Plan for the dissemination and exploitation including communication activities

Deliverable 7.1

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1.0	30/11/2022	Helena Vilaça	Initial version

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List of Abbreviations

Acronyms	Description
CA	Consortium Agreement
CMS	Content Management Program
CMYK	Cyan, magenta, yellow, black (colour system)
CSS	Cascading Style Sheets
D	Deliverable
EC	European Commission
EU	European Union
GA	Grant Agreement
GDPR	General Data Protection Regulation
HADEA	European Health and Digital Executive Agency
HEX	Hexadecimal colour (colour system)
HTML	Hyper Text Markup Language
IP	Intellectual Property
IPR	Intellectual Property Rights
KPIs	Key Performance Indicators
M	Month
NCs	Nanocapsules
PE	Polyethylene
PES	Polyester
PET	Polyethylene terephthalate
PHA	Polyhydroxyalkanoate
PHP	PHP Hypertext Preprocessor
PP	Polypropylene
RGB	Red, green, blue (colour system)
RIA	Research and Innovation Action
R&I	Research and Innovation
RRI	Responsible Research and Innovation
SEO	Search Engine Optimisation
VC	Value chain
W2BC	Waste2BioComp
WP	Work Package

1. Introduction

The overall objective of WP7 - Dissemination, Communication, Training, Exploitation and Innovation Management - is to maximise the project's impact, by: ensuring effective communication and outreach of the project´s activities and results to the identified target groups; disseminating Waste2BioComp (W2BC) by raising awareness about the project's results and making them available to the multiple stakeholders; providing the tools and develop the skills needed for the implementation of biomaterial-based manufacturing activities (training); developing the project's exploitation strategy, realised by market analyses, benchmarking and technology watch, business models and business plans for commercialization. Related to this exploitation, the WP includes innovation management, which encompasses IPR management and Open Science matters.

Thus, the present document corresponds to Deliverable D7.1 — Plan for the dissemination and exploitation including communication activities, whose main aim is to draw up a communications and dissemination strategy for the project and its implementation, as also define the exploitation strategy for the results of the project, as these are achieved.

This is a document for the use of all consortium members involved in the Waste2BioComp project, designated as "public" regarding the dissemination level. The deliverable will keep updated the Dissemination, Communication, and Exploitation strategies of the project as well as identify in detail stakeholders, actions, tools, materials, guidelines, KPIs and procedures agreed.

The organisation of the activities described in the deliverable will be performed in close cooperation with the consortium members.

Technical results will be published in journals and open access platforms. In addition to electronic communication, other means of communication will be used such as on-site face-to-face communication, two-way remote communication, and audio/video.

In detail, this document consists of:

- A detailed communication strategy, including the conference and communication objectives, identification of target groups, and key messages;
- Project visual identity (includes logo, templates, etc.) with strong pictures and images that illustrate the theme and objectives of the project;
- Digital tools and channels such as the website, social media, videos, newsletters, etc.;
- Planning for production of newsletters and other targeted mailings for press;
- Events and outreach strategy for project promotions to target groups;
- Responsibilities of the partners and measurable targets (KPIs) for the strategy;

This deliverable is alive and will be modified according to the project needs. The results of the strategies implemented will be made visible every year through the updated version of the deliverable D7.1 (M06; M24 and M36).

2. Summary of the Waste2BioComp Project

W2BC is a project funded by the Horizon Europe Programme of the European Commission with the aim of helping the EU reach its 2050 target of climate neutrality by impacting and generating significant change in the manufacturing sector. Reduction of the latter pollution and waste and increase of its reprocessing potential is pivotal in order to achieve a true circular and sustainable economy. The replacement of fossil raw materials by bio-based ones is crucial for the green transition of the manufacturing industries. To lower the environmental impact to a greater degree, bio-based products should be easy to reuse and recycle. However, a transition from conventional materials to bio-based ones requires not only the development of new raw-materials (e.g., biopolymers), but also the adaptation or even implementation of new manufacturing routes for them. The textile, packaging and footwear sectors contribute in large-scale to the world pollution: 10 % of the global greenhouse gas emissions are caused by clothing and footwear production and, in 2018, the generated packaging waste in the EU was estimated at 174.1 kg per inhabitant. Petrochemical-based materials used in the textile, footwear and packaging sectors are a threat to the environment due to their non-biodegradable and non-renewable nature.

W2BC has identified PHAs as a versatile bio-based class of polymers, having potential to replace traditional materials with high environmental footprint, such as PES, PE, and PP, thus minimising the environmental impact and allowing a cradle-to-cradle design of products.

Specific R&I objectives:

O1. Development of application tailored biopolymers, precursors, and additives.

O2. Development of smart inkjet printing systems for bio-based inks deposition.

O3. Development of smart manufacturing processes for bio-based foams, films, composites, and textiles.

O4. Production of demonstrators for the textile, packaging and footwear VCs and their validation.

O5. Re-manufacturing and recycling alternatives for the demonstrators.

O6. Toxicity and sustainability assessment: demonstrate that the new bio-based materials do not present any toxicity (including cytotoxicity) and are more sustainable than the existent petrochemical analogues.

O7. Dissemination, Communication, Training & Exploitation: develop training materials and 26 workshops, lectures, and training sessions, to support the creation of a skilled workforce in biomaterial-based manufacturing activities for the textile, footwear, and packaging VCs. Develop a business plan for each of these VCs with the W2BC new materials/products.

3. Communication and Dissemination Objectives

The main objectives of the communication plan are to lay out the overall strategy, by creating a clear and consistent message (why and what to communicate), that shall be spread among a target audience and through different communication channels (website, social media, newsletters, videos).

In short, the communication strategy aims to inform, promote, and communicate the project's activities and results by reaching out to its multiple audiences (citizens, the media, stakeholders) from the start of the project until the very end. Besides being a legal obligation under Article 38.1 of the Grant Agreement, communication is crucial to:

- Engage with stakeholders;
- Attract experts to the project;
- Generate market demand;
- Raise awareness of how public money is spent;
- Show the success of a European collaboration;

Complementary to the abovementioned, the aim of the dissemination strategy is to make the project's results public. Through its "open science" movement, knowledge and results will be made public and free of charge, not only to scientists but others that can learn from the results whether they are policymakers, civil society, sectors of interest and so forth. These results will be presented as soon as W2BC has data to share, with the aim of:

- Maximise results' impact;
- Allow other researchers to go a step forward;
- Contribute to the advancement of the state of the art;
- Make scientific results a common good;

The main dissemination outputs of this project will be scientific papers, technical reports, project videos, social media publications, infographics, and training materials. These will be the cornerstone of the project's exploitation and dissemination strategy, as the industry can eventually turn these ideas into commercial products.

4. Communication and Dissemination Strategy

4.1 Target Audiences and Description

The identification of target audiences of the W2BC project is crucial in order to customise the messages and dissemination & communication activities. Each group of stakeholders has different points of interest and demands regarding the project. According to this strategy, messages must be shaped and delivered in an effective manner.

Dissemination and Communication channels and activities described on this document will be clearly focused on them and the messages will be adapted.

The following audience and stakeholders of the sector have been identified before the starting of the project and will be considered at the European, national, and regional level. During its development, partners will be asked to report about contacts, networking and activities established with these groups:

Table 1 *Waste2BioComp Target Groups and characterisation*

Target Group	Characterisation
Manufacturing industries in the three VCs	Manufacturing industries in the **footwear, textile and packaging VCs** are the clear end-users and potential early exploiters of the W2BC results, replicating them at a large-scale.
Players across the textile, packaging, and footwear VCs	**Chemical industry** (e.g., manufacturers of PHAs and PES); Developers of packaging, footwear, and textile applications. **Technology developers** (e.g., inkjet printing and automatization equipment); Companies chemically recycling PET and/or other PES into valuable polyols.
Players from other VCs	The **automotive and building & construction** VCs: for PHA-based foams or even for energy absorbing components (like bumpers) or soft foams in diverse parts (steering wheel); for the replacement of PET-barrier foils for house and roof insulations; wood plastic composites. **Producers of plastic furniture** and/or household articles, sports goods. **Pharma and cosmetic companies** (e.g., replacement of PP-microparticles in toothpastes by biodegradable PHA-micro-nanoparticles, application of NCs with bioactives in creams, biodegradable packaging for cosmetic goods).
Universities & Research Centres	W2BC applied research will be exploited in new knowledge generation resulting in publications and having a direct impact on **graduates and researchers** working on these developments. Research in the three demonstrated VCs, as well as in transposing these innovative applications to other industries. This project will also be an interdisciplinary endeavour, which will open the door for the projects' results to be exploited on research in adjacent areas/subjects [e.g., **polymer chemistry, biochemistry, biotechnology, biomaterials, and medicine** (e.g., orthopaedics)].

Target Group	Characterisation
Workers & Students	Training in the project will be directed to students and mainly to upskilling the manufacturing industries' workforce in the footwear, packaging, and textile VCs and in lectures, seminars, and practicums. It will generate training materials to be used for training beyond the project's activities to interested workers and students.
Standardisation bodies on bio-based materials	The project's innovative approach will contribute to fill existing gaps in the standards and potentially will lead to new standardisation requirements for new materials/products.

4.2 Key Messages

The main purpose of any activities regarding communication and dissemination in a European project is to generate awareness to itself by informing citizens, media, authorities, industry, policy makers, and other relevant entities and individuals about its objectives and results. As such, the key messages that W2BC aims to promote and communicate will be the key areas of its impact and action.

On a macro-level, these will necessarily include the promotion of bio-based products (namely PHAs) as materials with high potential to replace more traditional, higher environmental footprint raw materials; the strategic approach of the textile, footwear, and packaging value chains to new and innovative, environmentally friendly solutions that promote the twin and green transitions; the progress in smart manufacturing in these sectors to increase productivity and contribute to the reduction of waste and CO_2 emissions.

It will then be important to identify, at the level of each Work Package and, in some cases, of tasks, which will be the main outputs to be disseminated. These will be more technical and possibly of more relevance to targets within each sector or in the scientific community but will need to have some translation to a broader audience. In each case, the partners will look to determine the key messages they will want to communicate based on the progress of the Project, which means some might be subject to adjustments or changes.

Nevertheless, we can already predict some of the most important ones, or at least the ones which the consortium understands to be those that they strive for. We attempt to summarize this below.

Main Key Messages

- Bio-based products have the potential to replace traditional materials, with a positive environmental impact;
- The textile, footwear, and packaging VCs are building towards innovative solutions to address the twin and green transitions;
- Smart manufacturing processes are improving the efficiency, productivity and impact in waste and emissions in these sectors.

WP-specific Messages

- The potential of PHAs to replace traditional raw materials in these sectors is high (WP1, WP3 and WP4);
- Smart processes such as inkjet printing systems can aid the achievement of the twin and green transition objectives (WP2, WP3 and WP4);
- Circularity is possible by synergies within these VCs, and the re-manufacturing, recycling and repolymerization of the materials developed is a possible alternative, or at the very least these have the potential for lower environmental impact (WP5 and WP6);

- New and adjusted skills, as well as business plans and strategies, are needed for the industry to have the capacity to absorb these new concepts and processes (WP7).

4.3 Communication and Dissemination Channels and Activities

4.3.1 Dissemination and Communication Policy and Rules and Support of the EU

W2BC will closely follow what is stipulated in Article 17 and Annex 5 of the Grant Agreement, namely by:

- striving to promote the Project to multiple audiences in a public (except on IPR-conflict cases), coherent and effective manner;
- guaranteeing the visibility of EU funding, by ensuring the European flag and funding statement are present on the different communication and dissemination materials and activities;
- giving due notice internally when intending to disseminate any results, and in such cases where the consortium feels there's potential for broad media public reach, inform the granting authority.

Furthermore, this deliverable is the document that will determine the communication and dissemination strategy, and as such will function as the repository for the duties of the partners, namely the WP7 leader, as well as keep track (through the foreseen updates at midterm and end of the Project) of any updates that could potentially affect the rules of Article 17 and Annex 5 of the Agreement.

4.3.2 Website

The Waste2BioComp website (available at www.waste2biocomp.eu) will serve as a one-stop-shop for all project-related information and news, including the dissemination of the project results. It will be created and regularly updated (with project information, results, partners, events, etc.) and will be used to disseminate the project's training activities and resulting materials.

Website objectives

- Increase projects recognition/visibility;
- Increase online exposure with a contemporaneous design compatible with mobile devices;
- Generate *leads;*
- Maximise the project impact in Horizon Europe;
- Promote project and results transparency;

The website's design communicates through an eye catching and well treated image. The first appeal is to captivate users, using strong phrases and images. A contemporary layout will be used, making it easier for the user to navigate and reach the desired end point on the website in less clicks, providing direct links to zones of interest such as News, Media, but also to areas that describe the project and its role in the industry. The W2BC website is developed using a Wordpress® platform, a Content Management System (CMS) more intuitive and user friendly optimised for smartphones and tablets. The latter is 100 % customisable and programmed using HTML/CSS/PHP and some elements of JavaScript coding language. Further, security is provided using Itheme Security.

4.3.3 Social Media Guidelines

Magellan is responsible for the management of the Twitter, LinkedIn and YouTube social media channels for the W2BC project, and partners must collaborate and engage by mentioning the W2BC Twitter account, retweeting and/or commenting the tweets about the project and sharing and/or commenting publications on LinkedIn.

Additionally, the project will also have a SharePoint account managed by CITEVE which will be used as a collaborative platform for the storage of documents and materials to seamlessly transition information and foster transparency and communication within the consortium.

4.3.4 Communication Materials

Magellan will develop a communication materials package, such as a general presentation, flyers, word template, roll-ups, etc., to promote the W2BC project that will be shared with and used by all consortium members. Nevertheless, in what concerns dissemination, each partner is responsible for the creation of scientific and research publications/communications (previously reviewed by the rest of the consortium members, following the times set in the Consortium Agreement).

4.3.5 Reporting Events

Public seminars have proven to be extremely useful and effective in any communication and dissemination strategy. These moments allow consortia and broader community to come together and focus on the activities and results of a project.

In that sense, W2BC will look towards organizing three main moments in which public presentations will be held: kick-off, midterm, and final conferences.

These events will allow not only the partners themselves to share in a more direct, physical, way their developments and even exchange new ideas, but also to approach the different audiences directly, updating the scientific, civil and industrial targets on the different achievements of the Project in simple, efficient terms.

Naturally, as physical events, the networking aspect of these conferences is also fundamental to increase awareness, gather support, and potentially develop new partnerships to the Project and its partners.

4.4 Waste2BioComp Visual Identity

The Brand Guidelines help make our branded communications effective and consistent. They explain the various elements that make up our identity - what they are, how they fit together, and why it is vital that we use them in the right way.

4.4.1 Logo

The Waste2BioComp logo is our signature and our brand's most widely recognized element. It consists of two components in a fixed relationship with one another - the icon and the logotype. The Waste2BioComp Brand must never be altered, distorted, tilted, handled, or disassembled in any application. There must always be sufficient space surrounding the logotype to avoid competition with other elements and to maintain its visual impact. The recommended open space is relative to the logo size and is 1x the height of the circle starting from our icon.

Figure 1 *W2BC Logo Spatial Awareness.*

LOGO VARIATIONS

These are the official versions of the Waste2BioComp logo. No other arrangement or colour is permitted. They are available in PDF format, compatible with Adobe® Illustrator®, for both print (CMYK) and digital (RGB).

Figure 2 *W2BC logo colour variations.*

The white (negative) version of the logo is intended for dark backgrounds. If the logo cannot be reproduced in colour, it should be used in the black or white version.

Figure 3 *W2BC logo negative version variations.*

ICON

The Waste2BioComp icon is recommend to be used as a social media Avatar, Favicon for the Website, and as an App Icon. All combinations on **Figure 4** are permitted. The selection of the icon should be made so that the most contrast to the background for optimal legibility is achieved.

Minimum Icon Size: 10 mm

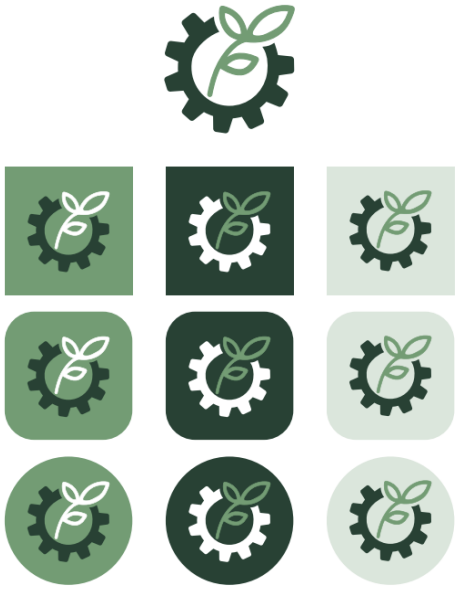


Figure 4 *W2BC icon variations.*

4.4.2 Templates

The following document templates are going to be used with both internal and external audiences and will be essential to ensure a uniform experience of throughout the project.

Word

The word layout is suitable for short and long documents like reports and similar types of communications. There are two cover page designs – with a light and dark colour background. The cover page is followed by an optional contents page.

The document is the A4 Vertical [210x297mm] format and follows the typography and colour scheme enumerated below (section 4.4.3)

Figure 5 *W2BC Word template layout.*

PowerPoint

In what concerns the 16:9 aspect ratio presentation format, W2BC has a single PowerPoint® template which must be used across in all internal and external communications.

Similar to the word template, the PowerPoint follows the typography and colour scheme enumerated below (section 4.4.3) and is composed of two different cover page designs (with a light and dark colour background) from which the entity formatting the document must choose to work on.

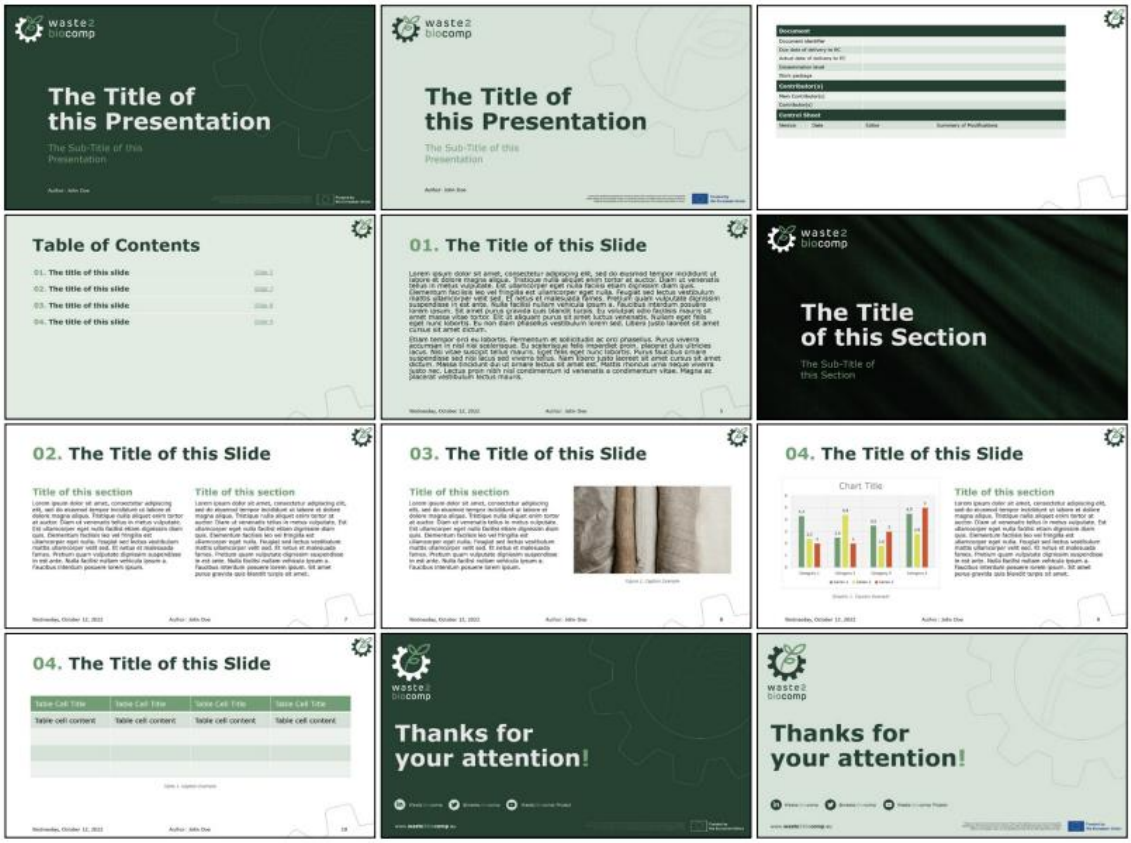


Figure 6 *W2BC Powerpoint template layout.*

Social Media Banners

Social media banners were created to convey a strong first impression, which reflect the overall vision and messaging of the project's brand identity. By reflecting the project innovative, contemporaneous, and sustainable identity, social media banners will play a pivotal role in capturing the attention of our desired target audiences, increasing, therefore, the project overall brand awareness. All banners exalt the support and funding of the European Union and are adapted in accordance with social platforms formats prerequisites.

Below, you may find examples of social media banners for our three social media platforms.

Figure 7 *Twitter banner example.*

Figure 8 *LinkedIn page banner example.*

Figure 9 *LinkedIn cover page banner example.*

Figure 10 *YouTube banner example.*

4.4.3 Colours and Font Guidelines

Colour is a key factor in ensuring rapid recognition of our brand, and it is therefore important that our brand colours are reproduced accurately. We have defined our colours with specific values for both print and digital. All documents, schemes, graphics, and so forth, should adhere to these specifications for all applications.

MAIN PALETTE

The primary palette consists of three colours. Dark Green is our main colour. It is used in the logo, and extensively throughout the visual identity, carrying the strongest brand recognition.

Figure 11 *W2BC Main Colour Palette.*

SECONDARY PALETTE

The secondary palette has been developed to complement our primary colours. It provides versatility in situations where many colours are needed, e.g., to create complex graphs and charts. This palette should be used only when the primary palette does not suffice.

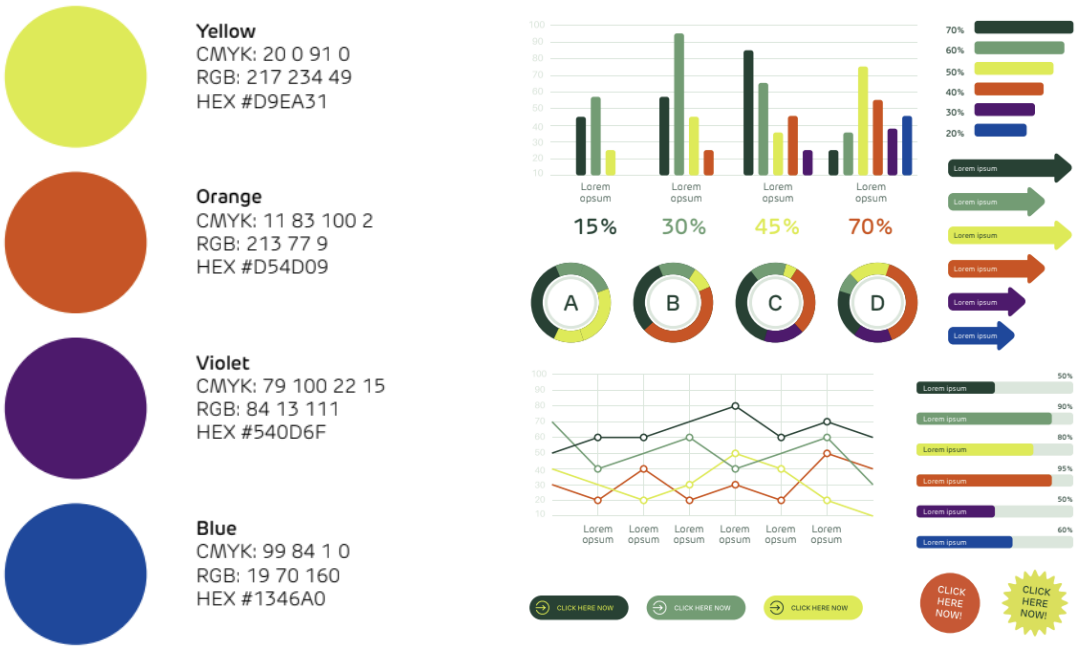


Figure 12 *W2BC Main Secondary Palette and examples of application.*

5. Communication Tools and Actions

5.1 Digital Marketing Strategy

With the main aim of attracting and establishing a W2BC community around our general public, the Digital Marketing Strategy has been established with three main pillars:

1. W2BC website www.waste2biocomp.eu that will be frequently updated through the section of news and events;
2. Social Media and newsletters to share the advances about the project included on the website and attract visitors and users. This will also be used as a tool to interact and listen to the comments of the stakeholders of the project;
3. SEO (Search Engine Optimisation) techniques to obtain a good positioning of the website on Google.

5.1.1 Website

The Waste2BioComp website (available at www.waste2biocomp.eu) will serve as a one-stop-shop for all project-related information and news, including the dissemination of the project results. It will be created and regularly updated (with project information, results, partners, events, etc.) and will be used to disseminate the project's training activities and resulting materials.

The website provides the following content, following guidelines and recommendations of the EC:

- General information about the project;
- Description of the entities who are part of the W2BC consortium;
- Information, objectives, and work packages;
- Section dedicated to Training, where all materials will be made available;

- Section dedicated to Outputs of the project, where public deliverables and scientific papers will be published;
- Section dedicated to News —related or relevant to the project — and Events — organised within the framework of the project or in which the project took part;
- Section dedicated to Mediaroom, where all materials/resources focused on Media Communication such as newsletters will be posted;
- Address and contact information;
- Appropriate disclaimers excluding the European Union and the European Health and Digital Executive Agency (HADEA) of responsibility;
- Project social media links.

Website Objectives

- Increase projects recognition/visibility;
- Increase online exposure with a contemporaneous design compatible with mobile devices;
- Generate *leads;*
- Maximise the project impact in Horizon Europe;
- Promote project and results transparency.

Hosting and Maintenance

In what concerns the W2BC website maintenance, which means the work needed to be done to keep the website fully operational and updated, the latter is going to be carried out mainly by Magellan. However, more intricate maintenance is going to be done by our external partner Boutik Studio, an award-winning studio focused on Branding, Web and Design.

Regarding web hosting — the space allocated on a web server for a website to store its files — the project will also rely on Boutik Studio as its hosting provider, considering the company's vast expertise in web services.

5.1.2 Newsletter and Mailings

Newsletters and mass e-mails are obviously one of the better and most efficient tools to directly reach an audience through digital means. This takes an even bigger importance in the case of a new project such as W2BC, as sometimes it is the only channel through which the different partners have an audience.

Partners will use their already existing audience (always complying with GDPR rules) to disseminate the first issues of newsletters and mailings, in order to develop a specific audience for the Project. This audience will grow thanks to the other channels, events and materials of communication and dissemination, but newsletters will play a big part in building them. Newsletters are an efficient hub of information, which can carry simple and direct data, links to the Project's and partners' websites and other communication channels, and all this with the certainty that we will be reaching the intended targets.

Thus, W2BC will have a bi-annual newsletter which will be addressed to communicating the most recent project developments and directed to all the stakeholders of the Project. As explained, the first editions will be disseminated through the partner's networks, and then as the Project's own audience starts growing, that will be used.

More sporadic, direct e-mail marketing will be used for specific activities such as events or for the dissemination of specific results, on a case-by-case basis and when it makes sense for the Project without saturating the audiences or breaking any GDPR rulings. Below we outline what would be the ideal plan for a scheduling of the W2BC newsletter editions.

To this effect, as well as the creation of accounts in social media, the Project created e-mail accounts for the management of these tools.

Table 2 *Draft Schedule of Waste2BioComp Newsletter*

Edition	Month
1st Newsletter	M07 (December 2022)
2nd Newsletter	M12 (May 2023)
3rd Newsletter	M19 (December 2023)
4th Newsletter	M24 (May 2024)
5th Newsletter	M31 (December 2024)
6th Newsletter	M36 (May 2025)

5.1.3 Social Media Channels

The creation of W2BC social media channels will increase the visibility and impact of the results attained in the project as well as constitute a community which facilitates the interaction between the W2BC and its different audiences. W2BC social media channels are aimed at informing, promoting, and communicating the project's activities and results.

For that effect three social media accounts were created and are currently set and updated regularly:

- **Twitter:** https://twitter.com/waste2biocomp
- **LinkedIn:** https://www.linkedin.com/company/waste2biocomp/
- **Youtube** (Audio-visual content): https://www.youtube.com/channel/UCVJI5rrE7QBnHCjzQCWNpIQ/featured

Magellan leads this task with the support of all partners in the consortium to ensure accurate and transparent communication (for its multiple audiences) and dissemination (for its specialist audiences). Additionally, recommendations and requirements for social media on EU funded RIA projects will be thoroughly taken in consideration.

Twitter

Twitter is used so as to establish meaningful relationships with relevant audiences such as the EC, policy makers, stakeholders, civil society and so forth. Moreover, the platform will be a propeller of the "community" referred previously by rightly communicating the W2BC ethos and providing, then again, a transparent means of communication where audiences can closely follow the project's current endeavours.

The credentials for Twitter are the following:

Twitter link: https://twitter.com/waste2biocomp

Hashtag: #waste2biocomp

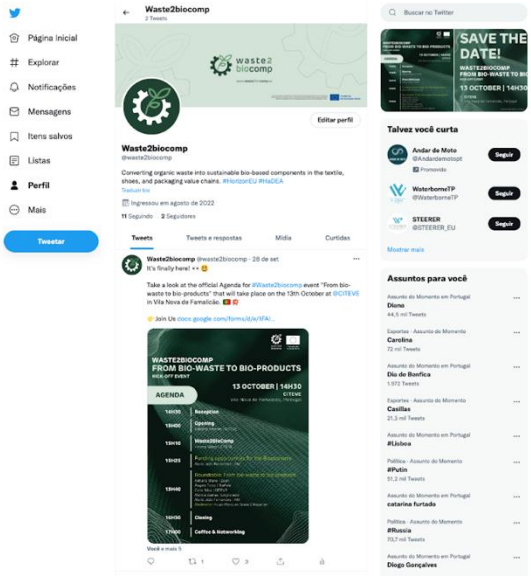


Figure 13 *Waste2BioComp Twitter page.*

LinkedIn

LinkedIn already was the most obvious platform to place W2BC and develop a network of connections to raise awareness for the Project, and in recent times it has become more and more effective at its purpose, by allowing meaningful, efficient, and targeted connections and interactions, as well as different options that allow an entity or individual to reach its goals.

It will thus be another one of the main channels of W2BC, where every communication, news, media content or updates generated by the Project and/or its partners will be posted.

The page has already been created, and is located at:

https://www.linkedin.com/company/waste2biocomp/

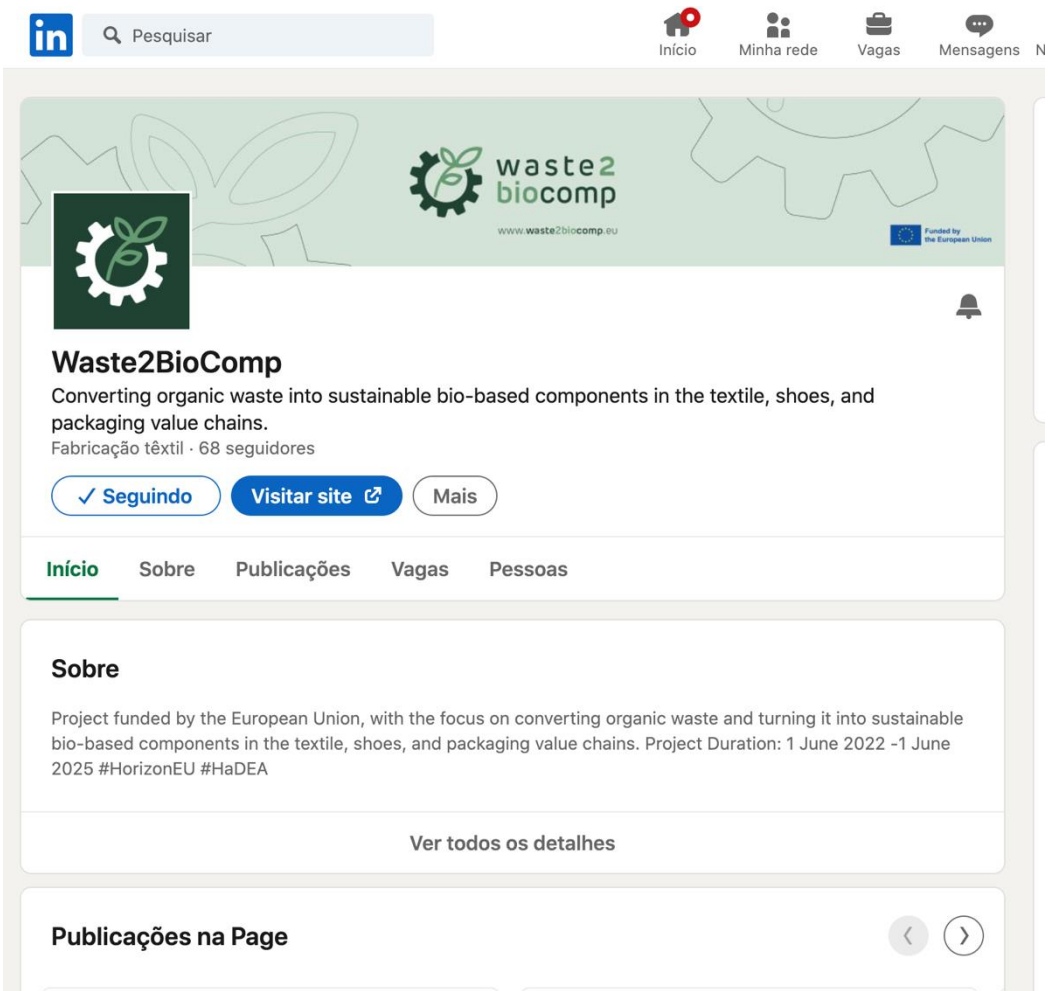


Figure 14 *Waste2BioComp LinkedIn page.*

YouTube

A YouTube account was created to serve as an audio-visual content repository for the videos and/or animations produced during the project's lifespan. With the creation of the latter, the W2BC benefits from a creative and easy method of sharing information to a larger audience in a short time. Furthermore, YouTube will also help increase Waste2BioComp's SEO through the use of backlinks. Backlinks will be created by adding the project's website link onto the YouTube profile page and within the description of each video posted on the channel. Consequently, it is expected an organic increase in traffic directed towards the project website.

The credentials for YouTube are the following:

YouTube Link: https://www.youtube.com/channel/UCVJI5rrE7QBnHCjzQCWNpIQ/featured

Hashtag: #waste2biocomp

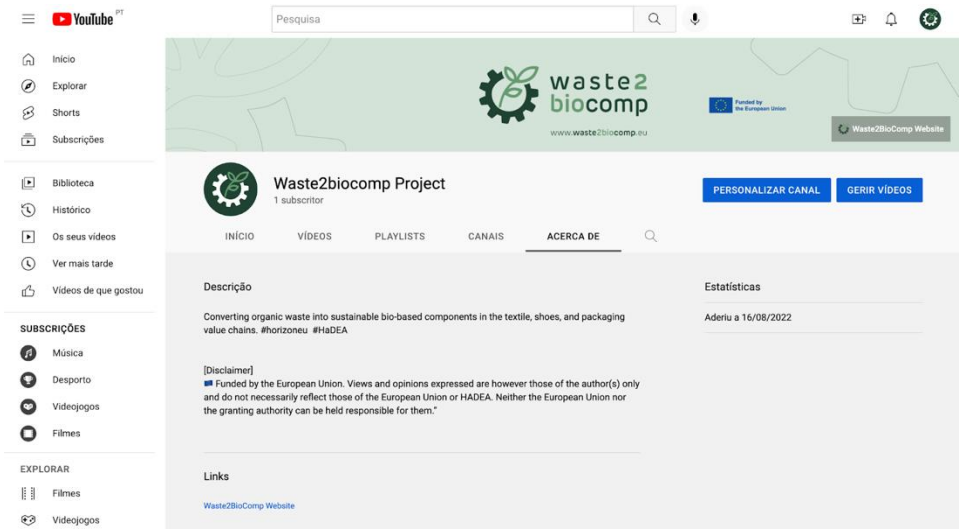


Figure 15 *Waste2BioComp YouTube Channel page.*

Social Media Management Tools

For the management of social media channels, the team will look to utilize an aggregator tool which will simplify the process and save resources and time. As an example, the Loomly platform has already been in use by the leader of WP7 in other instances and has proved to be a useful tool when it comes to projects such as W2BC. The platform allows for the centralization of different social media channels, by development a single campaign which then serves all of them, employing the same copy and visual media.

It is thus probably that the same tool will be implemented, unless further details become known, that facilitate the use of another tool, or of that one in a different fashion.

5.1.4 Digital Campaigns

Apart from organic social media communications, the consortium determined that it would be relevant to make use of targeted, paid campaigns to allow the awareness-raising and reach of the C&D strategy to be as effective as possible.

These campaigns will be most pertinent when some demonstrators of W2BC are up and running. The tools and trends of social media advertising are constantly evolving, and it will thus be important, in that sense, to evaluate the best way to approach this activity when more information is available regarding results and outputs of the Project.

In any case, it is almost certain the Twitter Ads (either Promoted, Follower, or Trend Takeover), LinkedIn Ads (Dynamic, Sponsored Messaging), and possibly YouTube Ads will certainly be the main platforms used, as they will be where W2BC will be present online. Google Ads, as the biggest platform, will also be under consideration if the partners consider that they will be able to gather more awareness while remaining cost efficient.

The partners are aware of the risks of developing campaigns which do not generate the desired return, which is why it will be crucial for the WP7 leader to make use of its past experiences and expertise, and eventually even build these campaigns through an advertising platform which consolidates several different ads services.

5.2 Printed Materials

As asserted by point 4, W2BC is expected to produce the following printed materials: 2 (two) project roll-ups and 600 (six hundred) flyers.

Project roll ups will serve as a multi-purpose asset for promoting the project, showcasing consortium partners and the European Union, and generating interest to uncover its results. The roll ups will enable us to communicate our project (brand) and make a visual impact in public spaces, providing a steady and purposeful message to our desired target audiences.

Similarly to roll-ups, project flyers will also serve as a multi-purpose asset. Their visual nature will allow for a powerful first impression, promotion of the project and communication of its results and relevant information.

5.3 Standard Project Presentation

A standard Project presentation is needed, in a PowerPoint (.pptx) format, to allow the homogenization of any presentations the partners need to develop both internally or publicly, and as such a template was prepared in the same line of the overall visual identity that was developed for W2BC. Below we can see an example of a slide of the presentation.

Figure 16 *Example of the cover slide of the standard W2BC presentation.*

More than a useful tool, this presentation will be mandatory for all partners' presentations done in the context of the Project, as it not only standardizes communication but also follows EU rules, such as logo placement, complying with the Agreement and guaranteeing that the Project obeys the necessary procedures.

5.4 Videos

Video content will be created to increase project awareness and spread its message in a way that we consider to be accessible to a large portion of our target audiences. Moreover, videos will also foster the project SEO, considering that Google includes YouTube videos at the top of the page for various search terms.

Videos shall be uploaded mainly to the project's YouTube channel. However, the remaining social media platforms and the project's website might also be used to post video content whenever we find of value to do so.

A project video regarding the project's kick-off event "Waste2BioComp: From Bio-Waste to Bio-Products" has already been produced and uploaded, which can be found here.

5.5 Media Relations

Besides the journals and specialty media mentioned below in section 5.7, it is important that a project of this magnitude maintains some relationship with general media, in its different formats, namely online publications.

As such, the Communication and Dissemination team will keep close attention to potential outlets which could be useful for the intentions of W2BC in terms of results dissemination. The partners will naturally have some contacts in media, but it will be important for the Project as an independent entity to develop some way of communicating with those outlets, sharing new information on the activities developed and results achieved, in order to raise awareness to W2BC by the general public.

This will also be achieved by inviting media to the big intermediate and final conferences of the Project, and regularly contacting and disseminating information of the major milestones of W2BC through those contacts identified as having the most potential. Priority will be given to online media, but other channels will not be overlooked, and despite not having a clear indicator to signal the objective in this matter, it is the intention of the consortium to be able to reach as broad a general audience as possible in all of the countries where W2BC will be implemented.

5.6 Events

Events are a very important part of any Communication and Dissemination strategy because they allow for very direct contact with stakeholders, and most times in an environment where these audiences are already primed to be engaged and highly aware of potential new developments. Participation of partners in trade fairs to increase awareness amongst the industry target groups will be incentivized, as well as in conferences (national and international) on applications for bio-based materials, to communicate to R&I stakeholders W2BC's innovations and results. The different physical communication materials created will serve their purpose here more than anywhere else, as they will be efficient items of communication that the partners attending different events will be able to use to communicate in a practical manner. Of course, the main outputs, deliverables, articles, and results of W2BC will be the main materials to be disseminated at different conferences, but nevertheless there is the intention to identify a list of events with potential to be of interest in broader terms to the objectives of the consortium, which will then serve as moments of communication of the Project's main guidelines and strategy as well.

5.7 Open Access and Journals

The Waste2BioComp project is expected to develop a significant amount of research results which will be disseminated to different key scientific communities in the three value chains.

The consortium will adopt a new approach to the scientific process, extending the principles of openness to the whole research cycle, by fostering a cooperative work and sharing of results, both between partners & with the public community, as early as possible, thus allowing a faster diffusion, adoption & commercialisation of then R&I results. Knowledge will be diffused through digital & new collaborative tools, e.g., shared reference libraries (Zotero, Mendeley), grant proposals (Research Ideas and Outcomes), data, codes, and protocols (Zenodo, GitHub, Protocols.io), contributing to the European Open Science Cloud.

The W2BC consortium will grant Open Access to scientific papers published in open-access journals (Gold Access), and on the Open Research Europe platform. All these scientific publications, as also technical reports (that after IP analysis are not deemed as confidential, for which access will be granted only for authorised project participants) will also be made available through public repositories such as Research Gate, PubMed, Open Access Infrastructure for Research in Europe, Registry of Open Access Repositories, Directory of Open Access Repositories, the EC portals and tools (e.g., CORDIS, European Open Science Cloud, OpenAIRE, Horizon Magazine), the project website (where pre-prints will be made available), and the websites of project partners. W2BC will also encourage citizens, civil society & end-users, to engage in the co-creation of Responsible Research

and Innovation (RRI) contents, generating valuable knowledge (e.g., training courses) for the developed smart manufacturing technologies & bio-based materials.

5.8 Ambassador Marketing (Referral Marketing Strategy)

W2BC will establish a list of ambassadors to represent and publicly promote the project in communication platforms and among multiple stakeholders. These ambassadors should be relevant people within the footwear, textile, and packaging sectors, or influencing people that promote the project's results among policymakers and final consumers — a structured campaign will be planned, including video quotes conveying the project's important information and developments.

6. Targets and KPIs

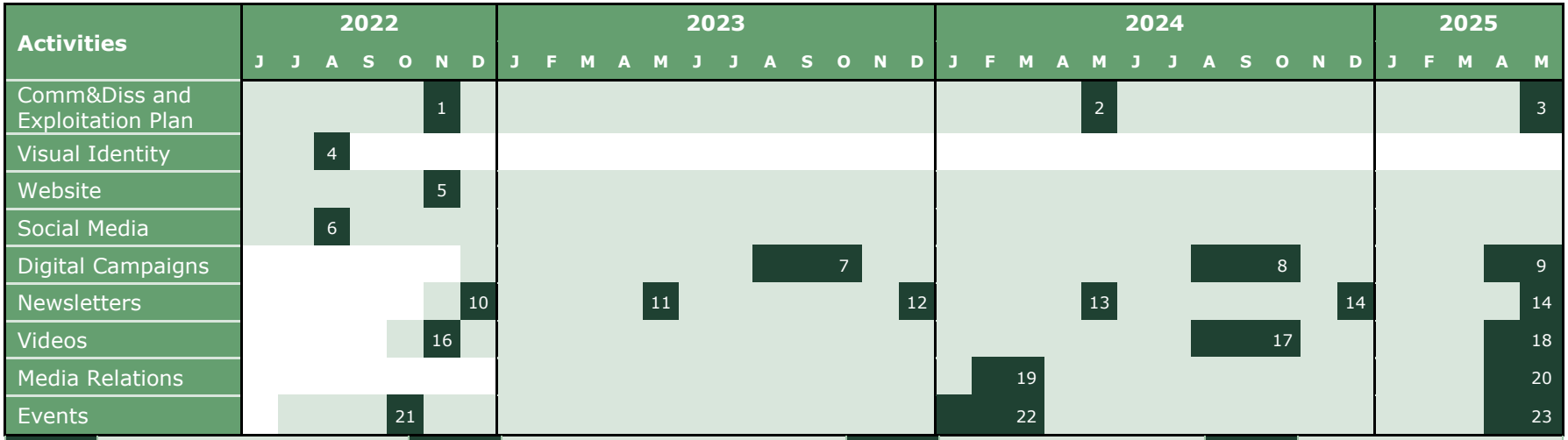
Table 3 *Targets and KPIs*

Tool/Channel	Aim/Description	Target KPI
Project Website	• One-stop-shop for all project-related information and news, including the dissemination of the project results. • Regularly updated (with project information, results, partners, events, etc.) and will be used to disseminate the project's training activities and resulting materials.	≥1500 unique visits by the end of the project
Social Media	• LinkedIn and Twitter Accounts. • YouTube channel used as a repository of the videos of the project.	Followers: >200 on Twitter >200 on LinkedIn
Printed Materials	• Roll-ups and Leaflets to be used for external project events.	2 Project Roll-ups 600 leaflets' copies
Newsletters and Infographics	• bi-annual newsletter • infographics to communicate developments and data in a concise way.	≥6 newsletters ≥6 infographics
Digital Campaigns	• Targeted campaign for the W2BC's stakeholders, namely the footwear, packaging and textile VCs	≥500 people engaged
Scientific Articles and Journals	• Publication of papers in academic journals, as well as technical reports and articles in specialized media.	≥15 publications of papers & Technical reports
List of Ambassadors	• List of individual ambassadors (e.g., relevant stakeholders, namely within the 3 VCs) which will represent and publicly promote the project.	≥1 ambassadors' campaign ≥5 video quotes disseminated
Videos	• Short project presentation video will be produced to be shared with media and will be uploaded on the project's social media channels.	>300 views across all platforms
Project Conferences	• Hybrid (physical/online) high-level conferences.	2 project conferences organized:

Tool/Channel	Aim/Description	Target KPI
		Kick-off Event Portugal: 60 registrations and over 40 attendees were present (13th & 14th of October 2022)
External Events	• Participation of partners in trade fairs and conferences (national and international) on applications for bio-based materials.	2 per year of Project

7. Timeline of Communication and Dissemination Activities

The figure below presents a general Gantt chart of the main communication activities, distributed from the beginning until the end of the Project. Some of these might suffer some adjustments or rescheduling due to the normal proceeding of a project of this magnitude, and the partners will always look to find the most suitable dates and moments to develop any communication activities. Nonetheless, it is important to set out with a plan and so the main outline of the calendar for WP7's communication and dissemination actions is presented below.



1-3	D7.1 – Comm&Diss Plan	6	Social media created	16-18	Videos production	22	Midterm Event
4	Visual Identity completed	7-9	Digital campaigns activation	19-20	Articles published	23	Final Conference
5	Website published	10-15	Newsletters editions	21	Kick-off Event		

Figure 17 *Gantt Chart Communication and Dissemination Activities.*

8. Exploitation Strategy

The Exploitation strategy of the Waste2BioComp project will pave the way towards a future exploitation of the results generated, considering a sustainable strategy aligned with solid business plans for each of the targeted VCs. The consortium established the following key exploitation measures to implement during the project:

- The operation of demonstrators in the 3 VCs (WP4), which will be the steppingstones for larger scale production and industries' commercialization in the future;
- Establishing B2B contacts with other potential end-users in the manufacturing industry and other players along the VCs which could uptake W2BC's solutions, particularly in the footwear, packaging, and textile VCs;
- Reach out to other R&I institutions and players (namely end-users) from other industries which are identified during the dissemination activities, to establish potential applications for other VCs;
- Guarantee further exploitation through a clear policy of intellectual property rights for the scientific and technical results after the lifetime of the project;
- Certify the involvement of standardization bodies in order to uptake necessary standardization activities.

In order to define a proper exploitation strategy, the consortium partners with interact with the coordinator (also responsible for Task 7.5, where the exploitation plan will be defined) on the categorisation of the project results, according to their commercialisation potential and need for IP protection.

8.1 The Exploitation Methodology

The Exploitation Strategy of W2BC shall promote the guidelines, best practices, and technical advancements while establishing intellectual property protection on key exploitable results of the project in order to make the best use of future commercial opportunities. Thus, the main goal of the exploitation strategy if to first, identify the possible exploitable results that may arise from the project, and plan suitable actions for each exploitable result, driven to make Waste2BioComp a successful and sustainable project.

Although the Exploitation can only start once research results are available, as it focuses on making concrete use of research results for commercial, societal, and legal (e.g., standardisation) purposes, it is important to have a previous prediction of the most probable exploitable results from the project, and how these can be exploited to better benefit the consortia, each partner individually, and the society.

There is a wide spectrum of results that may be recognised as exploitable, including research/ lab scale results, scale-up results, demonstrators, policy recommendations or standardisation activities.

CITEVE, as the Exploitation Manager, has started to design an exploitation methodology customized to the nature and size of the Waste2BioComp consortium and considering its fast-track implementation phase (36 months). This methodology will guarantee the creation of robust joint and individual exploitation plans at the end of the project. This methodology will be presented by CITEVE to all partners at the latest, on the M18 consortium meeting. Any suggested changes by the partners will be made, so that a solid commitment from all of the consortia can be achieved, and they have an active participation and involvement in the development of a final exploitation strategy for the bio-based materials developed along the project, and on the development of the business cases for each VC.

Exploitation issues will be brought to the attention of all partners from a very early stage in the project, to ensure that findings regarding market and commercialization can still be

fed into the R&D part of the project. The monthly meetings for each WP, where the coordinator/ exploitation manager will be also present will be valuable to identify KERs not already identified, and any issue that may arise in terms of their exploitation.

8.2 The Exploitation Timeline

The exploitation methodology will be implemented during the 3 years of the Waste2BioComp project, intensifying the efforts dedicated as the results become more consistent and technologically mature, which is expected to occur in the last year of the project, where the demonstrators will be produced and validated.

The involvement of all partners, together with a good market survey – to de done in sub-task 7.5.1 Benchmarking – and the support of the Ambassadors, will be key to gather information on how best to exploit the project results to penetrate further in the market of bio-based materials and their production technologies, and all of the R&D, toxicity and sustainability results, and end-of-life alternatives obtained till we reach the final demonstrators.

The permanent presence of an innovation and IPR management strategy (Task 7.4) will also be considered in the implementation of the exploitation methodology, as this is a paramount tool for maximizing the impact of W2BC and its implementation, the success of the exploitation strategy and avoidance of any disagreements among the consortium partners.

Also, the training and dissemination and communications predicted activities will make a huge contribution to increase the potential exploitation of KERs of the project, as these will reach to wider audiences and targeted groups. Namely, the workshops that will be organized can be excellent opportunities to show samples of the developed materials (after assuring IP protection) to the industry, scientific and wider communities, and catch their attention to the potential being developed in W2BC.

8.2.1 IP and Knowledge Management Strategy

The IP and knowledge management strategy will be based on the procedures and agreements included in the Consortium agreement (CA) and Grant Agreement (GA) of the W2BC project, following the EC guidelines. The CA specifies the organisation of work between parties and the management of W2BC; defines rights and obligations of parties, including their liability and indemnification. It also supplements (but not conflicts) the provisions of the GA concerning access rights and set out of rights & obligations of the parties.

This IPR´s strategy depends on different factors, including pre-existing patents, trademarks, registered designs and the single partners' exploitation claims – called the background. This is already included in the CA, and its use as a sound basis, any IPR issues will be resolved.

There is a dedicated task to Innovation and IPR management (T7.4), which will be led by CITEVE, with a close help from partner MAGELLAN, but with the collaboration of all partners. This task will run along with the development of the exploitation strategy in T7.5. Deliverable D7.3 – Report on the IPR activities – will describe in detail the IPR policy and all activities carried out along the project. Given the pre-existing knowledge of W2BC partners, D7.3 will be structured as such:

- Assessment of the new knowledge generated during the project, and assignment/determination of the properties' division of the generated IPR among the partners (the ownership of a result will be assigned to the partner(s) generating the new IP);
- Articulation of the IPR with the commercialization and business plan;
- Proposition of optimal IPR protection options (e.g., patent, copyright, trademark, confidentiality), in line with the selected business model options and taking into

account possible co-ownership: this will depend on the background and generated foreground ownership as well as the single partners' exploitation claims;
- Provision of guidelines to all consortium partners to determine legal commitments that each partner has to follow during the project lifetime and beyond;
- An extensive patent survey with documentation distributed among the Consortium listed in detail in deliverables D7.4 (M18 and M30) – Reports on benchmarking and technology watch - in the scope of Task 7.5.1.

8.2.2 Evaluation of Business and Innovation Potential - Benchmarking and Technology Watch

In order to extend knowledge on each relevant VC and its competitors, W2BC has included a benchmark and technology watch activity (T7.5.1). It is designed as a way to analyse all possible limitations and weaknesses of the innovative bio-based materials and production technologies under development. In a product Benchmarking study, meant to design new products or upgrade the current ones, usually reverse engineering is performed on competitors' products to find their strengths and weaknesses. In a similar way, a Benchmarking study will be performed with the main objective of comparing the innovative bio-based materials and manufacturing technologies to be developed in W2BC with the current commercial (petrochemical) solutions available at the market, namely:

- shoe sole and three-layered shoe insole materials will be compared with current used EVA materials;
- flexible plastic films and rigid plastic packages will be compared with marketed petrochemical plastics for the same purpose;
- social face mask will be compared with textile face masks developed during the Covid-19 pandemic, and disposable non-woven face masks;
- inkjet-printed garments (PES and cellulose), leather and textile shoes, insoles, face mask and plastic films printed with bio-based inks will be compared with equivalent products inkjet printed with petrochemical inks.

being expected similar (or better) properties as the fossil-based counterparts.

In the comparison study, products efficacy, safety, end-of-life alternatives, and sustainability will be accessed for benchmark, as also the manufacturing technologies applied. Therefore, by comparing the results and processes of those studied (the commercial "targets") to one's own results and processes, the Consortium will learn how well the targets perform and, more importantly, the business processes that explain why they might be successful.

As the generated knowledge, besides the developed demonstrators, is also valuable for the project and its innovation potential, all the KERs identified (see section 8.2.1) will be analysed by CITEVE from a double business and innovation perspective. Each result will be assessed bearing in mind the following pillars:

- strength of business idea;
- target sector and competition issues;
- target market and customers;
- stakeholders analysis and financial issues.

As a result, those results with a real potential to become products and services will continue with the methodology.

8.2.3 Development of a Commercialization Strategy Plan

The envisaged application of Waste2BioComp materials towards market implementation of bio-based materials and manufacturing technologies relates to:

- Bio-PHAs for fibres (nonwovens and nonwoven coatings for the textile VC), foams (for shoe soles and insoles), films and bio-composites (for flexible films and rigid packaging), and for microparticles and capsules;
- Bio-based microparticles for foams (show soles and insoles) and bio-composites (for the packaging VC);
- Bio-based functional capsules for textile nonwovens, foams (for show soles and insoles), bio-composites (for the packaging VC), and for bio-based inks for inkjet printing;
- Bio-based pigments and dyes for bio-inks for inkjet printing on different materials;
- Manufacturing technologies adapted for the new materials to be developed in W2BC, namely: chemical and biotechnological processes, encapsulation techniques, electrospray system, compounding technologies, blown extrusion, thermoforming, inkjet printing, colour removal system, and chemical recycling approaches;
- Characterization techniques adapted and/or validated for the new bio-based materials;
- Know-how generated on the manufacturing of the new bio-based materials and final demonstrators.

Besides the targeted VCs of W2BC – textile, footwear, and packaging – other possible markets for the developed products have already been identified (**Table 1**), and their potential as new real markets for the developed materials will be analysed during the project.

The overall commercialization strategy will link different findings from WP1 to WP6 to guarantee that all perceptions from the Offering up to the Selling stages do meet a common understanding of related activities which is accepted by the Consortium.

The regulatory assessment, toxicity, and sustainability assessments to be carried out under WP6 will further increase the exploitation and marketability of the developed materials and technologies.

8.2.3.1 Product Standardization Framework

It is not possible to achieve a proper market uptake, thus, not reasonable to develop exploitation strategies, without assuring that the materials, technologies, and demonstrators developed fulfil key regulations, standards, and certifications. The dedicated task T4.4 to Regulatory assessment (standards and regulations) will ensure that the products developed in W2BC comply with the existent regulations, standards, and certifications, or even contribute to new standards. CITEVE will be responsible for this task, and Deliverable D6.4 will contemplate the results of this analysis, to increase the impact of the project results, and upgrade the business plans that will be developed for each VC.

8.2.3.2 Networking with Other Projects and Initiatives

An important aspect of all R&D projects is the possibility of sharing information and establishing synergies with other related R&I projects and initiatives. The bio-based sector is a major one, that is increasing each year. The consortium has already some cooperations and synergies established with other companies and institutes, that may give valuable inputs for the project. A particularly important initiative is the Made in Europe Initiative, from which W2BC is part off, and is already starting to collaborate with the team responsible for this initiative.

CITEVE, as the coordinator, is the main responsible to establish the link with other projects and initiatives, but all partners have made a commitment to be attentive to new collaborative opportunities. The participation in joint events and workshops will be promoted, to facilitate the establishment of these synergies.

8.2.3.3 Access to Different Funding Schemes

As W2BC is an RIA project, its developments are expected to end at TRL6. Thus, to further exploit and scale-up the results, different funding schemes will be analysed. A portfolio of private and public funding sources will be identified, according to the growth strategy defined by each partner.

8.2. Exploitation Plan

8.2.1. Exploitable Results

The key exploitable results already identified in the DoA and in the CA will be updated and increased as the project evolves, and new results are obtained. CITEVE will follow closely the work carried out in each WP, so that it can identify early any new KER. The list below will be updated, and a proper monitoring activity will be carried out in parallel to the development of the project. The approach will ensure "keep alive" the identification throughout the lifetime of the Waste2BioComp project.

Main KERs already identified for W2BC:

- Bio-based components/materials, namely:
  - Pigments and dyes – to be explored by PILI, as the IP owner of processing knowledge and being already expanding its producing capacity;
  - Shoe soles and insoles – to be explored by NORA, as a current producer of these products (but in non bio-based form) and having already established channels for their commercial exploitation;
  - Plastic flexible films and rigid packaging – to be explored by PROPAGROUP, as a current producer of these products (only some bio-based) and having already established channels for their commercial exploitation;
  - Social facial masks – to be explored by RIOPELE, as the producer of the "base" textile fabric used in these, and as a current producer of these products (not 100% bio-based) and having already established channels for their commercial exploitation;
- Inkjet 3D printing equipment, with robotic arm – to be exploited by MTEX NS, as a current producer of printing equipment and having already established channels for their commercial exploitation;
- System for control of inkjet printing system – to be explored by NIXKA, as a current producer of printing control systems and having already established channels for their commercial exploitation;
- Chemical recycling know-how for different bio-based components – to be explored by GR3N, as the IP owner of processing knowledge.

Thus, W2BC counts with 7 partners for the exploitation of the new bio-based components/materials and manufacturing technologies, that will use their existent knowledge, and that generated during the project, to upscale the project results, and, through their existent commercial channels, and the establishment of new channels based on new opportunities given by W2BC results, increase the marketability potential of the outcomes of the project.

Before the signature of the Grant Agreement, the partners discussed and agreed on the previous background knowledge that they will use in the W2BC project, in the way this knowledge will be managed and the way the new generated IP will be protected and granted to the project partners during the project execution. This point was carefully analysed and described in Annex 1 of the Consortium Agreement.

The RTDs and HES will foster the exploitation of the KERs by licensing or selling they IP counterpart, but always in a constructive way, so that no initial limitations are placed to the exploitation of the KERs. Additionally, the RTDs, HES and partner MAGELLAN will also increase their business opportunities, by getting science closer to the market and

supporting the policy priorities for creating jobs, growth, and investment in research. They will also enhance their capacities (knowledge competences) for future collaborative projects with industry, improve their professional network, and curricula, through the publication of patents, scientific papers and scientific communications.

8.2.2. Lean Canvas / Business Model Generation

As already identified in the Exploitation Strategy during the proposal phase, three main business models will be prepared within Waste2BioComp:

- Bio-based nonwovens and nonwoven coatings for the Textile VC;
- Flexible bio-based films and rigid packaging for the Packaging VC;
- Bio-based shoe sole and insoles for the footwear VC.

Thus, in this activity, tailor-made business models for each of these VCs will be created, with a high exploitation potential with KER selected in previous activities. Such business models will be able to help to define future exploitation plans and will be aligned with the main overall exploitation strategies of each partner within their organizations. In this activity, a business model generation strategy based on Lean Canvas and complemented with focus tools and workshops will be implemented.

8.2.3. Exploitation and Business Plan Creation

In this activity, individual exploitation plans and a joint business plan will be built, establishing connections among them and considering the synergies and relationships already identified in the preliminary business plan. As a post-project activity, it will be analysed the possible "embedment" of such plans within the business/exploitation plans of each of the organizations. Given that the Waste2BioComp project is a RIA, the exploitation plans will identify a proper technology assessment and upscaling roadmap to identify key development activities that might be needed to implement to increase the TRL of the obtained results.

It is expected, and there is an agreement between the partner in that sense, that the project partners are the first to exploit the project results themselves, by their own efforts or facilitate exploitation by others (e.g., through making results available under open licenses). This can take place via innovation management actions, copyright management, data management plan and stakeholder/users engagement, among others.

9. Conclusions

The communication and dissemination strategy for Waste2BioComp has been written and developed by Magellan Association with the inputs of the project and consortium coordinator, CITEVE. The strategy is built upon communication strategies developed in the proposal stage and it describes in detail the tools and channels to be used for a successful communication of the project towards the identified targeted audiences

The strategy provides a clear overview of the following actions:

- Target audiences;
- Communication tools;
- Communication channels;
- Communication strategy;
- Media and press;
- Events;
- Brand Identity;
- Key Performance Indicators;
- Open Access and Journals.

The Exploitation Strategy was developed by the coordinator, CITEVE, as the leader of Task 7.5 – Benchmarking, Business Plans and exploitation strategy for the bio-based materials. This strategy reflects what the partners have already agreed upon during the proposal phase and while preparing the Grant Agreement.

This is a living document and the actions and strategies mentioned here will be updated and revised throughout the course of the project's lifespan.

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