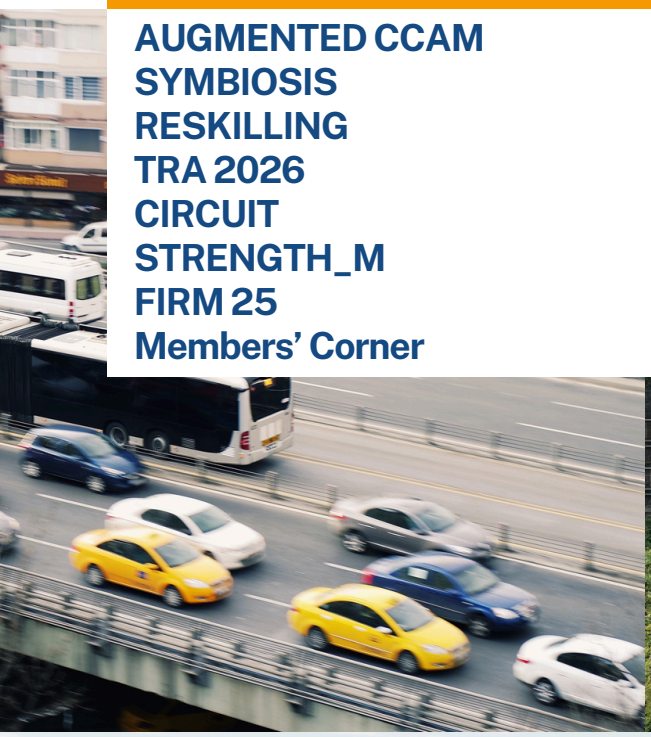
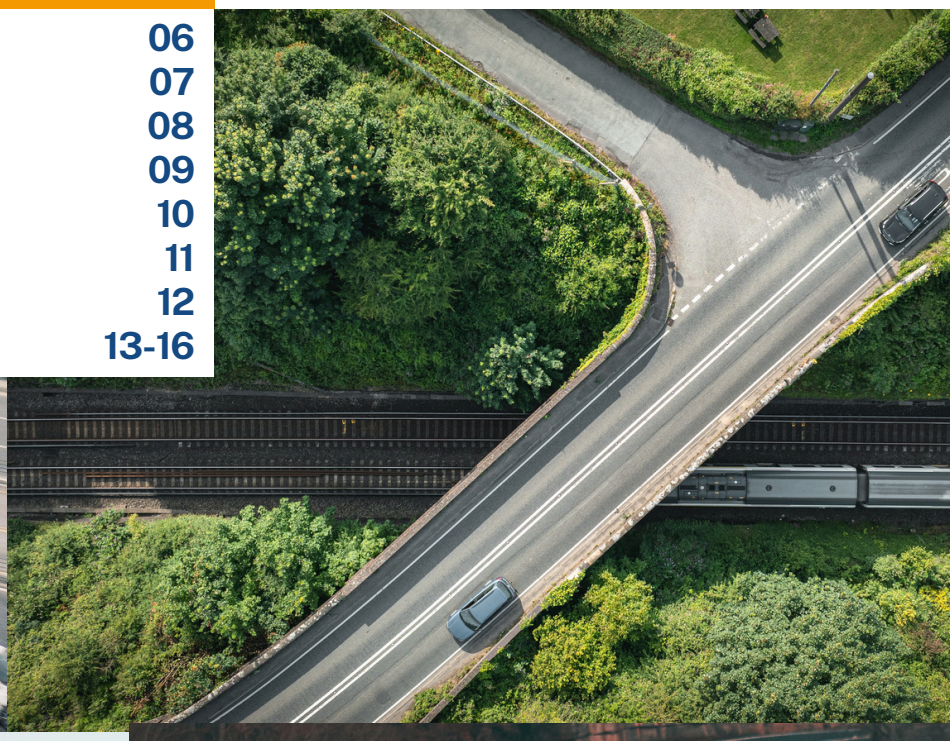
FIRM

FEHRL INFRASTRUCTURE RESEARCH MAGAZINE

JUNE 2025 | ISSUE NO. 22

FEHRL





PUBLISHED BY
FEHRL

Square de Meeûs,
35, 1000 Brussels | Belgium
www.fehrl.org

INNOVATION FOR TRANSPORT INFRASTRUCTURE

Transport infrastructure is the lifeblood of modern society, but it often struggles to meet demands and expectations on reliability, availability, maintainability, safety, environment, health and cost. FEHRL's role is to provide solutions for the challenges now faced and anticipate the challenges to come. Through innovation, the operation of transport infrastructure can address society's needs.

FEHRL encourages collaborative research into topics such as mobility, transport and infrastructure, energy, environment and resources, safety and security, and design and production.

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Welcome

Aleš Žnidarič,
FEHRL President
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Innovation in transport infrastructure is no longer a distant goal—it is happening now, across Europe, driven by collaborative research and a shared urgency to adapt. At the heart of this movement, FEHRL and its members are delivering concrete progress through ambitious projects and strategic partnerships.

This edition highlights key moments from flagship initiatives. AUGMENTED CCAM is demonstrating real-world use cases across Europe, showcasing the essential role of Physical-Digital Infrastructure in enabling connected mobility. SYMBIOSIS is setting a new standard for integrating biodiversity into infrastructure through actionable tools and cross-sector collaboration.

With RESKILLING, we're helping Europe's transport workforce prepare for automation and digitalisation—ensuring the transition is not only smart, but socially inclusive. CIRCUIT and STREnGth_M are tackling persistent barriers to circularity and research deployment, offering clear policy and market pathways forward.

FIRM25 brought these discussions to life, gathering experts around themes like automation readiness, resilience, and sustainability. The event reaffirmed the strength of our network and the value of collective insight.

Looking ahead, TRA 2026 in Budapest will be a key moment to connect ideas with impact. And through our Members' Corner, we continue to showcase national innovations that reinforce FEHRL's role as a hub of excellence.

Thank you to all who are shaping this transformation with us. Together, we are not just imagining the future of transport—we are building it.

Welcome

Thierry Goger
FEHRL Secretary General
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The first half of 2025 has already proven to be both intense and inspiring. From the resounding success of FIRM25 in Brussels to our growing presence at events like EUCAD and the ITS European Congress, we continue to witness the strength of our community — and the tangible progress being made across Europe in infrastructure innovation.

Projects such as AUGMENTED CCAM and SYMBIOSIS are no longer just ideas on paper; they are demonstrating impact in the field — be it through live pilot deployments, policy dialogues, or tool development. Meanwhile, RESKILLING brings a timely reminder that the future of mobility also depends on people — on the skills, adaptability, and inclusion of our workforce.

What stands out this year is the sense of shared purpose. Whether through circularity efforts in CIRCUIT, the systemic reflections of STREnGth_M, or the vibrant national contributions in our Members' Corner, the message is clear: we are moving forward — together.

This momentum is also reflected in our preparations for TRA 2026 in Budapest, which promises to be a cornerstone event for shaping Europe's transport future. The quality of submissions, diversity of stakeholders, and relevance of themes confirm that we are on the right path.

I want to warmly thank all our members and partners for their continued engagement. It is your dedication — at the project level, in national institutes, and across international fora — that makes FEHRL what it is: a living, learning network for sustainable transport innovation.

Let's keep this momentum going. The second half of 2025 holds even more promise.

For more information, also see:

www.fehrl.org

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Augmented CCAM

The **Augmented CCAM** project is entering its final stretch after completing its first round of pilot tests across **France, Spain, and Latvia**. These pilots covered key CCAM use cases such as **emergency vehicle prioritisation, vulnerable road user protection**, **traffic optimisation**, and **road worker safety**. The results confirmed the central role of Physical-Digital Infrastructure (PDI) in enabling connected and cooperative mobility, both in controlled and real-world conditions.

To prepare for this final phase, the consortium held its **Partner and Advisory Board meetings** on 17 and 18 March. These sessions allowed members and external experts to review pilot outcomes, discuss technical and policy priorities, and coordinate the next steps—particularly in terms of result consolidation, communication, and demonstration planning.

In May, **Augmented CCAM** was featured at three major events. At **FIRM25** in Brussels, the project contributed to discussions on infrastructure innovation and automation. A few days later, at **EUCAD 2025** in Ispra, the team shared a stand with the PoDIUM project and met with key stakeholders, including Project Officer Pedro Alfonso Pérez-Losa, to discuss infrastructure readiness for large-scale CCAM deployment.

Finally, at the **ITS European Congress** in Seville, the Spanish pilot site was highlighted in several sessions focused on PDI-enabled services, such as **VRU protection** and **emergency vehicle alerts**, as well as in a policy session addressing the challenges of scaling up **CCAM deployment across Europe**.

The **Final Event** of the Augmented CCAM project will take place in Paris from **15 to 18 December 2025**, following the project's extension. This four-day event will feature a live demonstration of key use cases, alongside presentations of project results and in-depth discussions with stakeholders from across the European mobility ecosystem.

Latvian demo event, pictures by Renārs Koris:

AUGMENTED CCAM has received funding from the European Union's Horizon Europe programme under grant agreement No 101069717.
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Click here to watch the videos

Partners

SYMBIOSIS

Since its launch in September 2024, the **SYMBIOSIS** project has entered its operational phase, with significant work underway to translate its ambition — mainstreaming biodiversity into infrastructure — into practical tools, policy guidance, and collaborative processes.

Over recent months, the consortium of **22 partners from across Europe** has advanced on multiple fronts. A major early milestone was the completion of a comprehensive literature review of 80+ **Environmental Impact Assessment (EIA)** case studies. The findings highlight persistent gaps in current practice, such as limited attention to lifecycle stages beyond construction and inconsistent benefit assessments. These insights will inform the creation of a robust biodiversity impact assessment toolbox.

The project has also gained visibility through its presence at international events. At the **UIC Sustainability Action Week** in March, **SYMBIOSIS** featured in the session *"The Tracks of Harmony: Nature & Rail,"* alongside infrastructure operators, funders, and research institutions. The exchange addressed topics such as **biodiversity data standardisation**, **vegetation management**, and **monitoring technologies.**

In April, **SYMBIOSIS** was presented at the **International Workshop on Applied Economics and Sustainability** in Athens, with a focus on the integration of biodiversity into corporate sustainability reporting. In May, at **FIRM25** in Brussels, **SYMBIOSIS** contributed to a session on mainstreaming biodiversity in infrastructure, reinforcing the need for cross-sector dialogue and shared methodologies.

In parallel, internal work packages have progressed on nature-based solutions, data harmonisation, and governance frameworks. The project is not only reviewing existing practices but also developing applied strategies to embed biodiversity into planning, procurement, and decision-making processes at all levels — from operators to institutions.

Stakeholder engagement remains a key priority. A **Technical Stakeholder Group (TSG)** is being formed to provide feedback throughout the project's development. In parallel, a **survey on habitat and biodiversity data practices** is open and will help shape harmonised, user-oriented methodologies.

With more events, workshops and tools on the horizon, **SYMBIOSIS** continues to lay the foundation for an infrastructure future that is sustainable, resilient, and biodiversity-smart.

Pinar Yilmazer (UIC) presenting SYMBIOSIS project at FIRM25 (Brussels) in May

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Partners

RESKILLING

The **RESKILLING project** tackles one of CCAM's biggest challenges: preparing Europe's transport workforce for the shifts automation will bring. Funded by **Horizon Europe (GA 101147328)** and driven by **20 partners in CCAM**, education, skills development and social innovation, **RESKILLING** blends technical foresight with Social Sciences & Humanities insights to map emerging roles, assess socio-economic impacts and co-design modular up-/reskilling pathways across the CCAM value chain.

The official kick-off took place on 5–6 February 2025 at CERTH-HIT in Thessaloniki, gathering **60+ experts** under the leadership of Matina Loukea (CERTH-HIT), Ingrid Skogsmo (VTI) and Caroline Alméras (ECTRI). Over two days, partners finalized the occupational-mapping methodology, agreed on SSH-informed stakeholder-engagement protocols and scheduled the first Co-Innovation workshops. Sessions also addressed data-collection standards, ethical considerations and metrics for social outcomes.

Building on these foundations, **RESKILLING** showcased its analytical framework and collect real-time feedback at EUCAD 2025 (13–15 May) in Ispra, Italy. In partnership with CCAM-ERAS, the project hosted an exhibition stand featuring early occupation profiles, a live survey on priority skills and a forum for pilot-project proposals.

These insights will directly inform governance guidelines and targeted training modules in **data analytics, systems integration, safety management** and beyond—ensuring a just, **inclusive transition to Connected, Cooperative & Automated Mobility**.

In the months ahead, the consortium will launch its first pilot reskilling courses, bringing together transport professionals, educators and policymakers to validate and refine our modular curricula. By the end of 2025, **RESKILLING** aims to deliver a public repository of CCAM role profiles and a set of co-innovation toolkits to help stakeholders across Europe adopt and adapt our solutions.

RESKILLING Stand at EUCAD 2025 (left to right) : Matina Loukea (CERTH/HIT), Georgios Sarros (CINEA), Ingrid Skogsmo (ECTRI) , Evy Rombaut (VUB), Ignacio Magallon Hernandez (ETSEIB-UPC), Adewole Adesiyun (FEHRL), Agostina Massarini (IRF)

More info about RESKILLING here

This project has received funding from the European Union's Horizon research and innovation programme under grant agreement No 101147328.

For more information about RESKILLING, please contact:
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Partners

Transport Research Arena 2026

TRA 2026: A 360° View on Europe's Mobility Future

As we look back on an intense spring of submissions and previews, **TRA 2026 in Budapest (18–21 May)** is shaping up to be the continent's unmissable transport forum. With over **3 000 delegates expected**, Hungary's capital will host a blend of strategy, science and hands-on demos under the banner "*Re-Generation in Transport*."

Four Pillars, One Vision

1. **User-Centered Mobility** – Designing systems around real needs: accessibility, safety, shared-mobility and inclusive policy.
2. **Green Decarbonization** – From zero-emission vehicles to circular-economy freight corridors, cutting carbon is mission-critical.
3. **Planning & Operation** – Resilient infrastructure, logistics optimization and data-driven economics keep people and goods moving.
4. **Transport Digitalization** – New this year: AI-powered traffic forecasting, V2X-enabled automated fleets, Mobility-as-a-Service platforms and predictive maintenance solutions that promise safer, more efficient networks.

Each pillar unfolds across dedicated strategic sessions, seven technical tracks, special-topic panels and poster slams — plus the **TRA VISIONS** competition spotlighting breakthrough work by **Young and Senior researchers**.

Call for Papers: Deadline 30 June

Although our Call for Abstracts officially closed on 30 June, you can still catch the buzz by reviewing the final programme draft online. Accepted speakers will be notified by 31 January 2026, with full-paper submissions due 31 March 2026 and the proceedings published in June 2026.

Why Join TRA 2026?

- Network with EU policy-makers, R&D funders and industry heavyweights
- Experience live demos of smart-city pilots and autonomous shuttles
- Forge partnerships in our "Invest in Mobility" showcase
- Elevate your research through high-impact **VISIONS awards**

TRA 2026 is where Europe's transport community converges to turn ideas into action. See you in Budapest!

On June 5, the TRA2026 organising team conducted a comprehensive site visit at HUNGEXPO, the future venue of Europe's leading transport research and innovation conference.

TRA2024 is supported by a Coordination and Support Action funded from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101056931

To learn more about FEHRL involvement at TRA visit the FEHRL's website.
For more global information, visit **www.traconference.eu**.

Partners

CIRCUIT

Over the past two months, **CIRCUIT** has moved from showcasing **recycled-concrete bridge elements** to **tackling the systemic hurdles blocking a circular transport infrastructure**. Two reports (April 8 and May 5, 2025) diagnose why circular-economy (CE) principles remain pilots rather than standard practice.

Mapping the Barriers

A literature review identified **50+ interlinked obstacles** in four clusters. Economic barriers top the list: high upfront costs, weak secondary-materials markets, and limited green financing. Regulatory hurdles—outdated standards and risk-averse procurement—keep recycled materials sidelined. Cultural resistance and siloed collaboration slow adoption, while technical issues around quality assurance and compatibility persist.

Industry Perspectives

A survey of **135 European stakeholders and follow-up interviews** show that legal compliance, not ESG ambition, drives most CE initiatives. Public authorities can unlock change by embedding circularity criteria in tenders and offering financial incentives, but concerns over recycled materials' long-term performance and balancing durability with adaptability remain.

Pathways Forward

Technical fixes alone won't suffice. Policymakers must update standards, introduce subsidies or procurement bonuses, and foster collaboration. Private actors should invest in R&D, pilot circular business models, and share lessons learned. Confronting economic, regulatory, cultural, and technical barriers in parallel is essential to shift from linear methods to **a resilient, resource-efficient infrastructure future**.

Together, these reports chart a clear roadmap from proof-of-concept to scalable circular infrastructure through policy reform, market innovation, and industry-wide cooperation.

To know CIRCUIT next steps subscribe to the project newsletter:

Here

Irina Stipanović, Circuit Project Technical Coordinator (INFRAPLAN) presenting CIRCUIT project at FRIM25

This project has received funding from the European Union's Horizon Europe Innovation Programme under grant agreement No 101104283"

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STREnGth_M

STREnGth_M (Stimulating road Transport Research in Europe and around the Globe for sustainable Mobility) continues to strengthen the connection between innovation and large-scale implementation. Since the last **FIRM** update, the project has marked key milestones and reinforced its visibility across Europe.

Removing Barriers to Deployment

The project's first major report, **Deliverable D1** – Overcoming Barriers to Research Deployment, identified ten categories of obstacles hampering the uptake of transport research—ranging from technology gaps and fragmented regulations to limited funding and weak knowledge transfer.

Key recommendations include:

- **Strengthening** ollaboration between research and industry
- **Improving** access to EU funding
- **Enhancing** knowledge-sharing mechanisms and training

The full deliverable is available on the ERTRAC website.

STREnGth_M at RTR 2025

At RTR Conference 2025, the project was showcased at a joint booth with FEHRL and POLIS Network, highlighting its goals and engaging with new stakeholders.

The event reinforced the need to align research with real-world impact from the outset.

Promoting Research at ITS Seville

With support from **STREnGth_M**, ERTRAC and FEHRL took part in the **ITS European Congress 2025** in Seville. The stand focused on connected and automated mobility, and promoted the ERTRAC Roadmap on Automated Driving as well as the upcoming **TRA 2026** in Budapest.

Mapping the European Landscape

Deliverable D3.1 – Visualisation of the Sustainable Road Transport Research Landscape provides a comparative view of RTR strategies in all 27 EU Member States. It assesses alignment with EU programmes and underlines the value of improved cooperation and coordination.

Thierry Goger (Secretary General of FEHRL) and Xavier Aertsens (Director of ERTRAC) promoting STREnGth_M and ERTRAC's vision for future mobility at ITS European Congress.

STREnGth_M has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101096253.

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For more information about STREnGth_M, please contact the project coordinator Verena Wagenhofer at **verena.wagenhofer@avl.com.**

D3.1 Visualisation of the sustainable RTR landscape at EU Member States level

Partners

FIRM 25

FIRM 25
FEHRL Infrastructure Research Meeting
6th May 2025

On May 6th, 2025, FEHRL hosted the **FEHRL Infrastructure Research Meeting (FIRM25)** at the Maison Irène et Frédéric Joliot-Curie in Brussels. The event brought together over 60 in-person attendees and many online participants from across Europe and beyond – making this hybrid edition one of the most inclusive and engaging yet.

With the theme "*Mobility is changing, our roads too!*", the day explored the major transitions shaping transport infrastructure: digitalisation, automation, sustainability, resilience, and biodiversity. Participants represented research organisations, European institutions, infrastructure operators, and industry leaders.

Four sessions structured the day

- **Session 1** – Strengthening road infrastructure research and reindustrialisation in Europe

High-level speakers from DG MOVE, DG RTD, ECTP, CCAM, ERTRAC and others shared strategies to align research with industrial needs and long-term European goals.

- **Session 2** – Enhancing Infrastructure Readiness for Large-Scale Autonomous Deployment

Concrete use cases from the AUGMENTED CCAM pilots and insights from public and private players showed how infrastructure is being adapted to support autonomous mobility.

- **Session 3** – Fostering circular and resilient transport infrastructures

Focused on innovation in materials, asset management, and life-cycle thinking, this session brought forward tools and projects that pave the way for greener roads and railways.

- **Session 4** – Mainstreaming Biodiversity & Infrastructure Symbiosis

A lively and inspiring closing session, highlighting the urgent need to integrate biodiversity into infrastructure planning. Speakers from the SYMBIOSIS project, CDV, MINUARTIA and UIC presented both challenges and concrete solutions.

Beyond the sessions, **FIRM25** was also a unique opportunity to reconnect in person with colleagues and project partners, to meet new stakeholders, and to strengthen ties across sectors. The closing cocktail offered a relaxed setting to keep the conversations going.

As one of FEHRL's flagship events, FIRM25 successfully demonstrated our capacity to convene expertise, foster knowledge exchange, and drive forward the European agenda on transport infrastructure.

More info about FIRM25

FEHRL MEMBERS' CORNER

YOUNG RESEARCHERS SEMINAR YRS2025

From 3 to 5 June, the 2025 edition of the **Young Researchers Seminar YRS2025** was held at the Federal Highway and Transport Research Institute **BASt** in Bergisch Gladbach, Germany.

During the three-day event, over **30 young talents from 12 European countries** presented their projects, exchanged ideas with senior experts and played an active role in shaping the future of mobility. The agenda included not only the sharing of fresh ideas and the presentation of innovative research, but also the opportunity to get into contact with research colleagues and networking on a European level.

In her keynote addresses, Karola Lambeck, Head of Directorate at the Federal Ministry for Transport (BMV), and Mette Møller, Senior Researcher at DTU, encouraged attendees to embrace collaboration in research and networking across borders.
In this context, BASt president Markus Oeser gave tips and advice on how to write a research paper – and how not to. Using examples from his own scientific career, he illustrated how to avoid mistakes and achieve good results when publishing research papers.
In lively exchange and discussion, the young researchers showed their great interest in the lectures.
In additional cross-cutting sessions from BASt Senior Researchers, Boguslav Jablkowski addressed AI in Research while Timo Hoffmann gave an overview on EU Projects, both highly exciting and cutting-edge topics in the European research landscape.

During the further seminar, the young talents had to prove themselves. In dedicated specialist sessions, all participants were invited to present the results of their research.

Tutors and members of the Steering Committee then provided feedback on papers and presentations, enabling the participants to learn and improve their skills in a protected environment.

In the seminar's closing ceremony, the best papers & presentations were rewarded with prizes. Congratulations go to the recipients of the **YRS2025 Awards**:

- **Chen Song (UGE)**
- **Alberto Rojas Rivero (Univ. Politécnica Madrid)**
- **Maria Levints (DZSF)**
- **Ola Qasseer (KTI)**

To complement the seminar's programme, a Tour-de-BASt was offered. Attendees gained exciting insights into different research fields of BASt, such as the Vehicle Engineering Test
Facility (FTVA), the Turntable Road-Marking Test System (RPA) or the Bicycle and Driving Simulators.
And of course, the social programme was not neglected. The YRS2025 official dinner took place in the unique setting of the Cologne tram museum. Over German specialities and Cologne beer, participants had the opportunity to strengthen their connections and expand their professional network, in the spirit of the day's motto "Continue and collaborate"!

The BASt Organisational Committee would like to thank all the young researchers and tutors, Steering Committee members and Supporting Organisations who contributed to the event and visited Germany. Three days full of enthusiasm and joy, great curiosity and excellent cooperation made every effort worthwhile. The Young Researchers Seminar 2025 will remain in our best memories and we are already looking forward to the next YRS in 2027!

bast
Federal Highway and Transport Research Institute

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Ursula Blume, Kirsten Graf-Landmann, Christine Kellermann-Kinner, Karl-Josef Höhnscheid

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LIGHTING THE ROAD DIFFERENTLY

HOW NETIVEI ISRAEL TURNED ENVIRONMENTAL RESEARCH INTO A NATIONAL SMART LIGHTING STRATEGY

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Adi Gamliel,
VP Innovation, Strategy and Sustainability, Netivei Israel
Board Member, FEHRL

Netivei Israel is driving innovative initiatives which combine national responsibility with technological leadership. Light pollution, a growing global problem, silently disrupts ecosystems, harms wildlife, and threatens human health. Advancing its mitigation to a strategic priority, Netivei Israel tackles light pollution across 8,500 km of interurban roads through innovative technology, protecting wildlife habitats and human health while advancing Israel's environmental leadership.

In collaboration with the Ministry of Environmental Protection, the Society for the Protection of Nature, and the Israel Nature and Parks Authority, Netivei Israel conducted an in-depth study mapping the ecological sensitivity of all interurban roads. A GIS layer was developed integrating biological, planning, and lighting data, classifying road segments into three levels of light sensitivity: open areas, high sensitivity, and extreme sensitivity. This advanced planning tool — first of its kind in Israel — enabled informed decision-making on lighting across all roads and intersections.

The ability of Netivei Israel's Innovation and Strategy Division to convert scientific data into actionable infrastructure policy proved to be a core strength. The company launched a national technology challenge, inviting startups and manufacturers to propose solutions based on the research. Following pilots in sensitive locations, LED fixtures were selected featuring warm light (below 2700K), reduced upward and lateral light spill, brightness capped at 20% above standard, and rear light shields. Each lighting unit was registered in a nationwide GIS platform and aligned with environmental guidelines.

The result was a three-year project that replaced approximately 130,000 lighting units across Israel's interurban network. Beyond ecological benefits, the program is projected to reduce electricity consumption by 54%, cut national emissions significantly, and lower maintenance and energy costs by over €40,000 per kilometer within a decade.

This initiative also advances the UN Sustainable Development Goals (SDGs), particularly:

- **SDG 9.4** – Promoting sustainable infrastructure and resource efficiency
- **SDG 13** – Urgent climate action through emission reduction
- **SDG 15** – Protection of terrestrial ecosystems and habitats
- **SDG 12.6** – Adoption of sustainable practices by public companies
- **SDG 14** – Minimizing light pollution in coastal and marine zones

The impact extended beyond technology — it reshaped companywide practices. Procurement documents were revised, technical manuals rewritten, oversight mechanisms established, and personnel across departments were trained to embed environmental considerations into core operations. This was not only a technological shift but a cultural one: the infrastructure body became a proactive partner in environmental and social change.

Netivei Israel's experience demonstrates how the integration of science, industrial innovation, and infrastructure execution can create environmental, economic, and social value. It is a model of smart governance — not merely managing infrastructure but redesigning future reality. The company's Innovation, Strategy and ESG Division leads a results-driven approach to operational innovation, transforming research into applied solutions that serve the public, protect the environment, and strengthen the Israeli economy.

****Netivei Israel is partner of BISON - BIODIVERSITY AND INFRASTRUCTURE SYNERGIES AND OPPORTUNITIES FOR EUROPEAN TRANSPORT NETWORKS (EU Horizon 2020 grant agreement No 101006661).*

FEHRL MEMBERS' CORNER

THE BELGIAN ROAD RESEARCH CENTER: 70 YEARS OF INNOVATION IN ROAD CONSTRUCTION

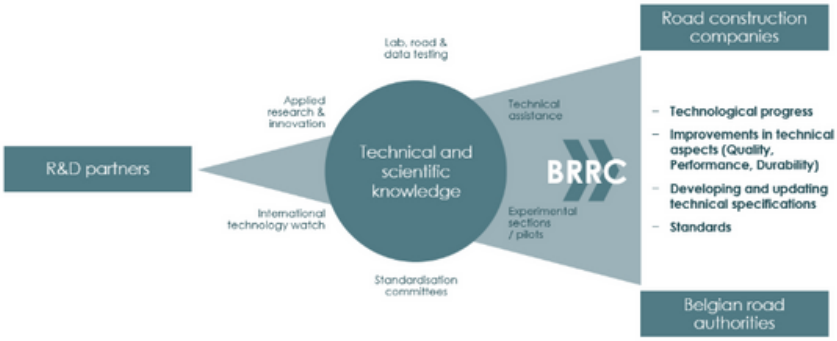
The Belgian Road Research Center is a collective research centre, created more than 70 years ago on the initiative of the Federation of Belgian Road Contractors with support from the Ministry of Public Works. BRRC is in a privileged position as an impartial operator at the centre of the Belgian road construction ecosystem. It was also a founding member of FEHRL.

Our mission: to promote technological progress in the Belgian road construction sector through applied research and knowledge transfer.

Belgian Road Research Centre
Together for sustainable roads

WWW.BRRC.BE

INNOVATION@BRRC.BE



Our activities are structured around four pillars: R&D&I, Expertise, Technical Assistance and Training.
We work in every area involved in road infrastructure projects: structures and surfaces, materials and technology, water management, mobility, infrastructure safety, road equipment, sustainability, circular economy and asset management.
These activities are all grouped around strategic objectives in three areas: sustainability in road construction, the digital transition in our sector and road data management.

BRRC is a partner of choice both nationally and in Europe

Based on many years of experience, our valuable expertise at the national level and our role at the interface between construction companies and road authorities, we are now recognised as a valuable partner in research, development and innovation (R&D&I).
As a result, we are very well placed to identify the needs of the sector, facilitate the implementation of R&D&I deliverables, carry out numerous pre-standardisation research projects (more than 10 in the last three years), and carry out European and CEDR projects (24 projects in the last 15 years). At the same time, we are continuing to invest in measurement equipment and advanced digital tools (e.g. GIS)
Through calls for partnership, we aim to contribute more actively towards the achievement of Europe's objectives.

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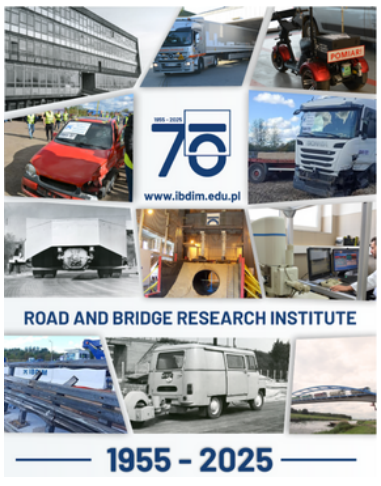


THE ROAD AND BRIDGE RESEARCH INSTITUTE (IBDIM) IS PROUD TO CELEBRATE ITS 70TH ANNIVERSARY IN 2025

Since its founding, IBDiM has been at the forefront of transport infrastructure research, design, testing and maintenance. Our multidisciplinary teams of engineers, scientists and technical specialists work together with national and international partners to develop innovative, safe and sustainable solutions for roads and bridges.

Join us in Warsaw for #MRP'25!

On 22–23 October 2025, IBDiM will host the II International Conference "Modern Road Pavements – Recycling and Decarbonisation" in Warsaw. This two-day event will bring together leading researchers, industry professionals, public-sector representatives and policy-makers to explore cutting-edge developments in sustainable road construction. Key topics include:
· advanced pavement recycling methods,
· low-emission materials and construction techniques,
· carbon footprint reduction strategies in road engineering,
· circular economy in road infrastructure.
MRP'25 will feature keynote lectures from global experts, technical sessions showcasing the latest research, and dedicated networking opportunities to foster collaboration. We warmly encourage you to participate in discussions, and help drive the transition to a more sustainable future for road infrastructure.
For full details on the programme, speakers and registration, please visit: https://mrp25.ibdim.edu.pl/en/
We look forward to welcoming you to Warsaw and to continuing our shared mission of delivering resilient, low-carbon transport networks across Europe. If you have any questions or would like to discuss potential collaboration, please do not hesitate to contact us.

FEHRL MEMBERS' CORNER

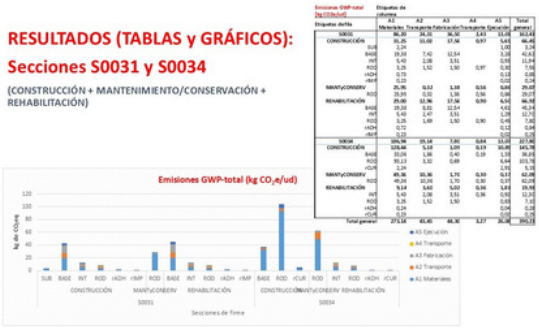
CEDEX TOOL FOR LIFE CYCLE ASSESSMENT (LCA) OF ROAD PAVEMENTS (HAFIRMA)

CENTRO DE ESTUDIOS Y EXPERIMENTACIÓN DE OBRAS PÚBLICAS

WWW.CEDEX.ES

Transport Research Centre at CEDEX (CET-CEDEX) has developed **HAFIRMA** (Environmental Analysis Tool for Road Pavements), created for the Roads General Directorate (DGC) of the Spanish Ministry of Transport and Sustainable Mobility (MITMS). **HAFIRMA** enables comparative environmental assessments between pavement sections included in the Spanish Road Instruction 6.1-IC "Pavement Sections" (or other sections specifically designed by the user). Among its most relevant potential uses are the environmental evaluation of pavement design alternatives at different stages of the design process, as well as its application in defining Green Public Procurement (GPP) criteria for road infrastructure projects.

HAFIRMA cover page



Example of HAFIRMA results (pivot tables and charts)

HAFIRMA enables the assessment of the GWP environmental impact (measured in kg CO_2 equivalent) of several different road pavement solutions (including their subgrade and also tack coats between layers), as established in the current regulations of the Road General Directorate of the Spanish Ministry of Transport and Sustainable Mobility, or any other pavement structures designed by the user.
Its key features include:

- It allows the environmental calculation of all types of pavement sections (flexible, rigid and any others), including the assessment of the production of warm and cold bituminous mixtures, even considering the incorporation of reclaimed asphalt.
- It covers all life cycle stages: raw material supply, transport, manufacturing and construction, including Construction, Maintenance and Rehabilitation stages (A1–A5 and B2–B5).
- It includes a built-in environmental database with representative data from the Spanish road sector.
- It allows the use of default environmental data from the built-in database or the introduction of user-specific impact values, enabling the customization of the pavement solutions to be evaluated.
- It provides detailed results through several pivot tables and charts, enabling the environmental comparison of different construction alternatives.
- Implemented as a Microsoft Excel spreadsheet with VBA macros, in Spanish.

SPOTLIGHT ON SERRP VIII

FEHRL's Strategic European Road Research Programme VIII (SERRP VIII, 2025–27) lays out a visionary agenda to future-proof Europe's transport infrastructure. Over the past months, we've published a dedicated article series unpacking the eight research priorities across three interlinked domains:

- **Built Environment:** Strengthening asset resilience with robotics, self-healing materials, digital twins and circular procurement.
- **Natural Environment:** Boosting biodiversity, enabling climate-neutral operations, harvesting road-side energy, and tackling air & noise pollution.
- **Social Environment**: Championing inclusive mobility, AI-driven predictive safety, active-travel infrastructure, and road-worker protection.

From predictive maintenance and non-exhaust emission capture to electrification pathways and greener urban logistics, each piece reveals practical innovations — robotics, IoT, machine learning, 3D printing, new business models — that will extend asset life, cut carbon, and make our roads safer, greener and more equitable.
Discover the full series and join us in shaping resilient, sustainable, and inclusive transport networks for tomorrow's Europe.

MORE INFO ABOUT SERRP VIII

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