

**D7.1 Plan for Exploitation and
Dissemination of Results
Macarena Sanz (WP7
Coordinator)**





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Include new
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Draft



Contents

1. Summary	5
2. Introduction	5
3. Management of CHIC project communication activities	6
3.1. Objectives:.....	6
3.2. Target Audience	6
3.3. Key Messages	7
3.4. Communication channels.....	8
3.4.1. Website	8
3.4.2. Social Networks	8
3.4.3. CHIC news items for stakeholders	11
3.4.4. CHIC newsletters	11
3.4.5. Brochures and Roll Ups	11
3.4.6. Design and development of CHIC videos	12
3.4.7. Promotion of CHIC project through TV documentary shows.....	12
4. Management of CHIC project dissemination activities	13
4.1. Definition and main objective:	13
4.2. Dissemination of results:	13
4.3. Target Audience:	13
5. Open Access	14
5.1. Definition:	14
5.2. Project's Open Access:	14
6. CHIC IPR Management	15
6.1. Introduction	15
6.2. Main Objectives of the IP Management Activities	16
6.3. IP Management Methodology	17
7. Management of CHIC project exploitation activities	20



1. Summary

The Plan for Exploitation and Dissemination of Results (PEDR) is one of the compulsory reports that H2020 projects are required to submit to the EC. The PEDR summarizes the consortium's strategy and concrete actions to disseminate, exploit and protect the foreground generated by a project and should serve as a guideline to the Consortium for the dissemination and exploitation (D&E) activities to be carried out in the context of the CHIC project.

2. Introduction

The CHIC project is designed to implement New Plant Breeding Techniques (NPBTs) and molecular farming in chicory for using it as a multipurpose crop to produce bioactive, health related products with clear benefits for consumers. Both NPBTs and molecular farming are very promising but at the same time technologies for which acceptance in the EU cannot be readily assumed. Therefore, stakeholder engagement, communication, dissemination, and exploitation activities play a key role within CHIC project in order to foster impact, both within the duration of its H2020 co-funded life-cycle as well as during its possible business-oriented follow-up.

Figure 1 shows the CHIC responsible innovation scheme. CHIC will thus generate a knowledge base for all stakeholders by defining scenarios, roadmaps and best practices to implement NPBTs in general breeding practices while taking into account concepts of Responsible Research and Innovation (RRI). CHIC will particularly address the RRI related demand for a transparent and interactive process by engaging with various stakeholders throughout the project. Thereby CHIC will contribute to enhancing the acceptability, sustainability and societal desirability of the innovation process as well as of the marketable chicory products. Thus, stakeholders over the whole value chain (breeders, growers, processors end-users and consumers) will benefit from CHIC as will be demonstrated by the two business cases (on healthy food fibers and on bioactive terpenes).

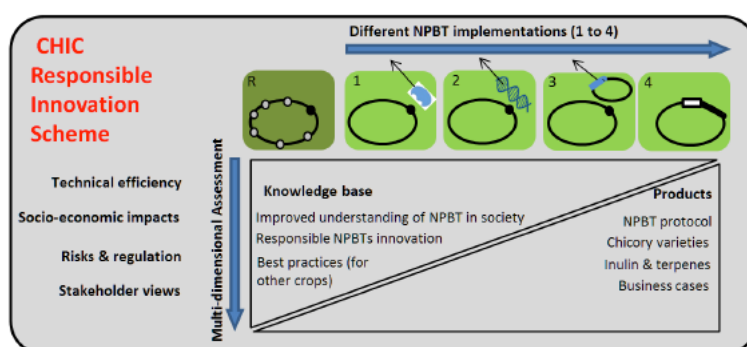


Figure 1: CHIC responsible Innovation Scheme

The aim of this document is to set up the strategies and procedures to manage the communication, dissemination and exploitation of results during the CHIC project. During the project's lifetime, market needs or interests of potential stakeholders may change, results that were not foreseen in the planning phase can develop, or any other number of



unknown variables can come up, that require a close review and regular updates/adjustments of the plans for communication, dissemination and exploitation. The strategy and procedures presented below will be continuously evaluated in order to achieve the maximum impact, so this initial plan for exploitation and dissemination of results may suffer some changes during the project.

3. Management of CHIC project communication activities

3.1. Objectives:

"Communication on projects is a strategically planned process that starts at the outset of the action and continues throughout its entire lifetime, aimed at promoting the action and its results. It requires strategic and targeted measures for communicating about (i) the action and (ii) its results to a multitude of audiences, including the media and the public and possibly engaging in a two-way exchange."¹

The main communication objective of CHIC project is **to increase the public awareness and improve the knowledge base of stakeholders on possible benefits of and challenges for NPBTs to generate valuable natural products which are socially accepted.**

In order to achieve the main objective of CHIC project, it is important to communicate and to make the stakeholders understand:

- What is a NPBT and what are their main differences with conventional breeding and GMO techniques.
- What are the main NPBT safety and regulatory aspects.
- What are the NPBTs benefits for all the stakeholders of the value chain
- What are the main environmental impacts when using NPBTs in agricultural production
- What are the main socio- economic aspects (benefits and costs) when using NPBTs in agricultural production.

3.2. Target Audience

As explained in section 3.3. " Consortium as a Whole", the CHIC consortium aims to achieve the expected impact of the Topic New Plant Breeding Techniques (NPBT) in molecular farming: Multipurpose crops for industrial bioproducts. This expected impact is divided over three major research areas: A. Technology, B. Stakeholder engagement & Communication, and C. Impact assessment & regulation. The consortium has been balanced to represent each of these research areas to a similar and adequate level.

The intended target audience of CHIC project is:

- Industry (SMEs and Large Entities) related to

¹https://ec.europa.eu/research/participants/portal/desktop/en/support/reference_terms.html



- Breeding:
 - Breeders
 - Industry that provides goods and services to breeders
- Farming:
 - Farmers
 - Indirect industry related to agriculture
- Processing industry and consumer product providers.
- Research representatives related to the three major research areas of the project:
 - Technologies: NPBTs, inulin fibers, terpenes
 - NPBTs safety and regulatory issues, business and economics assessment.
- University students that may be interested in the project areas.
- Related EU Projects:
 - Project funded under the same topic: [NEWCOTIANA](#) (Grant nº: 760331)
 - Other H2020 relevant projects funded under H2020- LEIT- BIOTEC.
 - Other H2020 relevant projects funded under "Science with and for society" initiative.
- Public Authorities, ranging from EU institutions and regulatory bodies to national and local administration.
- Public and Private Investors
- Local, national and international press.
- Organizations and associations related to:
 - Consumer associations
 - Schools networks
 - Environmental Associations

In order to comply with the EU regulations on personal data protection, it has been agreed that each partner will follow the actual plan to communicate and disseminate within CHIC project, but they will contact directly to their own network.

3.3. Key Messages

Before designing a dissemination activity, it is necessary to know which questions and issues it addresses, who the recipient is, and which impact we want to have on him/her. The following items will be addressed in the dissemination materials and tools:

- What is the main goal of CHIC?
- Why is CHIC important?
- Why is CHIC relevant for you (targeted to audience)?
- How will CHIC impact on different areas (R&D, socio-economic development, environment, daily life, etc.)?
- Who are CHIC partners?
- Which are the main achievements and results of the project so far?
- Who should I contact if I want to learn more about CHIC?



3.4. Communication channels

The external communication of CHIC project will take place through the following channels:

3.4.1. Website

CHIC website has been designed with inputs from all partners. It has been launched on March 2018.

The website presents a complete description of project concept, activities, objectives and consortium partners, as well as collection of FAQs which will be uploaded to the website within the first six months. The website will be continuously updated with news on the progress of the project.

It will also serve as a platform to keep stakeholders and CHIC followers informed about the progress of the project through the regular publication of articles, posts and updates on the activities of the different WPs. Besides, dissemination materials and e-bulletins can be downloaded directly from the website. A calendar shows the most important upcoming events of the project.

The website contains a link to an intranet available for CHIC partners, where all project documents from different WPs are shared and managed. The website is also linked to the CHIC social networks of the project. It can be visited at <http://chicproject.eu>

Partner nº 17, IDC will be responsible for the maintenance of the website.

Key performance for CHIC website:

It is estimated that during the project duration, CHIC website will have 10.000 visitors in the 2nd year of the project and 40.000 visitors at the end of the project.

3.4.2. Social Networks

Publications using social networks are useful for bringing awareness about the progress of the project, as well as to disseminate the interest of the implementation of NPBTs in chicory in order to establish it as a multipurpose crop. Most of the recommendations set up in the "Social media guide for EU funded R&I projects²" will be implemented in CHIC social networks strategy. The social networks will be used according to the following rationale:

- 1) Dissemination to skilled stakeholders (researchers, industry, PhD students...). The following social networks will be used:
 - Twitter is the social network usually used to inform in a fast and short manner of what is happening in a specific area. Any new related to the project (result,

²http://ec.europa.eu/research/participants/data/ref/h2020/other/grants_manual/amga/soc-med-guide_en.pdf



meeting, conference, publication...) will be published in Twitter and also any relevant news or updates in the fields of CHIC project on a regular basis.

- LinkedIn is the most popular professional social network. With more than 150M users it is the main tool people and companies use to establish commercial relationships. To support exploitation of commercial results LinkedIn can be quite useful that's why it will be used to support this activity during the last year of the project.
- 2) Dissemination to non- skilled stakeholders (target mainly school groups (students and teachers) and society with interest in science but lacking comprehensive awareness). The following social networks will be used:
- Facebook is the most "social" of the social networks. However, companies and professionals use Facebook because of its popularity. It is the most popular social network with more than two billion monthly users. Facebook will be mainly used to raise awareness about NPBTs among general public and mainly among teenagers and university students interested in science. The interaction in the form of likes and comments to the publication is in average higher in Facebook than in other platforms.
 - Instagram has grown to be one of the most popular social networks for photo sharing that the mobile web has ever seen. It's the ultimate social network for sharing real-time photos and short videos while on the go. It will be used to publish nice scientific pictures related to the project.
 - YouTube is the main social network to share videos. Due to the importance of doing communication and dissemination in a very visual way, one of the main objectives of CHIC communication strategy is to communicate using attractive videos. All of them will be accessible for everyone and uploaded to the specific YouTube channel created for CHIC. Scientific videos and videos with less scientific content but related to CHIC project will be uploaded to YouTube.

Partner nº 17, IDC will be the responsible for the maintenance of the website and social networks

Key Performance Indicator for CHIC social networks:

Although in Annex 1, part B of the CHIC Description of the action, it is estimated that CHIC will have 1000 followers during the project life time, the following KPIs are expected per social network:

- LinkedIn: 800 followers for CHIC project
- Twitter: 500 followers for CHIC project
- Facebook: 250 followers for CHIC project
- Instagram: 200 followers for CHIC project



- YouTube followers will be measures in terms of number of views to CHIC project (see section 3.4.6 "Design and development of CHIC videos")



How to use social media

Follow us and share your contents (pictures, news, publications, events, videos) on:

★



@H2020_CHIC



@H2020.CHICproject



@CHIC project



@h2020.chicproject



H2020 CHIC project



www.chicproject.eu

Try to use, whenever you can, hashtags related to the project e.g.: #H2020
 #chicory ; #terpenes ; #inulin
 #research ; #innovation ; #biotechnology ; #bioeconomy
 #PlantBreeding ; #NPBTs ; #MolecularFarming

Use handles in your tweets to maximise visibility e.g.: @EU_H2020
 @BBI2020 ; @EU_ENV ; @EUAgri ; @ERC_Research;
 @EU-EASME ; @EU_Growth

Tag on Instagram @europeancommission and use #InvestEUresearch

IMPORTANT: Please, do not use @CHIC #CHIC they belong to other users, they are not related to our project.



This project has received funding from the EU Horizon 2020 research & innovation programme under grant agreement N. 760891.

Figure 2: How to use social media in CHIC project



3.4.3. CHIC news items for stakeholders

Communication and dissemination through scientific but also non-scientific journals, magazines and newspapers.

IDC will coordinate with partners in each partner country the contact to relevant press and journals in order to make CHIC publications.

In the case that the new/article is published using the local language of the partner e.g.: a new is published in Spanish in a local Spanish magazine; it has been agreed that the English title of the new and a short English abstract will be uploaded to the website with the link to the source of the new. Both, the translated title and abstract needs to be approved by the partner and the author of the new/ article.

Key Performance Indicator:

It is expected that at least five publications in scientific and non-scientific journals, magazines and newspapers will be done during the project. The measuring of the impact of these publications will be also analyzed at a later stage when it is decided which type of publications to be done.

3.4.4. CHIC newsletters

Different CHIC newsletters will be developed during the project to be sent to each group of stakeholders. During the 1st two years of the project two type of newsletters will be sent:

- Newsletters for scientific and technological readers: The newsletter will be developed by partner n° 17 with the support of all WPLs and the project coordinator. It will be sent each six months. The content will be based on the description of the status of the activities of the project, results and dissemination activities (future lectures, attendance to congresses and posters presentations, scientific publications)
- Newsletters for non- scientific and technological readers: The newsletter will be developed by partner n° 17 with the support of partner n° 11 ASSF and partner n° 12 EPSO. The content will be based on teaching about plant breeding techniques for an improved understanding of biotechnology and informed decision making.

At a later stage, when the first results and conclusions appear, the development of different type of newsletter to different target audiences will be considered based on the needs of the stakeholders (policy makers, public authorities, industry, researchers) and messages to be given.

Key Performance Indicator:

Two newsletters developed per year and distributed among partners' networks. Each newsletter should be reach at least 500 readers.

3.4.5. Brochures and Roll Ups





A general leaflet will be created to give a brief but accurate insight into CHIC's main goals, objectives and activities as well as its impact on society. It will be available for partners to be distributed at all events where CHIC will be presented, such as conferences, congresses, and workshops.

At a later stage, when the first results and conclusions appear, the development of different type of brochures to different target audiences will be considered based on the needs of the stakeholders (policy makers, public authorities, industry, researchers, school groups, university students.) and messages to be given.

The roll up (dimensions: 2m x 0,85m) will be produced to catch the attention of stakeholders in public events.

The brochure and roll up will be ready at the end of the first semester of the project. It will be available to be downloaded from the website.

Key Performance Indicator: 1500 leaflets distributed by partners

3.4.6. Design and development of CHIC videos

Partner nº 12, EPSO will make two series of videos and make four video compilations (2-3 min each): two in the beginning of the project (expectations, potential of project partners and SAG members) and two at the end of the project (achievements, follow-up steps from project partners and SAG members).

In the other hand and linked with task 7.7 "Activities aimed at school students and households" an educational, innovative video will be developed and published by partner IDC during the second and third year of the project.

Partners will be encouraged to use videos to communicate and disseminate. All CHIC related videos will be uploaded to the CHIC YouTube channel.

Key Performance Indicator:

- *Two videos developed by EPSO with more than 2.000 views each.*
- *One education video developed by IDConsortium with more with 5.000 views.*

3.4.7. Promotion of CHIC project through TV documentary shows

IDC will coordinate with partners in each partner country the contact TV channels to present CHIC as a relevant project to be disseminated through specific science TV shows.

Key Performance Indicator:

Two documentaries about on TV shows on national channels.



4. Management of CHIC project dissemination activities

4.1. Definition and main objective:

Dissemination can be defined as “The public disclosure of results by any appropriate means (other than resulting from protection or exploiting the results), including by scientific publications in any medium”³

The main objective referred to the dissemination activities is the **transfer of knowledge and results** regarding the benefits and challenges in using NPBTs for products with advantages for consumers, thus opening the access to other audiences that may take an interest in the potential **use of this results**.

4.2. Dissemination of results:

The primary focus regarding the dissemination is to make sure that all the results are made available to the interested audiences through scientific publications. This will help the project to obtain the attention and support from those who will benefit from the results of the project, thus aiding and maximizing the impact of EU-funded research.

The partners will disseminate their results, as soon as possible, unless it goes against their legitimate interest, by appropriate means, which include scientific publications in any medium. IDC will be in charge of transferring these results through the scientific publications previously mentioned, by asking the partners in a monthly basis if they have written any scientific publication related to the project. In the case they have, they need to decide whether they want the content to be public or to protect the contained results due to IP rights.

Before making the scientific document public, there must be a notice to the other parties at least 45 days before the publication, and if there is no objection within 30 calendar days after receipt of the notice, then the publication will be made public. It is important to mention that all results will be screened by the Project Management Team (PMT) and will be prioritized for IP protection or for immediate dissemination, as appropriate.

4.3. Target Audience:

The project results will address specifically the research community, at national and European level, active in the area of NPBTs, the policy makers, at national and European level, that will help in paving the way towards a more sustainable Europe, industrial partners interested in exploiting new ways of manufacturing

³ EC Research & innovation Participant Portal Glossary/Reference Terms



products that will be in line with the needs of society, breeders and farmers involved in growing chicory, and investors interested in helping change the world in which we live by spending in promising techniques. Also civil society groups will be important for the acceptance of NPBTs

5. Open Access

5.1. Definition:

"Open access (OA) refers to the practice of providing online access to scientific information that is free of charge to the end-user and reusable. 'Scientific' refers to all academic disciplines"⁴

The European Commission is in favor of the concept "Open Research" by supporting open access since it is a way to improve innovation in the public and private sectors. If the results from the project are made available to all societal actors, researchers, innovators and the public, they can use these results for their own specific needs, which at the same time will encourage research. It is important to mention that Open Access does not affect the intellectual property, since the decision on whether to look for protection of Intellectual Property rights is made before deciding if open access will be published or not. This means that results can be published after an application for IP protection has been filed.

5.2. Project's Open Access:

Publications in peer-reviewed scientific journals will be the preferred channel for the dissemination of project results to the scientific/technical community. Any member of the consortium may prepare data for publication at any time, but before submission there will be a mechanism agreed with all other partners for project internal-peer review. These rules will be defined in the Consortium Agreement.

IDC will make sure that publications are provided with Open Access with the following two steps.

First IDC will assure that the publication is deposited in a suitable repository and in a "machine readable" format that can be understood by any computer. This with the aim of allowing the interested audiences to develop new tools for working with the documents, which means that scanned versions of the publications will not be allowed.

Second, IDC will assure that an open access route has been selected, depending on the criteria selected by the author of the publication, which can be the publication of the scientific document immediately after the final reviewed manuscript has been accepted

⁴ H2020 Programme: Guidelines to the Rules on Open Access to Scientific Publication and Open access to Research Data in Horizon 2020.



for publication (green open access) or immediately by the publisher upon publication (gold open access). After doing so, this will allow open access to publications as soon as possible, and in any case with no more than 6 months after the publication was uploaded. It is mandatory to provide open access to the metadata with a persistent identifier, like the Digital Object Identifier (DOI).

In our case, each beneficiary must ensure open access to all peer-reviewed scientific publications relating to its results, except where they want to protect IP rights. Access will be provided either via the published version or the final peer-reviewed manuscript accepted for publication. To meet the requirement about ensuring that publications can be read online, downloaded and printed, free of charge, all CHIC's publications will be listed on the project website and linked via DOI to the corresponding publication page. The consortium will pursue an open access strategy and it is therefore envisaged that most articles will be available for download as PDF files directly from the project website.

6. CHIC IPR Management

6.1. Introduction

One cannot speak about the concepts of communication, dissemination and exploitation in Horizon 2020 projects without clarifying the term project results. It is a central reference point in all three definitions, and it is fundamental when implementing any relevant activities.

In the Horizon 2020 programme project results are defined as:

"Any tangible or intangible output of the action, such as data, knowledge and information whatever their form or nature, whether or not they can be protected, which are generated in the action as well as any attached rights, including intellectual property rights."⁵

Results encompass all project outcomes that may be used by the project partners or other relevant stakeholders outside the project. They have the potential to be either commercially exploited (e.g. concrete products or services) or lay the foundation for further research, work or innovations (e.g. Novel knowledge, insights, technologies, methods, data).

Project outputs become available throughout the course of project – not only towards the end – therefore it is essential to closely capture, monitor and manage results (including the accompanying IP Rights) over the entire lifetime of the project and adjust communication activities, as well as dissemination and exploitation plans accordingly. Regularly keeping track of the project's progress will not only help capture results once they are achieved but will also help identify possible outcomes that were not originally foreseen at the start of the project.

The work to be performed by all project partners will lead to the development of a wide range of results, these results must be acknowledged as valuable intangible assets generated throughout the project.

The resulting intangible assets generated will include both intellectual property such as Patents, Trademarks, Copyrights or Trade Secrets and other subtler assets such as new knowledge, lessons learned, improved processes, or even increased reputation and

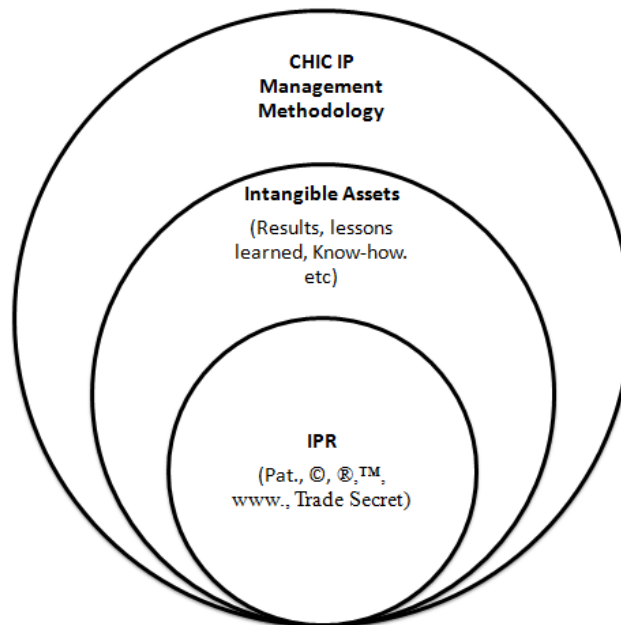
⁵ https://ec.europa.eu/research/participants/portal/desktop/en/support/reference_terms.html



awareness raised through the development of a project website, project name and logo and the publication of relevant content.

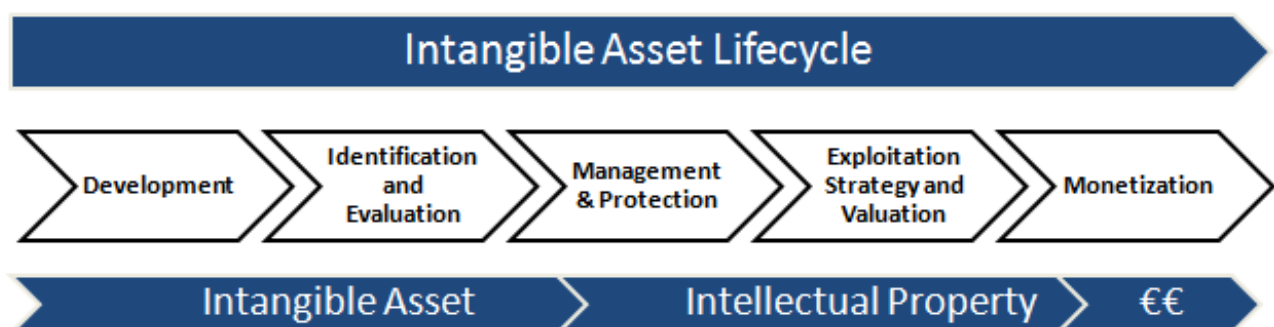
The IP management methodology to be implemented must take into account all these intangible assets in order to effectively improve the exploitation perspectives of the project results

Figure 2: CHIC Management Methodology



The main goal of the IP management methodology that will be implemented is to monitor, control and guide all project partners through the lifecycle of intangible asset development.

Figure 3: Intangible Asset Lifecycle Diagram



6.2. Main Objectives of the IP Management Activities

The main objectives of the Intellectual Property Management activities to be implemented will be:

- To ensure proper IP management during the project and raise IP awareness within the consortium balancing confidentiality requirement for IP protection and the wider dissemination of results.



- To support the formulation and implementation of a global publication and dissemination strategy.
- To regularly examine and update the project exploitation perspectives
- To provide guidance for exploitation strategies of project results that could fit or be aligned with each partner's strategic business goals and could maximize the socioeconomic impacts of the project.

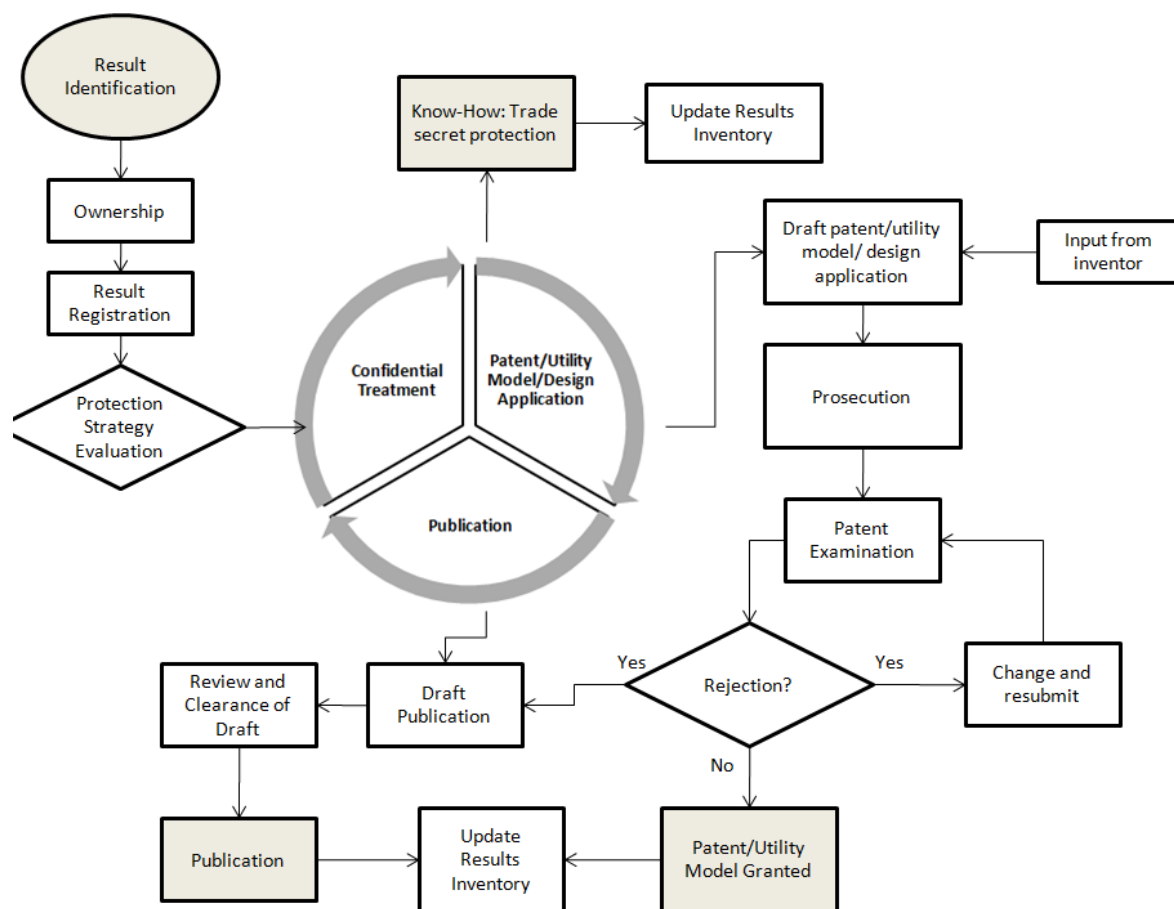
6.3. IP Management Methodology

All the aforementioned intangible assets that will be generated throughout the project must be properly **identified, assessed, managed, protected and exploited** to maximize the future impact of the project, bridge the gap into the market and provide long-term competitive advantage for the exploitation of the project results. The main activities that will be carried out throughout the CHIC project in terms of IP Management can be broken down into 4 groups:

1. **Identification of Results:** One of the key aspects to consider in order to implement a successful IP management methodology is to have the internal capabilities within the consortium to **identify** the results being generated on a regular basis. To achieve this, we will carry out the following "intangible asset and results audits" throughout the project:
 - One initial audit upon signature of the consortium agreement to identify the background IP (i.e. patents, know-how, software, etc.) held by the partners prior to the project and that they will provide to the consortium for the joint development of the project. The access rights to these assets will be clearly defined.
 - An Intangible asset and results audit to be performed annually at the annual progress meetings to update the background IP with the results and new knowledge generated during the project. This audit will also involve clearly defining the contribution of each consortium partner to the identified results and clarifying any ownership issues that may arise prior to initiating the definition of exploitation strategies.The results from these audits will be recorded in a common project spreadsheet which will be confidential and only shared within the consortium and the EC for reporting purposes.
2. **Assessment of Results:** To guarantee proper protection, all results generated during the project will be carefully assessed in terms of the state of the art, the technological landscape and the most suitable IP protection strategy before they are further disseminated. For that purpose, all results presented in reports or at project meetings will be initially treated as confidential (and labeled using confidentiality notices), until they are either properly protected or decided to be free for public dissemination by the partners(s) involved in the development of this result. The main procedure that will be implemented during the project to assess the most suitable protection strategy will be the following:



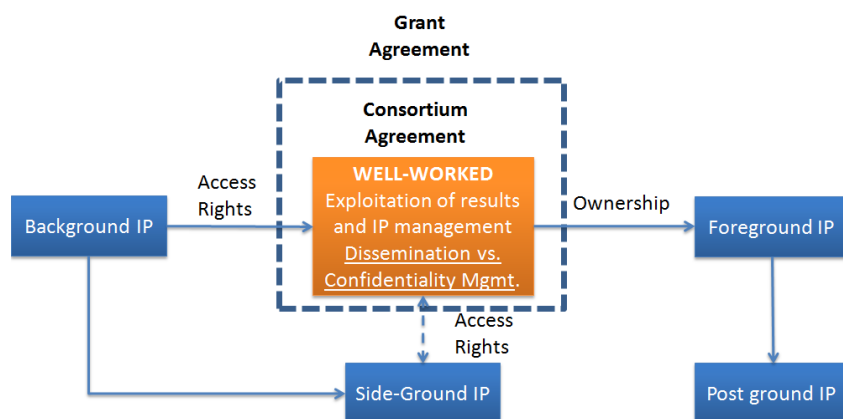
Figure 4: IPR Management CHIC procedure



3. **Management of IP issues:** For the general **management** of all the identified results and intangible assets generated all project partners will follow the provisions provided by the consortium agreement as their guide, together with the Grant Agreement. For this project the consortium agreement signed was the latest version of the DESCA H2020 MGA. All partners have already identified the background IP that they will bring to the project and defined the access rights to the consortium partners. The legal framework for the IP management of this project can be summarized by the figure below:



Figure 5: Legal Framework for IP management



The consortium agreement states clearly that any result generated during the implementation of the project shall be owned by the partner/s that generates it.

The allocation of ownership of the IP generated and identified must be addressed on the annual IP audits as previously mentioned. Joint ownership of results and other issues that may arise with generated IP, such as sharing of revenues or prosecution costs will be treated on a case by case basis.

In addition, to the management framework provided by the consortium agreement, an effective IP and knowledge management procedure will be reinforced through internal communication activities aimed at building a culture of IP awareness within the consortium and through implementing knowledge management best practices within the project to retain all relevant project documentation in a central repository and gathering lessons learned at the end of the project.

With regards to the management of the research data generated, the project will NOT opt-out of the Open Research Data Pilot; therefore, in order to manage the data in an effective way, the following measures will be implemented:

- All the research data, including associated metadata that are needed to validate the results published in scientific publications, will be deposited in a research data repository and will be made accessible for third parties to access, mine and reuse free of charge. In addition to this, the CHIC partners will provide information on the tools and services that were used to extract insights from the data and could be used by third parties to validate them, whenever possible, these tools and instruments will be provided.
- For other data and metadata that is not supporting scientific publications the goal will be to make it publicly available and free of charge. However, a more detailed Data Management Plan which will be developed during the first 6 months of the project will determine which kind of data will not be provided in open access because it could potentially jeopardize the achievement of the project goals, could lead to biased or incorrect conclusions or could potentially breach confidentiality, security, privacy or personal data protection obligations.



- The data management plan (DMP) mentioned previously will address in detail the implications of data ownership, data protection, privacy, confidentiality, liability and consumer protection that apply to the project. This DMP will be developed under WP7-Communication, Dissemination and Exploitation of Project Results.

4. IP Protection: With the previous steps fully implemented within the project, the consortium is equipped with sufficient tools to analyze in detail the most appropriate protection strategy for an identified result.

The Partners shall agree on the protection methods for any generated IP relevant for the exploitation of the project's results and each Partner should bear any related costs to obtain protection of their own IP. If a Partner decides not to protect Results, that Partner shall consult the other Partners, which may wish to acquire ownership of those Results.

The following table summarizes the protection mechanisms that are anticipated to be used to ensure that no potential rights are lost through accidental disclosure of results.

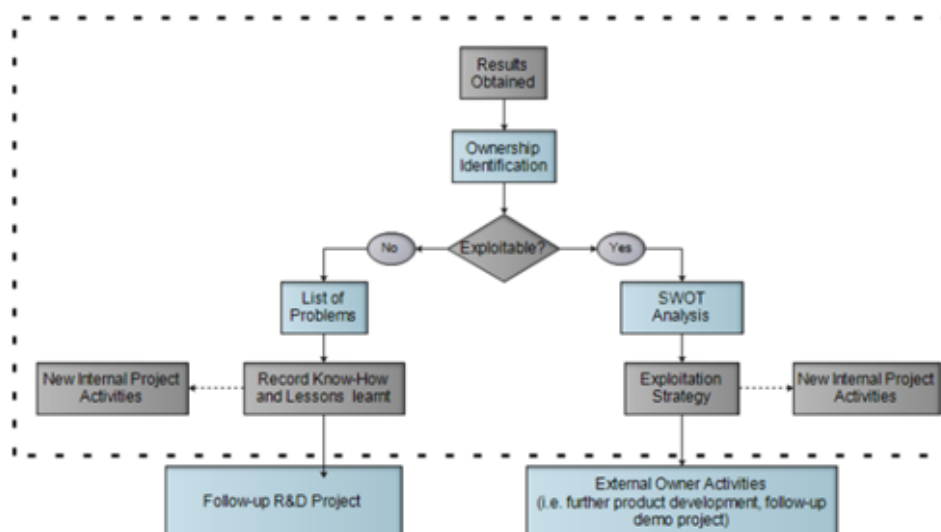
Formal IP Protection Methods	Contractual Knowledge Protection Methods	Other Protection Methods
Patents, Utility Models, Designs, copyright, trademark trade secrets	Non-Disclosure Agreements, IP provisions in contracts and employment agreements, invention disclosure and assignment forms	Cybersecurity, access rights, awareness raising

7. Management of CHIC project exploitation activities

In order to formulate strategies that leverage the generated results, knowledge and IP for further exploitation, the following procedure will be used to guide all partners through a strategic evaluation process:



Figure 6: Management of CHIC exploitation activities



Some possible forms of exploitation that could be foreseen for the results and IP generated during the project include:

- **Possible Knowledge Transfer Channels:**

- Public Dissemination:** Involves disseminating the results generated during the project via publishing or through presentations and attendance to events or conferences. The publications will be carried out through an open access model. This knowledge transfer channel will be especially relevant for all the researchers involved in the project.
- Further Internal Research:** Involves using the results for additional research after the project. This could be especially relevant for the RTDs involved in the project.
- Collaborative Research:** Involves the use of the results as background of future collaborative research projects. This will be especially relevant for the RTDs involved in the project.

- **Possible Commercialization Channels**

- Licensing:** Involves allowing other organizations to exploit the results through out-licensing them. This could be relevant for all project participants.
- Assignment:** Involves the results being exploited by other organisations by the transfer of ownership. This could be relevant for all project participants
- Joint Venture:** Involves using the results as background for a joint venture. This could be relevant for all project participants
- Spin-Off:** Involves the creation of a separate company established in order to bring to the market technology resulting from the project. This could be relevant for all project participants but especially relevant for universities, RTDs and academic institutions
- Internal Product Development:** Involves using the results for developing, creating and marketing a product/process. This could be relevant for the companies and SMEs in the project.



- f. **Internal service creation:** Involves using the result in creating and providing a service such as consultancy services. This could be relevant for the companies and SMEs in the project.

At the end of the project, a detailed PEDR plan will be developed addressing the main project objectives: 1) to implement New Plant Breeding Techniques (NPBTs) in chicory in order to establish it as a multipurpose crop for the production of health-related products with clear benefits for consumers, and 2) to develop co-innovation pathways with stakeholders for game-changing technologies, such as NPBTs.

By definition, the Plan for the Exploitation and Dissemination of Results is a document which summarizes the beneficiaries' strategy and concrete actions related to the protection, dissemination and exploitation of the project results.

In practice, the PEDR will need to be updated during the implementation of the project and beneficiaries are required to report periodically to the European Commission the concrete dissemination and exploitation activities carried out. **Taking this into account PEDR should be an open and "living" document updated during the project with the participation of all the project Partners.**

As a general principle, each PEDR must be tailored to the particular Horizon 2020 funding scheme and the topic conditions under the specific call for proposals. In this regard the PEDR for **Research and Innovation**, Innovation and SME Actions should demonstrate **a high level of innovation and focus on the business opportunity and concept for commercialization, such as development of new innovative products and services, compared to competing solutions.**

The final PEDR will define clear objectives adapted to the relevant target users and set up a concrete protection, exploitation and dissemination actions. This strategy will give an orientation as to the organization of the planned project activities and therefore will address as a minimum the following questions:

- What kind of needs does the project respond to?
- What kind of problem the proposed solution will solve and why this solution will be better than existing ones and in which areas?
- What new knowledge (results) the project will generate (assessment of the state of the art)?
- Who will use these results?
- What benefits will be delivered and how much benefit?
- How will end users be informed about the generated results?

Answers for the above questions will help to prepare a Business Model Canvas (BMC) sheet which allows participants to better outline increased economic impact of the project activities. As a result of BMC analysis, the PEDR will identify and address potential end-users and uses of the results that will be generated. It can also be very valuable input into creation of the Business Plan for the project.

The following key considerations will be analysed in detail throughout the project and will be reflected in the final PEDR:

1. Market analysis





Potential geographical coverage and economic size of the target markets where project results will be exploited and disseminated will be performed to regularly examine and update the project exploitation perspectives

2. End-users analysis

Potential users, main competitors and competitive advantages will be analysed to check some possible forms of exploitation that could be foreseen for the results of the project, these include:

- Possible Knowledge Transfer Channels
- Possible Commercialization Channel

3. IP Protection, Freedom to Operate and State of the art

The IP management procedure described in the previous section, together with the development of a patent landscape report will help analyse the state of the art and ensure freedom to operate. This patent landscape will be a valuable input for the development of an exploitation plan as it will provide insights on the technological trends, state of the art, key players and other external factors that could affect the exploitation perspectives of the IP generated throughout the project

4. Business Model exploitation

Depending on the project results Partners could address issues such as proof of concept, prototyping, demonstration of cost effectiveness, standardisation issues and potential regulatory requirements. The roadmap for the business model exploitation will be prepared to formulate and implement a global publication and dissemination strategy.

5. Management and measuring of the project results

Exploitable results/know-how will be generated throughout the project. All the results should be collected and processed in the table below. The table 1.1 will be made and updated after each annual meeting:

Exploitable Result	Application	End-user	Anticipated Exploitation Strategy	Partner/s involved	Time to market