



DELIVERABLE 6.4 Report on the Eco-Bot dissemination activities Version 2

RISA February 2020

www.eco-bot.eu



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 767625



D6.4: Report on the Eco-Bot dissemination activities Version 2

Summary

This document has been prepared in the context of Task 6.2: "Eco-Bot dissemination activities" and aims to present the dissemination and communication activities that have been carried out by the consortium partners during the first 18 months of the project.

DELIVERABLE NUMBER	WORK PACKAGE
D6.4	WP6
LEAD BENEFICIARY	DELIVERABLE AUTHORS
RISA	Aggeliki Giakoumaki (RISA) Stephanos Camarinopoulos (RISA)
QUALITY ASSURANCE	
Reviewer 1: Lina Stankovic Reviewer 2: Sylwia Slupik	USTRAT UEKAT
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



Table of contents

D6.4	: Report	ON THE ECO-BOT DISSEMINATION ACTIVITIES VERSION 2	I
Sum	MARY		I
TABL	E OF CONT	ENTS	
LIST C	of Figure	S	
LIST C	of Tables		IV
LIST C	OF ACRON	YMS AND ABBREVIATIONS	V
Exect	JTIVE SUN	1MARY	VI
1	Introdu	ICTION	1
2.	STRATEG	IC OVERVIEW	1
3.	Eco-Bo ⁻	Γ IDENTITY AND DISSEMINATION MATERIAL	2
3.1.		EYPESA's Leaflet on Eco-Bot	2
3.2.		Newsletter	4
3.3.		Video	5
4.	Dissemi	NATION ACTIVITIES	5
4.1.		Website	6
4.2.		Social Media	
	4.2.1.	LinkedIn	10
	4.2.2.	Twitter	11
	4.2.3.	YouTube	
	4.2.4.	Partners' Social Media Accounts	
4.3.		Scientific Journals and Conferences	15
	4.3.1.	Publications in Journals	16
	4.3.2.	Scientific Conferences and Workshops	
4.4.		Events	
	4.4.1.	Participation in external events	
	4.4.2.	Organisation of Eco-Bot events	21
4.5.		Mass media activities	
4.6.		Training and Education	25
5.	Dissemi	NATION ACTIVITIES AGAINST KPIS	26
6.	CONCLU	SIONS	29
ANN	EX A: Fir	ST NEWSLETTER	30
ANN	EX B: A Coordin	AGENDA OF THE 18 th Symposium of the National Council of Research	Project 33



List of Figures

Figure 1: EYPESA's Eco-Bot trifold leaflet front page	3
Figure 2: EYPESA's Eco-Bot trifold leaflet back page	3
Figure 3: Excerpt from the first Eco-Bot newsletter	4
Figure 4: Example frames from the first Eco-Bot video	5
Figure 5: Eco-Bot website news section	6
Figure 6: Eco-Bot website analytics for the period M19-M28	7
Figure 7: Eco-Bot website visitors by country for the period M19-M28	7
Figure 8: Eco-Bot website analytics for the period M7-M28	8
Figure 9: Eco-Bot website visitors by country for the period M7-M28	9
Figure 10: LinkedIn account	11
Figure 11: Twitter account	12
Figure 12: YouTube account	13
Figure 13: Partners' indicative LinkedIn posts on Eco-Bot	15
Figure 14: Partners' indicative Facebook posts on Eco-Bot	15
Figure 15: Eco-Bot presentation at the 18 th Symposium of the National Council of Research Project Coordinators in Gliwice	21
Figure 16: Excerpt from the article published in the Science in Poland portal	23
Figure 17: Interview given by UEKAT to the Poland IN channel	24
Figure 18: Eco-Bot presentation to SENSE students by EYPESA	26



List of Tables

Table 1: Progress in journal publications	17
Table 2: Overview of conferences and workshops with Eco-Bot presentations	18
Table 3: Dissemination activities against KPIs	26



List of Acronyms and Abbreviations

- CO: Confidential
- **CNN: Convolution Neural Network**
- DOI: Digital Object Identifier
- EU: European Union
- GRU: Gated Recurrent Unit
- **KPI: Key Performance Indicator**
- MDN: Mixture Density Network
- NILM: Non-intrusive load monitoring
- NGO: Non-Governmental Organisation
- PAP: Polska Agencja Prasowa (Polish Press Agency)
- PDF: Probability Density Function
- PRLF: Probabilistic Residential Load Forecasting
- PU: Public
- Q&A: Questions and Answers
- SPSS: Statistical Package for the Social Sciences
- WP: Work Package



Executive summary

This document describes the dissemination work carried out by the consortium partners during the months M19-M28 (April 2019 – January 2020) of the project in the context of Task 6.2: "Eco-Bot dissemination activities" of WP6: "Communication, Dissemination and Liaison Activities".

The reporting period coincides with the conclusion of the initial phase of the project (M1-M28), which involved all the preparatory work needed in order to reach the first version of Eco-Bot that will be released for the large-scale demonstration and validation activities of WP5. In accordance with the "Dissemination strategy and action plan" (D6.2), during the initial phase of the project, emphasis was given on the creation and raising of awareness and the early involvement of key stakeholders in order to take into account their needs and interests in the system design. Dissemination of results regarding the background research and design of the behavioural model and the NILM module has also started within this period.

Overall, the progress made within the initial project phase as regards the dissemination and communication activities is considered satisfactory and in line with the dissemination strategy and action plan defined in D6.2. In accordance with the latter, dissemination and communication activities are expected to be intensified during the forthcoming intermediate project phase (M29-M36), which will involve the launch of the large scale pilot and the extraction of the first project results in real settings and with real users, and will reach their peak in the final project phase (M37-M43).



Introduction

1

This deliverable presents the dissemination work carried out by the consortium partners during the period M19-M28 (April 2019 – January 2020) of the project in the context of Task 6.2: "Eco-Bot dissemination activities". The aim of the deliverable is to present the dissemination and communication activities that have been performed during the last 10 months of the initial phase (M1-M28) of the project, and to evaluate the progress made against the Key Performance Indicators that were defined in D6.2: "Dissemination strategy and action plan".

The deliverable is structured as follows:

- *Chapter 2* presents the strategic overview
- *Chapter 3* presents the work carried out as regards the preparation of additional dissemination material
- Chapter 4 describes the dissemination and communication activities carried out during the period M19–M28
- *Chapter 5* outlines the progress made in the dissemination activities, taking into account the action plan and the Key Performance Indicators.

2. Strategic Overview

Our dissemination strategy and action plan, which have been described in detail in D6.2, take into account the three main project phases in terms of work progress, namely the initial phase (M1-M28), the intermediate phase (M29-M36), and the final phase (M37-M43).

The reporting period coincides with the conclusion of the initial phase of the project (M1-M28), which involved all the preparatory work needed in order to reach the first version of Eco-Bot that will be released for the large-scale demonstration and validation activities of WP5. According to our dissemination strategy and action plan, as far as the initial phase of the project is concerned, emphasis is given on the creation and raising of awareness and the early involvement of key stakeholders in order to take into account their needs and interests in the system design; starting the dissemination of results regarding the background research and design of the behavioural model and the NILM module was also foreseen for the reporting period.

More specifically, as far as the dissemination and communication activities of Eco-Bot for the reporting period (M19-M28) are concerned, our action plan foresees the following:

- Creation of dissemination material
- Updating of the website
- Updating of social media accounts
- Publications in journals and participation in scientific conferences and workshops



- Participation in external events (exhibitions, trade fairs, forums, etc.)
- Organisation of Eco-Bot events
- Mass media activities
- Training and education activities

The following chapters present in detail the activities performed in relation to the above plan. It should be noted that the activities that aim to make liaisons with major stakeholders in the areas of energy efficiency, consumers behaviour, other prioritised relevant projects (funded by EC or international funds), and standardisation bodies, are presented in detail in D6.9 for the first year of the project and D6.10 for the period M13 to M28.

3. Eco-Bot Identity and Dissemination Material

During the first 18 months of the project, as was presented in D6.3, there were taken timely actions to create the Eco-Bot brand identity and dissemination material. These actions included the creation of the Eco-Bot logo and templates for the project deliverables, documents and presentations, as well as the creation of a project leaflet and a poster, both of which were updated after the replacement of BOTEGO with ERRA. This chapter presents the progress made during the last 10 months of the initial project phase (M19-M28) in the creation of new dissemination material.

3.1. EYPESA's Leaflet on Eco-Bot

The first leaflet of the project, to be used for distribution at all relevant key events as well as through the website, was produced on M8 and presented in D6.3. In M22 (July 2019), EYPESA produced an additional leaflet presenting Eco-Bot and their pilot, to be disseminated both online and in paper. The leaflet is available at: <u>https://eco-bot.estabanell.cat/intro</u>.

The Eco-Bot consortium plans to produce other leaflets as well in the later phases of the project, so as to provide updated and stakeholder-tailored information.

Figure 1 and Figure 2 present the layout and content of the leaflet produced by EYPESA.





Figure 1: EYPESA's Eco-Bot trifold leaflet front page



Figure 2: EYPESA's Eco-Bot trifold leaflet back page



3.2. Newsletter

The first Eco-Bot newsletter was published in the end of January 2020 (M28) on the project's website and is available at: http://eco-bot.eu/newsletter-1-introducing-the-eco-bot-project/.

The aim of this newsletter is to introduce the Eco-Bot project and raise awareness about it in the light of the upcoming large-scale pilot phase. It consists of an editorial by the Project Coordinator, followed by a general description of the project, a brief system overview, and a compact presentation of the features offered to consumers and facility managers. It also presents the consortium partners and concludes with a newsletter subscription option and the links to the social media channels available for following Eco-Bot progress and news. The newsletter is presented in Annex A.

It should be noted that given that the release of the newsletter took place in the end of the reporting period, its dissemination is still in progress at the time of writing this deliverable. It has already been announced in the Eco-Bot website's news and in posts in LinkedIn and Twitter, however it is foreseen that it will be further disseminated through the newsletters of the consortium partners and posts in their social media channels, as well as through emails to their contact lists. Therefore, the number of views of the newsletter is not yet available at this point.

NEWSLETTER #1: INTRO	DUCING THE ECO-BOT PROJECT
Editorial	
In October 2017, the Eco-Bot p is a EU research project led by brings together technology de enterprises (SMEs) from Germ	sroject was launched with the aim to change energy consumption behaviour towards energy efficiency. Eco Bot /RISA Sidentmikisandysen GmbH and co funded by the EU 102020 cesaerch and innovation programme. It wedpers and proceeds in the energy field as well as universities and high tech small and medium sized any, Greece, Poland, Spain, and the UK.
The orgent need to tackle clim solutions; engagement of con aspires to achieve.	aste change emphasises the importance of finding effective and affordable ways to turn to sustainable energy sumers towards more energy efficient behaviour is a key factor in this endeavour, and this is what Eco Bot
In the past 28 months, Eco-Bo and validation of our system t and the UK.	t has come a long way. We are now getting ready to launch the large scale pilot that will enable demonstration Through the involvement of approximately 300 consumers and facility managers from Germany, Spain, Italy,
Stay tuned to the progress an	d achievements of the Eco-Bot project by following our newsletter, website and social media accounts?
Stephanos Camarinopoulos	
Project Co-ordinator	
Eco-Bot at a glance	
co-Bot ("Personalised ICT-tools fo uropean Commission under the opic. The Eco-Bot consortium cor legma Labs, the University of Eco	If the Active Engagement of Consumers towards Sustainable Energy?Is a 43 month project co-funded by the "H020-EU3.3.1. – Beducing energy consumption and carbon foocprint by smart and sustainable use" programm sixes of nine partners, namely RSA, Susbanell Energia, adelphi, SEnerCon, DEOMA, the University of Surathclyde, nomics in Katowics, and ERNA.
Eco-Bot aims to provide a person- user-tailored advice on energy eff	slised virtual energy assistant that will deliver information about energy consumption on an appliance level and iciency measures, aspiring to engage users towards more energy efficient behaviour. To this end, Eco-Bot explore

e solution will be demonstrated in three different pilot sites, in order to validate the Eco-Bot system across real and diverse plore its potential in different business cases:

- Loabanell Energia (the power utility of Catalona) B2C business model BDXM (Eads Guilding Energy Management System provider with two ESColbuilding managers in Spain and the UI) B2B bus ShereCon (household energy users with sinart interies in Germany) B322C business model

Eco-Bot system overview

ne Eco-Bot project utilises recent advances in chatbot techr ersonalised information and energy efficiency recommendations. Eco-Bot is a set of different of the information and analysis of data needed towards personalised energy efficiency guidance. ns. Eco-Bot is a set of different cor mponents that are working together to p

sed of the following main components: the fr shavioural module, the pilots' backends, and



Figure 3: Excerpt from the first Eco-Bot newsletter



It is expected that the consortium will publish newsletters more frequently after the official launch of the large-scale pilot, to inform about the progress, news, and achievements of the project.

3.3. Video

Our first Eco-Bot video was produced in January 2020 and is presented in D6.7: "Eco-Bot Video Version 1".

The aim of the first Eco-Bot video is to present in a brief, fast-paced, and high-level manner the fundamentals of the project and introduce a wide audience to the benefits of the Eco-Bot approach to personalised energy efficiency. It is entitled "Introducing the Eco-Bot project" and consists of an introduction and the scope of the project, a presentation of the pilot sites and the goals of each pilot, as well as a short demonstration of indicative Eco-Bot features. The video is available at: <u>https://youtu.be/Yhg8s-K_WnQ</u>.

It should be noted that the production of the video was finalised in the end of the reporting period and was uploaded on the project's YouTube channel during the writing of this deliverable. It is currently promoted through the first newsletter of the project as well as through posts in websites and social media.



Figure 4: Example frames from the first Eco-Bot video

4. Dissemination Activities

This chapter presents the dissemination activities that have been performed during the period from the beginning of April 2019 until the end of January 2020 (M19-M28).



4.1. Website

The Eco-Bot website (<u>www.eco-bot.eu</u>) was created in M2 with relevant project information and is constantly updated with project news and dissemination activities, publications, and public deliverables. It also provides direct links to the project's social media accounts. The consortium is currently in the process of reforming and enriching the website, in order to highlight achievements and competitive advantages, following a stakeholder-oriented approach. The new website is planned to be launched at the end of March 2020 (M30), and will be presented in D6.6: "Digital management of the project and content production Version 2".



Figure 5: Eco-Bot website news section

In order to monitor the website activity, we have set up Google Analytics since April 2018 (M7). In the period from April 1, 2018 until March 31, 2019 (M7-M18), the number of new visitors reached 1445, as reported in D6.3, while in the period from April 1, 2019 until January 31, 2020 (M19-M28), 1558 new visitors were recorded. The distribution of visitors per month for the latter period, as well as other additional website usage metrics, are shown in Figure 6.

Moreover, Figure 7 shows the distribution of visitors by country for the 10 top countries that have visited the website in the period from M19 to M28. As shown in the figure, the majority of visitors are from Germany (20.34%), followed by Spain (12.03%).





Figure 6: Eco-Bot website analytics for the period M19-M28

С	country	Users	% Users	
1.	Germany	323	20.34%	
2.	Spain	191	12.03%	
3.	United States	160	10.08%	
4.	Greece	132	8.31%	
5.	Poland	98	6.17%	
6.	United Kingdom	56	3.53%	
7.	France	46	2.90%	
3.	Argentina	38	2.39%	
9.	Sweden	34	2.14%	
10.	India	32	2.02%	

Figure 7: Eco-Bot website visitors by country for the period M19-M28



As far as the whole monitored period from April 1, 2018 until January 31, 2020 (M7-M28) is concerned, the number of new visitors reached 3003. The distribution of visitors per month for the whole period, as well as other additional website usage metrics, are shown in Figure 8.



Figure 8: Eco-Bot website analytics for the period M7-M28

Figure 9 shows the distribution of visitors by country for the 10 top countries that have visited the website during the whole monitored period from M7 to M28. As depicted in the figure, overall, the majority of visitors are from Germany (16.43%), followed by Spain (13.02%). This is expected at this stage of the project as we were focusing on participants' recruitment and awareness raising where pilots are situated. We aim to achieve a wider EU reach as the project progresses and the website is revamped.



С	country	Users	% Users	
1.	Germany	496	16.43%	
2.	Spain	393	13.02%	
3.	United States	313	10.37%	
4.	Greece	236	7.82%	
5.	Poland	172	5.70%	
6.	United Kingdom	111	3.68%	
7.	France	79	2.62%	
8.	Sweden	73	2.42%	
9.	India	67	2.22%	
10.	Russia	57	1.89%	

Figure 9: Eco-Bot website visitors by country for the period M7-M28

Project announcements are published also on the partners' websites. Indicatively:

- Project's description on RISA's website:
 <u>http://www.risa.eu/en/informationsystems/contractresearch.php</u>
- Direct link to Eco-Bot's website on EYPESA's website homepage: <u>https://www.estabanell.cat/</u>
- Project's description on adelphi's website:

https://www.adelphi.de/de/projekt/eco-bot-entwicklung-virtueller-energiesparassistenten-f%C3%BCr-die-private-und-gewerbliche (German version)

https://www.adelphi.de/en/project/eco-bot-development-virtual-energy-savingassistants-private-and-commercial-use (English version)

- Article introducing the Eco-Bot project on SEC's website: <u>https://www.senercon.de/projekte/eco-bot/</u>
- Project description on DEXMA's website:
 <u>https://www.dexma.com/research-and-energy-innovation/all-our-projects/ecobot/</u>
- Project's description and links to project's social networks and outputs (activities and papers) from USTRAT on USTRAT's website:

https://pureportal.strath.ac.uk/en/projects/eco-bot-personalised-ict-tools-for-theactive-engagement-of-consu

• Project's description on PLEGMA's website:

http://pleg.ma/research/

• Project's description and video from the interview given about Eco-Bot from UEKAT to Poland In channel on UEKAT's website:



https://www.ue.katowice.pl/no_cache/en/university/news/article/european-researchproject-eco-bot-with-the-participation-of-the-ue-katowice-video.html (English version) https://www.ue.katowice.pl/no_cache/pracownicy/nauka-i-biznes/article/europejskiprojekt-badawczy-eco-bot-z-udzialem-ue-katowice-wideo.html (Polish version)

• Information on UEKAT's website about the publication of an article on Eco-Bot in the Science in Poland portal:

https://www.ue.katowice.pl/no_cache/pracownicy/nauka-i-biznes/article/kolejnyetap-europejskiego-projektu-badawczego-eco-bot.html

 Project's description on ERRA's website: <u>http://erra.gr/index.php/researchanddevelopment/researchprojects</u>

4.2. Social Media

Social media channels are used to reach a wider audience frequently and cost-effectively, in order to create and raise awareness and communicate progress and results. Project news, achieved milestones, Eco-Bot events, participation in external events, videos, and any other relevant project announcements are shared through the social media of Eco-Bot. Project-related announcements are also published in the social media of the consortium partners.

4.2.1. LinkedIn

The Eco-Bot LinkedIn account (<u>https://www.linkedin.com/company/eco-bot/</u>) has attracted 73 followers until the end of January 2020 (M28), which coincides with the end of the initial phase of the project. It is expected that in the forthcoming period, when substantially more news on the project's progress and reached milestones will be published, the LinkedIn account will attract a wider audience and the number of followers will increase significantly.





Figure 10: LinkedIn account

4.2.2. Twitter

A Twitter account (<u>https://twitter.com/ecobotproject</u>) has been created and is being updated with news and information about the project, as has been mentioned in D6.3. The number of followers until M28 has reached 82. It is expected that in the forthcoming period, when more tweets regarding Eco-Bot's progress and reached milestones will be published, the number of followers will grow significantly higher.





Figure 11: Twitter account

4.2.3. YouTube

We have also set up a <u>YouTube account</u>, which will be used for disseminating Eco-Bot videos. At the time of writing this deliverable, the first Eco-Bot video has just been uploaded on YouTube and we are currently in the process of disseminating it. The YouTube account is promoted through the project's website, posts in social media, as well as through the recently released first newsletter of the project.





Figure 12: YouTube account

4.2.4. Partners' Social Media Accounts

News and announcements about the project are also communicated to mass audiences through the social media accounts of the partners. Indicatively:

• RISA disseminates information about Eco-Bot through the company's LinkedIn account. Indicatively:

Announcement of the first Eco-Bot newsletter:

https://www.linkedin.com/posts/risa-sicherheitsanalysen-gmbh_newsletter-1introducing-the-eco-bot-project-activity-6629119908821118976-hPcL

Post regarding the 5th Plenary Meeting of the project in Berlin in January 2020:

https://www.linkedin.com/posts/risa-sicherheitsanalysen-gmbh_h2020-chatbot-research-activity-6629010143277301760-U2Dd

• EYPESA disseminates information about Eco-Bot through the company's Twitter and Facebook accounts. Indicative posts from the Estabanell Energia Facebook page are shown below:

Pilot dissemination:

https://www.facebook.com/EstabanellEnergia/posts/3618165321527239

https://www.facebook.com/EstabanellEnergia/posts/3598175100192928

Presentation of Eco-Bot to students from University of Shizuoka (Japan) and UPC (Barcelona):

https://www.facebook.com/EstabanellEnergia/posts/3437461739597599



Post with video on the Innovation Prize that EYPESA won (the video presents Eco-Bot along with other EU projects in which EYPESA participates):

https://www.facebook.com/EstabanellEnergia/posts/3011881618822282

Indicative posts from the Estabanell Distribució Facebook page:

https://www.facebook.com/EstabanellDistribucio/posts/839423133160594

https://www.facebook.com/EstabanellDistribucio/posts/834049823697925

https://www.facebook.com/EstabanellDistribucio/posts/793755614394013

https://www.facebook.com/EstabanellDistribucio/posts/690814288021480

https://www.facebook.com/EstabanellDistribucio/photos/a.339597659809813/65100 3698669206

https://www.facebook.com/EstabanellDistribucio/photos/a.339597659809813/65099 8938669682

• DEXMA disseminates information about Eco-Bot through the company's Twitter, Facebook and LinkedIn accounts. Indicatively:

https://www.linkedin.com/posts/dexma-tech_chatbot-energyefficiency-h2020activity-6628922285891952640-KRLq

• PLEGMA disseminates information about Eco-Bot through the company's LinkedIn, Twitter, and Facebook accounts. Indicatively:

https://www.linkedin.com/posts/plegma-labs h2020-chatbot-reseach-activity-6628719911705292800-ox24

https://twitter.com/PlegmaLabs/status/1223173513735000064 https://twitter.com/PlegmaLabs/status/1182273517888389120

https://twitter.com/PlegmaLabs/status/1182603700126277632

https://www.facebook.com/plegmalabs/posts/2800416410016551

https://www.facebook.com/plegmalabs/posts/2553334791391382

https://www.facebook.com/plegmalabs/posts/2288492187875645





Figure 14: Partners' indicative Facebook posts on Eco-Bot

4.3. Scientific Journals and Conferences

This section presents the efforts made so far to disseminate the project's research findings and outcomes to the scientific community, through publications in journals and participation in scientific conferences and workshops.



4.3.1. Publications in Journals

Two papers written by the scientific partners of the consortium, UEKAT and USTRAT, have been accepted for publication during the reporting period. The details of the publications are given below:

A paper written by UEKAT was published in December 2019 in "Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu" ("Research Papers of Wrocław University of Economics"). The publication details are as follows:

Joanna Trzęsiok, Sylwia Słupik, "The Identification and Analysis of the Factors Affecting Energy Consumer Behaviour", *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*, 2019, Nr. 6 (63), pp. 113-126. (DOI: <u>10.15611/pn.2019.6.09</u>)

<u>Paper abstract</u>: The paper indicates preliminary research results that are the basis for creating an individual behavioural model for the needs of the Eco-Bot project. It aims to identify consumer behaviours, particularly in the area of energy saving. Based on the results already achieved in the Eco-Bot project, in particular information from the survey completed by selected customers of the energy suppliers that are the partners in the project, the article attempted to determine the basic types of energy consumer behaviours and factors that affect these behaviours. Accordingly, the aim of the paper was to identify consumer attitudes, which turned out to be focused primarily on rational energy consumption and its saving. In addition, analysis was performed to determine to what extent demographic and economic factors (i.e. age, education, employment status, income) affected the attitudes and behaviours of energy consumers identified in the survey conducted during the project. The study applied multivariate statistical methods, i.e. principal component analysis and the Kruskal–Wallis test, while the calculations were performed using SPSS statistical software.

The paper will be published both online and in print form (<u>http://bazekon.icm.edu.pl/bazekon/element/bwmeta1.element.ekon-element-</u>000171578772).

Moreover, a paper written by USTRAT, with Eco-Bot acknowledgement, was accepted on January 31, 2020 for publication in the IEEE Transactions on Smart Grid. The publication details are as follows:

M. Afrasiabi, M. Mohammadi, M. Rastegar, L. Stankovic, S. Afrasiabi, & M. Khazaei, "Deepbased Conditional Probability Density Function Forecasting of Residential Loads", *IEEE Transactions on Smart Grid* (Accepted/In press, DOI: <u>10.1109/TSG.2020.2972513</u>).

The above DOI is for early online access; the paper is available from USTRAT repository (green open access) at: <u>https://pureportal.strath.ac.uk/en/publications/deep-based-conditional-probability-density-function-forecasting-o</u>

<u>Paper abstract</u>. The paper proposes a direct model for conditional probability density forecasting of residential loads, based on a deep mixture network. Probabilistic residential load forecasting can provide comprehensive information about future uncertainties in demand. An end-to-end composite model comprising convolution neural networks (CNNs) and gated recurrent unit (GRU) is designed for probabilistic residential load forecasting. Then, the designed deep model is merged into a mixture density network (MDN) to directly



predict probability density functions (PDFs). In addition, several techniques, including adversarial training, are presented to formulate a new loss function in the direct probabilistic residential load forecasting (PRLF) model. Several state-of-the-art deep and shallow forecasting models are also presented in order to compare the results. Furthermore, the effectiveness of the proposed deep mixture model in characterising predicted PDFs is demonstrated through comparison with kernel density estimation, Monte Carlo dropout, a combined probabilistic load forecasting method and the proposed MDN without adversarial training.

Furthermore, a paper submitted by USTRAT to Applied Energy (Elsevier) has recently received decision with minor revision, while three other papers are currently being prepared for submission by USTRAT and UEKAT.

Table 1 outlines the progress and planning in terms of journal publications.

Paper Title	Partner involved	Journal	Status
The identification and analysis of the factors affecting energy consumer behaviour	UEKAT	Research Papers of Wrocław University of Economics	Published in December 2019
Deep-Based Conditional Probability Density Function Forecasting of Residential Loads	USTRAT	IEEE Transactions on Smart Grid	Accepted / In press
Hourly profile disaggregation	USTRAT	Applied Energy – Elsevier	Received decision with minor revision on 27 Jan. 2020. Revision submitted on 5 Feb.
NILM via Deep Neural Networks for varying sampling rates	USTRAT	IEEE Trans. on Signal and Information Processing over Networks (IEEE TSIPN)	To be submitted in April 2020
Scalable deployment and assessment of NILM	USTRAT	Energy and Buildings – Elsevier	To be submitted in November 2020
Modelling approaches for individual energy consumption – input factors, methods and selected theories. The case of Eco-Bot project.	UEKAT	Not yet decided	Writing up

Table 1: Progress in journal publications



4.3.2. Scientific Conferences and Workshops

The presentation of the project at scientific conferences and workshops is one of the main dissemination channels used to reach the scientific and academic audience. During the last 10 months (M19 - M28) of the initial phase of the project, partners participated in conferences and workshops where they disseminated Eco-Bot and presented work performed in the project. These conferences and workshops are outlined in Table 2.

Conference / Workshop	Date	Location	Partner involved
IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)	May, 12-17, 2019	Brighton, UK	USTRAT
Scientific Conference on Economic and Social Conditions for the Development of the Economy in Theory and Practice (Konferencji Naukowej Ekonomiczne i społeczne uwarunkowania rozwoju gospodarki w teorii i praktyce)	September 4-6, 2019	Karpacz, Poland	UEKAT
PGCon: Edinburgh Postgraduate Conference	October 15-16, 2019	Edinburgh, UK	USTRAT
2019 MTMI International Conference on Emerging Issues in Business, Technology and Applied Sciences	December 20- 22, 2019	Ebene, Mauritius	USTRAT

Table 2: Overview of conferences and workshops with Eco-Bot presentations

More details regarding the participation of partners in the above conferences and workshops are given below:

IEEE ICASSP-2019 Conference

USTRAT participated in the 44th IEEE ICASSP-2019 Conference, held in Brighton, UK, from 12th until 17th May 2019 (<u>https://2019.ieeeicassp.org/</u>). ICASSP is the largest conference on signal processing and flagship of IEEE Signal Processing Society, bringing together few thousand participants every year. USTRAT team presented an invited paper in an oral special session on NILM, entitled:

D. Murray, L. Stankovic, V. Stankovic, S. Lulic and S. Sladojevic, "Transferability of neural network approaches for low-rate energy disaggregation," IEEE ICASSP-2019, Brighton, UK, May 2019.

Link to the paper: <u>https://pureportal.strath.ac.uk/en/publications/transferability-of-neural-networks-approaches-for-low-rate-energy</u>. The paper has already been downloaded 89 times, according to the USTRAT pure repository indicated on the link.



Scientific Conference on Economic and Social Conditions for the Development of the Economy in Theory and Practice

UEKAT participated in the Scientific Conference on Economic and Social Conditions for the Development of the Economy in Theory and Practice (Ekonomiczne i społeczne uwarunkowania rozwoju gospodarki w teorii i praktyce) that was held on September 4-6, 2019, in Karpacz, Poland (<u>http://knezit.ue.wroc.pl/informacje.html</u>).

The main goal of the conference was, first, to present the achievements and research results devoted to the multifaceted spectrum of scientific and research issues related to micro- and macroeconomics, economic policy, finance and accounting, tourism and the tourist economy, local and regional development, logistics and supply chain management, quality of life and economics of sustainable development, and management of the intangible resources of the organization. Secondly, discussion on current issues related to the functioning of enterprises and the economy in various areas and, moreover, the possibilities of applying theoretical research results in the field of business practice. The agenda of the conference is available at: http://knezit.ue.wroc.pl/Program_KN20190.pdf

UEKAT made two oral presentations in the conference:

- Sylwia Słupik, "Model approach to individual energy consumption conditions, methods and selected theories. The case of the eco-bot project" ("Podejście modelowe do indywidualnej konsumpcji energii – uwarunkowania, metody i wybrane teorie. Przypadek projektu eco-bot")
- Joanna Trzęsiok, Sylwia Słupik, "The identification and analysis of the factors affecting energy consumer behaviour in the eco-bot project" ("Identyfikacja i analiza czynników wpływających na zachowanie konsumentów energii w projekcie eco-bot")

The basic objectives of the Eco-Bot project, the state of progress of the project as well as the state of the art on behavioural economics and energy consumption along with preliminary research results were presented at the conference. In addition, models of approach to energy consumption have been shown on the example of the results of the Eco-Bot project and the main factors influencing the behaviour of energy consumers have been indicated.

PGCon: Edinburgh Postgraduate Conference

USTRAT attended a PGCon: Edinburgh Postgraduate Conference (<u>https://commnet.ac.uk/pgcon2019/</u>) in Edinburgh in October 15-16th, 2019, and presented a poster entitled:

M. Khazaei, L. Stankovic, and V. Stankovic, "Real-time anomaly detection of household appliances from smart meter data," PGCon: Edinburgh Postgraduate Conference, Edinburgh, UK, Oct. 2019.



Link to the poster: <u>https://pureportal.strath.ac.uk/en/activities/pgcon-edinburgh-postgraduate-conference</u>.

2019 MTMI International Conference on Emerging Issues in Business, Technology and Applied Sciences

USTRAT participated, via video link, in the 2019 MTMI International Conference on Emerging Issues in Business, Technology and Applied Sciences (<u>http://mtmi.us/iac/non-us-conference/</u>), held in Ebene, Mauritius, from 20th until 22nd December 2019. USTRAT team presented orally a paper entitled:

M. Khazaei, L. Stankovic, and V. Stankovic, "Trends and challenges in smart metering analytics," 2019 MTMI International Conference on Emerging Issues in Business, Technology and Applied Sciences, Mauritius, Dec. 2019.

Link to the paper: <u>https://pureportal.strath.ac.uk/en/publications/trends-and-challenges-in-smart-metering-analytics</u>.

4.4. Events

Attendance and organisation of events, as well as networking activities, will enable large scale dissemination of Eco-Bot and engagement of key stakeholders, and will help ensure project's sustainability and future exploitation. In this section, we focus on external events, besides scientific conferences described previously, where Eco-Bot was disseminated.

4.4.1. Participation in external events

During the period covered by this deliverable, Eco-Bot was presented in the following event:

<u>18th Symposium of the National Council of Research Project Coordinators</u> <u>"International projects - programming and advantages of participation"</u>

More specifically, UEKAT participated in the 18th Symposium of the National Council of Research Project Coordinators "International projects – programming and advantages of participation" (XVIII sympozjum Krajowej Rady Koordynatorów Projektów Badawczych "Projekty międzynarodowe – programowanie i zalety udziału") that was held on November 15, 2019, in Gliwice, Poland. The event was under the patronage of the Ministry of Science and Higher Education in Poland.

The purpose of the meeting was to exchange experience on project implementation. In addition, the meeting was aimed at promoting good practices of professional conducting research projects and promoting Polish participation in the EU Framework Programs. The symposium was attended by representatives of central and local government administration as well as scientists from universities operating in the region.



Dr. Sylwia Slupik from UEKAT made an oral presentation entitled "Active Engagement of Consumers Towards Sustainable Energy. Eco-Bot project – preliminary assumptions and research results", where the objectives, assumptions and preliminary results of the Eco-Bot project were presented, and the advantages of implementing projects in the formula of an international consortium were discussed. In addition, experience from cooperation with partners was shared and new scientific contacts were established.



An excerpt of the Symposium's agenda is given in Annex B.

Figure 15: Eco-Bot presentation at the 18th Symposium of the National Council of Research Project Coordinators in Gliwice

4.4.2. Organisation of Eco-Bot events

Two Eco-Bot workshops were organised during the first 18 months of the project, aiming to disseminate the project's objectives, competitive advantages and expected results, and to receive feedback from relevant stakeholders. These events were described in detail in D6.9 and were also briefly outlined in D6.3. During the period covered by the present report, no additional events were organised by the consortium.

In the forthcoming period, in accordance with the action plan defined in D6.2, the consortium plans to organise additional workshops with major stakeholders to exchange knowledge and look for means of enhancing market potential. Furthermore, demo events will be organised at the demonstration sites in order to showcase Eco-Bot to end-users and non-specialist attendees. The consortium plans also to organise one webinar to this end. Finally, a



consensus-building workshop will be organised at the end of the project to demonstrate the results achieved to a wide range of stakeholders.

4.5. Mass media activities

As was presented in D6.3, the first press release, which announced the launch of the project, was published on M2 and was forwarded by the project partners in their local and national press contacts. According to the action plan, our next press release is foreseen to be published in the next period and will announce the launch of the demonstration and validation activities.

Besides the foreseen press releases, the consortium also seeks opportunities to disseminate the project's main results through media articles and interviews in local and national press, printed and electronic, as well as through various EU channels. During the period covered by this report, the following mass media activities took place:

Article published in the Science in Poland portal

On December 30, 2019, the article "Eco-Bot - a personalized virtual energy assistant is being created" was released on the Science in Poland portal. As a result of an interview conducted by a Polish Press Agency (Polska Agencja Prasowa – PAP) journalist with the research project manager of UEKAT, Dr. Sylwia Słupik, the article promoted the Eco-Bot project and presented its assumptions for the portal readers. Dr. Słupik explained in the interview the purpose of the project, its range of impact and talked about the stages of work and the results achieved so far. The portal is run under the auspices of the Polish Ministry of Science and High Education and is dedicated to the scientific community, but all articles posted there are available in open access.

The article is available at:

http://scienceinpoland.pap.pl/en/news/news%2C80159%2Ceco-bot-personalized-virtualassistant-help-you-conserve-energy.html (English version)

http://naukawpolsce.pap.pl/aktualnosci/news%2C80025%2Ceco-bot-powstajespersonalizowany-wirtualny-asystent-energii.html (Polish version)





Figure 16: Excerpt from the article published in the Science in Poland portal

Interview on a national channel

The research project manager of UEKAT, Dr. Sylwia Slupik, gave an interview to the Poland IN channel, promoting the Eco-Bot project, its assumptions, and achievements. On January 22, 2020, a video from the interview was published in the Poland IN portal. The video outlines the assumptions of the project, presents the added value of creating a virtual assistant to help consumers manage energy efficiently, and informs about the consortium's research achievements. In addition, it draws attention to consumer behaviour and its importance in



everyday life. The material also promotes European Union initiatives in the field of research and scientific projects.

Links to the video published by Poland IN:

https://www.youtube.com/watch?v=1-thFvLWLhU

https://www.facebook.com/polandin/videos/487357215303223/



Figure 17: Interview given by UEKAT to the Poland IN channel

4.6. Training and Education

Education activities for students and training activities for academic projects on the project's research methodologies and results have already been organised by USTRAT as follows:

 USTRAT provides training and education through the following means: individual oneyear projects taken up by 4th year undergraduate students (x 8 students), MSc project students project dissertation (x 3 students), contribution to PhD student dissertation (x 3 students), 3-month group project on energy data analytics for 1st year undergraduate students within the Python Programming class (x5 groups of 2 students).

In addition to the above, USTRAT gave a series of seminars on methods they developed for energy disaggregation, all in July 2019, at the following Universities:

- Simon Fraser University, Vancouver, Canada
- University of British Columbia, Vancouver, Canada

Moreover, EYPESA organised the following sessions for students:

 On October 22, 2019, students from the Shizuoka University of Japan and the Barcelona School of Industrial Engineering (ETSEIB) of UPC (Polytechnic University of Catalonia) visited EYPESA's premises. During their visit, they attended a session in which EYPESA presented and discussed the research projects they participate in, including Eco-Bot

(https://www.facebook.com/EstabanellEnergia/posts/3437461739597599)

 On October 24, 2019, EYPESA organised a session in which they presented Eco-Bot to students from the program SENSE (Master's in Smart Electrical Networks and Systems). The students were familiarised with the issues that the project is addressing and how it is addressing them, and they watched a demo of how Eco-Bot works. The session concluded with Q&A (<u>http://eco-bot.eu/2019/10/24/eco-botproject-presented-to-sense-students-in-spain/</u>).

Figure 18: Eco-Bot presentation to SENSE students by EYPESA

5. Dissemination activities against KPIs

Table 3 presents the dissemination activities that took place during the period M19-M28, complemented by those performed during the first 18 months of the project, in order to enable direct comparison of the overall progress made in the initial project phase with the KPI targets defined in D6.2; the table includes the targets defined for all three project phases in order to facilitate progress monitoring against the overall targets.

Taking into account the targets set for the initial phase of the project (M1-M28), the dissemination activities that have been performed during this period are in line with the defined plan and the project is on the right track as regards the foreseen dissemination efforts. As shown in the table, the only deviation from the plan is the fact that only one newsletter was published during this period instead of the two that were originally planned.

ory			Achieved until M28			Timeline and targets			
Catego	Activity	Monitored parameter	M1- M18	M19- M28	Total	Initial phase (M1-M28)	Interm. phase (M29-M36)	Final phase (M37-M43)	Total
und ntity	Creation of Brand Identity	Project logo	Ready on M2			Ready on M2			
Bra iden		Project templates	Ready on M2			Ready on M2			

Table 3: Dissemination activities against KPIs

ry	Activity	Monitored parameter	Achieved until M28			Timeline and targets			
Catego			M1- M18	M19- M28	Total	Initial phase (M1-M28)	Interm. phase (M29-M36)	Final phase (M37-M43)	Total
		(leaflet, poster, deliverable)							
	Leaflet	Number of leaflets	1	1	2	1	1	-	2
unication kit	Poster	Number of posters	1	-	1	1	1	-	2
		Number of e-newsletters	-	1	1	2	1	1	4
Comm	e-newsietters	Number of recipients	-	N/A*	N/A*	5000	5000	5000	5000
	Promotional videos	Number of videos	-	1	1	1	1	-	2
Website	Project website	Creation of Eco-Bot website	Ready on M4			Ready on M4			
		Number of unique visitors	1445	1558	3003	2000	500	1000	3500
SI	LinkedIn account	Number of followers	21	73	73	50	120	200	200
channe	Twitter account	Number of followers	55	82	82	50	130	250	250
media	YouTube account	Number of video views	-	N/A*	N/A*	-	250	250	500
Social	Partners' individual social media accounts	Number of Eco- Bot related announcement s	16	20	36	18	9	9	36
ntific ations	Publications in journals and magazines	Number of published papers in journals	-	2	2	-	2	4	6
Sciel public	Presentations in scientific conferences / workshops	Number of presentations in conferences / workshops	6	5	11	2	4	4	10

^{*} At the time of writing this deliverable, the total numbers of viewers of the newsletter and of the video are not yet available, as they were released at the end of the reporting period and their promotion is still in progress.

ry			Achieved until M28			Timeline and targets			
Catego	Activity	Monitored parameter	M1- M18	M19- M28	Total	Initial phase (M1-M28)	Interm. phase (M29-M36)	Final phase (M37-M43)	Total
Networking and events	Participation in external events (exhibitions, workshops, EU events)	Number of Eco- Bot presentations	9	1	10	6	4	4	14
		Number of Eco- Bot events	2	-	-	2	3	1	6
	Organisation of Eco-Bot events	Number of attending stakeholders	40	-	40	20	30	80	130
		Number of non- specialist attendees	-	-	-	At least 50	non-specialis	st attendees	50
		Number of webinars	-	-	-	At	least 1 webii	nar	1
lia	Press releases, media articles and interviews	Number of press releases	1	-	1	1	2	1	4
iss Mec		Number of media articles	-	1	1	1	1	3	5
Ма		Number of interviews	-	1	1	-	-	1	1
g and tion	Educational activities for students	Number of educational activities	6	6†	8	At least 2 educational activities for students during the course of the project			2
Training educat	Training activities for academic researchers	Number of training activities	5	2	7	At least 1 training activity for academic researchers during the course of the project			

[†] 6 educational activities during the reporting period, including 4 ongoing and 2 new ones

6. Conclusions

This deliverable covers the dissemination and communication activities that took place during the period M19-M28, thus enabling the overall evaluation of the dissemination performance during the initial project phase in relation to the defined action plan and KPIs.

In accordance with the "Dissemination strategy and action plan" (D6.2), during the initial phase of the project, emphasis was given on the creation and raising of awareness and the early involvement of key stakeholders in order to take into account their needs and interests in the system design. Dissemination of results regarding the background research and design of the behavioural model and the NILM module has also started within this period.

Overall, the progress made within the initial project phase as regards the dissemination and communication activities is considered satisfactory and in line with the dissemination strategy and action plan defined in D6.2. In accordance with the latter, dissemination and communication activities are expected to be intensified during the forthcoming intermediate project phase (M29-M36), which will involve the launch of the large-scale pilot and the extraction of the first project results in real settings and with real users, and will reach their peak in the final project phase (M37-M43).

ANNEX A: First Newsletter

NEWSLETTER #1: INTRODUCING THE ECO-BOT PROJECT

Editorial

In October 2017, the Eco-Bot project was launched with the aim to change energy consumption behaviour towards energy efficiency. Eco-Bot is a EU research project led by RISA Sicherheitsanalysen GmbH and co-funded by the EU H2020 research and innovation programme. It brings together technology developers and providers in the energy field as well as universities and high tech small and medium sized enterprises (SMEs) from Germany, Greece, Poland, Spain, and the UK.

The urgent need to tackle climate change emphasises the importance of finding effective and affordable ways to turn to sustainable energy solutions; engagement of consumers towards more energy efficient behaviour is a key factor in this endeavour, and this is what Eco-Bot aspires to achieve.

In the past 28 months, Eco-Bot has come a long way. We are now getting ready to launch the large scale pilot that will enable demonstration and validation of our system through the involvement of approximately 300 consumers and facility managers from Germany, Spain, Italy, and the UK.

Stay tuned to the progress and achievements of the Eco-Bot project by following our newsletter, website and social media accounts!

Stephanos Camarinopoulos Project Co-ordinator

Eco-Bot at a glance

Eco-Bot ("Personalised ICT-tools for the Active Engagement of Consumers towards Sustainable Energy") is a 43-month project co-funded by the European Commission under the "H2020-EU.3.3.1. – Reducing energy consumption and carbon footprint by smart and sustainable use" programme topic. The Eco-Bot consortium consists of nine partners, namely RISA, Estabanell Energia, adelphi, SEnerCon, DEXMA, the University of Strathclyde, Plegma Labs, the University of Economics in Katowice, and ERRA.

Eco-Bot aims to provide a personalised virtual energy assistant that will deliver information about energy consumption on an appliance level and user-tailored advice on energy efficiency measures, aspiring to engage users towards more energy efficient behaviour. To this end, Eco-Bot explores non-intrusive load monitoring (NILM) algorithms, multi-factorial behaviour modelling, and natural language processing.

The solution will be demonstrated in three different pilot sites, in order to validate the Eco-Bot system across real and diverse conditions and to explore its potential in different business cases:

- Estabanell Energia (the power utility of Catalonia) B2C business model
- DEXMA (SaaS Building Energy Management System provider with two ESCO/building managers in Spain and the UK) B2B business model
- SEnerCon (household energy users with smart meters in Germany) B2B2C business model

Eco-Bot system overview

The Eco-Bot project utilises recent advances in chatbot technologies, advanced signal processing, and multi-factorial behavioural modelling, to offer personalised information and energy efficiency recommendations. Eco-Bot is a set of different components that are working together to provide all the information and analysis of data needed towards personalised energy efficiency guidance.

The system is comprised of the following main components: the frontend, the backend platform incorporating a knowledge-based expert system and the integrated behavioural module, the pilots' backends, and the Non-Intrusive Load Monitoring (NILM) module. Integration and communication with third parties to enrich the system's features is also enabled.

Learn more about the Eco-Bot system by checking our deliverables and publications.

Eco-Bot features

Eco-Bot offers a wide range of features aiming to address the requirements and expectations of *consumers* and *facility managers*.

Indicatively, the consumers are enabled to receive information on their consumption, both total and on appliance level, tailored recommendations for energy efficiency investments, e.g. regarding insulation and other home improvements, as well as for behaviour change, alerts for overconsumption, and notifications so as to be informed, for instance, in case a new subsidy that is relevant to them is announced, or to be given advice on appropriate actions during high peak periods.

The users are also motivated towards behaviour change by being given the option to set their own energy saving goals in terms of consumption, cost, and environmental impact. Furthermore, the system supports tackling the rebound effect by keeping the user aware through reminders of his/her energy consumption on a frequent basis as well as through the comparison of the consumption before and after energy saving events.

Facility managers, on the other hand, are enabled to receive, among others, information about energy consumption per building, league tables with the total consumption of their whole portfolio of buildings, energy and cost savings after the implementation of energy saving events performed in one or more buildings, tailored energy efficiency recommendations, etc. They are also enabled to set their own saving goals for each of the buildings they handle and easily monitor their progress in achieving their goals.

Watch our first demo video through our YouTube channel.

Consortium partners

Follow Eco-Bot

If you are interested in receiving our newsletters, please subscribe here. You can also follow the progress and achievements of Eco-Bot through the project's website and social media accounts.

		www.eco-bot.eu					
in	eco-bot	9	ecobotproject	ſ	ecobotproject	You	eco-bot

ANNEX B: Agenda of the 18th Symposium of the National Council of Research Project Coordinators

An excerpt of the agenda of the 18th Symposium of the National Council of Research Project Coordinators, where Eco-Bot was presented by UEKAT, is given below:

WYDARZENIE OBJĘTE PATRONATEM MINISTRA NAUKI I SZKOLNICTWA WYŻSZEGO JAROSŁAWA GOWINA

Ministerstwo Nauki i Szkolnictwa Wyższego

XVIII sympozjum Krajowej Rady Koordynatorów Projektów Badawczych "Projekty międzynarodowe – programowanie i zalety udziału" 15.XI.2019 r.

Aula D, Centrum Edukacyjno-Kongresowe Politechniki Śląskiej, ul. Konarskiego 18B, Gliwice

- 09:45 10:00 Rejestracja
- 10:00 10:05 Powitanie Prof. dr hab. inż. Marek Pawełczyk, Prorektor ds. Nauki i Rozwoju, Politechnika Śląska
- 10:05 10:15 Powitanie Prof. dr hab. Janusz Hołyst, Prezes Zarządu KRAB, Politechnika Warszawska
- 10:15 10:40 Dlaczego warto uczestniczyć w projektach międzynarodowych (m. in. ocena parametryczna oraz mechanizmy wsparcia oferowane przez MNiSW) - Katarzyna Markiewicz-Śliwa, koordynator Regionalnego Punktu Kontaktowego Politechnika Śląska
- 10:40 11:00 Strategia zwiększenia udziału w projektach europejskich nowy Program Ramowy Horyzont Europa – Dr Zygmunt Krasiński, Dyrektor Krajowego Punktu Kontaktowego
- 11:00 11:30 Regionalne Inteligentne Specjalizacje Województwa Śląskiego ICT, Energetyka, Zielona Gospodarka, Medycyna – teraźniejszość i przyszłość w dziedzinie projektów innowacyjnych - Monika Ptak-Kruszelnicka, Urząd Marszałkowski Województwa Śląskiego
- 11:30 12:00 Przerwa kawowa
- 12:00 13:00 Proces przygotowywania programów pracy czyli skąd Komisja Europejska bierze pomysły na tematy projektów międzynarodowych - Ewa Kocińska-Lange, Dyrektor ds. Badań i Innowacji, Business & Science Poland w Brukseli
- 13:00-13:45 Przykłady projektów realizowanych na Śląsku, finansowanych z Programu Horyzont 2020

 Aktywne zaangażowanie konsumentów w kierunku zrównoważonej energii. Projekt eco-bot, wstępne założenia i wyniki badań/ Active Engagement of Consumers Towards Sustainable Energy.
 Eco-bot project - preliminary assumptions and research results – dr Sylwia Słupik, Uniwersytet Ekonomiczny w Katowicach