries. This has resulted in the establishment of state-of-the-art training at the SRMIST campus, Kattankulathur, Chennai. The SRM- BRIN (Bosch Rexroth India) centre is established with the following:

Hydraulics Technology: 4 work benches (16 persons can be accommodated), Pneumatics Technology: 4 work benches (16 persons can be accommodated), PLC Technology – 4 Nos.(16 persons can be accommodated), Faculty Trainers-Completed the Train-the-Trainer program at VTU-BOSCH centre, Mysore. Advanced training@ Germany, Interaction rooms: with 24 capacity – two rooms.

## Centre for Electric Mobility

The Centre for Electric Mobility (CEM) was established in 2019 with Rs. 14 Crores funding from the Department of Science and Technology, Ministry of Science and Technology, under the Promotion of University Research and Scientific Excellence (PURSE) grant is fast emerging as a key player in advancing the electric vehicle (EV) industry in India. The team at CEM is dedicated to revolutionizing EV technology and integrating EV charging infrastructure into the Indian economy.

CEM's research efforts are focused on various aspects of EV technology, including wireless charging EV infrastructure, power electronic converters, fast DC charging, battery and energy management systems, electric motor design, and EV charging

smart grid power structures. This commitment aligns with the institution's emphasis on sustainable transportation practices, evidenced by the transition to EVs for various campus purposes, leading to a significant reduction in CO2 emissions.

The DST PURSE funded project has enabled CEM to establish cutting-edge EV R&D facilities, facilitating research and development aimed at improving energy efficiency and supporting a robust transportation system. Collaborations with industry leaders further enhance CEM's impact in advancing electric mobility technology through strategic partnerships.

The center comprises a team of 15 faculty members along with 8 research scholars, 2 completed Ph.D. candidates, 20 undergraduate, and 5 postgraduate intern students. This team has contributed to over 120 journal publications, including 57 SCI indexed publications. Additionally, more than 10 patents have been filed, with 3 granted and 6 published. Notably, one product has reached the commercialization stage, while four others are nearing completion.

CEM's research areas encompass a wide spectrum, including power electronics converters, inductive and fast DC charging systems, battery and energy management, electric motor design, autonomous vehicles, novel power electronics development, and hybrid transmission development.

The center actively promotes EV research and development through various activities such as EV & Autonomous Vehicle

Research Training, skill development for EV subsystems, incubation facilities for startups, internships, testing facilities, workshops, faculty development programs, and fabrication facilities.

## Placement

Good placement cell is very important for any college, institute or university. At SRM they are fortunate to have a very dedicated and forthcoming Director, Dr. N. Venkata Sastry at Career Centre. The

placement activities at SRMIST are being taken care of by the career center with the help of corresponding departments. The main objective of the career center is to encourage placement activities, internships, corporate relationships, and employability skill development. They also organize several guest lectures, workshops, and webinars on recent advancements in the automotive sector through several industry resource persons and alumni.

The main role of the Engineering and Technology department, especially the automobile department is to train students in the design, development, manufacturing, and testing of vehicles from the concept stage through the production stage. The SRMIST is located very near the automobile industries in and around Chennai. The department is in collaboration with more than 12 companies, governmental agencies, and institutes for skill-oriented training, industry-supported labs, student exchange programs, etc making it the first choice for many recruiters. They conduct industry certified Value-Added Programs to make students industry-ready in the fields of Hybrid Electric Vehicles (HEV), Advanced Driver Assistance Systems (ADAS), etc.



## GSV: Catering to transport and logistics sectors



Prof. (Dr.) Manoj Choudhary

When I first spoke with Prof. (Dr.) Manoj Choudhary, founding Vice-Chancellor of the Gati Shakti Vishwavidyalaya (GSV), Vadodara, in his soft spoken voice filled with humility he insisted that I visit the campus to get a feel of the environment and see the huge campus surrounded by greenery. And what a campus it is.



GSV is a Central University under the Ministry of Railways (Govt. of India), and is focused on the entire transportation sector and logistics. In the morning met the VC who is currently on lien from IIT Jodhpur, where he is a Professor of Electrical Engineering and is also the Finance Committee Chairman and a member of the Management Council of the Semiconductor Laboratory SCL (Ministry of Electronics & IT). “There was a demand for a curriculum to meet the industry needs of the transportation sector with an aim for accelerating development in the transport and logistics sectors. For the same GSV was created and I was specifically nominated by the ministry with a unique mandate to create a best-in-class resource pool for the entire transportation sector across technology, management and policy,” said Prof. (Dr.) Manoj Choudhary.

To meet the practical experience needs GSV provides mandatory internship during each summer break. The students after 1st year spend 2 to 3 weeks at Railway Establishments, after 2nd year, 4 to 6 weeks at any Railway PSU/Private Sector and after 3rd Year, 6 to 8 weeks at any Industry.

GSV has signed several memorandums of understanding (MOU). “We have MOU with 41 universities/oranisations. Our recent tie-up with Airbus opens new possibilities for the Aerospace and Aviation Sector in India. Three working group meetings were held with priority on Aircraft Maintenance Engineers, Safety Engineering, Air Cargo Management, Drone Operations, Decarbonization and Sustainability. The best part is they will provide scholarship for 40 B.Tech students spanning the entire 4 years of program,” said Prof. (Dr.) Manoj Choudhary.

In addition to this their MOU with Siemens includes providing scholarship for female students who meet eligibility criteria (Merit and Needs). There MOU with Nokia aims to build 5G, 6G & AI

usecases in Transportation & Logistics. Apart from this GSV has MOUs with DPIIT (Ministry of Commerce & Industry), GIDB (Gujarat Infrastructure Development Board) and Karmayogi Bharat (for capacity building of civil servants) as well as. GSV also has an Incubation and Entrepreneurship Cell (IEC) with an aim to implement Entrepreneurship policy for Students and Faculty. While 5 Patents were granted in 2023, 1 has been filed in 2024.

While talking with Professor Jitesh Thakkar, Dean, Academics he highlighted an important point, “For our M.Tech courses we are only on the lookout for full time employee with minimum two years of work experience and who are sponsored by Industry, R&D



organisations, Laboratories, Government. / Private Institutions, NGOs, Banking Institutions, or other Academic Institutions.”

GSV have separate hostels for boys and girls and GSV provides them options of choosing their roommates. “We strive to make sure our students are comfortable. On arrival they are allotted rooms but have the option of selecting different roommates and rooms of their choice if available within a fortnight. Also a team of professionals to handle any student issues,” said Professor Edwin Raj, Dean, Students' Welfare.

The Registrar, GSV, TV Ananthasubramanian and Ex-Officio - Secretary (Non-member) plays a pivotal role in addressing all non-academic issues at GSV including authentication of all documents and keeping all records on behalf of the University.

### Academic Programs

#### AY 2023-2024 (All for regular students)

- B.Tech in Civil Engineering (Specialization: Rail Engineering)
- B.Tech in Electronics & Communication Engineering (Specialization: Rail Engineering)
- B.Tech in Mechanical Engineering (Specialization: Rail Engineering)
- B.Tech in Electrical Engineering (Specialization: Rail Engineering)
- B.Tech in Artificial Intelligence & Data Science (Specialization: Transportation and Logistics)
- MBA (Logistics & Supply Chain Management)
- BBA (3 year): Transportation Management

#### AY 2024-2025 (New Programs)

- B.Tech in Aviation Engineering
- MBA in Ports and Shipping Logistics (Jointly with Indian Maritime University)

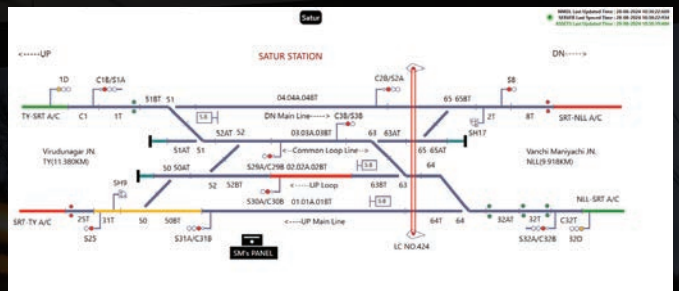
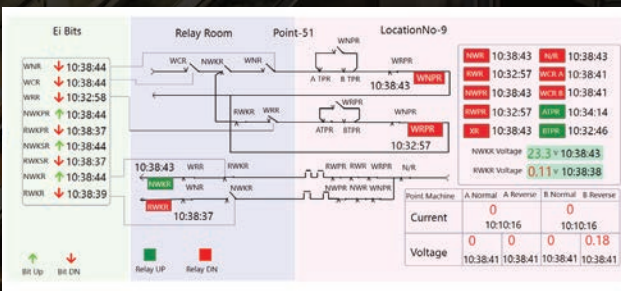
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Forms

Alerts

The 'Notification\_Response' form includes the following fields:

- Station Name:
- Location No:
- Fault Message:
- Initial Feedback: Select One
- Reason:

A 'Save' button is located at the bottom of the form.

The 'Alerts' screen displays a list of tasks with their statuses and timestamps:

- SATUR - TODAY 12:35: SIG-NLL - Earth Leakage Appeared
- SATUR - TODAY 08:49: Z1A - Signal Blanking
- SATUR - TODAY 08:36: IPS - IPS Mains Failure



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## The IAA – A Success Story



In 1897 the "Mitteleuropäische Motorwagenverein" organised a one-day exhibition of cars in Berlin which was the origin of the Internationale Automobilausstellung (IAA). This "Automobile Revue", as it was called, was a modest affair, since early cars were nothing more than motorized, open carriages and not particularly popular. Such that the Hotel Bristol on the glamorous thoroughfare Unter den Linden is large enough to host the eight motor cars on show – exhibited by Benz, Daimler, Kühlstein and Lutzmann.

Since then IAA has kept abreast of developments in every aspect of mobility – from the first motor car, via commercial vehicles



and electromobility, right up to the future of autonomous driving. IAA TRANSPORTATION 2024, under the motto "People And Goods On The Move," is committed to promoting climate neutrality in logistics and transportation. This event offers a unique opportunity to showcase the latest developments and technologies that will shape the future of the industry.

"The growing number of exhibitors and the increasing internationalization

of the IAA reflect the commitment and innovative strength of the entire industry," said Jürgen Mindel, Managing Director of the German Association of the Automotive Industry (VDA).

### Startup Area – The Innovation Hub for the Future of Mobility

IAA TRANSPORTATION 2024 will be showcasing an exclusive Startup Area in Hall 12. This area is integrated directly into the exhibition space, placing startups in close proximity to leading brands and integrating them into the event's activities. With 34 carefully selected young companies from various countries, IAA once again underscores its role as the leading platform for the future of logistics and transportation. Under the motto "People And Goods On The Move," ground-breaking solutions for the mobility of tomorrow will be presented.

"Startups play a crucial role in shaping the future of mobility. Their innovative approaches and fresh ideas drive technological advancement and offer solutions to the most pressing challenges of our time. IAA TRANSPORTATION provides these young companies with a unique platform to present their visions to a global audience and forge valuable partnerships," says Jürgen Mindel.

### Innovative Startups and Their Groundbreaking Technologies

This year's Startup Area features a curated selection of companies presenting pioneering technologies and solutions in the fields of batteries, artificial intelligence, autonomous driving, hydrogen and electric engines, and emission-free cooling technologies.

### International Diversity

The Startup Area impresses with its international diversity. The 34 startups hail from 15 countries, including Germany, Israel, France, the USA, the Netherlands, China, Switzerland, Italy, South Korea, Poland, Belgium, Denmark, Sweden, Austria, and the UK. Germany leads with 15 startups, followed by Israel with three, and France, the USA, and the Netherlands with two each. This global mix underscores IAA TRANSPORTATION's significance as an international platform for forward-looking mobility solutions.

### Prototype Club at IAA TRANSPORTATION

Another highlight of IAA TRANSPORTATION 2024 is the Prototype Club. This initiative provides a platform for visionary ideas and revolutionary prototypes shaping the future of mobility. The Prototype Club allows innovators to present their concepts and discuss them with industry experts to gain valuable insights and feedback. Participants of the Prototype Club will showcase their prototypes to a wide professional audience as part of IAA TRANSPORTATION. More information can be found on the Prototype Club website.

### IAA Test Drives: Zero-Emission Vehicle Innovations in Action

22 exhibitors will offer interested customers the opportunity to take guided test drives in the latest emission-free commercial vehicles of all classes during the IAA Test Drives. These test drives will take place both on the exhibition grounds and on public roads.

### Two Route Options for Diverse Driving Experiences

Two different route options are available for the test drives:

**Closed test track on the exhibition grounds:** An approximately 2 km long route in the on the eastern part of the exhibition grounds, suitable for prototype vehicles. Proof of insurance is mandatory for participation. Prototypes can only be driven on the exhibition grounds as they usually do not have road approval.

**Public roads:** Series production vehicles with road approval



can leave the exhibition grounds and be tested on public roads. Exhibitors can determine the length and duration of each drive.

**Participating Companies**

"We are pleased to announce the participation of the following companies, who will showcase their forward-thinking vehicles during the IAA Test Drives. The high level of interest demonstrates the industry's commitment to making their innovations tangible for everyone at IAA TRANSPORTATION," says Jürgen Mindel.



In addition to a wide variety of BEVs (Battery Electric Vehicles), several FCEVs (Fuel Cell Electric Vehicles) and vehicles powered by compressed natural gas (CNG) will also be featured. A small number of the latest Euro-standard diesel vehicles will be present as well. To date, 29 light and 30 heavy commercial vehicles have been registered for the test drives. This diverse selection of vehicles offers an excellent opportunity to experience the latest developments in zero-emission commercial vehicles first-hand.

**Industry Benefits**

Test drives provide significant value to the industry, allowing both exhibitors and potential customers to directly experience the latest technological advancements. For manufacturers, test drives are a crucial opportunity to receive direct feedback on their products and build customer confidence in new, sustainable technologies. Visitors benefit from the chance to test vehicles under real-world conditions and experience the performance and comfort of innovative commercial vehicles firsthand.

**Family Weekend on September 21 and 22, 2024**

This special event offers a wide range of activities and attractions for the whole family, especially drivers, truck enthusiasts, and children. Visitors can look forward to free rides on the solar-

powered Ferris wheel, truck and bus test drives (a valid Class B driver's license is required), and a broad entertainment program with live music.

"With the newly aligned Drivers' and Family Weekend, we've created a unique offer for drivers and their families. It's crucial to demonstrate how forward-thinking this industry is. Additionally, we want to highlight the significant role that drivers play in the entire industry and society. We are excited to be welcoming them to Hannover for a weekend full of emotions," said Jürgen Mindel.

**"Stars of the Year" awards for 2025**

On September 16, during the press day of IAA TRANSPORTATION 2024, the prestigious "Stars of the Year" awards for 2025 will be presented. The award ceremony will include the International Bus of the Year, International Van of the Year, International Truck of the Year, the Truck Innovation Award, and the International Trailer Award. These awards recognize outstanding achievements and innovations in the transport and logistics industry.



**Booking Test Drives On-Site**

IAA TRANSPORTATION 2024 cordially invites all interested parties to take advantage of these unique driving experiences and gain first-hand insight into the future of logistics and transportation. Test drives can be booked on-site in Hall 11 at the respective registration counters of participating companies. A valid driver's license for the corresponding vehicle class is required to participate.

The following companies will participate in the IAA Test Drives and present their innovative vehicles: Aurobay, B-ON, Bosch, DAF, Ford, Iveco, Hyliko, MAN, Maxus, Phinia, Quantron, Scania, Tesla, Trailer Dynamics, Volkswagen commercial vehicles, Volvo, Volta Trucks and Windrose.

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## Anuga India: Tastes Success

One of the largest international trade fair in India for the food & beverage (F&B) - Anuga Select India & Anuga FoodTec India 2024 was an enlightening and engaging experience says **Pooja Amritkar**.

From the moment I walked into the exhibition space, I was amazed by the sheer energy and scale of the event. The gathering of over 54,000 trade buyers and 270+ exhibitors is a testament to its significance and rising impact. The event brought together key players from across the globe to explore new business opportunities, forge strategic partnerships, and exchange ideas that shape the future of global cuisine.

Innovative Trends, an interesting and impressive segment of the event encouraged me to explore cutting-edge products, plant-based products, bold new flavour's, and revolutionary concepts in the F&B industry.

One of the most exciting highlights of the 3-day exhibition was the Culinary Corner, where renowned chefs from around the world stepped into the spotlight to share their expert tips and reveal the secrets behind their mouthwatering dishes. There were thrilling showcases and insightful panel discussions featuring stars like Chef Jerson Monterey Jack, Chef Rakhee Vaswani, Chef Gautam Chaudhary, Chef Suvir Saran, Michelin Star Chef, Chef Parth Bajaj, Chef Varun Inamdar, and Chef Rahul Punjabi.

The event put a strong spotlight on diversity and inclusion, discussing effective leadership strategies and what the future holds for women in leadership roles.

The exhibition featured premier brands in today's F&B industry. Each booth offered something different, and it was a roller-coaster ride for my taste buds to explore their diverse range of flavors and textures. Gopal Snacks had me hooked with their incredible variety of namkeen. Their Cristos crunchy wafers are a standout,

featuring bold and unique flavors like African Mint, Korean BBQ, and Mexican Chili. They are also known for their tasty gathiyas and Coringo Snacks. Conversing with Gaurav Pandya, VP of Euro India Foods, was an eye-opener. He shared how they blend traditional recipes, top-notch quality, and sustainable practices to create their wide range of snacks and beverages. After trying their products, I can confidently say their crunchy chips and namkeen have become my go-to travel snacks. As a person who needs a flavor kick, I loved the Karara Crackers in Wonder Co.'s delightful biscuit varieties and Golden Butter Day is perfect to pair with my morning chai.



The event traversed international boundaries by featuring many brands from countries such as Brazil, Indonesia, Iran, Italy, Poland, Saudi Arabia, South Africa, South Korea, and Turkey. Binari, known for its premium seaweed products had a unique range of gluten-free snacks and salad toppers. Straight from

Brazil to the world – Tropicool offers superfruit beverages that are enjoyable and healthy. I highly recommend trying their Açai berry juice. I also had a chance to taste the famous Moi Soi Thai curry collection and sauces at their pavilion. Revolt's energy drinks gave me the boost I needed to continue exploring the expansive exhibition.

The event was a true melting pot of ideas, flavors, and cultures and at the forefront of driving innovation, sparking creativity, and fostering collaboration in the F&B industry. It was a privilege to connect with industry leaders, taste revolutionary products, and witness firsthand the creativity and collaboration that will undoubtedly shape the future of our F&B industry.

## Brazilian culinary experience@Radisson

It was again on the kind invitation of my dear friend Harkaran Singh, GM, Radisson Blu Mumbai International Airport that we went for the Sunday brunch and this time it was to experience the vibrant flavours of Brazil along with live stations, live music, wine tasting and the famous Brazilian dance. The Sunday brunch, a part of their 'Brunch Club' every weekend provides the finest elements of culinary delights.

### Brazilian culinary experience

Led by the dynamic duo Rohit Gupta and Randall Fernandes, Tropicool Brazil Edition provided guests a buffet featuring traditional



Brazilian dishes, including live stations where chefs prepared Brazilian delights and street food favourites with an array of authentic flavours. "Its not just about food, the idea was to bring a taste of Brazil in India especially the famous Tropicool Acai. We also have started a cafe the first all-Brazilian café in Mumbai," said Randall Fernandes.

The menu was curated to offer a true taste of Brazil. Guests had an opportunity to indulge in refreshing Acai-based mocktails, crafted to perfectly complement the vibrant flavours of the Brazilian buffet. An attraction for many of the guests was the presence of Brazilian dancers dancing to the tune of live Brazilian music.



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# AI solution shows truck drivers where to park

Parking spaces are in short supply globally, especially at rest stops along Germany's highways. Truck drivers are required by law to observe certain rest periods, so when they cannot find parking, they often simply park off to the side of an entrance or exit or on the shoulder, all of which are very risky. The result is rear-end collisions, sometimes with a deadly outcome. There is great pressure to take action, and quickly. This is where the SOLP project comes in: Researchers from the Fraunhofer Institute for Telecommunications, Heinrich-Hertz-Institut, HHI are working with partners to develop an AI-supported prediction tool for truck drivers and shipping companies. The goal is to provide information on available parking spaces, both public and private, and make it easier to find parking.

Overloaded truck parking lots along Germany's highways are a huge challenge for transportation companies, as they are required to factor available parking and strict driving time requirements into their route scheduling. Nationwide road haulage, logistics, and disposal association Bundesverband Güterkraftverkehr, Logistik und Entsorgung (BGL) e. V. puts the shortfall of parking spaces on and around highways in Germany at 40,000. And that figure is rising. Finding a regular truck parking space for mandated rest periods is a constant headache for drivers. With parking spaces so hard to find, the search alone can often take so long that drivers run the risk of violating driving time regulations, which can bring hefty fines or even cost them their license. And often, overcrowding at rest stops leads drivers to park illegally and even dangerously. The Smart Optimized Lorry Parking, or SOLP, project aims to address this issue. Researchers from Fraunhofer HHI are working with BLUE Consult GmbH, KRAVAG, and SVG Assekuranz Service GmbH

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to develop an AI-supported prediction tool for truck drivers and shipping companies to provide information about available public and private parking spaces. The solution is intended to help make it easier for truck drivers to find a place to park and utilize existing space more efficiently, thereby preventing accidents and improving the flow of traffic on the highways. The project is receiving funding from the German Federal Ministry for Digital and Transport (BMDV) as part of the mFUND innovation initiative.

Unlike previous approaches, the SOLP recommendation system does not consider the relevant route as a static sequence of roads and parking lots. Instead, it calculates a dynamic forecast of potentially usable parking spaces based on interdependent factors including traffic density, parking space availability, and driving and rest times. "The innovation consists in displaying a recommendation with regard to truck parking lot occupancy levels along the route so drivers can proceed directly and quickly to those spots with an eye to legal requirements," says Thomas Meiers, a scientist at Fraunhofer HHI in Berlin. He and his team are responsible for the AI modeling.

## Color-coded display shows parking space occupancy

The system supplies color-coded information on available parking. The AI-supported digital recommendation tool is built into either an app or an on-board unit, where it displays parking lot occupancy along a driver's route using color coding. Red stands for a fully occupied rest stop, yellow for tolerated parking, and green for available rest stop space. Forecasts are updated every 15 minutes for the next two hours. The AI is trained with information on the location and features of induction loops, which count the number of vehicles passing through, and parking spaces within the highway network, with traffic flow data from induction loops and telematics and parking lot occupancy data. To produce a forecast, the current information is then analyzed and linked in real time with the routes traveled by truck drivers.

As the next step, the pilot application is to be tested by selected truck drivers in various states around Germany before the system is rolled out nationwide. The project partners' objectives include improving the efficiency of parking lot occupancy and reducing the risk of traffic jams. The innovative AI forecast is also intended to prevent accidents due to improper parking in parking lot entrances. The smart parking space search assistant will also significantly ease the burden on truck drivers, giving them a way to comply with legal break time requirements and helping to reduce stress. Logistics companies will be able to plan their deliveries more reliably while conserving fuel and cutting costs.

*Source- Fraunhofer Institute for Telecommunications*



Photo- © gettyimages

Finding a regular truck parking space at highway rest stops is a constant headache for drivers.

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