



**polynSPIRE**  
Innovative technologies for plastic recycling

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## Final Communication and Dissemination Plan

Deliverable 10.1 (v2)

WP10 Communication and Dissemination

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## D10.1 Final Communication and Dissemination Plan

This document was designed and elaborated accessible for colour-blind and visual disabled readers. If any information is not accessible, please address to [info@polynspire.eu](mailto:info@polynspire.eu) and we will amend as soon as possible.

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## APPROVALS

Author/s	Reviewers
EuPC – European Plastics Converters	Reviewer 1: CIRCE

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### EXECUTIVE SUMMARY

This document is the reviewed plan for communication and dissemination of the polynSPIRE project and includes the main activities that have been carried out until the first reporting period (M18) and that will be executed until the end of the project. The document sets the strategic framework for communication and dissemination of the project results and this second will be available to all project partners. The aim of this Final Communication and Dissemination Plan is to establish and run the visibility and communication infrastructure of the project so that all activities carried out during the project lifetime will be widely known in Europe. The dissemination activities have been designed to target the key audiences and stakeholders and to maximize awareness of polynSPIRE objectives and project activities.

The Communication and Dissemination Plan gives an overview of all dissemination opportunities identified through traditional communication channels such as event attendance (conferences, seminars, workshops, etc.), project publications (brochures, press releases, articles in professional journals, etc.) and project presentations (to various stakeholders and the general public).

During the first period (M01-M18) in terms of dissemination and communication activities 2 polynSPIRE networking events have been organized, project was presented at 14 different conferences and events, and there were numerous internal meetings where partners presented the project to their peers and colleagues. In addition, the communication and dissemination working group created the project identity that includes a logo, a brochure (in English and Spanish), roll up banner, general presentation, etc. Moreover, the consortium published a first video in order to bring the project closer to the general public.

EuPC coordinates and manages polynSPIRE dissemination and communication activities. Nevertheless, all the project partners are responsible to disseminate polynSPIRE results through their communication channels and towards their existing communities.

## TABLE OF CONTENTS

Overview of the deliverable .....	4
List of abbreviations and acronyms .....	5
1 INTRODUCTION.....	6
2 THE POLYNSPIRE BRAND IMAGE.....	7
2.1 The polynSPIRE image: logo & branding .....	7
2.1.1 Meaning of the logo.....	7
2.2 Objectives and key communication messages.....	8
2.3 Templates .....	9
2.4 Visual best practices .....	10
3 STAKEHOLDER’S ROLE.....	11
3.1 Contribution from internal and external stakeholders .....	11
3.2 Tracking and reporting of dissemination activities with Plan of Use and Dissemination of Knowledge (PUDK) 11	
3.3 Dissemination potential of deliverables.....	11
3.4 Rights and obligations of the Consortium.....	11
3.4.1 Tracking and reporting of dissemination activities .....	11
3.4.2 Dissemination of another partner’s unpublished results or background .....	12
3.4.3 Cooperation obligations.....	12
3.4.4 Use of names, logos or trademarks .....	12
3.5 Schedule for project partners’ responsibilities in press notes .....	12
4 DISSEMINATION AND COMMUNICATION STRATEGY.....	13
4.1 Acknowledgement of EU funding .....	13
4.1.1 Communication and dissemination materials.....	13
4.1.2 Signals in the infrastructure .....	13
4.2 Dissemination and communication levels.....	13
4.3 Deliverables and dissemination potential.....	13
4.4 Internal dissemination and communication .....	13
4.4.1 Communication and Dissemination task force and meetings.....	14
4.4.2 Reporting to the Steering Committee (SC).....	14
4.4.3 Repository of documents.....	14
4.5 Dissemination and communication materials.....	14
4.5.1 Website.....	14

- 4.5.2 Brochures ..... 15
- 4.5.3 Roll-up Banner ..... 15
- 4.5.4 Press Releases ..... 15
- 4.5.5 Social media (Twitter and LinkedIn) ..... 16
- 4.5.6 General project presentation ..... 17
- 4.5.7 E-Newsletter ..... 17
- 4.5.8 Public project deliverables and reports ..... 19
- 4.5.9 Poster ..... 19
- 4.5.10 Video ..... 19
- 4.5.11 Other material ..... 19
- 4.6 Project workshops and other events ..... 19
  - 4.6.1 Dedicated Workshops ..... 19
  - 4.6.2 polynSPIRE Networking events series ..... 20
  - 4.6.3 Strategic initiatives, events and conferences ..... 20
  - 4.6.4 Final event ..... 21
- 4.7 Publication of results ..... 21
  - 4.7.1 Procedure ..... 21
  - 4.7.2 Open access to scientific publications ..... 22
  - 4.7.3 Assistance to a conference ..... 22
- 5 PLAN FOR THE USE AND DISSEMINATION OF KNOWLEDGE (PUDK) ..... 23
  - 5.1 List of activities ..... 23
    - 5.1.1 Planned activities 2018-2022 ..... 23
  - 5.2 Synergies/interaction with other projects and initiatives ..... 28
- 6 MEASURABLE RESULTS ..... 31
  - 6.1 Google analytics ..... 31
  - 6.2 Number of publications ..... 31
  - 6.3 Media coverage ..... 31
- 7 CONCLUSION ..... 32
  - 7.1 Summary table ..... 32
  - 7.2 Next steps ..... 32
- List of figures ..... 33
- List of tables ..... 33
- Annexes ..... 34



## Deliverable 10.1 (v2) Final Communication and Dissemination Plan

Annex I Press Kit.....	34
ANNEX II DISSEMINATION POTENTIAL (from deliverables).....	36
Annex III Graphic materials developed .....	37
First roll-up: developed for HARMONI summit. ....	37
Brochure .....	38
Annex IV Dissemination and deliverables best practices for visual accessibility.....	39



## OVERVIEW OF THE DELIVERABLE

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WP:	10
Task:	Development of the Dissemination and Communication Strategy
Title:	Final Communication and Dissemination Plan

General description of the deliverable, as in the DoA describing:

- Task Leader: EuPC  
Partners Involved: CIRCE; CSM; IKMIB  
A detailed and agile dissemination, communication and awareness plan will be developed at the beginning of the project, being periodically updated and deployed along the project life cycle. It will contain:
  1. the identification of polynSPIRE stakeholders, and analysis of their characteristics, in order to establish the most suitable dissemination formats and channels for each target group;
  2. the dissemination methods and channels and their associated activities and tools to reach the expected impacts in terms of awareness, acceptance and final uptake (project website, conferences, workshops, publications, videos, etc.);
  3. dissemination procedures according the EC GA and CA; and
  4. the schedule and complementarities of dissemination and communication among partners.
  
- EuPC will coordinate and manage polynSPIRE dissemination and communication activities. Nevertheless, all the project partners will be responsible to disseminate polynSPIRE results through their communication channels and towards their existing communities. Therefore, all partners will play a role in the dissemination of the results and their interest and opportunities will be identified through a dedicated survey template to be filled (and updated) by the partners during the project. In addition, the partner responsible for each deliverable will be asked to establish the dissemination potential of the deliverable prior to its submission. The deliverables of the project will be used as milestones to monitor the progress of dissemination activities. The dissemination activities will be constantly tracked and monitored by EuPC, thus a brief overview will be presented in every SC meeting. A continuous monitoring activity will enable to assess the results and impacts of the dissemination and communication activities providing regular feedback to the effectiveness of the strategy.

## LIST OF ABBREVIATIONS AND ACRONYMS

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CA – Consortium Agreement  
GA – General Assembly  
PUDK – Plan of Use and Dissemination of Knowledge  
SC – Steering Committee  
WP – Work package

# 1 INTRODUCTION

---

This report is the Definitive Communication and Dissemination Plan for the polynSPIRE project. The purpose of this document is to set the strategic framework for communication and dissemination activities of the project results. The aim of this last version of the Communication and Dissemination Plan, following D10.1, is to establish and run the visibility and communication infrastructure of the project so that all activities carried out during the project lifetime will be widely known in Europe. The plan is an integral part of the Work Package (WP) 10.

The WP 10 develops an impact-oriented dissemination and communication strategy to guarantee the effective outreach of the project results towards stakeholders and the general public and enhance their acceptance and exploitation. polynSPIRE dissemination activities focus on its real added value in economic, technical, and environmental terms and they will also support the project sustainability even beyond its lifespan.

The specific objectives for the WP 10 are:

- To define an agile communication strategy to be adapted to the different target groups and messages.
- To prepare the visual identity and a set of materials for the promotion of the polynSPIRE project.
- To monitor and execute the communication plan with a continuous penetration into the main target groups and the public with tailored messages to transfer ideas in a clear and effective way.

The Communication and Dissemination Plan gives, hence, an overview of all dissemination opportunities identified through traditional communication channels such as event attendance (conferences, seminars, workshops, etc.), project publications (brochures, press releases, articles in professional journals, etc.) and project presentations (to various stakeholders and the general public). These activities will be complemented by online activities based on the project website, and through the main social platforms (e.g. LinkedIn and Twitter). The dissemination activities have been designed to target the key audiences and stakeholders and to maximize awareness of polynSPIRE objectives and project activities. Any dissemination activities and publications in the project will acknowledge the Horizon 2020 Programme funding.

## 2 THE POLYNSPIRE BRAND IMAGE

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### 2.1 THE POLYNSPIRE IMAGE: LOGO & BRANDING

The polynSPIRE logo was created at the beginning of the project, and partners had a chance to choose the best solution among different options. The logo includes a short name of the project, with an aim to capture the attention of the target audience.

The logo is used on all internal and external documents, deliverables, reports, dissemination materials, websites, and presentations. The logo forms the basis of the polynSPIRE brand and the colors and style will be used throughout the project. There are two version of the logo, with and without a motto (Fig 1).



Figure 1 The polynSPIRE Logo (both versions with and without motto)

The motto below for the given version can be translated to the local languages, if needed.

The following colour code is used for the logo:

- Magenta: RGB (235, 110, 177)
- Green: RGB (153, 204, 51)
- Light Green: RGB (239, 255, 213)
- Grey: RGB (126, 126, 126)

As regards as the font code:

- The font used for the polynSPIRE logo is: Krona One
- The font used for the motto is: Franklin Gothic Demi Cond

#### 2.1.1 Meaning of the logo

The logo represents an effort of the project to “close the loop” in a life cycle. The green line represents a linear economy, and the dotted pink lines a circular economy. In order to close the loop, we are suggesting an alternative solution that lays on three pillars. These pillars are three polynSPIRE innovations. Furthermore, the dotted pink lines are also symbolizing research and innovation that projects partners will undertake in order to close the loop and make the economy circular.

The brochure as well as some other graphic material have been designed by following this philosophy in order to keep coherence with the meaning.

## 2.2 OBJECTIVES AND KEY COMMUNICATION MESSAGES

In order to achieve the objectives of the polynSPIRE project, an efficient dissemination strategy has been developed and implemented. This strategy is unfolded in the present Communication and Dissemination plan. The plan will be regularly updated in order to follow the progress of the project, and this second version mirrors this progress.

The main purpose of the Communication and Dissemination plan is to set clear and reliable rules, aiming at ensuring targeted and effective dissemination of project's objectives, activities and results. Strategy envisages also all dissemination methods, tools and channels for the identified target groups. It is expected that the implementation of this plan coupled with partners' activities will achieve maximum awareness of project activities and results.

The dissemination objectives of polynSPIRE project are the following:

- Establishment of core messages of the project
- Identification of communication and dissemination methods and tools
- Dissemination of the results, solutions and knowledge collected within the project to the audience
- Definition of partners' responsibilities in dissemination activities

The communication and dissemination actions are performed throughout the whole duration of the project, progressing from initial awareness raising to the promotion of the polynSPIRE deliverables. These actions will be supported by materials for communication which will be customized according to the targeted public (project partners, industry associations, policy makers, governmental representatives, etc.).

The polynSPIRE objectives are fully explained in the project proposal and these objectives will be the key messages. The strategy will highlight the project's objectives and convey the key messages to a widest possible audience that includes policy makers, representatives of industry organisations, the general public, and media.

The overall objective of polynSPIRE is to demonstrate a comprehensive set of innovative, cost-effective and sustainable solutions, aiming at improving the energy and resource efficiency of the recycling processes for postconsumer (after product's end of life) and post-industrial (produced during transformation processes from raw materials to the final product) plastic containing materials. To this end, three innovation pillars are demonstrated in operational environments reaching TRL 7:

- A. First innovation is focused on chemical recycling processes to obtain the feedstock needed by chemical industries to synthesize new polymers, whose reintroduction at the beginning of the value chain will reduce the consumption of fossil raw materials. Chemical recycling as a path to recover plastic monomers and valuable fillers (such as carbon or glass fibres) relying on microwaves - assisted organic chemistry (implying an energy consumption reduction up to 68%) and smart magnetic catalysts (which can increase efficiency around 60%).

- B. Second innovation is focused on mechanical recycling to produce enhanced quality recycled materials to be used as raw materials by product manufacturers. Thus, these plastic wastes are reintroduced at the middle of the value chain. Advanced additivition for mechanical recycling processes to enhance recycled plastics quality, using vitrimers, high-energy radiation and compatibilizing additives.
- C. Third innovation is focused on material valorisation of low-grade plastics as raw materials for other sectors. In POLYNSPIRE, plastic wastes will be used in the steel industry as substitute of carbon source for iron ore reduction and foaming agent (coke). The valorisation of plastic waste as a carbon source in the steel industry could lead to reductions of around 80% of fossil carbon sources in electric arc furnaces (EAF).

The project concept will address 100% waste containing streams ensuring the recycling of at least a 50% of total plastics containing PA and PU leading to a reduction of CO<sub>2</sub> equivalent emissions between 30% and 40%. Furthermore, non-technological barriers such as legislative or standardization ones are also addressed at EU level and business models to integrate the aforementioned solutions in the overall plastic waste management system will be set up.

### 2.3 TEMPLATES

Common layouts for project documents are used. Dedicated templates for deliverables and PowerPoint presentations are available and all project partners can access to them via the [polynSPIRE intranet](https://emdesk.eu/cms/?s=Login&) (https://emdesk.eu/cms/?s=Login&)



Figure 2 polynSPIRE Word and PowerPoint templates

## 2.4 VISUAL BEST PRACTICES

For every 100 users of our website, documents and information generated, up to 8 of them can suffer some kind of colour-blindness. This means that 8% of the potential users can miss information or experience difficulties in accessing to it.

More, that 8% ratio also applies to our potential customers, so it would be a good idea to make their life easier and letting them know that we care about them.

There are a few easy to follow good practices to create colour-blind friendly documents and images from polynSPIRE we are taking into consideration. In fact, the elements that are favourable for colour-blind users are considered to be good design practices in the wider sense. So, if the document is well designed, it should be accessible to all users.

In brief, every generated deliverable will be checked to guarantee colour-blind friendliness. If this is the case, the second page of the document will include the following disclaimer:

*This document was designed and elaborated accessible for colour-blind and visual disabled readers. If any information is not accessible, please address to [info@polynspire.eu](mailto:info@polynspire.eu) and we will amend as soon as possible.*

Specific guidelines on Dissemination and deliverables best practices for visual accessibility in polynSPIRE has been developed and attached in Annex IV. The guidelines will be also accessible via the project's intranet and documents repository.

## 3 STAKEHOLDER'S ROLE

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### 3.1 CONTRIBUTION FROM INTERNAL AND EXTERNAL STAKEHOLDERS

Internal stakeholders on the polynSPIRE project are project partners, whereas policymakers, industry associations, EU authorities and the wide public in general, are regarded as external stakeholders. It is expected that both internal and external stakeholders contribute to polynSPIRE communications and dissemination activities. There are a large number of tools available to stakeholders to help these activities. The tools include a general presentation of the project, roll up banner, press kit, project website, e-newsletter, etc.

### 3.2 TRACKING AND REPORTING OF DISSEMINATION ACTIVITIES WITH PLAN OF USE AND DISSEMINATION OF KNOWLEDGE (PUDK)

The dissemination activities are tracked with Plan of Use and Dissemination of Knowledge via Google Sheets ([link](#)), and the list is updated every 6 months.

The PUDK is in a form of an excel sheet and includes overall sheet with all activities that partners disseminated, and any foreseen future activities. In addition, PUDK contains specific sheets where partners can provide more detail information on a specific dissemination activity. Moreover, there is a section reserve for reporting any activities on the social media. The PUDK can be found in [the project's intranet](https://emdesk.eu/cms/?s=Login&). (<https://emdesk.eu/cms/?s=Login&>)

### 3.3 DISSEMINATION POTENTIAL OF DELIVERABLES

All partners play a role in the dissemination of the results and their interest and opportunities are identified through the PUDK. This is a dedicated survey template to be filled (and updated) by the partners during the project. In addition, the partner responsible for each deliverable are asked to establish the dissemination potential of the deliverable prior to its submission within a specific internal-use chapter at the beginning of the deliverable. The deliverables of the project are used as milestones to monitor the progress of dissemination activities. The dissemination activities are constantly tracked and monitored by EuPC, thus a brief overview will be presented in every SC/GA meeting. A continuous monitoring activity enables to assess the results and impacts of the dissemination and communication activities providing regular feedback to the effectiveness of the strategy.

### 3.4 RIGHTS AND OBLIGATIONS OF THE CONSORTIUM

All dissemination activities must be approved by the consortium according to the provisions set in the Consortium Agreement and the Grant Agreement.

#### 3.4.1 Tracking and reporting of dissemination activities

According to Article 29.1 of the GA each partner should disseminate its results, taking into account the confidentiality agreements set in the GA and CA:



Unless it goes against their legitimate interests, each beneficiary must — as soon as possible — ‘disseminate’ its results by disclosing them to the public by appropriate means (other than those resulting from protecting or exploiting the results), including in scientific publications (in any medium).

According to Article 29.1 of the GA any partner that intends to disseminate (participate, launch or host any related activity) foreground of polynSPIRE shall notice the project coordinator and dissemination manager as soon as possible and at least 45 days in advance, including the information that will be disseminated and the forum.

### 3.4.2 Dissemination of another partner’s unpublished results or background

A partner shall not include in any dissemination activity another partner's results or background without obtaining the owning party's prior written approval, unless they are already published.

### 3.4.3 Cooperation obligations

The partners undertake to cooperate to allow the timely submission, examination, publication and defence of any dissertation or thesis for a degree which includes their results or background subject to the confidentiality and publication provisions agreed in the Consortium Agreement.

### 3.4.4 Use of names, logos or trademarks

Any to use in advertising, publicity or otherwise of the name of the parties or any of their logos or trademarks is not permitted without their prior written approval.

## 3.5 SCHEDULE FOR PROJECT PARTNERS’ RESPONSIBILITIES IN PRESS NOTES

Although EuPC coordinates and manages polynSPIRE dissemination and communication activities, all the partners are responsible to disseminate the results through their communication channels and towards their existing communities. In addition, the partner responsible for each deliverable will be asked to establish the dissemination potential of the deliverable prior to its submission.

It is expected that each partner will publish at **least once a month** through social media, and EuPC and CIRCE will be publishing 2 times per month via Twitter and LinkedIn polynSPIRE accounts.

For a better replication and impact of any publications, partners are encouraged to include a link of the post within the online PUDK only available for polynSPIRE members and accessible via Google Sheets. The online PUDK link is shared every six months with all the partners and each partner is able to update PUDK independently. This practice saves time and creates better workflow among all members of the consortium. The latest PUDK version will be also available to all polynSPIRE partners via the [polynSPIRE intranet](https://emdesk.eu/cms/?s=Login&) (<https://emdesk.eu/cms/?s=Login&>).

## 4 DISSEMINATION AND COMMUNICATION STRATEGY

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### 4.1 ACKNOWLEDGEMENT OF EU FUNDING

#### 4.1.1 Communication and dissemination materials

All communication and dissemination materials include the following specific sentence and the EU emblem (flag):



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 820665.

When displayed together with another logo, the EU emblem must have appropriate prominence.

Besides, any dissemination of results must indicate that it reflects only the author's view and that the **Commission is not responsible** for any use that may be made of the information it contains.

#### 4.1.2 Signals in the infrastructure

It is foreseen that all the equipment purchased for the project will include a sticker with the following specific sentence:



This [infrastructure][equipment] is part of a project that has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 820665.

### 4.2 DISSEMINATION AND COMMUNICATION LEVELS

The strategy differentiates two dissemination and exploitation levels according to the target audience:

- internal for project partners;
- external for policymakers, industry associations, EU authorities and the wide public in general.

### 4.3 DELIVERABLES AND DISSEMINATION POTENTIAL

Technical deliverables contain an internal use section (not to submit to the EC) to be completed by the deliverable responsible.

This information includes the results that might be disseminated and the main stakeholders addressed by the results of the deliverable.

### 4.4 INTERNAL DISSEMINATION AND COMMUNICATION

Different groups are set up within the consortium to jointly design and update the dissemination and exploitation plan, and regularly inform all the members about these activities. Also, the groups distribute responsibilities and assign tasks in order to fulfil the requirements of the project.

Conference calls and meetings of these groups are scheduled regularly through the whole duration of the project. All the project partners are informed about the decisions taken within these groups.

### 4.4.1 Communication and Dissemination task force and meetings

A group is set up to monitor the progress of the communication and dissemination work package (WP10). The group is led by EuPC but it is expected that all the partners take part in the task force. In the first four months of the project, the activities were mainly focused on the creation of the project website and logo, including a design for a roll up banner. After initial creation of the project identity, the activities were expended on creating the first version of the Communication and Dissemination Plan, capturing dissemination activities of all the partners via PUDK, creating regular online content and presence via website and social media (Twitter and LinkedIn), producing a first video, etc.

### 4.4.2 Reporting to the Steering Committee (SC)

A representative of EuPC is a member of the steering committee and reports about the progress of the dissemination and exploitation activities on behalf of the task force. The on-site SC meetings takes place at least 6 times during the project lifetime (together with the GA) and the on-line SC meetings are ensuring a communication every 3 months.

### 4.4.3 Repository of documents

All the documents are stored in [EMDESK](#), and access is possible only for the approved users.

## 4.5 DISSEMINATION AND COMMUNICATION MATERIALS

### 4.5.1 Website

The project website is one of the main communication tools for any EU funded project. It provides easy and quick access to the project results for a wide audience.

The project website is available at [www.polynspire.eu](http://www.polynspire.eu) and it is updated on a regular basis with the latest results and news concerning the project.

The polynSPIRE website includes the following content:

- **Project Homepage** – general project description & latest news, acknowledgement of the EU funding
- **About us** – list of project partners including their logos, website address, contact persons and a brief description
- **Challenges** – barriers for plastic packaging and polynSPIRE goals
- **Solution** – polynSPIRE concept and main objectives
- **News & Events** – latest news and press releases about the project
- **Documents** – a repository of reports/deliverables that is available to the general public
- **Press Area** – all public information about the project including general presentation
- **Members Area** – this is restricted part of the website, reserved for internal communication and containing all intellectual outputs, and available only for the consortium members and authorized visitors

In addition, “D10.2 Project website operative” detailly covers the structure of the website as well as its main drivers behind project’s online strategy and goals that should be reach with the online presence and outreach to the wider audience.

During the first period of polynSPIRE project, its dedicated website had 4700 unique page views, it reached 17 thousand total impressions, and had over 800 clicks. Besides that, our project page was searched organically almost 700 times and 580 direct visits.

### **4.5.2 Brochures**

To promote the polynSPIRE project to a wider audience a trifold brochure in English and Spanish has been produced aiming to be translated in further languages according to the future events. The brochure includes a description of the project, its background, and goals as well as a list of the partners involved. The brochure is presented in the offices of the polynSPIRE partners, during conferences, workshops as well as shows and is also distributed to internal staff, visitors, partners, and clients. The brochure can be found in the Annex III as well as within the press area section from the website.

### **4.5.3 Roll-up Banner**

In order to enhance the project visibility as well as the EC support, roll-up banners are a key material within polynSPIRE project. To this regard, A first banner has been developed in an early stage of the project, and it is envisaged that each partner has the banner for dissemination purposes when necessary. The banner is use to present the project during conferences, workshops and trade shows. The banner can be found in Annex III.

### **4.5.4 Press Releases**

polynSPIRE press releases aim to record all the activities of the project and inform the general public about the project. They are available following this link: <https://polynspire.prezly.com/>



## New Chemical Recycling Project - Polynspire

[Preview: New Chemical Recycling Project - Polynspire](#)

Last 25-26 September, Brussels hosted the kick off meeting of a new European research project, polynSPIRE, aimed at improving the overall performance of plastics recycling looking for a more sustainable plastic value chain.

### ABOUT POLYNSPIRE

polynSPIRE Project is a research project funded by Horizon2020 EU's new research and innovation programme, with the aim to demonstrate a set of innovative, cost-effective and sustainable solutions, aiming at improving the energy and resource efficiency of plastic recycling processes for post-consumer and post-industrial waste streams containing at least 80% of plastic materials. The project brings together 22 leading European research/academic institutions, governmental organisations, and industries and SMEs. polynSPIRE has a duration of 48 months (1st September 2018 – 30th August 2022) and a total budget of 9.95 Million Euros.

The polynSPIRE project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 820665.

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Figure 3 Examples of press release

### 4.5.5 Social media (Twitter and LinkedIn)

Information on the polynSPIRE project developments and its results are published on the websites of the different partners as well as promoted via their Social Media accounts including Twitter and LinkedIn.

At any moment of polynSPIRE lifetime (and beyond) partners are more than welcome and invited to share and promote polynSPIRE via press and social media using whether their personal or professional account.

- polynSPIRE LinkedIn page: <https://www.linkedin.com/company/polynspire-project/about/>
- polynSPIRE Twitter profile: <https://twitter.com/H2020polynspire>

All the posts in social media are encouraged to include the unique hashtag #polynSPIRE.

#### 4.5.6 General project presentation

A generic PowerPoint presentation was created at the beginning of the project. Based on the project outcome, this presentation will be updated regularly. The presentation contains a non-confidential overview of the project which is used by the members for dissemination purposes.

Also, the presentation “Boosting the Circular Economy in Europe” is available at the project website (<https://www.polynspire.eu/press-area>) as well as in [the project’s intranet](#).



## Boosting the Circular Economy in Europe



The project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 820665



Figure 4 polynSPIRE Presentation

#### 4.5.7 E-Newsletter

An e-newsletter will be available to people and organizations that registered for it via the website. The e-newsletter will be drafted with the collaboration of all the project partners. The goal is to communicate the latest project’s news and developments. It is envisaged that the newsletter will be published bi-yearly (winter and summer edition), and it will be available on the polynSPIRE website, polynSPIRE press room and also distributed by e-mail to interested stakeholders and other organizations who previously registered on the polynSPIRE website. The first edition will be available late January/early February 2020.

The newsletter will include a summary of the technical outcomes, information about events and conferences where polynSPIRE will be presented, info on polynSPIRE networking events, and it will briefly present members of the consortium.

The screenshots below represent a drafted version of the first newsletter prior to its delivery:

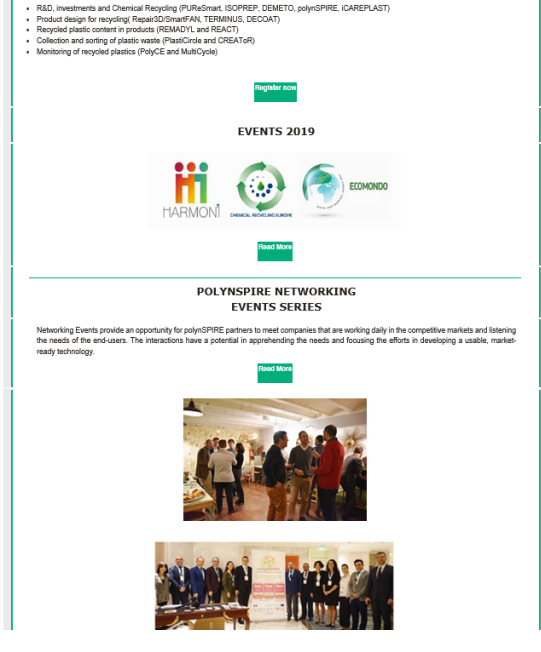
**A**



**B**



**C**



**D**



#### 4.5.8 Public project deliverables and reports

All the public deliverables and reports will be available on the polynSPIRE website under documents section (<https://www.polynspire.eu/documents>).

#### 4.5.9 Poster

Graphic materials will be developed to promote the project at selected events providing general information and preliminary results, addressing both technical and non-technical public. Along the project execution, three versions of this material will be released, firstly with a general presentation of the project and at the end of the project gathering the results: Leaflet and Dissemination poster.

At month 30, these graphic materials will be updated, representing the main progress of the project. Both leaflet and poster will be uploaded to the website and will be available for download to any visitor of the polynSPIRE website. The printable versions will be uploaded in the EMDESK, as it will serve also as a support document for fairs, congress, forums, and workshops.

#### 4.5.10 Video

At least two introductory videos are planned to be produced during the project. The video materials will be disseminated via social media, polynSPIRE website and YouTube channel. The first video was published in October 2019 and it is available on all dissemination platforms, such as polynSPIRE website, Twitter, and EuPC's YouTube channel. (<https://www.youtube.com/watch?v=QA0cmFUUVk8>)

#### 4.5.11 Other material

In order to further promote our project, communication and dissemination working group decided to develop some polynSPIRE merchandise. polynSPIRE merchandise will help the consortium to increase the visibility of the project, and reach additional future customers. In this concern, the first items were promoted at our meeting in Istanbul, Turkey in October 2019, and it is foreseen to continue creating new products in 2020.



Figure 5 polynSPIRE pen

## 4.6 PROJECT WORKSHOPS AND OTHER EVENTS

### 4.6.1 Dedicated Workshops

The polynSPIRE project aims to organize at least 2 open workshops or conferences (dedicated to the project or in collaboration with larger initiatives) answering to specific technical needs within the project. The



workshops will be set up by the project on different locations with the objective to discuss project results and receive inputs from outside.

The aim is to disseminate the project results, mobilize stakeholders and establish deep ties with relevant platforms, networks, associations and other related projects. Moreover, key partners will present the project in at least 2 main national and European events related to plastic recycling.

In addition, exploitation workshops will be performed to promote market uptake of the chemical recycling and upgrading technologies, recovered plastics and fibres.

### 4.6.2 polynSPIRE Networking events series

Networking Events provide an opportunity for polynSPIRE partners to meet companies that are working daily in the competitive markets and listening the needs of the end-users. The interactions have a potential in apprehending the needs and focusing the efforts in developing a usable, market-ready technology.

The goal of the entire networking series is to explore how polynSPIRE results could be exploitable at the regional level, with an aim to provide potential exploitation opportunities for the project and its members, and gather information to enrich the polynSPIRE development towards market-ready production.

Taking advantage from the annual or semesterly assemblies organized by the polynSPIRE consortium, a connection between the innovation side (project partners) and the industry (invited companies with proven excellence and which are willing to collaborate and be a part of a game-changing project) is coordinated, cost-efficiently and widely opening polynSPIRE and its member to the “real” industry.

The events are being held in different locations and timings according to the project needs and the obtained results.

During the first period (M01-M18) up to 2 network event have been organized, the first polynSPIRE networking event was organized by the coordinator party, Fundacion CIRCE (Centre of Research for Energy Resources and Consumption) in the form of a meeting between polynSPIRE consortium members and selected local Spanish companies that potentially have compatible activities in order to generate business opportunities. The event took place in Zaragoza, Spain.

The second networking event was organized by IKMIB and Kordsa, both partners from the project and it took place in Istanbul, Turkey. It generated a great interest among regional firms, and over 50 companies took part. A wrap up video from this second event has been generated and it can be visualized from the project website (<https://youtu.be/AsWnuE8JFSE>).

### 4.6.3 Strategic initiatives, events and conferences

During the first year, our project took part in various strategic conferences and initiatives in order to position the project at a forefront of the latest technical breakthroughs and policy developments in our industry. Among others, we can highlight the following:

- [Plastic Multiplier Initiative](#)
- [Chemical Recycling conference](#)
- [Ecomondo](#)

#### 4.6.4 Final event

At the conclusion of the project, the consortium will organize a conference where results will be explained. Moreover, in this final conference, the replication strategy beyond polynSPIRE project and the real expectations concerning the new developed technologies and value chains will also be explained.

The final conference (including a webinar) will be organized in Brussels in the framework of other EU related initiatives and events. Synergies with other EU funded projects and initiatives in the SPIRE domain will be exploited to increase the outreach of potential stakeholders, organize joint events, exchange knowledge, experience and best practices, and stimulate discussions among key players, the scientific and industrial community.

EuPC will be in charge of networking activities with related projects, previous and future calls of H2020 or other relevant programs.

## 4.7 PUBLICATION OF RESULTS

### 4.7.1 Procedure

A specific procedure is performed in order to publish the results of the project.

A spotted publication (abstract/paper...) shall be noticed and requested for approval, together with the results to be shared with the general public, etc community, etc. As it is stated in the project's Consortium Agreement (Article 8.4.1): *"Prior notice of any planned publication shall be given to the other Parties **at least 45 calendar days before the publication**. Any objection to the planned publication shall be made in accordance with the Grant Agreement in writing to the Project Coordinator and to the Party or Parties proposing the dissemination **within 30 calendar days** after receipt of the notice. If no objection is made within the time limit stated above, the publication is permitted."*

In case there is no objection to the share of results within the publication, the abstract/paper should be sent to the Project Coordinator (Tatiana Garcia) & the Project Manager (Breogan Sanchez) both from CIRCE as well as the WP10 Leader (Marjan Ranogajec) in CC for its initial validation and record.

Once preapproved, the Coordination party will send it within 3 working days to the project Consortium in order to expect feedbacks, reviews and disconformities. The paper will be considered definitive if no disagreements appear within one natural week.

The figure below intends to visually represent the considered timeframes.

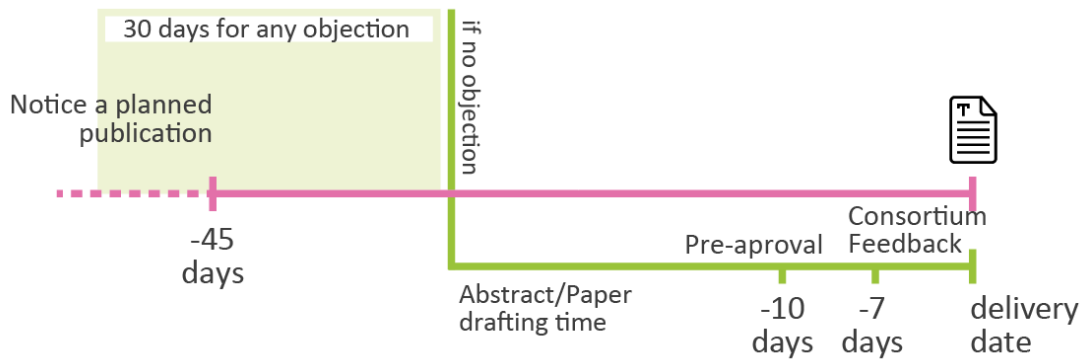


Figure 6 polynSPIRE procedure to publish results

#### 4.7.2 Open access to scientific publications

Each beneficiary must ensure open access (free of charge online access for any user) to all peer-reviewed scientific publications relating to its results.

In particular, it must:

- a) as soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications; Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications.
- b) ensure open access to the deposited publication — via the repository — at the latest:
  - on publication, if an electronic version is available for free via the publisher, or
  - within six months of publication (twelve months for publications in the social sciences and humanities) in any other case.
- c) ensure open access — via the repository — to the bibliographic metadata that identifies the deposited publication.

The bibliographic metadata must be in a standard format and must include all of the following:

- the terms “European Union (EU)” and “Horizon 2020”;
- the name of the action, acronym and grant number;
- the publication date, and length of embargo period if applicable, and
- a persistent identifier.

#### 4.7.3 Assistance to a conference

All partners are motivated to present results in any conferences organized by other project partners.

Each partner will follow its own strategy to disseminate the project results, which includes submitting papers or presentations to be presented in conferences, or proposing themselves as speakers to the organizers of these events. In this sense, eligible specific budget included in other costs section in Resources to be committed section from the GA are set to some partners to participate in events and/or conferences.

## 5 PLAN FOR THE USE AND DISSEMINATION OF KNOWLEDGE (PUDK)

The aim of the PUDK is to monitor and track all the communication activities connected to polynSPIRE project. The reported activities should cover posts on partners’ website, various conference attendance, published papers, newspaper articles, etc. The publication should include project progress, public presentation of the results, scientific articles, etc.

The PUDK list is available via link within the Collaboration section in [the project’s intranet](#), and it will be updated regularly by all project partners. The list is powered by Google Sheets and all partners with the link are able to open and edit it.

### 5.1 LIST OF ACTIVITIES

#### 5.1.1 Planned activities 2018-2022

Below are detailed dissemination activities performed by the polynSPIRE consortium during the first year of the project and the current list of planned future activities.

The current PUDK list is as follows:

Table 1 PUDK with reported dissemination activities

Partner	Date	Title	Event/Publication	Location	Type of audience	Approx. size of audience
<b>2018</b>						
NIC	18.10.2018	polynSPIRE project	Successful proposals	Ljubljana, Slovenia	Researchers, employed at NIC	79
CSM	29.10.2018	INDTECH Congress	Congress about Industrial technology	Vienna, Austria		30
NIC	5.11.2018	polynSPIRE – innovative technologies for plastic recycling	NIC web page	<a href="#">Link</a>		
Arkema	06.11.2018	<a href="#">2ACR</a>	2ACR Research community	Paris, France	Researchers and Eco-organisms	50

CSM	07.11.2018	STEELMASTER	Lecture in Technical course	Padova, Italy		30
EuPC	26.11.2018	polynSPIRE project	Circular Polymers in Furniture	Brussels, Belgium	Industry representatives	40
I.Blu	28.11.2018	Recycling of Plastic Packaging in Raw Materials as Substitute of Carbon Source for iron ore reduction in the steel industry	Clean tech 4. The 4th European Conference on Clean Technologies in the Steel Industry (CLEAN TECH 4) organized by AIM, the Italian Association for Metallurgy	Bergamo, Italy	Researchers and Steel manufacturers	100
NIC	10.12.2018	Slovenian Smart Specialization	Presentation for industrial partners	Ljubljana, Slovenia	Slovenian industry and other organizations	30
Nurel	19.12.2018	NUREL PARTICIPAN EN EL PROYECTO POLYNSPIRE	Nurel website	<a href="#">Link</a>		
<b>2019</b>						
CIRCE	16 - 17.01.2019	Regulatory barriers to innovation for a Circular Economy of plastics	2019 HARMONI Summit	Brussels, Belgium	Researchers, industry representatives, policy makers	30
AITIP	13 - 14.02.2019	polynSPIRE project	The European Biopolymer Summit 2019	Ghent, Belgium	Researchers, chemical companies	
EuPC	14.03.2019	polynSPIRE project	EuPC Steering Committee	Brussels, Belgium	National Plastic Associations and industry	20
CIRCE	15.03.2019	CIRCE organizes an entrepreneur encounter to explore	New	Zaragoza, Spain	General Public	150

		innovative recycling processes in Zaragoza				
EuPC	21.03.2019	polynSPIRE project	EuPC Member Executives Forum	Brussels, Belgium	National Plastic Associations and industry	40
CIRCE	27.03.2019	CIRCE WILL ALLOW ARAGON MAIN COMPANIES SAVING ENERGY IN PLASTIC RECYCLING THANKS TO THE POLYNSPIRE PROJECT	New	Zaragoza, Spain	General Public	237
CSM	01.04.2019	STEELMASTER	Lecture in Technical course	Padova, Italy		40
CIRCE	04.06.2019	Chemical Recycling conference	polynSPIRE presentation, <a href="https://www.chemicalrecyclingeurope.eu/post/european-chemical-recycling-conference-2019-challenges-and-opportunities">https://www.chemicalrecyclingeurope.eu/post/european-chemical-recycling-conference-2019-challenges-and-opportunities</a>	Brussels, Belgium	Researchers, industry representatives, policy makers	150
Repsol	13.06.2019	Annual conference Eurpur Euromolders	<a href="https://www.europur.org/events/annual-event-2019">https://www.europur.org/events/annual-event-2019</a>	Lisbon, Portugal	Polyurethane market	362
CIRCE	13.06.2019	Plastics Circularity - Synergies in H2020 Projects	<a href="http://www.fcirce.es/economia-circular-es/circe-expone-los-avances-de-sus-investigaciones-en-el-reciclado-de-plasticos-en-bruselas">http://www.fcirce.es/economia-circular-es/circe-expone-los-avances-de-sus-investigaciones-en-el-reciclado-de-plasticos-en-bruselas</a>	News in our website		48

EuPC	13-14.06.2019	polynSPIRE project	EuPC Annual Meeting	Berlin, Germany	National Plastic Associations and industry/Media	200
Arkema	18-19.06.2019	Plastics recycling Technologies	Display	Dusseldorf Germany	Companies mostly in Plastics recycling	210
CIRCE	09-12.09.2019	Heating assisted by microwaves application in plastic recycling	17th Conferencia Internacional de Microondas y Calentamiento de Alta Frecuencia (AMPERE 2019)	Valencia, Spain	Professionals / Researchers	300
CIRCE	24-26.09.2019	Multi-frequency design of an optimized microwave cavity for plastic recycling applications	COMSOL Conference 2019 Cambridge	Cambridge; UK	Professionals / Researchers	150
Novamont	October 2019	polynSPIRE project	<a href="mailto:Novamont@School">Novamont@School</a>	Novara, Italy	National students	250
FM	02-04.10.2019	FM will give presentation during the workshop about microwave application and participate in Dissemination event.	polynSPIRE GA	Istanbul, Turkey	polynSPIRE partners, industry representatives	15-40
İKMİB	4.10.2019	polynSPIRE Dissemination event	polynSPIRE Dissemination event	İstanbul, Turkey	Related stakeholders	40-50
Novamont	16-23.10.2019	polynSPIRE project	K2019	Düsseldorf, Germany		
EuPC	23.10.2019	Presented polynSPIRE project	EuPC's MEF Meeting	Düsseldorf, Germany	National Plastics and Sectorial	25

					Associations	
CSM	01.11.2019	Plastic utilization in EAF	Publication			
Novamont	05-08.11.2019	polynSPIRE project	Ecomondo	Rimini, Italy		
CIRCE	08.11.2019	PolynSPIRE presentation into special session: <a href="https://en.ecomondo.com/events/program/seminars-and-conferences/e12421960/european-research-and-innovation-for-the-implementation-of-circular-economy-and-bioeconomy.html">https://en.ecomondo.com/events/program/seminars-and-conferences/e12421960/european-research-and-innovation-for-the-implementation-of-circular-economy-and-bioeconomy.html</a>	Ecomondo	Rimini, Italy		
CIRCE	26.11.19	Heating assisted by microwaves application in plastic recycling	Seminario de Keysight Tecnologías de Medida de Materiales	Zaragoza, Spain	Professionals / Researchers	20
Novamont	04-05.12.2019	polynSPIRE project	European Bioplastics Conference	Berlin, Germany		
CIRCE	9.12.2019	COP25 - The plastics challenge and their possible solutions	<a href="https://www.miteco.gob.es/es/cop25-agenda/agenda-din.aspx?tcm=tcm:30-505241">https://www.miteco.gob.es/es/cop25-agenda/agenda-din.aspx?tcm=tcm:30-505241</a>	Madrid, Spain	General Public	30-40



CIRCE	20.2.2020	Optimized design of a resonant cavity for microwave heating reactor used in plastic recycling applications	Electromagnetic Modelling and Simulation (NAFEMS)	Madrid, Spain	Professionals / Researchers	30
CIRCE	April 2020	PolynSPIRE project	Open Access Government journal	Online publication	Professionals / Researchers	

Table 2 PUDK with dissemination activities made during the first period.

## 5.2 SYNERGIES/INTERACTION WITH OTHER PROJECTS AND INITIATIVES

Clustering with other European projects and initiatives is one of the tasks of the polynSPIRE project, polynSPIRE relies on the lessons learned from previous EU and national projects addressing plastic recycling and its utilisation along the plastic manufacturing value chain. Deliverables, stakeholder identification, and awareness campaigns are some of the common inputs these projects can provide to polynSPIRE.

The stakeholders and synergies table, also called SYST, is (as the PUDK does) available via link within the Collaboration section in the project’s intranet, and it will be updated regularly by all project partners. The list is powered by Google Sheets and all partners with the link are able to open and edit it.

The projects identified by the time this report is being drafted are:

Project	Program	Main links with polynSPIRE
<a href="#">Integrated Catalytic Recycling of Plastic Residues Into Added-Value Chemicals (iCAREplast)</a>	<b>H2020</b> Oct 2018 - Sep 2022	Similarities with polynSPIRE - iCAREPLAST addresses the cost and energy-efficient recycling of a large fraction of today’s non-recyclable plastics and composites from urban waste. Heterogeneous plastic mixtures will be converted into valuable chemicals (alkylaromatic) via chemical routes comprising sequential catalytic and separation steps.
<a href="#">Towards circular economy in the plastic packaging value chain (CIRC-PACK)</a>	<b>H2020</b> May 2017 - Apr 2020	CIRC-PACK ( <b>CIRCE</b> coordinator, <b>AITIIP</b> , <b>NOVAMONT</b> partners) aims at more sustainable, efficient, competitive, less fossil dependence, integrated and interconnected plastic packaging value chain.
<a href="#">Advanced Eco-designed Fibres and Films for large consumer products from biobased polyamides and polyesters in a circular Economy perspective (EFFECTIVE)</a>	<b>H2020</b> May 2018 - Apr 2022	The EFFECTIVE project ( <b>CIRCE</b> and <b>NOVAMONT</b> ) aims at demonstrating (TRL 7) innovative and economically viable routes for the production of biobased polyamides and polyesters from renewable feedstock. Specific synergies will be exploited regarding this manufacturing

<a href="#"><u>Establishing a multi-purpose biorefinery for the recycling of the organic content of Absorbent Hygiene Products (AHP) Waste in a circular economy domain (EMBRACED)</u></a>	<b>H2020</b> Jun 2017 - May 2022	In EMBRACED ( <b>CIRCE</b> and <b>NOVAMONT</b> partners), an integrated biorefinery will be established in order to valorise the three different fractions obtained from AHP waste towards the production of bioproducts of commercial interest.
<a href="#"><u>Modular, scalable and high-performance depolymerization by microwave technology (DEMETO)</u></a>	<b>H2020</b> Sep 2017 - Aug 2020	The core mission of DEMETO project ( <b>FM</b> and <b>EuPC</b> partners) is to enable chemical de-polymerization of PET at industrial scale thanks to a microwave-based process intensification.
<a href="#"><u>Biopolymers with advanced functionalities for building and automotive parts processed through additive manufacturing (BARBARA)</u></a>	<b>H2020</b> May 2017 - Apr 2020	BARBARA ( <b>AITIIP</b> coordinator) aims at the valorisation of side-stream fractions and residues from agro-food production into novel polysaccharides and functional additives
<a href="#"><u>Integrated solutions for pre-processing electronic equipment, closing the loop of postconsumer high-grade plastics, and advanced recovery of critical raw materials antimony and graphite (CloseWEE)</u></a>	<b>H2020</b> Dec 2014 - Nov 2018	Among other objectives, CloseWEE project ( <b>VTG</b> partner) aims at developing resource-efficient and innovative solutions for closing the loop of postconsumer high-grade plastics from WEEE.
<a href="#"><u>Flexible Pilot Scale Manufacturing of Cost-Effective Nanocomposites through Tailored Precision Nanoparticles in Dispersion (CO-PILOT)</u></a>	<b>H2020</b> Jan 2015 - Dec 2017	The CO-PILOT project ( <b>ION</b> partner) addresses the field of nanocomposites which has witnessed remarkable progress (compound annual growth rate of 18%) in recent years with many different types of nanocomposites exhibiting radically enhanced properties.
<a href="#"><u>New approaches for the valorisation of URBAN bulky waste into high added value REcycled products (URBANREC)</u></a>	<b>H2020</b> Jun2016 - Nov 2019	URBANREC project aims to develop and implement an ecoinnovative and integral bulky waste management system (prevention, logistics and new waste treatments to obtain added value recycled products).
<a href="#"><u>A new circular economy concept: from textile waste towards chemical and textile industries feedstock (RESYNTEX)</u></a>	<b>H2020</b> Jun 2015 - Nov 2018	The RESYNTEX project ( <b>ARKEMA</b> partner) aims at designing, developing and demonstrating new high environmental impact industrial symbiosis between the unwearable blends and pure components of textile waste and the chemical and textile industries.

Table 3 Identified synergies and interactions with other projects

polynSPIRE joined forces with other European projects involved in similar topics to form Plastic Circularity Multiplier synergy initiative. In total, 18 projects are part of the initiative with an aim to:



## Deliverable 10.1 (v2) Final Communication and Dissemination Plan

- showcase the synergies of EU funded projects in the field of plastic circularity and coordinate the communication and dissemination activities.
- explore the concepts of industrial symbiosis / innovation ecosystems / joint impact in the selected plastics circularity H2020 projects.

It is expected that the Plastic Circularity Multiplier's website will be online Q1 2020.

## 6 MEASURABLE RESULTS

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### 6.1 GOOGLE ANALYTICS

Regarding the project website, Google analytics is implemented in 2019 and it will give an overview of sessions and users. It is used to continually measure the performance and activity of visitors so that impact can be easily assessed.

### 6.2 NUMBER OF PUBLICATIONS

Different publications were already released during the polynSPIRE project: press releases, articles, scientific articles, e-newsletters, etc. All these publications were covered by press media and also relevant stakeholders were informed about the dissemination and exploitation activities. In addition, polynSPIRE consortium will continue to release different publications in upcoming years.

### 6.3 MEDIA COVERAGE

Partners are continuously encouraged to contact the media (either general or specialized) in order to increase the project's visibility and to spread the activities and results foreseen in it. This can be achieved by:

- The emission of a press release
- inviting media to the main events celebrated during the project.

A press kit was developed to help partners in the elaboration of their press releases, or to help journalists on the elaboration of articles about polynSPIRE.

## 7 CONCLUSION

The Communication and Dissemination Plan aims at ensuring an adequate knowledge transfer to the project partners and all other interested parties in polynSPIRE.

Several tools have been or will be developed to put in place this strategy:

- website
- general presentation, brochures and banners
- newsletter and press releases
- dedicated social media accounts (Twitter and LinkedIn)
- scientific articles and posters
- workshops and final event in Brussels
- 2 videos
- press kit
- participation in external events and conferences
- interaction with other projects and initiatives

### 7.1 SUMMARY TABLE

Below is a table of completed tasks.

Task	Major achievements	Links to other WPs
	Action	
<b>10.2</b>	Project identity: Project logo, roll-up banner, document templates (deliverables, minutes, agenda, power points presentations), general project presentation, website, social networks accounts (Tweeter & LinkedIn), brochure, press kit, polynSPIRE video, networking events	All
<b>10.3</b>	Dissemination and public communication actions: The project was presented at the HARMONI summit in Brussels. Regular stream of project news and updates through online channels.	All

Table 4 Summary table

### 7.2 NEXT STEPS

Below is a table of foreseen actions.

Task	Foreseen action	Partners involved	Delivery date
<b>10.1</b>	Mid-term report on communication and dissemination activities	EUPC, CIRCE, IKMIB	M24
<b>10.2</b>	2 <sup>nd</sup> polynSPIRE video	EUPC, CIRCE, IKMIB	
<b>10.2</b>	3 <sup>rd</sup> Networking Event	EUPC, CIRCE, IKMIB	
<b>10.2</b>	E - Newsletter	EUPC, CIRCE, IKMIB	

Table 5 Foreseen actions

## LIST OF FIGURES

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Figure 1 The polynSPIRE Logo (both versions with and without motto).....	7
Figure 2 polynSPIRE Word and PowerPoint templates.....	9
Figure 3 Examples of press release.....	16
Figure 4 polynSPIRE Presentation.....	17
Figure 5 polynSPIRE pan.....	19
Figure 6 polynSPIRE procedure to publish results.....	22

## LIST OF TABLES

---

Table 1 PUDK with reported dissemination activities.....	23
Table 2 PUDK with dissemination activities made during the first period.....	28
Table 3 Identified synergies and interactions with other projects.....	29
Table 4 Summary table.....	32
Table 5 Foreseen actions.....	32

## ANNEXES

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### ANNEX I PRESS KIT

#### 1. polynSPIRE Summary

**Project title:** Demonstration of Innovative Technologies towards a more Efficient and Sustainable Plastic Recycling

**Starting date:** 01/09/2018

**Duration in months:** 48

**Call:** H2020-NMBP-SPIRE-2018

**Topic:** CE-SPIRE-10-2018. Efficient recycling processes for plastic containing materials (IA)

**Fixed EC Keywords:** Circular economy, Composites (including laminates, reinforced plastics, cermets, combined natural and synthetic fibre fabrics filled composites), Sustainable design (for recycling, for environment, eco-design)

**Free keywords:** Polymer, SPIRE, Chemical Industry, Steel Industry, vitrimers, automotive, polyamide, polyurethane, polyolefin, microwave, magnetic catalyst, recycling

**Abstract:** The main objective of polynSPIRE is to demonstrate a set of innovative, cost-effective and sustainable solutions, aiming at improving the energy and resource efficiency of post-consumer and post-industrial plastic recycling processes, targeting 100% waste streams containing at least 80% of plastic materials. To this end, three innovation pillars are addressed at TRL7: A) Chemical recycling assisted by microwaves and smart magnetic catalysts as a path to recover plastic monomers and valuable fillers (carbon or glass fibres), B) Advanced additivation and high energy irradiation to enhance recycled plastics quality and C) Valorisation of plastic waste as carbon source in steel industry.

Innovations A and B can lead up to 34% of fossil fuel direct reduction for PA and 32% for PU. Approach C can lead to reductions of around 80% of fossil carbon sources in electric arc furnaces. The demonstration is completed by the performance of a rigorous holistic environmental and economic analysis (LCA and LCC) to ensure the industrial feasibility and the accomplishment of environmental restrictions. Efforts are dedicated to analyse non-technological barriers (legislative or standardization) that could hinder the proper innovations deployment.

polynSPIRE also implies the development of a comprehensive business plan, gathering 7 business models and establishing a cross-linked relation between plastic, chemical and steel manufacturing industries. Its consortium, coordinated by CIRCE, ensures polynSPIRE success through the involvement of 4 RTOs, 1 university, large companies, 5 SMEs and 2 multiplier associations. To that end, chemical companies (REPSOL QUIMICA, ARKEMA, NOVAMONT, NUREL and KOR), plastic compounders (BADA) and converters (MAIER), waste managers (I.Blu), technology developers (CIRCE, NIC, ION, AITIIP, TUE, CSM), equipment



## Deliverable 10.1 (v2) Final Communication and Dissemination Plan

and steel manufacturers (FM, CPPE, HTT, FENO), exploitation (CIRCE), standardisation (DS) and dissemination (EUPC and IKMIB) entities are involved in the consortium.

### 2. Texts for polynSPIRE social media accounts

- LinkedIn: A more efficient and sustainable plastic recycling will be achieved by polynSPIRE consortium that will demonstrate three innovative technologies during the project lifetime. The consortium has all relevant actors along the plastics recycling value chain: chemical companies (REPSOL QUIMICA, ARKEMA, NOVAMONT, NUREL and KOR), plastic compounders (BADA) and converters (MAIER), waste managers (I.BLU), technology developers (CIRCE, NIC, ION, AITIIP, TUE, CSM), equipment and steel manufacturers (FM, CPPE, HTT, FENO), exploitation (CIRCE), standardisation (DS) and dissemination (EuPC and IKMIB) entities are involved in the consortium.

- LinkedIn (alternative): polynSPIRE project is a research project funded by Horizon2020, with an aim to demonstrate a set of innovative, cost-effective and sustainable solutions for the plastics recycling. The three innovative solutions will have a game changing effect on the circular economy in Europe.

- Twitter: polynSPIRE is a research project funded by Horizon2020 aiming to improve the energy and resource efficiency of plastic recycling processes

- Twitter (alternative): polynSPIRE is a Horizon2020 project, aiming to boost European circular economy through innovative technologies for plastic recycling

### 3. Availability of corporative materials

polynSPIRE general presentation can be downloaded [here](#).

polynSPIRE logo can be found [here](#).

Additional materials (brochure, banners, etc.) have been also developed and are available to download on the polynSPIRE website.

- English Brochure: [https://d59d7590-0fd2-4f40-b10c-f88eb15b8e8d.filesusr.com/ugd/81f3b1\\_9fc233ba7e384995a62de1cf54407a40.pdf](https://d59d7590-0fd2-4f40-b10c-f88eb15b8e8d.filesusr.com/ugd/81f3b1_9fc233ba7e384995a62de1cf54407a40.pdf)
- Spanish Brochure: [https://d59d7590-0fd2-4f40-b10c-f88eb15b8e8d.filesusr.com/ugd/81f3b1\\_68360ea24c314b9fb281a62c1c75d262.pdf](https://d59d7590-0fd2-4f40-b10c-f88eb15b8e8d.filesusr.com/ugd/81f3b1_68360ea24c314b9fb281a62c1c75d262.pdf)



## ANNEX II DISSEMINATION POTENTIAL (FROM DELIVERABLES)

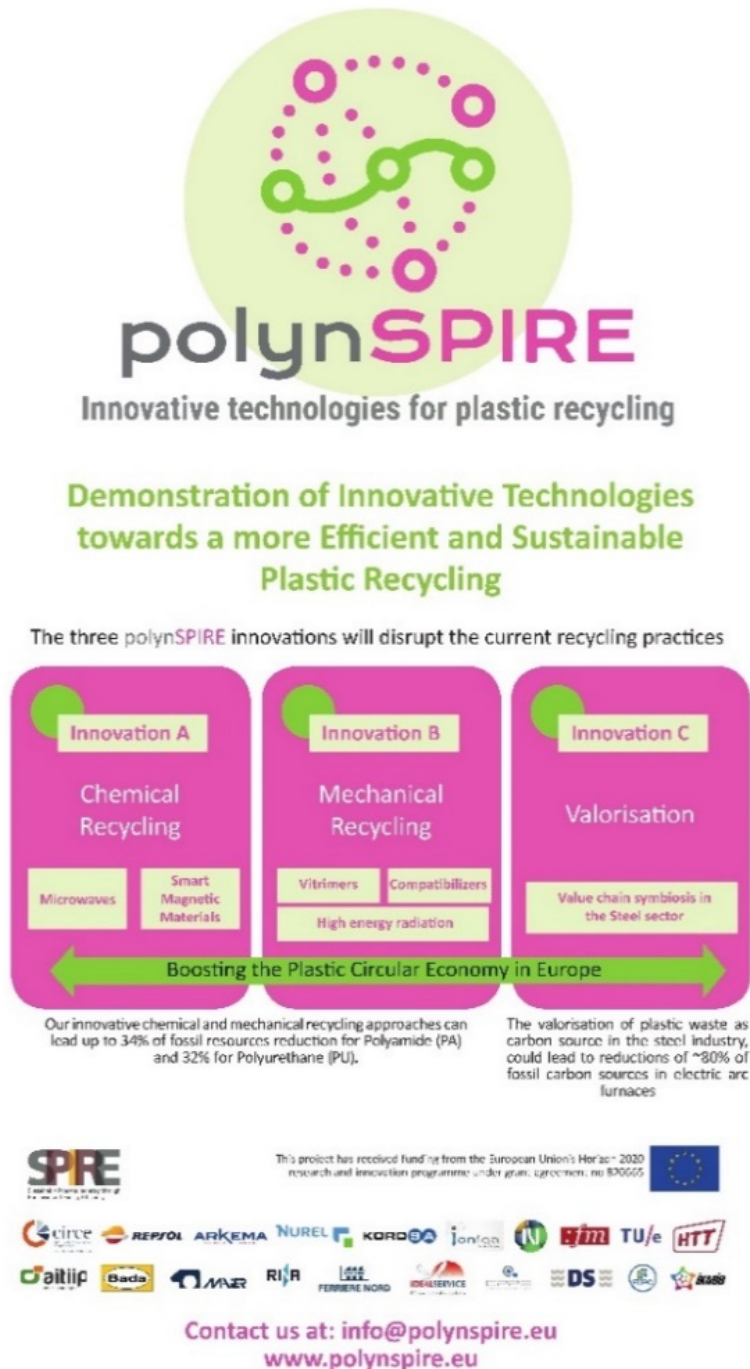
The following table is included, as internal use, in technical deliverables and is to be completed by the deliverable responsible


What's the confidentiality degree of this deliverable?		<input type="checkbox"/> Total	<input type="checkbox"/> Partly	<input checked="" type="checkbox"/> Public
Being "Partly" the confidentiality, what are the results that might be disseminated?				
1				
2				
3				
Main stakeholders to be addressed by the results of the deliverable				
Name	Type	Sector	Contribution to the project	
1				
2				
3				
Main events related to the results of the deliverable				
Title	Date	Press release	Target audience	
1				
2				
3				
Dissemination tools: what sort of materials can be created to contribute to disseminate the results?				
<input type="checkbox"/> Photographs	<input type="checkbox"/> Video	<input type="checkbox"/> Power point	<input type="checkbox"/> Papers	<input type="checkbox"/> Poster
<input type="checkbox"/> News for project website	<input type="checkbox"/> Networking opportunities	<input type="checkbox"/> Training course	<input type="checkbox"/> Seminar	<input type="checkbox"/> Social network
Potential Paper				
Title		Authors		
Abstract / Public summary (500 words)				
Other dissemination suggestion or comments from the DLV authors				

Avoid using styles linked with Titles, Heading or Table/Images description in this section, since they should not be referenced in the list of figures and tables, and the table of content.

## ANNEX III GRAPHIC MATERIALS DEVELOPED

First roll-up: developed for HARMONI summit.




  
**polynSPIRE**  
 Innovative technologies for plastic recycling


**Demonstration of Innovative Technologies  
 towards a more Efficient and Sustainable  
 Plastic Recycling**


The three polynSPIRE innovations will disrupt the current recycling practices


Innovation A	Innovation B	Innovation C
<b>Chemical Recycling</b>	<b>Mechanical Recycling</b>	<b>Valorisation</b>
<div style="display: flex; justify-content: space-around;"> <div style="background-color: #fff; padding: 2px 5px; font-size: 8px;">Microwaves</div> <div style="background-color: #fff; padding: 2px 5px; font-size: 8px;">Smart Magnetic Materials</div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #fff; padding: 2px 5px; font-size: 8px;">Vitrimers</div> <div style="background-color: #fff; padding: 2px 5px; font-size: 8px;">Compatibilizers</div> </div> <div style="background-color: #fff; padding: 2px 5px; font-size: 8px; text-align: center;">High energy radiation</div>	<div style="background-color: #fff; padding: 2px 5px; font-size: 8px; text-align: center;">Value chain symbiosis in the Steel sector</div>
<div style="display: flex; align-items: center; justify-content: center;"> <span style="font-size: 2em; color: green;">←</span> <span style="color: green; font-weight: bold; margin: 0 10px;">Boosting the Plastic Circular Economy in Europe</span> <span style="font-size: 2em; color: green;">→</span> </div>		
Our innovative chemical and mechanical recycling approaches can lead up to 34% of fossil resources reduction for Polyamide (PA) and 32% for Polyurethane (PU).		The valorisation of plastic waste as carbon source in the steel industry, could lead to reductions of ~80% of fossil carbon sources in electric arc furnaces





This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 870665




















































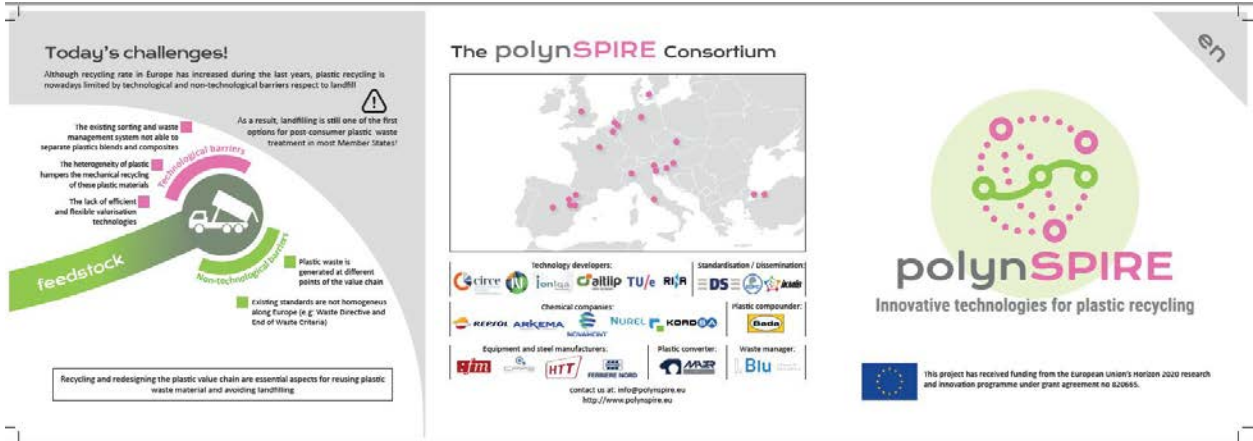




Contact us at: [info@polynspire.eu](mailto:info@polynspire.eu)  
[www.polynspire.eu](http://www.polynspire.eu)

Brochure

polynSPIRE Brochure (English version)



**Today's challenges!**  
Although recycling rate in Europe has increased during the last years, plastic recycling is nowadays limited by technological and non-technological barriers respect to landfill!

- The existing sorting and waste management systems are not able to separate plastics blends and composites
- The heterogeneity of plastic hampers the mechanical recycling of these plastic materials
- The lack of efficient and flexible valorisation technologies

**Technological barriers**

- Plastic waste is generated at different points of the value chain
- Existing standards are not homogeneous along Europe (e.g. Waste Directive and End of Waste Criteria)

**Non-technological barriers**

- As a result, landfilling is still one of the first options for post-consumer plastic waste treatment in most Member States!

**The polynSPIRE Consortium**

technology developers: Cefirce, Ionica, Galiljo TU/e, RIJA, DS, Akzo

Chemical companies: KBR, ARKEMA, NUREL, KONO, Baxa

Equipment and steel manufacturers: HTT, FERRERES AGRO, S&P

Plastic converter: Bliu

Waste manager: Bliu

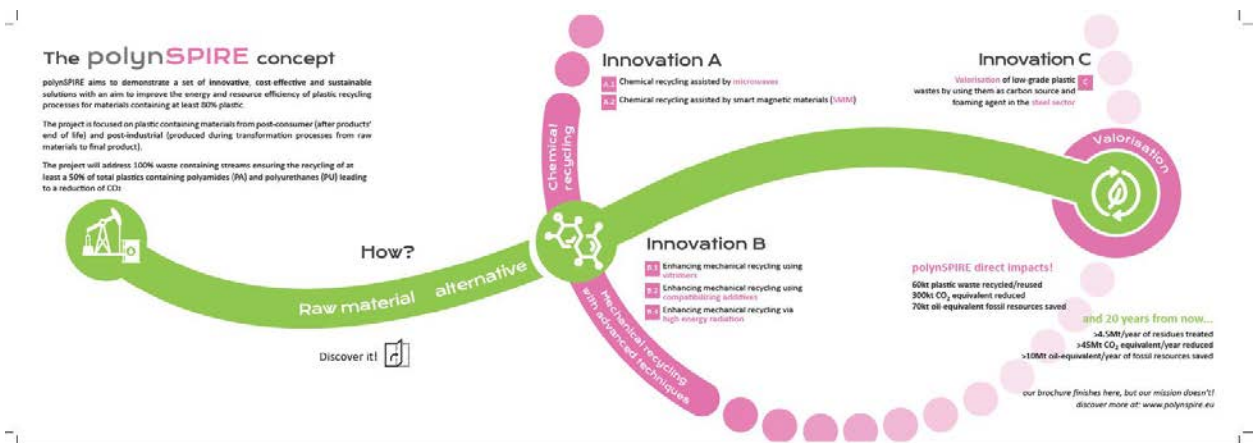
Standardisation / dissemination: DS, Akzo

Plastic compounder: Baxa

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http://www.polynspire.eu

**polynSPIRE**  
Innovative technologies for plastic recycling

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 820655.



**The polynSPIRE concept**

polynSPIRE aims to demonstrate a set of innovative, cost effective and sustainable solutions with an aim to improve the energy and resource efficiency of plastic recycling processes for materials containing at least 30% plastic.

The project is focused on plastic containing materials from post-consumer (after products' end of life) and post-industrial (produced during transformation processes from raw materials to final product).

The project will address 100% waste containing streams ensuring the recycling of at least a 50% of total plastics containing polyamides (PA) and polyurethanes (PU) leading to a reduction of CO<sub>2</sub>.

**How?**

Raw material alternative

Discover it!

**Chemical recycling**

**Innovation A**

- A1: Chemical recycling assisted by microwaves
- A2: Chemical recycling assisted by smart magnetic materials (SAM)

**Mechanical recycling with advanced techniques**

**Innovation B**

- B1: Enhancing mechanical recycling using ultrasonic
- B2: Enhancing mechanical recycling using compatibilising additives
- B3: Enhancing mechanical recycling via high energy radiation

**Valorisation**

**Innovation C**

Valorisation of low-grade plastic wastes by using them as carbon source and foaming agent in the steel sector

**polynSPIRE direct impacts!**

- 60kt plastic waste recycled/reused
- 300kt CO<sub>2</sub> equivalent reduced
- 70kt oil equivalent fossil resources saved

**and 20 years from now...**

- +4.0Mt/year of residues treated
- +45Mt CO<sub>2</sub> equivalent/year reduced
- >10Mt oil-equivalent/year of fossil resources saved

our brochure finishes here, but our mission doesn't!  
discover more at: www.polynspire.eu

polynSPIRE Brochure (Spanish version)



**¡Desafíos actuales!**  
Aunque el volumen de material reciclado en Europa ha crecido en los últimos años, el reciclaje de plástico está limitado por barreras tecnológicas y logísticas respecto a vertederos.

Los sistemas actuales de gestión de residuos y clasificación no son capaces de reparar mezcla de plásticos o compuestos. La cambio de tipo de plásticos dificulta el reciclaje mecánico de estos materiales. No existen tecnologías de valorización de materiales flexibles y eficientes.

Como resultado, los vertederos siguen siendo el destino de la gran mayoría de los plásticos provenientes del consumo en todos los estados miembros.

El residuo plástico se genera en diversos puntos de la cadena de valor. Los estándares actuales no son homogéneos a través de Europa (a.e. Directiva de Residuos y Ordenanza para Acabar con los Residuos).

Reciclar y rediseñar la cadena de valor de los plásticos es esencial para la reutilización real de los materiales de residuo y evitar los vertidos al medioambiente.

**El consorcio polynSPIRE**

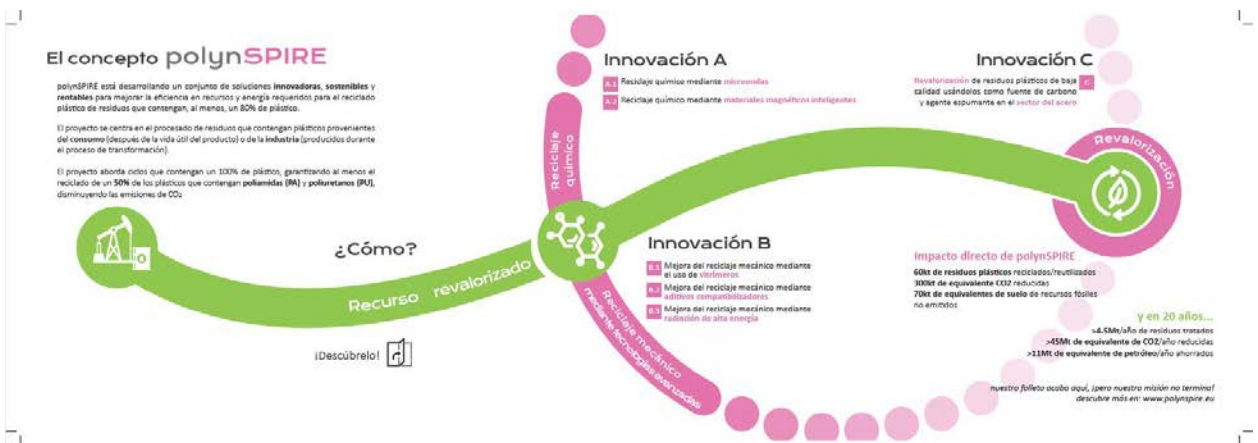
Desarrolladores de tecnología: CIRCE, INTECRA, GALLIP TU/e, RIJN, DS, ANB.

Empresas químicas: REPOL, ARKEMA, NUREL, KORDO, BADA.

Fabricantes de plásticos: NIM, HTT, ASSAULT, INNER, GESTORES DE RESIDUOS.

contacto en: info@polynspire.eu  
http://www.polynspire.eu

Este proyecto ha recibido financiación del programa de investigación y desarrollo de la Unión Europea horizonte 2020, bajo el acuerdo de subvención n. 820685



**El concepto polynSPIRE**

polynSPIRE está desarrollando un conjunto de soluciones innovadoras, sostenibles y reciclables para mejorar la eficiencia en recursos y energía requeridos para el reciclado de residuos que contienen, al menos, un 80% de plástico.

El proyecto se centra en el procesamiento de residuos que contienen plásticos provenientes del consumo (después de la vida útil del producto) o de la industria (producidos durante el proceso de transformación).

El proyecto aborda ciclos que contienen un 100% de plástico, garantizando al menos al reciclado de un 50% de los plásticos que contienen poliámidos (PA) y poliuretanos (PU), disminuyendo las emisiones de CO<sub>2</sub>.

**¿Cómo?**

Recurso revalorizado

**Innovación A**

- Reciclaje químico mediante **microondas**
- Reciclaje químico mediante **materiales magnéticos inteligentes**

**Innovación B**

- Mejora del reciclaje mecánico mediante el uso de **microondas**
- Mejora del reciclaje mecánico mediante **aditivos compatibilizadores**
- Mejora del reciclaje mecánico mediante **radiación de alta energía**

**Innovación C**

Revalorización de residuos plásticos de baja calidad usándolos como fuente de carbono y agente espumante en el sector del acero.

**Revalorización**

**Impacto directo de polynSPIRE**

- 60kt de residuos plásticos reciclados/reutilizados
- 30kt de equivalente CO<sub>2</sub> reducidos
- 70kt de equivalentes de suelo de recursos fósiles no emitidos

**en 20 años...**

- +4.5Mt/año de residuos tratados
- 45Mt de equivalente de CO<sub>2</sub>/año reducidos
- >11Mt de equivalente de petróleo/año ahorrados

nuestro folleto acaba aquí, ¿pero nuestra misión no termina!  
descubre más en: www.polynspire.eu

## ANNEX IV DISSEMINATION AND DELIVERABLES BEST PRACTICES FOR VISUAL ACCESSIBILITY

Attached as PDF in the following pages

Also, can be found in the project's intranet as well as in the website's documents repository.



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# Dissemination and deliverables best practices for visual accessibility

Annex to the D10.1 Dissemination Plan (v1)  
WP10 Communication and dissemination

Identifier:	Responsible:	Date:	PU / CO
Annex to the D10.1 Dissemination Plan (v1) Dissemination and deliverables best practices for visual accessibility	CIRCE	--/--/----	PU

The project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 820665





## Annex to the D10.1 Dissemination Plan Dissemination and deliverables best practices for visual accessibility

This document was designed and elaborated accessible for colour-blind and visual disabled readers. If any information is not accessible, please address to [info@polynspire.eu](mailto:info@polynspire.eu) and we will amend as soon as possible.

## 1 DID YOU KNOW?

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- Colour-blindness or colour vision deficiency (CVD) affects around 1 in 12 men and 1 in 200 women worldwide. This means that for every 100 users that visit our website or read our documents, up to 8 people could actually experience the content much differently than we expect. In fact, many of them might lose valuable information in the charts and images.
- There are several kinds of CVDs, being the most extreme case the total colour-blindness or the inability to see colours and the red-green colour-blindness as the most common.
- Facebook has a really well optimized interface for colour-blind people. This is because Mark Zuckerberg is colour-blind! In his case, he is red-green colour-blind. And that is why the whole Facebook palette is in blue tones.
- Colour-blindness can affect cooking abilities. The maturity of the fruits and vegetables, or the ability to tell the degree of doneness depends on the colour!
- Bulls are colour-blind to red. They are just attracted by the movement. So if a bull faces at you, you would probably do much better standing still than running away, even if you are wearing red.
- In World War II, some experiments were performed by the allied side. Apparently, some people believed that colour-blind people could see through the camouflage like a super power!
- In 1875, in the Lagerlunda rail accident nine people were killed in Sweden because a colour-blind rail operator misread a colour sign. Colour-blindness tests became mandatory for the railway employees. With this document, we propose more integrative solutions with more creative approaches, such as using non-colour signs!

## 2 IS IT WORTH TO CREATE COLOUR-BLIND FRIENDLY DOCUMENTS AND COMMUNICATION?

---

As mentioned before, for every 100 users of our website, documents and information generated, up to 8 of them can suffer some kind of colour-blindness. This means that 8% of the potential users can miss information or experience difficulties in accessing to it.

More, that 8% ratio also applies to our potential customers, so it would be a good idea to make their life easier and letting them know that we care about them.

There are a few easy to follow good practices to create colour-blind friendly documents and images. In fact, the elements that are favourable for colour-blind users are considered to be good design

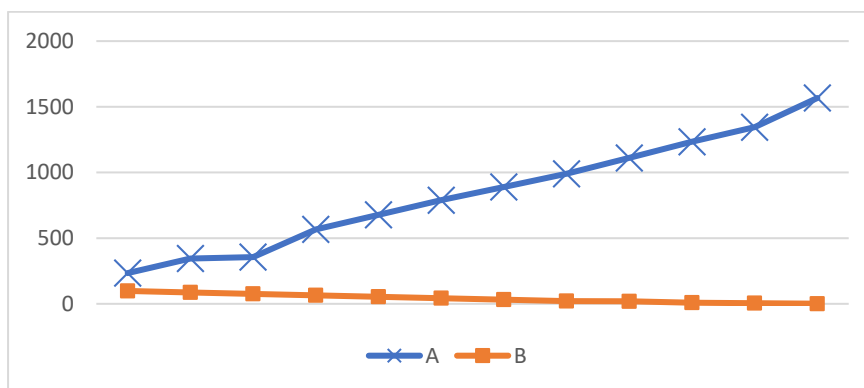
practices in the wider sense. Therefore, if the document is well designed, it should be accessible to all users.

## 3 WHAT CAN WE DO TO CREATE COLOUR-BLIND FRIENDLY DOCUMENTS?

### 3.1 YOU CAN USE BOTH COLOURS AND SYMBOLS TO CREATE REFERENCES.

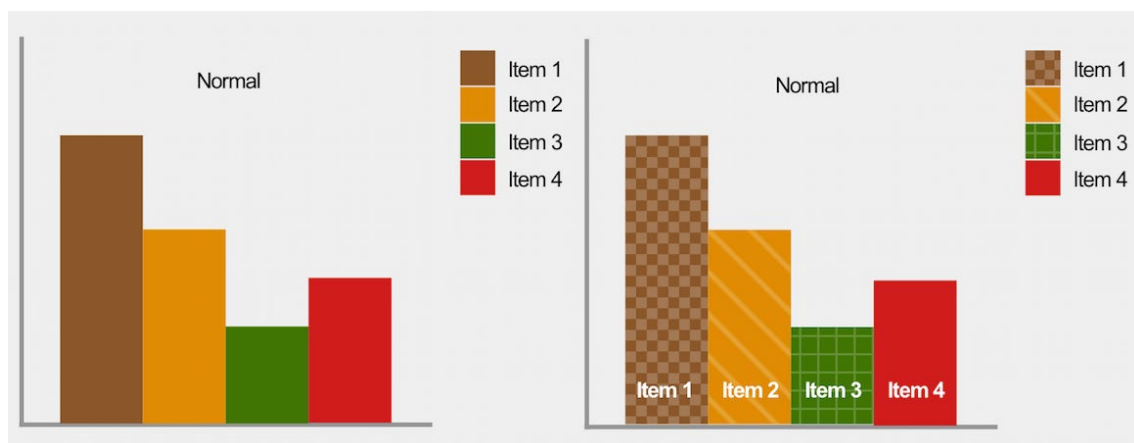
When you use a reference, try not to use a colour reference. A red popup can be seeing as just a popup, so it won't be recognized as a warning without the corresponding symbol by almost the 8% of the European males.

As an example, when you create a chart you can use different marks. This can be applied to other kind of graphs.



### 3.2 YOU CAN USE PATTERNS AND TEXTURES.

The pattern can identify a relation without the need of the colour, it allows to use a wide colour palette, and it looks good.





### 3.3 AVOID BAD COLOUR COMBOS.

Be smart when picking colour combinations. As colour-blindness affects people in different ways, it is difficult to determine which colours are “safe” to use. Nevertheless, there are a few combinations to avoid:

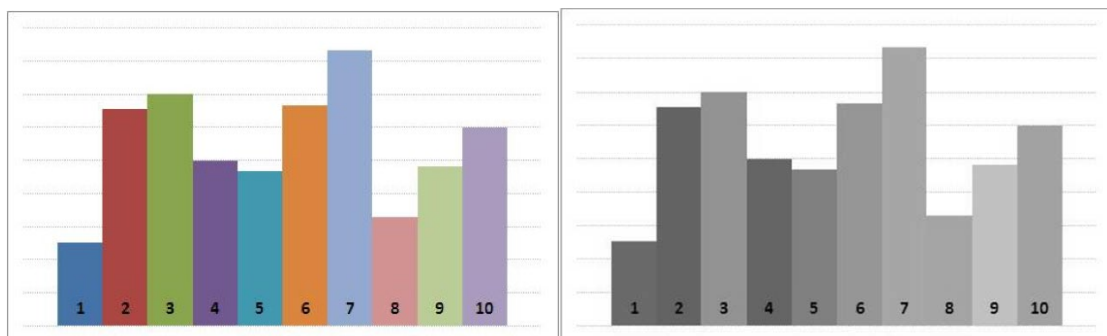
- Green + Red
- Blue + Purple
- Green + Blue
- Light Green + Yellow
- Blue + Grey
- Green + Grey
- Green + Black

### 3.4 TRY WITH MONOCHROME.

As colour-blind and non-colour-blind people are equally capable of seeing shades, it could be a good idea to use the same colour in different shades. This doesn't mean that you will end up using black and white, you can use any colour in its different shades!

### 3.5 IF YOU ARE IN DOUBT, JUST PRINT IT BLACK AND WHITE AND SEE THE RESULTS.

Printing black and white can help you to evaluate the impact of colour in the information you want to deliver. If the document provides the same information in colour than B&W, you can trust that colour-blind people will be able to access to that information.



### 3.6 TRY SOME USEFUL TOOLS:

You can try an online site with the colour-blind view of your choice here: [Toptal online colour-blind simulator for websites.](#)

You can also add extensions to your web browser in order to simulate different visual disability. We have selected two of them for Google Chrome as an example:

With ChromeLens you can simulate the use of any website for a blind or colour-blind person. It also has an accessibility tester and a tab-tracker in order to guarantee that blind people using screen readers can fully understand your site. [Find it here.](#)



## Annex to the D10.1 Dissemination Plan Dissemination and deliverables best practices for visual accessibility

A similar tool is Colorblinding. Easier to use than ChromeLens, it simulates any colour-blindness kind in a website. [Find it here.](#)

Try them on polynSPIRE site! Here are our experiences with the extension “Colorblinding” for Google Chrome:

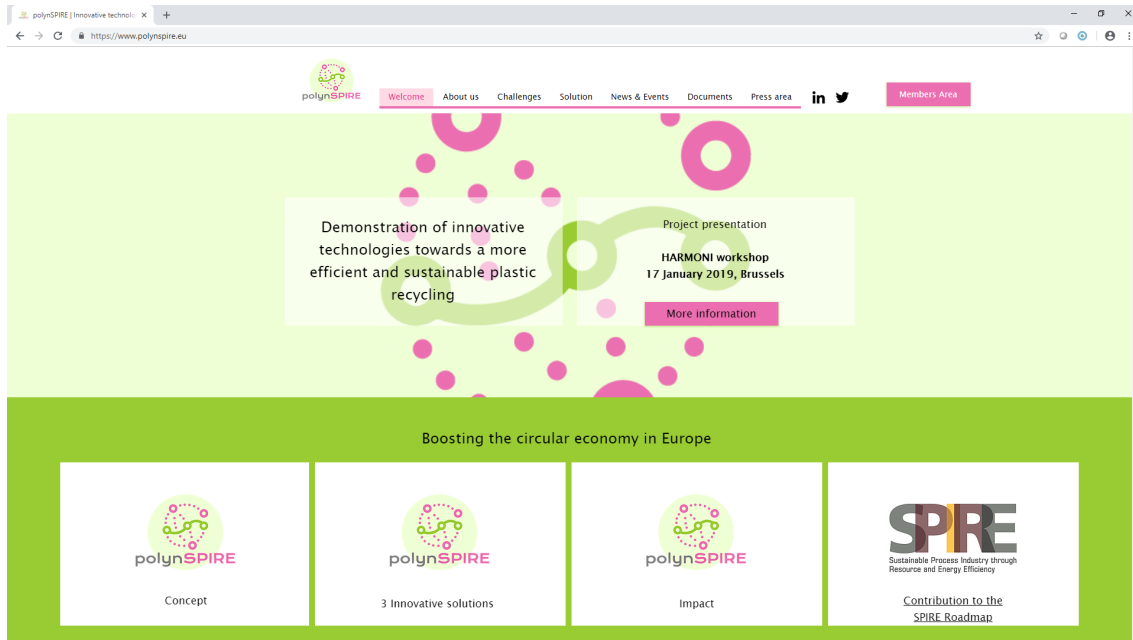


Figure 1. polynSPIRE website; normal colour vision

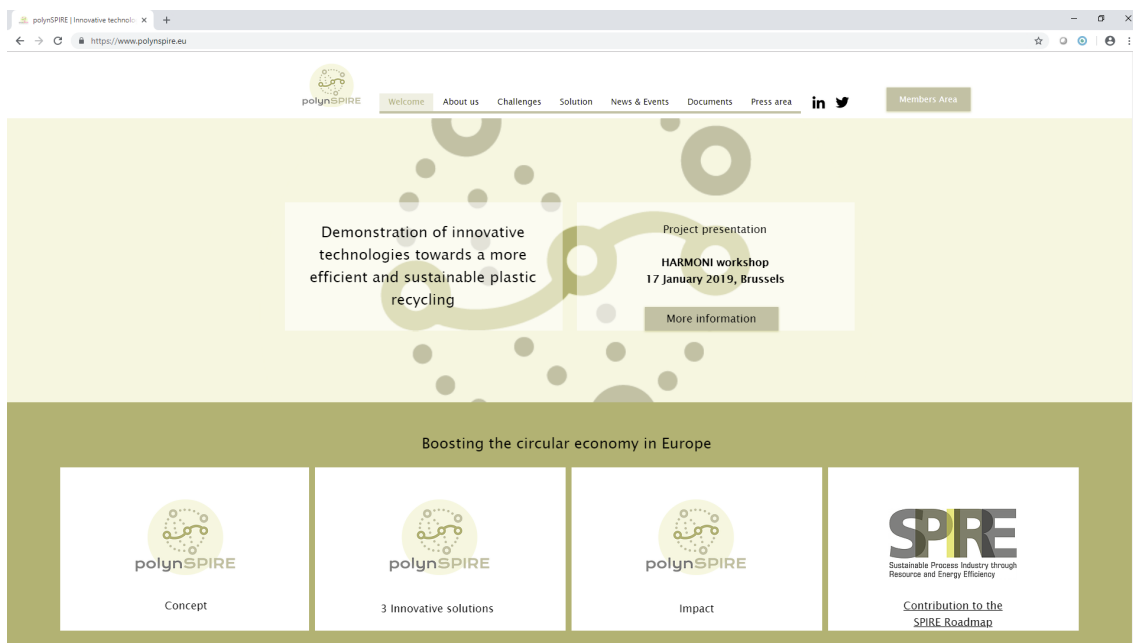


Figure 2. polynSPIRE website; red-blind (deuteranopia, the most common colour-blind case) vision



## Annex to the D10.1 Dissemination Plan Dissemination and deliverables best practices for visual accessibility

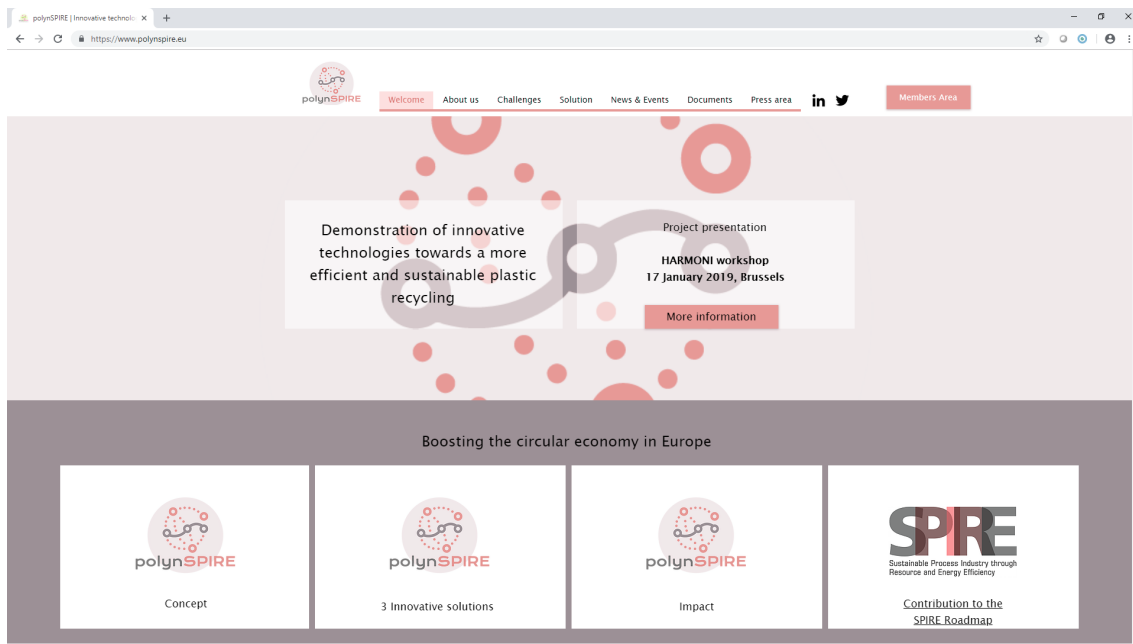


Figure 3. polynSPIRE website; blue-blind (tritanopia) vision

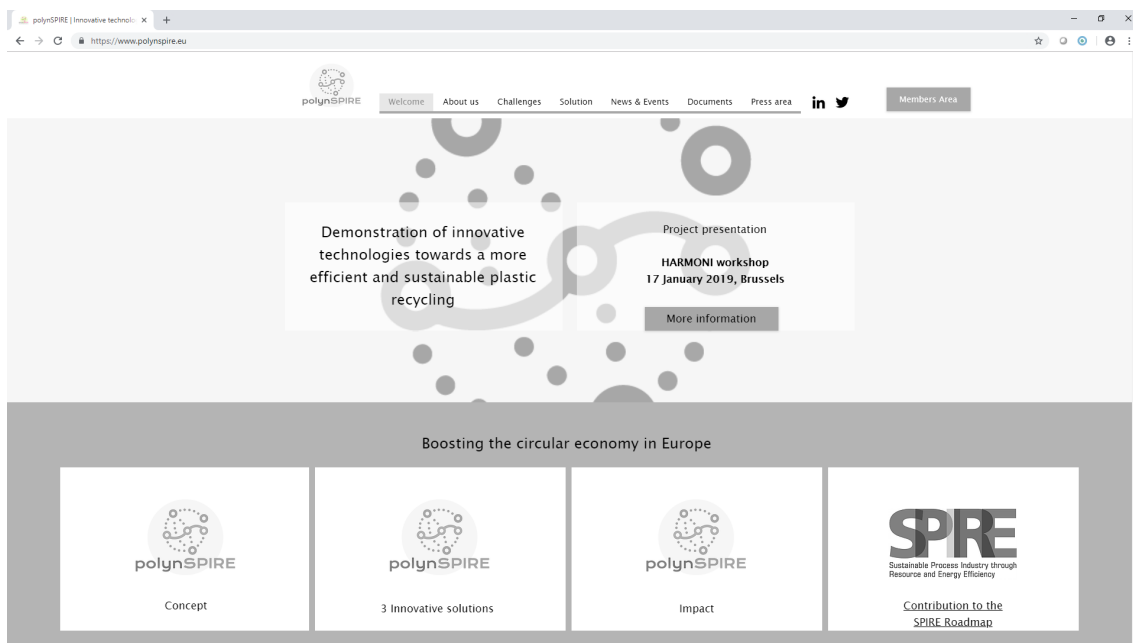


Figure 4. polynSPIRE website; monochromacy (achromatopsia) vision

You can also upload any image you have doubts to see the colour-blind perspective [here](https://www.color-blindness.com/coblis-color-blindness-simulator/) (https://www.color-blindness.com/coblis-color-blindness-simulator/)

Remember that you can transform any graph or table to image to try it!

### 3.7 MAKE IT ACCESSIBLE

In order for the whole document is accessible not only for colour-blind but also for any visual disability, you may want to use the Accessibility Checker from Microsoft. People using a screen reader will appreciate it!

More info [here](https://support.office.com/en-us/article/rules-for-the-accessibility-checker-651e08f2-0fc3-4e10-aaca-74b4a67101c1) (https://support.office.com/en-us/article/rules-for-the-accessibility-checker-651e08f2-0fc3-4e10-aaca-74b4a67101c1)

## 4 WE SHOULD AWARE ANY USER THAT THE DOCUMENT IS ADAPTED

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This way they will keep on reading it in a more comfort way and allowing them to give full attention to the contents. It could also create awareness on every user of the importance of any visual disability.

If the document has passed visual disabled filters and the accessibility checker, we propose to include this small paragraph in the second page of the polynSPIRE documents, right after the cover:

*This document was designed and elaborated accessible for colour-blind and visual disabled readers. If any information is not accessible, please address to [info@polynspire.eu](mailto:info@polynspire.eu) and we will amend as soon as possible.*

In case the document is only colour-blind friendly, the proposed paragraph is:

*This document is colour-blind friendly. All the information is available with non-colour references. The document can be printed in black and white and no information will be missed, helping colour-blind users and the environment. We ask to paper-print only if necessary.*