



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n° 820742



HR-Recycler: Hybrid Human-Robot RECYcling plant for electriCal and eLEctRonic equipment

## D11.1 – Dissemination plan and reports (version 1)

WP number and title	WP11 – Dissemination and Exploitation
Lead Beneficiary	CERTH
Contributor(s)	IBEC
Deliverable type	Report
Planned delivery date	30/11/2019
Last Update	07/11/2019
Dissemination level	PU



## Disclaimer

This document contains material, which is the copyright of certain HR-Recycler contractors, and may not be reproduced or copied without permission. All HR-Recycler consortium partners have agreed to the full publication of this document. The commercial use of any information contained in this document may require a license from the proprietor of that information.

The HR-Recycler Consortium consists of the following partners:

Participant No	Participant organisation name	Short Name	Type	Country
1	Centre for Research and Technology Hellas CERTH - ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS	CERTH	RTO	GR
2	FUNDACIO INSTITUT DE BIOENGINYERIA DE CATALUNYA	IBEC	RTO	ES
3	TECHNISCHE UNIVERSITAET MUENCHEN	TUM	RTO	DE
4	COMAU SPA	COMAU	IND	IT
5	FUNDACION TECNALIA RESEARCH & INNOVATION	TEC	RTO	ES
6	ROBOTNIK AUTOMATION SLL	ROB	SME	ES
7	FUNDACION GAIKER	GAIKER	RTO	ES
8	SADAKO TECHNOLOGIES SL	SDK	SME	ES
9	DIGINEXT	DXT	IND	BE
10	VRIJE UNIVERSITEIT BRUSSEL	VUB	RTO	BE
11	INDUMETAL RECYCLING, S.A.	IND	SME	ES
12	INTERECYCLING - SOCIEDADE DE RECICLAGEM SA	INT	SME	PT
13	BIANATT ANAKYKLOSI AIIE ANONIMI BIOMICHANIKI EMPORIKI ETAIRIA	BNTT	IND	GR

## Document History

---

VERSION	DATE	STATUS	AUTHORS, REVIEWER	DESCRIPTION
0.1	07/11/2019	Draft	Apostolos Axenopoulos, Alex Papadimitriou (CERTH)	First Draft
0.3	22/11/2019	Draft	Anna Mura (IBEC)	Content updates
1.0	27/11/2019	Final	Apostolos Axenopoulos (CERTH)	Final version
1.2	23/03/2020	Final	Apostolos Axenopoulos (CERTH)	Links that were not working have been corrected; more target KPIs have been added in communication strategy (according to review recommendations)

## Definitions, Acronyms and Abbreviations

---

ACRONYMS / ABBREVIATIONS	DESCRIPTION
EERA	European Electronics Recyclers Association
EFFRA	European Factories of the Future Research Association
ETSI	European Telecommunications Standards Institute
EUROP	European Robotics Technology Platform
HISPARON	Spanish Technological Platform for Robotics
IMS	Intelligent Manufacturing Systems
ISWA	International Solid Waste Association
WEEE	Waste Electrical and Electronic Equipment

## Table of Contents

---

Executive Summary .....	8
1 Introduction .....	9
2 Dissemination and Communication Strategy .....	10
2.1 Step-1 Why to communicate and to disseminate.....	10
2.2 Step-2 What to communicate and to disseminate .....	10
2.3 Step-3 To whom to communicate and to disseminate .....	11
2.4 Step-4 How to communicate and to disseminate.....	12
3 Dissemination and Communication Material.....	15
3.1 HR-Recycler logo .....	15
3.2 HR-Recycler leaflet.....	15
3.3 HR-Recycler poster .....	16
3.4 Project e-newsletter and Community building .....	18
3.5 Project website and online collaborations .....	19
3.6 Social Media.....	20
4 Dissemination Activities and Events.....	21
5 Conclusions .....	27

# List of Figures

---

Figure 1: HR-Recycler logo .....	15
Figure 2: HR-Recycler leaflet .....	16
Figure 3: HR-Recycler Poster .....	17
Figure 4: Slide Template.....	17
Figure 5: HR-Recycler newsletter .....	18
Figure 6: HR-Recycler public website .....	19
Figure 7: HR-Recycler Twitter account .....	20

## List of Tables

---

Table 1: HR-Recycler target groups.....	11
Table 2: Dissemination activities.....	13
Table 3: Impact indicators of HR-Recycler communication activities .....	14
Table 4: List of 2019 publications in the online reporting sheet.....	22
Table 5: Interesting contacts/projects in the online reporting sheet .....	23
Table 6: List of interesting journals in the online reporting sheet .....	23
Table 7: List of interesting events in the online reporting sheet .....	26

## Executive Summary

---

This deliverable “D11.1 – Dissemination plan and reports” presents the strategy to be followed by the HR-Recycler consortium to reach a relevant audience (scientific and industrial collaborators) and to create the desired impact among its research and interest community.

The purpose of this document is to provide the initial project dissemination plan by highlighting target groups and defining internal communication procedures and means. This includes online (web page, twitter, blog, newsletter) and offline media, such as shared excel sheets for reporting and updates. The main communication instruments designed by project partners are described.

The website, available since M6 at the URL <https://www.hr-recycler.eu/>, is the main communication channel developed and used by the HR-Recycler consortium. The dissemination pack prepared for HR-Recycler includes: the official logo, a slide presentation template, a leaflet with the most relevant information about the project aims and benefits introduced and a poster.



## 1 Introduction

---

HR-Recycler focuses on the construction of a hybrid human-robot recycling plant for WEEE equipment, encompassing highly ambitious scientific goals and, at the same time, exhibiting great exploitation potentials. To this end, great emphasis is placed towards building a community around the core research and technological achievements of the project, and towards raising awareness about the project activities, by informing and attracting the interest from potential stakeholders, researchers and the general public. To meet these targets, a very wide set of key communication activities has been included in the project work-plan such as: organization of project workshops, public events, joining existing stakeholder communities and network societies, clustering with other running projects devoted to human-robot collaboration and WEEE recycling, publication material, etc.

It should be noted, that the dissemination plan will be updated and refined throughout the course of the project. Furthermore, there will be subsequent versions of the deliverable where information about activities carried out will be reported, namely in D11.2 (delivery date M24) and D11.3 (delivery date M42).

In the following sections, the official HR-Recycler Dissemination pack (website, logo, leaflet, poster, newsletter, social media) and plans for participation/organisation of events, conferences is reported.

## 2 Dissemination and Communication Strategy

---

The main focus of HR-Recycler's Dissemination and Communication strategy is to promote the innovative character and unique part of HR-Recycler to the appropriate target communities, at appropriate times and via appropriate methods, by widely spreading its activities and results among potential contributors that could assist in the development, evaluation, uptake and exploitation of the project outcomes, encouraging their participation on a systematic and regular basis.

The project's Dissemination & Communication plan (T11.1) will be based on a 4-step methodology, which describes why, what, to whom & how to communicate and disseminate, coupled with emphasis on community building (T11.2, T11.3).

### 2.1 Step-1 Why to communicate and to disseminate

To raise awareness amongst interested parties that can be impacted by HR-Recycler outcomes: the dissemination activities focus on: defining techniques and media appropriate for fostering the project's results; targeting relevant audiences that can benefit from the HR-Recycler results; showing the project results to the relevant stakeholders; participating to relevant initiatives in order to guarantee a wide visibility of the project objectives and outcomes.

It is important to guarantee the project greatest impact on stakeholders outside the project partnership to ensure:

- Project outputs will be fully exploited and used in the most effective manner;
- **Knowledge gained** through the project, and more generally the information generated by the project, can be made available to all interested organisations;
- Elements of **excellence** of the project can be **reused** and **replicated** in other projects, becoming a reference point triggering further developments in the field and beyond;
- Project reaches **decision-makers** contributing to **improvement** of future **policies**;
- Benefits that the **project's outcomes** will bring to **society** (services, employment, economy) are well pointed out;
- The final users will become **familiar** with the project's results and understand their **benefits**.

### 2.2 Step-2 What to communicate and to disseminate

The following project information will be communicated to the relevant audience:

- Vision (objectives, strategic relevance) and key facts: messages will follow an evolution from the start of the project to the aftermath and therefore, they will be reviewed periodically during the course of the project,
- News (achievements and results): partners will for example recapture how HR-Recycler improves industrial human robot collaboration, based on the foreseen demonstration/training activities (e.g. KPIs such as willingness to have will be part of the project's evaluation methodology). Personalised experiences will illustrate the impact of the project and will give a strong human dimension that can catalyse end-users' acceptance;
- Events promotion and events results.

Via our communication channels, we want to broadcast the general message of the project on sustainable recycling and the benefits for the environmental and societal health, as well as share the different activities of the project and further promote and transfer the project's outcomes. Also, the project partners will be encouraged and supported in the process to commercialize the generated knowledge. For this, we will ensure that "demonstrations" of the project outputs are prominently featured and broadcast via the dissemination activities. Particular attention will be given towards making available, to researchers and stakeholders communities, the real-world data generated by the HR-Recycler research and development activities, so as to promote scientific excellence in both the fields of HRC and WEEE recycling.

## 2.3 Step-3 To whom to communicate and to disseminate

We aim to narrow the gap between the **research communities**, **industrial stakeholders** and the **general audience**, by not only extending the knowledge of the project results to the scientific communities but also by engaging the public interest and enthusiasm for HR- Recycler technology. One of the underlying objectives of this task is **the identification of both national and international projects** around the world that are related to the work of HR-Recycler. These related initiatives will then be targeted for potential scientific collaboration/ cooperation.

Key stakeholders of the HR- Recycler target audience have been grouped into several categories. As seen in the following Table, several target groups have been defined, which include both high-level and low-level stakeholders.

Industries and end users (WEEE and beyond)	Researchers and robotics technology providers	Public Bodies, Associations & Facilitators
<ul style="list-style-type: none"> <li>WEEE recycling industries</li> <li>WEEE recycling plant workers, supervisors</li> <li>Manufacturing industries, assembly workers, supervisors</li> </ul>	<ul style="list-style-type: none"> <li>Scientific community</li> <li>Related EU-funded projects</li> <li>Leading industries and SMEs in robotic solutions</li> </ul>	<ul style="list-style-type: none"> <li>National public authorities (industrial committees, ministry and regional councils)</li> <li>Organizations (e.g. European Robotics Association, EUnited Robotics, EERA - European Electronics Recyclers Association)</li> <li>ETPs (Robotics Technology Platform) and clusters</li> <li>Standardisation Bodies (such as CEN, ETSI)</li> </ul>

**Table 1: HR-Recycler target groups**

The project's dissemination strategy will emphasize on several stakeholders across different levels: WEEE recycling industries (starting from IND, INT and BNTT and others affiliated to EERA) and plant workers as the core end-users of HR-Recycler tools, as well as further industries embracing HRC as key to improve efficiency. In particular:

- **WEEE recycling industries and end users:** The first dissemination target of HR-Recycler will be the end users of the proposed HRC system (Europe and worldwide), encompassing WEEE recycling and further industries, and the system's final end users, i.e. WEEE recycling plant workers, technicians and production supervisors. A robust solution to be used in mixed, HRC-based factory floors will be made available to the market after the finalization of the project. Thus, it is imperative for the project dissemination activities to increase awareness of industries that can adopt the overall system in their factory process and their workers.
- **Researchers and robotics technology providers:** This target group encompasses the research and academic organisations, scientific journals, Committees, and other working groups in all research

fields that HR-Recycler will focus, ranging from robust vision-based object detection & tracking, factory floor modelling real-time state perception and orchestration, intuitive and ubiquitous human-machine interfaces, learning by demonstration, to low-level robotic control mechanisms. The multidisciplinary nature of HR-Recycler will enable reaching distinct scientific communities. Moreover, this group encompasses industrial, robotic, VR/AR and visual technology providers that develop and commercialize products, software applications, methodologies and educational/training services. Among others, it includes providers of robotic arms and end-effectors, industrial AGVs and collaborative mobile robotic platforms, industrial VR and AR solution providers, as well as AI-enabled industrial computer vision companies. These communities will benefit from the HR-Recycler innovative results and can further act as catalyst for the dissemination and exploitation of achievements to technology providers worldwide, thus enhancing the project results commercial acceptance.

- **Public Bodies, Organizations and Facilitators:** This target group includes public bodies at national and European level (industrial committees, ministry and regional councils), capable to facilitate HR-RECYCLER in reaching out to end users. Moreover, the group encompasses standardization bodies (e.g. CEN, ETSI) as well as organizations and associations promoting robotics research and excellence, such as the European Robotics Association or EUROP (European Robotics Technology Platform).

Thus, the dissemination activities target audience will go beyond end-users as, the main potential customers of the HR-Recycler solutions are actually decision makers (site managers, CEO, board of directors...) and the project scale-up will need facilitators. Special attention will be paid to disseminate the project results through:

- The EFFRA; COMAU is a member of EFFRA.
- The SPARC PPP. COMAU and Robotnik are members of euRobotics aisbl
- The European Electronics Recyclers Association (EERA); IND, INT and BNTT are members of the EERA.
- SADA KO is a member of HISPARN (Spanish Technological Platform for Robotics) and in process of joining ISWA (International Solid Waste Association). Both entities are willing to contribute to European Projects dissemination and facilitate the networking and collaboration among its members.
- EPoSS, the European Platform on Smart Systems Integration contains an active working group of key enabling technologies and robotics. EPoSS organizes regular meetings (Smart Systems Integration conference, EPoSS annual forum) and attracts numerous industrial stakeholders.
- Municipalities and associations responsible for the collection of household waste, or collective collection schemes. Indumetal, Interecycling and Bianatt will carry out dissemination work in certain key agents of their business, as they are interested parties in disposing of their waste in a more effective facility for treatment.

Community building and linking to other projects activities (T11.2, T11.3); a core starting point will be projects where the HR-Recycler partners (e.g. CERTH, COMAU, TEC, IND) participate, both in the FOF and robotics domains, as well as in the WEEE recycling and circular economy, as well as ones where organizations and companies affiliated to the HR-Recycler partners (e.g. EERA members) participate.

## 2.4 Step-4 How to communicate and to disseminate

Our plan includes

- 1) Writing on the outcome of the project in relevant scientific journals

- 2) Participating in relevant scientific and industrial events at the national (each Eu member state) and international level (Eu and worldwide).
- 3) Organizing workshops and get together. This will be done via invitations to participate in common events organised by HR-Recycler in high profile international events, e.g. set up joint workshops to maximise the audience, and/or invitation of key members of other initiatives to provide keynote talks or to participate in highly interactive panel discussion as part of these workshops/ sessions.
- 4) Reporting via the web and the social media on a regular basis to update online the information about the achievements of the project.

The indicative activities planned in HR-RECYCLER are listed below:

Dissemination activity or material	Main objective	Target audience
Organisation of presentation /feedback sessions (1 per year at major forums or trade shows, relevant to the project theme)	Key stakeholders from Europe and beyond will be invited to presentation / feedback sessions, to provide the project with their inputs (visions and alternative solutions).  Indicative events may include BIEMH (International Machine-Tool Exhibition), E-Waste World Conference & Expo 2020, etc.	An attendance of 40-70 delegates is considered.
Organisation of educational/training sessions (one per each end-user)	A series of training activities to HR-Recycler solutions will be held in cooperation with the end-users of the project (IND, INT, BNTT) along with key stakeholder groups (e.g. COMAU, Robotnik customers), to enable new users to experiment the solutions and to provide their feedback.	An attendance of 20-30 delegates per session including representatives from the HR-RECYCLER end--users
Liaison with the IMS organization and respective Robotic Associations/Organizations	Contribute to the organisation of events of respective alliances and initiatives, namely by participating to EUnited Robotics and European Robotics Association workshops and by setting up Special Sessions at respective conferences/exhibitions (e.g. Hannover Messe, Automatica Service Robots exhibition, Global Industrie) to diffuse the technologies introduced in HR-RECYCLER.	An attendance of 40-50 delegates is considered for the European Robotics Association events, whereas participation to major exhibitions (e.g. Hannover, Automatica Service Robots, ICT event) will be part of the D&C activities.
Organization of a workshop to showcase the results of the project to a European audience	At least one workshop will be organized within the European Robotics Forum, held each year under the organization of euRobotics.	An attendance of about 50 delegates participating in the ERF
Organization of a workshop to showcase the results of the project to a European audience	At least one workshop will be organized within the Living Machines conference, held each year co-organised by IBEC.	An attendance of about 25 delegates participating in the workshop.

**Table 2: Dissemination activities**

The communication team of HR-Recycler will keep an overview of all activities undertaken and its partners in the framework of the HR-Recycler Dissemination and Communication strategy and consider ways in which the strategy is implemented. In order to assess the impact of our dissemination and communication activities and adjust our plan in the course of the project, we will use appropriate indicators. These are detailed below:

Tools	Metrics	Target
<b>Project Public Website</b>	# of site visits per week # of downloads per week # size of website audience	Number of unique visitors to HR-Recycler Website: =>3000
<b>Workshops</b>	# of workshops # of participants/workshops	Target: 3 workshops Target: =>30 participants / workshop
<b>Social Media</b>	Engagement: # of views, likes, followers (FB, LinkedIn, Twitter)	Target: At least 5 posts per platform and per month with at least 25 likes/shares per post.
<b>Publications</b>	# of publications in technical, scientific and academic journals	Target: at least 10 scientific or academic articles and conference or magazine articles.
<b>Newsletter</b>	# of newsletters issued # of readers/subscribers	Target: annually Target: 50 subscribers per issue
<b>Blogposts</b>	# of posts	Target: at least 2 posts per month

**Table 3: Impact indicators of HR-Recycler communication activities**

### 3 Dissemination and Communication Material

---

The following chapter gives an outlook on how different media is used to spread the message to all the different communities and stakeholders. Specific tools and communication material have been realized and published with the main aim of providing project partners with adequate means for carrying out dissemination activities. The dissemination material has been developed for being used according to different communication needs and to various event typologies.

The communication material of HR-Recycler includes:

- HR-Recycler logo;
- HR-Recycler leaflet;
- HR-Recycler poster;
- public project web site;
- HR-Recycler newsletter;
- Social media accounts (Twitter, Facebook, LinkedIn, Instagram).

Communication material will be refined periodically in order to be aligned with the status of development of the project.

#### 3.1 HR-Recycler logo

The *HR-Recycler logo* has been designed taking into the account the human-machines collaborative effort which is at the center of the project outcome.



Figure 1: HR-Recycler logo

#### 3.2 HR-Recycler leaflet

We have designed an A4, 2-sided printed leaflet with all the main information about the Project to be used by all members when participating in dissemination and outreach activities.

Leaflet will be used in the project activities both in printed form and in electronic form: printed leaflets are distributed during the official project events and during other events attended by project partners; electronic leaflets are sent via email in any communication which need to present the project to new stakeholders.



<h3>HR-Recycler Context</h3> <p>The technological advances that have been achieved over the past decades have led to a tremendous increase of both the types and the total amount of electrical and electronic equipment that is manufactured. Despite the importance of Waste Electrical and Electronic Equipment (WEEE) management, the issue of the WEEE recycling has not received that increased industrial attention.</p> <ul style="list-style-type: none"> <li>• Growing number of gadgets has led to a 63% increase in electronic waste in Asia.</li> <li>• Only 20% of E-waste Generated Is Documented To Be Collected and Recycled.</li> </ul> 	<h3>Aims &amp; Goals</h3> <p>HR-Recycler will target the development of a "hybrid human-robot recycling plant for electrical and electronic equipment" operating in an indoor environment. The fundamental aim of the system (and its great innovation potential) will be to replace multiple, currently manual, expensive, hazardous and time-consuming tasks of WEEE materials pre-processing with correspondingly automatic robotic-based procedures (categorization of electric/electronic devices, disassembling them, sorting of device components), before the materials are eventually provided as input to a fine shredding machine and conventional material separation steps are applied (using air/water flows, oscillating movements, magnets, etc.). More specifically, the overall goal of HR-Recycler is to create a hybrid collaboration environment, where humans and robots will harmoniously share and undertake at the same time different processing and manipulation tasks, targeting the industrial application case of WEEE recycling.</p>	<h3>Project Benefits</h3> <p>The primary output of the envisaged system will be to extract sorted electric/electronic device components (e.g. Printed Circuit Boards (PCBs), Cu coils, capacitors, etc.) and concentrated fractions (e.g. copper, aluminium, plastics, etc.) of increased economic and environmental value; hence, contributing to the fundamental goal of the 'European circular economy' project and boosting economic activity in secondary markets. Additionally, mixed fractions (i.e. fractions with low concentration in valuable materials) will be collected, in order to be sent to other facilities for further dedicated recycling process.</p> 
<h3>HR-Recycler Consortium</h3> 	<h3>Project ID</h3> <p><b>DURATION:</b> 42 months (December 2018 – May 2022)</p> <p><b>PARTNERS:</b> 13 partners from 7 countries (Greece, Spain, Germany, Italy, Portugal, France, Belgium)</p> <p><b>FUNDING:</b> HR-Recycler receives funding from the European Union's Horizon 2020 research and innovation programme.</p> <p><b>CALL IDENTIFIER:</b> DT-FOF-02-2018</p> <p><b>PROJECT COORDINATOR:</b> Centre for Research and Technology Hellas (CERTH)</p> <p><b>WEBSITE:</b> <a href="https://www.hr-recycler.eu/">https://www.hr-recycler.eu/</a></p> <p><b>SOCIAL MEDIA:</b> Twitter: @HrRecycler Facebook: @HrRecycler</p>	 <h3>HR-RECYCLER</h3> <p>Hybrid Human-Robot RECYcling plant for electriCal and eLEctRonic equipment</p>  <p> This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n° 820742.</p>

Figure 2: HR-Recycler leaflet

### 3.3 HR-Recycler poster

We also designed an A0 poster that contains the main message of the project, the logos of the participants and of the EU finding body. The poster is to be used by all partners when participating at dissemination/outreach events.

The poster will be developed in a vertical format to allow partners to expose it during conferences or in other events. It will be refined during the project life in order to take into account the project status advancement and other eventual needed changes.





**HR-RECYCLER**  
Hybrid Human-Robot RECYcling plant for electriCal and eLEctRonic equipment

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n° 820742.

The technological advances that have been achieved over the past decades have led to a tremendous increase of both the types and the total amount of electrical and electronic equipment that is manufactured. Despite the importance of Waste Electrical and Electronic Equipment (WEEE) management, the issue of the WEEE recycling has not received that increased industrial attention.

- Growing number of gadgets has led to a 63% increase in electronic waste in Asia.
- Only 20% of E-waste Generated Is Documented To Be Collected and Recycled.

**Aims & Goals**

HR-Recycler will target the development of a 'hybrid human-robot recycling plant for electrical and electronic equipment' operating in an indoor environment. The fundamental aim of the system (and its great innovation potential) will be to replace multiple currently manual, expensive, hazardous and time-consuming tasks of WEEE materials pre-processing with correspondingly automatic robotic-based procedures (categorization of electric/electronic devices, disassembling them, sorting of device components), before the materials are eventually provided as input to a fine shredding machine and conventional material separation steps are applied (using air/water flows, oscillating movements, magnets, etc.). More specifically, the overall goal of HR-Recycler is to create a hybrid collaboration environment, where humans and robots will harmoniously share and undertake at the same time different processing and manipulation tasks, targeting the industrial application case of WEEE recycling.

**Project ID**  
DURATION: 42 months (December 2018 – May 2022)  
PARTNERS: 13 partners from 7 countries (Greece, Spain, Germany, Italy, Portugal, France, Belgium)  
CONTACT: <https://www.hr-recycler.eu/>

**FUNDING:** HR-Recycler receives funding from the European Union's Horizon 2020 research and innovation programme.  
**CALL IDENTIFIER:** DT-FOF-02-2018  
**PROJECT COORDINATOR:** Centre for Research and Technology Hellas (CERTH)

**HR-Recycler Consortium**

IR INDUSTRIAL RECYCLING S.A., DIGINEXT, iti Information Technologies Institute, VUB Vrije Universiteit Brussel, intorecycling, tecnalia, BIANATT, GAIKER, TUM, IBEC, CIMA, SADA KO, Robotnik

Figure 3: HR-Recycler Poster

In addition, we have prepared the project's **slide template** to be used by the consortium members for presentations related to the project.



**HR-RECYCLER**  
Hybrid Human-Robot RECYcling plant for electriCal and eLEctRonic equipment

**4<sup>th</sup> Plenary Meeting**  
**Athens, 12-14 November 2019**  
**Introduction – Project Management**

Presenter  
CERTH-ITI

iti Information Technologies Institute, IBEC, TUM, CIMA, tecnalia, SADA KO, Robotnik, VUB Vrije Universiteit Brussel, DIGINEXT, intorecycling, BIANATT, GAIKER, IR INDUSTRIAL RECYCLING S.A.

Figure 4: Slide Template

### 3.4 Project e-newsletter and Community building

Via the webpage people can sign up to receive the project's Newsletter (see image on the left). The user will receive a message to confirm the subscription in agreement with the EU **General Data Protection Regulation** (see image on the right).

The content of the newsletter directly reflects the ongoing activities of the project. We have already issued the first edition of the newsletter and getting ready for the next one at the beginning of 2020.

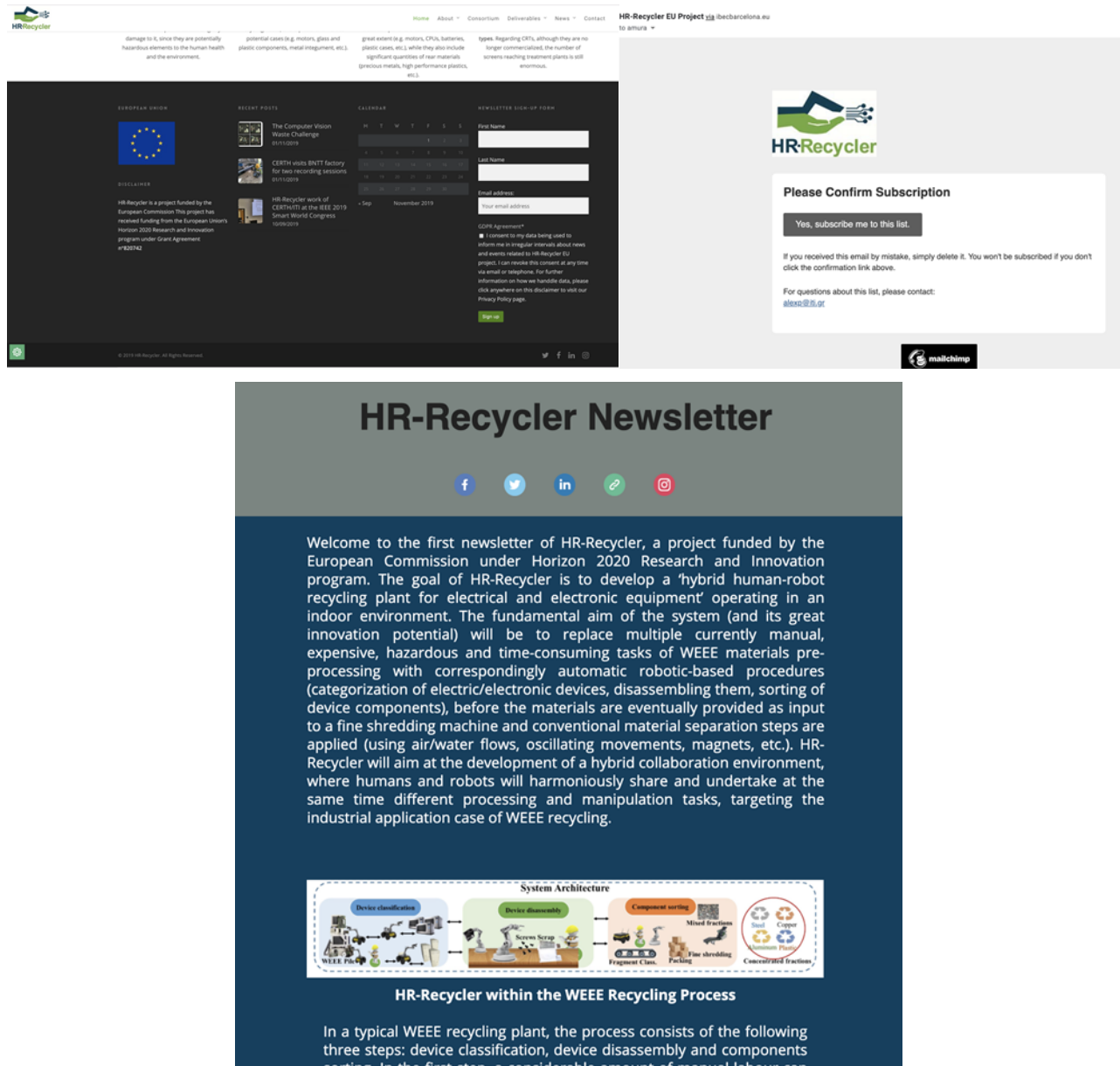


Figure 5: HR-Recycler newsletter

### 3.5 Project website and online collaborations

The consortium has designed and populated an online website meant to broadcast relevant information about the project. The public website is regularly updated and is available at this url link <https://www.hr-recycler.eu/>

The Website has the following aims:

- ensuring adequate presence of the HR-Recycler project on the web;
- informing target groups and general public about the aim and objectives of the HR-Recycler project;
- disseminating project's activities and initiatives;
- supporting the creation of synergies with similar projects to attract and concretely involving the relevant actors;
- being the main tool to communicate, transfer knowledge and exchange information facilitating the collaboration between the potential users and the further extensions and adoption of the project outcomes.

The website will be kept updated with relevant information and public materials produced by the HR-Recycler consortium, including information about HR-Recycler presence at conferences, events and fairs, HR-Recycler publications, both scientific and informative, and other relevant mentions about HR-Recycler and its results in relevant channels. The website also includes a reserved area for internal documentation exchange/versioning and User space.

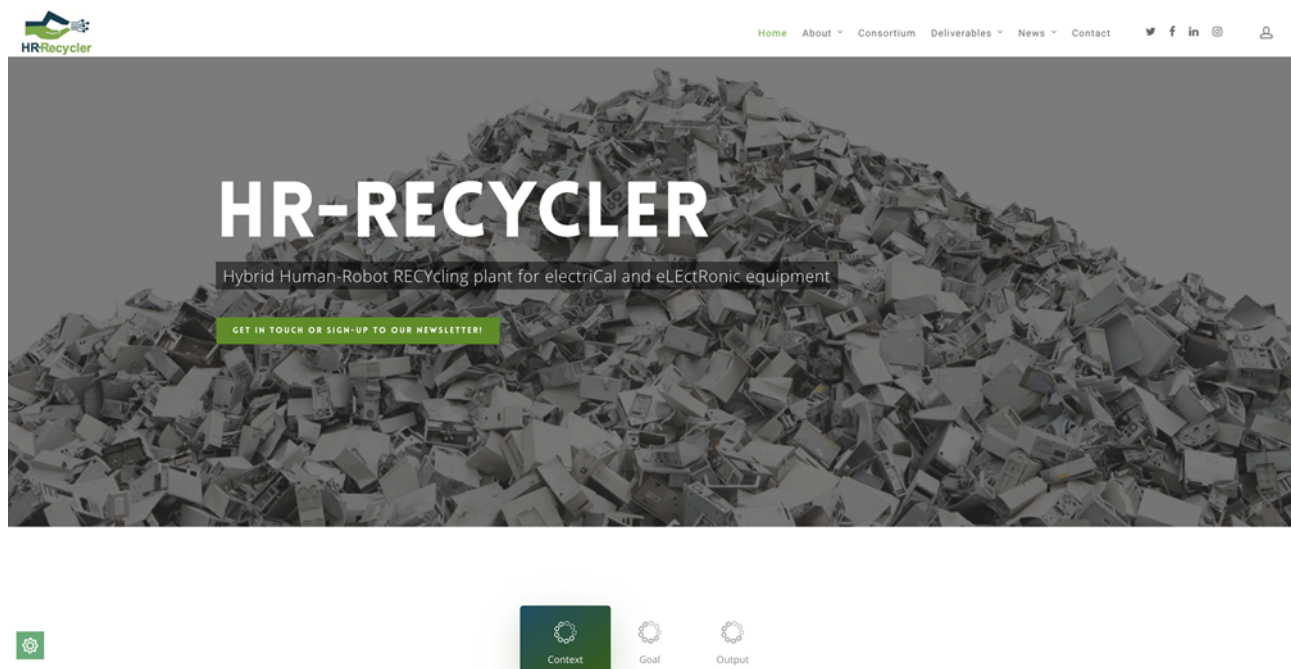


Figure 6: HR-Recycler public website

### 3.6 Social Media

HR-Recycler will also exhibit regular social media activity to complement its communication outlets. Social media accounts have been created for Twitter, Instagram, Facebook and LinkedIn. Links to the social media accounts are given below:

<https://twitter.com/HrRecycler>

<https://www.facebook.com/HRRecycler/>

<https://www.linkedin.com/showcase/40941785/admin/>

[https://www.instagram.com/hr\\_recycler/](https://www.instagram.com/hr_recycler/)

More information regarding the public website and the social media channels can be found in Deliverable D11.4 Project Web presence.



Figure 7: HR-Recycler Twitter account

## 4 Dissemination Activities and Events

**For internal communication** and with the goal to provide a constant update of the dissemination activities we have developed a template for managing the projects dissemination and outreach activities. This is an *online reporting sheet* for the logging of the ongoing activities of each partner including: type of events attended (conferences, workshops, schools, type of publication (open accessed technical and scientific papers, academic articles, white papers, reports, posters etc.), as well as contacts with new collaborators and other stakeholders.

Examples of the online reporting sheets are given in the following tables.

Publication	Consortium members	Title	Authors	Journal/ Proceedings/ Web	date/ Year	open access
<b>Journals</b>	SDK	Artificial Intelligence for recycling	Belén Garnica	Futureenviro	Nov 2019	<a href="https://futureenviro.es/digital-versions/2019-10/28/index.html">https://futureenviro.es/digital-versions/2019-10/28/index.html</a>
	TUM	Adaptation and Transfer of Robot Motion Policies for Close Proximity Human-Robot Interaction	Khoi Hoang Dinh, Ozgur S. Oguz, Mariam Elsayed, Dirk Wollherr	Frontiers in Robotics and AI	July 2019	<a href="https://www.frontiersin.org/article/10.3389/frobt.2019.00069">https://www.frontiersin.org/article/10.3389/frobt.2019.00069</a>
	VUB	Towards a method for data protection impact assessment: Making sense of GDPR requirements	Dariusz Kloza, Niels van Dijk, Simone Casiraghi, Sergi Vazquez Maymir, Sara Roda, Alessia Tanas and Ioulia Konstantinou	d.pia.lab Policy Brief No. 1/2019	November 2019	<a href="https://cris.vub.be/en/publications/towards-a-method-for-data-protection-impact-assessment-making-sense-of-gdpr-requirements(f5c069e6-5c06-48e9-ae07-a244c4b1e3ca).html">https://cris.vub.be/en/publications/towards-a-method-for-data-protection-impact-assessment-making-sense-of-gdpr-requirements(f5c069e6-5c06-48e9-ae07-a244c4b1e3ca).html</a>
<b>Conferences</b>	CERTH, IBEC, TUM, TEC, SDK	A hybrid human-robot collaborative environment for recycling electrical and electronic equipment	G.T. Papadopoulos, A. Axenopoulos, D. Giakoumis, I. Kostavelis, A. Papadimitriou, S. Sillaurren, L. Bastida, O. S. Oguz, D. Wollherr, E. Garnica, V. Vouloutsis, P. Verschure, D. Tzovaras, P. Daras,	5th IEEE Int. Conf. on Internet of People (IoP 2019),	19-23 Aug.	<a href="https://www.iti.gr/iti/files/document/publications/HR_Recycler_IoP2019_CR.pdf">https://www.iti.gr/iti/files/document/publications/HR_Recycler_IoP2019_CR.pdf</a>
	IBEC	Robust Postural Stabilization with a Biomimetic Control Architecture	Adrián Fernández Amil, Giovanni Maffei, Jordi Ysard Puigbò Llobet, Xerxes Arsiwalla, Paul Verschure	Living Machines: Conference on Biomimetic and Biohybrid Systems	9-12 July 2019	<a href="https://link.springer.com/book/10.1007/978-3-030-24741-6">https://link.springer.com/book/10.1007/978-3-030-24741-6</a>



	IBEC	Latent Morality in Algorithms and Machines.	Xerxes Arsiwalla, Ismael Tito Freire González, Vasiliki Vouloutsi, Paul Verschure	Living Machines: Conference on Biomimetic and Biohybrid Systems	9-12 July 2019	<a href="https://link.springer.com/book/10.1007/978-3-030-24741-7">https://link.springer.com/book/10.1007/978-3-030-24741-7</a>
	IBEC	Towards psychologically plausible robots: evaluation of the iCub's facial expressions.	Vasiliki Vouloutsi, Klaudia Grechuta, Paul Verschure	Living Machines: Conference on Biomimetic and Biohybrid Systems	9-12 July 2019	<a href="https://link.springer.com/book/10.1007/978-3-030-24741-8">https://link.springer.com/book/10.1007/978-3-030-24741-8</a>
<b>Schools/workshops</b>	IBEC	System level understanding of the brain and its emulation in advanced technology.	Vicky Vouloutsi, Ismael Tito Freire, Adrián Fernández Amil	Barcelona Brain and Cognition summerschool 2019	2-13 September	<a href="https://bcbt.specs-lab.com/bcbt19/">https://bcbt.specs-lab.com/bcbt19/</a>
<b>Outreach</b>	IBEC	Neurorobotics as a tool to understand the brain	Vicky Vouloutsi, Ismael Tito Freire, Maria Blancas	Barcelona International Youth Science Challenge. BIYSC	8-19 July 2019	<a href="https://biyisc.org/programmes/research-projects/neuro-robotics-tool-understand-brain-0">https://biyisc.org/programmes/research-projects/neuro-robotics-tool-understand-brain-0</a>
	IBEC	Technology Revolution: Biomimetic Robots to understand human behavior	Maria Blancas, Vicky Vouloutsi, Anna Mura	Festa del la ciencia. Barcelona	26-10-2019	
<b>Blog</b>	TEC	Come and follow us!	Sara Sillaurren, Eva Salgado	News in internal blog of Tecnalia (Tecnalia Express) about HR-Recycler project	Nov-2019	

Table 4: List of 2019 publications in the online reporting sheet

Organization/project name	Type/domain	Project/company	Contact full name	Email	Website	Social media
MITCSAIL	robotics recycling	MIT Lab (USA)		industry@csail.mit.edu.	<a href="https://www.csail.mit.edu/">https://www.csail.mit.edu/</a>	<a href="https://www.youtube.com/watch?v=Tdzbd0Eh44U">https://www.youtube.com/watch?v=Tdzbd0Eh44U</a>
	CSAIL Alliances				<a href="https://cap.csail.mit.edu/">https://cap.csail.mit.edu/</a>	
COLLECTORS	waste collection system	EU project (NL, DE, BE)	<a href="https://www.collectors2020.eu/get-involved/regional-working-group/">https://www.collectors2020.eu/get-involved/regional-working-group/</a>		<a href="https://www.collectors2020.eu/">https://www.collectors2020.eu/</a>	<a href="https://twitter.com/COLLECTORS2020">https://twitter.com/COLLECTORS2020</a>
IMAGINE	Robots Understanding Their Actions by Imagining Their Effects	EU project (Austria?)			<a href="https://imagine-h2020.eu/">https://imagine-h2020.eu/</a>	<a href="https://twitter.com/imagineh2020">https://twitter.com/imagineh2020</a>

Zenrobotics	multipurpose sorting robot that easily adapts to a wide range of sorting needs.	Company (FI)	<a href="https://zenrobotics.com/contact-information/">https://zenrobotics.com/contact-information/</a>	info@zenrobotics.com	<a href="https://zenrobotics.com/">https://zenrobotics.com/</a>	<a href="https://twitter.com/zenrobotics">https://twitter.com/zenrobotics</a>
ZRR for Municipal Waste	incorporate AI and robotics into the company's municipal solid waste plants	Ferrovia, Zenrobotics, EIT Climate-KIC	<a href="https://eit.europa.eu/news-events/news/ai-and-robotics-could-revolutionise-municipal-waste-sorting">https://eit.europa.eu/news-events/news/ai-and-robotics-could-revolutionise-municipal-waste-sorting</a>		<a href="https://eit.europa.eu/news-events/news/ai-and-robotics-could-revolutionise-municipal-waste-sorting">https://eit.europa.eu/news-events/news/ai-and-robotics-could-revolutionise-municipal-waste-sorting</a>	

**Table 5: Interesting contacts/projects in the online reporting sheet**

Nr.	Acronim	Description	Website
1	<b>IEEE T-RO</b>	IEEE Transactions On Robotics	<a href="https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=8860">https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=8860</a>
2	<b>IEEE TCST</b>	IEEE Trans. on Control Systems Technology	<a href="http://www.ieeecss.org/publications/tcst">http://www.ieeecss.org/publications/tcst</a>
3	<b>RAM</b>	IEEE Robotics and Automation Magazine	<a href="https://www.ieee-ras.org/publications/ram">https://www.ieee-ras.org/publications/ram</a>
4	<b>RA-L</b>	IEEE Robotics and Automation Letters	<a href="https://ieeexplore.ieee.org/xpl/aboutJournal.jsp?punumber=7083369">https://ieeexplore.ieee.org/xpl/aboutJournal.jsp?punumber=7083369</a>
5	<b>TMECH</b>	IEEE/ASME Trans. on Mechatronics	<a href="http://www.ieee-asme-mechatronics.org/">http://www.ieee-asme-mechatronics.org/</a>
6	<b>PAMI</b>	IEEE Transactions on Pattern Analysis and Machine Intelligence	<a href="https://www.computer.org/csdl/journal/tp">https://www.computer.org/csdl/journal/tp</a>
7		IEEE Trans. on Image Processing	<a href="https://ieeexplore.ieee.org/xpl/aboutJournal.jsp?punumber=83">https://ieeexplore.ieee.org/xpl/aboutJournal.jsp?punumber=83</a>
8		The International Journal of Robotics Research (Sage)	<a href="https://journals.sagepub.com/home/ijr">https://journals.sagepub.com/home/ijr</a>
9		Robotics and Autonomous Systems (Elsevier)	<a href="https://www.journals.elsevier.com/robotics-and-autonomous-systems">https://www.journals.elsevier.com/robotics-and-autonomous-systems</a>
10		Journal of Intelligent & Robotic Systems (Springer)	<a href="https://www.springer.com/journal/10846">https://www.springer.com/journal/10846</a>
11		International Journal of Computational Vision and Robotics (InderScience)	<a href="https://www.inderscience.com/jhome.php?jcode=ijcvr">https://www.inderscience.com/jhome.php?jcode=ijcvr</a>
12		Industrial Robot: An International Journal (Emerald)	<a href="https://www.emeraldgroupublishing.com/ir.htm">https://www.emeraldgroupublishing.com/ir.htm</a>
13		Pattern Recognition (Elsevier),	<a href="https://www.journals.elsevier.com/pattern-recognition">https://www.journals.elsevier.com/pattern-recognition</a>
14		Computer Vision (Elsevier)	<a href="https://www.journals.elsevier.com/computer-vision-and-image-understanding">https://www.journals.elsevier.com/computer-vision-and-image-understanding</a>
15		Product and Process Development (Elsevier)	<a href="https://www.elsevier.com/catalog/engineering/industrial-and-manufacturing-engineering/integrated-product-and-process-development">https://www.elsevier.com/catalog/engineering/industrial-and-manufacturing-engineering/integrated-product-and-process-development</a>
16		Knowledge-based systems (Elsevier)	<a href="https://www.journals.elsevier.com/knowledge-based-systems">https://www.journals.elsevier.com/knowledge-based-systems</a>

**Table 6: List of interesting journals in the online reporting sheet**

Nr.	Acronym	Description	Date	partner	Venue	Topics	Website
1	ICMRE	5th International Conference on Mechatronics and Robotics Engineering	16-19 Feb		Rome, Italy	Robotic Systems	<a href="http://www.icmre.org/">http://www.icmre.org/</a>
2	HUCAPP 2019	3 rd International Conference on Human Computer	25-27 Feb	TEC	Prague,Czech Republic	Human-Computer Interaction	<a href="http://www.hucapp.vision-grapp.org/">http://www.hucapp.vision-grapp.org/</a>
3	HRI 2019	ACM/ IEEE International Conference on Human- Robot Interaction	11-14 Mar		Daegu, Korea	Human-Computer interaction	<a href="http://humanrobotinteraction.org/2019/">http://humanrobotinteraction.org/2019/</a>
4	IUI 2019	24th annual meeting of the intelligent interfaces community and development on intelligent user interfaces	16-20 Mar		Los Angeles, USA	Human-Computer interaction	<a href="http://iui.acm.org/2019/">http://iui.acm.org/2019/</a>
5	ERF 2019	European Robotics Forum	20-22 Mar	CERTH	Bucharest, Romania	Robotics	<a href="https://www.eu-robotics.net/robotics_forum/index.html">https://www.eu-robotics.net/robotics_forum/index.html</a>
6	IWSDS 2019	International Workshop on Spoken Dialogue Systems Technology	24-26 Apr		Siracusa, Italy	Human-Computer interaction	<a href="https://iwsds2019.unikore.it/">https://iwsds2019.unikore.it/</a>
7	CHI2019	Weaving the threads of CHI	4-9 May		Glasgow, UK	Human-Computer interaction	<a href="https://chi2019.acm.org/">https://chi2019.acm.org/</a>
8	EABOSTON 2019	An event apart	6-8 May		Boston, USA	UX and User modelling	<a href="https://aneventapart.com/event/boston-2019">https://aneventapart.com/event/boston-2019</a>
9	UXPA	17th Annual User Experience Conference	10-May		Boston, USA	UX and User modelling	<a href="https://uxpabostonconference2018.sched.com/">https://uxpabostonconference2018.sched.com/</a>
10	Ergonomics and Human Factors	Ergonomics and Human Factors: Strategic Solutions for Workplace Safety and Health	13-16 May		Boston, USA	UX and User modelling	<a href="https://10times.com/health-care-conference">https://10times.com/health-care-conference</a>
11	GI19	Graphics Interface	28-31 May		Ontario, Canada	Human-Computer interaction	<a href="http://graphicsinterface.org/conference/2019/">http://graphicsinterface.org/conference/2019/</a>
12	UMAP 2019	The 27th ACM Conference On User Modelling, Adaptation and Personalization	9-12 Jun		Larnaca,Cyprus	UX and User modelling	<a href="http://www.um.org/umap2019/">http://www.um.org/umap2019/</a>
13	JNR2019	Robotics national workshop	13-14 June		Alicante, Spain	Robotic Systems	<a href="http://jnr2019.ua.es/">http://jnr2019.ua.es/</a>
14	EICS 2019	The 11th ACM SIGCHI Symposium on Engineering Interactive Computing Systems	18-21 Jun		Valencia,Spain	Robotic Systems	<a href="http://eics.acm.org/2019/">http://eics.acm.org/2019/</a>



15	SALENTO AVR 2019	6th Augmented Reality, Virtual Reality and Computer Graphics	24-27 Jun		Lecce, Italy	Human-Computer interaction	<a href="http://www.salentoavr.it/">http://www.salentoavr.it/</a>
16	Interaccion 2019	XX INTERNATIONAL CONFERENCE ON HUMAN-COMPUTER INTERACTION	25-28 Jun	TEC	Donostia-San Sebastian (Spain)	Human-Computer interaction	<a href="https://interaccion2019.ehu.eus/?lang=en">https://interaccion2019.ehu.eus/?lang=en</a>
17	URLONDON 2019	User Research London	28-Jun		London, UK	UX and User modelling	<a href="https://www.userresearchlondon.com/">https://www.userresearchlondon.com/</a>
18	IAV 2019	10th IFAC Symposium on Intelligent Autonomous Vehicles	3-5 Jul		Gdansk, Polonia	Robotic Systems	<a href="http://konsulting.gda.pl/iaav2019/web/">http://konsulting.gda.pl/iaav2019/web/</a>
19	TAROS	The 20th Towards Autonomous Robotic Systems Conference	3-5 Jul		London, UK	Robotic Systems	<a href="https://www.qmul.ac.uk/robotics/events/taros2019/">https://www.qmul.ac.uk/robotics/events/taros2019/</a>
20	HCI 2019	21st International Conference on Human-Computer Interaction	26-31 Jul		Orlando, Florida, USA	Human-Computer interaction	<a href="http://2019.hci.international/">http://2019.hci.international/</a>
21	IOP 2019	The 5th IEEE International Conference on Internet of People	19-23 Aug		Leicester, Uk	UX and User modelling	<a href="http://www.smart-world.org/2019/iop/cfp.php">http://www.smart-world.org/2019/iop/cfp.php</a>
22	ICR 2019	ICR 2019: 4th International Conference on Interactive Collaborative Robotics	20 - 25 Aug		Istanbul, Turkey	Human-Computer interaction	<a href="http://specom.nw.ru/icr2019/">http://specom.nw.ru/icr2019/</a>
23	FedCSIS 2019	7th Conference on Multimedia, Interaction, Design and Innovation	1-4 Sept		Leipzig, Germany	UX and User modelling	<a href="https://fedcsis.org/2019/midi">https://fedcsis.org/2019/midi</a>
24	Interact 2019	International Conference on Human-Computer Interaction	2-6 Sep		Paphos, Cyprus	UX and User modelling	<a href="https://interact2019.org">https://interact2019.org</a>
25	ICVS 2019	The 12th International Conference on Computer Vision Systems (ICVS 2019)	23-25 Sept		Thessaloniki, Greece	Computer Vision	<a href="http://www.icvs2019.org">www.icvs2019.org</a>
26	MOBILEHCI 2019	21st International Conference on Human-Computer Interaction with Mobile Devices and Services	1-4 Oct		Tapei, Taiwan	Human-Computer interaction	<a href="https://mobilehci.acm.org/2019/">https://mobilehci.acm.org/2019/</a>
27	AMUSE	UX Conference	16-18 Oct		Budapest, Hungary	UX and User modelling	<a href="http://amuseconf.com/">http://amuseconf.com/</a>
28	RSVT 2019	ACM--2019 International Conference on Robotics Systems and Vehicle Technology	18 - 20 Oct		Wuhan, China	Robotic Systems	<a href="http://www.rsvt.org/">http://www.rsvt.org/</a>
29	UIST 2019	32nd ACM User Interface Software and Technology Symposium	20-23 Oct		New Orleans, Louisiana, USA	UX and User modelling	<a href="http://uist.acm.org/uist2018/">http://uist.acm.org/uist2018/</a>
30	IROS 2019	Intelligent ROBots and Systems	3 - 8 Nov		Macau, China	Robotic Systems	<a href="http://www.iros2019.org/">http://www.iros2019.org/</a>
31	ERW2019	European Robotics Week	15-24 Nov		TBD	Robotic Systems	<a href="https://www.eu-robotics.net/robotics_week/about/index.html">https://www.eu-robotics.net/robotics_week/about/index.html</a>

32	ICRAI 2019	Robotics and Artificial Intelligence	22-24 Nov		Singapore	Robotic Systems	<a href="http://www.icrai.org/">http://www.icrai.org/</a>
33	LM2020	Biomimetic and biohybrid systems	28-31 July	IBEC	Freiburg, Germany	Robotic Systems	<a href="http://livingmachinesconference.eu/2020/">http://livingmachinesconference.eu/2020/</a>
34	BCBT 2020	Barcelona Brain and Cognition summerschool	TBA	IBEC	Barcelona, Spain	UX and User modelling	<a href="https://education.humanbrainproject.eu/web/bcbt-2018-summer-school">https://education.humanbrainproject.eu/web/bcbt-2018-summer-school</a>
35	Hannover Messe 2019	Hannover Messe	1-5 April	TUM	Hannover, Germany	Robotic Systems	<a href="https://www.hannovermesse.de/en/">https://www.hannovermesse.de/en/</a>

**Table 7: List of interesting events in the online reporting sheet**

## 5 Conclusions

---

With these activities we will ensure that the HR- Recycler results will be disseminated to the appropriate target communities, at appropriate times, via appropriate methods. Responsible partners are collecting the knowledge generated by the consortium, including open accessed technical and scientific papers, academic articles, white papers, reports, posters etc. Reports on the dissemination activities and materials are produced corresponding to the key milestones of the project.

Given our efforts during the first year of the project, this activity has already contributed to some of the KPI of O8 and O9 as follows:

<b>KPI 8.1</b>	Number of stakeholder organizations to be included in the HR-Recycler community: > 40
<b>KPI 8.2</b>	Number of organized workshops related to the core activities of the project: at least 2 (one to be hosted by GAIKER and IND, and one to be held by BNTT and CERTH).
<b>KPI 8.3</b>	Cooperation/liaison with at least 5 projects already from the 1st year of the project.
<b>KPI 9.1</b>	Number of attracted future stakeholders/providers: > 30.
<b>KPI 9.2</b>	Business plans available for all identified exploitable assets, including the overall HR-Recycler system.