



FREILOT

Urban Freight Energy Efficiency Pilot

D.FL.1.3 External Liaison Plan



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Executive Summary

During the first year the FREILOT pilot partners have already established a number of important liaisons with FREILOT external entities on different levels, from international down to local levels. These liaisons can be divided in four categories: European and national research projects, relevant organisations, standardisation bodies and public authorities.

Liaison with European and national projects is very strong. The first European project to mention is CVIS, which has developed several prototypes: communication and application platforms for the Energy Efficient Intersection Control, the base for the intersection control application itself as well as the Delivery Space Booking application used in Lyon. These have been further enhanced in order to be useable in FREILOT. Considering enhancements of the FREILOT communication platform these have been done through cooperation with the Dutch SPITS project.

The SMARTFREIGHT liaison has this far led to fruitful discussion. SMARTFREIGHT partners have participated in FREILOT open events and vice versa. Trondheim has also been discussed as one potentially new FREILOT site. However, this in the end did not result in adding Trondheim as the fifth FREILOT pilot site as it was difficult to assemble and get support from all local partners needed for a sustainable implementation (City of Trondheim, NPRA, SINTEF, Q-Free and fleet operators) in the timeframe of FREILOT.

Liaison with PARFUM project has focused on information exchange between the projects. One specific area of interest for FREILOT has been to learn about the regulation barriers and Bremen city solution when it comes to Delivery Space Booking functionality. The solution in PARFUM was to apply for an exemption from the national regulations in Germany. The exemption was approved, for unlimited time period. FREILOT Lyon partners are now investigating the maximum duration possible for an exemption in France. Both FREILOT and City of Bremen are interested in further following-up the liaison.

eCoMove project is developing what could be seen as the next generation FREILOT Eco Driving Support and Energy Efficient Intersection Control. Extensive liaison is planned on several fields, from pilot site infrastructure sharing, liaison on system design and development to evaluation methodology,

FOT-Net is an excellent platform for learning from other Field Operational Tests (FOT) and sharing FREILOT lessons learned and results with the relevant research community in Europe.

Three new projects starting up late in 2010 (COSMO) and early in 2011 (DRIVE C2X, FOTsys) are very interesting liaison partners. However, more details on what kind of liaison between FREILOT and these projects is possible needs to be determined. For sure FREILOT and DRIVE C2X will share the same pilot/test location in the city of Helmond.

In addition to the above mentioned project the FREILOT partners have established liaison with several organisations/forums. IRU is of high interest for the FREILOT pilot as it represents vast number of fleet operator associations. Promoting FREILOT final results through IRU network of truck fleet operators will be very beneficial for raising awareness of the pilot and its outcomes.

The Open Cooperative Mobility Alliance and the EU-US Task force are two forums important for supporting wide spread of FREILOT intersection control application across Europe and world-wide, while liaison with organisations such as KpVV and LUTB are important for disseminating information about the project on regional and national levels.

The potential of FREILOTs Energy Efficient Intersection Control application to reach Europe-wide deployment is closely related to the standardisation activities of three standardisation bodies, ETSI, CEN and ISO. Therefore liaising with them has high importance for FREILOT partners.

Last but not least this report mentions also three public authorities which are not official partners in the project but are still closely related to the ongoing work of FREILOT. Rijkswaterstaat could enable FREILOT on-board unit for Energy Efficient Intersection Control application to communicate with thousands road side units in the Netherlands. The situation is similar with GDDKiA in Poland, while TfL could potentially be a key to convincing mega cities that Delivery Space Booking can help in optimising freight deliveries in these cities.

The above set of external entities represents the highest priorities for liaison but is in no way limiting the project partners' liaison ambitions with external organisations.

1. European and national research projects

Even though FREILOT is aiming at early, sustainable deployment of Intelligent Transport Systems (ITS) for increased energy efficiency of urban freight, there are many reasons for the project partners to liaise with other, mainly research-oriented, projects. Being supported by the European Commission funding and having inherited results from earlier projects, FREILOT is strongly linked to these. The research community (which also contains numerous deployment needed stakeholder groups, e.g. cities, public road authorities and fleet operators) on the other side is very interested in following specific cases on how sustainable deployment of energy efficiency oriented ITS could be achieved.

1.1. Cooperative Vehicle Infrastructure systems (CVIS)

CVIS¹ is the European project that has most links with FREILOT. This integrated project, which started in 2006 and will end in mid 2010, aims at creating a European reference platform for Cooperative Systems and a set of cooperative applications. Several key FREILOT partners have had prominent roles in CVIS, such as ERTICO – ITS Europe (coordinator of both initiatives), Volvo and PEEK traffic.

FREILOT has taken over several prototypes from the CVIS project and has further enhanced them through cooperation with SPITS. The main FREILOT liaison partners are not very surprisingly, ERTICO – ITS Europe, Volvo and PEEK Traffic.

1.2. SPITS

SPITS² is a Dutch project, funded by the 13 partners and the Dutch Ministry of Economic Affairs. It is tasked with creating Intelligent Traffic Systems (ITS) concepts that can improve mobility and safety. The SPITS project focuses on three main areas: Traffic management, In-vehicle systems and a Service download and management solution.

The SPITS communication platform is a simplified continuation of the CVIS communication system. It focuses on off-the-shelf hardware and software portability. The development work on the communication system has been done by SPITS and FREILOT partner PEEK Traffic. Currently the communication platform is used by the FREILOT cooperative intersection system in Helmond and Krakow, the SPITS partners and the Grand Cooperative Driving Challenge³. The main FREILOT liaison partner is PEEK Traffic.

1.3. SmartFreight

SmartFreight project is closely related to FREILOT as both projects are working on creating more efficient and sustainable urban freight. The main aim of SMARTFREIGHT is to specify, implement and evaluate Information and Communication Technology (ICT) solutions that integrate urban traffic management systems with the management of freight and logistics in urban areas.⁴ The project finished in October 2010 with a final event in Trondheim where the FREILOT project coordinator and few other FREILOT partners (City of Bilbao, Volvo, CERTH and CTAG) were present. At the final event the FREILOT project coordinator took part in the closing panel session discussing how to bring SMARTFREIGHT results to deployment. In the same way SmartFreight partners have been present at FREILOT open workshops. At the FREILOT open workshop in Lyon SINTEF and Norwegian Public Road Administration were present and in Helmond workshop, SINTEF and Q-Free participated.

The liaison between these projects, which are both utilising Cooperative Systems technologies, did not consist only of participation in each other's workshops. Early in FREILOT a discussion took place between the FREILOT and SmartFreight project coordinators on possibilities for Trondheim site to become the fifth FREILOT pilot site. This did not work out as it was difficult to assemble and get support from all local partners needed (City of Trondheim, NPRA, Sintef, Q-Free and fleet operators)

¹ CVIS website: <http://cvisproject.org/>

² SPITS website: <https://spits-project.com/>

³ GCDC website: <http://www.gcdc.net/>

⁴ SmartFreight website: <http://www.smartfreight.info/>

in the timeframe of FREILOT.

1.4. PARFUM

PARFUM is a European project which by the time of updating this deliverable has been finalised. It has implemented and evaluated a combination of innovative and state-of-the-art technologies for clean-vehicles for city logistics and public transport, integrated with synergistic policy and planning approaches. These were tested and evaluated under-real life conditions in two urban areas (Bremen (DE) and Padova (IT)). The results have been compared and analysed with regard to the results from other cities regarding complementary air pollution mitigation programmes.⁵

FREILOT has established liaison with this project and one of its partners, city of Bremen. The most interesting aspect for FREILOT partners was go get feedback on how the city of Bremen dealt with national legislation which in Germany (and also in France) does not allow reserving parts of roads “public space” for specific vehicles. The Delivery Space Booking solution implemented in Bremen has been able to “bypass” the national regulation by getting an exemption – for unlimited duration of time. The FREILOT Lyon has similar set-up but the exemption is time limited. The main FREILOT liaison partners is Interface Transport.

1.5. eCoMove

eCoMove is a newly started integrating project focusing its research on supporting a driver to adopt a more eco-friendly driving style. The functionalities developed in the project can be seen as the next generation of FREILOT’s Eco Driving Support and Energy Efficient Intersection Control services.

In addition to information sharing, the main cooperation between the eCoMove and FREILOT will be sharing of the Helmond FREILOT pilot site and liaison on evaluation methodologies. The main FREILOT liaison partners are ERTICO – ITS Europe (general liaison), PEEK Traffic (traffic management related liaison), Volvo (eco driving related liaison) and CTAG (evaluation related liaison).

1.6. COSMO

COSMO is a CIP pilot (same as FREILOT) and is focusing on deployment of Cooperative Systems for increased energy efficiency. The project is starting late in 2010. It is to be investigated what kind of liaison could be achieved between the projects. The main liaison partner is ERTICO – ITS Europe.

1.7. Demonstratieprogramma Truck van de Toekomst

This is a Dutch national project which is piloting already market available solutions for reducing fuel consumption on trucks. One type of energy saving solutions is information and communication technologies (ICT).

In the ICT part of this project the work focuses on eco driving support thus there is very much potential to compare everything from evaluation methodologies to the evaluation results. The main FREILOT liaison partner is ERTICO – ITS Europe.

1.8. FOT-NET

The FOT-Net project has as its main objective to create a networking platform for anyone interested in Field Operational Tests (FOTs), their set-up and their results.⁶

FREILOT is not an FOT but still has many similarities with other FOTs. These are for example, data collection, data analysis, evaluation methodology etc. The main FREILOT liaison partners are CTAG and ERTICO – ITS Europe.

1.9. Drive C2X and FOTsys

Drive C2X and FOTsys are two FOTs in the area of cooperative systems which are starting early in 2011. It is to be investigated what kind of liaison could be achieved with these projects. The main FREILOT liaison partner is ERTICO – ITS Europe.

⁵ PARFUM website: <http://www.parfum-life.ecolo-bremen.de/about.php?level=4>

⁶ FOT-NET website: <http://www.fot-net.eu/>

2. Relevant organisations

2.1. *International Road and Transport Union (IRU)*

The International Road and Transport Union (IRU) is the international organisation which upholds the interests of the road transport industry worldwide. Via its network of 181 national Member Associations in 75 countries across all five continents, it represents the operators of buses, coaches, taxis and trucks, from large fleets to individual owner-operators.⁷

Being an organization which represents a huge number of professional truck fleet operators it is extremely important for FREILOT to receive feedback from the IRU on its services, their specification, business models, etc. In addition, in the later stages of the FREILOT pilot stage when results are available IRU will help communicate those results to their members. The main FREILOT liaison partner is ERTICO – ITS Europe.

2.2. *Open Cooperative Mobility Alliance*

The alliance has been created as a spin-off from the CVIS integrated project to support coordinated deployment of Cooperative Systems in Europe. Currently the alliance has 40+ member organizations and is hosted by ERTICO – ITS Europe.

FREILOT is bringing input and validating its outcomes through the joint work with other alliance members. The main FREILOT liaison partners are ERTICO – ITS Europe and PEEK Traffic.

2.3. *Lyon Urban Truck and Bus (LUTB)*

The LUTB is the R&D cluster for urban mass transport systems for passengers & goods in the Lyon and Rhône-Alpes region. The cluster has 3 priority interdisciplinary programs: Shared testing and resource facilities, Think Tank and Scientific forums. The main partners are Renault Truck, Irisbus, Grand Lyon, INRETS and IFP.⁸

Early in the beginning of the project, FREILOT got certified as an LUTB project. This certification enables good dissemination to other stakeholders and media in the Rhône-Alpes region. The liaison with LUTB will be highlighted at the Lyon pilot site media event planned at the start of the pilot operational phase. The main FREILOT liaison partner is Volvo.

2.4. *EU-US Task force*

Initiated as a joint action between European Commission DG INFSO and US Department of Transport (DOT), the so called EU-US Task force is focusing on synchronising the work in the area of Cooperative Systems between Europe and USA.

FREILOT Energy Efficient Intersection Control has been chosen as one of three priority applications to be used as a case study to investigate similarities and differences between Cooperative Systems implementations on the two continents. The main FREILOT liaison partners are PEEK Traffic and ERTICO – ITS Europe.

2.1. *Kennisplatform Verkeer en Vervoer (KpVV)*

KpVV (Transport Knowledge Resource Centre) supports all those in the various decentred tiers of government involved in the development and implementation of traffic and transport policy. KpVV does this by developing and disseminating knowledge and expertise in the field of traffic and transport policy.⁹

KpVV is an important gateway to Dutch municipalities, provinces and greater city regions. The main liaison focus will be to provide KpVV with the latest information on FREILOT which they then can forward to their members. The main FREILOT liaison partner is Gemeente Helmond.

⁷ Wikipedia: [http://en.wikipedia.org/wiki/International_Road_and_Transport_Union_\(IRU\)](http://en.wikipedia.org/wiki/International_Road_and_Transport_Union_(IRU))

⁸ LUTB website: <http://www.lutb.fr>

⁹ KpVV website: <http://www.kpvn.nl>

3. Standardisation bodies

In order to reach wide-scale European deployment Energy Efficient Intersection Control application needs to work in an interoperable way in different cities, different countries and between different providers of the on-board and road side units. This can only be achieved through standardisation. There are three standardisation organisations which are deemed as strategically important for liaison activities from FREILOT partners' side. These are: ETSI, CEN and ISO. The main FREILOT liaison partner towards these standardisation bodies is PEEK Traffic, supported by ERICO – ITS Europe.

3.1. *European Telecommunications Standards Institute (ETSI)*

The European Telecommunications Standards Institute (ETSI) is an independent, non-profit, standardization organization in the telecommunications industry (equipment makers and network operators) in Europe, with worldwide projection.¹⁰

This standardisation body is of high interest for FREILOT as it is the place where Cooperative Systems communication functionalities and protocols are being standardised. These standards influence directly the communication devices for the Energy Efficient Intersection Control FREILOT service. ETSI standardisation activities will enable FREILOT to be interoperable with Cooperative System communication devices across Europe. The lessons learned and results from the FREILOT pilot will be provided as a feedback to the relevant ETSI working groups by the end of the project. Until then the cooperation will be based on FREILOT partners taking into account latest communication standards developed by ETSI.

3.2. *Comité Européen de Normalisation (CEN)*

The European Committee for Standardization or Comité Européen de Normalisation (CEN), is a non-profit organisation whose mission is to foster the European economy in global trading, the welfare of European citizens and the environment by providing an efficient infrastructure to interested parties for the development, maintenance and distribution of coherent sets of standards and specifications.¹¹

In the same way as ETSI, CEN is a standardisation body of high interest for FREILOT. CEN is the place where Cooperative Systems application functionalities (such as Energy Efficient Intersection Control) and protocols are being standardised. The input from FREILOT partners into this standardisation body will start by the time the FREILOT operational stage is running and when the key FREILOT partners have verified and validated the performance of the used applications and technologies.

3.3. *International Organization for Standardization (ISO)*

The International Organization for Standardization widely known as ISO, is an international-standard-setting body composed of representatives from various national standards organizations. The organization promulgates worldwide proprietary industrial and commercial standards. While ISO defines itself as a non-governmental organization, its ability to set standards that often become law, either through treaties or national standards, makes it more powerful than most non-governmental organizations. In practice, ISO acts as a consortium with strong links to governments.¹²

An important part of the FREILOT Cooperative Systems communication platform is based on Communications Access for Land Mobiles (CALM)¹³ standards. In the same way as with previous two standardisation bodies, FREILOT partners will follow the latest standardisation developments and feed back into those when applications and technologies have been thoroughly verified and validated.

¹⁰ Wikipedia: <http://en.wikipedia.org/wiki/ETSI>

¹¹ Wikipedia: http://en.wikipedia.org/wiki/European_Committee_for_Standardization

¹² Wikipedia: http://en.wikipedia.org/wiki/International_Organization_for_Standardization

¹³ Wikipedia: http://en.wikipedia.org/wiki/Communications,_Air-interface,_Long_and_Medium_range

4. Public authorities

This chapter lifts forward few public bodies which are seen as strategic liaison partners for FREILOT. This list is in no way exclusive, and the liaison is expected with far more partners than just these.

4.1. Rijkswaterstaat

Rijkswaterstaat is part of the Dutch Ministry of Transport, Public Works and Water Management. Its role is the practical execution of the public works and water management, including the construction and maintenance of waterways and roads.¹⁴

In European context Rijkswaterstaat is probably the leading public road authority when it comes to Cooperative Systems. The organisation has been heavily involved in projects such as CVIS and SAFESPOT and are actively working on deployment plans for these future technologies and services. From FREILOT point of view it is extremely important to ensure that developments in FREILOT and in Rijkswaterstaat are aligned. Currently Rijkswaterstaat is investigating how communication devices for future road side units should be designed. Under assumption that FREILOT gives input and is aligned with the final specification, FREILOT on-board units for communication with intersections will be able to communicate not only with intersections in Helmond but also with thousands of road side units on inter-urban roads across the Netherlands. This added value strengthens the business case for this FREILOT service. The main FREILOT liaison partner towards Rijkswaterstaat is PEEK Netherlands.

4.2. Generalna Dyrekcja Dróg Krajowych i Autostrad (GDDKiA)

The General Directorate for National Roads and Highways (Polish: Generalna Dyrekcja Dróg Krajowych i Autostrad) is the central authority of national administration set up to manage the national roads and implementation of the state budget in Poland. The GDDKiA was established on 1 April 2002 by the Polish Ministry of Transportation.¹⁵

Poland being an emerging economy is investing strongly in extending its infrastructure. New roads equipped with new ITS equipment are being built. Cooperation between GDDKiA and FREILOT started already at the FREILOT project proposal stage. At that time it was decided that the FREILOT Energy Efficient Intersection Control service would be piloted on a GDDKiA inter-urban road which is leading into the city of Krakow. This far GDDKiA has not been active in the area of Cooperative Systems but has created links with Rijkswaterstaat and Swedish Transport Agency to cooperate in this field. For FREILOT, successful cooperation with GDDKiA could lead to wide deployment of Cooperative Systems units across Poland, leading to a strengthened business case for the FREILOT services. The main FREILOT liaison partner towards GDDKiA is PEEK Poland.

4.3. Transport for London (TfL)

Transport for London (TfL) is the local government body responsible for most aspects of the transport system in Greater London in England. Its role is to implement the transport strategy and to manage transport services across London.¹⁶

TfL has shown very much interest in optimising urban freight distribution. One of the activities has been to trial Delivery Space Booking functionality within the framework of the CVIS integrated project. The prototypes trialled in London have been further enhanced and are used in the Delivery Space Booking functionality in FREILOT. The organisation is closely following the developments in the FREILOT pilot. From FREILOT point of view, helping to prove to mega cities, such as London, that the delivery space functionality can be optimised through a sustainable implementation of Information and Communication Technologies would be a huge success when looking into the wider deployment of this service. The main FREILOT liaison partner towards TfL is ERTICO.

Without any question there are many more public authorities that FREILOT consortium will liaise with during the project lifetime. The above mentioned ones represent the highest priority for liaison but are in no way limiting the project partners' liaison ambitions with external organisations.

¹⁴ Wikipedia: <http://en.wikipedia.org/wiki/Rijkswaterstaat>

¹⁵ Wikipedia: <http://en.wikipedia.org/wiki/GDDKiA>

¹⁶ Wikipedia: http://en.wikipedia.org/wiki/Transport_for_London