



**R3PACK – REDUCE, REUSE, RETHINK PACKAGING TOWARDS
NOVEL FIBRE-BASED PACKAGING AND REUSE SCHEMES**

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Name	Organization
Antoine Covillers	(RE)SET

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EXECUTIVE SUMMARY

This deliverable D1.2 consolidates different aspects and descriptions of Intellectual Property (IP) management, intellectual property rights (IPR) protection plan to be used in the R3PACK project. The objective, procedures, activities, and roles to manage IP are foreseen both in the grant agreement number 101060806 and in the R3PACK consortium agreement (dated 1st June 2022). The IP strategy complies with the rules put out in grant agreement, the conditions agreed in the consortium agreement as well as the rules and recommendations defined in the EU Horizon Europe framework.



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INTRODUCTION

This deliverable is the first version of the Intellectual Property Rights (IPR) Management Strategies and Procedures plan for R3PACK. The goal of the task is to outline IPR related strategies to ensure that relevant knowledge is made accessible to those who need it and will benefit from it. The R3PACK beneficiaries are aware that appropriate IPR regulations and their management are critical for the project results and, therefore, general IPR rules will apply to the project. Bearing in mind the collaborative nature of the project, intellectual property will be managed on an equitable basis by the partners who generate the knowledge and know-how. This knowledge will be protected in the form of patents, know-how, and trade secrets. The IPR strategies are based on the Grant Agreement principles and ground rules set in the Consortium Agreement. They will be regularly updated following R3PACK's General Assemblies with all beneficiaries, and other negotiating meetings between Partners.

1. INTELLECTUAL PROPERTY RIGHTS MANAGEMENT PROCEDURES

Intellectual Property Rights (IPR) management is the process of effectively controlling and protecting intellectual property. In R3PACK, it aims to provide the best use of the IP generated in different work packages within the consortium, by setting up legal frameworks to clarify the ownership of results and their exploitation. R3PACK's IPR management plan will help protecting beneficiaries' rights while ensuring necessary in- and external dissemination of information.

1.1. LEGAL FRAMEWORKS

The R3PACK procedures for managing IPR within the Consortium and the public world complies with the rules defined in the Grant Agreement and the conditions agreed in the Consortium Agreement.

1.1.1. Grant Agreement

The Grant Agreement is the legal implementation of the project as agreed between the European Commission and the Consortium Parties. The Grant Agreement number 101060806, Article 16 "INTELLECTUAL PROPERTY RIGHTS (IPR) — BACKGROUND AND RESULTS — ACCESS RIGHTS AND RIGHTS OF USE" (Annex 5)

defines the rules for handling Intellectual Property Rights, their use, and dissemination. All Consortium partners are signatories to the Grant Agreement.



Definition of Key Concepts:

As per the R3PACK grant agreement, Subsection 1, Article 16, "**Background**" means any data, know-how or information - whatever its form or nature (tangible or intangible), including any rights such as intellectual property rights - that is:

- (a) held by the beneficiaries before they acceded to the Agreement
- (b) needed to implement the action or exploit the results.

As per the R3PACK grant agreement, Subsection 2, Article 16, "**Results**" means any tangible or intangible effect of the action, such as data, know-how or information, whatever its form or nature, whether or not it can be protected, as well as any rights attached to it, including intellectual property rights.

1.1.2. Consortium Agreement

Before the project started, the Consortium Parties signed a Consortium Agreement where roles, responsibilities, and mutual obligations are defined. The R3PACK Consortium Agreement is based upon the DESCAs model consortium agreement that has been fine tuned to embrace the specificities of the project and beneficiaries. The R3PACK consortium agreement contains specific rules and procedures regarding IPR:

- Results – Section 8
- Access Rights – Section 9
- Non-disclosure of information – Section 10

1.2. RESULTS

Results are generated throughout the whole lifecycle of the project, during the R&D and Demonstration phase.

1.2.1. Ownership of Results

Results are owned by the Party that generates them.

1.2.2. Joint Ownership of Results

Joint ownership is governed by Grant Agreement Article 16.4 and its Annex 5, Section Ownership of results, with the following additions.

Unless otherwise agreed:

- each of the joint owners shall be entitled to use their jointly owned Results for non-commercial research and teaching activities on a royalty-free basis, and without requiring the prior consent of the other joint owner(s).



- each of the joint owners shall be entitled to otherwise Exploit the jointly owned Results and to grant non-exclusive licenses to third parties (without any right to sub-license) if the other joint owners are given: (a) at least 45 calendar days advance notice and (b) Fair and Reasonable compensation.

1.2.3. Transfer of results

Each Party may transfer ownership of its own Results, including its share in jointly owned Results, following the procedures of the Grant Agreement Article 16.4 and its Annex 5, Section Transfer and licensing of results, sub-section "Transfer of ownership".

1.2.4. Dissemination

During the Project and for a period of 1 year after the end of the Project, the dissemination of own Results by one or several Parties is governed by the procedure of Article 17.4 of the Grant Agreement and its Annex 5, Section Dissemination.

A Party cannot include in any dissemination activity another Party's unpublished Results or unpublished Background without obtaining the owning Party's prior written approval. Furthermore, the Parties agree to respect the non-disclosure of confidential information for a period of 5-years after the end of the Project.

Each Party is entitled to use any logo or trademark of the Project created specifically for the purpose of the Project (to the exclusion of any name, logo, or trademarks of the other Parties in accordance with Section 8.4.5) royalty-free and on a non-exclusive basis for the execution of the Project only.

1.3. ACCESS RIGHTS

The Beneficiaries have agreed to grant on a non-exclusive and royalty-free basis, Access rights to Results and Background for the implementation of the action, under the conditions to be used only for the purposes for which the Access Rights to it have been granted. Access Rights will also be free of any administrative transfer costs. However, any Access Rights granted exclude any rights to sublicense unless expressly stated otherwise in writing by all the Parties concerned.

Results are owned by the Party that generates them. The Party should grant access Rights to its Results if they are needed for the exploitation of another Party's own Results on Fair and Reasonable conditions. In the case of internal non-commercial research activities and non-commercial educational purposes, however, the Access to Results should be granted on a royalty-free basis.



1.4. BACKGROUND

Background information, subject to IP, that might be relevant for carrying out the project, has been generated before the start of the project. The Access right to the Consortium members' Background is managed by the Consortium Agreement. If needed for exploitation of a Party's own Results, Access rights are granted on Fair and Reasonable conditions and on a royalty-free basis.

Prior to the start of the project, Parties have identified and agreed on the key Backgrounds and have, where needed, informed each other that Access to specific Background is subject to legal restrictions or limits on attachment 1 of the Consortium Agreement.

Out of 23 partners, 9 have reported helpful Background for the project that is made available under the agreed conditions in the CA.

The following table shows an example regarding the Background IP which partners defined (complete list of Background is listed in Annex 1):

CONSORTIUM AGREEMENT – Article 13, Attachment 1

PARTY	DESCRIBE BACKGROUND (IF APPLICABLE)
FLOREALE	The current state of FLOREALE HOLDING's knowledge and know-how of the state of the art on the transformation process of Fruits and Vegetables: 1st, 4th and 5th range is Needed by another Party for implementation of the Project (Article 16.1 and its Annex 5 Grant Agreement, Section "Access rights to results and background", sub-section "Access rights to background and results for implementing the action") or Exploitation of that other Party's Results (Article 16.1 and its Annex 5 Grant Agreement, Section "Access rights to results and background", sub-section "Access rights for exploiting the results").

1.5. RESULTS DISSEMINATION

The beneficiaries must promote the action and its results by providing targeted information to multiple audiences (including the media and the public), in accordance with Annex 1 and in a strategic, coherent, and effective manner.

1.5.1. Open access

Full open access will be provided to 23 out of 25 of R3PACK's deliverables. All these deliverables will be fully accessible to enable a broader impact of the project's results. The only restricted deliverables will be D2.1 and D4.1. They will



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be registered as sensitive, and their access will be limited under the conditions of the Grant Agreement.

The Data Management Plan (DMP) and Digital Output Management Plan (DOMP) foresee the handling of the generated data within R3PACK. They will detail among other things the storage, access, use and reuse of data and digital output according to the FAIR principles. These plans will be deposited in a public repository allowing full open access.

All scientific publications stemming from R3PACK's action will be open peer reviewed with foreseen use of Open Research Europe and also given full access via a public repository.

Acknowledgment: visibility of EU funding

R3PACK beneficiaries must acknowledge any communication activity by displaying the EU emblem and including the text as following:

“This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101060806”.



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2. INTELLECTUAL PROPERTY RIGHTS MANAGEMENT STRATEGIES

2.2 INTELLECTUAL PROPERTY RIGHTS PROTECTION STRATEGIES

2.2.1 IPR continuous monitoring

To ensure the continuous protection of the Consortium's intellectual property rights, IPR is systematically addressed at the General Assemblies organized a minimum number of two times per year for the duration of the project. Extraordinary General Assemblies could be organized as well if needed.

Any Beneficiary is allowed to make suggestions to update the current ground rules and strategies framing IPR management within the Consortium.

The evolution of IPR strategies is handled democratically. The decisions are voted during an ordinary or extraordinary General Assembly, gathering at least two third of the Beneficiaries. The cast votes majority determines whether a new IPR management strategy is adopted or not.



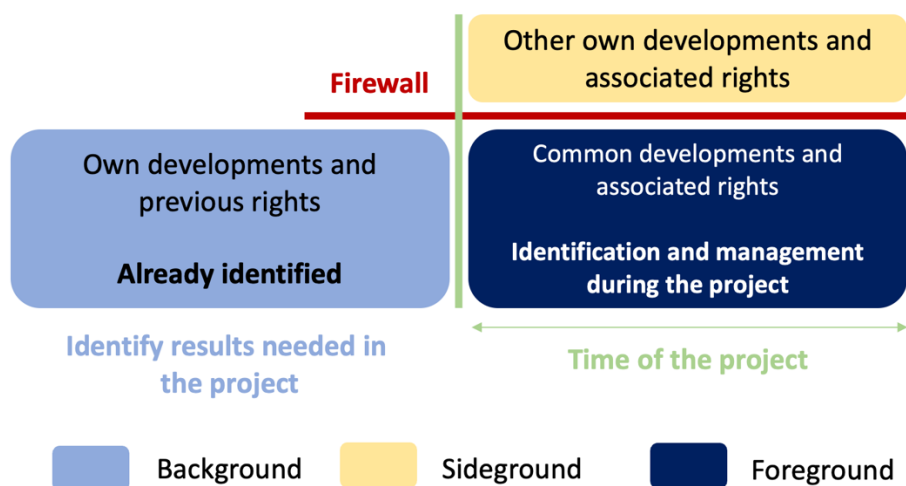
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2.2.2 IPR protection plan

The IPR management has been planned ahead of the project’s start, setting main principles regarding the background, foreground and sideground, potentially subject to intellectual property as described in Figure 1.

Table 1. IPR management



The background of each technological partner has been identified before the beginning of the project, so that the results of this background can be exploited by another partner within the project if needed. If protected results need to be used in the project by another partner, the exploitation rights will be granted for free during the project and without infringement to the provisions of the Consortium Agreement. Each partner thus has the freedom to operate and will be ensured for new developments.

The sideground concerns all the developments that will be done by the partners while the project is running but on solutions that are not related to the project. Those will be strictly separated from the rest of the intellectual propriety. A strict firewall will be guaranteed to make sure that there is no permeability between the results developed in the project and the possible innovations done aside by each partner.

The foreground are the results developed throughout the project in collaboration with the different Parties. These results will be the focus of R3PACK’s IPR protection strategy. Some results will be formalized as deliverables to the European Commission. 2 out of 25 of these deliverables are considered sensitive and therefore not public, while the others will be made fully accessible. Results under the form of internal deliverables only meant for the consortium to build on will also arise and be subject to IPR. Finally, all other kinds of results that emerge from the action will have to be identified from the beginning to the end of the project. It will be during the Task 7.3 “Exploitation potential and new market” that final negotiations will be held to discuss the



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exploitation rights of each solution and the ownership of solutions produced if relevant.

So far, no current results have been identified as requiring a patent or license. However, Deliverable 4.1 “Identification of combined fibre-based packaging substrates, surface pre-treatments and barrier formulations that will enable substitution of current plastic-based packaging” (M18) will be the subject of conversations about patenting and/or licensing.

In the meantime, the backbone of the IPR management strategy relies on the following pillars:

- **Ownership of results:** results are owned by the beneficiary that generates them, whereby ‘Results’ means any (tangible or intangible) output of the action, as well as any rights attached to it.
- **Joint ownership by several beneficiaries:** whenever results have been jointly generated by two or more beneficiaries and it is not possible to establish the respective contribution, such results shall be jointly owned by the beneficiaries which generated them. In such a situation, the joint owners must agree (in writing) on the allocation and terms of exercise of their joint ownership (‘joint ownership agreement’).
- **Agreement on background:** the beneficiaries must identify and agree (in writing) on the background for the action (‘agreement on background’). ‘Background’ means any data, know-how or information that is held by the beneficiaries before their accession to the Grant Agreement and is needed to implement the action or exploit the results.
- **Access rights:** the beneficiaries have agreed to give each other access – on a royalty-free basis – to the background needed to implement their own tasks under the action.

2.2.1 Open science

As aforementioned issues related to IPR, and licensing agreements will be thoroughly considered to assure the smooth and effective implementation of open science principles in parallel with the innovation and new business model development and respecting the partners’ commercial interests.

The following Open Science practices will be adopted:

- **Early and open sharing of the research:** main hypotheses of experimental work conducted in WP2, WP3, WP4 and primary statistical analyses will be pre-registered. Data and analysis code will be made publicly accessible after publication.



- **Responsible management of research data** in line with the FAIR principles further explained in the Data Management Plan (D1.3)
- **Outputs management** described in the Digital Outputs Management plan (D7.1), allowing to monitor access and re-use of the main project outputs and inform the exploitation strategy accordingly
- **Development of Open educational resources** (WP7) supporting a wider understanding of the key project findings
- **Open peer review of R3PACK scientific publications** deposited in a public repository allowing full open access
- **Citizen Science implementation**, promoting participatory methods securing inclusive research practices and active involvement of end-users in the foreseen process of development through co-design (WP2), co-creation (WP3 - WP4), and co-assessment (WP5) activities.

2.2.2 Third parties' management

Third parties, whether it is industrial partners, washers, technology, or material suppliers, will collaborate with R3PACK's consortium throughout the project. These new parties are important for the project's impact, as on one hand, they allow to cover greater volumes and more food categories for substitution and reuse. They imply more potential adopters of the final solutions, thus ultimately a greater scale up of reusable and fiber-based packaging solutions across Europe. On the other hand, they allow access to better technologies for improved results and avoid blockage in the innovation process, thus increasing chances of R3PACK achieving the set goals for reuse uptake and fiber-based solutions development.

The potential involvement of third-parties results from our strong position to focus on "Derisking". The derisking process entails identifying potential risks beforehand and carrying out a continuous sourcing of solutions (innovations) that could solve any arising issue. In the case a technology, that is part of the consortium, happened to not fulfill the expectations, the chances are likely to be stopped in the action. Therefore, it has been decided to not include specific technologies within the consortium to allow free room for innovation and mitigate risks with the help of "derisking". On occasions it will imply working with third parties to get access to the needed solutions.

The Grant Agreement (Article 9.2) and Consortium Agreement (Article 4.5) provide a legal framework for the management of third parties, securing their compliance with the project rules, as well as the 'referee's' responsibility towards its third party and the consortium. However, to ensure the full respect of confidentiality within R3PACK, a complementary IPR management process specifically for third parties has been implemented.



A Non-Disclosure Agreement (NDA) to be signed between the Third party and the concerned beneficiary ensures the protection of IPR of the Consortium. Any new third-party involved with R3PACK signs a two-party NDA with their «referee». The NDA secures the information shared between the external party and the beneficiary, and by extension all listed parties of R3PACK's consortium. All information related to the R3PACK project is characterized as confidential.

CONCLUSION

This first version of IPR management strategy and procedures describes the currently applied rules and guideline within R3PACK framed by the Grant Agreement and the Consortium Agreement foremost, but also following negotiation meetings between the Parties. Few results and IPR challenges have occurred during the first 6-months of the project. The procedures and strategy will be updated by Month 12.



ANNEX

Annex 1

PARTY	DESCRIBE BACKGROUND (IF APPLICABLE)
FLOREALE	The current state of FLOREALE HOLDING's knowledge and know-how of the state of the art on the transformation process of Fruits and Vegetables: 1st, 4th and 5th range is Needed by another Party for implementation of the Project (Article 16.1 and its Annex 5 Grant Agreement, Section "Access rights to results and background", sub-section "Access rights to background and results for implementing the action") or Exploitation of that other Party's Results (Article 16.1 and its Annex 5 Grant Agreement, Section "Access rights to results and background", sub-section "Access rights for exploiting the results").
FRANDEX	The current state of knowledge and know-how of Frandex related to the conditioning of snack products – including but not limited to technical parameters is Needed by another Party for implementation of the Project (Article 16.1 and its Annex 5 Grant Agreement, Section "Access rights to results and background", sub-section "Access rights to background and results for implementing the action") or Exploitation of that other Party's Results (Article 16.1 and its Annex 5 Grant Agreement, Section "Access rights to results and background", sub-section "Access rights for exploiting the results").
BIOEXTRAX	<p>Bioextrax Background IP consists of two processes: 1. Accumulation of PHA and 2. Extraction of PHA. These can be used independently or be combined.</p> <p>Bioextrax Background IP regarding accumulation of PHAs includes know-how around suitable strains, feeding methods and other fermentation conditions for accumulation of both short and medium chain length PHA. It includes, but is not limited to, a patent-pending method to produce PHA from sucrose (publication no WO 2022/144195).</p> <p>Bioextrax Background IP regarding extraction of PHAs includes a process protocol and microbes for extraction of PHA from PHA-containing biomass, using different bacterial cells and/or its enzymes lysing the cell walls of the PHA producing microbial cells, including pre-treatment for sterilization, separation and post-treatment for separation, water washing with or without detergents/surfactants and drying methods. It includes, but is not limited to, a patented method for extraction of PHAs (EP3224367B1).</p>



RISE	Access to the current state and knowledge of RISE’s esterified lignin, esterified lignin combined with vegetable oil, cellulose microfibrils – including the process to obtain these products and by-products from the process - is Needed by another Party for implementation of the Project (Article 16.1 and its Annex 5 Grant Agreement, Section “Access rights to results and background”, sub-section “Access rights to background and results for implementing the action”) or Exploitation of that other Party’s Results (Article 16.1 and its Annex 5 Grant Agreement, Section “Access rights to results and background”, sub-section “Access rights for exploiting the results”).
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FIBERLEAN	Access to the current state of knowledge and know-how of Fiberlean related to microfibrillated cellulose and derivatives thereof is Needed by another Party for implementation of the Project (Article 16.1 and its Annex 5 Grant Agreement, Section “Access rights to results and background”, sub-section “Access rights to background and results for implementing action”) or Exploitation of that other Party’s Results (Article 16.1 and its Annex 5 Grant Agreement, Section “Access rights to results and background”, sub-section “Access rights for exploiting results”).
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LSDH	The current state of knowledge and know-how of LSDH related to the conditioning of beverages and vegetables – including but not limited to technical parameters is Needed by another Party for implementation of the Project (Article 16.1 and its Annex 5 Grant Agreement, Section “Access rights to results and background”, sub-section “Access rights to background and results for implementing the action”) or Exploitation of that other Party’s Results (Article 16.1 and its Annex 5 Grant Agreement, Section “Access rights to results and background”, sub-section “Access rights for exploiting the results”).
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CANDIA	The current state of knowledge and know-how of Candia related to the conditioning of dairy products (milk , butter , cream , cheeses , etc.), associated filling process and routes to market – including but not limited to technical parameters is needed by another Party for implementation of the Project (Article 16.1 and its Annex 5 Grant Agreement, Section “Access rights to results and background”, sub-section “Access rights to background and results for implementing the action”) or Exploitation of that other Party’s Results (Article 16.1 and its Annex 5 Grant Agreement, Section “Access rights to results and background”, sub-section “Access rights for exploiting the results”).
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SCHREIBER	The current state of knowledge and know-how of SCHREIBER related to the conditioning of dairy products (yoghurt, cream, cheeses, etc.), associated filling process and routes to market – including but not limited to technical parameters is needed by another Party for implementation of the Project (Article 16.1 and its Annex 5 Grant Agreement, Section “Access rights to results and background”, sub-section “Access rights to background and results for implementing the action”) or Exploitation of that other Party’s Results (Article 16.1 and its Annex 5 Grant Agreement, Section “Access rights to results and background”, sub-section “Access rights for exploiting the results”).
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ARWIN (RE)SET	Access to the current state of knowledge and know-how of ARWIN ((RE)SET related to cellulose functionalization to confer barrier properties for packaging and Reusable Standards Packaging thereof is Needed by another Party for implementation of the Project (Article 16.1 and its Annex 5 Grant Agreement, Section “Access rights to results and background”, sub-section “Access rights to background and results for implementing action”) or Exploitation of that other Party’s Results (Article 16.1 and its Annex 5 Grant Agreement, Section “Access rights to results and background”, sub-section “Access rights for exploiting results”).
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