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# Cross-cutting aspects of European R+I proposals

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# KEY COMPONENTS OF THE COMMUNICATION, DISSEMINATION AND EXPLOITATION PLAN

- NOTE: The communication and dissemination plan is crucial for (i) effectively sharing project outcomes, (ii) maximizing impact, and (iii) engaging relevant stakeholders.

## 1. COMMUNICATION STRATEGY

- Clear project messaging and branding
- Target audience identification
- Channels of communication (e.g., website, social media, newsletters)
- Stakeholder engagement activities

## 2. DISSEMINATION STRATEGY

- Objectives and target groups for dissemination activities
- Tailored dissemination activities (e.g., workshops, conferences, webinars)
- Publications, reports, and scientific articles
- Intellectual Property Rights (IPR) considerations

## 3. EXPLOITATION STRATEGY

- Identification and protection of project results with potential for exploitation (IPR Management)
- Commercialization or market uptake plans
- Industry collaboration and technology transfer activities
- 2 Strategies for maximizing the impact and sustainability of project results

## KEY COMPONENTS OF THE COMMUNICATION, DISSEMINATION AND EXPLOITATION PLAN

### Common barriers to effective Communication, Dissemination and Exploitation activities

- Not clear perception of the difference between communication, dissemination, and exploitation.
- Focusing on implementing and validating technical objectives, as they often wrongly consider that working on these concepts (especially exploitation) is still too early (this is a common practise for programmes with lower starting [Technological Readiness Level \(TRL\)](#)).
- Limited considerations of what can be valuable key results of the project and/or lack of interest from the partners to consider the value and potential unique selling points (USPs) of the key results outside their own (commercial, academic) communities.
- Lack of reflection and joint discussions within the consortia in collaborative projects.

## KEY COMPONENTS OF THE COMMUNICATION, DISSEMINATION AND EXPLOITATION PLAN

**Dissemination** is making sure the projects results are available to the scientific community, policy makers and industry – using scientific language prioritizing accuracy. **Communication** activities, on the other hand, can be thought of as increasing the public visibility of the project and its results using accessible language. This could include aiming for coverage in TV, radio, print and online media.

ACTION	DISSEMINATION	COMMUNICATION
<b>Objectives</b>	Public disclosure of results	Promotion of the project and its results
<b>Audience</b>	Target groups, such as scientific communities, industry stakeholders, policy-makers, etc.	General public, including EU citizens, civil society and mass media
<b>Language</b>	Scientific language	Non-specialised language
<b>Channels</b>	Peer-review journals, scientific conferences, online repository of results, etc.	TV channels, radio, newspapers, generalist website, newsletters, etc.

## KEY COMPONENTS OF THE COMMUNICATION, DISSEMINATION AND EXPLOITATION PLAN

Action	Communication Activities	Dissemination Activities	Communication Channels	Dissemination Channels
<b>Publications</b>	Non scientific Publications	Scientific publications	Press release, Newsletter, News sites articles, Blogs	Articles in scientific magazines and blogs
<b>Events</b>	Events for the general public	Stakeholders events	Open Doors, Public talks	Market showcase B2B networking
<b>Online</b>	Online promotion	Online disclosure of results	Generalist website, Social media	Online repository of results, Social media
<b>Meetings</b>	Two-way exchanges with citizens	Stakeholders engagement	Citizens Blog and Prizes, Photo contest, Surveys, Interviews	Feedback sessions, Industrial events, Training sessions
<b>Media</b>	Mass media campaign	Presentations in scientific conferences	Newspapers, Local TVs, Radios	Scientific conferences, workshops and seminars
<b>Materials</b>	Promotional material	Conferences proceedings	Leaflet Brochure Poster	Publication of proceedings

# BEST PRACTICES FOR COMMUNICATION AND DISSEMINATION

## 1. CLARITY AND CONSISTENCY

- Ensure clear and concise project messaging
- Maintain consistency in branding and communication materials

## 2. STAKEHOLDER ENGAGEMENT

- Identify key stakeholders and tailor messages to their needs
- Foster dialogue and collaboration through regular interactions

## 3. DIVERSE COMMUNICATION CHANNELS

- Utilize a mix of channels (e.g., website, social media, events)
- Consider different formats (e.g., infographics, videos, blog posts)

## 4. TIMING AND FREQUENCY

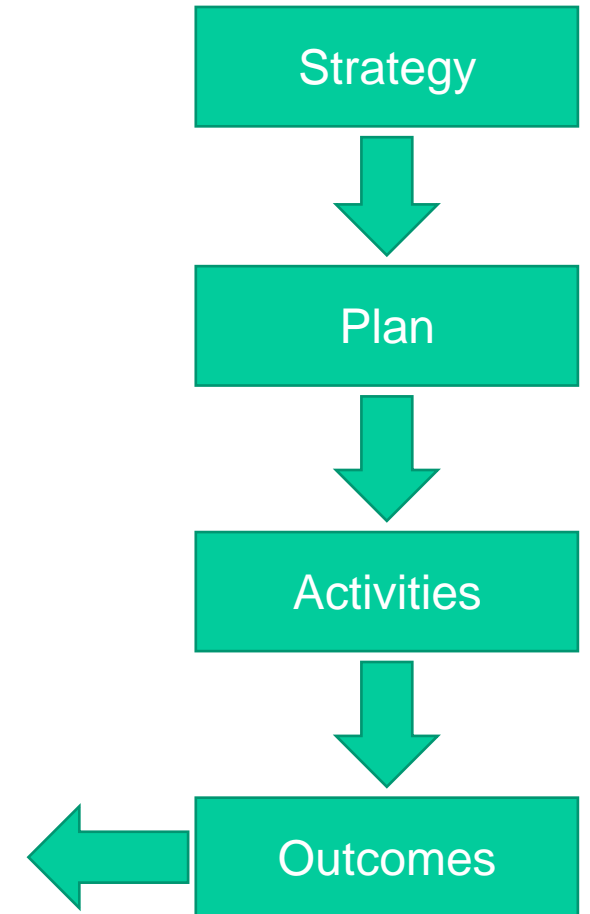
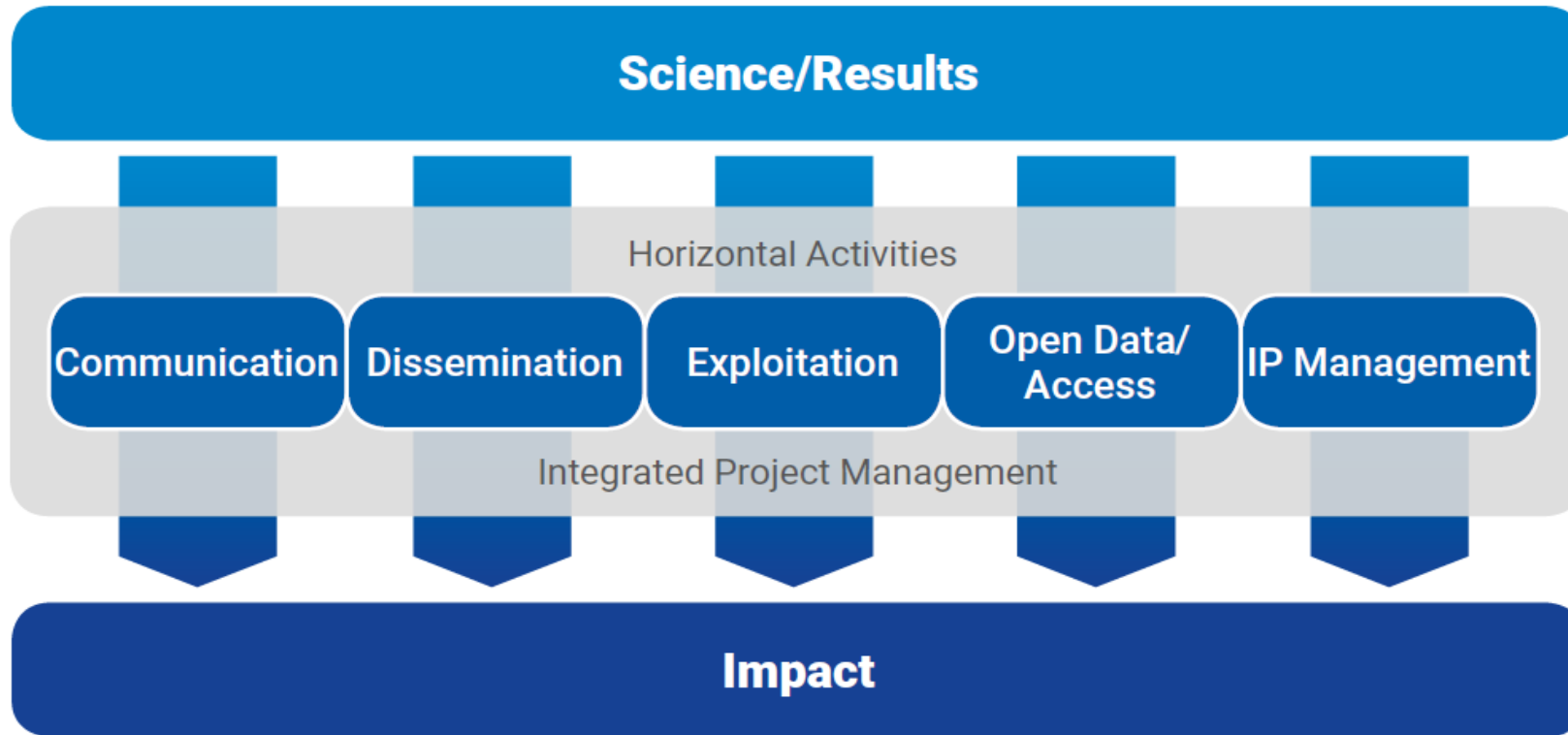
- Plan communication activities throughout the project lifecycle
- Regularly update stakeholders on project progress and milestones

## 5. EVALUATION AND FEEDBACK

- Collect feedback from stakeholders to assess effectiveness
- Monitor and evaluate the impact of communication and dissemination efforts

# KEY CONSIDERATIONS FOR PROTECTING RESEARCH RESULTS

*Keeping track of communication, dissemination and exploitation means keeping track of your project!*



## KEY CONSIDERATIONS FOR PROTECTING RESEARCH RESULTS

NOTE: Protecting research results is essential to safeguard intellectual property, encourage innovation, and ensure the project's long-term impact.

### 1. INTELLECTUAL PROPERTY (IP) ASSESSMENT

- Identify potentially protectable research results
- Conduct IP searches and evaluations
- Determine suitable IP protection mechanisms (e.g., patents, copyrights)

### 2. IP MANAGEMENT PLAN

- Define the project's IP management strategy
- Establish roles and responsibilities within the consortium
- Outline procedures for IP creation, ownership, and exploitation



## KEY CONSIDERATIONS FOR PROTECTING RESEARCH RESULTS

### 3. CONFIDENTIALITY AND NON-DISCLOSURE AGREEMENTS

- Implement measures to protect sensitive information
- Establish agreements with consortium partners and third parties
- Safeguard confidential research data and know-how

### 4. DISSEMINATION AND EXPLOITATION

- Balance the need for protection with the dissemination of results
- Define appropriate licensing or exploitation models
- Consider commercialization strategies and potential industry partnerships

**NOTE:** A comprehensive approach to protecting research results ensures the project's competitiveness, value, and impact.

# BEST PRACTICES FOR PROTECTING RESEARCH RESULTS

## 1. EARLY PLANNING IP STRATEGY

- Integrate IP considerations into the project's planning phase
- Develop an IP strategy aligned with project objectives
- Engage IP experts and consultants, if necessary

## 2. CONSORTIUM AGREEMENT

- Establish clear rules on IP ownership, management, and exploitation
- Results are owned by the beneficiaries that generate them. Given the collaborative nature of most projects, some results can be jointly developed by several participants. Hence, situations of joint ownership might arise.
- Define mechanisms for resolving IP-related disputes within the consortium
- Address provisions for managing joint ownership of IP rights

## 3. PROTECTION MECHANISMS

- Identify appropriate protection mechanisms for different types of results
- File patent applications, register copyrights, or use trade secret protection
- Regularly review and update IP protection strategies

## BEST PRACTICES FOR PROTECTING RESEARCH RESULTS

### 4. COLLABORATION WITH INDUSTRY AND KNOWLEDGE TRANSFER

- Explore collaborations with industry partners for IP commercialization
- Establish technology transfer mechanisms and licensing agreements
- Leverage support from Intellectual Property Rights (IPR) helpdesks or experts

### 5. MONITORING AND ENFORCEMENT

- Regularly monitor the market for potential infringements
- Implement enforcement strategies to protect IP rights
- Maintain records and documentation to support IP enforcement actions

# KEY CONSIDERATIONS FOR AI TRACEABILITY, REALIABILITY AND ROBUSTNESS

NOTE: Ensuring AI traceability, reliability, and robustness is crucial for building trust, addressing ethical concerns, and promoting responsible AI development and deployment.

## 1. TRACEABILITY

- Data Governance: Establish transparent data collection, processing, and storage practices.
- Algorithmic Transparency: Document and explain the decision-making processes of AI systems.
- Record Keeping: Maintain comprehensive records of data sources, model versions, and system configurations.

## 2. RELIABILITY

- Bias Mitigation: Identify and mitigate biases in training data and algorithms.
- Validation and Testing: Implement rigorous testing procedures to ensure system performance and reliability.
- Monitoring and Maintenance: Continuously monitor and maintain AI systems to address performance degradation and emerging risks.

# KEY CONSIDERATIONS FOR AI TRACEABILITY, REALIABILITY AND ROBUSTNESS

## 3. ROBUSTNESS

- Adversarial Attacks: Assess and enhance AI systems' resilience against malicious attacks and attempts to manipulate data or algorithms.
- System Resilience: Design AI systems to operate effectively in diverse and changing environments.
- Explainability: Develop methods to provide explanations for AI system outputs and actions.

[Directrices éticas para una IA fiable](#)

[Coordinated plan on artificial intelligence 2021 review](#)

[Fostering a European approach to artificial intelligence](#)

[Artificial intelligence – critical industrial applications](#)

## KEY CONSIDERATIONS FOR AI TRACEABILITY, REALIABILITY AND ROBUSTNESS

### Siete requisitos esenciales para lograr una inteligencia artificial fiable

- 1. Intervención y supervisión humanas:** Los sistemas de inteligencia artificial deben facilitar sociedades equitativas, apoyando la intervención humana y los derechos fundamentales, y no disminuir, limitar o desorientar la autonomía humana.
- 2. Robustez y seguridad:** La fiabilidad de la inteligencia artificial requiere que los algoritmos sean suficientemente seguros, fiables y sólidos para resolver errores o incoherencias durante todas las fases del ciclo de vida útil de los sistemas de inteligencia artificial.
- 3. Privacidad y gestión de datos:** Los ciudadanos deben tener pleno control sobre sus propios datos, al tiempo que los datos que les conciernen no deben utilizarse para perjudicarles o discriminarles.
- 4. Transparencia:** Debe garantizarse la trazabilidad de los sistemas de inteligencia artificial.
- 5. Diversidad, no discriminación y equidad:** Los sistemas de inteligencia artificial deben tener en cuenta el conjunto de capacidades, competencias y necesidades humanas, y garantizar la accesibilidad.
- 6. Bienestar social y medioambiental:** Los sistemas de inteligencia artificial deben utilizarse para mejorar el cambio social positivo y aumentar la sostenibilidad y la responsabilidad ecológicas.
- 7. Rendición de cuentas:** Deben implantarse mecanismos que garanticen la responsabilidad y la rendición de cuentas de los sistemas de inteligencia artificial y de sus resultados.

# BEST PRACTICES FOR AI TRACEABILITY, RELIABILITY, AND ROBUSTNESS

## 1. ETHICAL FRAMEWORK AND GOVERNANCE

- Adhere to ethical guidelines and frameworks for AI development and deployment.
- Establish clear governance structures for ensuring responsible AI practices.
- Involve multidisciplinary expertise, including ethics, law, and social sciences.

## 2. DATA MANAGEMENT AND QUALITY

- Adopt robust data management practices, including data collection, labeling, and preprocessing.
- Ensure data quality, accuracy, and representativeness, while addressing bias and discrimination.
- Implement data privacy and security measures to protect sensitive information.

## 3. EXPLAINABILITY AND INTERPRETABILITY

- Develop AI models and algorithms that can provide explanations for their outputs and actions.
- Enable users to understand the factors influencing AI system decisions.
- Foster user trust by making AI systems more interpretable and accountable.

# BEST PRACTICES FOR AI TRACEABILITY, RELIABILITY, AND ROBUSTNESS

## 4. CONTINUOUS MONITORING AND EVALUATION

- Implement ongoing monitoring and evaluation mechanisms for AI systems in real-world settings.
- Collect feedback from users and stakeholders to identify and address potential issues.
- Regularly update and improve AI models and algorithms based on performance evaluations.



## KEY COMPONENTS OF THE PLAN OF EXPLOITATION

NOTE: The Plan of Exploitation is a strategic roadmap that outlines the steps and considerations for maximizing the impact and exploitation of project results. The Plan of Exploitation integrates strategic considerations such as FTO, technology surveillance, market analysis, and a solid business case to drive successful exploitation of project results.

### 1. FREEDOM TO OPERATE (FTO)

- Assess the legal and intellectual property landscape related to project results
- Conduct FTO analysis to identify potential risks and ensure freedom to operate
- Develop strategies to address any identified constraints and mitigate risks

### 2. TECHNOLOGY SURVEILLANCE

- Implement technology intelligence and monitoring practices
- Stay updated on emerging technologies and market trends relevant to the project
- Identify opportunities for further development or adaptation of project results

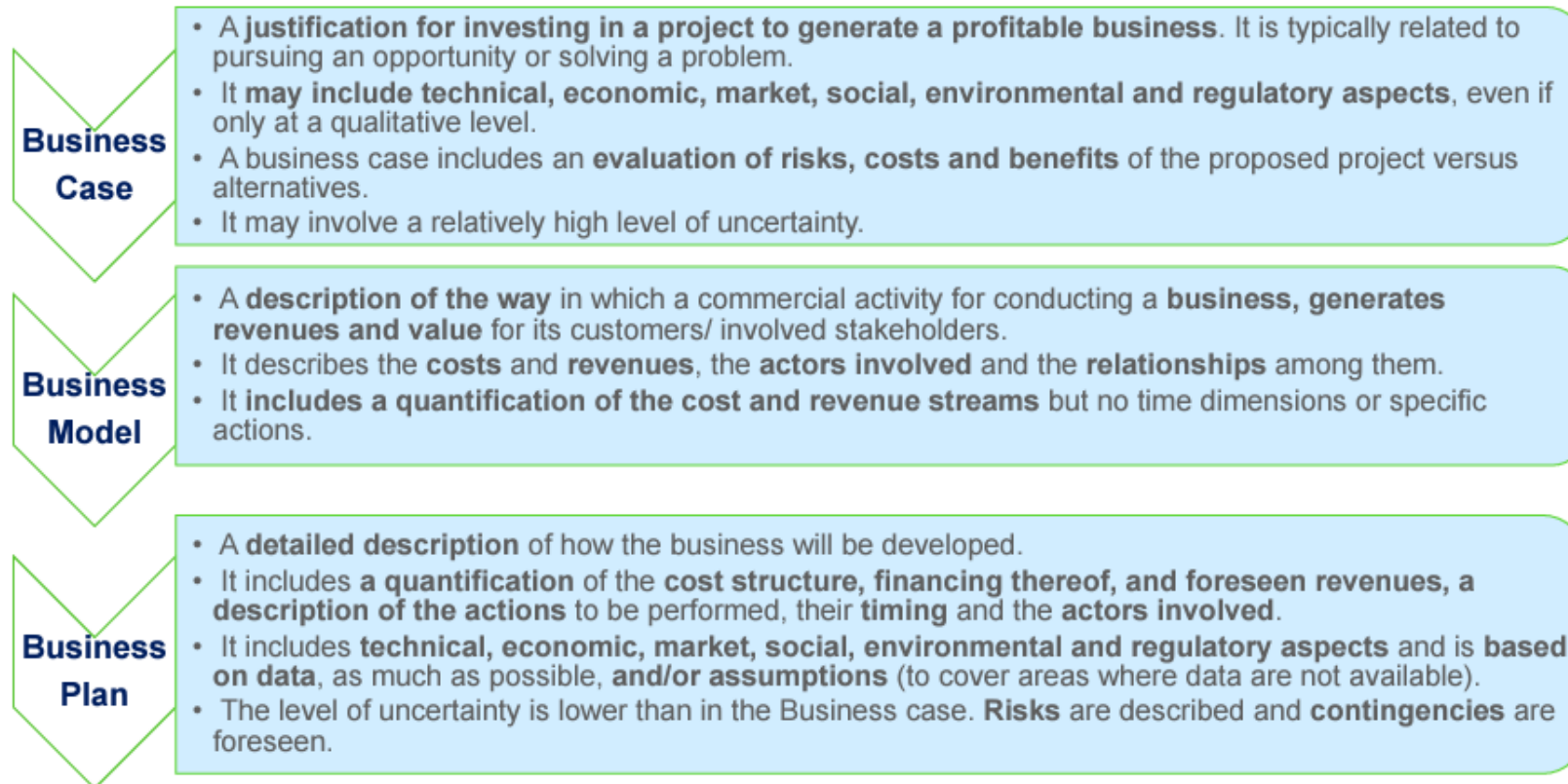
### 3. MARKET ANALYSIS

- Conduct market analysis to assess the commercial potential and market demand for project results
- Identify target markets, customer segments, and potential competitors
- Analyze market dynamics, trends, and regulatory factors influencing the commercialization strategy

# KEY COMPONENTS OF THE PLAN OF EXPLOITATION

## 4. BUSINESS CASE/MODEL/PLAN

- Develop a comprehensive business case or model that outlines the commercialization strategy
- Define the value proposition, revenue streams, cost structure, and scalability of the project results
- Create a detailed business plan to guide the implementation and execution of the commercialization strategy



## KEY COMPONENTS OF THE PLAN OF EXPLOITATION

### WHY SHOULD ONE INCLUDE A BUSINESS PLAN INTO A HORIZON EUROPE PROPOSAL?

#### 1. BUSINESS MODEL

**Direct sales:** this is a quite common practise for targeting customers at a local level (national, adjacent countries) and with customers that you have already established commercial relationships e.g. for other business activities. Direct sales are also quite common for big enterprises that have an established pan-European or global commercial network

**Distribution network:** smaller companies and SMEs usually follow this path aiming to expand in new markets (e.g. new regions and territories) where they have no contacts. In this case, a basic commission plan is good to be included

**Licensing:** this is another way to reach multiple markets, via receiving a royalty for allowing third parties to commercially use your final offering. Nevertheless, the protection of the innovation (patent, copyright, trademark, trade secret) is a key asset to guarantee the protection of the intellectual property of the applicants

## KEY COMPONENTS OF THE PLAN OF EXPLOITATION

### WHY SHOULD ONE INCLUDE A BUSINESS PLAN INTO A HORIZON EUROPE PROPOSAL?

#### 2. PRICING STRATEGY

A preliminary pricing strategy is important to be presented in the proposal, as this (i) quite often constitutes a key differentiation point with the state-of-the-art solutions, that already exist in the market. To enhance the potential pricing advantage of your solution, you can include a brief but solid cost-benefit analysis with the dominant competing technology in the respective market; (ii) will lead to and justify the P&L statement.

#### 3. SUPPLY CHAIN

It is also important to demonstrate the value chain of your final product (especially regarding physical products). Disclosing names of your partners/suppliers and brief justification for the major ones will add value in the proposal. Although, it is quite common that the applicants have not decided the final supplier of a specific material, you can provide a list of potential suppliers you are considering collaborating with.

## KEY COMPONENTS OF THE PLAN OF EXPLOITATION

### WHY SHOULD ONE INCLUDE A BUSINESS PLAN INTO A HORIZON EUROPE PROPOSAL?

#### 2. PROFIT & LOSS STATEMENT

- Rows that can consist of sales volume (in units, kgr, m2 – depending on the final product), revenues, costs and EBITDA (in euros) and the final return on investment (ROI). These are the basic information to be included, although any additional data such as detailed costs (e.g. personnel, direct/indirect costs) are more than welcome.
- Columns, one per year after the end of the project. Although there is not a specific requirement from the EC template regarding the number of years, a 5-year projection period is the common practise. The reason is that 5 years is a period that the innovation shall prove its market potential, resulting not only in a full payback of the initial investment but also in a promising ROI. Nevertheless, in projects with non-physical final product (e.g. a mobile application), the market entrance shall be more rapid. This is mainly because of the nature of these products, as the development and innovation move at a much faster pace; thus, it is important to penetrate the market as fast as possible not to lose the first-mover advantage.

## KEY COMPONENTS OF THE PLAN OF EXPLOITATION

### WHY SHOULD ONE INCLUDE A BUSINESS PLAN INTO A HORIZON EUROPE PROPOSAL?

#### 2. PROFIT & LOSS STATEMENT

##### But, how do we calculate the ROI?

The official ROI equation is the following:  **$ROI = (Cumulative\ profit - Investment) / Investment$**  where *cumulative profit* is the EBITDA from Y1 after the end of the project and the *Investment* is the total funds used (including investment to reach the current stage of development before the EU grant, the EU grant itself and the own contribution of the applicants, if applicable).

Growth of their teams during and after the project (also important).

## KEY COMPONENTS OF THE PLAN OF EXPLOITATION

### WHY SHOULD ONE INCLUDE A BUSINESS PLAN INTO A HORIZON EUROPE PROPOSAL?

#### 2. PROFIT & LOSS STATEMENT

	2028	2029	2030	2031	2032
<i>Costs</i>					
Raw material costs	22 307	25 429	28 990	33 048	37 675
OPEX (operative expenses)	4 461	5 621	6 922	8 346	9 856
Final products	26 768	31 051	35 912	41 394	47 531
R&D / upscaling expenses	2 231	2 275	2 321	2 367	2 415
Marketing/selling/admin.	3 123	3 747	4 497	5 396	6 476
<i>Benefits</i>					
Total sales	44 613	53 536	64 243	77 091	92 510
Gross margin	17 845	22 485	28 331	35 697	44 978
Other	1 600	1 680	1 764	1 852	1 945
<i>Metrics</i>					
EBITDA	10 392	14 182	19 049	25 281	33 243
EBT	10 892	14 782	19 749	26 081	34 143
Net Income	8 387	11 382	15 207	20 083	26 290
Gross margin, %	40%	42%	44%	46%	49%

# PLAN OF EXPLOITATION EXECUTION

## 1. IMPLEMENTATION ROADMAP

- Define a clear timeline and milestones for executing the Plan of Exploitation
- Allocate resources and responsibilities within the consortium for implementation
- Regularly monitor progress and adjust strategies as needed

## 2. PARTNERSHIP AND NETWORKING

- Establish collaborations and partnerships to leverage resources, expertise, and market access
- Network with industry stakeholders, potential customers, investors, and relevant organizations
- Participate in industry events, conferences, and exhibitions to showcase project results

## 3. CONTINUOUS EVALUATION AND ADAPTATION

- Continuously monitor the market and competitive landscape for feedback and adaptation
- Evaluate the effectiveness of the exploitation strategy and make necessary adjustments
- Embrace a flexible approach to adapt to evolving market dynamics and user needs



## LIVING LABS AND OPEN INNOVATION

- **Living Labs** are real-world environments where stakeholders collaborate to co-create and test innovations. Living Labs facilitate user engagement, feedback, and validation of project results.
- **Open Innovation** principles encourage collaboration with external stakeholders and integration of their inputs into the exploitation strategy.
- The **multi-actor approach** (MAA) aims at exactly this. It brings the right people together from science, practice, or anyone who can help tackle the objective of the project. All experience and knowledge are therefore taken into account and the partners create results together, to answer real problems.
- **Citizen science** is any activity that involves the public in scientific research and thus has the potential to bring together science, policy makers, and society as a whole in an impactful way. Through citizen science, all people can participate in many stages of the scientific process, from the design of the research question, to data collection and volunteer mapping, data interpretation and analysis, and to publication and dissemination of results. Citizen science is also an approach of scientific work that may be used as a part of a broader scientific activity.

**NOTE:** Incorporating Living Labs and Open Innovation practices can enhance the relevance, usability, and market adoption of project results.

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