



# E-mobility Directory



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solutions  
plus

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#### **TITLE**

SOLUTIONSplus E-mobility Directory

#### **AUTHORS**

The directory was compiled by SLOCAT with the information from SOLUTIONSplus partners.

#### **DISCLAIMER**

The views expressed in this publication are the sole responsibility of the authors named and do not necessarily reflect the views of the European Commission.

#### **PICTURES**

All the pictures are provided by the SOLUTIONSplus partners.

July 2024

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# About

The SOLUTIONSplus E-mobility Directory serves as a detailed compilation of profiles for various organisations participating in the SOLUTIONSplus project. This project, funded by the European Union's Horizon 2020 research and innovation programme, aims to develop and implement innovative electric mobility (e-mobility) solutions across urban environments worldwide. The primary purpose of this directory is to provide an in-depth overview of the contributions, expertise, and roles of each participating organisation within the project.

## Highlight collaborative efforts

The directory underscores the collaborative framework of the SOLUTIONSplus project, emphasising the synergistic efforts of multiple stakeholders from different sectors. By presenting detailed profiles, it illustrates how diverse expertise and resources are pooled together to achieve the common goal of promoting sustainable urban mobility through e-mobility solutions.

## Showcase achievements and innovations

The directory highlights significant achievements and innovative solutions developed within the project. These include the creation of an e-mobility toolbox, comprehensive evaluations, policy advice papers, and the implementation of pilot projects in various cities. By documenting these successes, the profiles demonstrate the practical outcomes and benefits of the collaborative efforts.

## Provide evaluation and policy guidance

It includes evaluation frameworks and policy recommendations aimed at supporting the sustainable deployment of electric vehicles and related infrastructure. The directory offers insights into best practices and lessons learned, which can be applied to future projects and initiatives.

## Facilitate knowledge sharing and capacity building

By compiling detailed profiles, the directory serves as a resource for knowledge sharing among project participants and other stakeholders. It supports capacity building by disseminating information on the methodologies and tools developed, enabling replication and scaling of successful e-mobility solutions.

The directory is a crucial resource that details the purpose, contributions, and achievements of the SOLUTIONSplus project. It provides a comprehensive overview of the collaborative efforts to advance e-mobility solutions, highlighting the strategic roles of participating organisations and the broader impact on urban mobility sustainability. By doing so, it facilitates knowledge sharing, supports capacity building, and guides future initiatives aimed at promoting sustainable transportation solutions globally.





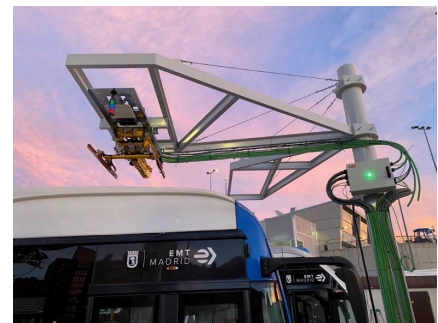
## ABB Deutschland - Germany

### DESCRIPTION

ABB E-mobility is enabling a more sustainable and resource-efficient mobility future as a global leader in electric vehicle (EV) charging solutions. ABB E-mobility is a partner of choice for the world's biggest EV OEMs and nationwide EV charging network operators. It offers the widest portfolio of EV charging solutions from smart chargers for the home to high-power chargers for the highway stations of the future, solutions for the electrification of fleets and charging for electric buses and trucks. With ~1,500 employees around the world, ABB E-mobility has sold more than one million EV chargers across more than 85 markets, including over 50,000 DC fast chargers.

### ACHIEVEMENTS

A pantograph-based solution and product for charging up to four electric buses in parallel has been developed, built and tested at a bus depot of EMT, the public transport company of Madrid. The charger is now used in and integrated into EMT's regular daily operations.



### INNOVATION and SUSTAINABILITY

The solution that was developed within SOLUTIONSplus has been integrated into [the ABB e-mobility product portfolio for bus depot charging](#).

### EXPERTISE and CONTACT

- Kai Koenig: [kai.koenig@de.abb.com](mailto:kai.koenig@de.abb.com)



## Centro Movilidad Sostenible - Chile

### DESCRIPTION

Centro Mario Molina Chile (CMMCh), established in 2004 and accredited by CORFO, is a research and development centre focused on promoting technological innovation and public policy design. Operating as a non-profit organisation, CMMCh collaborates with international bodies like UNEP, the Inter-American Development Bank, and others to advance research in transport, energy efficiency, and air quality. Their work includes projects on efficient transport technology, electromobility, and air pollution analysis.

### ACHIEVEMENTS

In the SOLUTIONSplus project, CMMCh contributes to regional training (WP2), demonstration implementation (WP4), and communication activities (WP6). Significant projects include the reduction of vehicle emissions in Latin America through cleaner fuels (UNEP), the Sustainable Bus System initiative in Santiago, and the ZEBRA partnership for deploying zero-emission buses in Latin America.

## INNOVATION and SUSTAINABILITY

CMMCh focuses on enhancing energy efficiency in transport and reducing urban air pollution through innovative research and policy solutions, particularly in electric mobility and sustainable public transport systems across Latin America.

## EXPERTISE and CONTACT

Key areas of expertise include energy-efficient transport technologies, electromobility, and air quality management.

- Sebastián Galarza: [sebastian@cmsostenible.org](mailto:sebastian@cmsostenible.org)



## DESCRIPTION

CRF (Centro Ricerche Fiat) is part of the Stellantis Group, born from the merger of Fiat Chrysler Automobiles and Groupe PSA. Stellantis is one of the world's main car manufacturers, with a 14 brands portfolio and a clear mission: to offer to all users, freedom of movement through distinctive, attractive, eye-catching, affordable and sustainable mobility solutions.

In a fast evolving environment, with new challenges within a connected, electric, shared and autonomous mobility, Stellantis plans its new business and organisation models to open up to new opportunities in terms of building skills and new production methods at global level, strengthening its ecosystem to promote innovation and address its challenges with speed and efficiency.

Since 1978, CRF, now the focal point for Stellantis R&I activities, has had the mission to:

- Develop and transfer innovative powertrains, vehicle systems and features, materials, processes and methodologies together with innovation expertise in order to improve the competitiveness of Stellantis products;
- Represent Stellantis in European collaborative research programs, joining pre-competitive projects and promoting networking actions;
- Support Stellantis in the protection and enhancement of intellectual property

## ACHIEVEMENTS

The main activities CRF has performed in SOLUTIONSplus are:

- In WP2 (Capacity building) provide key technical advice and support to partner cities and other partners regarding the electric solutions to be adopted and take charge of multiple technical presentations in the SOLUTIONSplus training modules
- In WP3 (Business models) support the assessment of many start-ups business plans (Business Model Canvas evaluation)
- In WP5 (Scale-up) preparation of two technical policy papers (one on “Electric Safety for L category EVs” and one on “Opportunities coming by using automotive components in L Category EVs (LEVs)”)

## INNOVATION and SUSTAINABILITY

Electrification is one of the key technologies to dramatically reduce GHG, pollutants and noise. Identifying e-solutions that fit the urban scenario (people and goods transportation) and offering a more effective usage of the vehicles (i.e. collective mobility, vehicles sharing) can enable a significant reduction in pollution and congestion.

Identifying innovative e-solutions for emerging markets through a deep understanding of the different market needs.

Supporting in defining proper local standards and homologation norms starting from the European standards and best-practices

## EXPERTISE and CONTACT

Small e-vehicles, also exploiting automotive e-components.

- Vittorio Ravell: [vittorio.ravello@crf.it](mailto:vittorio.ravello@crf.it)



## China Link Invest (Li Wan SRL) - Belgium

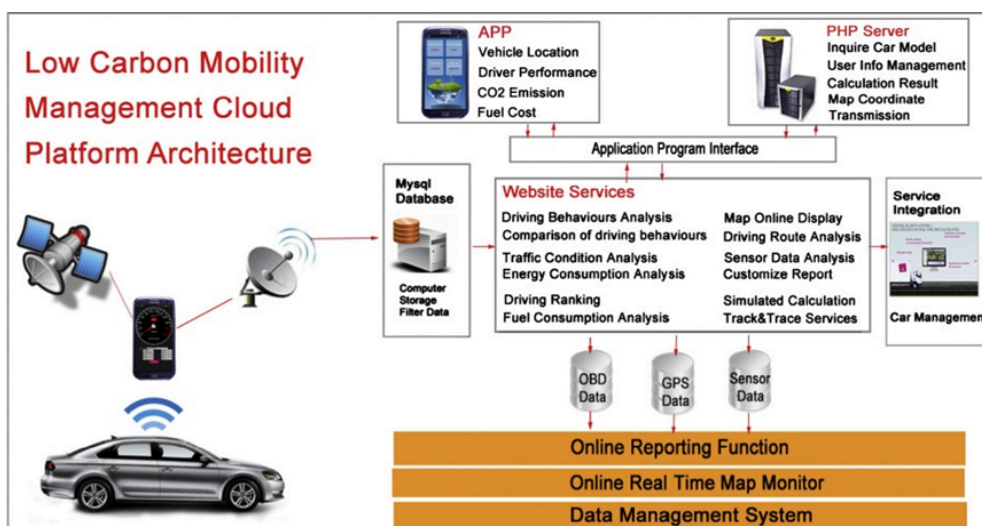
## DESCRIPTION

China-Link Invest focuses on creating and managing strategic partnerships and investment between China and Europe, preparing projects, and developing entrepreneurship, leadership and motivation for growth.

## ACHIEVEMENTS

- Participation: SOLUTIONSplus is a flagship project promoting electric urban transport with diverse stakeholders supporting sustainable mobility. Nanjing, the only Chinese city in the LCMM project, advances green transport through EU-China collaboration.
- LCMM Demo: Covers 12,000 km, reducing CO2 by 14.09%.
- Training & Impact: Trained 500+ individuals, influenced 1,600 survey responses, improved bus punctuality by 25%, and cut bus energy use by 18%.
- Standardisation: discussing and helping on electric bicycle charging stub standard by pointing to a similar standard draft in China.
- Scale-up proposal: A Nanjing pilot cut emissions by 14.09%. Expansion plans include transport collaborations and mapping apps, tackling technical, privacy, and financial challenges.
- Partners: NJUST, UNEP, ERTICO, T-System, China-Link Invest and others. China-Link Invest works as coordinator for the LCMM Nanjing demo.





## INNOVATION and SUSTAINABILITY

Due to Google Maps being blocked in China and GPS tracking security concerns, the LCMM platform underwent significant adaptations. After brilliant efforts, the LCMM demonstration in Nanjing began on June 14, 2022, with 10 private vehicles.

## EXPERTISE and CONTACT

Vast professional expertise in international investment, trade, management, eco-innovation, high-tech, and engineering.

- Dr. Li Wan: [li@clinvest.eu](mailto:li@clinvest.eu)



## Clean Air Asia - Philippines

### DESCRIPTION

Clean Air Asia (CAA) is an organisation dedicated to improving air quality and promoting healthier, more livable cities in Asia and the Pacific. Established in 2001 by the Asian Development Bank, World Bank, and USAID, CAA envisions "Asia without air pollution." The organisation collaborates with national and city governments, the private sector, and development agencies to reduce air pollution and greenhouse gas emissions across over a thousand cities in Asia. CAA's headquarters is in Manila, with offices in Beijing and Delhi, and it is recognized by the UNFCCC and the Partnerships for Sustainable Development. CAA's work encompasses air quality and climate change, low-emission urban development, clean fuels and vehicles, and green freight and logistics.

### ACHIEVEMENTS

In the SOLUTIONSplus project, CAA has contributed to:

- WP2 (Capacity building): Involvement in regional training
- WP3 (Business models): Cataloguing e-mobility solutions

- WP4 (Implementation): Creating demonstration implementation plans and overseeing regional implementation in Asia
- WP5 (Policy): Integrating e-mobility into local and national plans and facilitating funding and procurement
- WP6 (Communication): Leading dissemination and communication activities.

## **INNOVATION and SUSTAINABILITY**

CAA promotes sustainable urban mobility solutions, including walkability, cycling, fuel economy, electro-mobility, and green freight practices. They support cities and countries in air pollution and greenhouse gas management, aiming to mitigate emissions through improved transport and urban development policies. Their approach combines science-based guidance with strategic partnerships for impactful, lasting changes.

## **EXPERTISE and CONTACT**

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**DLR Institute of Transport Research - Germany**

## **DESCRIPTION**

The Institute of Transport Research investigates linkages and interdependencies between transportation, economy, society and environment in an integrated and systematic manner. Research is based on the analysis and modelling of mobility behaviour of households and businesses. Around 70 scientists work at the institute, with an annual turnover of approximately 10 million Euros. Partnerships exist with universities and other research institutes as well as national and international institutions of business, administration and policy. Important customers are national governmental departments, the European Commission, federations and leading industrial enterprises.

The department “Means of Transport” is looking to add at the earliest possible date a researcher with knowledge in statistics and econometrics to their Team “Public transport and intermodality”. The division investigates innovative transportation services as well the demands and appropriate conditions for passenger and freight traffic. The research of the Team “Public transport and intermodality” focusses on the design of transportation services and the acceptance and preferences of potential users. The goal is to align transportation services with user demands and thereby contribute to a mobility transition.

The institute operates in interdisciplinary teams, utilising a range of methods, including statistical analysis of quantitative data on user behaviour, and studies of stated and revealed preferences related to mobility behaviour. Qualitative methods such as interviews, focus groups, and co-creative approaches are also employed.

## **ACHIEVEMENTS**

Work Package 1:

- Lead of User needs Assessment

- Contribution to several deliverables, especially to those regarding the Impact Assessment (1.6)

#### Work Package 4:

- Scientific lead partner for the Demo in Dar es Salaam, especially for the component on electric three-wheelers
- Contribution to data collection, data analysis and reporting
- Numerous tasks regarding pilot implementation, for instance supporting the charging station locations, company assessment, Africa e-mobility week in Dar es Salaam, amongst other activities
- Lead contribution for Impact Assessment Deliverable 1.6

#### **PUBLICATIONS and CONFERENCES (amongst others):**

- Goletz, Mirko und Hasselwander, Marc (2023) *Clean energy transition in informal transport: modeling drivers' interest to switch to electric vehicles*. WCTR 2023, 2023-07-17 - 2023-07-21, Montréal, Kanada. Volltext nicht online.
- Hasselwander, Marc und Nieland, Simon und Dematera-Contreras, Kathleen und Goletz, Mirko (2023) *MaaS for the masses: Potential transit accessibility gains and required policies under Mobility-as-a-Service*. Multimodal Transportation, 2 (3), e100086. Elsevier. doi: 10.1016/j.multra.2023.100086. ISSN 2772-5863.
- Panagakos, George und Goletz, Mirko und Hasselwander, Marc und Mejia, Alvin und Aittoniemi, Elina und Bruhn Barfod, Michael und Dhar, Subash und Muñoz Barriga, Maria Rosa und Munshi, Talat und Painuly, Jyoti Prasad und Shrestha, Shritu und Silla, Anne und Teko, Edmund und Torrao, Guilhermina und Werland, Stefan und Dematera-Contreras, Kathleen (2023) *E-mobility solutions for urban transportation: User needs across four continents*. Transportation Research Procedia, 72, Seiten 2558-2565. Elsevier. doi: 10.1016/j.trpro.2023.11.772. ISSN 2352-1465.
- Hasselwander, Marc und Senyagwa, Jacqueline und Martin, Emilie und Andrieu, Vera-Marie und Goletz, Mirko und Lah, Oliver (2022) *Vehicle electrification in informal transport*. Urban Transitions Global Summit 2022, 2022-11-08 - 2022-11-10, Sitges, Barcelona, Spanien.





## INNOVATION and SUSTAINABILITY

The institute has demonstrated the success of e-mobility with vehicles smaller than cars in the Global South. While the integration of feeder services with public transport remains a global challenge, significant progress has been made in scaling up these efforts in Dar es Salaam. Business models surrounding electric tricycles continue to evolve and are expected to significantly impact the market's future development.

Moving forward, it is recommended that charging infrastructure be developed in an integrated manner, that public transport and three-wheelers achieve greater physical and tariff integration, and that further research is conducted on how regulation and policy can support the diffusion of cleaner vehicles.

## EXPERTISE and CONTACT

- Mirko Goletz: [mirko.goletz@dlr.de](mailto:mirko.goletz@dlr.de)
- Marc Hasselwande: [marc.hasselwander@dlr.de](mailto:marc.hasselwander@dlr.de)



## ERTICO - Belgium

### DESCRIPTION

ERTICO – ITS Europe is a public-private partnership with close to 120 companies and organisations representing service providers, suppliers, traffic and transport industry, research, public authorities, user organisations, mobile network operators, and vehicle manufacturers. ERTICO embodies thought leadership and fosters stakeholder engagement. Together with its Partners, ERTICO develops, promotes and deploys Intelligent Transport Systems and Services (ITS) through various activities including European co-funded projects, innovation platforms, and international cooperation advocacy. The ERTICO-led initiatives such as the ERTICO Academy and [City Moonshot](#) provide targeted mobility training and knowledge sharing and allow for cross-fertilisation of approaches, showcasing ERTICO's commitment to innovation and deployment. ERTICO is the organiser of the annual ITS European and World Congresses in Europe.

### ACHIEVEMENTS

As leader of the SOLUTIONSplus Start-up Incubator, in collaboration with FIER, ERTICO has actively supported the project start-ups in developing their e-mobility solutions around the world. To help the start-ups develop their business, ERTICO created a specific training programme on [Innovation Management](#), successfully completed by ten project start-ups, and made available to the wider public. Following the training, ERTICO organised tailored coaching sessions, offering specific advice and recommendations to the start-ups, and supported the organisation of regional events in Latin America and [Asia](#), enabling the start-ups to meet local stakeholders and showcase their innovations.

ERTICO participated in the project's capacity-building activities and led the third e-course on Mobility as a Service (MaaS) and Intelligent Transport Systems (ITS) as part of the SOLUTIONSplus [global e-learning programme](#) on electric mobility. The launch webinar attracted 100 attendees, with 33 participants receiving certificates for completing the e-course.

Additionally, ERTICO supported the communication and dissemination activities, promoting the project achievements and developments to its extensive network. This included organising and covering the project's participation in the ITS Congresses in **Hamburg**, **Toulouse**, **Los Angeles**, **Lisbon**, and **Suzhou**, which gathered up to 12,000 attendees for the World Congresses.



Regional event in Latin America (March 2024)

### E-Course 3: E-mobility and ITS

- 100 attendees on launch webinar from 39 countries
- Course launched: 17<sup>th</sup> January
- Now closed but available on demand
- Certificates to be issued - subject to verification by ERTICO.
- Completion of assignments as follows:

Unit 1	Unit 2	Unit 3	Unit 4
46	35	33	27

- 33 participants to receive certificates

e-course on MaaS  
(Global e-learning programme)

SOLUTIONSplus had a prominent presence at these congresses through a dedicated booth at the ERTICO stand, sessions on MaaS and **micromobility**, and a **pitching competition** showcasing the innovative products developed by the project start-ups.

## INNOVATION and SUSTAINABILITY

As a partnership organisation, ERTICO actively promotes the SOLUTIONSplus solutions and insights from the project to its broad network of 120 partners and organisations such as ITS America and ITS Asia Pacific and ERTICO. This promotion extends the ITS European and World Congress, two large-scale events organised by ERTICO, and ERTICO initiatives like the ERTICO Academy and City Moonshot. The outputs and methodology from the SOLUTIONSplus training programme on MaaS are used in various other activities, including the enterprise Rent-a-Car, which used the programme for interns in Birmingham, England. In addition, lessons learned and training sessions developed for the project start-ups are incorporated into ERTICO's broader engagement with other start-ups.

## EXPERTISE and CONTACT

- John Paddington: [j.paddington@mail.ertico.com](mailto:j.paddington@mail.ertico.com)
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**ICLEI – Local Governments for Sustainability - Germany**

## DESCRIPTION

ICLEI-Local Governments for Sustainability is a global network of over 1,500 cities, towns, and regions committed to building a sustainable future. Founded in 1990, ICLEI operates through 23

regional secretariats and offices worldwide. The organisation addresses the local impacts of global challenges, such as climate change and urbanisation, by promoting urban development that minimises environmental impact and fosters equitable, people-centred communities.

ICLEI's EcoMobility initiative unites cities dedicated to advancing urban mobility solutions that are environmentally friendly and innovative. Since 2012, ICLEI has provided capacity training and knowledge dissemination in sustainable urban mobility through events like EcoMobility Days, EcoMobility World Festival and Congress, and various workshops. These events also raise awareness, encourage public participation, foster public-private partnerships, and promote city-to-city exchanges.

## ACHIEVEMENTS

ICLEI has successfully implemented multiple initiatives and projects, such as the EcoMobility World Festival in Kaohsiung and the EcoLogistics project in Argentina, Colombia, and India. These projects focus on promoting low-carbon urban freight, performance measurement of mobility systems, and facilitating dialogue on sustainable urban mobility.

### Relevant Projects

- **EcoLogistics (IKI, 2017-2021):** Focuses on promoting sustainable urban freight in Argentina, Colombia, and India.
- **Cities SHIFT (Hewlett Foundation, 2017-2020):** Supports cities in India, Uganda, and China to shift towards sustainable travel modes.
- **TUMI Network of High Ambition Leaders (German Government, 2018-2019):** Facilitates sustainable mobility dialogue in African cities.
- **EcoMobility Alliance (2011 – present):** A network of cities committed to reducing reliance on fossil fuel-based personal automobiles.
- **EcoMobility World Festival (2013, 2015, 2017):** Demonstrates car-free urban living through month-long neighbourhood transformations in Suwon, Johannesburg, and Kaohsiung.

## INNOVATION and SUSTAINABILITY

In the SOLUTIONSplus project, ICLEI is responsible for knowledge dissemination (WP6), city twinning, and capacity building (WP2). ICLEI leverages its global activities, including the EcoMobility Alliance and EcoLogistics project, to enhance capacity-building efforts and inform project cities about developments worldwide. ICLEI's offices in Japan and South Korea can also share regional experiences to add value to the project.

## EXPERTISE and CONTACT

- Tu-My Tran: [tu-my.tran@iclei.org](mailto:tu-my.tran@iclei.org)



## DESCRIPTION

Applus IDIADA is a global partner to the automotive industry with over 30 years' experience supporting its clients in product development activities by providing design, engineering, testing and homologation services.

IDIADA's success in product development is built on a unique blend of highly experienced engineers, state-of-the-art test and development facilities and the constant drive towards innovation. The company has +3,000 professionals and an international network of 56 subsidiaries and branch offices in 22 countries, ensuring its clients receive fast, customised solutions.

## ACHIEVEMENTS

IDIADA was involved in WP1, WP3 and WP4 and, furthermore, thanks to previous experiences in co-funded as well as commercial projects, provided support in the definition of vehicle concepts and in the evaluation of the characteristics of the electric vehicles. IDIADA has indeed provided a perspective of industry best practices to assess the impact of each solution in the urban environment. In WP1 IDIADA was involved through training on the sizing of the drivetrain and battery and in the evaluation of the main KPIs. In particular regarding the definition of user needs in the urban environment and the standardisation and harmonisation to be considered by the use cases in WP3. Finally, in WP4 IDIADA participated in measuring the impact of different solutions for different mobility service providers, in particular in Standardisation of Charging for demonstrators of the SOLUTIONSplus projects. As part of the project, IDIADA has participated to the following events and activities:



In October 2021 - Dissemination: "Improved Vehicles: Sustainability of LEVs for Urban Logistics" for Regional training for Latin America. Challenges and opportunities of Light Electric Mobility.

In June 2023 Design support and technical report review of the retrofitting of electric tricycles at SESCO, Dar es Salaam.

In March 2024 - Dissemination and panel discussion with manufactures about "Suitability of LEVs for urban electric vehicles" in the Latin American Electric Mobility Forum, Colombia

## INNOVATION and SUSTAINABILITY

As a member of SOLUTIONSplus consortium, IDIADA has expanded the concept of electric vehicle systems through experience in several markets worldwide beyond the European one. For example, the need to include second-life and long-term plans for converted vehicles was a great inspiration for sustainability goals. Furthermore, the period following the project will be very interesting to consolidate any gains obtained during the demonstration project.

## EXPERTISE and CONTACT

The field of electric mobility holds significant importance for IDIADA, which will aim to participate in similar projects in the future. In areas such as impact assessment, frugal vehicle development, or

battery development, IDIADA is already collaborating with UEMI, Valeo, and CRF, among other consortium partners, and looks forward to continuing these partnerships.

- Marco Mammetti: [marco.mammetti@idiada.com](mailto:marco.mammetti@idiada.com)



## DESCRIPTION

The Institute for Transportation and Development Policy (ITDP) is a non-profit organisation that works around the world to design and implement high-quality transport systems and policy solutions that make cities more liveable, equitable, and sustainable.

## ACHIEVEMENTS

As part of the SOLUTIONSplus consortium, ITDP has contributed technical support to advance sustainable mobility solutions in the Africa region. ITDP's work under the project has spanned multiple areas, including the planning and implementation of e-bikeshare systems, the development of e-mobility roadmaps, and the preparation of charging plans for e-three-wheelers and e-buses.

Following are some of the SOLUTIONSplus outputs to which ITDP has contributed:

- [E-mobility roadmap for Dar es Salaam](#)
- [Kigali e-bus charging infrastructure master plan](#)
- [E-bikeshare: Planning and Implementation](#)
- [Kigali e-bike policy paper](#)
- [D4.4 Demo activities funded by other sources](#)
- [Dar 3W report](#)
- [Kigali emissions study](#)
- [Kigali bikeshare evaluation](#)
- [Kigali e-bus operations monitoring](#)
- [Scaling the use of Electric bicycle for Urban deliveries in Dar es Salaam](#)

## INNOVATION and SUSTAINABILITY

ITDP's technical support is aiding cities in laying the groundwork for a sustainable, low-carbon transport future. In Dar es Salaam and Kigali, collaboration with government agencies will continue to advance ongoing e-mobility projects. Project partners, including the Dar Rapid Transit Agency (DART) and the City of Kigali, will be engaged to ensure successful implementation and scaling of these initiatives.

In Addis Ababa, Ethiopia, a replication study for e-buses will be conducted. This study will gather data on public transport routes operated by Sheger and Anbessa bus services, prioritising routes for electrification based on factors such as passenger demand, the number of buses in operation, and daily kilometres travelled. The study is expected to yield recommendations on the appropriate e-bus fleet size and the optimal phasing for deploying electric buses in Addis Ababa.

## CONTACTS

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- Claire Birungi: [claire.birungi@itdp.org](mailto:claire.birungi@itdp.org)



## International Council on Clean Transportation (ICCT) - Germany

### DESCRIPTION

The ICCT is an independent, nonprofit research organisation founded to provide exceptional, objective, timely research and technical and scientific analysis to environmental regulators. ICCT's work empowers policymakers and others worldwide to improve the environmental performance of road, marine, and air transportation to benefit public health and mitigate climate change.

### ACHIEVEMENTS

The ICCT has provided expert research and analysis to facilitate the adoption and integration of sustainable urban electric mobility solutions, which are crucial in assisting governments at various levels worldwide. In relation to Task 5.2, titled "Policy development, institutionalisation and integration of e-mobility in local and national plans," the ICCT has made a valuable contribution by producing a policy paper that focuses on measures at the local levels to enhance electric vehicle accessibility. This paper draws upon ICCT's expertise and experience from different regions, including Europe, South America, and Asia. The policy examples highlighted in the paper encompass incentive policies for testing and purchasing electric (commercial) vehicles, strategies to support the deployment of charging infrastructure for zero-emission buses, and the formulation of technology development plans and guidelines as strategic tools for transitioning to electric buses and facilitating their procurement. The compilation of these policy measures, achievements, and key success factors additionally reinforce the policy recommendations for the project nations in establishing structures for the implementation of electric mobility at the local, regional, and national scales.

### INNOVATION and SUSTAINABILITY

The SOLUTIONSplus project has showcased how cities worldwide can tackle obstacles to e-mobility and lead the path towards a greener, more sustainable urban transportation future through advocacy, partnerships, and practical demonstrations.

The ICCT has outlined several strategic approaches to effectively utilise the knowledge gained from the project. One of the primary strategies involves integrating the project outcomes into policy papers, which will be used to influence and advocate for the establishment of supportive policies and regulations that will enhance the adoption of electric vehicles. In addition to advocating for policies, the ICCT is committed to broadening its collaborations with a diverse group of stakeholders within the e-mobility ecosystem. This will require forming partnerships with project participants, including government agencies, industry pioneers, non-governmental organisations, and local communities, in order to foster a sustainable and electrically-driven urban mobility landscape.

The ICCT's objective is not only to disseminate best practices and lessons learned, but also to customise these valuable insights to suit the distinct requirements and obstacles faced by every city or region striving for a sustainable transportation future.

### EXPERTISE and CONTACT

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## Lindholmen Science Park - Sweden

### DESCRIPTION

Lindholmen Science Park AB (LSP) is a non-profit organisation specialised in research and innovation within future mobility solutions for people and goods. As a neutral party, LSP coordinates projects where many stakeholders need to work together in order to make innovation happen.

### ACHIEVEMENTS

In SOLUTIONSplus, LSP has contributed in training activities on electric bus charging and implementation strategies describing experiences from Gothenburg and the ElectriCity cooperation. Contributions have been in recorded format and in real time participation.

LSP has also produced and provided digital information material, including PPT presentations and videos, from the ElectriCity system demonstrations from 2015-2020 and how these joint efforts led to the large-scale implementation of electric buses in Gothenburg from 2020 onwards.

### EXPERTISE and CONTACT

LSP is deeply involved in the electrification of the transport sector, especially in road transport with heavy trucks. The REEL project run by CLOSER at LSP is a national initiative where leading Swedish actors have joined forces to accelerate the transition to electrified, emission-free heavy transport on roads. Within REEL around 70 different regional logistics flows in varying types of driving assignments are operated and evaluated. In parallel, the E-Charge is a system demonstration project with the aim to electrify the long-haul transports.



## Nederlandse Organisatie voor toegepast-natuurwetenschappelijk Onderzoek (TNO) - The Netherlands

### DESCRIPTION

TNO (Nederlandse Organisatie voor toegepast-natuurwetenschappelijk Onderzoek TNO) is one of the major contract research organisations in Europe. With a staff of approximately 3500 and an annual turnover of 580 million Euros, TNO is carrying out research in order to achieve impact on the following seven themes: Healthy Living, Industrial Innovation, Transport and Mobility, Energy, Built Environment, Information Society, and Defence, Safety and Security. TNO functions as an



intermediary between basic research organisations and industry. By translating scientific knowledge into practical applications, TNO contributes to the innovation capacity of businesses and government. TNO is involved in many international projects (about 30% of the market turnover), including EU-funded collaborations.

The Traffic and Transport unit carries TNO's applied research for the mobility & logistics industry and related branches. The expertise covers relevant technological aspects as well as the influence of human behaviour. The focus is on innovation in the areas of lean, safe, reliable and affordable mobility and logistics.

## ACHIEVEMENTS

TNO's main contributions were in WP1: Toolbox and Evaluation. Specific contributions include:

**D1.2: Evaluation framework:** TNO led the activity to set up an evaluation framework. The developed assessment framework provides an overview of different steps to conduct the impact assessment within the SOLUTIONSplus project . By applying the framework, the impact assessment process can be conducted in a coherent and harmonised way across the demonstration cities to ensure the fulfilment of the project objectives. The assessment framework includes six main subsequent steps: analysis of high-level user needs, identification of key performance indicators (KPIs), data collection, descriptive and analytical KPI assessment, KPI evaluation, and results analysis.

**D1.6: Impact assessment results:** TNO collaborated with the demo executed in Hanoi and was the lead author of the Hanoi section of D1.6 Hanoi demo impact assessment results. The Hanoi demonstration focuses on boosting the ridership and effectiveness of the currently running BRT and the forthcoming metro rail. The demonstration consisted of a trial with 50 shared e-mopeds to test the sharing system to facilitate travel from a BRT stop to a shopping mall and vice versa. Plans are that the sharing system will be replicated at other locations in the city, probably connecting the Metro terminal with residential areas. The demo's objective was to form the habit of using green traffic modes and raise awareness of environmental protection among the people of Hanoi city through the application of science and technology in the management and operation of public transport and the connection of public transport in the city.

## INNOVATION and SUSTAINABILITY

Key experiences from the impact assessment resulting in some recommendations are:

- E-mopeds have a fairly local operational domain, and their operational effectiveness should be assessed within this appropriate domain rather than other domains.
- Demo-sensitivity aspects should be taken into account for extrapolation purposes in a wider operational domain.
- A much wider range of transport modes should be considered for substitution by e-mopeds to improve the likelihood of successful uptake.

## EXPERTISE and CONTACT

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## DESCRIPTION

Pluservice is a leading tech company in the sector of technological solutions for transport and mobility. The company develops ERP software, integrated management and control systems for ticketing, operations of the transport and parking service, the monitoring and maintenance of vehicles and assets, shift planning and accounting. The acquired know-how allows us to develop a suite of integrated and customisable applications aimed at optimising production processes and the sale of mobility services, including the new frontier of MaaS and the most innovative services such as on-demand and sharing.

The myCicero platform has integrated over 350 cities and over 100 mobility operators with the aim of offering the Maas Operator and citizens a complete and intermodal mobility experience.

## ACHIEVEMENTS

Cities are struggling to integrate different mobility options into a seamless user experience. Pluservice helped the SOLUTIONSplus Project address this challenge.

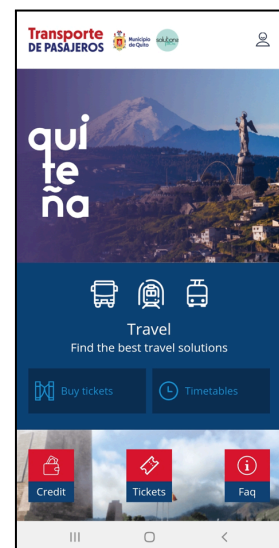
A mobile app with different public transportation options in one place, like buses, subways, and taxis was the way Pluservice helped to develop working on several parts of the project, including:

- Helping to craft Business Models and Startup Strategies for MaaS (Mobility as a Service) solutions.
- Defining Functional Requirements for cutting-edge e-mobility applications.
- Regional Implementation efforts in Latin America and Africa.
- Dissemination and Communication activities to spread knowledge and best practices.

Pluservice's core contribution involved the development of a MaaS Mobile App platform. This innovative platform, built on a dedicated cloud infrastructure, was piloted in Quito, Kigali, and Dar Es Salaam:

- Building the Foundation: Configured databases and set up backend services for seamless app operation and management.
- Empowering Users: Designed two mobile applications: one for customer service representatives to support users, and another for control staff to verify travel tickets.
- Open Architecture: Platform offered APIs (Application Programming Interfaces) for:
  - Third-party developers leverage their services and create their own MaaS applications.
  - Turnstile control systems for seamless integration with public transport infrastructure.

Beyond the core tasks, Pluservice provided valuable consultancy and training in related areas by producing a series of videos and tutorials to share among innovative startups (Work Package 2).



## Project Highlights:

**Quito:** Developed a customised MaaS App with the local authorities. The pilot, involving 50 university students in late 2022, proved successful. However, due to business model concerns, regulatory hurdles, and leadership changes, further development was stalled.

**Kigali:** Extensive discussions and training sessions were conducted between July 2021 and May 2023. Challenges in data collection, international payment processing, and local cloud regulations ultimately led to a joint decision to pause the collaboration.

**Dar Es Salaam:** Served in an advisory role, supporting the local app development team with technical expertise. While Dar Es Salaam is building its own ticketing app, conditions for a full-fledged MaaS solution are still evolving.

**Sharing Learnings:** Committed to knowledge sharing that led to the development of a MaaS paper presented at the TRA 2024 conference. This paper summarised the key challenges, solutions, and valuable lessons learned throughout the project.

**Pluservice** is at the forefront of shaping smarter, more accessible mobility solutions and committed to driving innovation and collaboration for a sustainable transportation future.

## INNOVATION and SUSTAINABILITY

For SOLUTIONSplus consortium members they can draw from the exploitation plan. Learnings from the project, plans to take this further.

- Replication of innovative solutions: The project replicates successful solutions across different cities. Pluservice could explore ways to partner with SOLUTIONSplus or other similar projects to expand its reach and impact in the e-mobility market.
- Focus on e-mobility business models: SOLUTIONSplus is developing new business models for various e-mobility solutions. Pluservice can learn from these models and adapt them to its own context, especially for MaaS (Mobility as a Service) solutions and bundling electric vehicle fleets.
- Partnerships with European industry players: SOLUTIONSplus is actively collaborating with European companies in the e-mobility sector. Pluservice could participate in similar partnerships to gain access to new technologies and expertise.
- Integration of different e-mobility solutions: The project focuses on integrating various e-mobility solutions (e.g., electric buses, charging infrastructure, MaaS apps) to create a comprehensive urban mobility ecosystem. Pluservice can leverage this approach to develop integrated solutions for its customers.
- **Focus on Sustainability:** SOLUTIONSplus emphasises the long-term sustainability of implemented solutions. Pluservice could highlight more in the communication material how its solutions contribute to sustainable urban mobility.

Overall, the SOLUTIONSplus project offers valuable insights and potential collaborations for Pluservice to broaden its horizons in the e-mobility space. By learning from the project's focus on replication, business models, partnerships, and integration, Pluservice can refine its own strategies and become a more prominent player in the sustainable urban mobility market.

## EXPERTISE and CONTACT

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## POLIS - Belgium

### DESCRIPTION

POLIS is the leading network of 120+ cities and regions, working together on sustainable urban mobility and innovation while advocating for greater involvement of local and regional authorities in national and international mobility policy agendas.

POLIS's membership draws from across Europe and beyond, from large capitals, including London and Paris, to small and medium-sized cities, such as Leuven and Ravenna, and regions, such as Baden Württemberg and Catalonia. In addition, their associate members are non-profit entities interested in sustainable mobility, including leading academic institutions.

### ACHIEVEMENTS

POLIS led the SOLUTIONSPlus Capacity Building Activities (WP2) coordinating all formats of training delivered within the project – in close cooperation with the Regional Teams, and other relevant partners and external entities.

The Capacity Building Activities took different formats, to empower SOLUTIONSPlus Living Lab partners to successfully implement their pilot actions, as well as to external mobility stakeholders worldwide, interested in the topic of e-mobility and sustainable mobility. The type of Capacity Building Activities are further explained below.

- **Regional Trainings**

These activities catered to specific local contexts and needs of SOLUTIONSPlus Living Lab activities, mostly serving as internal training of project stakeholders. As they catered for the local context and needs, the regional training activities were divided - or not into modules -, and the number of units and parts was variable. As they were locally adapted they did not follow a strict general SOLUTIONSPlus structure. Instead, the local teams assessed the best way to present the topics, considering local capacity, speakers' availability, cooperation with different projects and cities, and other variables. In each region, the activities carried out over time were part of a cohesive training plan, not isolated events. From these, POLIS highlights the regional training organised by POLIS as a [City Dialogue on electrification of the taxi sector](#), in cooperation with the [World Economic Forum Zero Emission Urban Fleets](#).

- **Peer-to-Peer Exchanges**

SOLUTIONSplus created mechanisms for the transfer and adoption of innovative e-mobility solutions by facilitating peer-to-peer learning in the form of secondment and staff exchange programs between partner cities, site visits and on-the-job training by experienced cities. Several Peer-to-Peer Exchanges





have been organised, notably the [SOLUTIONSPlus Study Tour to Madrid](#), led by POLIS, which brought representatives from different Living Labs to the Spanish capital to gain first-hand insights into their e-mobility achievements.

- **Global E-learning Programme:**

The SOLUTIONSPlus Global E-learning Programme was first-of-its kind, free-of-charge, e-learning programme focusing on e-mobility insights and context-specific experiences from across all continents. A total of 5 e-courses were organised, and are accessible via the Mobility Academy Platform, namely:

- 1<sup>st</sup> course: [Electric mobility: it's more than just electric cars](#), led by POLIS
- 2<sup>nd</sup> course: [Electrification of buses and integration in cities' public transport systems](#)
- 3<sup>rd</sup> course: [Mobility as a Service and Intelligent Transport Systems \(ITS\)](#)
- 4<sup>th</sup> course: [Electrification of paratransit](#)
- 5<sup>th</sup> course: [Zero-Emission Urban Freight](#), led by POLIS.

- **Other relevant Events and Capacity Building**

- Workshop at the International transport Forum 7<sup>th</sup> Safer City Streets Network Meeting [Electromobility & Road Safety: challenges and opportunities](#), organised by POLIS
- Workshop at Walk21 Conference: [Ensuring Pedestrian Safety in an E-Mobility Era, a SOLUTIONSPlus and TRANS-SAFE workshop for African cities and beyond](#), organised by POLIS
- Showcasing SOLUTIONSPlus at [Transforming Transportation Conference](#)



- **Main Policy Outputs**

- Policy Brief on Road Safety and E-Mobility, forthcoming
- Policy Brief on Pedestrian Safety and E-Mobility, forthcoming

- **Main Communication Outputs**

- Article in Cities in Motion Magazine, titled [“E-Transition, Women’s Revolution”](#) written by POLIS
- Article in Cities in Motion Magazine, titled [“Finding SOLUTIONS...plus: Driving the Future of Urban Electric Mobility”](#), written by UEMI & POLIS, forthcoming

- **Main Deliverables**

- D2.1 The SOLUTIONSplus capacity building plan, led by POLIS
- D2.2 Capacity building tools and update, drafted by UNH, with the support of POLIS
- D2.3 Peer-to-peer Capacity Building on EV innovation – activity report, drafted by POLIS
- D2.4 Regional training activity report, drafted by POLIS
- D2.5 eLearning report, drafted by UNH, with the support of POLIS
- D2.6 Collection of good practices from SOLUTIONSplus capacity building activities, drafted by WI, with the support of POLIS

- **Person Month Consumption** (estimation: exact value to be confirmed once internal financial analysis is carried out)
  - WP2: 37,15
  - WP4: 6,18
  - WP6: 9,67
  - Total: 52,99

## INNOVATION and SUSTAINABILITY

POLIS will continuously promote knowledge transfer (by dissemination of the project's global learning resources and Toolbox), policy transfer (development of policy briefs and guidelines that can be published in the European Commission Sustainable Transport Forum subgroup on public authorities) and innovation transfer (between the members which are part of the SOLUTIONSplus consortium and other POLIS cities and regions, willing to implement similar solutions in the future, as part of the *Clean Vehicles & Air Quality Working Group* regular meetings, webinars and study tours).

As a member of the *New Expert Group on Urban Mobility (EGUM)* POLIS can bring insights from SOLUTIONSplus directly to Member States and their corresponding entities in charge of drafting and implementing Sustainable Urban Mobility Plans, as well as road transport electrification strategies.

POLIS makes the most of its extensive network across – and beyond - Europe, from different sectors (public institutions, research, industry, consultants) and different levels (European, national, regional, local). Networks and initiatives such as the *2ZERO partnership*, *ALICE-ETP*, *Sustainable Transport Forum*, *CCAM partnership*, etc. will be informed about project outcomes. Further, POLIS has and will continue to foster knowledge sharing with organisations operating beyond Europe, such as *the World Economic Forum – Zero-Emission Urban Fleets*, *International Transport Forum (OECD)*, *Transport Research Board*, *NUMO*, and *WALK21*, among others

## EXPERTISE and CONTACT

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## DESCRIPTION

Rupprecht Consult - Forschung & Beratung GmbH is an independent private research and consultancy firm based in Cologne, Germany. Since 1996, the company has developed innovative solutions for sustainable development in collaboration with partners across Europe and beyond. The goal is to support the decarbonization of cities and regions by promoting sustainable mobility. Committed to the sustainable development of urban areas globally, Rupprecht Consult focuses on generating innovative ideas for urban mobility planning and fostering cooperation with a wide range of stakeholders.

## ACHIEVEMENTS

RC's contributions centred on the conceptualization, planning, organisation, and implementation of the ambitious **SOLUTIONSplus Global Learning Program**, which spanned four years (2020-2024) and was hosted on the **Mobility Academy platform (mobility-academy.eu)**. The program included the delivery of seven online courses (each lasting 2-4 months), over 15 webinars and online workshops, and one 2-day peer-to-peer workshop in Montevideo. Through these efforts, more than 150 participants from around the world were trained.



Workshop in Montevideo, Uruguay



SOLUTIONSplus Global Learning Program visual

## INNOVATION and SUSTAINABILITY

The SOLUTIONSplus Global Learning Program was a pioneering e-learning initiative on global e-mobility solutions, collaboratively developed by leading e-mobility organisations from around the world and highlighting real-world implementations across diverse contexts. Continued training and capacity building are essential to advancing the transition to sustainable mobility. Support will be sustained through involvement in follow-up projects such as eBRT 2023 and STREnGth\_M, aimed at reinforcing capacities and skills at all levels. All e-courses developed by SOLUTIONSplus will remain freely accessible on the Mobility Academy platform.

## EXPERTISE and CONTACT

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## SIMUS (Asociación Latinoamericana de Sistemas Integrados para la Movilidad Urbana Sustentable) - Colombia

## DESCRIPTION

It is the network specialised in sustainable urban mobility in Latin America, comprising authorities at the subnational, national, and international levels; public transport operators, and industry stakeholders. It is interconnected globally through collaborating partners such as multilateral banks, bilateral cooperation agencies, foreign governments, universities, and specialised institutions, working towards the transformation of public transport into a high-quality, safe,

environmentally sustainable, socially inclusive, and economically sustainable urban mobility system for all. Present in more than 60 cities across 14 countries in the region.

As a specialised technical support and permanent advisory body, it has a team of world-class expert advisors, specialised in various interdisciplinary areas of sustainable mobility and urban development. They provide technical assistance, build capacity, and organise academic events and meetings with public and private stakeholders in the urban mobility and sustainable urban development ecosystem.

SIMUS promotes best international practices through benchmarking to advocate for sustainable solutions for active, safe, integrated, and shared door-to-door mobility for all, aiming to reduce the carbon footprint in public transportation systems in the Latin American region. It embraces the challenge of defining new high-quality standards for the effective transformation and modernisation of public transport towards sustainable urban mobility.

## ACHIEVEMENTS

- **Virtual COMUS 2024** Participated in discussions on the Solutions Plus Global Electromobility Platform and public transport trends, with 122 speakers from 20 countries and 4,800 participants.
- **Latin American Electric Mobility Forum 2024, Bogotá, Colombia** Presented projects to accelerate electric mobility adoption, improve the environment, and reduce carbon emissions, with 100 local participants and 60 from 6 countries.
- **XXII Latin American Congress Public and Urban Transport, Dominican Republic** Shared success stories from Uruguay, Ecuador, Rwanda, Germany, the Philippines, Nepal, and Vietnam, focusing on urban public transport, with 89 papers and 15 invited speakers.
- **International Transport Cita, México** Participated in discussions on sustainable electromobility, focusing on three-wheeled vehicles, with 7,800 site attendees, 500 online attendees, and 79 speakers from 12 countries.
- **Working Group President and Management Team ATU and Swiss Cooperation, Perú** Announced SP platform, shared lessons on electromobility models and financing schemes.
- **Engineering Week - Universidad La Salle, Bogotá** Presented EVL 3R project success stories, fostering collaboration and learning.

## INNOVATION and SUSTAINABILITY

It is considered crucial to elevate the exchange of knowledge and experiences gained during the development of SOLUTIONSplus. This initiative facilitated the implementation and operation of over 10 pilots, measured their impacts, and provided assistance across various phases—from institutional and regulatory aspects, financing schemes, and public/private partnerships to business models and the development of MaaS, all within diverse cultural contexts but facing common challenges. The proposed value generated from this is as follows:

- **Toolbox:** As a platform for the exchange of knowledge, experiences, and capacity building, SIMUS offers a strategic and powerful instrument for disseminating, connecting, and sharing insights. It creates spaces for direct engagement by linking Supply (SOLUTIONSplus) and Demand (new cities/authorities, industry, and key stakeholders) either virtually or in person, while also enhancing the associated Virtual Platforms of SOLUTIONSplus.
- **Exchange of Knowledge and Experiences of Pilots and Demonstrative Actions:** This involves connecting and relating the members of the SOLUTIONSplus Consortium, the



authorities, and industry stakeholders where the pilots were developed, with authorities and potential cities/organisations interested in developing similar solutions.

This approach has been discussed in the context of regional follow-up meetings, and readiness for implementation has been expressed.

## EXPERTISE and CONTACT

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## SLOCAT Partnership

## DESCRIPTION

SLOCAT is the international, multi-stakeholder partnership powering systemic transformations and a just transition towards equitable, healthy, green and resilient transport and mobility systems for the people and the planet. SLOCAT delivers on missions through co-creation, co-leadership and co-delivery across knowledge, advocacy and dialogue activities in the intersection between transport, climate change and sustainability. Their multi-sectoral Partnership engages a vibrant and inclusive ecosystem across transport associations, NGOs, academia, governments, multilateral organisations, philanthropy and business; as well as a large community of world-class experts and change-makers. Going where others do not or cannot go individually, their Partnership is leveraged to set ambitious global agendas and catalyse progressive thinking and solutions for the urgent transformation of transport and mobility systems worldwide.

## ACHIEVEMENTS

SLOCAT contributed to the dissemination, amplification, and replication of SOLUTIONSplus project results, aiming to inform policy, operations, research, and development. Project results were mainly shared with the global transport community through regular newsletters (to 3000+ subscribers), social media, websites, podcast series, and multistakeholder dialogues. Key highlights are:

- A **SLOCAT Partners Café** held on 18th June 2024, featured eight regional leaders, local entrepreneurs, and experts from the **SOLUTIONSplus** project, showcasing their work on advancing integrated urban electric mobility solutions. This interactive gathering convened over 30 participants from 18 organisations working at the intersection of transport, climate change and sustainability, creating a space for peer learning and collaboration.
- An **E-mobility Directory** was developed to provide an in-depth overview of the contributions, expertise, and roles of each participating organisation within the project. The directory underscores the collaborative framework of the SOLUTIONSplus project, emphasising the synergistic efforts of multiple stakeholders from different sectors. By presenting detailed profiles, it illustrates how diverse expertise and resources are pooled together to promote sustainable urban mobility through e-mobility solutions.
- The podcast, "**Integrating urban electric mobility solutions - What does it take?**", featured a conversation between Mr. Oliver Lah, Head of the Mobility and International Cooperation Unit, Wuppertal Institute, Ms. María Rosa Muñoz, Senior Researcher at the Wuppertal

Institute and Mr. Spencer S. Taylor, Jr., Director of Climate Change and Environment, Ministry of Transport in Liberia. The episode discussed SOLUTIONSplus' global efforts in creating a global platform for shared, public, and commercial e-mobility solutions, setting the stage for a transition towards low-carbon urban mobility. The podcast is part of the Tough Questions, Smart Answers on All Things Transport, People and Planet series by SLOCAT.

- SLOCAT facilitated the engagement of SOLUTIONSplus partners at the [2024 regional conference of the NDC Transport Initiative for Asia \(NDC-TIA\)](#), where they discussed the necessary transformations to set transport on a sustainable path to zero emissions by mid-century, ensuring climate action and prosperity. Project results were disseminated during sessions on “Accelerating the Transition Towards Fossil-Free Transport” and “Passenger Transport Electrification.”

## **INNOVATION and SUSTAINABILITY**

The SOLUTIONSplus project has provided valuable evidence on expanding electrification to a wider range of transport modes beyond private vehicles. These insights are key to enhancing the ambition and capacity needed to implement the next round of Nationally Determined Contributions (NDCs) submitted to the Paris Agreement in 2025. The platform has highlighted the importance of robust multi-stakeholder engagement and the benefits of a centralised platform for sharing best practices and achievements.

Moving forward, SLOCAT plans to leverage the success of SOLUTIONSplus across different geographies and continue to bring best practices in urban electric mobility to global and regional discussions on sustainable, low-carbon transport.

## **EXPERTISE and CONTACT**

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**SWARCO - Austria**

## **DESCRIPTION**

The traffic technology group SWARCO headquartered in Wattens near Innsbruck / Austria has an international network of production facilities, offices and partners on all continents and offers one of the most complete solution portfolios for road marking, signage, urban traffic management, parking, highway and tunnel management, and public transport. SWARCO connects vehicles with the road infrastructure and helps in setting up charging infrastructure to boost electro-mobility and offer modular and holistic solutions with added values that support tomorrow's mobility and make life in cities more livable.

## **ACHIEVEMENTS**

SWARCO contributed its experience and expertise to the SOLUTIONSplus project. With over 30 years of supplying ITS technology, SWARCO was able to exchange knowledge throughout the project. The contributions focused especially on the business models of e-mobility and mobility shifts, involving activities such as validation, review, training, and creation, which constituted the majority of the input and efforts.

## INNOVATION and SUSTAINABILITY

SWARCO's participation in this extensive research project has been highly valuable. The wide geographical spread of the project has provided significant insights into e-mobility and e-mobility business models. This enabled the validation of different models, trends, correlations, and effects in diverse settings, proving to be more valuable than a more condensed setup. SWARCO is prepared for new research projects of this scale.

## EXPERTISE and CONTACT

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**T Systems**

**T-Systems - Germany**

## DESCRIPTION

With locations in more than 20 countries and over 26,000 employees (December 31, 2023), as well as annual revenues of around EUR 4.0 billion (2023), T-Systems is one of the leading providers of digital services in Europe. T-Systems offers end-to-end IT solutions, driving the digital transformation of companies in all industries and institutions. T-Systems' focus industries are automotive, the public sector, healthcare and public transport. In these selected industries, T-Systems reaches deep into the value chains and develops industry-specific solutions, so-called vertical applications. These include, for example, services for Catena-X, the open data ecosystem for the automotive industry, digital identities in the healthcare sector, administrative digitalization and an AI-based forecasting machine for public transport.

## ACHIEVEMENTS



Notable achievements in the field of sustainable transportation have been made by e.g., the evaluation of e-charging infrastructure in Hamburg, Germany, conducted as part of the "Zukunftstaxi" project. Despite the decision not to proceed with deployment, this initiative significantly contributed to the SOLUTIONSplus project by offering valuable insights into charging solutions and Mobility as a Service (MaaS) concepts for e-Cars and mini-buses.

Additionally, the deployment of the Low Carbon Mobility Management (LCMM) App in South America, including tests in the cities Quito and Montevideo, showcased its possibilities in measuring and reducing fleet emissions.

Comprehensive training and support for the LCMM app further achieved to monitor and manage carbon footprints, aligning with global sustainability goals.

## INNOVATION and SUSTAINABILITY

The challenges in innovation and sustainability that need to be addressed include financing and funding for e-vehicles and charging infrastructure and establishing a supportive regulatory and policy framework for electrification. Additionally, cities require monitoring tools to measure air pollution, as mobility significantly impacts air quality. Implementing tools to measure driving

behaviour in real-time can help reduce fuel consumption and CO2 emissions, aiding cities in achieving sustainable traffic management.

LCMM is standardised by ISO (ISO 23796-1:2022). Within the Intelligent Transport Systems it provides a methodology to extract trip data using nomadic and mobile devices for estimated CO2 emissions. LCMM as a toolset contributes to the UN's Sustainable Development Goals. In Hamburg taxis (electric, hybrid and fuel engines) continuously provide trip data.

The EU- Emission Trading System is a market-based mechanism to incentivize reduction of greenhouse gas emissions in a cost-effective and economically efficient manner. In a white-paper the application of this mechanism to the transport sector is described.

## EXPERTISE and CONTACT

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**Technische Universität Berlin - Germany**

## DESCRIPTION

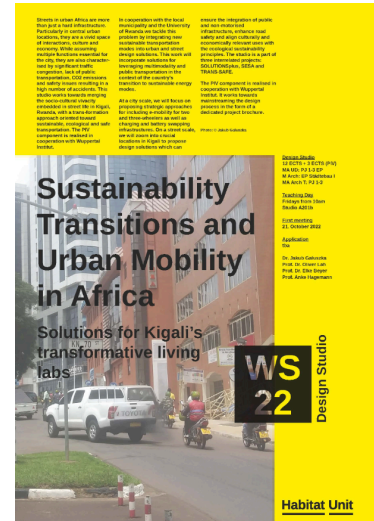
The internationally renowned Technische Universität Berlin is located in Germany's capital city at the heart of Europe. The University's academic activities are focused on achieving sharply-defined goals: building a distinctive profile for the university, ensuring exceptional performance in research and teaching, providing graduates with excellent qualifications and a modern approach to university administration. The TU Berlin strives to promote the dissemination of knowledge and to facilitate technological progress through adherence to the core principles of excellence and quality. Strong regional, national and international networking with partners in science and industry are an important aspect in these endeavours. The Habitat Unit to which the project's research group is affiliated is a globally networked research and teaching centre developing new approaches, expertise and application-oriented tools relevant for global urbanisation and urban change processes. The Habitat Unit is committed to an inclusive and rights-based approach to urban policy, urban management as well as development-oriented and actor-driven planning. Based at the School of Architecture at the Technische Universität Berlin, the Habitat Unit promotes an extended understanding of urban and architectural design, which integrates spatial, material and cultural sensitivities with new models of participation, co-production and urban governance. The Habitat Unit collaborates closely with leading universities worldwide, advises national and global development agencies and represents TU Berlin as an official partner in the Habitat Partner Universities Initiative established by UN-Habitat.

## ACHIEVEMENTS

TUB supported activities in WP2, WP3, WP5, WP6 as well as in WP4 where capacity building activities fed into the demonstration actions. As part of its contributions to capacity building efforts in the project, the Technical University of Berlin (TUB) has streamlined its SOLUTIONSplus activities into academic activities where Master's students of the Urban Design Studio at the TUB, with support from the project's local teams elaborated conceptual proposals for the re-design of



public transport stations in the demo areas, in order to enhance the urban quality and to allow an integration of shared micro-mobility in the Hamburg demonstration. For Kathmandu, the students have developed the concept of mobility hub and charging infrastructure planning in selected areas in the city. Similarly, the Design Studio of the Technical University of Berlin (TUB) in collaboration with the regional and local teams and city officials elaborated a conceptual proposal for an intermodal corridor to be implemented in the Historic Centre of Quito (HCQ), the pilot area which is intended to be turned into a Low-emission Zone (LEZ). Following up on this, and in order to define the best route for the corridor, workshops and site visits with local counterparts were carried out. The site visits also allowed the identification of 2 potential plots owned by the municipality for the installation of distribution hub/s in the area.



For Montevideo, TUB students worked in collaboration with the regional and local teams and city officials to elaborate a conceptual proposal for a multimodal e-mobility hub in the Ciudadela Terminal, the bus terminal in which ABB e-bus chargers were planned to be installed. The conceptual proposal was presented to the local counterparts. Again, a Design Studio work on Dar es Salaam carried out by students of the TU Berlin focused on multi-modal transport system, land readjustment, and green infrastructure, which inspired the design works for the SOLUTIONSplus demonstration in Dar es Salaam. Also, in collaboration with the regional and local teams and Pasig city officials, TUB students elaborated a conceptual proposal for locally appropriate cost-efficient charging stations for light electric vehicles. Similar proposals for the re-design of public transport stations in the demo areas in Kigali were put forward by the students to enhance the urban quality and to allow integration of shared micro-mobility.

## INNOVATION and SUSTAINABILITY

In terms of educational activities, TUB wants to facilitate understanding of integrated mobility development among future planners and architects; as such has established the Design Studios as a platform to spur design thinking and innovation creation amongst students and leverages on the demonstration actions carried out in the project to offer practical on-hands training and knowledge to students. The learnings, experiences and impacts generated through the implementation of the various demonstration actions in SOLUTIONSplus will serve as a source of learning reference for students allowing them to iterate future designs and innovations hence optimising them to generate better, greater and sustained positive impacts for the societies, people and users these are intended for.

As an educational organisation with the focus on spatial planning, the outputs of SOLUTIONSplus' toolbox can be mainly used within the teaching and capacity building activities of TUB. Some practice-oriented projects and policy guidance delivered by the TUB can clearly be informed by the prepared materials. Main elements that can be utilised include the outputs of the integration package, including: Sustainable Urban Mobility Plans and Guidelines; and Sustainability package including gender inclusive electric mobility.

In terms of research and policy advice, TUB will be most certainly involved in follow up projects and applications resonating the same principles and aiming at integration of e-mobility towards socio-economic equity and integrated spatial planning practice.

## **EXPERTISE and CONTACT**

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## **DESCRIPTION**

The United Nations Human Settlements Programme (UN-Habitat) is mandated by the UN General Assembly to promote socially and environmentally sustainable towns and cities. UN-Habitat is the focal point for all urbanisation and human settlement matters within the UN system.

UN-Habitat works with partners to build inclusive, safe, resilient and sustainable cities and communities. UN-Habitat promotes urbanisation as a positive transformative force for people and communities, reducing inequality, discrimination and poverty.

## **ACHIEVEMENTS**

UN-Habitat selected and funded 10 electric mobility startup partners from 9 countries in Latin America, Asia and Africa for funding through the SOLUTIONSplus project Work package 3 and 4. This was the first case of UN-Habitat entering procurement agreements with startups for seed funding engagement. The selected projects encompassed city level demonstrations to test different types of innovative and integrated e-mobility solutions, complemented by a comprehensive toolbox, regional and global capacity development and replication activities.

UN-Habitat worked with global partners to develop online and in person global e-learning E-courses (WP 2), accompanied with regionally relevant training webinars that targeted innovators, policy makers, academia and civil society. UN-Habitat oversaw the design and development of online e-learning materials for global and regional learning programs in Africa, LATAM, Asia and Europe.



Image on the left: A graduate of the gender responsive e-moto training program run by Ampersand and GIZ Rwanda  
Image on the right: The first Africa E-mobility Forum in Dar es Salaam, Tanzania

UN-Habitat together with regional partners, drafted an e-mobility policy advice paper and a proposal for National Urban Mobility Programme and Plan for Tanzania to support the transition to low carbon mobility (WP 5).

## **INNOVATION and SUSTAINABILITY**

UN-Habitat is working on scaling the demonstration actions in Kigali and Dar es Salaam by submitting scale up proposals to relevant funding agencies.

UN-Habitat has been sharing the lessons learned on innovative partnerships with other UN agencies to develop innovative solutions to address urban challenges

Through the capacity building programme UNH that has targeted local and national government officials, experts and practitioners UNH will continue to support them to quantify and reduce greenhouse gas and pollutant emissions and other factors, such as congestion, economic and health effects etc. at the local and national level.

UN-Habitat will continue supporting the development of e-mobility policies, and local and National Urban Mobility Policy and Plans that contribute to low carbon transport and mobility with respect to individual city and country needs.

## **EXPERTISE and CONTACT**

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## **Urban Electric Mobility Initiative (UEMI) - Germany**

### **DESCRIPTION**

The Urban Electric Mobility Initiative (UEMI) is a key player in advancing sustainable urban mobility solutions globally. UEMI focuses on integrating electric mobility into urban transport systems to reduce emissions and improve urban living conditions. As the coordinator of the SOLUTIONSplus project, UEMI played a pivotal role in driving the project's objectives and

ensuring successful implementation across various regions. As the mobility hub of the Urban Living Lab Center, UEMI supports transformative living labs in Asia, Europe, Africa, and Latin America.

## ACHIEVEMENTS

UEMI's leadership in the SOLUTIONSplus project was instrumental in coordinating efforts among diverse stakeholders, including cities, local innovators, and industry partners. Key contributions and impacts include:

- **Coordination and Leadership:** UEMI effectively coordinated the SOLUTIONSplus project, ensuring seamless collaboration among partners and stakeholders. This included organising biweekly meetings, facilitating communication, and overseeing the progress of various work packages.
- **Standardisation and Harmonization:** Led the development of the report on standardisation and harmonisation for demonstration actions, which was published in February 2023. This report aligns with the European Commission's recommendations and aims to achieve global standardisation for e-mobility components.
- **Innovation Management Training:** Developed and implemented an e-course to support start-ups in their innovation journeys, providing essential management skills and strategic insights.
- **Policy Papers and Publications:** Facilitated the development, review, and finalisation of several policy papers and publications, contributing to the body of knowledge on sustainable urban mobility.
- **Replication and Scaling:** Facilitated the replication of successful e-mobility solutions in new regions, leveraging standardised solutions to enhance scalability and interoperability.

## INNOVATION and SUSTAINABILITY

After SOLUTIONSplus, UEMI continues to drive innovation and sustainability in urban mobility through various follow-up activities:

- **Global Environment Facility (GEF):** UEMI is involved in GEF projects aimed at promoting low-carbon urban mobility solutions.
- **Urban Living Lab Center:** Establishing hubs to support transformative living labs in Asia, Europe, Africa, and Latin America, fostering innovation and knowledge exchange.
- **Regional Projects:** Engaging in regional projects such as the following:
  - MobiliseHER: This aims to strengthen engagement of civil society organisations in transport planning and governance in Indian cities, to mainstream gender-responsive planning in developing and implementing low-carbon urban transport systems.
  - eBRT2030: This seeks to support sustainable urban transport by proposing innovative solutions for electric Bus Rapid Transit (BRT). eBRT2030 aims to demonstrate the applicability of a new generation of eBRT systems in different urban contexts, with 7 demonstration sites across the world. UEMI supports activities in Bogotá and Quito.
  - STREnGth\_M: Stimulating road Transport Research in Europe and around the Globe for sustainable Mobility, or STREnGth\_M, aims to contribute to the planning of research and innovation in Europe by identifying existing barriers to



the deployment of research results on European and international levels, among others.

- BOOST: This project aims to uncover untapped job creation potential in the e-mobility sector in Africa.
- SESA (Smart Energy Solutions for Africa): Providing energy access technologies and business models that are easily replicable and generate local opportunities for economic development and social cohesion in nine African countries (Test site in Kenya, Validation sites in Ghana, South Africa, Malawi and Morocco, and Replication sites in Namibia, Nigeria, Rwanda and Tanzania). The project also includes e-mobility demos with the potential of renewable energy for charging.
- GEF7 (E-MOVILIZA): This project supports the shift towards low-carbon electric mobility in Ecuador.
- GEF7 (E-MOBILITY ASAP): This project supports the acceleration and scaleup of electric mobility in the Philippines by focusing on the development of the EV incentive strategy (EVIS) aiming to narrow the cost gap between electric vehicles (EVs) and fossil fuel-based vehicles enabling the shift to EVs and providing fiscal and non-fiscal support to attract EV and EV parts manufacturing.

## EXPERTISE and CONTACT

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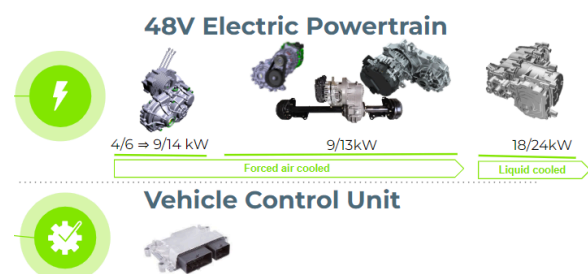
Valeo - France

## DESCRIPTION

Valeo is an automotive supplier and partner to automakers worldwide. As a technology company, they design innovative solutions for smart mobility, with a particular focus on intuitive driving and reducing CO2 emissions. The Group also provides and distributes spare parts for automakers and independent aftermarket operators.

## ACHIEVEMENTS

Valeo is a SOLUTIONSplus consortium member. Its mission, as part of Work Package 4, is to provide electric motors and powertrains to the vehicle builder partners, for electric 2 and 3 wheelers and small 4 wheelers. Valeo has extended its contribution by providing additional sub-systems and vehicle accessories and developing the vehicle control unit software to manage them.



## INNOVATION and SUSTAINABILITY

To develop the first complete kit, several iterations were necessary especially to interface with the battery management system, develop the strategy for the pre-charge. It has been an opportunity to on-job trained the partners on the complete system.



## EXPERTISE and CONTACT

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## Virtual Vehicle - Austria

### DESCRIPTION

With over 300 employees, Virtual Vehicle Research GmbH is Europe's largest research centre for virtual vehicle development in the rail- and automotive sectors. The scientific focus is on interdisciplinary cutting-edge research for climate-neutral mobility. The goal is to develop reliable, software-defined systems that will secure sustainable competitive advantages and future jobs.

### ACHIEVEMENTS

Virtual Vehicle brought in its experience and expertise for different e-Mobility solutions in the SOLUTIONSplus project. A special focus was on the impact assessment in the cities of Madrid and Hamburg. In Madrid, the impact of e-Buses and charging with inverted pantographs in combination with smart charging was assessed. For the city of Hamburg, the impact of e-scooters for the last mile, to increase the possibilities in combination with public transport, was investigated.

Virtual Vehicle strongly contributed to the impact assessment of different technologies (e-buses, inverted pantograph charging & smart charging, e-scooters) in the cities of Madrid and Hamburg.

### INNOVATION and SUSTAINABILITY

For Virtual Vehicle it was a great experience to be part of this research project. Getting insights and feedback for the application of different e-mobility solutions around the world, in cities with very different requirements and boundary conditions, was very valuable.

## EXPERTISE and CONTACT

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## VOLVO (SE) - Sweden

### DESCRIPTION

The Volvo Group is one of the world's leading manufacturers of trucks, buses, construction equipment, and marine and industrial engines. The group also provides complete solutions for financing and service. The Volvo Group, with its headquarters in Gothenburg, employs about 100,000 people, has production facilities in 18 countries, and sells its products in more than 190 markets.

The Volvo Group provides electric buses, trucks, and construction equipment to demanding customers. The Volvo Group is also well established and has long experience working with solutions in the market regions of South America, Africa, and Asia.

Volvo Buses is one of the world's leading providers of sustainable passenger transport solutions. The group offers premium city- and intercity buses, coaches, and bus chassis, as well as a wide range of services for increased productivity, uptime, and safety. Volvo Buses has sales in 85 countries and a global service network with more than 1,500 dealerships and workshops.

## ACHIEVEMENTS

Volvo has primarily contributed to the following work-packages:

- WP1 Toolbox and Evaluation (3PM): Providing content from the e-Bus deployment activities in Europe and Sweden in particular.
- Task 1.1: Contributed with details regarding the [ElectriCity](#) and the [ASSURED](#) project e-Bus training sections in the Toolbox about e-buses, charging, and operation of electric buses in city traffic operations in D1.1.
- WP2 capacity building, city-to-city cooperation, and professional (6 p.m.): Participated in cooperation activities, providing bus-OEM perspectives and experiences from e-bus deployment in Europe and beyond.
- Task 2.4: Provided regional e-training for e-bus introduction in public transport operation, covering the areas of integration in the transport system, electric propulsion systems, control, management, and connectivity, chassis and body, batteries, and charging solutions.
- Task 2.5: Contributed to global training in the thematic cluster regarding electric buses, e-BRT, and retrofitting electric buses (e.g., for Kathmandu). Contributed to the knowledge sharing activities regarding thematic cluster operations and innovative charging solutions, as reported in D2.5.
- WP3 Market of Solutions and Business Models (17 PM): Providing content from a commercial e-bus OEM industrial perspective with an extensive market presence.
- Task 3.1: Provided input to the key concept database and catalogue with e-bus vehicle-related content in D3.1.
- Task 3.2: Contributed to the dialogue between the industry and the local businesses involving the Volvo Bus market companies in Africa and South America to leverage the SOLUTIONSplus project. Efforts to plan and arrange for regional e-bus training in South America have been an ongoing task.
- Task 3.3: Contributed to the business models and plans leveraged for the experiences of e-bus deployment in Europe together with the existing Volvo Bus market presence primarily in South America.
- Task 3.4: Participated in the start-up incubator activities.
- Task 3.5: Contributed to the D3.5 definition of functional requirements for e-mobility regarding innovations for heavy-duty vehicles, people, and freight in commercial vehicle operation. This also included necessary charging solutions, vehicle technologies, and batteries, stressing the importance of European and international standardisation.
- WP4: Comparative demonstration actions (1 PM). Contributed to the e-bus demonstration development in South America, Africa, and Asia.
- Task 4.2: Discussed potential contributions to the e-bus demonstrations in Montevideo and Quito. During the project, continuous dialogue with the local markets resulted in the now-initiated deployment of e-buses for the South American market.

- WP6: Exploitation and Dissemination (1 PM). Contributed through active participation in the European Partnership 2ZERO and through the technology platforms ERTRAC and ALICE.
- Task 6.2: Contributed to the research and innovation policy level discussions in the EG VIA (2ZERO) European partnership and related partnership discussions and results conferences. D6.2.

## INNOVATION and SUSTAINABILITY

A (indirect) result of the SOLUTIONSplus activities is the launch of the new electric bi-articulated buses, the first from the [Volvo Buses' BZR electromobility platform](#), which will undergo testing in Latin America.



This new e-bus solution provides high efficiency in mass transport. With 28-metre bodies, the transport capacity is up to 250 passengers. The buses will operate in Curitiba, Brazil; Bogotá, Colombia; and Mexico City ([press release](#)).

The work to exploit the [e-Bus deployment](#) in South America, Africa, and Asia continues. This will be further developed in the ongoing project and hopefully also in future international collaboration with EU-supported actions.

## EXPERTISE and CONTACT

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**VTT**

**VTT - Finland**

## DESCRIPTION

VTT Technical Research Centre of Finland Ltd is a state owned and controlled non-profit limited liability company established by law and operating under the ownership steering of the Finnish Ministry of Employment and the Economy.

VTT is a Research and Technology Organisation (RTO) whose activities are focused on three areas: Carbon neutral solutions, Sustainable products and materials, and Digital technologies. VTT is impact-driven and takes advantage of its wide multi-technological knowledge base to strengthen Finnish and European industrial competitiveness. VTT can combine different technologies, produce information, upgrade technology knowledge, and create business intelligence and value added for its stakeholders. Over the years, VTT has gained vast experience from participation and coordination of numerous European projects including R&D Framework Programme projects and other thematic frameworks and programmes. VTT is ranked among the leading European RTOs.

## ACHIEVEMENTS

VTT was responsible for implementation of the e-mobility toolbox, an online information portal to support development, implementation and monitoring of innovative electric mobility solutions

(<http://emobility.tools>). Regarding evaluation activities, VTT has contributed to setting the evaluation framework, conducting user needs assessment, and conducting ex-ante, ex-post and scaled up assessment for the cities of Quito and Montevideo. In addition, VTT has produced two policy advice papers related to suitable EV charging station location setting and deployment of light electric vehicles, and a report on sustainable procurement of e-vehicles.

## INNOVATION and SUSTAINABILITY

The project has provided valuable experience in the methodology and execution of evaluation work, which will be leveraged in other projects and in the planning of new national and international initiatives. Broader knowledge has been gained on the scope of e-mobility solutions and the context of their implementation in various cities and use cases, encompassing different perspectives such as procurement, planning, and evaluation.

## EXPERTISE and CONTACT

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**Wuppertal Institute - Germany**

## DESCRIPTION

The Wuppertal Institute is a leading think tank for sustainability and transformation research focused on impact and practical application. The organisation's activities are centred on developing transformation processes aimed at shaping a climate-friendly and resource-efficient world. For the SOLUTIONSplus project, the Wuppertal Institute mobilised its Research Department “UN-Habitat Collaborating Center”, part of the Urban Living Lab Center, which supports transformative living labs in Asia, Europe, Africa, and Latin America.

## ACHIEVEMENTS

The Wuppertal Institute played a leading role in the SOLUTIONSplus project, coordinating regional efforts across Asia, Africa, Europe, and Latin America. Key contributions included initiating the e-mobility toolbox, supporting impact assessments in various cities, and organising numerous training sessions, workshops, and site visits.

- **WP1:** Initiated the e-mobility toolbox, supported impact assessments in Kathmandu, Hanoi, Pasig, Kigali, Dar es Salaam, and Hamburg.
- **WP2:** Organised and co-organized various online and on-site training sessions across Asia and Africa, including workshops on e-mobility business models, electric bus procurement, and gender-inclusive e-mobility.
- **WP3:** Supported the selection and coordination of start-ups in Asia (Tojo Motors, QiQ, CEI, SEV), Africa (Ampersand, Guraride, BasiGo, Auto Truck, SESCO, TRI, Ekoglobe), and Europe (Hoppy, Impact).
- **WP4:** Coordinated prototype developments and e-mobility services, including diverse EV projects in Kathmandu, Hanoi, Pasig, Kigali, and Dar es Salaam. Organised demonstration launches and facilitated partner collaborations.

- **WP5:** Contributed to policy papers and reviews, including urban mobility plans and e-mobility roadmaps for Nepal, Southeast Asia, and Africa. Authored several academic research papers and supported technical committees.
- **WP6:** Engaged in dissemination activities through presentations at various international conferences and webinars.

Key metrics include numerous training sessions, workshops, policy papers, and academic publications. The institute facilitated critical regional collaborations and contributed to the successful implementation of e-mobility solutions.

## **INNOVATION and SUSTAINABILITY**

Support in developing follow-up projects

- Regional (Asia, Africa and Europe): GIANTS (Green Intelligent Affordable New Transport Solutions). The project aims to provide affordable and accessible mobility solutions to both emerging (Philippines, Kenya and India) and advanced (Europe) markets by developing a new electric vehicle platform.
- Asia: TRANSCEND (Transformative Actions for Climate and Ecological Protection and Development). The project focuses on scaling good practices in public transport on a national level (in Philippines), building capacity of local stakeholders and reinforcing ambition comprehensive monitoring and stakeholder coordination by implementing start-up Accelerator programme and implementing e-mobility living labs
- Africa:
  - SESA (Smart Energy Solutions for Africa): Providing energy access technologies and business models that are easily replicable and generate local opportunities for economic development and social cohesion in nine African countries (Test site in Kenya, Validation sites in Ghana, South Africa, Malawi and Morocco, and Replication sites in Namibia, Nigeria, Rwanda and Tanzania). The project also includes e-mobility demos with the potential of renewable energy for charging.
  - Co-ProdUSE: Electric mobility as part of the Urban and Rural Labs in Rwanda
  - GIZ Skills Development: Technical education and vocational training on electric mobility in Rwanda
  - GIZ BOOST: Job creation through electric micromobility in Morocco and Ghana
  - In current preparation with the EU Delegation in Dar es Salaam and ENABEL: follow-up project on green urban mobility in Tanzania as part of a larger Global Gateway Tanzania Project on Trade and Transport
  - SWARME-E: Development of innovative interconnected mini-grid systems in Rwanda and Tanzania with the integration of productive use of energy applications, including light electric vehicles

## **EXPERTISE and CONTACT**

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## DESCRIPTION

Zaragoza Logistics Center (ZLC) is a research and educational institute specialised in logistics and supply chain management. ZLC is affiliated to the Massachusetts Institute of Technology (MIT) and the University of Zaragoza (UZ), the Spanish centre of the MIT Global SCALE Network.

## ACHIEVEMENTS

ZLC has been deeply involved in developing the logistics models for the pilots of Quito and Pasig. Quito's plan development involves the implementation of software to optimise routing, supporting the successful launch of a Light Electric Freight Vehicle (LEFV) system for 'last mile' distribution within the city. Meanwhile, Pasig's plan development aims to identify the ideal locations for parking spaces and charging points, catering to the city administration's substantial fleet of e-vehicles.

The model developed for Quito resulted in two policy briefs to support cities in the transition to green last-mile delivery for the consolidation of zero-emissions areas.

ZLC has made significant strides in capacity building and training through its participation in the e-courses and regional training in thematics of freight and e-logistics topics. As part of the SOLUTIONSplus Global Learning Programme on electric mobility, ZLC participated in the fifth course titled "Zero-Emission Urban Freight" preparing materials and lecturing on sustainable policy responses to urban mobility in last-mile distribution strategies, decarbonization frameworks in urban freight distribution for climate change, and distribution networks (from 1 echelon to 2 echelon). ZLC also participated in the regional training of Latin America through lectures on low carbon last mile logistics trends and building a collaborative electrical distribution network.

ZLC has supported as experts in the business plan and BMC (Business Model Canvas) coaching sessions with the start-ups involved in the project.

The main policy recommendations found in Quito are compiled in the Figure. Source: Logistics Model of Quito, included in the Policy Brief.



## INNOVATION and SUSTAINABILITY

One of ZLC's core research areas is devoted to **Transport Networks & Urban Mobility** which includes promotion and knowledge transfer through presentations at congresses, conferences and workshops, courses and also through publications in journals, magazines, books and press.

ZLC will share the **knowledge gained** in the organisation through project results presentation, main developments and lessons learned. The **key results and lessons learned** (like best practices and recommendations) will be used for courses, capacity training and webinars. The gained **know-how** will be exploited in future projects, both research and industrial initiatives.

The main key learning from ZLC's involvement in SOLUTIONSplus is that ***a successful transition to urban electric mobility is a reality with the involvement of all the involved stakeholders in a city and the according planning.***

## **EXPERTISE and CONTACT**

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solutions  
plus