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REFINET

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WP2

D2.4

FEHRL

Mid-term strategy plan on consolidation and expansion of REFINET network

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Abbreviations

Acronym	Full name
REFINET	REthinking Future Infrastructure NETworks
USE-iT	Users, Safety, Security and Energy in Transport Infrastructure
FOX	Forever Open infrastructure across (X) all transport modes

Definitions

Term	Full name
SIP	Strategic Implementation Plan

1 Introduction and background

REFINET is a 24-month project under the H2020 topic of MG-8.1b-2014, which aims to create a sustainable network of European and international stakeholder representatives of all transport modes and transport infrastructure sectors. It will also deliver a shared European vision of how to specify, design, build or renovate and maintain the multi-modal European transport infrastructure network of the future, along with innovative processes to enhance the effectiveness of the sector, and elaborate a Strategic Implementation Plan (SIP) with a comprehensive set of prioritised actions.

REFINET will consider two complementary scenarios, namely maintenance and the upgrading of existing transport infrastructures, and the development of new transport infrastructures. REFINET will contribute to create a European-wide consensus on where to focus efforts to research and innovation to improve the productivity of assets and drastically reduce traffic disruptions of transport flows from inspection, construction and maintenance activities, as well as accommodate increasing/changing traffic demand. Thus, REFINET will pave the way to enhanced technology integration and transfer and mass-market development for innovative materials, components, systems and processes supporting the pan-European generalisation of advanced multimodal infrastructures.

As mentioned above, there is a need to strengthen the cooperation between the stakeholders in all transport modes. The consortia of three Coordination and Support Action (CSA) projects (REFINET, FOX and USE-iT) have joined forces to make it possible and enhance the performance of multi-modal transport infrastructure. Of particular importance to these projects is the opportunity such cooperation gives in disseminating project results to a wide community of stakeholders.

2 Objectives of the Deliverable D2.4

The WP2 – COMMUNITY NETWORK BUILDING focuses on creating a sustainable community of transport infrastructure stakeholders that will collaborate with the REFINET partners to develop the REFINET Vision (WP3) and its SIP deployment strategy (WP4). This WP started in month 1 and will finish in month 24.

As agreed between the three CSAs, the EC and INEA, the community to be built on cross-modal transport infrastructure reflects the synergy between the cluster of REFINET, FOX and USE-iT. Therefore, all input from the FOX and USE-iT projects has been integrated with the REFINET network, which aims at building a very large community.

WP2 is built around four tasks:

- 2.1: Identification of stakeholders
- 2.2: Set up of the REFINET Group of Experts
- 2.3: Set up of the REFINET Network
- 2.4: Consolidation of the REFINET network

This Deliverable 2.4 (D2.4) embraces the output of task 2.4 (Consolidation of the REFINET Network). The aim of this task is to ensure that the REFINET network consolidates and keeps expanding even after the end of the project, hence supporting the objective of building a transport infrastructure community.

More specifically, the objectives of task 2.4 “Consolidation of the Refinet Network” are:

- To keep expanding the REFINET stakeholder network up to 1,000 names
- To consolidate the REFINET network, so that it can form a stable community after the end of the project
- To foster a communication channel between the project partners and the stakeholders
- To collect input/feedback from the stakeholders
- To participate in the consultation process, including the thematic workshops for the Group of Experts

- To leverage the dissemination of the project results at various events
- To develop the mid-term (and initiate the final) strategy plans for the consolidation and expansion of the REFINET network (this specific sub-task is addressed by this specific D2.4, which is directly linked to D2.2).

The following section 3 presents the consortium's strategy to address each of the objectives of task 2.4.

3 Action Plan to consolidate the REFINET network

3.1 To keep expanding the REFINET stakeholders network up to 1,000 names

With almost 700 stakeholders who are already part of the REFINET community or network (see D2.2), the current REFINET community is already very strong. The statistics also show that the current distribution of stakeholders is well balanced in terms of geographical distribution, types of stakeholders, modal and cross-modal distribution and international dimension.

This good achievement comes from the successful cooperation between the partners of the three CSAs and good coordination of the various efforts. It is also worth emphasising that the great achievement of getting the US stakeholders on board results mostly from the workshop organised at TRB 2016.

Nonetheless, the following measures have been envisaged to further improve and expand the REFINET community. Partners will:

- Contact the representatives of the **TEN-T Network** to include them in the REFINET network (+40 contacts are expected);
- Further liaise with **industrial** contacts to get more industry involvement, especially the Small and medium-sized enterprise (SME) part of the stakeholders (+70 contacts are expected);
- Further liaise with **contractors** in order to get more stakeholders (+50 contacts are expected);
- Further liaise with **user representatives** to increase the number of stakeholders from this category. This activity will be done in cooperation with the USE-iT project where the user perspective is dominant (+40 contacts are expected);
- Further liaise and involve members from the national and European Technology Platforms (ETPs) (+60 contacts are expected);
- Further liaise with contacts in **less represented countries** (where fewer than three stakeholders have been provided - e.g. Romania) in order to increase the number of stakeholders from these countries; the partners may also organise one or two of the thematic workshops in this country(ies) (+80 contacts are expected);
- Partners will further stimulate the **international dimension**, in particular via the organisation of three additional major activities (see table 2) in the USA, Asia and Australia (+30 contacts are expected).

The WP2 members estimate that there could be a 30% variation to the additional stakeholders expected after further investigation. This would mean that the REFINET network would reach around 900 stakeholders instead of 1000. Is this a risk for the network? Actually NOT! Indeed, the post-project activity of the REFINET network **will mostly rely on the core of the REFINET** network, meaning the three project partners and two Groups of Experts. It is therefore necessary to further increase the priority of the Groups of Experts. The target is to get about 250-300 experts, including both Groups of Experts from REFINET, FOX & USE-iT.

3.2 To consolidate the REFINET network so that it can form a stable community after the end of the project

This is the most challenging part of the whole exercise. Indeed, currently the stakeholders are very much separate from each other and work in silos.

The strategy developed by the cluster of the three CSAs is based on a three-step approach:

- UNDERSTAND (short-term)
- TRUST (medium-term)
- COMMIT (medium to long-term)

The first phase entitled “UNDERSTAND”, on which the partners of the three CSAs have devoted most of the effort, consists of generating a common understanding of the various and complex issues related to cross-modal transport infrastructure within the different types of stakeholders from the REFINET network. This step relies mostly on the intense communication and dissemination from the cluster of CSAs. All the activities accomplished and planned within WP5 are the pillar of this phase. The potential for misunderstanding is high, hence the risk of lack of trust and commitment are also high. The project partners will continue paying particular attention to the terminology used, sensitivity around a few political issues and the inclusiveness of all points of view in the dissemination of the projects outputs.

The second phase known as “TRUST” relies on the completion of phase one “UNDERSTAND”. This particular phase aims at fostering the exchange and collaboration between the stakeholders of the REFINET network. Indeed, it is only by “experiencing” each other’s views, on the basis of a common understanding, that trust can be built. The phase “TRUST” is completed when the stakeholders change their mindset from “competition” to “cooperation”.

This step is supported by the overall structure for the communication with the stakeholders and experts and the integration of a REFINET community (see figure 1 below). In this structure, the REFINET network, currently with the assistance of the three consortia, acts as discussion platform which enables input and feedback to be captured from all representatives of the transport sectors who have a stake in cross-modal infrastructure issues. The two main risks envisaged here are:

- Lack of trust in innovative solutions by transport authorities (medium risk);
- Lack of trust between the ETPs of the different modes of transport in the REFINET Vision and SIP (medium risk).

The partners of the three CSAs and the respective Groups of Experts make up a good representation from the main stakeholders involved in the aforementioned risks; namely industry and transport authorities for the first type of risk and members of each of the ETPs for the second one. As a result, the close liaison with each of the respective stakeholders, based on personal contacts, will be continued on a regular basis and play a key role in alleviating the above-mentioned “TRUST” risk in the future of cross-modal transport infrastructure.

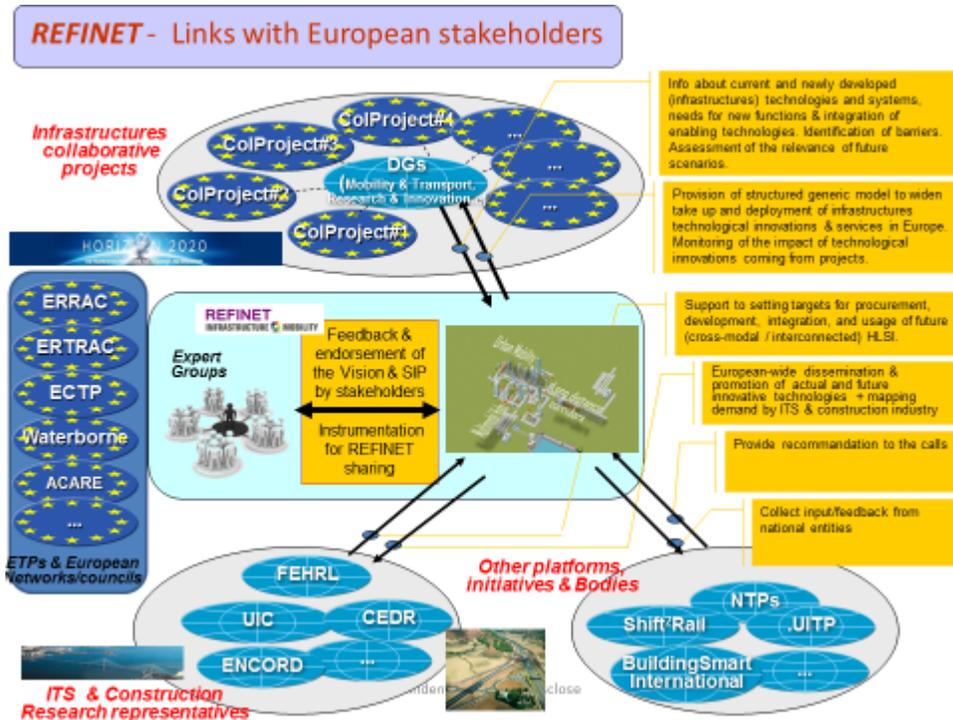


Figure 1: Overall structure for the communication with the stakeholders and experts and the integration of a REFINET Community

The third phase called “COMMIT” relies on the completion of phase two “TRUST”. This step aims at empowering the REFINET community so that the different stakeholders presented in figure 1 above commit to cross-modal R&D&I and the implementation of the REFINET results.

An important element of the success of this phase will be the endorsement of the CSA cluster’s results by the main stakeholders, in particular the transport authorities and industry. To that purpose, the role of the project partners of the three CSAs and the Group of Experts is crucial and their respective relations with key stakeholders will be exploited.

Likewise, for the “TRUST” phase, the two main risks envisaged here are:

- Lack of commitment in implementing innovative solutions by transport authorities, which has the immediate effect of preventing the development of innovative solutions from the industry since there is no market (medium risk);
- Lack of commitment from the ETPs in exploiting the REFINET Vision and SIP (medium risk).

To reduce the first risk, FEHRL will exploit its MoU with CEDR (Conference of the European Road Directors) in order to increase the commitment of the National Road Authorities (NRAs). Similar liaison from the other members of REFINET, FOX and USE-iT representing the other modes will be also performed. Besides, the EC Directive on Green Procurement will be of further support to alleviate the risk.

The partners will also liaise closely with each of the respective stakeholders from each of the ETPs in order to foster some “COMMITMENT” to the future of the cross-modal transport infrastructure. It is nonetheless clear that there will be no or very little commitment taken during the timeframe of the project. Therefore, the WP2 would recommend establishing a **PPP or a similar initiative** whose role would be to follow up on the exploitation of results from REFINET, FOX and USE-iT in order to support the effective deployment of the R&D&I roadmaps developed by the clusters of CSAs.

3.3 To foster a communications channel from the project partners to the stakeholders and leverage the dissemination of the project results at various events

The communication channel follows the overall structure for the communication with the stakeholders and experts and the integration of a REFINET community (see figure 1 above).

Two levels of communication and dissemination are made:

- *Internal communication*, focused on the cluster of the three CSAs (REFINET, FOX & USE-IT) consortia and Group of Experts in order to create synergies between the contribution of each of the three CSAs and align the cluster dissemination to the stakeholders;
- *External communication* that also includes the members of REFINET network and other people interested in transport infrastructure.

The communication and dissemination activities follow a plan that has been established by the WP5 (see D5.2 & D5.3).

Dissemination activities focus on three sectors that have been identified as especially relevant to assure the expected impact of the project: transport sector, construction sector and ICT (Information and Communication Technologies) sector.

Partners will liaise with all the various categories of organisations in Europe (institutional, industry – read more in D2.1 & D2.2) to foster the “UNDERSTANDING, TRUST, COMMITMENT” of the whole sector about the REFINET Vision and SIP, as well as create synergies with other initiatives funded at European or national levels.

The communication and dissemination plan encompasses different types of activities, including a REFINET-FOX-USE-iT item at regular meetings (e.g. ETPs), webinars, conferences, workshops, website, newsletters, etc. Table 1 shows the list of the major past activities and events organised so far, while table 2 presents the major future events until the end of the project.

Table 1: Major past activities and events

Event	Topic	Date	Location
REFINET website		End 2015	
ECTP, ERTRAC, FEHRL, ETRA, ENCORD plenaries	Update of REFINET progress	2015-2016	Europe
SETRIS consortia meetings	Update of REFINET progress and creation of synergies	2015	Europe
REFINET Workshop	Technological demands of transport infrastructures	2 nd December 2015	Madrid, Spain
REFINET Workshop	Strategic Implementation Plan Technological demands of transport infrastructures	16 th March 2016	London, UK
TRB 2016 Conference-workshop	Cross Modal Transport Infrastructure	13 th January 2016	Washington DC, USA
TRA 2016 Conference – Invited session (with	Increasing the performance of multi-modal transport	18th-21st April 2016	Warsaw, Poland

FOX and USE-iT), poster, stand (within FEHRL stand)	infrastructure through stakeholder engagement and European-wide shared vision		
Meeting with Commissioner Violeta Bulc at TRA 2016	Briefing about Cross Modal Transport Infrastructure	18th April 2016	Warsaw, Poland

Table 2: Upcoming major activities and events

Event	Topic	Date	Location
General Assembly of the different ETPs and Platforms	Consultations with the REFINET network	From June 2016 until October 2017	Miscellaneous
Thematic workshops	WP3 & 4	2016-17	Europe (with a possibility to focus on less represented countries, e.g. Romania)
Stakeholder Workshop	Workshop	October 2016	Australia
ECTP conference	Conference	October 2016	Brussels
Scanning Tour	Scanning Tour 2016	22th November – 3rd December, 2016	Japan and South Korea
TRB2017 Conference-workshop	Workshop	January 2017	Washington DC, USA
FIRM 2017	Conference/workshop	2017	Brussels, Belgium

In addition, as a result of the direct communication and dissemination made by the partners of the three CSAs and the good coordination of the various efforts, REFINET results will also be further disseminated through other different networks and channels: national Technology Platform networks, FEHRL members, other FEHRL channels (e.g. dissemination through the ECTP website, partner websites, FEHRL social media and publications).

3.4 To participate in the consultation process, including the thematic workshops for the Group of Experts and to collect input/feedback from the stakeholders

The consultation process with the stakeholders relies mostly on:

- Mass media tools, in particular Twitter and webinar;
- Intensive dissemination of the project results at various events and further exchanges with stakeholders both within and outside Europe.

The main planned activities are mentioned in the table 2 above.

The consultation process with the Group of Experts relies mostly on:

- The active involvement and contribution of the experts in the thematic workshops.

Globally, the consolidation process between the partners of REFINET (as well as FOX and USE-iT) with the REFINET network and the Groups of Experts are expected to (see figure 1):

- Provide information about the current and newly developed (infrastructure) technologies and systems, as well as the needs for new functions and integration of enabling technologies. Identify the barriers and assess the relevance of future scenarios;

- Provide input to the generic model to widen the take-up and deployment of the technological innovations and services for infrastructure in Europe;
- Support the monitoring of the impact of technological innovations coming from projects;
- Support the setting of targets for procurement, development, integration, and usage of future (cross-modal/interconnected) HLSI;
- Support the Europe-wide dissemination and promotion of actual and future innovative technologies and mapping demand by the ITS and construction industry;
- Provide recommendations to the European Commission and national R&D&I calls;
- Support the collection of input from national entities.

More precisely, the stakeholders and experts involved within:

- REFINET will provide input and feedback on a broader scope – from an entrepreneurial point of view – including socio-economic issues (demand, big trends, economic factors) in an innovative holistic approach to serve societal needs;
- FOX will focus on physical infrastructure and related technologies common to at least two modes of transport;
- USE-iT – operation of infrastructure and related technologies.

Beside on these aspects, the stakeholders and experts involved in REFINET will contribute to the overall vision and its implementation, while the ones involved in FOX and USE-iT will focus more on the intermediate step, namely the identification and transferability of cross-modal solutions (technologies, governance, users, and infrastructure).

As a result, the cluster's approach will enable to respond to both calls 2014 – 8.1 & 8.2:

- Call 8.1: “Smarter design, construction and maintenance” aimed at impacting the monitoring and managing of systems; developing new construction & maintenance techniques, extending the life-span of existing transport infrastructure [for all transport modes] in order to support the transition towards zero traffic disruptions and reduce nuisance generated by transport.
- Call 8.2: “Next generation transport infrastructure: resource efficient, smarter and safer” focused on improving infrastructure capacity and incident management by means of added-value mobility services across different modes, hence reducing infrastructure operation energy intensity and subsequent emissions.

Ultimately, the current development of this collaborative community of stakeholders will reinforce the networking among operators with a view to enhancing the effectiveness of the sector, and will enable major benefits in terms of resource consumption, environmental footprint, capacity levels, user satisfaction, which is in line with the EU Strategic Transport Research and Innovation Agenda for 2050.

4 Conclusion

D2.4 is very complementary to D2.2. Indeed, D2.4 aims to complete the strategy to foster the “UNDERSTANDING, TRUST and COMMITMENT” of the REFINET network, including the three Groups of Experts which is crucial for the short, medium and long-term success of the cluster initiative.

The strategy to foster the “UNDERSTANDING, TRUST and COMMITMENT” is very much supported by the Communication and Dissemination plan, as well as the Scoping Paper on the cluster's synergies.

All together, the different efforts enable REFINET to: (a) widely inform the RTD community and industry about the innovative scenarios, vision and priorities (SIP); (b) integrate in the loop the input or feedback of the various stakeholders along the value chain; (c) generate a vision and SIP that are shared by the whole community.

The main efforts of the WP2 partners will focus on:

- The expansion and consolidation of the REFINET network (1,000 members) by the end of the project, hence supporting the objective of building a transport infrastructure community;
- The consultation with the Group of Experts.

The work already undertaken, as well as the planned activities with the REFINET network and Group of Experts will enable the REFINET Vision to be finalised and to the SIP to be defined.

In addition, the additional planned activities (Scanning Tour 2016, Stakeholders workshop in Australia 2016 and Session at TRB 2017) will further foster the international dimension of the REFINET network.