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Report on the H2020RTR conference

#H2020RTR18

28 & 29 November 2018
Albert Borschette Conference Center (CCAB)
Brussels

On 28th and 29th November 2018, ERTRAC (*European Road Transport Advisory Council*), EGVIA (*European Green Vehicles Initiative Association*) and the European Commission, represented by DG RTD, DG MOVE and the Executive agency INEA, co-organised the second European Conference on “*Results from road transport research in H2020 projects*”.

This conference is an ambitious attempt to give a glimpse of the outcomes of the research performed in the frame of advanced (i.e. ongoing since more than the half time duration of the project) H2020 funded projects in the field of road transport, covering all areas of the programme: urban mobility, road safety, automated road transport, green vehicles and logistics.

The following report aims at providing a comprehensive overview of the very rich content presented during these two days conference. It is structured into three main part: a general introduction, a comprehensive summary of each session and, as an annex, some information about the projects’ achievements at the time of the conference.

Wishing you a happy reading!

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Urban mobility

Improved quality of city life in urban areas is depending on a reliable and efficient transport network as backbone. The overall strategic goal is to reduce greenhouse emissions from mobility, reduce noise, increase the use of alternative fuelled vehicles and public/shared transport and address safety issues.

While introducing electrified public transport paves the way for enhancements and innovation, it also generates new challenges in deployment and operation. A broad spectrum of topics from user needs, policy development, e-bus technologies to skills needs of the transport professionals of the future has been covered during the first day. Urban congestion is one of the major challenges faced by public authorities and has also been extensively discussed during the conference. The reason for submitting urban road congestion to research, is the understanding that significantly reducing urban road congestion and improving the financial and environmental sustainability of urban transport will bring major benefits for the economy, the attractiveness of cities and citizens' wellbeing. The neighbourhood mobility projects can help to develop people-oriented transport and mobility solutions. These solutions translate people's (both passenger and freight) needs into new ways of delivering and / or co-creating these solutions.

Road safety

Road safety has improved significantly in Europe over several decades. However, the EU has entered into a phase of stagnation in its efforts to further improve road safety with fatality and injury figures remaining nearly constant since 2013. This means that still around 25,000 people lose their lives on European roads each year, and more than four times as many are seriously injured. In its efforts to turn this trend around and again move towards "Vision Zero", the European Commission follows the Safe System Approach. This implies, amongst others, the improvement of all elements of the road transport system with regard to safety, including vehicles, road infrastructure and the behaviour of all road users. Amongst those, vulnerable road users (VRUs), such as powered two-wheelers, cyclists and pedestrians, were defined as a specific target group for better protection in the EC's Policy Orientations on Road Safety 2011-2020. The projects presented in the sessions under consideration very well reflect the Safe System Approach and the focus on VRU safety in their contributions to the achievement of the above-mentioned EU safety targets.

Automated Road Transport

The area of Connected Automated Driving and automation is one of the hot topics for policy makers. During the H2020RTR conference, only connected and automated driving in urban mobility scenario has been investigated; all of the projects presented pay a particular attention to the target of more safety and efficiency in road usage.

Connected automated transport of the future will also require close interaction between vehicles and infrastructure for the benefits of the user and society. Cooperative ITS and

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infrastructure prepared for connected automated vehicles targeted by several H2020 funded projects is therefore a key enabler for the large-scale uptake of these new technologies.

Green Vehicles

Sustainable development is one of the main challenges of the 21st century. To tackle this challenge, a major effort will have to be made on improving the energy efficiency of road transport and more specifically of the vehicles themselves. The EGVI projects presented over the 2 days of the conference are bringing a significant contribution to this by developing solutions covering a wide range of technologies:

- Improvements of powertrain control and battery management for low-emission heavy duty vehicles,
- Light weighting and new materials
- Improvements of the efficiency and the emissions of spark and compression ignition combustion engines
- Development of advanced EATS
- Improvements of the efficiency and the emissions of spark and compression ignition combustion engines
- Development of advanced measurement techniques for ultrafine particles below the actual size threshold
- New vehicle concepts and electric vehicle integration with the grid.

Logistics

Several projects were presented on the second day, addressing different challenges and opportunities for logistics. All of them aiming at contributing to priorities such as: transport decarbonization, modal-shift and digitalization.

A specific attention was paid to challenges and opportunities for logistics in the urban domain all in order to:

- Improve basic knowledge and understanding on freight distribution and service trips in urban areas.
- Assess innovative policies and solutions to ensure a better use of infrastructure (e.g. delivery spaces, off peak deliveries, non-road modes, urban waterways) and vehicles (types, load factors).
- Assess innovative policies and solutions on consolidation and distribution centres in urban areas.

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Main output of the sessions

“Driver assistance and automated driving systems”

The results of the four automated driving and urban mobility projects ADAS&Me, AutoMate, MAVEN and VI-DAS were presented. They have the common objective to enable a safer and more efficient road usage for several vehicle types (e.g. conventional and electric car, truck, bus or motorcycle).

Two projects (ADAS&ME and VI-DAS) were focused on the development of a (cooperative) system architecture in order to increase safety and security for drivers. Through data collection of targeted driver states, algorithms could be developed, which are almost ready for application. Besides multimodal adaptive HMI and personalized driver/rider behaviour profiles are already available as prototypes.

Overall, monitoring of the environmental context as well as driver/rider aspects (e.g. fatigue, sleepiness, stress or anxiety) are combined in order to better understand the underlying risks. To do this, innovative approaches such as deep learning are applied (VI-DAS) to determine the current situation but also predict following incidents. Thus, the best action can be executed on the basis of suggestions and warnings to the driver.

All projects imply social, economic and environmental impacts with the potential to increase the driver's safety significantly and improve the overall traffic flow.

“Innovations in public transport and skills of the future”

The session covered projects related to improving quality of life in urban areas from different aspects. Deployment of electrically powered buses in cities provides opportunities to reduce emissions of noise and from combustion engines, improve overall energy efficiency. E-buses open up for innovating public transport with novel concepts such as in-door bus stops. Results from the EBSF2 project provided concrete examples of how to support deployment through (12) demonstrators allowing to test new technologies, and develop IT-system protocols for improved interoperability.

The session also presented results from the transport authority perspective in the ELIPTIC project coordinated by the city of Bremen. The project focused on electrification of public transport using, and optimizing, existing electric infrastructure available for trolley buses and trams. The project tested various electric vehicles and highlighted the need for common and harmonized electric energy transfer systems. An important result from the project is the “FACTOR 100” campaign to promote the benefits of electrification of public transport.

The CIPTEC project also focused on the overall objective in making public transport more attractive, as a mean to reduce congestion and relevant impacts. The project performed a market and customer trend analysis, mapped an evaluated based on existing innovation and services, co-creation of new innovative solutions for public transport. Main results from the project is the Toolbox, strategy plan and policy recommendations for public transport operators and authorities.

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Finally, the SKILLFUL project approached the future needs for skills and competences of transportation professionals at all levels. Existing and future needs has been reviewed, structured to identify and propose new business roles in the education and training chain. The result was a list of suggestions for future business roles, such as;

- Transport knowledge aggregators,
- Transport lifelong training promoters,
- Transport training certifiers,
- Transport training infrastructure providers,
- Collaborative passion arenas in Transport
- “In vivo Altschool” social networks in Transport.

“Powertrain control, battery management & lightweight materials”

The morning session was divided into two parts, one addressing powertrain control and battery management and the other light weighting and novel materials.

In the first part the two projects IMPERIUM and optiTruck were presented. Both projects are aiming at reducing the fuel consumption and emissions through advanced powertrain control concepts targeting at least 20% fuel reduction. Main approach was combining advanced vehicle side technologies with simulations and ITS solutions. Recent results clearly show that, with implementing and further developing existing solutions, significant progress regarding reduced fuel consumption and less emission can be made. The final validation and demonstration are foreseen for 2019.

As outlined in the most recent “Long Distance Freight Transport Roadmap” of ERTRAC (2018) the heavy-duty vehicles (HDV) emissions have increased by 14% during the period 1990-2014. It is expected that without further actions the emissions from HDV will increase by further 10% by 2030 compared to 2010. Consequently, additional measures have to be implemented in order to lower the CO₂ emissions of new trucks by 15% in 2025. In this context the two projects IMPERIUM and optiTruck have been initiated, contributing to the emission targets defined by ERTRAC.

The aspect of light weighting and novel materials was only covered by the project ALLIANCE, as the representative of LoCoMaTech was not able to attend on short notice. However, both projects were initiated to provide affordable solutions for mass-produced lightweight automotive parts. Whereas LoCoMaTech is focusing only on low-cost processing, ALLIANCE covers the full range from material development over manufacturing and joining technologies to advanced design concepts. The ALLIANCE projects set ambitious targets of 20-30% weight reduction on part levels with 6% reduction in GWP on full vehicle level while limiting the cost to 3€/kg saved. Presented results indicate that these targets are feasible.

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“Safety for all road users & safety aspects of road infrastructure”

While InDeV has generated new knowledge from the analysis of VRU accidents, PROSPECT, XCYCLE and SENIORS have developed and further improved in-vehicle and on-bike safety systems as well as corresponding testing methods and tools with a focus on the safety of vulnerable and elderly road users.

SAFER-LC, SAFE STRIP and SAFE-10-T clearly have their focus on infrastructure safety. They develop various solutions for increased safety at level crossings, a road strip module with integrated sensor, communication as well as energy harvesting functions and a decision support tool for transport infrastructure management, which shall improve both safety and network capacity.

While SimuSafe will provide behaviour models and simulators for various kinds of road users, MeBeSafe, InterACT, TrustVehicle and BRAVE deal with the interaction between road users and the other elements of the road transport system from a human behavioural perspective. The inter-action with automated vehicles is a specific focus here.

SafetyCube has created a road safety decision support system for policy makers and other stakeholders enabling them to select and implement the most appropriate and cost-effective measures to reduce fatalities and injuries among all road user types. This nicely reflects the principle of shared responsibility from the Safe System Approach, according to which the responsibility for road safety rests both with the individual road users and with the organisations providing their operating environment.

Some very promising projects have been identified: the development of avoidance systems for VRU accidents combining autonomous steering and braking in PROSPECT, the provision of in-vehicle blind spot warning and on-bike collision warning systems by XCYCLE, which offer a cost-effective solution to reduce bicycle and motorised vehicle accidents in urban areas, the provision of new safety testing methods and tools to be exploited amongst others by Euro NCAP from both PROSPECT and SENIORS.

With the very dynamic technological development, in particular in the automation of road transport, the need for further research beyond the scopes of the presented projects is apparent. This applies not only to human-technology interaction, but also to the implications on driver capabilities, to the crash safety of driverless vehicles and in particular to the need for a predictive safety assessment framework.

Being “safe and secure at any time” has been included as an important objective in the ERTRAC Vision for 2050, which implies “*nearly zero accidents and injuries due to safety functions and automated driving functions in fully connected vehicles, road users and infrastructure*” according to ERTRAC’s Strategic Research Agenda 2018.

The work and the results of all 13 projects presented in the sessions under consideration directly and indirectly contribute to the achievement of these ambitious objectives.

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“Tackling urban road congestion & citizens-friendly transport innovation”

The projects TRACE and FLOW have developed an improved understanding of measures to reduce urban road congestion whilst increasing urban accessibility for passengers and freight and contribute to the achievement of broader sustainable urban transport policy objectives. They have both looked at innovations for walking and (safe) cycling. Where TRACE focuses on the support of travellers, FLOW focuses on decision support tools.

The neighbourhood projects have reached their midterm point, and can show progress but no final results. The projects show that neighbourhoods and urban districts are an appropriate scale to pilot mobility innovations that address common sustainable urban mobility issues. They are taking into account diversity in cultural backgrounds, demographic developments, economic potential and social conditions. The projects in question have a diverse approach to improving access to local functions (healthcare, education, jobs, businesses) or focus on sustainable lifestyles and behaviours. Also, new uses of public space for different mobility users could be developed and tested at neighbourhood level. The three projects have a different approach: CITIES4PEOPLE focuses on the overall process of co-creating mobility solutions. Metamorphosis focuses on the creation of child friendly neighbourhoods, with use of action methods/tactical urbanism. MUV has developed an app for local impacting behavioural change.

“Battery technologies and energy management in vehicles”

The results of three battery projects eCAIMAN, FiveVB and SPICY with the objective to increase specific energy density were presented. According to the state of the art, the specific energy density is approximately 125 Wh/kg on single cell level enabling cruising ranges of today’s EVs in the range of 200-400 km. In the course of the projects, new Li-ion chemistries and cell technologies were investigated to push the range of EVs well beyond 400 km - also in cold climates.

The ambitious targets specified at the start of the projects of specific energies >250 Wh/kg could not be achieved. However, good progress was achieved up to approximately 190 Wh/kg on cell level (+50% compared to state of the art) and approximately 150 Wh/kg on module level. The durability and stability of cells with highest energy density remain a challenge, however.

Cost issues were also addressed, but reported cost reduction potentials (-20%) will need to be validated in an industrial environment. The very ambitious cost targets of 200 €/kWh seem to be out of reach for the specific investigated cell concepts. A realistic level for these cases is reported with 300-350 €/kWh which would help to save several hundreds of Euros of the costs of today’s battery packs. The close co-operation and exchange of information among the three battery projects have resulted in joint elaboration of testing standards.

Two projects JOSPEL and OSEM-EV focused on improvements of the energy efficiency of electric road vehicles by reducing the energy consumption for passenger comfort (-50%) and conditioning of powertrain components such as e.g. the battery (-30%) as well as by reducing energy losses – e.g. heat losses of the battery system. With a combination of several new

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technologies such as Joule-effect surface heaters in the cabin, reduction of battery heat losses and improved battery thermal management, reduction of heat losses of the cabin in combination with lightweight materials, the application of efficient heat pumps as well as operating strategies optimised for minimal energy consumption, the energy needed for passenger comfort could be reduced >50%.

“Sustainable urban transport planning & CIVITAS living laboratories”

EMPOWER in its approach explores how changes in mobility behaviour, individual choices, and social norms can be catalysed, accelerated and guided towards modal shift, changing vehicle use or ownership, reducing the need for travel, new mobility patterns, or their combination. The project identifies relevant drivers and barriers. The project uses digital techniques (apps) and social media tools.

The three SUMP projects have reached their mid-term and are promoting the take up of the innovative concept of Sustainable Urban Mobility Plans (SUMPs). The projects develop instruments and mechanisms for information exchange to assist local authorities in preparing and implementing SUMPs. The plans build on the European SUMP guidelines and include quantified targets detailing a long-term vision. The projects focus mainly on process support, including local consultation and interdepartmental coordination, monitoring and evaluation. The projects also address financing options, and consider a wide range of measures, including newly-emerging technologies, policy-based, and soft measures.

The CIVITAS living lab projects are all city-led Innovation Actions, composed of four to five cities, led by at least two advanced cities, which are committed to establish living laboratories where innovative solutions can be implemented. The participating cities demonstrate their common interests and their vision on how they will ensure a meaningful and close cooperation. Each city follows an integrated, multimodal approach by demonstrating and testing under real life-conditions a set of complementary and reinforcing mobility solutions. The solutions combine newly-emerging technologies, policy-based, and soft measures with a strong replication potential. These living labs apply a thorough impact and process evaluation. The projects have their own focus: DESTINATIONS looks at touristic destinations, PORTIS at port cities and ECCENTRIC and peri-urban and isolated neighbourhoods and target audiences.

“Advanced ICE and hybrid vehicles”

The results of three advanced ICE projects REWARD, GasOn, HDGAS with the objective to produce efficient and clean powertrains and aftertreatment technologies for future light, medium and heavy-duty vehicles were presented.

For diesel passenger cars, technologies of high efficiency (low swirl concept; quiescent combustion concept) as well as advanced EATS optimised for these combustion concepts can reduce CO₂ emissions more than 5% vs. MY2015 and MY2018 vehicles emission and NOx emission below 40 mg/km.

Advanced CNG engines may achieve 20% reduction in CO₂ emissions and may be further developed to fulfil Euro6+ emission levels. The HPDI high pressure (300 bar) natural gas

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injection concept (HPDI) which uses a diesel micro pilot to provide ignitable conditions for the natural gas may provide a reduction of 20% in CO₂ emissions in HDVs. The emission compliance with Euro VI was also achieved.

Four projects, ECOCHAMPS, THOMSON, ORCA, and ADVICE were presented focusing on efficient, robust and cost-effective hybrid powertrains as well as on advancing the user acceptance. It was found that several key innovations (Commercial Modular System; (pre - selected) hybrid electric components, optimised and integrated hybrid powertrains) may lead to powertrain efficiency increases of 20-30% in passenger cars, 30% in medium duty vehicle and 17-18% in city bus and HDV. Hybrid technology will play an important role in achieving the 2030 industry CO₂ targets and contribute to a competitive and resource efficient transport system as targeted in the European Transport Policy White Paper (2011).

The project LOWBRASYS which focuses on the development of a novel, low environmental impact brake system was also presented.

“Cooperative ITS and infrastructure for CAD”

The session covered the broad area of cooperative ITS and infrastructure systems. Starting from innovative user services based on the TIMON cooperative platform for web and mobile applications. These services focused on driver assistance, for vulnerable road users, commuters, real time traffic information, a real-time traffic API and collaborative ecosystem. The session continued with a review of the results from the HIGHTS projects, focusing on high precision positioning for cooperative-ITS applications. Robust, dependable and sub-meter localisation is a key element for cooperative systems. This was achieved through vehicle to infrastructure communication and localisation algorithms. The project also resulted in developing a European-Wide Positioning Service Platform.

Cooperative systems are depending on reliable communication systems, and in particular robust and flexible antennas. The ROADART project resulted in novel multi-antenna and communication concepts for trucks. These concepts have been tested in real-world scenarios in Cooperative Adaptive Cruise Control (CACC) application. In particular tunnel applications was evaluated with good results. At mid-term, these concepts can be realised in reconfigurable antenna arrays configurations.

The session also covered the question of how to increase the capacity of local authorities and other urban mobility stakeholders to get ready for the transition towards shared road network, through increasing level of connected and automated vehicles. The CoEXist project presented results related to micro and macroscopic transport modelling, mixed-user road infrastructure and local transport policies. How to make authorities and infrastructure “Automation-ready”? The project has also been linked to a US-EU twinning initiative with the FHWA to common definitions and sharing use-cases and modelling tools.

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Finally, the session covered how to get road infrastructure ready for mixed vehicle traffic flows in the ongoing INFRAMIX project. The project will look into physical & digital road infrastructure elements, novel signalling, visualisation elements, traffic estimation, monitoring and control strategies. The expected potential long-term impact of the project will be:

- New traffic estimation and control algorithms for mixed traffic environments
- Simulation environments and hybrid testing for mixed traffic situations
- Extension of traffic messages
- Extensions of existing technologies, Infrastructure classification scheme (for automation levels of vehicles)
- Set of minimum interventions for infrastructure upgrades
- New safety parameters for assessment.

“Future logistics”

The NEXTRUST project aimed at demonstrating at large scale level the concept of horizontal collaboration as proposed by a previously funded project (CO3) and included in the ALICE roadmap on Supply Network Coordination and Collaboration. Horizontal Collaboration has been again demonstrated as a powerful approach to increase load factors and reduce empty trips in logistics chain in a number of cases and at a larger scale. As novelty in NEXTRUST, the concept was applied and tested in the rail freight domain. The main barriers identified to implement the concept at a wider and faster pace are the effort to establish the horizontal collaboration while complying with anticompetition regulation as well as the changes in global supply chains that may hamper ongoing horizontal collaboration cases. Nevertheless, the projects achieved good results and now is time for the concept take-up by industry. But despite good results, the challenge of increasing load factors and reducing empty trips at a larger extent remain.

SYNCHRONET aimed to explore further opportunities out of the synchromodality concept i.e. exploiting full possibilities of different modal transport alternatives for end to end logistics routes in an agile, flexible and dynamic planning and execution of end to end logistics as described in ALICE roadmap on Corridors, Hubs and Synchromodality. Several tools and demonstrators have been developed showcasing the benefits of this concept. On top, low steaming or smart steaming has also been further investigated, building on previous project results (swiftly Green) that showed the independency of the total lead time with the speed of the mode of transport in most cases. Much more influence on lead times is idle time in terminals, warehouses, etc.

SELIS and AEOLIX are addressing the need of digital capability to make it easy and affordable for stakeholders to collaborate and exchange information by connecting their information systems and/or platforms and get access to a cloud of logistics services pooled through different platforms. Both projects are engaged in a case to fully link SELIS and AEOLIX ecosystems and contributing to the implementation of ALICE roadmap on Information

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Systems for Interconnected Logistics and also connected to the Digital Transport and Logistics Forum (DG MOVE).

Last, but not least, CLUSTER 2.0 project is working on the potential role of logistics clusters, as natural consolidation and de-consolidation areas, to increase load factors, reduce empty trips and also increase the share of rail transport. The approach is to create a well-functioning and trusted ecosystem within the clusters, in which relevant information is shared, and pool all clusters together to have full visibility of the flows in the network of clusters to identify opportunities for sharing transport means and routes. Moreover, the project is also working on further modularisation beyond the maritime container, for smaller units but bigger than boxes, as a follow up and complementary effort of the previously EU-funded project Modulushca. Clusters 2.0 is also addressing transshipment technologies. All these developments are backing the concept of the Physical Internet.

“Particulate and emissions: vehicles and measurements”

The results of three projects PaREGE_n, DiePeR and EAGLE with the objective of reducing simultaneously the fuel consumption and the particle emission of combustion engines were presented.

The reductions of the fuel consumption should be achieved by improving the efficiency of the engine by 5% for Diesel engines (DiePeR), 15% for gasoline engines (PaREGE_n) and approximately 20% for ultra-lean burn gasoline engines (EAGLE). The additional challenge for the PaREGE_n and DiePeR projects is the analysis and reduction of ultrafine particle emissions smaller than the actual legislative lower size threshold of 23 nm down to a particle size of 10 nm. Fuel consumption reductions reported during the conference are in line with the initial objectives: 10.5-11.7 % in PaREGE_n, 13 % in EAGLE; DiePeR project reported an efficiency improvement potential of up to 15 % with new technologies such as variable compression and minimised heat losses of the engine.

These results directly translate to reduced CO₂-emissions. Even if in the future CO₂-neutral synthetic fuels are used, improvement in fuel efficiency will be beneficial to minimise the total amount of energy needed and the total turn-over of energy, respectively. Regarding the ultrafine particle formation, emission and aftertreatment, both projects (PaREGE_n & DiePeR) have identified combustion and filter technologies which allow Diesel and gasoline engines to fulfil Euro6d emission regulations.

Three projects DownToTen, SUREAL-23 and PEMs4Nano were presented, focusing on the understanding of the formation and measurement of ultrafine particles (in the range of 10-23 nm). New prototype instruments were developed, suitable for stationary laboratory investigations as well as for portable emission measurement systems (PEMS). Based on the results achieved so far, it was concluded that, even if special operating conditions can lead to higher number of ultrafine particle emissions, there is no urgent need to change the regulatory particle number size cut-off for Diesel and gasoline cars with particle filters. The measurement devices developed in the three projects are of utmost importance for the identification and

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quantification of sources for ultrafine particle emissions and ultimately improvement of health of millions of citizens in Europe and all over the world.

“Future logistics – urban freight”

The urban logistics session gave a comprehensive overview of the city logistics and urban freight H2020 related projects. These projects addressed some of the challenges and opportunities identified in ALICE-ERTRAC urban logistics roadmap:

- Improving basic knowledge and understanding on freight distribution and service trips in urban areas.
- Assessing innovative policies and solutions to ensure a better use of infrastructure (e.g. delivery spaces, off peak deliveries, non-road modes, urban waterways) and vehicles (types, load factors).
- Assessing innovative policies and solutions on consolidation and distribution centres in urban areas.

The 3 projects presented, SUCCESS, CITYLAB, and NOVELOG addressed collaboration and coordination opportunities for further efficiency in city logistics operations and also how to reduce pollution and congestion. The three projects gave a clear picture of opportunities from very different perspectives and application fields. As the main outcome of the session, it was highlighted that cities and other stakeholders are giving more strategic value to better understanding and managing urban freight impact in cities and the value for the citizens in new consumer experience trends. Most pilots and cases of these projects are framed in cities with a broader strategy on urban freight which is allowing that most of the pilots keep alive after the project ends. According to the projects, the take-up and implementation of results is pretty much enhanced compared to efforts made 3-5 years ago. That is why cities should develop Sustainable Urban Logistics Plans (SULPs) in a clear way within and better complementary to SUMP and in particular to establish clear paths for implementation of new ruling practices.

As a brief of the projects, SUCCESS focuses on the analysis of value of consolidation centres for construction sites in cities. The project has developed a detailed assessment of the operations in four sites and extracted very practical conclusions and lessons learnt; some of them have been already taken up in other sites. CITYLAB is based on 7 different Living Labs to implement solutions that positively influence business profitability, reduce traffic and emissions, and have wider roll-out potential for the logistics sector applied to other European cities.

Finally, NOVELOG focused the presentation on the analysis and systematisation of measures, impacts and city typologies which have resulted into an effective and sustainable way to approach city logistics improvement. In particular, the guidelines and toolkits are very valuable as a baseline for cities creating Sustainable Urban Logistics Plans.

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“New vehicles concepts and EV grid integration”

The green vehicle session covered both new vehicle concepts and electric vehicle integration with the grid. The two grid integration projects presented are still running, whereas all of the new vehicle concept projects have been successfully completed.

Until now, vehicles are generally designed in the spirit of the decathlon. It is possible to drive them anywhere and use them for everything. On the other hand, this means that they are also oversized for typical urban daily use, which can contribute to increasing congested streets. It can be expected that new vehicle concepts, focused on a specific use, will begin appearing on the horizon as urban areas transition from parking lots to living spaces. These vehicles would be ideally suited for daily operation such as short trips and commuting to work, as well as making better use of urban space. Thus, a challenge arises to make individual mobility more suitable for the integration into urban transport systems and at the same time attractive for the users. Four projects have been presented that make first important steps at presenting attractive alternatives for such new vehicle concepts: EU-LIVE, ESPRIT, RESOLVE and Silver Stream. These encompass the next generation of electrified, cost and energy-efficient light urban vehicles (L-category) for future personal urban mobility, showcased by three different demonstrators, including innovative last-mile systems as well as the project SilverStream focuses on new concepts especially for Europe’s aging population. All these projects have been successfully completed and offer an excellent basis for further work in this area. Two further projects are still running and tackle the important topic of infrastructure that addresses vehicle charging as well as user services that will increase user friendliness, and provide further building blocks for integrated urban mobility systems: NeMo and ELECTRIFIC.

Details about the projects presented are available in the Annex. In case you are interested to watch again one or several specific presentation(s), the recording of all sessions is still available (please visit [EGVI website](#)).

As the two first H2020RTR conferences were a success and a great opportunity to network and exchange about the latest research results in the field of Road Transport, EGVI, ERTRAC and the European Commission have decided to organise a third one in 2019. Pencil these dates in your agenda: H2020RTR19 Conference will take place on December 4th and 5th 2019 in Brussels. Join us to make this 3rd edition greater than ever !

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