DELIVERABLE 6.10
Report on the liaison and cluster activities with other projects Version 2

USTRAT
February 2020

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D6.10: Report on the liaison and cluster activities with other projects Version 2

Summary

This deliverable reports on relevance of activities in which the consortium was engaged in for creating liaisons with relevant projects (national, European and international), industry, non-governmental and research organisations as well as with identified standardisation bodies from Month 13 to Month 28 of the project. The purpose of pursuing new and existing links is to contribute especially with regards to new guidelines, best practices, dissemination and exploitation routes. Specifically, the report details the objectives of each liaison activity, as well as the outcomes and follow-up actions of these activities. Liaison activities comprised establishing links nationally, across the EU and internationally, with external stakeholders, other projects, research institutions and standardisation bodies over the aforementioned period covering topics of energy efficiency, consumer behaviour and sustainability. This report details the findings of each and implications for the next steps of the project.

DELIVERABLE NUMBER	WORK PACKAGE
D6.10	WP6
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PLANNED DELIVERY DATE	**ACTUAL DELIVERY DATE**
31/01/2020	12/02/2020
DISSEMINATION LEVEL	x PU = Public □ PP = Restricted to other programme participants □ CO = Confidential, only for members of the consortium

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AI: Artificial Intelligence

BEIS: Department for Business, Energy and Industrial Strategy

CA: Consortium Agreement

D: Deliverable

DoW: Description of Work, referring to the Annex I of the Grant Agreement

EPFL: École Polytechnique Fédérale de Lausanne

ESCO: Energy Service Company

GA: Grant Agreement

GSP: Graph Signal Processing

IEC: International Electrotechnical Commission

IEEE: Institute for Electronics and Electronics Engineers

IPR: Intellectual Property Rights

MSCA: Marie Sklodowska-Curie Action

NILM: Non-Intrusive Load Monitoring

REA: Research Executive Agency

SENS: Smart Energy Savings

T: Task

UVP: Unique Value Proposition

WP: Work Package

The aim of this document is to report on Deliverable 6.10, which is part of WP6 Task 6.5 as per the DoW, for the period Month 13 to Month 28, that is October 2018 to January 2020. Specifically, the document will report on the liaison activities to identify and establish cooperation with relevant multi-sectoral stakeholder and impartial groups external to the project. For the reporting period of this deliverable, focus has been placed on making links with external projects and bodies, nationally, within EU, and internationally, for the purposes of exploring pertinent standardisation activities, clarifying the Eco-Bot product offering in light of other energy management systems and identify exploitation issues such as IPR, market (including current market trends and market segmentation), etc. and identify dissemination routes.

The methodology regarding the liaison and clustering activities was for individual consortium members to first identify external stakeholders, relevant projects and bodies that would meet the objective of this task. The next step was to organise or attend workshops/seminars/meetings with these external bodies to exchange knowledge, share experience from past projects and efforts on energy efficiency, assess market potential and make links for further consultations focusing on enhancing market potential and maximising user engagement as Eco-Bot progresses.

This report describes liaisons with external organisations or bodies and projects during this reporting period, lessons learnt, and actions taken to shape Eco-Bot, thinking ahead as we prepare for the forthcoming intermediate project phase (M29-M36), which will involve the launch of the large scale pilot and the findings from the first project results in real settings and with real users. This deliverable is complementary to the project's dissemination activities for this period, reported in D6.4.

1. Introduction

1.1.   Purpose

The purpose of this document is to report on the various activities undertaken by the project consortium, during M13 to M28 of the project implementation, with the objective of making relevant liaisons with external bodies, such as stakeholders, governmental and non-governmental organisations, consumer bodies, standardisation bodies, research institutions, and other EU and international projects. The aims of these activities are to exchange knowledge pertaining to energy efficiency measures and how to maximise impact, meeting national, EU and international energy goals, consumer behaviour studies pertaining to energy consumption, existing research, trials and products to enhance consumer-offering and market potential of Eco-Bot.

We report on how the knowledge gained and liaisons made will refine the project's next steps in terms of technical execution of the project and opportunities arising for exploitation and dissemination.

The report is organised as follows. Section 2 summarises progress on follow-up actions from D6.9 on the cluster and liaison activities in the first 12 months of the project. Section 3 describes all liaison and clustering activities in Months 13 to 28, pertinent to technical execution, exploitation and dissemination, focusing on the objectives, the findings and follow-up actions for each activity. Section 4 summarises the findings and follow-up actions from these activities. The final section concludes the report.

2. Progress of follow-up actions from previous cluster & liaison activities

Deliverable 6.9 reported on project liaison activities during the period M1 to M12 of the project. In this section, we elaborate on how findings and experiences gained through these activities supported the implementation of the project in the following reporting period (M13 to M28). We split the findings into those related to technical execution of the project, exploitation and dissemination.

2.1.   Impact on technical execution of the project

Following cluster and liaison activities with other projects and stakeholders tackling NILM reported in D6.9, it was determined that the proposed Eco-Bot NILM solution would ideally be based on deep learning architecture due to high performance and practicality of implementation. Transfer learning by using publicly available datasets was also identified as a reasonable option to avoid reliance on often-unavailable in-house training data, due to the cost, intrusiveness and feasibility of large scale submetering. The proposed NILM module implementation for residential pilots is based on a deep learning architecture and our approach to training the models for both residential and commercial pilots is based on transfer learning due to the typical unavailability of historical data following national and EU data

privacy rules that prevent utilities and energy management companies from sharing customers' smart meter data. Description of the NILM module is reported in D4.2.

The liaison activities in the first year of the project also resulted in more informed workshops to specify the bot requirements and customer engagement strategies with the bot. During the first three exploitation workshops under WP7 different exercises were offered. In one of them participants identified needs and thoughts, or feelings of fictional but typical customers of the three use cases (DEXMA, EYPESA and SEC) through an empathy map towards their Eco-Bot experience. As "by-products" of these empathy maps some additional and nice-to-have features of Eco-Bot were deducted and shared with the technical partners of the consortium. These workshops set the ground for the definition of the use cases that act as the cornerstone of the Eco-Bot platform design. This design was implemented in the front-end or bot-end of the platform to offer the energy-related content proactively and reactively in multiple graphical ways (tables, lists, images, buttons, links, etc.) with the objective to improve the customer experience.

Liaisons were also beneficial in understanding success stories and potential pitfalls in field studies exploring user behaviour and engagement with respect to energy. Students doing Eco-Bot related projects in EYPESA and USTRAT have also had a chance to work on Eco-Bot related problems to capture their views and approaches. As a consequence, in the implementation of the Eco-Bot back-end, only appliances for which reliable NILM can be obtained at different sampling rates, are disaggregated and presented to participants as reported in D4.2. Furthermore, energy efficiency recommendations prepared by UEKAT were reviewed by the pilots and customised so as to fit the pilots' countries characteristics and customers. Moreover, Eco-Bot incorporates a relevance feedback mechanism that enables refinement of the energy efficiency advice given to the user segments based on the feedback received by the users, to maximise user engagement.

2.2. Impact on exploitation

Learnings from the three exploitation workshops under T7.1 (mentioned in Section 2.1 above) also helped partners get clarity and ideas on Unique Value Propositions (UVPs), competitors and business models that enriched the exploitation workshop in Athens in October 2019 and the business model canvasses presented in D7.2.

In D6.9, liaisons were made with a not-for-profit company in Germany, co2online, in a workshop. Co2online was very interested in the innovative NILM technology as its application within co2online's tools would bring an important advance in comparison to competitors on the market of online energy monitoring tools. This also enriched the aforementioned exploitation workshop in Athens and exploitation strategy in D7.2.

2.3. Impact on dissemination

The liaison activities at EU NILM workshop in the period covered by D6.9 resulted in an invitation to contribute to a special session on NILM at the flagship signal information processing IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)-2019 conference, which was used to present technical results to the scientific

community and get feedback on the methodology and performance. This dissemination is detailed in D6.4.

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3. Cluster & liaison activities

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This section summarises the various liaison and cluster activities carried out for the period Month 13 to Month 28 of the project by various beneficiaries in the consortium. This is organised by anticipated impact on technical execution of the project, exploitation potential and dissemination potential in the following subsections.

3.1.   Liaison activities with potential impact on technical execution of the project

3.1.1. Liaisons with EU & international projects on NILM

Objective and findings:

At the EU NILM workshop in Duisburg in Oct'18, the USTRAT team made a link with H2020 Research and Innovation FEEdBACk project with the objective of sharing experiences and challenges of low-sampling rate load disaggregation with EPFL members of the consortium, which focuses on Energy Management in Buildings. That project was also looking into disaggregating smart meter data at resolutions of one hour and concluded that unsupervised approaches were needed, that they could not disaggregate individual appliances but general household activities instead, and needed additional data such as household composition etc. to provide reasonable results. They also tested USTRAT's GSP-based disaggregation algorithms, which provided the best disaggregation performance results but had a long run time due to their implementation using the Matlab Toolbox. USTRAT also made links with Pecan Street project in USA on strategies to broaden their appliance-level dataset to Europe, and potentially augmenting the appliances that can be disaggregated for Eco-Bot.

In April'19, USTRAT shared experiences on big data processing challenges with University of Novi Sad with their following H2020 projects: ADVANTAGE, I-BiDaaS and forthcoming INCOMING projects. This is especially relevant for implementation of the NILM module in terms of meeting near real-time and scalable disaggregation requirements as well as related to developing deep learning approaches effective when transfer learning is applied.

USTRAT linked with the Smart Meter Project, led by Cambridge Innovation Consulting in the UK, to explore the algorithms and additional services that can be realistically implemented with smart meter data by utilities, focused on Spain.

Follow-up actions:

The follow-up action is for USTRAT to rigorously assess Eco-Bot's 1-hour NILM with no additional information besides smart meter data, during the first phase of pilot trials and learn from USTRAT's GSP-based 1-hour NILM algorithm to improve reliability. USTRAT will also

explore suitability of Pecan Street Dataport and other public datasets for creating transfer learning-based models suitable for Eco-Bot and continue liaising with Pecan Street for expanding their EU plans.

3.1.2. Technical feedback from the SocialRES project consortium

Objective and findings:

In November 2019, adelphi presented the Eco-Bot project and the bot itself (via screenshots) to the H2020 SocialRES Consortium, which fosters socially innovative and inclusive strategies for empowering citizens in the renewable energy market of the future. These stakeholders stressed the necessity that the bot is visually attractive and should include images/visuals to keep the user interested/engaged. There was also some concern about where the NILM user data should be stored due to privacy concerns; preferably it should be in the household where it is generated.

Follow-up action:

WP4 to review the front-end and back-end platform designs in light of the above feedback.

3.1.3. Networking in the National Top Runner Initiative

Objective and findings:

In November 2018, during the workshops organised by adelphi and RISA at the National Top Runner Initiative conference/forum "Product efficiency - more innovations for energy-efficient products" in the German Ministry of Economic Affairs and Energy, participants expressed concerns and ideas for the bot when presented with the Eco-Bot idea. The participants comprised private companies, consumer organisations, research institutions and policymakers. The concerns revolved primarily around privacy and data security, misuse of personal data potential loss of interest in the bot in the medium to long term, motivation for the user to remain engaged with the bot, rejection of the bot if the tone/recommendations seem too patronising. Opportunities for the Eco-Bot offering arose in the form of detection of energy consumption of individual appliances, supplement to personal advice and added transparency on magnitude of energy consumption. These concerns and opportunities were shared with the Exploitation and Innovation Steering Board of Eco-Bot and the technical partners.

Follow-up actions:

These individual concerns and opportunities will be taken under consideration by the consortium in WP4, WP5 and WP7.

3.1.4. **Liaisons with standardisation bodies**

Objective and findings:

USTRAT is a member of the IEEE Smart Grids Technical Activities Committee (https://smartgrid.ieee.org/about-ieee-smart-grid/committees/technical-activities-committee), which also focuses on standards and standardisation activities. The purpose of this committee is to:

- Track the present standards to make sure they are current and up-to-date as far as the existing technologies are concerned.
- Look ahead in the short term to prepare for the incremental evolution of the standards to keep track with the evolving Smart Grid reality
- Make contact with lead Standards person in each IEEE Organizational Unit
- Promote Smart Grid related standards
- Facilitate transition from R&D to standardisation and commercialization
- Provide early guidelines for standard development as the R&D work is becoming mature
- Coordinate with the IEEE Standards Association (IEEE SA) on necessary changes in existing standards, as well as, forecast future standard developments that may be necessary

IEEE SA has a portfolio of 100 standards pertaining to smart grid communications and operational capabilities. Of particular interest is the IEEE 1377™-2012 – IEEE Standard for Utility Industry Metering Communication Protocol Application Layer (End Device Data Tables) – provides common structures for encoding data that is transmitted over advanced metering infrastructure and smart grids. It can be used to transmit data between smart meters, home appliances, network nodes that use the IEEE 1703™ LAN/WAN messaging standard, and utility enterprise collection and control systems. The standard revises IEEE-1377™-1977. It is co-published as ANSI C12.19 and MC12.19.

During NILM EU'18, USTRAT and PLEGMA learnt from the International Electrotechnical Commission (IEC) about the ongoing standardisation work on sensing devices for NILM, and how NILM findings can help shape smart meter resolutions and measurements that they gather.

Of relevance to Eco-Bot are standardisation activities pertaining to smart metering protocols, communications and security, as well as emerging smart grid big data analytics.

Follow-up action:

USTRAT to keep abreast of developments and possibility to impact standardisation activities from Eco-Bot findings. Evaluate how the protocols for smart metering influence national roll-outs and in turn the sampling rate of the data available to the residential sector, the trade-offs between high and low sampling rates w.r.t data security and privacy, storage and communications bandwidth.

3.1.5. **Liaison with Discovergy GmbH**

Objective and findings:

SEC made linkages with the German Einsparzahler project, an initiative and funding scheme of the German Ministry of Economics for the development of digitally supported energy saving assistants and platforms for energy efficiency services. The smart metering company Discovergy which will be the smart meter provider for Eco-Bot is involved in the Einsparzähler project offering new customers the free installation of smart meters and asking in return for the use of their anonymised data which will be evaluated for scientific purposes as well as for the assessment of energy savings through user feedback. Discovery and SEC agreed to use the synergies of both projects by exchange of anonymised Eco-Bot user data and findings on NILM evaluation on the one side and experiences with customer involvement and smart metering services on the other side.

Follow-up action:

German Eco-Bot pilot participants will use Discovergy smart meters at reduced cost (the installation will be free of charge). Smart meters will be installed at participants' homes by electricians which are partners of Discovergy's network. Discovergy will be responsible for the first level user support in case of smart meter problems and will be taking the role of the metering point operator forwarding user data to the billing company (utility) if the user agrees. Discovergy will most likely send an e-mailing to their already existing Einsparzähler customer base (around 100) to promote the Eco-Bot project and ask for participation. Discovergy and SEC will be in frequent exchange on results of both projects, especially on NILM evaluations and on the use of the chatbot technology and personalized user advice which is not yet part of Discovergy's services and could be interesting in future.

3.2. Liaison activities with potential impact on exploitation of the project

3.2.1. **Clustering with the SocialRES project**

Objective and findings:

In November 2019 adelphi presented the Eco-Bot project and the bot itself (via screenshots) to the H2020 SocialRES Consortium to check if members of energy cooperatives could see an added value of such a bot for the members of their cooperatives. Interest for the bot as a whole, but particularly for NILM, was expressed by some of the SocialRES stakeholders (e.g. Lake Constance Foundation, Power Parity Cooperatives, I-Ener and Abundance).

Follow-up action:

Determine a suitable mechanism to share Eco-Bot's learnings or key exploitable results with the project. Also determine the best approach to enable stakeholders to get in touch with various responsible parties for exploitable results of Eco-Bot.

3.2.2. Networking in MSCA AI Cluster event

Objective and findings:

In December 2019, USTRAT attended a two-day MSCA AI Cluster event in Brussels organised by the REA to find out more about the EC's future strategy regarding AI and Energy in Europe. USTRAT made linkages with H2020 RISE projects working in the AI ecosystem. USTRAT listened to presentations on projects pertinent to energy efficiency and AI methods for Digital, Environment and Health. Of interest were also lessons learnt and linkages made with the REA on the future of AI strategy in Europe, especially on trustworthy AI and how this is pertinent to energy efficiency in the home.

Follow-up action:

Explore possibility of exploiting Eco-Bot's findings for future EU projects in the AI landscape.

3.2.3. Liaison with the UK Government Department for Business, Energy and Industrial Strategy

Objective and findings:

In January 2019, USTRAT attended the information session organised by the UK government Department for Business, Energy and Industrial Strategy (BEIS) to explore the additional benefits of smart metering besides energy feedback. This session focused on the Smart Energy Savings (SENS) programme of BEIS aiming to encourage long-term energy savings through innovative products and services (beyond a smart meter and In-Home Display) as part of UK's Clean Growth Strategy. BEIS is investigating interventions focusing on actions taken to influence energy consumption in homes, e.g., feedback, advice, practical assistance, financial interventions, social interventions and use of technology.

Follow-up action:

USTRAT to keep up with SENS findings, and feed back towards Eco-Bot final exploitation deliverable in WP7.

3.2.4. Liaison with DG R&I

Objective and findings:

In order to prepare the exploitation workshop under T7.1 in Athens in November 2019, adelphi reached out to the DG R&I – D1 of the European Commission, who provided an exploitation expert for the workshop, feedback on the outcomes of the workshop and how to develop it further. Another funding scheme under the booster program is currently available to support the project for the final exploitation workshop planned and offers guidance with completing the final business plans and business models. Adelphi and beneficiaries were encouraged to apply for the program, if needed.

Follow-up action:

Evaluate if additional exploitation support from the EC is necessary and apply for the booster program.

3.2.5. Networking in ICASSP'19

Objective and findings:

USTRAT made links with members of the research team at Amazon, Informetis Europe and Verv at ICASSP'19 to exchange knowledge on the value of energy feedback and NILM within smart home technologies. Verv is an SME based in the UK focusing on NILM and energy trading using blockchain technology. The smart home industry has mainly focused on developing hardware solutions for NILM at very high rates providing accurate estimates of individual load consumption, but acknowledging that NILM at very low rates is important, have generally expressed interest in services that very low rate NILM could provide.

Follow-up action:

Maintain contact with stakeholders for potential exploitation of Eco-Bot.

3.2.6. Liaisons with utilities worldwide for NILM exploitation

Objective and findings:

Thinking ahead of potential exploitation of work carried out in Eco-Bot, USTRAT has made links with utilities worldwide that are interested in the value of NILM for improving their customer service and experience. These are: Scottish Power in UK, Oss Norge which is a subsidiary of Glitre Energi in Norway, Rainforest Automation in Vancouver, Canada, which carries out work for BC Hydro and other utilities in the USA. Discussions also involved reliability of NILM and customer engagement. USTRAT's Eco-Bot team is also working closely with the Research & Knowledge Exchange Services team to set the wheels in motion for potential exploitation of NILM.

Follow-up action:

USTRAT to explore exploitation opportunities, including joint projects, with these stakeholders.

3.2.7. Liaison with electricity retailer Mercator

Objective and findings:

In the preparation for the Spanish residential pilot by EYPESA, the retailer Mercator (a retailer in the same company group as EYPESA) was involved in the preparation for many activities. This was due to all the legal limitations that were identified in the Spanish pilot regarding

electricity distribution companies. Additionally, in the context of Spain it is probable that a tool like Eco-Bot would be most attractive to an electricity retailer which is the player in the sector that has the contact with clients. Hence getting the insight of the retailer could improve Eco-Bot and increase its exploitation possibilities later in as it takes into consideration diverse aspects and insights obtained from the electricity retail company and their experience with client needs.

Follow-up action:

Obtain constructive feedback from the pilot participants on one hand and from the electricity retail company on the other (Mercator), and explore possibilities for further exploitation of Eco-Bot.

3.2.8. Networking in the Seminar on Intelligent Energy

Objective and findings:

In December 2018, UEKAT participated in the Seminar on Intelligent Energy organised under the auspices of the 3x20 Cluster Association and the Prosumer Energy Center. The 3x20 Cluster Association is an entity focused on the promotion, implementation and dissemination of the European Union's energy policy objectives in Poland, expressed in the form of a 3 × 20 Package. The December seminar was devoted to the new business model of the network. In particular, during the seminar a practical experiment was carried out using commercially available solutions for managing electricity receivers. UEKAT presented the Eco-Bot project during the seminar and made links with representatives of the Smart EPC company dealing with energy efficiency. The company is looking for solutions that use a virtual network, electricity and cold storage to make the most effective use of energy mainly from local production in renewable sources. The purpose of the meeting was to exchange knowledge on the value of energy feedback in the framework of smart home and office technology.

Follow-up action:

Maintain contact with stakeholders for potential exploitation of Eco-Bot.

3.3. Liaison activities with potential impact on dissemination of the project

3.3.1. Liaison with Simon Fraser University

Objective and findings:

USTRAT team spent a month with Dr S. Makonin and his team at Simon Fraser University, BC, Canada to exchange knowledge on practical implementation issues in NILM, including transfer learning, availability of range of household appliance data needed for transfer learning, 'cleaning' of smart meter data, etc. USTRAT also visited the University of British

Columbia to explore opportunities for collaboration on community detection within networks and responsible AI issues.

Follow-up action:

USTRAT to leverage on datasets from this linkage to include NILM model on heat pumps, and explore opportunities for dissemination with these contacts.

3.3.2. Liaisons with Energy Service Companies

Objective and findings:

In October 2019, DEXMA celebrated its yearly events with partners, the DEXMA Days. During this event, feedback was gathered from partners about their thoughts on Eco-Bot to get a better understanding of the business needs of Energy Service Companies (ESCOs). This enabled to improve understanding of the dissemination and exploitation paths of the Eco-Bot project.

Follow-up action:

DEXMA to explore more ways to tune the Eco-Bot offering for purposes of exploitation and opportunities for dissemination.

3.3.3. Liaison with the GIZ project

Objective and findings:

In April 2019, adelphi made links with GIZ Project Coordinator on Energy Efficiency in Public Buildings in Turkey via a phone interview. GIZ project was reviewing new digital instruments in the area of energy efficiency to share with GIZ community.

Follow-up action:

Coordinator to keep GIZ project coordinator updated about project progress through newsletter or other dissemination/communication activities.

3.3.4. Networking in NILM Workshop

Objective and findings:

In October 2019, PLEGMA attended the EU NILM workshop in Thessaloniki in Greece with the objective of keeping up-to-date on NILM activities in EU and the rest of the world. There is wider interest by industry in NILM, as evidenced by the NILM workshop attendees, and therefore provides a useful forum for dissemination of Eco-Bot, and indirectly potential exploitation.

Follow-up action:

Consider the NILM workshop as a relevant dissemination venue once findings are obtained after demonstration.

3.3.5. **Liaison with the Polish Association of Environmental and Resource Economists**

*Objective and findings***:**

UEKAT is a member of Polish Association of Environmental and Resource Economists (http://psesizn.pl/en). The activities of the Association aim to raise the level of scientific research, its influence on environmental policy in individual countries and to promote integration of this policy in Europe and in the world. The more specific aims of the Association's activities are defined as follows:

- stimulating the development of economic disciplines whose subject of research/interest is environmental protection and natural resources;
- initiating and conducting scientific research on environmental aspects of economic development;
- determining the impact of economic policy in the field of environmental protection and the management of natural resources;
- conducting training and information activities; and
- shaping economic and ecological awareness of economic activists and society, through the exchange of information, education and the promotion of conservation and saving measures.

The Association is the organiser of an energy session entitled Towards Sustainable Energy Economy of Cities as part of The Third World Conference of the Society for Urban Ecology 2020 (SURE2020) which will take place in July 2020 in Poznań (https://www.sure2020.org).

Follow-up action:

UEKAT to explore opportunities to participate in scientific conferences organised by the Association and to disseminate the Eco-Bot project.

4. Summary of findings

During liaison activities this period, it became again very striking how important data protection is and the concerns arising in how Eco-Bot handles customer data and makes inferences via NILM from customer data. The consortium will also reflect on this for technical execution of the project as one of the follow-up actions handled in Section 3.1.

Through linkages with industry, governmental organisations and NGOs, it is clear that there is demand and opportunity for technology solutions and effective interventions that

demonstrate long term energy savings. This impacts Eco-Bot exploitation, and follow-up actions as detailed in Section 3.2 will be taken in this regard.

Finally, liaisons made also identified further opportunities for dissemination. Follow-up actions in this regard are detailed in Section 3.3.

In summary, lessons learnt from interacting with various relevant projects and stakeholders continue to support the project in terms of technical implementation as well as developing further exploitation and project communication strategies.

5. Conclusions

The document reported on the various activities undertaken by the project consortium to making relevant liaisons with external bodies, such as stakeholders, governmental and non-governmental organisations, consumer bodies, standardisation bodies, research institutions, and other EU and international projects. The report focused on the three priorities of the consortium at this phase in the execution of the project, namely technical execution, exploitation and impact on dissemination. The consortium will review progress on the follow-up actions from the liaison activities and report in the following deliverable D6.11.