REE4EU: Integrated High Temperature Electrolysis (HTE) and Ion Liquid Extraction (ILE) for a Strong and Independent European Rare Earth Elements Supply Chain

Project type:	Innovation action		
Start date of project:	01/10/2015	Duration:	48 months

[D 9.2a] Dissemination, Communication and Exploitation plan

WP n° and title	WP9 - Market analysis, Exploitation and Dissemination
Responsible Author(s)	PNO-I
Contributor(s)	ALL PARTNERS
Dissemination Level	PU

TABLE OF CONTENTS

List of Figures

List of Tables

List of abbreviations and definitions

Abbreviation	Definition
EC	European Commission
REA	Research Executive Agency
REE	Rare Earth Element(s)
PM	Permanent magnet(s)
PMS	Permanent magnet swarf

1 Executive Summary

This document reports on the dissemination and communication activities planned and implemented for creating awareness about the REE4EU initiative, and the project results. More specifically, it includes a description of the communication and dissemination strategy used to reach a wide audience, and the channels and tools that will be and have already been used to disseminate the REE4EU project objectives and results. It also summarises the main exploitation routes that have been identified so far.

The report includes the activities realized from the start of the project, and the included plan represents a guide to support the consortium partners to plan and carry out the dissemination activities using the right material and channels.

The plan will be regularly reviewed and updated, and a final report summarising the dissemination, communication and exploitation activities will be released at the end of the project.

This document is articulated around 6 objectives:

- To outline, present and purpose the dissemination, communication and exploitation plan;
- Relates to the REE4EU relevant stakeholders, to explains which methodology has been chosen in order to guarantee their successful engagement;
- To present the dissemination material that have been realized and the ones planned, presenting also some visual examples;
- To report the activities carried out and planned by each consortium partner including conferences, press release, presentations and papers;
- To report the main successful exploitation activities;

2 Introduction

2.1. REE4EU Project presentation

2.1.1. The Project

Rare earth elements (REEs) are the seventeen chemical elements lanthanides, Scandium and Yttrium. Because of their geochemical properties, REEs are typically dispersed and not often found concentrated as RE minerals in economically exploitable deposits. REEs are considered “key-enablers” of green technologies, as they are used in hybrid electric vehicles, wind mills, and highly efficient electric motors. The dependence on Chinese exports makes Europe, and western countries in general, extremely dependent and vulnerable to Chinese market control. Therefore, REE are considered to be materials with the highest supply-risk.

Regaining REE from RE-containing waste streams may constitute an important RE secondary source in Europe.

A recent study, based on detailed trade data, estimates the global trade in RE-containing products in 2010 at around €1.5 trillion, or 13% of the global trade. However, only 1% of RE waste is being recovered as no adequate process is currently available. REE4EU will open-up a fully new route bringing recovery of in-process wastes from PM manufacturing within reach.

2.1.2. The Project

The REE4EU project will develop, validate and demonstrate in two industrially relevant pilots an innovative Rare Earth Alloys (REA) production route from permanent magnets (PM) and Ni metal hydride (NiMH) battery waste. The targeted integrated solution is based on recently developed lab-proven technologies for direct high temperature electrolysis of REA production. It will be combined in the pilots with an innovative and proven Ionic Liquid Extraction or tailored hydrometallurgical pre-treatment to demonstrate dramatic improvements in cost and environmental performance compared to state of the art technologies.

The project involves in its consortium the full value chain including (SME and large) RE metal producers, PM manufacturer, SME process engineering companies and LCA experts, large electronics and battery recycling companies, SME technology transfer, innovation specialists as well as chemical and end-user associations. Together with 4 top research institutes on high temperature electrolysis, ionic liquids and RE recycling the REE4EU consortium will prove technical and economic viability on in-process PM waste (swarf), as well as end-of-life (EoL) PM and NiMH battery waste, develop urgently required market data on EoL RE availability and a triple value-chain business case for a new European Rare Earth Alloys (REA) production sector from secondary raw material.

2.1.3. Benefits

The project will prove technical and economic viability on in-process permanent magnet waste, as well as end-of-life permanent magnets and NiMH battery waste. The targeted integrated solution will demonstrate dramatic improvements in cost and environmental performance compared to state of the art technologies. This includes avoidance of process steps, 50% energy savings, and 100% recycling of reagents as opposed to disposal of strong acid leaching agents in state of the art pre-treatment steps.

Figure 1. REE4EU Concept

REE4EU will also develop urgently required market data on EoL RE availability and a triple value-chain business case for a new European secondary rare earth alloys production sector. This will create new jobs, increase Europe's independence from imports and last but not least, provide valuable raw materials for fast growing European green-technology industries such as electrical/hybrid vehicles and wind turbines.

2.2. REE4EU approach to Dissemination

In order to effectively communicate with stakeholders and to reach maximum spread of the project results, a defined dissemination methodology is needed. The REE4EU dissemination methodology is based on the following main points:

- Raising Awareness and interest for the proposed innovative solution;
- Involving the entire consortium;
- Planning activities to disseminate project results to target audiences;

Activities to ensure wide visibility and identification of the project have been planned as part of dissemination campaign. During the first months of the project the main activities of dissemination have been focused on realization of the strategy.

The plan foresees:

- Design of the REE4EU brand identity (i.e. logo);
- Realization and distribution of dissemination materials such as: website, brochures, template for project documents and power point presentation, poster, video etc.
- Planning participation in relevant events, exhibitions, workshops, specialized international meetings, etc.;
- Stakeholders analysis to build consensus around project initiatives and valorize project results;
- Launch of a media campaign existing of public relations, featured articles in magazines, e-journals, forums, mailing lists, press releases, social networks etc;
- Establishing synergies with projects to help extend the scope of dissemination results to new fields in both National and international domains;
- Guarantee synergy with EU platforms;

Dissemination activities are being conducted in order to actively engage all consortium partners. The partner responsible for dissemination (PNO-I/CTECH) has continuously been working to ensure proper information dissemination to support the full communication of the project results. Partners are involved to define and plan dissemination efforts in order to provide a structured and dynamic approach to the communication of the project results.

REE4EU is deploying different dissemination techniques through various communication channels. These techniques include:

- The professional design, production, and distribution/ promotion of REE4EU dissemination material (website, brochures, power point presentation, video, reusable illustrations etc.).
- These materials will be distributed at designated conferences, workshops, or EC events attended by REE4EU partners and external stakeholders.
- The dissemination materials are distributed in electronic format by email to interested parties and it is accessible on the project management website.

All consortium partners have an important role in the diffusion of project results. Project results are demonstrated in a variety of ways, including the presentation of REE4EU at relevant events such as: conferences, exhibitions, poster sessions, workshops, communication material distribution opportunities, etc.

The search for events has started at the beginning of the project, it is currently ongoing and it will continue till the end of project. The results of the research are posted on the project website in order to promote an active participation by both partners and contacts.

Also, significant in terms of dissemination, are joint initiatives and the exchange of information with other major international players in the field, such as :

- A.SPIRE events: Sustainable Process Industry through Resource and Energy Efficiency
- SCRREEN: European CRM expert Network (http://scrreen.eu/)
- Platirus: PLATInum group metals Recovery Using Secondary raw materials: http://www.platirus.eu/;
- REEcover - Recovery of Rare Earth Elements from magnetic waste in the WEEE recycling industry and tailings from the iron ore industry: http://www.reecover.eu/ - (ended in December 2016)
- INSPIRE: Business Models for Flexible and Sustainable Manufacturing http://www.inspire-eu-project.eu/
-

3 Dissemination Strategy

3.1 Dissemination objectives

Dissemination, communication and exploitation activities are aimed to:

- Widespread the project results among relevant stakeholders to generate awareness and interest in the proposed solutions,
- Obtain valuable feedback on intermediate project results so that new ideas can emerge to enhance the impact of the project,
- Set up engagement strategies with relevant stakeholders for the potential exploitation of technologies and knowledge generated during the project

The plan provides an overview on the dissemination strategy, by focusing on the following main themes:

- The main results to be disseminated throughout the project,
- The dissemination channels and instruments to be used,
- The major stakeholders and targets groups to focus on,
- The main dissemination strategies actions implemented so far for each partner,
- The REE4EU events.

The project encourages the maximum publicity for its activities and the greatest possible involvement of external actors in its discussions.

This plan also presents the first results of the Dissemination Activities. The report which is in its first version, will be updated at the end of the project (M48).

3.2 Project stakeholders and target group

The main identified target groups that will be addressed, coherently with the stakeholder analysis, are the Innovators, Investors and Business Drivers in the global REE4EU supply chain, which can be classified as profit and non-profit stakeholders.
More in general the target group for the dissemination activities considered are the following:

- **Companies:** who are driving successful innovations in the field of critical raw materials and particularly in REE and bringing it to the market;
- **Researchers:** scientific community developing synergetic or complementary technologies in the topic of recovery or production of CRM and more specifically in the domain of Rare Earth Elements and Alloys), (public/private universities, research centers at national and EU level);
- **Wide audience and policy makers:** examples are associations with high reaching potential to regional or national stakeholders, policy makers involved in increasing Europe's resilience to the supply risk of CRM, in local jobs creation, and in developing green-technologies relying on CRMs, etc.

4 Dissemination material and tools

4.1 Project Identity

The widespread dissemination of the project results begins with the project visibility. To achieve maximum visibility, the project needs a personality. The project identity is linked with a graphically coherent and consistent representation of the REE4EU logo on project dissemination materials and documentation.

It's necessary that every event, presentation, newsletter, deliverable, brochure, etc. make use of this image and be consistent with its style

The logo will make the project recognizable as it defines its identity for the whole duration. It's used in every document produced within the project context and in every kind of contact to the external environment.

Figure 2. REE4EU logo

4.2 Website

We describe here the REE4EU public Web Site, supported by pictures of the online site.

The Web Site, available at the URL http://www.ree4eu.eu , represents the most effective communication tool of the REE4EU project to:

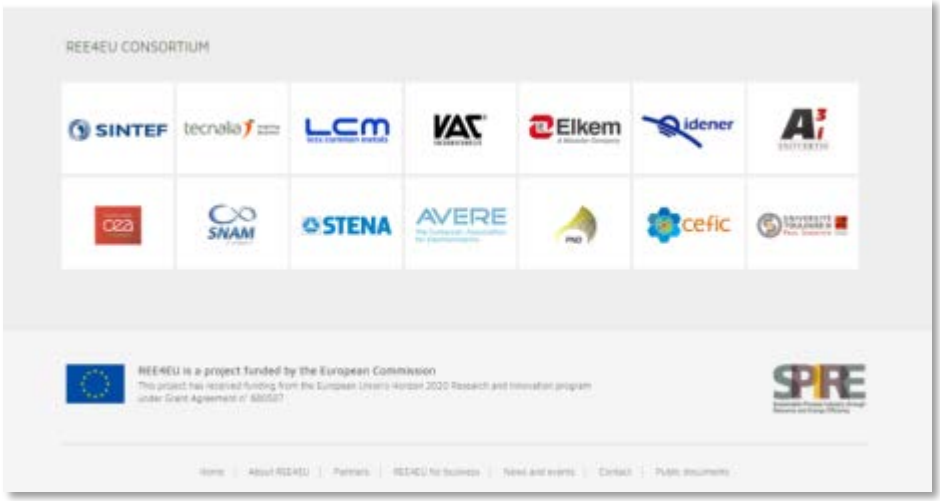
- ✓ inform all the stakeholders and general public about the aim and objectives of the REE4EU project;

- ✓ disseminate project's activities and initiatives;
- ✓ collect, store and distribute information
- ✓ invite external sources to interact in order to build and to facilitate business development activities. For this activity a dedicated page, REE4EU for Business has been foreseen.

The REE4EU Website is available in English and is composed the following main areas:

- Home
- About REE4EU
- Partners
- REE4EU for business
- News and Events
- Results
- Contact
- Public documents

A)



B)

Figure 3 A) Header, and B) Footer

4.2.1 The homepage

The Home Page (FIG.4) shows all major contents available on the Website:

- The text in the page describes the aims of the project, providing a clear statement to visitors about the contents of the project;
- A project video presentation, realized by STENA, is embedded;
- A video showing the trials carried on at LCM premises, as meaningfull milestone of the project, added at M30;
- Direct access to all the areas of the website are provided (HOME, ABOUT REE4EU, PARTNERS, REE4EU FOR BUSINESS, NEWS AND EVENTS, RESULTS, CONTACT);
- All the project partners logos are displayed;
- The latest news and events interesting and coherent to the project scope are posted;
- Information about the project funding are given, included the SPIRE logo;

Up to now, four green boxes have been added during the the project in order to increase:

1. The visibility of the project newsletters (directly downloadable from the public document page)
2. The stakeholder analysis report (which is available after login process)
3. The REE4EU publication on the impact magazine, released in June 2017
4. The market analysis report (which is available after login process)

Figure 4. The homepage

In the following paragraph every area of the website will be detailed.

4.2.2 About REE4EU

This area includes:

- ✓ The **contex**t of the project, explaining that which is problem: **Rare earth elements** are typically dispersed and not often found concentrated as RE minerals in economically exploitable deposits. The dependence on Chinese exports makes Europe, and western countries in general, extremely dependent and vulnerable to Chinese market control. REE from RE-containing waste streams may constitute an important RE secondary source in Europe.
- ✓ A **description** of the project's specific objectives: The REE4EU project will demonstrate in 2 industrially relevant Pilots an innovative Rare Earth Alloys (REA) production route from permanent magnets PM and Ni metal hydride (NiMH) Battery waste. The project will be based on an innovative and proven Ionic Liquid Extraction or tailored hydrometallurgical pre-treatment.
- ✓ The **benefits** expected from the project: improvements in cost and environmental performance compared to state of the art technologies, such as avoidance of process steps, 50% energy savings, and

100% recycling of reagents as opposed to disposal of strong acid leaching agents in state of the art pre-treatment steps.

✓

Figure 5. About REE4EU. The Project

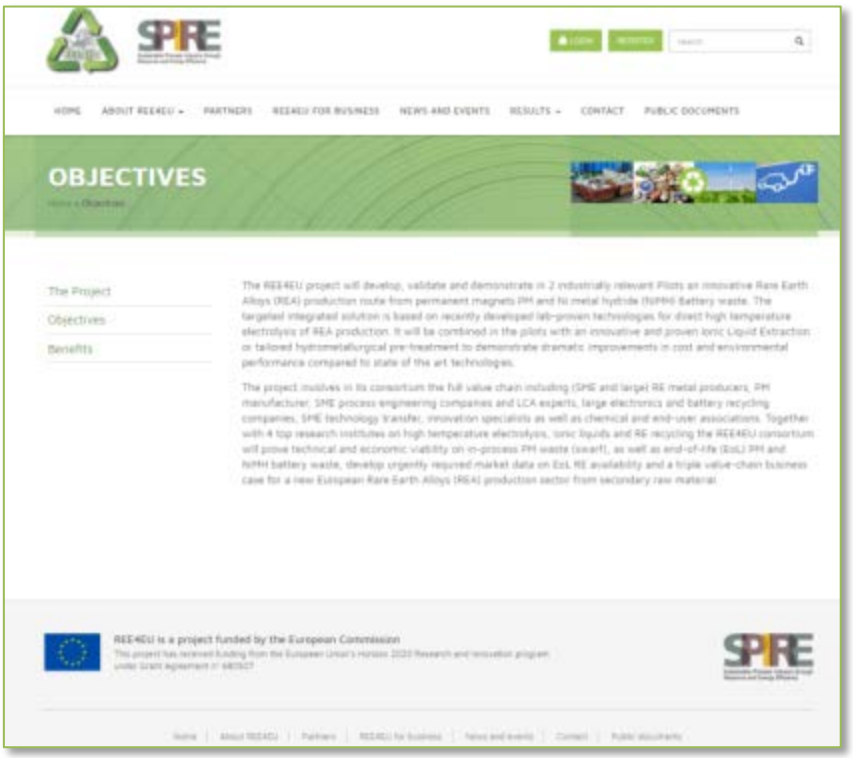


Figure 6. About REE4EU. The Objectives

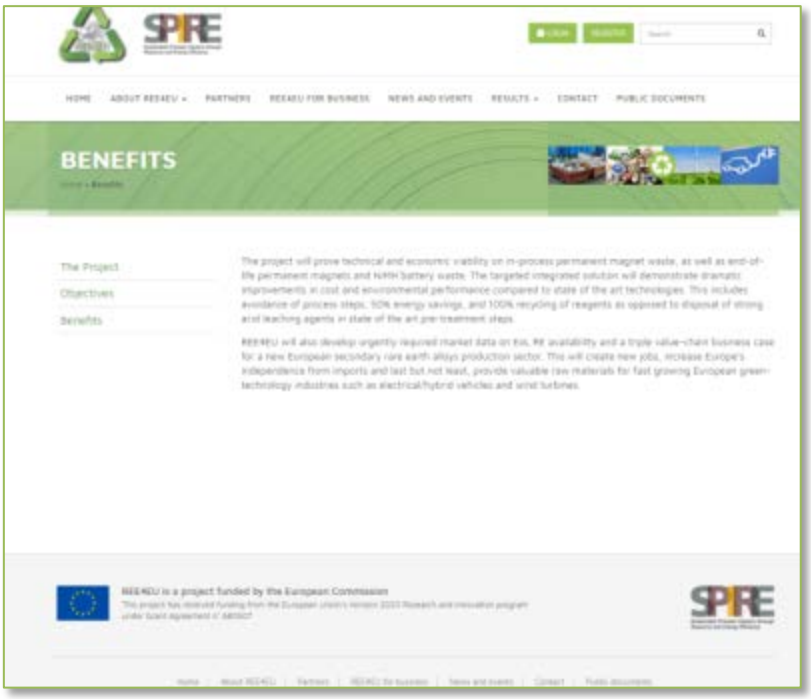
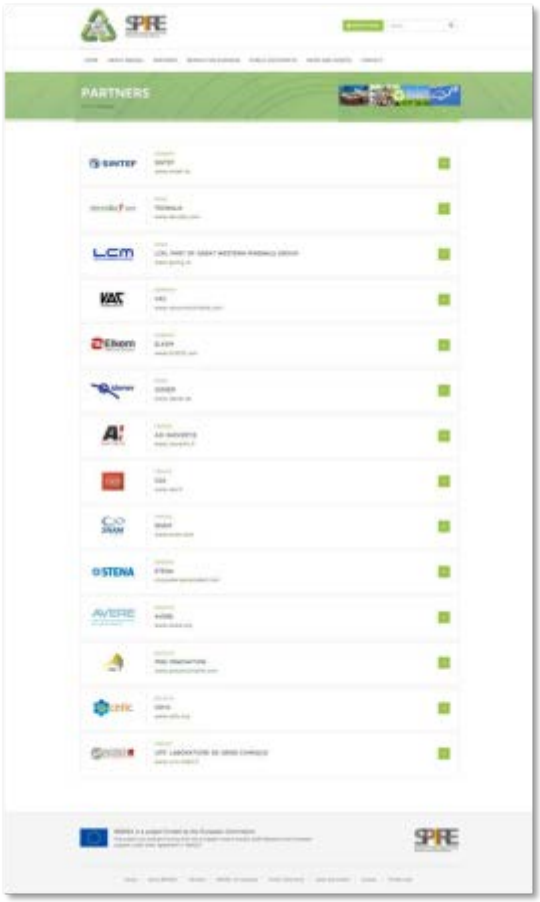


Figure 7. About REE4EU. The benefits



4.2.3 Partners

The section "PARTNERS", hosts the information of each partner of REE4EU project.

For each organisation it is included:

- the logo of the organisation, the full name and the website (Figure 8).
- A brief description of the organisation, highlighting their main competences related to the project (Figure 9).

Clicking on the symbol "+" it will possible to see the full description of the organization.

Figure 8. Partners: Partners name, logo and website

Figure 9. Partners description (example about coordinator SINTEF)

4.2.4 REE4EU for Business

This page will be very important to enable the development of an integrated stakeholders value chain needed to demonstrate the economic sustainability of EoL permanent magnet and NiMH battery wastes as feedstock for an investment in a European secondary RE Alloy plant. To this end, the value chain reported in the page will be updated with the stakeholders identified within the project.

Figure 10. REE4EU for business

4.2.5 Section “News and Events”

In these page is present an archive of news related to REE4EU as well as interesting events on REE, Rare Earth Alloys (REA) Permanent Magnets (PM) and Secondary Batteries (SB), Ionic Liquid Extractionin order to create a network all through Europe with other events and organizations (the list is regularly being updated with the most recent one).

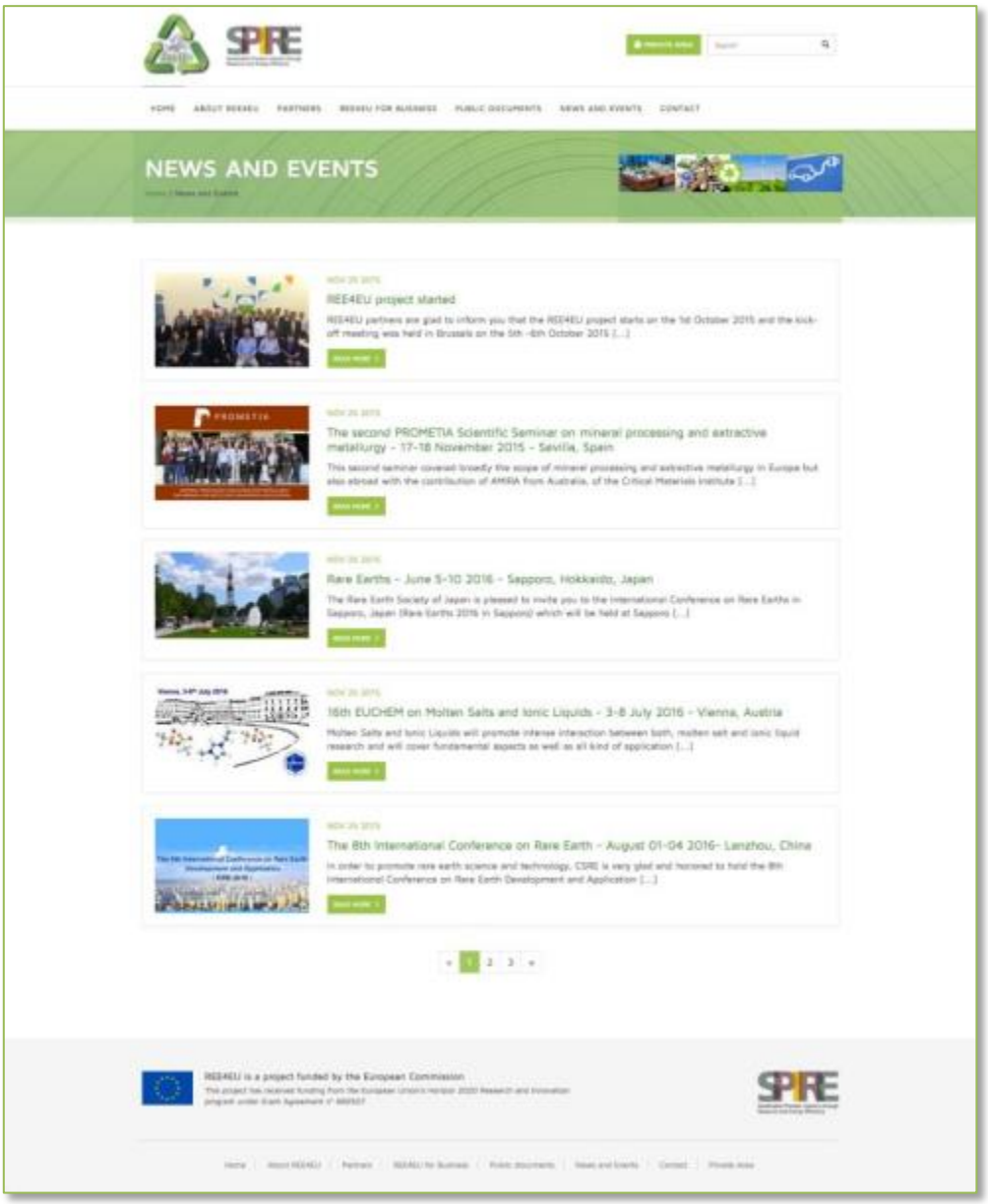


Figure 11: News and events

4.2.6 Results

The page focusing on results was created in M12. It describes the activities implemented in the first year of the project and by providing details about the ILE step (Hydrometallurgical and Ionometallurgical approach) and the HTE Step. It points out the activities aiming at process optimisation, design and engineering carried out in order to demonstrate the REE4EU process in an industrially relevant environment. Moreover, a further analysis of the status of the stakeholder analysis, dissemination & exploitation of the project results is reported.

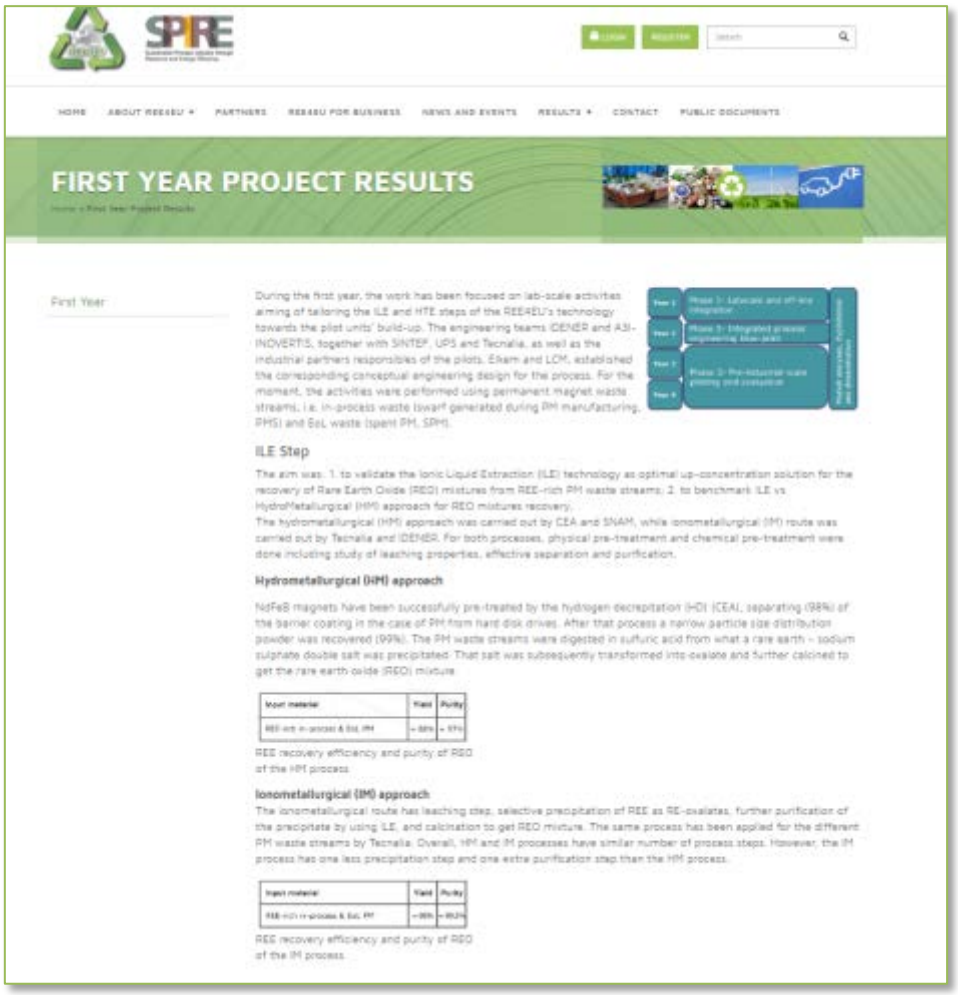


Figure 12. First year project results

A further section related to the most relevant results will be created to update the wide public about the new results achieved after the activities performed, foreseen at M32.

4.2.7 Contacts

Thanks to this area it will be possible to contact project partners and create a network of stakeholders interested in the REE4EU project, in particular it will be possible to contact:

The Project Coordinator:

Dr. Ana Maria Martinez, Senior Research Scientist at SINTEF;

The Exploitation Manager:

Dr. Nader Akil, Innovation and Grants Senior Consultants at PNO Innovation BV;

The Dissemination Contact:

Dr. Patrizia Circelli, Innovation and Grant Consultants at CiaoTech;

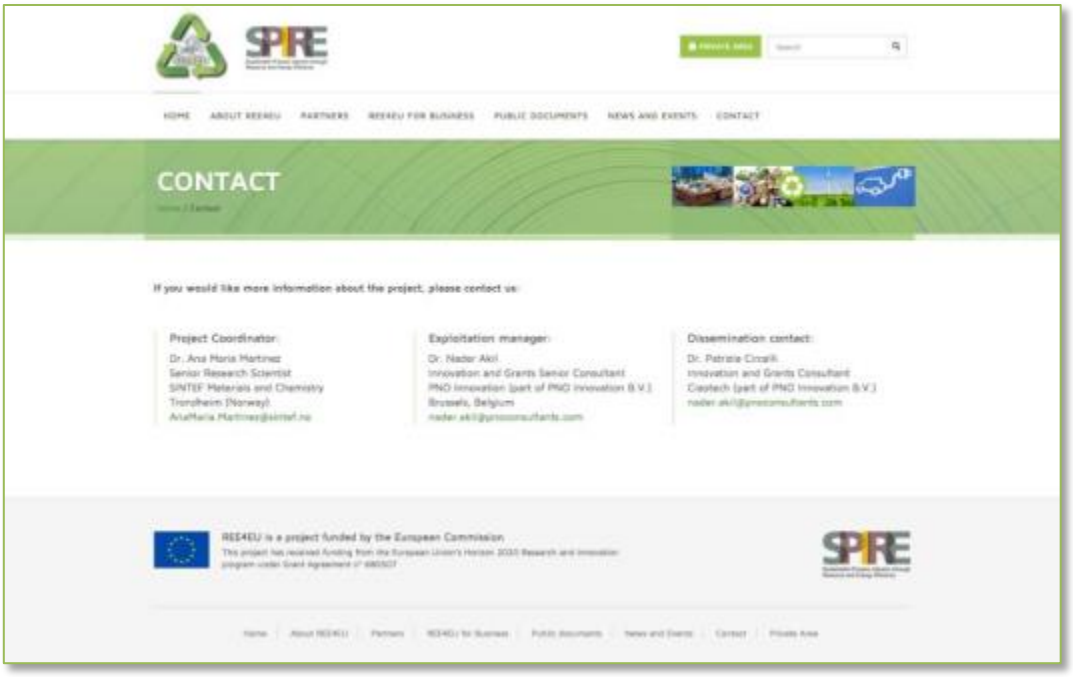


Figure 13. Contact (Project Coordinator, Exploitation Manager, Dissemination Manager)

4.2.8 Public Documents

The section public documents stores the relevant public project documents such as public reports, analysis, dissemination material released (brochures, videos, newsletters, presentations, publications) with an useful instrument for searching by tags.

The public dissemination materials are available without any registration/login process (i.e. project newsletters, brochures, posters), meanwhile reports, analysis and studies performed in the framework of the project activities (deliverable 9.1 “Value Chains Stakeholders Analysis Report” and the deliverable 9.4 “Market Analysis Report”) can be downloaded only after registration: the partners agreed to make this distinction since the registration will allow the consortium to get in touch with relevant stakeholders operating in the REE field.

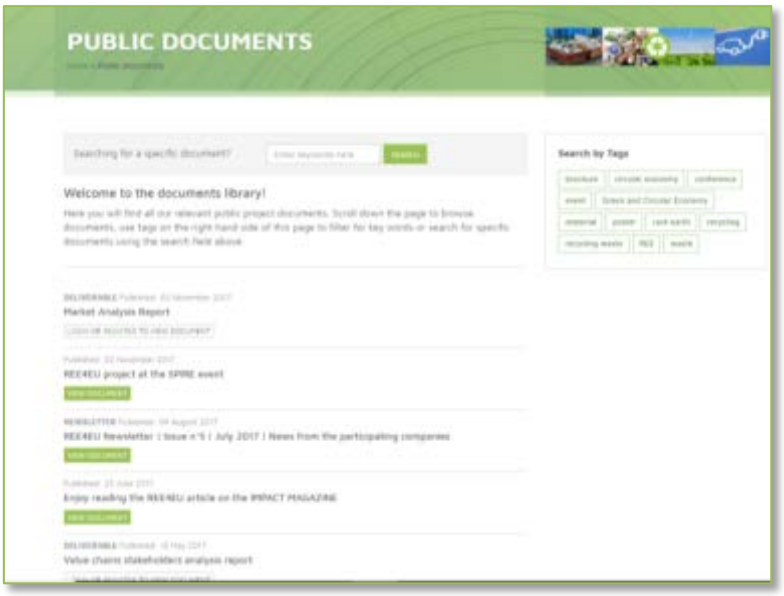


Figure 14. Public documents - Notice that the Deliverable 9.1 and 9.4 can be downloaded only after registration.

4.3 Brochure

The first brochure is reported hereafter (Figure 15). Leaflet/ brochure where the REE4EU goals and expected results are described, the main benefits are presented and the consortium partners are listed. Dissemination material will be updated at the end of each year of the project (M12, M24, M36, M48).

A)

B)

Figure 15. Brochure. A) Front Page; and B) Back Page

The first year project results have been included in the update of the REE4EU brochure (M12), as follows:

Figure 16. Brochure update, back page (M12).

A further brochure related to the most relevant results will be created to update the wide public about the new results achieved after the activities performed.

4.4 Poster

A poster displaying the general information about REE4EU was elaborated. It was conceived to be a flexible tool easy to be adapted to many different contexts (events, conferences, exhibitions) and in compliance with ad hoc partners' requests.

Figure 17 .Poster

4.5 Roll-up

The roll-up displays the main REE4EU information, its website URL, the partners involved and a key image connected to the project scope, in addition to the EC acknowledgment.

Figure 18. Roll-up

4.6 Press releases

Short press releases announcing the project progresses, updates, news, relevant participation to the main events have been periodically prepared (each 2-3 months) and widespread through the channels reported in table 1 and by using the most famous social media channels as well as the partners' websites. Analytic information about all the press releases produced in the framework of the implementation of the

dissemination & communication activities are further detailed in the partners dissemination tables here attached. REE4EU was also included several times in the publication of the **SPIRE newsletter**, where updates dealing with REE4EU main progresses and information were released.

LEADER	TITLE OF THE NEWS	DATE	LINK
PNO/ CIAOTECH	REE4EU: first six months progress meeting	**MAY 2016**	http://myemail.constantcontact.com/SPIRE-Newsletter-2016-7.html?soid=1120321611365&aid=RYkjcibvE0E
PNO/ CIAOTECH	REE4EU project: Strategy Meeting, Trondheim	**JULY 2016**	http://myemail.constantcontact.com/SPIRE-Newsletter-2016-8.html?soid=1120321611365&aid=0MbNtarkAH4
PNO/ CIAOTECH	The third newsletter of the REE4EU project	**MAY 2017**	http://myemail.constantcontact.com/SPIRE-Newsletter-2017-12.html?soid=1120321611365&aid=ZiVX6Ys61wk
PNO/ CIAOTECH	The REE4EU Value chains stakeholders analysis report	**NOVEMBER 2017**	http://myemail.constantcontact.com/SPIRE-Newsletter-2017-14.html?soid=1120321611365&aid=ML1SwLbiijM
PNO/ CIAOTECH	REE4EU: the project goes on!	**MARCH 2018**	http://conta.cc/2Dqs5IE https://www.spire2030.eu/news/press-office/newsletter

Table 1. REE4EU press releases within the SPIRE newsletter

4.7 Scientific publications

Each partner should contribute by submitting publications for technical literature and dedicated journals (web and print). During the course of the project, publications (at least 8) are foreseen in international (peer-reviewed) journals and industrial magazines. The submitted final versions of the publications should then be uploaded onto the REE4EU website and to be actively promoted via REE4EU's own and partners' social media channels. Morevoer, Research Organizations will create awareness of REE4EU at Research level, presenting the project findings to the engineers and scientists of the future through lectures and seminars for undergraduate and postgraduate students and academics (at least once per year). The publications accessible via OpenAIRE will be displayed automatically. Beneficiaries will only need to check if the publications are linked to the project. In case of publications not registered via OpenAIRE, the beneficiary encodes the Digital Object Identifier (DOI) and all the rest of information is complete automatically.

4.8 Newsletters

Table 2 describes the project newsletters realized and planned in the framework of the whole duration of the project. This plan is flexible and it can be adapted to the specific communication and dissemination needs of REE4EU current activities.

Newsletter number	Month	Issues of the newsletter	Date of publication
1	6	Role of the companies in REE4EU project	***March 2016***
2	10	Role of the research organization in REE4EU project	***July 2016***
3	14	Updates on the first-year project results	***December 2016***
4	18	Updates on partners participation to relevant events (realized and planned) and a special focus on the stakeholder analysis	***April 2017***
5	22	News from the participating companies	***August 2017***
6	29	REE4EU: the project goes on!	***March 2018***
7	32	News from the participating research organization	*June 2018*
8	36	Updates on the third-year project results	*September 2018*
9	40	Updates on partners participation to relevant events	*January 2019*
10	44	To be defined during the fourth year of the project	*April 2019*
11	46	Exploitation activities and Workshop	*June 2019*
12	48	Updates on the final project results	*October 2019*

Table 2. Newsletters (in the grey boxes the published newsletters).

4.9 Videos

During the project, two videos are already available into the homepage of the project's website:

- A short video was also realized, targeting a wide public audience, and explaining the achievements and the benefits of the REE4EU project. The information which becomes available in the project development phase, provides the opportunity to involve external stakeholders into the project by changing their perceived interest and attitude in the project with targeted information. The video was posted directly in the Homepage of the REE4EU website and widely disseminated through all the channels identified in table 2, it got more than 1700 views on Youtube;
- A short video showing the validation of the REE4EU's high temperature electrolysis (HTE) technology at a pilot scale is available at the home page of the website of the project. The video shows one of the trials carried out in the 1 kA electrolysis cell installed at LCM. The permanent magnet-derived rare earth oxide mixture supplied by VAC was converted to rare earth alloy ingot, which will be used to produce a new permanent magnet. The video shows several moments during the HTE cell operation, including start-up, electrolysis operation, feeding of the raw material, and tapping of the alloy product. The video was posted as important milestone in the project to illustrate to the public audience how the REE4EU project is going on. It was posted also on YouTube, LinkedIn, Twitter and Innovation Place (PNO channels).

Figure 19. Videos in home page

5 Dissemination channels

5.1 Social media

The most important social media can be summarized as in Table 3.

Channels	Link	No of users
REE4EU website	http://www.ree4eu.eu/	/
Innovation Place: CTECH/PNO-I web-portal (Europe) (news published through news and newsletter)	https://www.innovationplace.eu/	> 10,000
Ricerca&innovazione: CTECH/PNO-I web-portal (Italy) (news published through news and newsletter)	http://www.ricercaeinnovazione.it/	6,000
Facebook (By using the INNOVATION PLACE account) *Active from October 2015 to March 2018	https://www.facebook.com/innovation.place.pno?fref=pb&hc_location=profile_browser	200
Linkedin Innovation Place group	https://www.linkedin.com/groups/4086674	940

Linkedin company page	https://www.linkedin.com/company/innovation-place	290
Twitter (INNOVATION PLACE account)	@INNOVATION_PL	364
Twitter (CIAOTECH account)	@PNO_IT	176
CEFIC	Suschem.org and suschem.blogspot.com/	/

Table 3. Dissemination channels

In particular, the most important web dissemination channel can be represented by:

- **REE4EU website**
- **Partner websites**
- **InnovationPlace** is an online service supporting organisations to achieve their strategic R&D objectives through the matching and managing of R&D projects, organisations, and grants. InnovationPlace is based on the Open Innovation paradigm, with the active involvement of industry leaders, multinational organisations, high-level research centres, public bodies, and innovative SMEs all around Europe. During the last years the number of users registered in the web platform has drastically increased.
- **Ricerca & Innovazione** is the Italian Open Innovation platform that supports collaborative research through the successful combination of research and development projects, excellent European organizations and the most important public funding opportunities at European, national and regional level.
- The world's most famous social networks: **Facebook, LinkedIn and Twitter.**

For giving an example, In the following figures some of the posts released into the web.

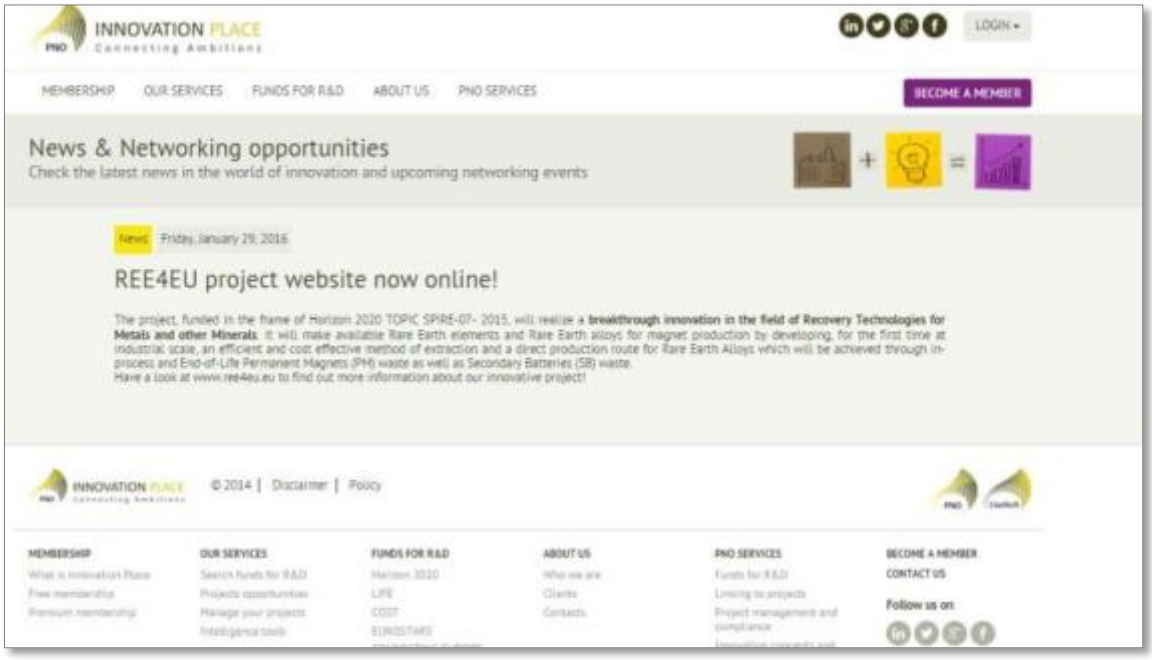


Figure 20. Innovation Place website, news section

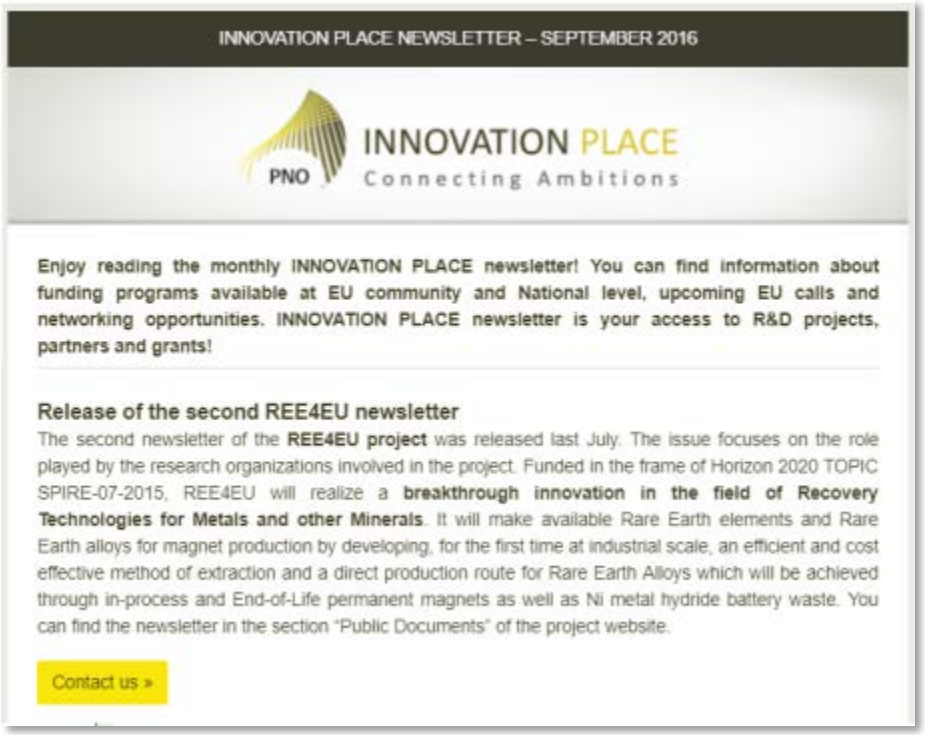


Figure 21. Innovation Place Newsletter

Figure 22. Facebook (Innovation Place account, closed on March 2018)

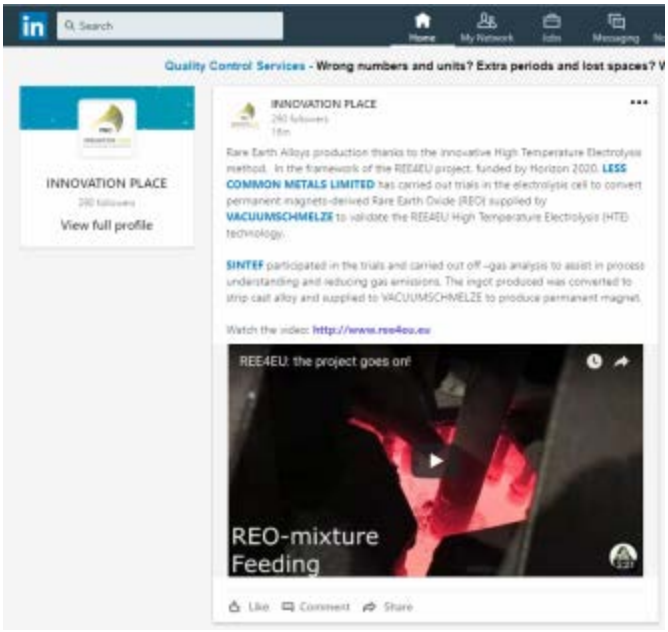


Figure 23. Linkedin page of Innovation Place with one of the REE4EU post

Figure 24. Twitter post example (Innovation Place Account)

5.2 REE4EU Dissemination Strategy

Table 4 shows the audience as target group reached from the Communication Material and the Communication Channel. Each target group has been strategically involved through appropriate communication strategy.

Target group	Communication material	Communication channel
COMPANIES	REE4EU website News/newsletter Press release REE4EU electronic brochure REE4EU paper brochure	Emails and phone calls Exchange of links about related projects/Industrial Journals/magazines Invitation to REE4EU events Industrial workshops REE4EU website and partner's websites Social network: LinkedIn, twitter Partners communication channel: Innovation Place, Ricerca & Innovazione, …
RESEARCHERS	Communication in international conferences (oral/written) Posters Scientific papers News/newsletter REE4EU electronic brochure REE4EU paper brochure	International conferences Scientific journals REE4EU website and Partner's website Social network: LinkedIn, twitter Partners communication channel: Innovation Place, Ricerca & Innovazione, … Invitation to REE4EU events
WIDE AUDIENCE AND POLICY MAKERS	News/newsletter REE4EU articles REE4EU brochure	REE4EU Website Popular Journals/magazines Invitation to REE4EU events Social network: LinkedIn, twitter, facebook Attendance to networking and policy workshops

Table 4. Dissemination strategy for Target Groups

5.3 Results achieved in the framework of the Dissemination Activities

In the following two tables, the main figures of results achieved by the whole consortium are summarized.

In particular, the tables describe the type and number of activities performed, as well as the audience reached from the beginning of the project to M18.

The analytic list of individual partner tables, displaying all the information related to the dissemination actions implemented for the period M0-M18, are contained in the ANNEX 1, at the end of this document.

	Scientific Community	Industry	Civil Society	General Public	Policy Makers	Media	Investors	Customers	Other
SINTEF	500	350	350		100	1			
TECNALIA	480	20		376					
LCM	25	30	10	0	10	5		5	
VAC * no activities reported									
ELKEM	100	125		20000					
IDENER	100	15		1000					
INOVERTIS				1500					18000
CEA	300	50	500					50	
SNAM * no activities reported									
STENA				189000				10000	
AVERE									
PNO	4800	15000	1000	1589	500				
CEFIC		100		3000	100				
UPS * no activities reported									
TOTAL	**6305**	**15690**	**1860**	**216465**	**710**	**6**		**10055**	**18000**

Table 5 Estimated number of persons reached in the context of all dissemination activities.

	Organisation of a Conference	Organisation of a Workshop	Press release	Non-scientific and non-peer-reviewed publication (popularised publication)	Exhibition	Flyer	Training	Social Media	project website	Communication Campaign (e.g. Radio, TV)	Participation to a Conference	Participation to a Workshop	Participation to an Event other than a Conference or a workshop	Video/Film	Brokerage Event	Pitch Event	Trade Fair	Participation in activities organized jointly with other H2020 projects	Other
SINTEF											3	4						1	2
TECNALIA											2								4
LCM												2							
VAC * no activities reported																			
ELKEM											1	1							2
IDENER											1								3
INOVERTIS			1					9											
CEA											1								1
SNAM * no activities reported																			
STENA			2					8						1					5
AVERE																			
PNO			9	1	1	1500		18	41		2	1					1		26
CEFIC			1								3								
UPS * no activities reported																			
TOTAL			**13**	**1**	**1**	**1500**		**35**	**41**		**13**	**8**		**1**			**1**	**1**	**43**

Table 6 Number of Dissemination and Communication activities linked to the project for each of the following categories

In the following pages and as explained, the individual partners tables focusing on the activities performed will be shown.

They describe the initiatives implemented in the framework of the REE4EU dissemination actions from **M18 to M30**, and future plans the partners are going to implement.

6 List of events and other actions in the framework of the dissemination

6.1 Partner dissemination

Partners are requested to maintain an active participation within the dissemination strategy. Proactive and balanced levels of participation will have profound effects throughout the whole project, and will guarantee that the dissemination techniques are applied to the fullest possible extent.

During the project PNO, supported by CTECH, are leading al the dissemination activities. Dissemination Tables will be distributed to each partner in order to collect and monitor dissemination progress. Each table summarizes the dissemination activities that have been attended during the project.

In the next chapter the contribution collected from each partner are presented.

6.2 Individual Partners Dissemination Table

The tables below report the dissemination activities achieved at partner's level during the period from M18, i.e., 1st April 2017 up to date. The detailed dissemination activities corresponding to M1 to M18 were already reported in the first periodic report, and included again at the end of this document (see Section 8, Annex I).

6.2.1 SINTEF

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Conference	SINTEF	Presentation of the project and some results at the 2nd Conferece on European Rare Earths Resources (ERES 2017)	28-31 May 2017	Santorini (Greece)	Companies, Research organizations, and Policy Makers	300 (RTO: 200, Companies: 50, Policy Makers: 50)	Europe	http://eres2017.eresconference.eu/
Workshop	SINTEF	Presentation of the project at the NAMEC workshop (Nanotechnology & advanced materials for the Energy Union – Going Circular), satellite of the EuroNanoForum Conference	23 June 2017	Valletta, Malta	Companies, Research organizations, Industrial associations and Policy Makers	25 (RTO: 15, Policy makers:5, Companies: 5)	Europe	https://www.namec-cluster.org/single-post/2017/05/23/NAMEC-workshop-at-EuroNanoForum-2017-Nanotechnology-advanced-materials-for-the-Energy-Union---Going-circular
Pitch event	SINTEF	Presentation of the project at the EU Process Industry	19 September 2017	Brussels	Companies, Research organizations, Industrial associations and Policy Makers	250 (RTO: 100, Companies: 100, Policy makers:50)	Europe	https://www.spire2030.eu/news/new/2017-eu-process-industry-conference

Participation in activities organized jointly with other H2020 projects	SINTEF	Clustering workshop. Organized by PLATIRUS project (GA 730224)	26 October 2017	Torino (Italy)	Research organization and Industry	25 (R&D:15 Companies: 10)	Europe	www.platirus.eu
Conference	SINTEF	Presentation of results of the project at the TMS conference. Session: Perfluorocarbon Generation and Emissions from Industrial Processes: PFC Generation Mechanisms from Industrial Processes Tittle: Perfluorocarbon Formation during Rare Earth Electrolysis	11-15 March 2018	Phoenix, Arizona (US)	Research organizations and companies	50 (RTO: 25, Companies: 20, Policy makers: 5)	World	http://www.tms.org/TMS2018/Home/ http://www.programmaster.org/PM/PM.nsf/ViewSessionSheets?OpenAgent&ParentUNID=D4E26CFB7AF9775B8525815C00641FC4
Conference	SINTEF	Presentation of results of the project at the TMS conference. Session: Perfluorocarbon Generation and Emissions from Industrial Processes: PFC Generation Mechanisms from Industrial Processes Tittle: PFC Evolution Characteristics during Aluminium and Rare Earth Electrolysis	11-15 March 2018	Phoenix, Arizona (US)	Research organizations and companies	50 (RTO: 25 Companies: 20, Policy makers: 5)	World	http://www.programmaster.org/PM/PM.nsf/ViewSessionSheets?OpenAgent&ParentUNID=D4E26CFB7AF9775B8525815C00641FC4

Conference	SINTEF	Invited presentation at the TMS Conference, Session: Deriving Value from Challenging Waste Streams: Recycling and Sustainability Joint Session: Urban Mining and Electronic Waste. Tittle: Urban Mining for a Circular Economy: Activities at SINTEF	11-15 March 2018	Phoenix, Arizona (US)	Research organizations and companies	60 (R&D 45 Companies 15)	World	http://www.programmaster.org/PM/PM.nsf/ViewSessionSheets?OpenAgent&ParentUNID=A82ABD0587D7A4E0852581940049C886
Workshop	SINTEF	Presentation and Poster at the 13th Workshop on Reactive Metal Processing. Tittle: "Urban mining for a circular economy: Activities at SINTEF", some results of the project will be presented	16-17 March 2018	Boston, Cambridge (US)	Research Organizations, Companies	44 (R&D: 34, Companies: 10)	World	http://www.okabe.iis.u-tokyo.ac.jp/core-to-core/rmw/RMW13_index.html

Description of other dissemination activities (press releases, news, nonscientific publications, etc.):

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
LinkedIn post – Slideshare	SINTEF (shared post from Tecnalia)	An independent rare earth elements supply chain. Closing the loop on recycling of rare earth elements	June 2017	LinkedIn	Companies / Research organizations/ Industrial associations /Policy Makers	183	World	https://www.slideshare.net/jokinhidalgo/closing-the-loop-on-recycling-of-rare-earth-elements?trk=v-feed
Twitter	SINTEF	#REE4EU project #costeffective #re-	Septem	Twitte	Companies	More than	World	https://twitter.com/SPIRE20

post	/SPIRE	extraction & #novel direct #REalloy #poductionroute#SPIREProcess2017#processindustry @SPIRE2030	ber 2017	r	/ Research organizations/ Industrial associations /Pol icy Makers	990 followers		30/status/910127524306391040

Scientific publications (This field is only for peer reviewed articles)

Type of scientific publication	Title of the scientific publication	DOI	ISSN	Authors	Title of the journal	Number, date	Publisher	Place of publication	Year of publication	Relevant pages	Public & private participation	Peer-review	Is/Will open access provided to this publication
Publication in Conference Proceeding	Perfluorocarbon Formation during Rare Earth Electrolysis	doi.org/10.1007/978-3-319-72284-	ISSN 2367-1181	K.Osen; A. M. Martinez; H. Gudbrandsen; A. Store; O. Kjos; C. Sommerseth; H. Gaertner; T. A. Aarhaug; P. Chamelot; M. Gibilaro; L. Massot	Light Metals	2018	Springer International Publishing AG		2018	1443-1448		YES	YES, green open access, embargo 1 year
Publication in Conference Proceeding	PFC Evolution Characteristics during Aluminium and Rare Earth Electrolysis	doi.org/10.1007/978-3-319-72284-9_189	ISSN 2367-1181	O. Kjos; A. Solheim; T. Aarhaug; K. Osen; A. M. Martinez; C. Sommerseth; H. Gudbrandsen; A. Støre; H.Gaertner	Light Metals	2018	Springer International Publishing AG		2018	1449-1455		YES	YES, green open access, embargo 1 year

6.2.2 TECNALIA

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Conference	TECNALIA	Presentation at IdeaCAMP	13-14 September 2017	Aachen	Companies/ Research organizations/ Industrial associations/Policy Makers	100	EU	https://eitrawmaterials.eu/events/circular-crm/
Conference: Oral presentation	TECNALIA	Ionic Liquid Based (Ionometallurgy) Industrial Applications in TECNALIA (Recycling of Critical Metals from Primary and Secondary Wastes)	18-21 September 2017	Warsaw	Companies/ Research organizations/ Industrial associations/Policy Makers	100	worldwide	
Conference: poster presentation	TECNALIA	Integrated High Temperature Electrolysis (HTE) and Ionic Liquid Extraction (ILE) for a strong and independent European Rare Earth Elements (REE) Supply Chain	18-21 September 2017	Warsaw	Companies/ Research organizations/ Industrial associations/Policy Makers	1000	worldwide	

Description of other dissemination activities (press releases, news, nonscientific publications, etc.):

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Slideshare	TECNALIA	Closing the loop on recycling of rare earth elements	June 2017	Slideshare	Companies/ Research organizations/	More than 720 followers	International	https://es.slideshare.net/jokinhidalgo/closing-the-loop-on-recycling-of-rare-earth-elements
Linkedin post	TECNALIA	REE4EU Newsletter | Issue n°6 | February 2018	March 2018	Linkedin	Companies/ Research organizations/	More than 720 followers	International	https://www.linkedin.com/feed/update/urn:li:activity:6379264926313181184
Slideshare	TECNALIA	REE4EU Newsletter | Issue n°6 | February 2018	March 2018	Slideshare	Companies/ Research organizations/	More than 720 followers	International	https://es.slideshare.net/jokinhidalgo/ree4eu-newsletter-issue-n6-february-2018

6.2.3 ELKEM

Description of events attended: workshop, conference, training, trade fair exhibition..

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Poster on REE4EU project CONFERENCE	Elkem	INFACON	Feb. 25-28/18	Cape Town, South Africa	Professionals within ferro alloy industries, suppliers, customers, raw material producers etc.	450	World wide	http://infacon15.com/

Description of other dissemination activities (press releases, news, nonscientific publications, etc.):

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Intranett	ELKEM	"REE4EU pilot has started"	March 6th	Elkem Intranett	All employees	6000	World wide within Elkem	N/a

6.2.4 IDENER

Description of events attended: workshop, conference, training, trade fair exhibition..

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Conference	IDENER	E-waste recycling chain event	13-14th September	Aachen (Germany)	R&D researchers, industry	100	EU	https://eitrawmaterials.eu/events/circular-crm/
Workshop	IDENER	H2020 Busness opportunities in the circular economy event	19th September	Oslo (Norway)	R&D researchers, industry	100-120	EU	https://www.b2match.eu/h2020circulareconomy
Conference/ workshop	IDENER	Raw Materials Week	6-10th November 2017	Brussels (Belgium)	R&D researchers, industry, policy makers	200-300	EU	https://ec.europa.eu/growth/content/raw-materials-week-2017_en
Conference/Pitch	IDENER	SPIRE Process Industry Conference	19th September	Brussels (Belgium)	Relevant stakeholders for EU Process Industry	200-300	EU	https://www.spire2030.eu/news/new/2017-eu-process-industry-conference

Description of other dissemination activities (press releases, news, nonscientific publications, etc.):

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
News at website	IDENER	IDENER attends E-waste recycling chain event in Aachen (Germany)	25 Sep 2017	IDENER website	Public audience	--	All	http://www.idener.es/?p=2498
News at website	IDENER	IDENER attends REE4EU Midterm meeting in Brussels	19 Sept 2017	IDENER website	Public audience	--	All	http://www.idener.es/?p=2601

6.2.5 PNO-I

Description of dissemination events attended or planned :

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
WORKSHOP	PNO/CIAO TECH	CPPP IMPACT WORKSHOP	17 May 2017	Brussels, Belgium	Companies/ Research organizations/	185: 90 scientific comm	Europe	http://www.buildup.eu/en/news/cppp-impact-workshop-2017-report-and-presentations-available

						95 industry		
CONFERENCE	PNO/CIAO TECH	Conference on Environmental Engineering and Management (ICEEM)	6-9 September 2017	Bologna, Italy	Companies/ Research organizations/	250 academia 50 industries	Europe	http://iceem.ro/
CONFERENCE	PNO	2017 EU PROCESS INDUSTRY SPIRE CONFERENCE: A LOOK TO THE FUTURE	19-21 September	Brussels, Belgium	Companies/ Research organizations/	300: 150 industry 150 scientific community	Europe	https://www.spire2030.eu/news/new/2017-eu-process-industry-conference
Workshop	PNO	INSPIRE Business Model innovation Workshop	23 November 2017	Brussels, Belgium	Companies/ Research organizations/	Around 100: 50 industry 50 scientific community	Europe	http://www.inspire-eu-project.eu/wp-content/uploads/2017/11/20171128-press-release-INSPIRE-workshop.pdf
Workshop	PNO	Platrirus project clustering event	08 November 2017	Brussels, Belgium	Companies/ Research organizations/	20: 10 industry 10 scientific comm.	Europe	http://www.platirus.eu/news-and-events/platirus-m12-meeting-clustering-workshop/

Description of other dissemination activities (press releases, news, nonscientific publications, etc.) realized or planned:

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
News on website	PNO/CIAOTECH	The Value chains stakeholders analysis report now available!	15/5/17	REE4EU webportal	Companies/ Research organizations/ Industrial associations	200	Europe	http://www.ree4eu.eu/news-and-events/value-chains-stakeholders-analysis-report-now-available/
News on website	PNO/CIAOTECH	REE4EU project meeting in Liverpool (UK)	18/5/17	REE4EU webportal	Companies/ Research organizations/ Industrial associations	200	Europe	http://www.ree4eu.eu/news-and-events/ree4eu-project-meeting-liverpool-uk/
News on website	PNO/CIAOTECH	REE4EU article on the IMPACT MAGAZINE	22/6/17	REE4EU webportal	Companies/ Research organizations/ Industrial associations	200	Europe	http://www.ree4eu.eu/news-and-events/ree4eu-article-impact-magazine/
Tweet on	PNO/CIAOTEC	Vi segnaliamo	28/7/17	Twitter	Companie	250	Italy	https://twitter.com/PNO_IT/status/890

Twitter - Ciaotech	H	un'interessante intervista di Ana Maria Martinez di @SINTEF su #REE4EU:			s/ Research organizations/ Industrial associations			865697697308672
Tweet on Twitter – Innovation Place	PNO/CIAOTECH	Interesting article on the IMPACT MAGAZINE on the work done in the framework of #REE4EU. http://bit.ly/2ttZYIl	28/7/17	Twitter	Companies/ Research organizations/ Industrial associations	250	Europe	https://twitter.com/INNOVATION_PL/status/890865688809746432
Post on linkedin, Innovation Place group	PNO/CIAOTECH	5th REE4EU newsletter just released	22/8/17	Linkedin	Companies/ Research organizations/ Industrial associations	835	Europe	https://www.linkedin.com/feed/update/urn:li:activity:6306466201308524544
News on website	PNO/CIAOTECH	The fifth newsletter of the REE4EU project was released	22/8/17	PNO Web portal	Companies/ Research organizations/ Industrial	> 10.000	Europe	https://www.innovationplace.eu/news/5th-ree4eu-newsletter-just-released

					associations			
Tweet on Twitter – Innovation Place	PNO/CIAOTECH	5th #REE4EU newsletter just released	24/8/17	Twitter	Companies/ Research organizations/ Industrial associations	250	Europe	https://twitter.com/INNOVATION_PL/status/900700534277107712
Tweet on Twitter - Ciaotech	PNO/CIAOTECH	È online la 5ª newsletter di #REE4EU,	24/8/17	Twitter	Companies/ Research organizations/ Industrial associations	250	Italy	https://twitter.com/PNO_IT/status/900700528115634176
News on website	PNO/CIAOTECH	Event's participation (ICEEM)	1/9/17	REE4EU webportal	Companies/ Research organizations/ Industrial associations	200	Europe	http://www.ree4eu.eu/news-and-events/ree4eu-project-9th-iceem-edition-7-Settembre-bologna-italy/
News on website	PNO/CIAOTECH	PNO Brokerage event at 9th ICEEM edition	1/9/17	PNO Web portal	Companies/ Research organizati	> 10.000	Europe	https://www.innovationplace.eu/news/pno-brokerage-event-at-9th-iceem-edition-9-Settembre-bologna-italy

					ons/ Industrial associations			
Tweet on Twitter – Innovation Place	PNO/CIAOTECH	On Settembre 7, #REE4EU will presented at the 9th edition of the #ICEEM.	4/9/17	Twitter	Companies/ Research organizations/ Industrial associations	250	Europe	https://twitter.com/INNOVATION_PL/status/904653632116797440
Tweet on Twitter - Ciaotech	PNO/CIAOTECH	Il 7 settembre il progetto #REE4EU sarà presentato nell'ambito dell'#ICEEM,	4/9/17	Twitter	Companies/ Research organizations/ Industrial associations	250	Italy	https://twitter.com/PNO_IT/status/904654126772051972
Post on linkedin, Innovation Place group	PNO/CIAOTECH	REE4EU project	5/9/17	Linkedin	Companies/ Research organizations/ Industrial associations	835	Europe	https://www.linkedin.com/feed/update/urn:li:activity:6311905907739500544
Post on linkedin,	PNO/CIAOTEC	REE4EU project will be	5/9/17	Linkedin	Companies/	835	Europe	https://www.linkedin.com/feed/updat

Innovation Place group	H	presented at the 9th edition of The International Conference ICEEM			Research organizations/ Industrial associations			e/urn:li:activity:6310419575217356800
Tweet on Twitter – Innovation Place	PNO/CIAOTECH	Only 1% of #RareEarth waste is being recovered.	8/9/17	Twitter	Companies/ Research organizations/ Industrial associations	250	Europe	https://twitter.com/INNOVATION_PL/status/906140415237214211
Tweet on Twitter - Ciaotech	PNO/CIAOTECH	Cosa sono le #terrerare? #REE4EU	8/9/17	Twitter	Companies/ Research organizations/ Industrial associations	250	Italy	https://twitter.com/PNO_IT/status/906141386151526401
News on website	PNO/CIAOTECH	Event's participation (IdeaCamp)	18/9/17	REE4EU webportal	Companies/ Research organizations/ Industrial associations	200	Europe	http://www.ree4eu.eu/news-and-events/ree4eu-joined-circular-crm-ideacamp-innovation-research-e-waste-recycling-chain-13-14-Settembre-2017-aachen-germany/

Tweet on Twitter - Ciaotech	PNO/CIAOTECH	La metodologia di ricerca inizia con lo studio di mercato e con la #stakeholder #analysis. #REE #TerreRare #REE4EU	30/10/17	Twitter	Companies/ Research organizations/ Industrial associations	250	Italy	https://twitter.com/PNO_IT/status/924925813371359233
News on website	PNO/CIAOTECH	REE4EU Midterm meeting in Brussels	2/11/17	REE4EU webportal	Companies/ Research organizations/ Industrial associations	200	Europe	http://www.ree4eu.eu/news-and-events/ree4eu-midterm-meeting-brussels/
News on website	PNO/CIAOTECH	REE4EU's Market Analysis Report now available!	3/11/17	REE4EU webportal	Companies/ Research organizations/ Industrial associations	200	Europe	http://www.ree4eu.eu/news-and-events/ree4eus-market-analysis-report-now-available/
News on website	PNO/CIAOTECH	REE4EU's Market Analysis Report now available	3/11/17	PNO Web portal	Companies/ Research organizations/ Industrial	> 10.000	Europe	https://www.innovationplace.eu/news/ree4eu's-market-analysis-report-now-available

					associations			
News on Ricerca e Innovazione website	PNO/CIAOTECH	Progetto REE4EU: pubblicata l'analisi di mercato nel settore delle terre rare	6/11/17	PNO Web portal in Italy	Companies/ Research organizations/ Industrial associations	> 6.000	Italy	https://www.ricercaeinnovazione.it/news/progetto-ree4eu-pubblicata-l%E2%80%99analisi-di-mercato-nel-settore-delle-terre-rare
News on Innovation Place website	PNO/CIAOTECH	REE4EU's Market Analysis Report now available	6/11/17	PNO Web portal	Companies/ Research organizations/ Industrial associations	> 10.000	Europe	https://www.innovationplace.eu/news/ree4eu%E2%80%99s-market-analysis-report-now-available
Post on linkedin, Innovation Place group	PNO/CIAOTECH	REE4EU's Market Analysis Report now available!	7/11/17	Linkedin	Companies/ Research organizations/ Industrial associations	835	Europe	https://www.linkedin.com/feed/update/urn:li:activity:6333597938060791808
Tweet on Twitter - Ciaotech	PNO/CIAOTECH	#REE4EU: pubblicata l'analisi di mercato nel	7/11/17	Twitter	Companies/ Research organizati	250	Italy	https://twitter.com/PNO_IT/status/927830817748942848

		settore delle terre rare			ons/ Industrial associations			
5 Post on REE4EU website	PNO/CIAOTECH	Events updates	January 2018	REE4EU project website	Companies/ Research organizations/ Industrial associations		Europe	http://www.ree4eu.eu/news-and-events/
2 Post on REE4EU website	PNO/CIAOTECH	Events update	February	REE4EU project website	Companies/ Research organizations/ Industrial associations		Europe	http://www.ree4eu.eu/news-and-events/
News on website	PNO/CIAOTECH	REE4EU: pubblicata la sesta newsletter di progetto	6/03/2018	R&I PNO Italian portal	Companies/ Research organizations/ Industrial associations	>6000	Italy	https://www.ricercaeinnovazione.it/news/ree4eu-pubblicata-la-sesta-newsletter-di-progetto
News on	PNO/CIAOTEC	REE4EU: the	6/03/201	IP PNO European	Companies/	>10.000	Europe	https://www.innovationplace.eu/news

website	H	project goes on	8	portal	Research organizations/ Industrial associations			/ree4eu-the-project-goes-on
News on website	PNO/CIAOTECH	REE4EU: pubblicata la sesta newsletter di progetto	4/03/2018	R&I Italian PNO portal	Companies/ Research organizations/ Industrial associations	>6.000	Italy	https://www.ricercaeinnovazione.it/
News on newsletter	PNO/CIAOTECH	REE4EU: the project goes on!	4/03/2018	IP PNO Europe portal	Companies/ Research organizations/ Industrial associations	>10.000	Europe	www.innovationplace.eu
News on SPIRE newsletter	PNO / CIAOTECH	REE4EU: The Project Goes On!	14/03/2018	SPIRE newsletter 15/18	Companies/ Research organizations/ Industrial associations		Europe	http://conta.cc/2Dqs5IE https://www.spire2030.eu/news/press-office/newsletter

6.2.6 CEFIC

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Conference, REE4EU project presentation	CEFIC	SusChem Stakeholder Event	07 June 2017	Brussels	chemical companies/ national associations, RTOs, universities, European Commission representatives, SMEs representatives	190 participants	Europe	http://suschem.org/events/suschem-2017-stakeholder-event

Description of other dissemination activities (press releases, news, nonscientific publications, etc.:

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
ARTICLE	CEFIC	An independent rare earth elements supply chain. Closing the loop on recycling of rare earth elements	April 2017	IMPACT MAGAZINE	Industries, research centers, policy makers and other	35500	EUROPE	http://www.ingentaconnect.com/content/sil/impact/2017/00002017/00000005/art00012

6.2.7 UPS

Description of dissemination activities:

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
oral	UPS	Pyrometallurgical Processes for reactive metal production: Nd example	11-13 july 2017	Nancy	French congress on Chemical Enginnering	50 researchers	France	
oral	UPS	Procédé d'électrolyse en sels fondus pour la production de terres rares métalliques à partir d'un précurseur oxyde: exemple du Néodyme (Nd)	26-29 june	Bordeaux	French congres on electrochemistry	100 : 75 from university and 25 from industry	France	

6.2.8 INOVERTIS

Description of events attended: workshop, conference, training, trade fair exhibition..

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Workshop	INOVERTIS/A3i	FILIDECHET / MATECO - Récupération des métaux précieux	23/10/2017	Aix-en-Provence (France)	Professional Waste Valorisation	~70	France	http://www.safecluster.com/
Trade fair / BtoB meetings	INOVERTIS/A3i	Waste Meetings	6-7/12/2017	Lyon (France)	Professional Waste Recycling, Treatment& Valorisation	>500	France	http://www.wastemeetings.com/fr/
Trade fair / BtoB meetings	INOVERTIS/A3i	11th Members Meeting TENERDISS	02/02/2018	Grenoble	Professional Energy &Waste Treatment	~200	France	https://www.tenerrdis.fr/
Trade fair / BtoB meetings	INOVERTIS/A3i	PCH Meetings	28-29/12/2017	Lyon (France)	14th Industries Business Meetings	>500	France	

Description of other dissemination activities(press releases, news, nonscientific publications, etc.):

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Post on social network	INOVERTIS/ A3i	#REE4EU The stakeholder analysis in the framework of the project available soon	11/04/2017	Twitter	Companies/ Research organizations/ Industrial associations	324	Europe	https://twitter.com/inovertis/status/851736848183459841
Post on social network	INOVERTIS	@REE4EU – Recyclage des terres rares en EU (année 1)	11/04/2017	Twitter	Companies/ Research organizations/ Industrial associations	740	Europe	https://twitter.com/inovertis/status/851728968222953472
Post on social network	INOVERTIS	REE4EU newsletter March 2017	11/04/2017	Linkedin	Companies/ Research organizations/ Industrial associations	>250	Europe	https://www.linkedin.com/hp/update/6257501004560900097
Post on social network	INOVERTIS	Projet REE4EU (H2020) – Recyclage des terres rares en EU - Résultats de l'année 1 -	11/04/2017	Linkedin	Companies/ Research organizations/ Industrial associations	>250	Europe	https://www.linkedin.com/hp/update/6257490104261050368

Website	INOVERTIS	Projet REE4EU (H2020) – Recyclage des terres rares en EU - Résultats de l'année 1 -	11/04/2017	website	Companies/ Research organizations/ Industrial associations	>250	Europe	http://www.inovertis.fr/actualites/22-projet-ree4eu-h2020-recyclage-des-terres-rares-en-eu.htm
Post on social network	INOVERTIS	Projet REE4EU (H2020) – Recyclage des terres rares en EU - Résultats de l'année 1 -	11/04/2017	Scoop it	Companies/ Research organizations/ Industrial associations	>250	France	Release from website
Post on social network	INOVERTIS	Interesting article on the IMPACT MAGAZINE on the work done in the framework of #REE4EU	21/08/2017	Twitter	Companies/ Research organizations/ Industrial associations		Europe	https://twitter.com/INNOVATION_PL/status/890865688809746432
Post on social network	INOVERTIS	REE4EU: #INOVERTIS conceived and managed the conceptual and basic engineering of the ILE process in close collaboration with Elkem's team	21/08/2017	Twitter	Companies/ Research organizations/ Industrial associations	287	Europe	https://twitter.com/inovertis/status/899660345836482560

Post on social network	INOVERTIS	NOW AVAILABLE : REE4EU NEWSLETTER No 5 JULY 2017	21/08/2017	Linkedin	Companies/ Research organizations/ Industrial associations	>250	Europe	https://www.linkedin.com/feed/update/urn:li:activity:6305424777972588544

6.2.9 AVERE

Description of events attended: workshop, conference, training, trade fair exhibition..

Type of activities	Main leader	Title	Date	Place	Audience: number of industries	Size of audience	Countries addressed	Link to the website
Presentation	AVERE	The Transition to Electric Drive	28-02-2018	London	60	80	Global conference	http://www.argusmedia.com/events/argus-events/europe/argus-metals-week/battery/ Argus Battery metal week
Presentation	AVERE	Critical Raw Materials for EVs	21-03-2018	Brussels		60 (estimate based on last event)	European	http://criticalrawmaterials.org Critical Raw Materials Organisation, NGO in Brussels representing industry
Presentation	AVERE	AVERE Projects and Status Electromobility 2017	06-10-2017	Belgrade, Serbia	?	120	National, regional	http://sajam.rs/en/e-mobility-forum/ E-MOBILITY FORUM 2017, BELGRADE 06.10.2017

Presentation	AVERE	AVERE Projects and Status Electromobility 2017	05-10-2017	Bucharest, Romania	?	90	National, regional	http://aver.ro/ev2017.html The 12th edition of the International Conference and Expo Show on ELECTRIC MOBILITY
Presenation at IEA HEV-TCP Executive meeting	AVERE	Use and recycling of REE in transport sector in Europe: focus cars	10-11-2018	Vienna, Austria	0	30	15, Global	http://www.ieahev.org
Continuous presentation at EVS30 conference	AVERE	AVERE (participation in) Projects	09-10-2017 till 11-10-2017	Stuttgart, Germany	Unknow; 10,000 exhibition visitors		Global	http://www.messe-stuttgart.de/en/evs30

Description of other dissemination activities (press releases, news, nonscientific publications, etc.):

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Submission of proposal for presentation of REE4EU at EVS31	AVERE	Current and future use of Rare Earth Metals in Permanent Magnets for Electric Vehicles and other vehicles and the collection potential for recycling	Sept 2018	Kobe, Japan			**Global**	
Submission of IEA HEV Task proposal CRM4EV	*AVERE*	*Task Critical Raw Materials for Electric Vehicles (Battery metals, REEs)*	*March 2018*					

No activities reported from M 18 – to M 30 from:

- **VAC**
- **LCM**
- **CEA**
- **SNAM**
- **STENA**

6.3 Summary of the activities implemented from M 18 – to M 30

	Organisation of a Conference	Organisation of a Workshop	Press release	Non-scientific and non-peer-reviewed publication	Exhibition	Flyer	Training	Social Media	project website	Communication Campaign	Participation to a Conference	Participation to a Workshop	Participation to an Event	Video/Film	Brokerage Event	Pitch Event	Trade Fair	Participation in activities organized jointly with other H2020 projects	Other
SINTEF								2			3	2				1		1	
TECNALIA						100		3			3								
LCM * no activities reported														1					
VAC * no activities reported																			
ELKEM					1			1			1								
IDENER						30							4						2
INOVERTIS								8				1					3		1
CEA * no activities reported																			
SNAM * no activities reported																			
STENA * no activities reported																			
AVERE					1						4	1					1		
PNO								14	14		2	3							10
CEFIC				1							1								
UPS											2								
TOTAL			**0**	**1**	**2**	**130**		**28**	**14**		**16**	**7**	**4**	**1**		**1**	**4**	**1**	**13**

Table 7. Number of Dissemination and Communication activities linked to the project for each of the following categories

	Scientific Community (Higher Education, Research)	Industry	Civil Society	General Public	Policy Makers	Media	Investors	Customers	Other
SINTEF	469	230			115				
TECNALIA	1000	40		1000					
LCM * no activities reported									
VAC * no activities reported									
ELKEM	450	6000							
IDENER	300								
INOVERTIS	60		50	300				50	
CEA * no activities reported									
SNAM * no activities reported									
STENA * no activities reported									
AVERE	140	140	50		70				
PNO	5776	11291	2000	1000					
CEFIC	19100	7100	5000	1000	3100	500			
UPS	125	25							
TOTAL	**27420**	**24826**	**7100**	**3300**	**3285**	**500**		**50**	**0**

Table 8 Estimated number of persons reached in the context of the dissemination activities

7 Exploitation Plan

7.1 Audience and main routes for effective exploitation of the REE4EU project

Targeted Audience

The Plan for the Exploitation and Dissemination of Results is aimed at the following **audience** and respectively, at the fulfilment of the following **objectives (**Table 9**):**

Targeted exploitation	**Communication& Dissemination**	**Key Players** *:* - *Industrial players directly involved, E.g. Rare Earth Oxide (REO) and Rare Earth Alloy (REA) producers, recyclers of rare earths, waste collectors, and other players interested in the recovery of critical raw materials (CRM)* - *Research organisations with complementary technologies to REE4EU* • Close engagement and collaboration
		Subjects/Defenders *(industrial players not directly involved, E.g. REE-rich product manufacturers, such as Permanent Magnet (PM) and battery manufacturers, end-users of REE-rich products, similar players but with other critical raw materials).* • Keep informed; • Capacity building (potential supporters and ambassadors of the project results)
		Context setters *(E.g. research institutions, Industry Associations)* • Meet their needs; • Mitigate possible negative influence; • Raise awareness;
		Crowd/ bystanders *(Civil society)* • Monitor their needs • Raise awareness

Table 9. Audiences of REE4EU's Communication, Dissemination, and Exploitation

7.2 Routes for effective exploitation of the REE4EU project

Although the exploitation activities of REE4EU are scoped around the recovery and production of REE-containing materials from End of life (EoL) products, **several of the demonstrated technologies and processes can also be deployed in other domains** (i.e. not directly linked to REE nor to EoL products). For instance, some of the proposed technologies enable recovery of other critical raw materials (CRM) from primary or secondary by-products. Communicating – among others - the versatility of REE4EU's technologies will maximise the impact of REE4EU's granted funding and potentially **spin-off new business and scientific activities**.

The exploitation routes that have been perused by the REE4EU partners aim to valorise the different REE4EU technologies and know-how, and to move them one step closer to the market. The exploitation activities are divided in the following two main routes:

1. Exploitation plan for the REE4EU concept ("main route")

2. Exploitation activities that have been perused to valorise the different technologies, processes and know-how beyond the scope of REE4EU ("spin-off")

Figure 25 illustrates the different exploitation routes foreseen for REE4EU. The following sections elaborate on the sub-tasks, achievements and planned actions of the respective routes.

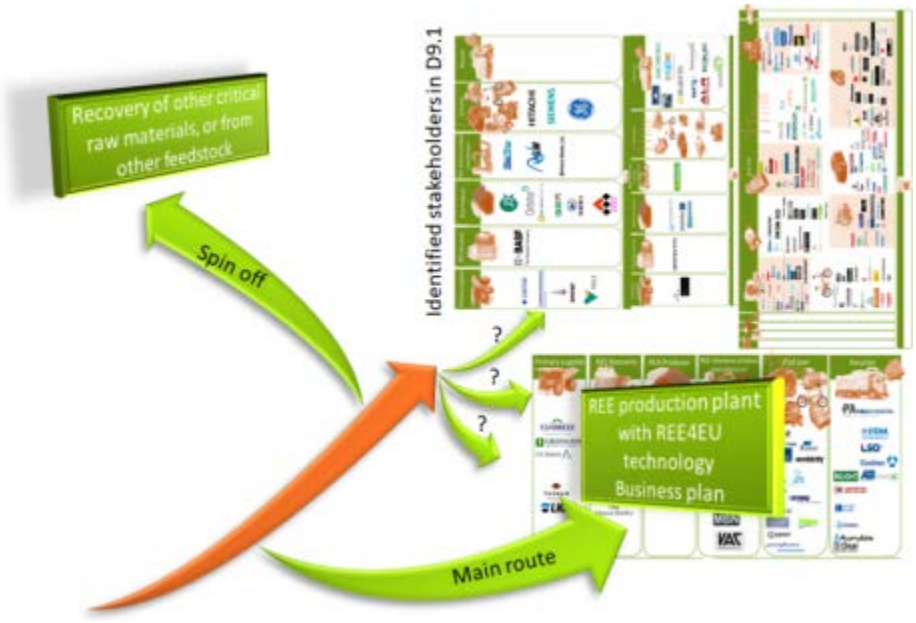


Figure 25. Illustration of the main exploitation routes of the REE4EU project

7.2.1 Exploitation plan for the REE4EU concept (main route)

Main achievements and planned actions:

Assessment of REE4EU's business case for future upscaling

Activities will translate the technological breakthroughs of REE4EU into a solid business plan with defined timeline, projected costs and revenues. Stakeholders' and market analyses will, respectively, identify key stakeholders and deepen the understanding of the rare earth market in Europe. Moreover, economic uncertainties will be alleviated by integrating actual performance data from the techno-economic analysis (TEA) of REE4EU's pilots.

- **Aim**: Wider adoption of REE4EU's concept in future REE recovery process lines
- **Mode of execution for defined tasks:** Stage-to-gate
- **Milestones**: Value Chain Stakeholder Analysis, Market Analysis, Business Model (See **Figure 2**)

To support this exploitation route, complementary tasks were defined and are illustrated in Figure 26. For each of the tasks, activities, envisioned output and information flows – from one task to another - are also included in the schematic.

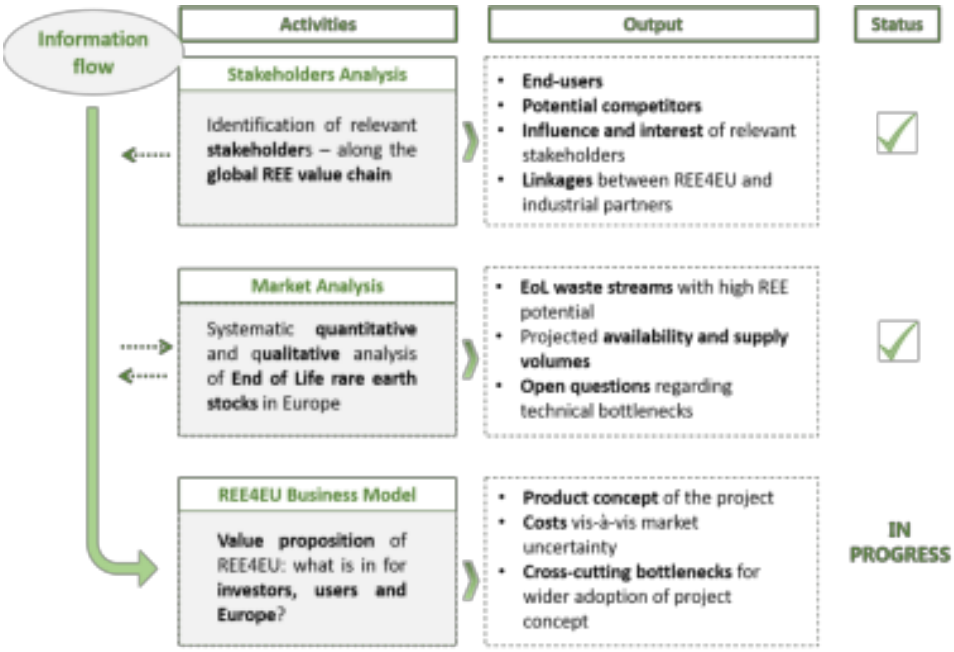


Figure 26. Tasks and output of REE4EU's *main route of exploitation actions*

7.2.2 Target stakeholders for REE4EU's *exploitation plan*

A Value Chain Stakeholders Analysis was carried out in WP9, generating information for over 300 organisations. The study focused particularly on identifying *industrial* stakeholders (SMEs, or large industries) that are performing international research, innovation and business activities across or around the value chain of the REE4EU project (Figure 27). These organisations, found along the different nodes of the chain are the **prime audience for REE4EU's main route exploitation activities**. The industrial innovators in particular, are also potentially interesting for spin-off projects.

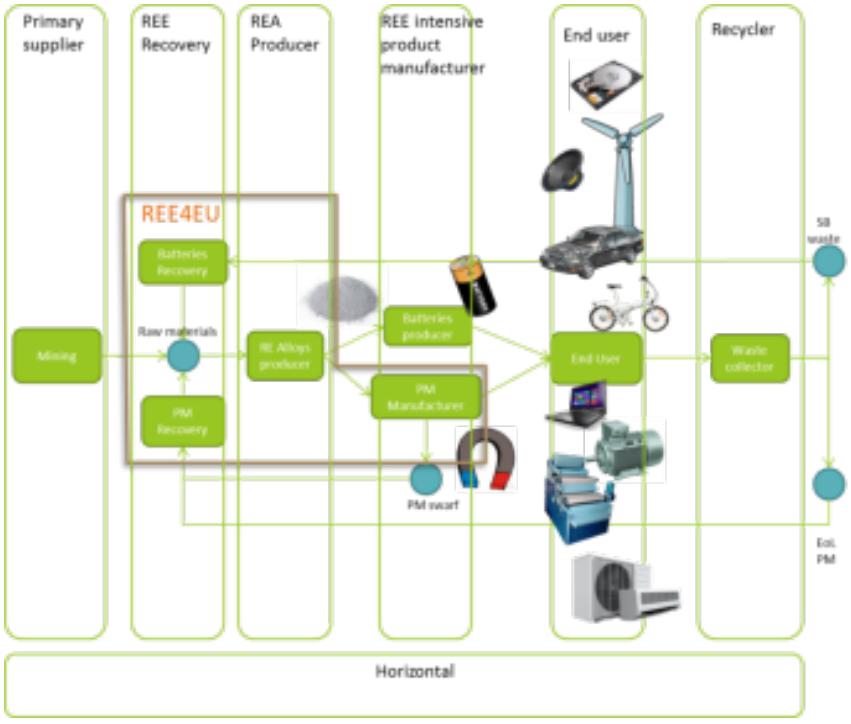


Figure 27. The REE global value chain and how it is embedded in the global supply chain

To identify relevant organisations (i.e. having a business linkage with supply/use/recovery of rare earths) and their connection to REE4EU's exploitation (i.e.), the overall task was carried out in different phases:

1. First, six (6) positions of stakeholders in the REE global supply chain were specified:
    - Primary Supplier;
    - REE recovery;
    - REA producer;
    - REE intensive product manufacturer;
    - End user (mainly stakeholders using REE in the 9 products specified in the ERECON report);
    - Recycler;
2. Then, the Cordis database was screened to identify the "Innovators" of the EU in the field of recovery of REE;
3. Similarly, several patent databases such as WIPO, Espacenet, etc. were explored to compile a list of potential investors in the field of REE recovery;
4. Web search, interviews, and surveys provided additional information that helped screen stakeholders that can serve as business drivers for sustainable REE supply.
5. Ultimately, a distinct profile was built for all the identified "innovators", "Investors", and "business drivers". Among others, the profile of each stakeholder clarifies its status (profit/non-profit), size (large enterprise/ SME) and position along the value chain (primary supplier, REE recovery, etc.). Figure 28 and Figure 29 illustrate the value chain positions of the shortlisted stakeholders from REE4EU's respective Innovator and Investor pools.

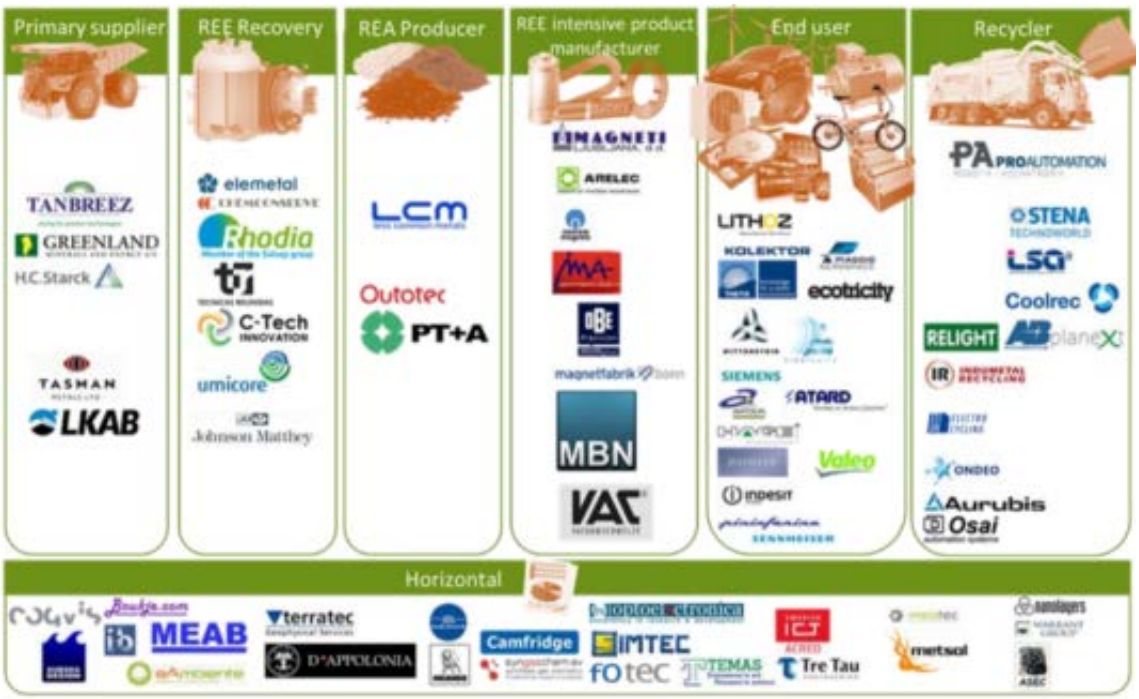


Figure 28. Industrial innovators identified during REE4EU's stakeholder analysis

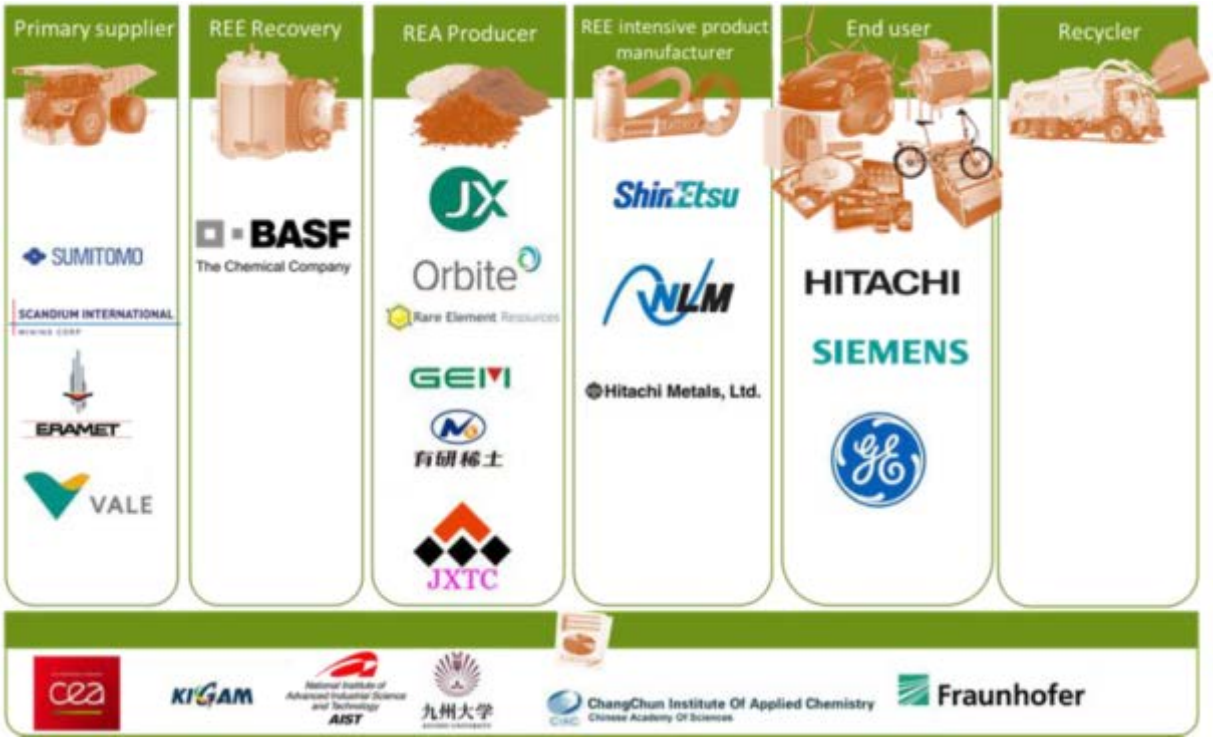


Figure 29. Patent owners identified during REE4EU's stakeholder analysis

Targeted dissemination and communication activities towards relevant identified stakeholders are being perused for their engagement in the exploitation of the REE4EU concept.

7.3 Most promising EoL product markets for sourcing rare earths

A market analysis (Deliverable 9.4) of the *prospective* European market of secondary rare earth elements (REE) was carried out in WP9. This report reviewed the market segment of several End of Life products as "**feedstocks" for a future REE recovery process line** – operating in the order of ktons:

- "consumer" appliances: HDDs, e-vehicles, electric power steering and e-bikes and residential air conditioners;
- "industrial" appliances: offshore wind turbines, magnetic separators, industrial motors.

The recycling potential and specificities of each product were thoroughly explored by diving into relevant scientific literature, white papers and European open-access databases. The information drawn from these sources, was complemented by up-to-date insights from industry experts, gathered through interviews and surveys. For each EoL product, a dedicated chapter was compiled summarising the conditions prevalent in its respective market segment – with an aim to assess how "fit" the product is for recycling and REE recovery. Finally, the authors ran a comparative assessment of all products taking into consideration the following factors:

- Amount of REE loaded in a product's (sub)components
- Supply of REE from end-of-life products – Expected availability from 2020-2040
- Maximum monetary value of REEs contained in a waste stream
- Maturity of legislation encouraging their recycling
- Availability of collection schemes

- Design compatibility with EoL PM recycling
- Risk for REE reduction/elimination
- Probability of second life out of EU Vs end-of-life in EU
- Possibility of recovering more than one REE from a product

Figure 30 shows the radar charts that were developed to facilitate visual comparison of the products and their "fit" to being as a cost-effective feedstock for REE recovery. For each product, the chart poles represent its estimated performance against potential hurdles/incentives for recycling.

The findings presented in the Market Analysis report indicate European EoL EVs as the most relevant feedstock for a future REE recovery plant - with a potential to provide more than 11 ktons of Nd and close to 1 kton of Dy likely to be harvested over the next two decades. In addition, **conventional vehicles with Electric Power Steerers** (EPS) (estimated Nd content of 5 ktons) **could complement EVs as another rich source of secondary REE**. Moreover, though the automotive sector seems by far the most promising market segment for REE recycling, **residential air conditioners also show potential for cost-effective REE recovery** which could translate to approx. 2 ktons of Nd. At the same time, one should not overlook that industrial EoL products (wind turbines, magnetic separators and industrial motors) may also be a promising feedstock for a future REE recovery business.

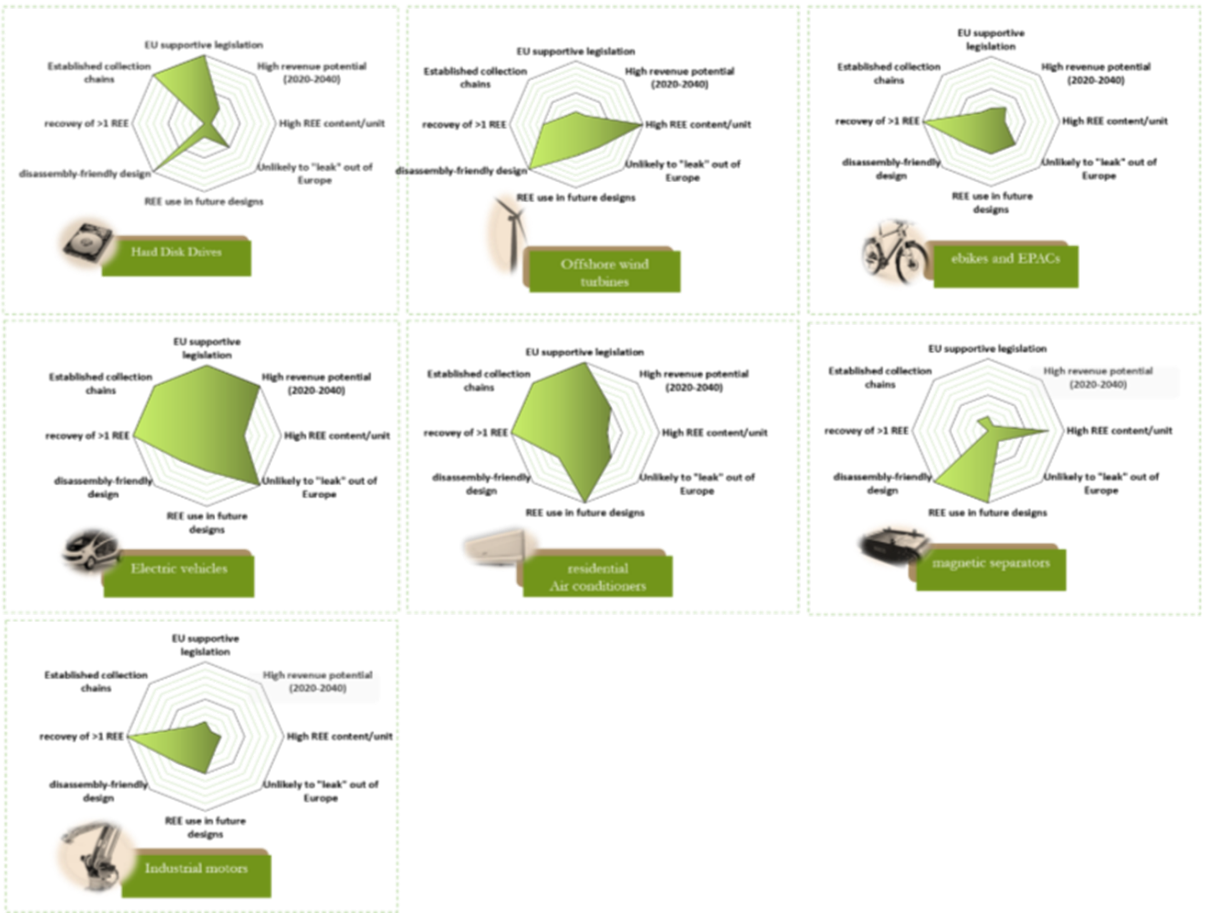


Figure 30.Qualitative assessment of REE recovery from End of Life products

One of the report's conclusions was that **several technical and systemic barriers** must be removed to enable future REE recovery from the above EoL products. The most important were:

- incompatibility of existing sorting and recycling infrastructure in Europe with complex product architecture of REE-rich EoL products, e.g. in electronic waste;
- absence of legislation enforcing collection and tracking of secondary REE magnets separately from other secondary materials.

In overall, the results suggested that **future REE recovery business cases** should incorporate **different scenarios** for upstream collection rates and dismantling costs to allow for a more realistic feasibility analysis.

7.4 Structure of REE4EU's Business Plan

Alloys destined for Permanent Magnets (PM) and Secondary Batteries (SB) production require very narrowly defined ratios of rare earth element composition. That makes the production of new alloys from in-process and End-of-Life wastes – which have different quantity and mixtures of REEs- a complex and risky undertaking. To date, only 1% of RE waste is being recovered as no adequate process is available. At the same time, former EU-funded projects with relevance to recovery of REEs, either do not demonstrate the extraction technologies at pilot scale or, if they do, they do not go one step further, which is the production of valuable alloys and final products.

7.4.1 Key selling points of REE4EU's technological approach

REE4EU demonstrates a fully closed-loop recycling process, from REE-containing waste material to REE-containing product. The Rare Earth Alloys (REA) will be used for manufacturing new semi-finished (e.g.: Rare Earth Master Alloys - REMA) or finished products (e.g.: PM). The project's flowsheet combines two technologies – one for REE extraction (ionic liquid extraction or ILE) and the other for production of rare earth alloys (high temperature electrolysis or HTE). HTE with the existing REA and PM production chain will be demonstrated within Less Common Metals (LCM) and Vacuumschmelze (VAC) facilities, while ILE coupled with THE at Elkem's facilities.

Differently to State-of-Art methods, this approach avoids energy intensive and costly separation of the individual REO from REO mixtures (Figure 31). This novel direct route eliminates significant number of intermediate process steps that would have been otherwise necessary to produce marketable REAs. Figure 31 illustrates REE4EU's novel REA production route, also in comparison to the steps foreseen in SoA value chains. The illustrated value chains include: (i) REA production from primary raw materials (black line); (ii) SoA recycling in-process waste via classical Hydrometallurgical route (red line); (iii) REE4EU Innovative process for two waste streams: EoL and in-process waste (green line)

7.4.2 Business cases foreseen for commercial-scale REE4EU's concept

In WP9, partners – led by PNO and Inovertis - will submit to the European Commission a Business Plan report for a Rare Earth Recovery scheme that will make use of REE4EU's technological concept. The business plan will assume three different scenarios as regards the treated feedstock: (i) treatment of in-process PM production waste (swarf), (ii) treatment of black mass from EoL battery processing at recycling facilities, and (ii) treatment of REE-rich components extracted from REE End-of-Life products that are collected and dismantled for this purpose. In overall, the Business Plan report will assess the commercial viability of three distinct business cases summarised in Table 10, all

with aligned outcome (i.e. production of market-ready REA). The business cases are also schematically represented – as value chains – in Figure 32.

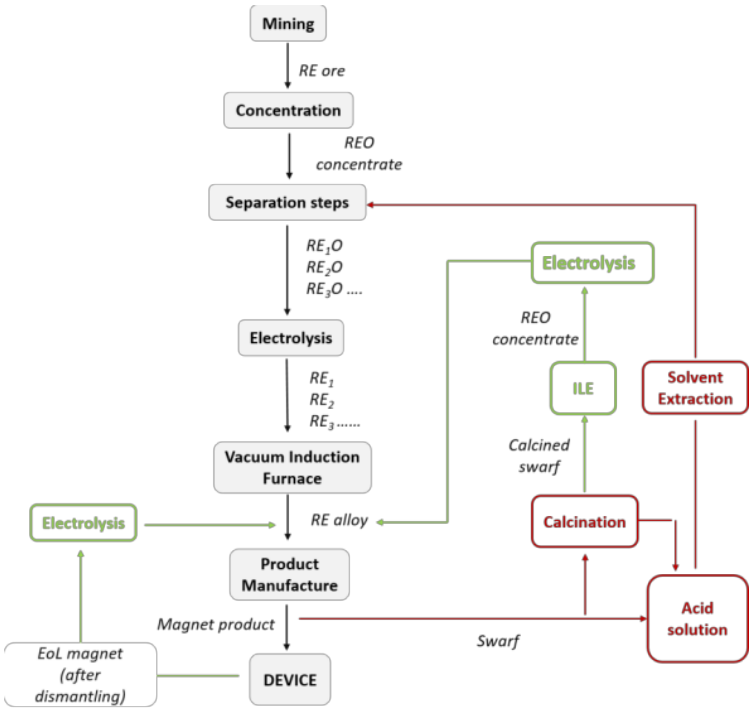


Figure 31. Process improvement with REE4EU solutions

Business Case 1	**Calcinated PM swarf**	**Cost beneficial or neutral REE recovery from PM in-process waste** *(Calcinated PM swarf)* ***Critical risks for a successful venture*** • In-process waste provides a secure but limited "input stream" for the REE4EU REE recovery plant – risk in terms of supply security • Narrowly defined composition ranges of the waste stream do not allow effective 'calibration' of the business case to the common
Business Case 2	**Black masses**	**Cost beneficial or neutral REE recovery from battery recycling waste** *(black masses from End-of-Life NiMH and Li-ion batteries)* ***Critical risks for a successful venture*** As in Business Case 1
Business Case 3	**End of Life pre-treated products**	**Cost-effective REE recovery from EoL waste** *(air conditioners and (electric) mobile vehicles)* **Critical risks for a successful venture** • Products are widely distributed across the EU • Products can vary in terms of useful lifetime; hence their supply is expected to peak at different points in the future • Products need to be collected and dismantled to extract their REE-rich components prior to the recovery plant

Table 10. Summary of business cases examined in REE4EU

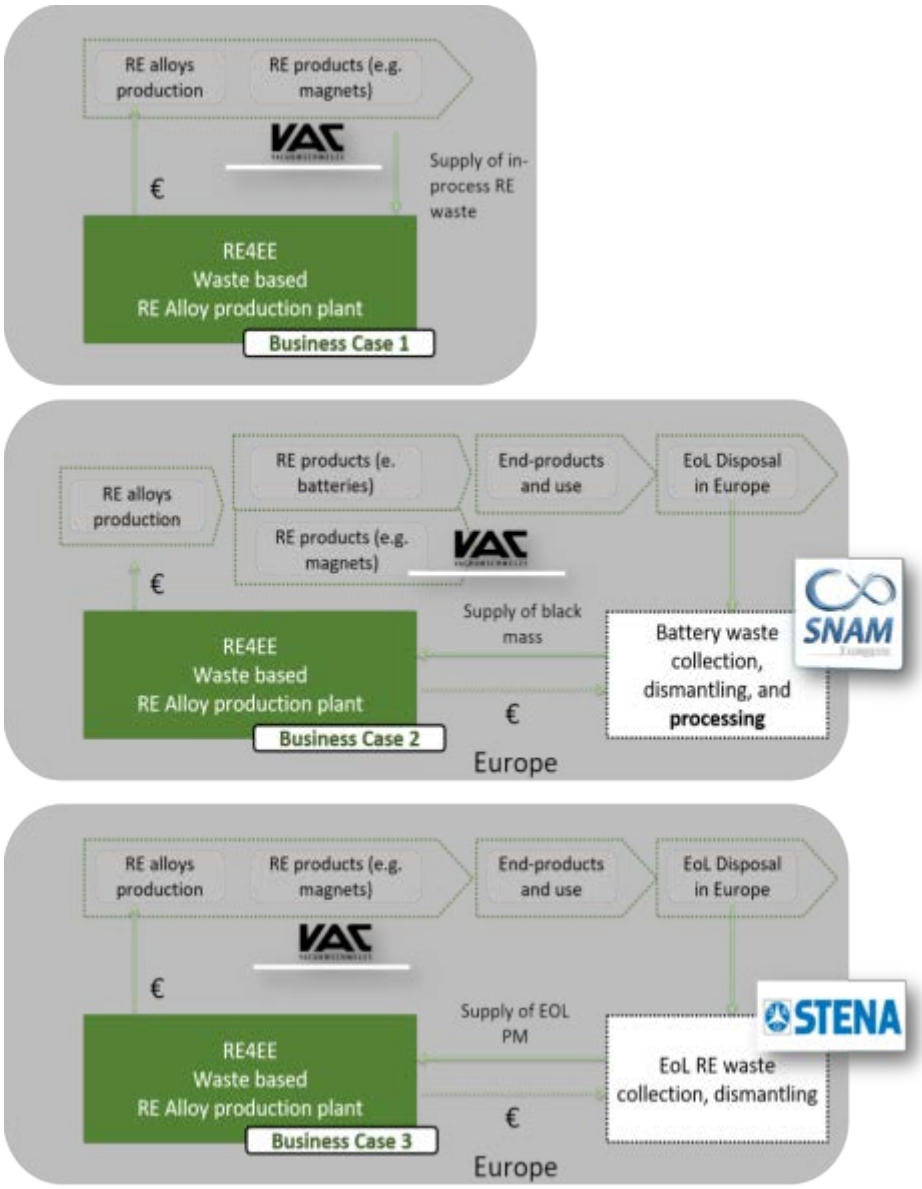


Figure 32. Business cases that will be assessed in REE4EU's business plan

For the REE4EU business plan, partners will jointly determine the necessary investment and capital costs of a future industrial-scale plant (i) implementing State-of-the-art treatment ("Base case scenario) and (ii) follows REE4EU's technological concept ("REE4EU scenario"). A thorough economic analysis model will be built for assessing the feasibility of the abovementioned business cases. The analysis will:

- integrate insights of previous project activities, such as the Life Cycle Impact Assessment and the market analysis, in a transparent way;
- incorporate different types of cost components such as energy costs, operation, maintenance, fixed charges on capital investment, etc. For each input, the report will clearly state all the assumptions made regarding sourcing, percentage accuracy, and scaling method[1];

[1] Referring to equipment costs that can be extrapolated by using available cost correlations with size/ capacity

- consider necessary activities upstream of the REE recovery plant. For example, **STENA,** *one of the larger WEEE recyclers in EU*, will evaluate the expenses associated with the pre-treatment of End of Life products (i.e. collection, dismantling and recovery of REE-rich product components);
- yield capital and operating cost estimates and other financial indicators to reflect near-future investment for industrial-scale operations;
- finally, conclude on the most critical techno-economic bottlenecks and cost risk factors, based on a rationally designed sensitivity analysis (exemplary outputs shown in Figure 33).

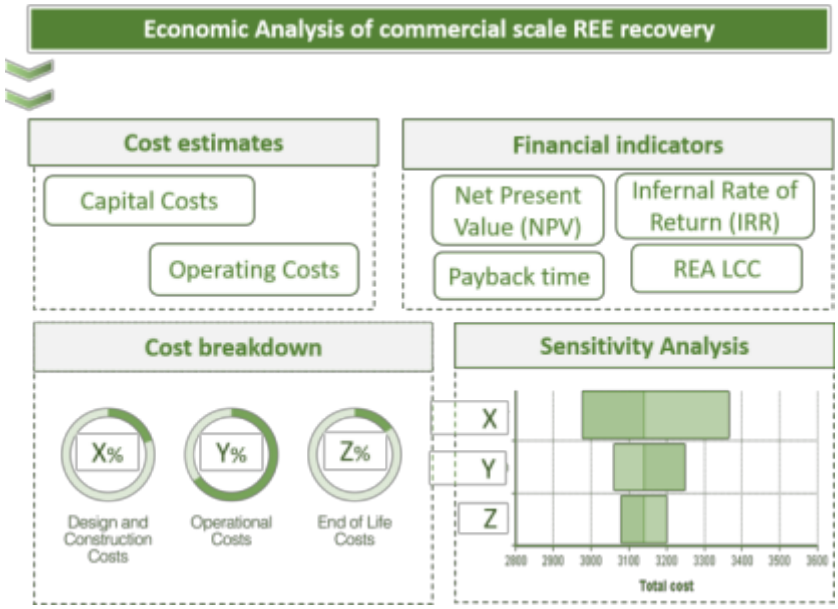


Figure 33. Exemplary outputs of economic analysis for projected large-scale implementation of REE4EU

7.5 Preparation of exploitation of REE4EU towards replication – approach and milestones

On April 26th, the DCE responsible partners (SINTEF, PNO, CIAOTECH, AVERE, CEFIC) developed a high-level roadmap for raising commercial interest in the REE4EU concept and technologies. Partners have jointly agreed on the approach and milestones required for effectively exploiting REE4EU's outcomes

The exploitation *approach* foresees:

- Communication with stakeholders for direct feedback on the REE4EU concept and technologies
- Presentation of the project's exploitable outcomes to selected stakeholders (using tailored channels of communication and tools)
- Possibly inviting stakeholders to visit the pilot plant at Elkem's premises for higher communication impact

As part of a short-term action plan, partners agreed on the following milestones:

M1 – June 2018

Prepare a solid outline of REE4EU's exploitation strategy and present it to the EC at REE4EU's next review meeting (June 2018)

M2 – November 2018

Prepare and present results of exploitation activities: stakeholders and market analyses, business plan and video of the REE4EU pilot at the Raw Materials Week in Brussels

Note: CEFIC and AVERE will use the same material to reach the public present in other european events as well.

M3 - Mar/April 2019

Invite interested stakeholders from the Raw Materials community, and other shortlisted stakeholders (follow-up on the review meeting in Brussels) for an invitation-only exploitation workshop

M4 – June 2019

After having established quality and price of output material and cost reduction recommendations, the consortium will select promising stakeholders and invite at Elkem (proposal to the EC to use any remaining money from the project to show the running pilot to key stakeholders).

(June 2019)

7.5.1 Exploitation plan for spin-off exploitation route

Transversal diffusion of REE4EU's technological value proposition

Activities will valorise the knowledge gained within the project to develop competences in other sectors or strengthen of existing capabilities[2].

- **Aim**: Knowledge transfer to interested stakeholders (also from sectors which are not directly linked to the field of Rare Earths, such as Co mining) and effective IPR management
- **Mode of execution:** running throughput the project

The REE4EU concept encompasses a combination of several technologies and processes such as the Ionic Liquid leaching, and the High temperature electrolysis that are in principle stand-alone technologies that can be used independently or in combination with other technologies to i) enhance the efficiency and selectivity of the process further or the quality of the final produced material, or ii) recover different materials from different feedstocks. Aware of the potential of those technologies, the partners have discussed their potential use for the recovery of other CRMs from different feedstocks, and their potential combination with other technologies.

Leveraging on the stakeholders analysis and particularly on the work of the "Innovators" in Europe who have been identified in the value chains and stakeholders analysis deliverable D9.1 (see Figure 24 in Section 1.1.1 and Table there) several academic and industrial partners have been contacted to explore potential synergies with other technologies developed by the "Innovators" in other EU funded projects.

Table 1: Industrial innovators in Europe who are already involved in developing recovery technology within EU funded projects and their position in the value chain (Extract from D9.1).

[2] Information will only be shared with a wider audience after appropriate measurements have been taken to protect the IPR of the REE4EU consortium members.

Table 11: Coordinators of EU funded projects with identified links to REE4EU (extract from D9.1)

TITLE	START DATE	END DATE	PROJECT ACRONYM	COORDINATOR	PROJECT FUNDING (€)	SUBPROGRAMME AREA
Next generation urban mining - Automated disassembly, separation and recovery of valuable materials from electronic equipment	01/09/15	31/08/19	ADIR	FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.	5.262.201	SPIRE-07-2015
Towards Replacement of Critical Catalyst Materials by Improved Nanoparticle Control and Rational Design	01/06/16	31/05/19	CritCat	TTY-SAATIO	4.369.293	NMP-23-2015
A Chemical Approach to Molecular Spin Qubits: Decoherence and Organisation of Rare Earth Single Ion Magnets	01/08/15	31/07/20	DECRESIM		1.827.375	ERC-CoG-2014
Training Network for the Design and Recycling of Rare-Earth Permanent Magnet Motors and Generators in Hybrid and Full Electric Vehicles	01/09/15	31/08/19	DEMETER	KATHOLIEKE UNIVERSITEIT LEUVEN	€ 3.802.512,00	MSCA-ITN-2015-ETN
Drastically reduced use of rare earths in applications of magnetocalorics	01/01/13	31/12/15	DRREAM	IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE	€ 3.707.143,00	NMP.2012.4.1-3
European Rare Earth Magnet Recycling Network	01/09/13	31/08/17	EREAN	KATHOLIEKE UNIVERSITEIT LEUVEN	€ 3.901.642,00	FP7-PEOPLE-2013-ITN
Development of a sustainable exploitation scheme for Europe's Rare Earth ore deposits	01/01/13	31/12/17	EURARE	NATIONAL TECHNICAL UNIVERSITY OF ATHENS - NTUA	€ 9.000.000,00	NMP.2012.4.1-1
New geomodels to explore deeper for High-Technology critical raw	01/02/16	31/01/20	HiTech AlkCarb	THE UNIVERSITY OF EXETER	€ 5.395.296,00	SC5-11d-2015

materials in Alkaline rocks and Carbonatites						
Aeronautical Magnetic Gear Box	01/09/12	30/04/14	MAGBOX	UNIVERSIDAD CARLOS III DE MADRID	€ 183.627,00	JTI-CS-2012-1-SFWA-01-048
New permanent magnets for electric-vehicle drive applications	01/10/13	30/09/16	MAG-DRIVE	INSTITUT JOZEF STEFAN	€ 2.549.000,00	GC.SST.2013-2.
Improved magnets for energy generation through advanced tidal technology	01/12/12	30/11/14	MAGNETIDE	ATARD SAVUNMA VE HAVACILIK SANAYI ILERI TEKNOLOJI UYGULAMALARI ARASTIRMA VE GELISTIRME A.S.	€ 1.131.700,00	SME-2011-1
Establishing of a novel technology platform for bio-based mineral processing: Development of peptides as agents for the separation of rare earth minerals via bio-flotation	01/03/15	28/02/17	MINEPEP	HELMHOLTZ-ZENTRUM DRESDEN-ROSSENDORF EV	168.321,00	FP7-PEOPLE-2013-IOF
New Spin for Molecular Magnets	31/08/15	30/08/17	MOLMAG	JYVASKYLAN YLIOPISTO	191.326,00	MSCA-IF-2014-EF
HIGH PERFORMANCE NANOSTRUCTURE PERMANENT MAGNETS	01/06/10	31/12/12	NANOPERMAG	NATIONAL CENTER FOR SCIENTIFIC RESEARCH "DEMOKRITOS"	202.319,00	FP7-PEOPLE-2009-IIF
Nanocrystalline Permanent Magnets Based on Hybrid Metal-Ferrites	01/12/12	30/11/15	NANOPYME	FUNDACION IMDEA NANOCIENCIA	3.479.493,00	NMP.2012.4.1-3
NOVel, critical materials free, high Anisotropy phases for permanent MAGnets, by design.	01/04/16	30/09/19	NOVAMAG	FUNDACION BCMATERIALS - BASQUE CENTRE FOR MATERIALS, APPLICATIONS AND NANOSTRUCTURES	5.562.360,00	NMP-23-2015

Development of novel, high Performance hybrid TWV/GPF Automotive afteR treatment systems by raTIonAL design: substitution of PGMs and Rare earth materials	01/04/16	30/09/19	PARTIAL-PGMs	WARRANT GROUP SRL	4.650.000,00	NMP-23-2015
Rare Earth Oxide Dielectrics for Advanced Germanium CMOS Technology	01/05/11	30/04/13	REACT	"NATIONAL CENTER FOR SCIENTIFIC RESEARCH ""DEMOKRITOS"""	157.720,00	FP7-PEOPLE-2010-IEF
Novel active nanophotonic devices in rare-earth doped double tungstates	01/08/11	31/07/15	RE-ACT	UNIVERSITEIT TWENTE	100.000,00	FP7-PEOPLE-2011-CIG
Reclamation of Gallium, Indium and Rare-Earth Elements from Photovoltaics, Solid-State Lighting and Electronics Waste	01/01/13	31/12/16	RECLAIM	NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO	4.715.525,00	NMP.2012.4.1-2
Recovery of Rare Earth Elements from magnetic waste in the WEEE recycling industry and tailings from the iron ore industry	01/12/13	30/11/16	REECOVER	NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU	5.995.741,00	ENV.2013.6.3-1
Rare Earth Element reCYCLing with Low harmful Emissions	01/07/13	30/06/18	REE-CYCLE		2.255.515,00	ERC-AG-PE8
Improvement of Technical Capabilities for Research and Development (R&D) Related to Separation, Determination and Preliminary Production of different Rare Earth Elements.	01/11/09	31/10/11	REESEP	HELSINGIN YLIOPISTO	€ 251.508,00	FP7-PEOPLE-IIF-2008
RARE EARTH FREE PERMANENT MAGNETS	01/05/12	30/04/15	REFREEPERMAG	"NATIONAL CENTER FOR SCIENTIFIC RESEARCH ""DEMOKRITOS"""	3.841.400,00	NMP.2011.2.2-4

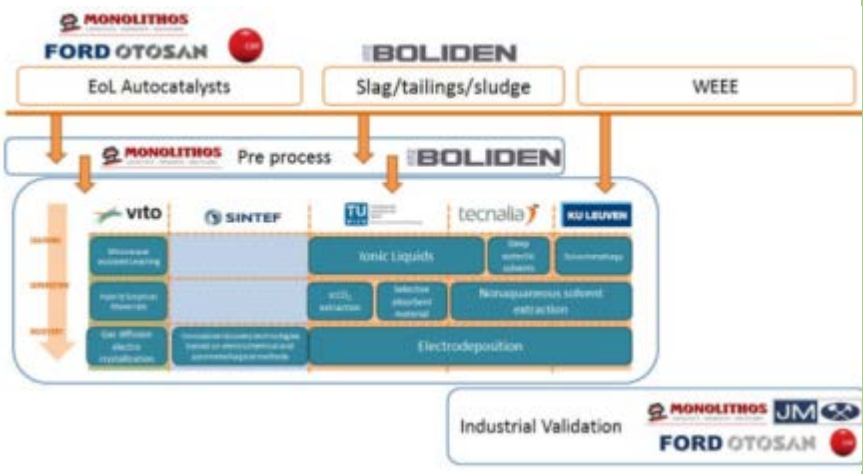
New Recovery Processes to produce Rare Earth -Magnesium Alloys of High Performance and Low Cost	01/09/15	31/08/18	REMAGHIC	FUNDACION CIDAUT	3.253.441,00	SPIRE-07-2015
Rare Earth Magnet Recovery for Environmental and Resource Protection	01/01/13	30/06/16	REMANENCE	C-TECH INNOVATION LIMITED	3.722.000,00	NMP.2012.4.1-2
Rare Earth Metal Separation with Ionic Liquids	01/02/15	31/01/17	REMSIL	THE QUEEN'S UNIVERSITY OF BELFAST	231.283,00	FP7-PEOPLE-2013-IIF
Resource Efficient Production Route for Rare Earth Magnets	01/01/15	31/12/17	REProMag	OBE OHNMACHT & BAUMGARTNER GMBH & CO KG	5.726.365,00	FoF-02-2014
Replacement and Original Magnet Engineering Options	01/12/12	30/11/15	ROMEO	INSTITUT JOZEF STEFAN	3.978.306,00	NMP.2012.4.1-3
The development of a novel rare-earth magnet based wave power conversion system - Snapper	01/09/09	31/08/11	SNAPPER	NATIONAL RENEWABLE ENERGY CENTRE LIMITED	988.620,00	SME-1
Thermoelectric power generation from anomalous Nernst effect based on rare earth free hard magnetic materials	01/03/14	29/02/16	THERMO-SPIN	"THE PROVOST, FELLOWS, FOUNDATION SCHOLARS & THE OTHER MEMBERS OF BOARD OF THE COLLEGE OF THE HOLY & UNDIVIDED TRINITY OF QUEEN ELIZABETH NEAR DUBLIN"	254.638,00	FP7-PEOPLE-2013-IEF

After thorough analysis of the technologies developed by several key innovators, contacts were established with them via phone calls and email exchange where the REE4EU project and technologies were introduced and teleconferences were arranged to brainstorm about the synergy and the possible combination of technologies to enhance the selectivity and efficiency of the process, as well as to use those combined technologies to recover other CRM from different feedstocks. In a later stage face to face meetings with key stakeholders were initiated for the conceptualisation of new initiatives that resulted later on in several collaborative projects with strong industrial engagement to move the technologies forward to the market. The tables below present a summary of some key initiatives (already in the public domain) that were initiated:

Initiative name	**First of a kind commercial Compact system for the efficient Recovery Of Cobalt Designed with novel Integrated Leading technologies (CROCODILE)**
Leader of the initiative	Tecnalia
REE4EU partners involved	Tecnalia, PNO, Sintef, SNAM, Stena, IDENER
External Stakeholders involved	**Companies**: Freeport, Glencore Nikkelverk, Ecorecycling, Larco, Relight, Iomartov, Kopacek, Akkuser, Accurec, Saubermacker, Comet Traitments, Monolithos **University and research centres**: Katholieke University Leuven, BRGM, Bangor university, Natural History Museum
Objectives of the initiative	The initiative will showcase innovative metallurgical systems based on advanced pyro-, hydro-, bio-, iono- and electrometallurgy technologies for the recovery of cobalt and the production of cobalt metal and upstream products from a wide variety of secondary and primary European resources. CROCODILE will demonstrate the synergetic approaches and the integration of the innovative metallurgical systems within existing recovery processes of cobalt from primary and secondary sources at different locations in Europe, to enhance their efficiency, improve their economic and environmental values, and will provide a zero-waste strategy for important waste streams rich in cobalt such as batteries. Additionally, the initiative will produce a first of a kind economically and environmentally viable mobile commercial metallurgical system based on advanced hydrometallurgical and electrochemical technologies able to produce cobalt metal from black mass containing cobalt from different sources of waste streams such as spent batteries and catalysts. A study of a pre-existing mobile plant built within the EU funded project HydroWEE DEMO meant to extract rare earth and precious metals from WEEE will be realised, and demonstration of the combination of some REE4EU technologies such as the ionic Liquid leaching with other technologies will be realised for high selectivity and efficient recovery of CRMs such as cobalt. The new established value chain in this project will bring together for the first time major players who have the potential of supplying 10,000 ton of cobalt annually in the mid-term range from European resources, corresponding to about 65% of the current overall EU industrial demand. Therefore, the project

	will reduce drastically the very high supply risk of cobalt for Europe, provide SMEs with novel business opportunities, and consolidate the business of large refineries with economically and environmentally friendly technologies and decouple their business from currently unstable supply of feedstocks.
Exploitation of the technology and know-how from the REE4EU	The Ionic liquid and Deep eutectic solvent leaching processes will be adapted and combined with advanced pre-treatment and other solvo-metallurgical technologies to increase the efficiency and selectivity of the overall process to recover critical raw materials mainly cobalt.
More information about the CROCODILE initiative	Website: Expected start date: June 2018 Total cost: 14,890,408 Euros CROCODILE is a project co-funded by the European Commission.

Initiative name	**Platinum group recovery using secondary raw materials (PLATIRUS)**
Leader of the initiative	Tecnalia
REE4EU partners involved	Tecnalia, Sintef, PNO
External Stakeholders involved	**Companies**: Johnson Matthey, Fiat, Ford, Boliden, Monolithos, Env-Aqua **University and research centres**: Katholieke University Leuven, Vito, Technische university of Wien
Objectives of the initiative	The initiative aims at reducing the European deficit of Platinum Group Metals (PGMs), by upscaling to industrial relevant levels a novel cost-efficient and miniaturised PGMs recovery and raw material production process. The targeted secondary raw materials will be autocatalysts, electronic waste (WEEE) and tailings and slags from nickel and copper smelters, opening-up an important range of alternative sources of these critical raw materials, with the potential to substitute a large amount of primary raw materials which are becoming more and more scarce in Europe. For the first time five of the major research centres in Europe will collaborate in developing and fine tuning the most advanced recovery processes for PGMs. This joint effort will lead to a unique exchange of know-how and best practices between researchers all over Europe, aiming at the selection of the recycling process and the preparation of the Blueprint Process Design that will set the basis for a new PGM supply chain in the EU.

	Two primary and secondary material producers with a consolidated business model will carry out validation of the innovative recovery processes in an industrially relevant environment by installing and testing them in an industrially relevant environment and benchmarking with the currently adopted recovery processes. A recycling company will provide a link to market introduction by manufacturing autocatalysts with second-life PGMs obtained via the PLATIRUS technology. Two large automotive companies will validate the material produced through the new recovery process, and ensure end-user industry driven value chains for recovered PGM materials. LCA, economic and environment assessment of the whole process will be led by a specialized consultancy company. Finally, the PLATIRUS project will be linked to European and extra-European relevant stakeholders, research activities and industries, with a solid dissemination, communication and exploitation plan.
Exploitation of the technology and know-how from the REE4EU	The initiative will exploit several technologies and know-how originally considered and further developed in the REE4EU project such as the Ionic Liquid and the deep eutectic solvents leaching process. Additionally, those know-how and technologies will be combined and tested with other technologies that have been developed by external research partners of the REE4EU to improve their efficiency selectivity, and to target primary feedstocks instead of only EoL products. The picture below shows how some of the REE4EU technology are combined with other technologies in the Platirus project :  The Ionic liquid and Deep eutectic solvent leaching processes will be combined with microwave assisted leaching to increase the efficiency and selectivity, while their combination with other separation and recovery technologies will extend the range of feedstocks from EoL products to mining slag, tailings and sludges. Validation of the technologies will be performed by world leading industries such as Johnson Matthey, Ford and Fiat. The novel process, obtained via the joint action of the major research

	centres in EU, will represent a step forward in terms of sustainability and environmental footprint, while offering significantly enhanced flexibility and selectivity. The initiative's final target is to fill the supply-demand gap of PGMs, estimated to currently be around 40 tonnes/year for an equivalent current value of 1200 MEUR/year.
More information about the Platirus initiative	Website: http://www.platirus.eu/ Start date: 01-11-2016 End date: 31-10-2020 Total cost: 6,994,210 Euros PLATIRUS is a project funded by the European Commission. This project has received funding from the European Union's Horizon 2020 Research and Innovation program under Grant Agreement n° 730224.

8 ANNEX I

LIST OF EVENTS AND OTHER ACTIONS IN THE FRAMEWORK OF THE DISSEMINATION (M0-M18)

In the following pages, all the activities implemented by the REE4EU partners in the framework of the dissemination are reported.

They refer to the period M0 – M18.

Individual Partners Dissemination Plan Table

8.1 SINTEF

Description of events attended:

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Workshop	SINTEF	Presentation at the EURARE partner meeting	6-7 June 2016	Uppsala	Companies/ Research organizations / Industrial associations	40 participants	Europe	www.eurare.eu
Policy workshop	SINTEF	Presentation at the Critical Raw Materials in Every Day Applications, Scientific and Industrial Policy Workshop	26-27 september 2016	Brussels	Companies/ Research organizations / Industrial associations	80 participants	Europe	http://www.reecover.eu/workshop-critical-raw-materials-in-everyday-applications/
Conference	SINTEF	Presentation at the 2nd scientific seminar arranged by the PROMETIA organization	17-18 November 2015 –	Sevilla, Spain	Companies/ Research	90 participants	Europe	(www.prometia.eu).
Conference	SINTEF	Poster presentation at the 6th EU-US- Japan Trilateral	29 November	Brussels,	Policy makers/	More than 100	World	http://ec.europa.eu/growth/tools-

		Conference on Critical Materials	2016	Belgium	Companies/ Research organizations / Industrial associations	participants		databases/newsroom/cf/itemdetail.cfm?item_id=9047&lang=en
Workshop	SINTEF	Presentation of the project at the European Geological Survey Raw Materials Week Workshop	30 November 2016	Brussels, Belgium	Companies/ Research organizations / Industrial associations	19 participants	Europe	http://www.eurogeosurveys.org/
Wokshop	SINTEF	Presentation at the KIFEE seminar	7-10 March 2017	Kyoto, Japan	Universities/ Research organizations / Companies/ Industrial associations/ Policy makers	150 participants	Japan-Norway	http://9thkifee.doshisha.ac.jp/
Conference	SINTEF	Participation at the TMS Conference-Sessions related to RE	26 February-2 March 2017	San Diego (US)	Companies/ Research organizations / Industrial associations	several 1000	World	http://www.tms.org/meetings/annual-17/AM17home.aspx

Description of other dissemination activities (press releases, news, nonscientific publications, etc.):

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
News on the website	SINTEF	REE4EU - Integrated High Temperature Electrolysis and Ion Liquid Extraction for a strong and independent European Rare Earth Elements Supply Chain	27 October 2015	SINTEF website	Companies/ Research organizations/		International	http://www.sintef.no/en/projects/ree4eu-integrated-high-temperature-electrolysis-ht/
News on the website	SINTEF	Skrap skal stille råstoffsult	17 February 2017	SINTEF website	Companies/ Research organizations/		Norway (in Norwegian)	http://www.sintef.no/siste-nytt/skrap-skal-stille-rastoffsult/

Specify the number of Dissemination and Communication activities linked to the project for each of the following categories

DISSEMINATION ACTIVITY	N°

Participation to a Conference (the REE4EU project takes part in a conference with a poster/oral presentation)	**3**
Participation to a Workshop (the REE4EU project takes part in a workshop with a poster/oral presentation)	**4**
Participation in activities organized jointly with other H2020 projects (the REE4EU project takes part and/ or co-organises an activity with another H2020 project)	**1**
Other (Any other activity implemented (IP/R&I newsletters, news posted on platforms and partners corporate websites, ..)	**2**

Specify the estimated number of persons reached, in the context of all dissemination and communication activities, in each of the following categories

AUDIENCE	PERSONS
Scientific Community	**500**
Industry	**350**
Civil Society	**350**
Policy Makers	**100**
Media	**1**

8.2 TECNALIA

Description of events attended:

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Congress, + Poster presentation	TECNALIA	EUCHEM congress	3 – 8 July 2016	Wien (AUSTRIA)	Companies/ Research organizations/ Industrial associations	500	Europe	http://www.euchem2016.org/welcome/
Congress, + Poster presentation	TECNALIA	Symposium I "Solutions for Critical Raw Materials Under Extreme Conditions" at the 2017 E-MRS Fall Meeting	18 – 21 September 2017	Warsaw University of Technology (POLAND)	Companies/ Research organizations/ Industrial associations	300	Europe	https://www.crm-extreme.eu/WP/event/crm-extreme-annual-conference-2017-save-date/

Description of other dissemination activities (press releases, news, nonscientific publications, etc.):

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
News on the website	TECNALIA	MATERIALS FOR ENERGY & ENVIRONMENT	16 June 2015	TECNALIA website	Companies/ Research organizations/		International	http://www.tecnalia.com/en/energy-and-environment/news/materials-for-energy-a-environment.htm
News on the website	TECNALIA	Recovery of Rare Earth Elements to assure competitiveness	6 October 2015	TECNALIA website	Companies/ Research organizations/		International	http://www.tecnalia.com/en/energy-and-environment/news/recovery-of-rare-earth-elements-to-assure-competitiveness.htm
News on the website	TECNALIA	Materials: Ionic liquids in tecnalia 2015	29 March 2016	Slideshare	Companies/ Research organizations/		International	http://www.slideshare.net/jokinhidalgo/materials-ionic-liquidstecnalia2015
News on the website	TECNALIA	REE4EU Poster EUCHEM 2016 Jokin Hidalgo	27 July 2016	Slideshare	Companies/ Research organizations/		International	http://www.slideshare.net/jokinhidalgo/ree4eu-poster-euchem-2016-jokin-hidalgo-corrected-4

News on the website	TECNALIA	REE4EU brochure-first-year-results	19 April 2017	Slideshare	Companies/ Research organizations /		International	https://es.slideshare.net/jokinhidalgo/ree4eu-brochurefirstyearresults
News on the website	TECNALIA	REE4EU Newsletter | Issue n°4 | March 2017	19 April 2017	Slideshare	Companies/ Research organizations /		International	https://es.slideshare.net/jokinhidalgo/ree4eu-newsletter-issue-n4-march-2017

Specify the number of Dissemination and Communication activities linked to the project for each of the following categories

DISSEMINATION ACTIVITIES	N°
Participation to a Conference (the REE4EU project takes part in a conference with a poster/oral presentation)	**2**
Other (Any other activity implemented (IP/R&I newsletters, news posted on platforms and partners corporate websites, ..)	**4**

Specify the estimated number of persons reached, in the context of all dissemination and communication activities, in each of the following categories

AUDIENCE	PERSONS
Scientific Community	**480**
Industry (audiences in exhibitions, general conferences, (i.e. estimated number of IP/R&I)	**20**
General Public (social media (FB, linkedin, twitter), partner corporate websites)	**376**

8.3 LCM

Description of events attended:

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Policy workshop	LCM	Critical Raw Materials in Every Day Applications, Scientific and Industrial Policy Workshop	26-27 September 2016	Brussels	Companies/ Research organizations/ Industrial associations	60	Europe	http://www.reecover.eu/workshop-critical-raw-materials-in-everyday-applications/
Critical raw Materials Workshop	LCM	European Critical Raw Materials Workshop	27 September 2016	Brussels	Companies/ Research organizations/ Industrial associations	25	Europe	http://criticalrawmaterials.org/

Specify the number of Dissemination and Communication activities linked to the project for each of the following categories

DISSEMINATION ACTIVITY	N
Participation to a Workshop (the REE4EU project takes part in a workshop with a poster/oral presentation)	**2**

Specify the estimated number of persons reached, in the context of all dissemination and communication activities, in each of the following categories

AUDIENCE	PERSONS
Scientific Community	**25**
Industry	**30**
Civil Society	**10**

Policy Makers (in case of dedicated workshops/conferences)	**10**
Customers	**5**

8.4 ELKEM

Description of events attended:

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Presentation CONFERENCE	Elkem	REE4EU pilot project	11.05.2016	Gothenburg, Sweden	Industry	100	International	www.circularmaterialsconference.se/speaker-presentations-2016/
Presentation WORKSHOP	Eyde Cluster	REE4EU	24.11.2016	Kristiansand N	Industry	25	Norwegian	

Description of other dissemination activities (press releases, news, nonscientific publications, etc.):

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
News on the website	ELKEM	Elkem Technology has joined as industry partner	January 27th, 2016	REE4EU information on Elkems	Companies/ Research organizations/	> 2.000	International	https://www.elkem.com/news/elkem-technology-industry-partner-in-eu-project/

		in EU project		Intranet sites and on Elkem.com				
News on Bluestar Intranett site	Bluestar (Elkem' owner)	Addressed by Bluestar CEO Michael Konig in his annual summary og main activities in Bluestar companies	January 2017	Bluestar Intranett	Bluestar employees	20.000	Internatio nal	

Specify the number of Dissemination and Communication activities linked to the project for each of the following categories:

DISSEMINATION ACTIVITIES	N
Participation to a Conference (the REE4EU project takes part in a conference with a poster/oral presentation)	**1**
Participation to a Workshop (the REE4EU project takes part in a workshop with a poster/oral presentation)	**1**
Other (Any other activity implemented (IP/R&I newsletters, news posted on platforms and partners corporate websites, ..) *See comment on Bluestar CEO highlighting REE4EU as an example of waste management projects where Elkem is partner.	**2**

Specify the estimated number of persons reached, in the context of all dissemination and communication activities, in each of the following categories

AUDIENCE	PERSONS
Scientific Community	**100**
Industry	**125**
General Public	**20.000 (see above)**

8.5 IDENER

Description of events attended:

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Presentation/ Conference	Elkem	REE4EU pilot project	11.05.2016	Gothenburg, Sweden	Industry	100	International	www.circularmaterialsconference.se/speaker-presentations-2016/

Description of other dissemination activities (press releases, news, nonscientific publications, etc.):

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
News on the website	IDENER	REE4EU Environment, Multidisciplinary Design Optimization, Public - EU FP7 /	October 2015	IDENER website	Companies/ Research organizations/		International	http://www.idener.es/?portfolio=ree4eu

		H2020						
News on website	IDENER	"REE4EU" first bi-annual progress meeting	2nd May 2016	IDENER website	Companies/ Research organizations/ Industrial associations	---	All	http://www.idener.es/?p=2262
News on website	IDENER	"REE4EU" High Temperature Electrolysis Engineering Strategy Meeting	11st July 2016	IDENER website	Companies/ Research organizations/ Industrial associations	---	All	http://www.idener.es/?p=2280
News on website	IDENER	"REE4EU" project kick off	3th November 2015	IDENER website	Companies/ Research organizations/ Industrial associations	---	All	http://www.idener.es/?p=2205

Specify the number of Dissemination and Communication activities linked to the project for each of the following categories

DISSEMINATION ACTIVITIES	N°
Participation to a Conference (the REE4EU project takes part in a conference with a poster/oral presentation)	**1**
Other (Any other activity implemented (IP/R&I newsletters, news posted on platforms and partners corporate websites, ..)	**4**

Specify the estimated number of persons reached, in the context of all dissemination and communication activities, in each of the following categories

AUDIENCE	PERSONS

Scientific Community	**100**
Industry (audiences in exhibitions, general conferences, (i.e. estimated number of IP/R&I)	**15**
General Public (social media (FB, linkedin, twitter), partner corporate websites)	**1000 (* assuming that 1 of every 5 visitors of our website has seen REE4EU-related content)**

8.6 INOVERTIS

Description of other dissemination activities(press releases, news, nonscientific publications, etc.):

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Post on Linked In	INOVERTIS/ A3i	Kick-off and Technical Meeting 1 in Norway	11/02/2016	Linked In	Companies/ Research organizations/ Industrial associations	1373	Europe	https://www.linkedin.com/company/inovertis---p%C3%B4le-technologies-propres?trk=biz-companies-cym
Post on Linked In	INOVERTIS/ A3i	Technical Meeting 2 in Spain	11/03/2016	Linked In	Companies/ Research organizations/ Industrial associations	161	Europe	https://www.linkedin.com/company/inovertis---p%C3%B4le-technologies-propres?trk=biz-companies-cym
Post on Viadéo	INOVERTIS/ A3i	Kick-off and TM1 in Norway	11/02/2016	Viadéo	Companies/ Research	>200	France	http://www.viadeo.com/fr/company/inovertis-pole-

					organizations/ Industrial associations			technologies-propres
Post on Viadéo	INOVERTIS/ A3i	TM2 in Spain	11/03/2016	Viadéo	Companies/ Research organizations/ Industrial associations	>200	France	http://www.viadeo.com/fr/company/inovertis-pole-technologies-propres
Post on Twitter	INOVERTIS/ A3i	Kick-off and TM1 in Norway	11/02/2016	Twitter	Companies/ Research organizations/ Industrial associations	> 289	Europe	https://twitter.com/inovertis_tp
Post on Twitter	INOVERTIS/ A3i	TM2 in Spain	11/03/2016	Twitter	Companies/ Research organizations/ Industrial associations	> 100	Europe	https://twitter.com/inovertis_tp
Press release	INOVERTIS/ A3i	"Inovertisgagne un projeteuropéend' envergure" – (Inovertis won a major european project)	27/07/2016	Press release – EconomieDrômoise Journal (ED N°192 – Juillet/Août, P8)	- CEO - other subscribers (public organizations) -deposit locations - chambers of	- 18 181 - 692 (400) - 37 - 6	France (Rhône-Alpes)	https://www.linkedin.com/company/inovertis---p%C3%B4le-technologies-propres/comments?topic=6163991460552204289&type=U&scope=10046492&stype=C&a=fX6x

					commerce			
Post on Twitter	INOVERTIS/ A3i	Press release	27/07/2016	Twitter	Companies/ Research organizations/ Industrial associations	> 100	Europe	https://twitter.com/inovertis_tp
Post on Viadéo	INOVERTIS/ A3i	Press release	27/07/2016	Viadéo	Companies/ Research organizations/ Industrial associations	>200	France	http://www.viadeo.com/fr/company/inovertis-pole-technologies-propres
Post on Linked In	INOVERTIS/ A3i	Press release	27/07/2016	Linked In	Companies/ Research organizations/ Industrial associations	161	Europe	https://www.linkedin.com/company/inovertis---p%C3%B4le-technologies-propres?trk=biz-companies-cym

Specify the number of Dissemination and Communication activities linked to the projectfor each of the following categories

DISSEMINATION ACTIVITY	N
Press release	**1**
Social Media(posts on social media channels published including partners' websites)	**9**

Specify the estimated number of persons reached, in the context of all dissemination and communication activities,in each of the following categories

AUDIENCE	PERSONS

General Public (social media (FB, linkedin, twitter), partner corporate websites)	**1 500**
Other (local journal)	**18 000**

8.7 CEA

escription of events attended:

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Conference	CEA	Invitation to a Plenary conference	12 02 2016	Midi-Minatec Grenoble – FRANCE	Companies/ Research	400	Europe	

Description of other dissemination activities (press releases, news, nonscientific publications, etc.):

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
News on the website	CEA	Hydrometallurgical processes: a unique alternative for recovering and recycling critical	6 october 2016	Website of CEA	Companies/ Research organizations/ Industrial		Europe	http://liten.cea.fr/cea-tech/liten/en/Pages/techno%20Transverse/Hy

		metals			associations			droMetallicProcesses.aspx

Specify the number of Dissemination and Communication activities linked to the project for each of the following categories

DISSEMINATION ACTIVITIES	N°
Participation to a Conference (the REE4EU project takes part in a conference with a poster/oral presentation)	**1**
Other (Any other activity implemented (IP/R&I newsletters, news posted on platforms and partners corporate websites, ..)	**1**

Specify the estimated number of persons reached, in the context of all dissemination and communication activities, in each of the following categories

AUDIENCE	PERSONS
Scientific Community	**>300**
Industry	**>50**
Civil Society	**>500**
Customers	**>50**

8.8 AVERE

Description of events attended:

Type of activities	Main leader	Title	Date	Place	Audience: number of industries	Size of audience	Countries addressed	Link to the website
Congress, Oral presentation + stand at the event	AVERE	Eurobike Show	31 august- 4 september 2016	Friedrichshafen , Germany	Companies/ Research organizations/ Industrial associations	46000	Europe People reached related to REE4EU	(www.eurobike-show.com
Congress conference	AVERE	LEVS	20 - 21 September 2016	Barcelona, Spain	Companies/ Research organizations/ Industrial associations	157	International, 25 countries	http://www.levs.mobi/

Conference	AVERE	CRM Alliance	27 September 2015	Brussels, Belgium	Companies/ Industrial associations/ Policy makers	80	European orientation	http://criticalrawmaterials.org

Description of other dissemination activities (press releases, news, nonscientific publications, etc.):

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
news	AVERE	REE4EU project: High Temperature Electrolysis Engineering Strategy Meeting, Trondheim (20-22 June 2016)	13 July 2016	AVERE website	Companies/ Research organizations / Industrial associations	Unknown, not monitored	Europe	http://www.avere.org/www/index.php
News	AVERE	REE4EU project: High Temperature Electrolysis Engineering Strategy Meeting, Trondheim (20-22 June 2016)	13 July 2016	AVERE LEV-TF website	Companies/ Research organizations / Industrial associations	unknown	Europe	https://averelev.wordpress.com/
Article	AVERE	Second REE4EU Newsletter is out	17 August 2016	AVERE LEV-TF website	Companies/ Research organizations / Industrial	unknown	Europe	https://averelev.wordpress.com/

					associations			
News	AVERE	Second REE4EU Newsletter is out	17 august 2016	AVERE website	Companies/ Research organizations / Industrial associations	Unknown, not monotored	Europe	http://www.avere.org/www/index.php
Tweet	AVERE	Second REE4EU Newsletter is out	17 August 2016	Avere Twitter account	Companies/ Research organizations / Industrial associations	620 followers	Europe	https://twitter.com/AVERE_EU

Specify the number of Dissemination and Communication activities linked to the project for each of the following categories

DISSEMINATION ACTIVITIES	N°
Social Media (posts on social media channels published including partners' websites)	**1**
Participation to a Conference (the REE4EU project takes part in a conference with a poster/oral presentation)	**3**
Other (Any other activity implemented (IP/R&I newsletters, news posted on platforms and partners corporate websites, ..)	**4**

8.9 PNO-I

Description of dissemination events attended or planned :

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Congress	PNO/CIAO TECH	12th Congress of the Interdivisional Group of Organometallic Chemistry Co.G.I.C.O.	5th –8th June 2016	Genoa, Italy	Companies/ Research organizations/	130	Europe	http://www.sciliguria.it/COGICO2016/EN_index.htm
Conference, REE4EU project presentation	PNO/CIAO TECH	Ree4eu project presentation at the New_InnoNet project event	9 June 2016	Brussels	Companies/ Research organizations/	97	Europe	http://www.newinnonet.eu/
Conference	PNO/CIAO TECH	European Conference Industrial Technologies	22 – 24 June 2016	RAI Amsterdam, The Netherlan	Companies/ Research organizations/	1.250	Europe	http://www.industrialtechnologies2016.eu/

		2016		ds				
Congress	PNO/CIAO TECH	Ecomondo – the green Technologies expo	8th to 11th of November 2016	Rimini, Italy	Companies/ Research organizations/ Industrial associations	100.000	International	http://en.ecomondo.com/

Description of other dissemination activities (press releases, news, nonscientific publications, etc.) realized or planned:

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
News on newsletter	PNO/CIAOTECH	Innovation Place Newsletter	4th November 2015	PNO web-portal (Europe)	Companies/ Research organizations/ Industrial associations	> 10.000	Europe	https://www.innovationplace.eu/
Press release	PNO/CIAOTECH	Finanzia i tuoi progetti di Ricerca e Sviluppo grazie ad Horizon 2020	December 2015	Italy	Companies	2.000	Italy	http://www.youblisher.com/p/1294421-Fare-n-30-Dicembre-2015/
Post on linkedin	PNO/CIAOTECH	PNO Consultants in the Circular Economy field	8th December 2015	Linkedin	Companies/ Research organizations/ Industrial associations		Europe	

News on website	PNO/CIAOTECH	REE4EU project website now online	January 29, 2016	PNO web-portal (Europe)	Companies/ Research organizations/ Industrial associations	> 10.000	Europe	https://www.innovationplace.eu/news/REE4EU-project-website-now-online!
News on website	PNO/CIAOTECH	Lanciato il sito del progetto REE4EU	12th February 2016	PNO Web portal in Italy	Companies/ Research organizations/ Industrial associations	> 6.000	Italy	https://www.ricercaeinnovazione.it/news/Lanciato-il-sito-del-progetto-REE4EU!
Post on linkedin, Innovation Place group	PNO/CIAOTECH	REE4EU project website now online	29th January 2016	Linkedin	Companies/ Research organizations/ Industrial associations	835	Europe	https://www.linkedin.com/groups/4086674
Tweet on twitter	PNO/CIAOTECH	REE4EU project website now online	29th January 2016	Twitter	Companies/ Research organizations/ Industrial associations	229	Europe	https://twitter.com/innovation_pl
Post on Facebook	PNO/CIAOTECH	REE4EU project website now online	29th January 2016	Facebook	Companies/ Research organizations/ Industrial associations	200	Europe	https://www.facebook.com/innovation.place.pno?fref=pb&hc_location=profile_browser

News on website	PNO/CIAOTECH	REE4EU partners meeting –	7th March 2016	PNO web-portal (Europe)	Companies/ Research organizations/ Industrial associations	> 10.000	Europe	https://www.innovationplace.eu/news/REE4EU-Partner-meeting---28-29-January,-Kristiansand-%28Norway%29
News on website	PNO/CIAOTECH	Progetto REE4EU, incontro dei partners	7th March 2016	PNO Web portal in Italy	Companies/ Research organizations/ Industrial associations	> 6.000	Italy	https://www.ricercaeinnovazione.it/news/Primo-meeting-di-progetto-per-REE4EU---28-29-gennaio,-Kristiansand-%28Norvegia%29
Post on linkedin, Innovation Place group	PNO/CIAOTECH	REE4EU partners meeting –	7th March 2016	Linkedin	Companies/ Research organizations/ Industrial associations	835	Europe	https://www.linkedin.com/groups/4086674
Post on linkedin, comapy page	PNO/CIAOTECH	REE4EU partners meeting –	7th March 2016	Linkedin	Companies/ Research organizations/ Industrial associations	111	Europe	https://www.linkedin.com/company/innovation-place
Tweet on twitter	PNO/CIAOTECH	REE4EU partners meeting –	7th March 2016	Twitter	Companies/ Research organizations/ Industrial	229	Europe	https://twitter.com/innovation_pl

					associations			
Post on Facebook	PNO/CIAOTECH	REE4EU partners meeting –	7th March 2016	Facebook	Companies/ Research organizations/ Industrial associations	200	Europe	https://www.facebook.com/innovation.place.pno?fref=pb&hc_location=profile_browser
News on newsletter	PNO/CIAOTECH	Innovation Place Newsletter - REE4EU project: first six months partner meeting, Sweden (19-20 April)	5 May 2016	PNO web-portal (Europe)	Companies/ Research organizations/ Industrial associations	> 10.000	Europe	https://www.innovationplace.eu/
SPIRE NEWSLETTER	PNO/CIAOTECH	REE4EU: first six months progress meeting	17 May 2016	SPIRE NEWSLETTER	Companies/ Research organizations/ Industrial associations		Europe	
Post on Google + Ciaotech	PNO/CIAOTECH	Il progetto REE4EU partecipa alla conferenza Industrial Technologies 2016!	17 June 2016	Google + Ciaotech-	Companies/ Research organizations/ Industrial associations	>8000	Europe	https://plus.google.com/b/109811077007235828437/109811077007235828437/posts?gmbpt=true&hl=it
Post on Google + Innovation	PNO/CIAOTECH	REE4EU project at	17 June 2016	Google + Innovation	Companies/ Research	>6000	Europe	https://plus.google.com/b/104555128554936983080/104555128554936983

Place		the Industrial Technologies 2016 conference!		Place	organizations/ Industrial associations			080/posts?gmbpt=true&hl=it
Post on Facebook IP	PNO/CIAOTECH	REE4EU project at the Industrial Technologies 2016 conference	17 June 2016	Facebook Innovation Place	Companies/ Research organizations/ Industrial associations	214	Europe	https://www.facebook.com/innovation.place.pno/
Post on Linkedin, IP	PNO/CIAOTECH	REE4EU project at the Industrial Technologies 2016 conference	17 June 2016	Linkedin, Innovation Place Group	Companies/ Research organizations/ Industrial associations	848	Europe	https://www.linkedin.com/groups/4086674
Post on Linkedin	PNO/CIAOTECH	REE4EU project at the Industrial Technologies 2016 conference	17 June 2016	Linkedin, Innovation Place company page	Companies/ Research organizations/ Industrial associations	120	Europe	https://www.linkedin.com/company/2332689?trk=tyah&trkInfo=clickedVertical%3Acompany%2CentityType%3AentityHistoryName%2CclickedEntityId%3Acompany_company_2332689%2Cidx%3A0
News on website	PNO/CIAOTECH	Conferenza Industrial Technologies 2016: parteciperà anche	17 June 2016	PNO CIAOTECH web portal	Companies/ Research organizations/ Industrial	>6000	Italy	http://www.pnoconsultants.it/news/id/1881/conferenza-industrial-technologies-2016-partecipera-anche-il-progetto-ree4eu

		il progetto REE4EU			associations			
News on website	PNO/CIAOTECH	REE4EU project at the Industrial Technologies 2016 conference!	17 June 2016	PNO web-portal Europe	Companies/ Research organizations/ Industrial associations	>10000	Europe	https://www.innovationplace.eu/networking-news/REE4EU-project-at-the-Industrial-Technologies-2016-conference!
Tweet on Twitter	PNO/CIAOTECH	REE4EU project at the Industrial Technologies 2016 conference!	17 June 2016	Twitter Innovation Place	Companies/ Research organizations/ Industrial associations	250	Europe	https://twitter.com/INNOVATION_PL
News on Newsletter	PNO/CIAOTECH	Progetto REE4EU: meeting per le strategie di progettazione dei reattori per l'elettrolisi ad alte temperature – Trondheim, 20-22 giugno 2016	6 July 2016	PNO Web portal in Italy	Companies/ Research organizations/ Industrial associations	> 6.000	Italy	https://www.ricercaeinnovazione.it/news/Lanciato-il-sito-del-progetto-REE4EU!
News on website	PNO/CIAOTECH	REE4EU project: High Temperature Electrolysis Engineering Strategy Meeting, Trondheim (20-22	7 July 2016	PNO web-portal Europe	Companies/ Research organizations/ Industrial associations	>10000	Europe	https://www.innovationplace.eu/news/REE4EU-project:-High-Temperature-Electrolysis-Engineering-Strategy-Meeting,-Trondheim-%2820-22-June-2016%29

		June 2016)						
News on website	PNO/CIAOTECH	Progetto REE4EU: meeting per le strategie di progettazione dei reattori per l'elettrolisi ad alte temperature – Trondheim, 20-22 giugno 2016	6 July 2016	PNO CIAOTECH web portal	Companies/ Research organizations/ Industrial associations	>6000	Italy	http://www.pnoconsultants.it/news/id/1900/progetto-ree4eu-meeting-per-le-strategie-di-progettazione-dei-reattori-per-lelettrolisi-ad-alte-temperature-trondheim-20-22-giugno-2016
News on website	PNO/CIAOTECH	Progetto REE4EU: meeting per le strategie di progettazione dei reattori per l'elettrolisi ad alte temperature – Trondheim, 20-22 giugno 2016	6 July 2016	PNO Web portal in Italy	Companies/ Research organizations/ Industrial associations	>6000	Italy	https://www.ricercaeinnovazione.it/news/Progetto-REE4EU:-meeting-per-le-strategie-di-progettazione-dei-reattori-per-l%E2%80%99elettrolisi-ad-alte-tempertature-%E2%80%93-Trondheim,-20-22-giugno-2016
Tweet on Twitter	PNO / CIAOTECH	REE4EU project: High Temperature Electrolysis	6 July	Twitter Innovation	Companies/ Research organizations/		Europe	https://twitter.com/INNOVATION_PL

		Engineering Strategy Meeting, Trondheim (20-22 June 2016)		Place	Industrial associations			
SPIRE NEWSLETTER 2 news	PNO/CIAOTECH	REE4EU project: High Temperature Electrolysis Engineering Strategy Meeting, Trondheim (20-22 June 2016)	4 July 2016	SPIRE NEWSLETTER	Companies/ Research organizations/ Industrial associations		Europe	
News on Newsletter	PNO/CIAOTECH	REE4EU project: High Temperature Electrolysis Engineering Strategy Meeting - 20-22 June, Trondheim	19 July 2016	PNO web-portal (Europe)	Companies/ Research organizations/ Industrial associations	>10000	Europe	
News on newsletter	PNO/CiaoTech	Pubblicata la seconda newsletter del progetto REE4EU	7 September 2016	PNO Web portal in Italy	Companies/ Research organizations/ Industrial associations	>6.000	Europe	

News on newsletter	PNO/Ciaotech	Release of the second REE4EU newsletter	7 September 2016	PNO Web portal (Europe)	Companies/ Research organizations/ Industrial associations	>6000	Europe	
Post on IP Linkedin	PNO/CiaoTech	REE4EU project - Rare Earth Recycling for Europe – second newsletter focusing on research centers and organizations involved in the project	3 October 2016	Linkedin Innovation Place	Companies/ Research organizations/ Industrial associations	872	Europe	https://www.linkedin.com/groups/4086674/4086674-6188649584953225217
Tweet on IP Twitter	PNO/CiaoTech	#REE4EU Find out more about the RTOs involved in the project by reading the second newsletter here	3 October 2016	Twitter IP	Companies/ Research organizations/ Industrial associations	258	Europe	https://twitter.com/INNOVATION_PL
News on website	PNO/CIAOTE	REE4EU project meeting in	1 December	PNO web	Companies/ Research	>10000	Europe	https://www.innovationplace.eu/news/REE4EU-

	CH	Trondheim, Norway	2016	portal Europe	organizations/ Industrial associations			project-meeting-in-Trondheim,-Norway
News on website	PNO/CIAOTECH	Meeting del progetto REE4EU a Trondheim, Norvegia	1 December 2016	PNO Web portal in Italy	Companies/ Research organizations/ Industrial associations	>6000	Italy	https://www.ricercaeinnovazione.it/news/Meeting-del-progetto-REE4EU-a-Trondheim,-Norvegia
News on newsletter	PNO/CiaoTech	REE4EU project meeting in Trondheim, Norway	13 December 2016	PNO web portal Europe	Companies/ Research organizations/ Industrial associations	>10000	Europe	www.innovationplace.eu
News on newsletter	PNO/CiaoTech	Meeting del progetto REE4EU a Trondheim, Norvegia	13 December 2016	PNO Web portal in Italy	Companies/ Research organizations/ Industrial associations	>6000	Italy	https://www.ricercaeinnovazione.it/
News on newsletter	PNO/CiaoTech	Release of the third REE4EU newsletter	11 January 2017	PNO web portal Europe	Companies/ Research organizations/ Industrial associations	>10000	Europe	www.innovationplace.eu

News on newsletter	PNO/CiaoTech	Pubblicata la terza newsletter del progetto REE4EU	12 January 2017	PNO Web portal in Italy	Companies/ Research organizations/ Industrial associations	>6000	Italy	https://www.ricercaeinnovazione.it/
News on website	PNO/CiaoTech	Release of the third REE4EU newsletter	12 January 2017	PNO web portal Europe	Companies/ Research organizations/ Industrial associations	>10000	Europe	https://www.innovationplace.eu/news/Release-of-the-third-REE4EU-newsletter
News on website	PNO/CiaoTech	Pubblicata la terza newsletter del progetto REE4EU	12 January 2017	PNO Web portal in Italy	Companies/ Research organizations/ Industrial associations	>6000	Italy	https://www.ricercaeinnovazione.it/news/Pubblicata-la-terza-newsletter-del-progetto-REE4EU

Specify the number of Dissemination and Communication activities linked to the project for each of the following categories

DISSEMINATION ACTIVITIES	N°
Press release (issued by every partner composing the project consortium)	**9**
Non-scientific and non-peer-reviewed	**1**
Exhibition (participation of the project to an exhibition event **with a stand/corner)**	**1**
Flyer (number of flyers distributed)	**1500**
Social Media (posts on social media channels published including partners' websites)	**18**
Website (posts, news, updates published on **the project website)**	**41**
Participation to a Conference (the REE4EU project takes part in a conference with a poster/oral presentation)	**2**

Participation to a Workshop (the REE4EU project takes part in a workshop with a poster/oral presentation)	**1**
Trade Fair(exhibition specifically dedicated to a targeted sector/audience)	**1**
Other (Any other activity implemented (IP/R&I newsletters, news posted on platforms and partners corporate websites, ..)	**26**

Specify the estimated number of persons reached, in the context of all dissemination and communication activities, in each of the following categories

AUDIENCE	PERSONS
Scientific Community	**4.800**
Industry	**15.000**
Civil Society	**1000**
General Public	**1589**
Policy Makers	**500**

8.10 CEFIC

Description of events attended:

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Conference, REE4EU project presentation	CEFIC	SusChem Stakeholder Event	16 June 2016	Brussels	Companies/ Research organizations/ Industrial associations / legal authorities	230 participants,	Europe	http://suschem.blogspot.be/2016_06_01_archive.html
Workshop, REE4EU project presentation	CEFIC	SusChem and European Projects presentation	31 October – 02 November 2016	Juiz de For a (Brazil)	Companies / Universities / Research associations / legal authorities	100	International	No link – internal conference

Workshop, REE4EU project presentation	CEFIC	SusChem and European Projects presentation	07 November 2016	Sao Paulo (Brazil)	Companies / Universities / Research associations / legal authorities	150	International	No link – internal conference

Description of other dissemination activities (press releases, news, nonscientific publications, etc.):

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
ARTICLE	CEFIC	Not published yet	MARCH 2017	IMPACT MAGAZINE	Broad audience		EUROPE	Not published yet

Specify the number of Dissemination and Communication activities linked to the project for each of the following categories

DISSEMINATION ACTIVITIES	N°
Press release (issued by every partner composing the project consortium)	**1**
Non-scientific and non-peer-reviewed publication (popularised publication) (non-scientific publications written by a partner of the project consortium (es, magazines..)	**1**
Participation to a Conference (the REE4EU project takes part in a conference with a poster/oral presentation)	**3**

Specify the estimated number of persons reached, in the context of all dissemination and communication activities, in each of the following categories

AUDIENCE	PERSONS
Industry (audiences in exhibitions, general conferences, (i.e. estimated number of IP/R&I)	**100**
General Public (social media (FB, linkedin, twitter), partner corporate websites)	**> 3000**

Policy Makers (in case of dedicated workshops/conferences)	**> 100**

8.11 STENA

Description of other dissemination activities (press releases, news, nonscientific publications, etc.):

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
News	STENA	Recycling project about recycling rare earth metals	13 May 2016	Metal Supply (Raw material related) website	Industrial associations	**25.800**	**SE**	http://www.metal-supply.se/article/view/251993/okad_tillgang_till_sallsynta_metaller#.Vz4X701f2bw
News	STENA	Recycling project about recycling rare earth metals	10 May 2016	Bergsmannen (Raw material related)	Companies/ Research organizations/ Industrial associations	**7.700**	**SE**	
News	STENA	Stena medverkar till återvinning av sällsynta jordartsmetall	17 May 2016	Aktuell hållbarhet (Sustainability news magazine	Companies/ Research organizations/ Industrial associations	**20.000**	**SE**	http://www.aktuellhallbarhet.se/stena-medverkar-till-atervinning-av-sallsynta-

		er STENA METALL IN NEW EU PROJECT FOCUSED ON RECYCLING OF RARE EARTH METALS						jordartsmetaller/
News	STENA	Recycling project about recycling rare earth metals	16 May 2016	Recyclingnet website (Recycling Industry magazine)	Companies/ Research organizations/ Industrial associations	**27.000**	SE	http://www.recyclingnet.se/nyheter/atervinningsprojekt-for-sallsynta-jordartsmetaller/
News	STENA	/ STENA METALL IN NEW RECYCLING PROJECT ABOUT RECYCLING OF RARE EARTH METALS	13 May 2016	Metaller och gruvor website (Raw material related)	Companies/ Research organizations/ Industrial associations	**10.000**	SE	http://www.metallerochgruvor.se/2016/05/stena-metall-i-nytt-forskningsprojekt
Post	STENA	STENA METALL IN	10 May 2016	Facebook	Companies/	**3.000**	SE	https://www.fa

		NEW RECYCLING PROJECT ABOUT RECYCLING OF RARE EARTH METALS			Research organizations/ Industrial associations			cebook.com/urbergsgruppenGrenna/
Press release	STENA	/ STENA METALL IN NEW RECYCLING PROJECT ABOUT RECYCLING OF RARE EARTH METALS	13 May 2016	STENA pressroom	Companies/ Research organizations/ Industrial associations	**1.800**	SE	
Video	STENA	/ STENA METALL IN NEW RECYCLING PROJECT ABOUT RECYCLING OF RARE EARTH METALS	13 May 2016	Youtube STENA channel	Companies/ Research organizations/ Industrial associations	**2.400**	INTERNATIONAL	
Post	STENA	/ STENA METALL IN NEW RECYCLING	13 May 2016	Stena LinkedIn accounts in Sweden	Companies/ Research organizations/	**23.000** impressions 136 clicks to	INTERNATIONAL	

		PROJECT ABOUT RECYCLING OF RARE EARTH METALS			Industrial associations	YouTube 93 social actions/likes 3 comments		
Post	STENA	/ STENA METALL IN NEW RECYCLING PROJECT ABOUT RECYCLING OF RARE EARTH METALS	13 May 2016	Stena LinkedIn accounts in Poland	Companies/ Research organizations/ Industrial associations	**1.334** impressions 6 clicks to YouTube 8 social actions/likes	PL	
post	STENA	/ STENA METALL IN NEW RECYCLING PROJECT ABOUT RECYCLING OF RARE EARTH METALS	13 May 2016	WEBsites, digital annual report etc		**9.000**	INTERNATIONAL	Stenametall.com
post	STENA	/ STENA METALL IN NEW RECYCLING PROJECT ABOUT	13 May	Industry magazine		**4.000**	SE	http://www.industripress.se/stena-metall-i-nytt-forskningsproje

		RECYCLING OF RARE EARTH METALS						kt-om-atervinning-av-sallsynta-jordartsmetaller
POST	STENA	/ STENA METALL IN NEW RECYCLING PROJECT ABOUT RECYCLING OF RARE EARTH METALS	17 May 2016	Industry magazine			SE	https://nozaksson.wordpress.com/2016/05/17/nu-skall-jordartsmetaller-atervinnas/
POST	STENA	/ STENA METALL IN NEW RECYCLING PROJECT ABOUT RECYCLING OF RARE EARTH METALS	1 dec 2016	Industry/financemagazine		**20.000**	SE	http://www.vafinans.se/aktier/nyheter/Stena-Metall-vill-hitta-saett-att-%C3%A5tervinna-saellsynta-jordartsmetaller-1001565902
POST	STENA	EU study looks at recycling rare earth metals	8 June 2016	Industry magazine		**38.000**	INTERNATIONAL	http://www.recyclingtodayglobal.com/article/rare-earth-metals-stena-

								sustainability/

Specify the number of Dissemination and Communication activities linked to the project for each of the following categories

DISSEMINATION ACTIVITIES	N°
Press release (issued by every partner composing the project consortium)	**2**
Social media	**8**
Video	**1**
Other	**5**

Specify the estimated number of persons reached, in the context of all dissemination and communication activities, in each of the following categories

AUDIENCE	PERSONS
General Public (social media (FB, linkedin, twitter), partner corporate websites)	**189000**
Customers	**10.000**