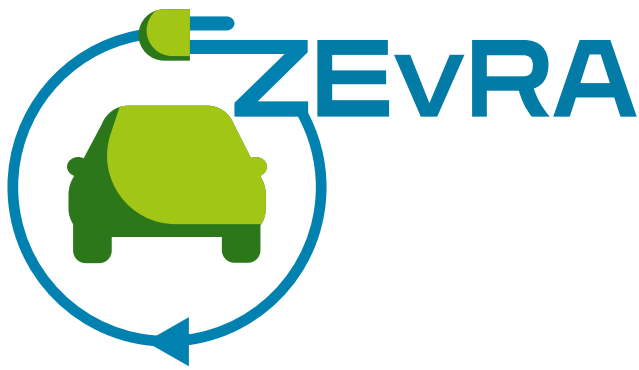




Zero Emission electric Vehicles enabled by haRmonised circulaRity

Deliverable 6.6

Exploitation plan

31st December 2024



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No. 101138034.

Project information

Project acronym	ZEvRA
Full name of the project	Zero Emission electric Vehicles enabled by haRmonised circulaRity
Grant agreement	101138034
Coordinator	FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV
Starting date	1st January 2024
Duration in month	36
Call identifier	HORIZON-CL5-2023-D5-01-04

Document information

Document title	Exploitation plan
Deliverable number	D 6.6
Dissemination level	PU - Public
Deliverable type	R – Document, Report
Work package	WP6
Work package leader	BAX
Partners involved	/
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Submission date	31 st December 2024

Document history

Date	Version number	Summary of changes
15 November 2024	V1	Initial draft document
12 December 2024	V2	Final Version
07 February 2025	V3	Revised Version 1

ZEVR project abstract

ZEVR's main objective is to improve the circularity of light-duty EVs throughout their entire value chain, from materials supply and manufacturing to end-of-life (EoL) processes, which aligns with the European Union's goal of achieving zero CO₂e emissions by 2035, particularly in the EV value chain. To do so, ZEVR will develop a Design for Circularity (DfC) methodology and a holistic circularity assessment aimed at improving the production of electric vehicles (EVs) based on the 9Rs. This methodology will be validated by developing zero emission solutions for the most important automotive materials, covering > 84% material mix: steel, three versions of aluminium (wrought, casting, and foam), thermoplastics composites (long and continuous fibre-reinforced), unfilled/short fibre plastics, glass, tyres and Rare Earth Elements (REE). These solutions will be supported by a set of digital tools to support the manufacturing of the use cases, the assessment of circularity, traceability, and the virtual integration of components into a full replicable vehicle.

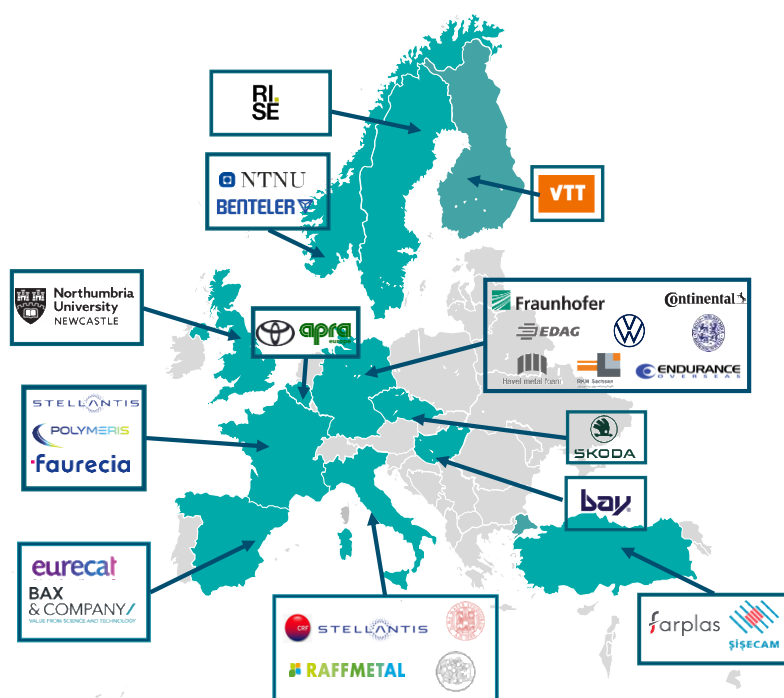


Figure 1: ZEVR Consortium

To maximise the outreach of our methodology and zero emission solutions, ZEVR will develop a dedicated training & upskilling programme for the automotive workforce and academia, together with activities aimed at increasing awareness & acceptability of the proposed zero emission solutions. Lastly, circular business models targeting EoL and logistics aimed at improving the economic feasibility of circularity in EVs are advanced. ZEVR's innovations aim to improve zero emission approaches in the life cycle and value chain of at least 59% of European EVs by 2035 through the 5 OEMs and Tier 1's that are part of the consortium (Figure 1), which includes industry and academia covering the entire automotive value chain.

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Abbreviations and Acronyms

Table 1: Abbreviations and Acronyms

Abbr.	Full name
BAX	Bax Innovation Consulting SL
FRA	Fraunhofer Gesellschaft zur Forderung der Angewandten Forschung EV
TRL	Technical Readiness Level
KER	Key Exploitable Results
DfC	Design for Circularity
LCA	Life Cycle Assessment
EV	Electric Vehicle
OEM	Original Equipment Manufacturer
WP	Work Package
CBM	Circular Business Models
CE	Circular Economy
EAB	External Advisory Board
IB	Industry Board
RTO	Research and Technology Organisation
CI	Competitive Intelligence
EoL	End of Life
RKW	RKW Sachsen GmbH Dienstleistung und Beratung
POL	Polymeris
VTT	Teknologian Tutkimuskeskus Vtt Oy

Executive summary

ZEvRA aims to enhance vehicle material circularity, enabling zero-emission vehicles. It will achieve this through four stages: identifying design use cases, guiding technology development, translating requirements into design strategies, integrating technology to TRL5 with zero virgin materials, and transitioning to circular manufacturing. Collaboration with stakeholders is essential to address regulatory and logistical challenges in the vehicle manufacturing sector.

Task 6.2, "Exploitation of Innovations and Circular Business Models," focuses on creating a viable exploitation strategy, guiding the consortium toward maximizing the project's most promising Key Exploitable Results (KERs). This deliverable identifies ZEvRA's exploitable results and presents the methodology that will be followed for strategizing the KERs and align project outcomes with broader societal and economic impacts.

Three deliverables will be elaborated to report the results of T6.2 (D6.6, D6.7, D6.8) and the present document at Year 1 describes the process that will be followed to do so as well as the first outcome of such process. In this sense, the exploitation strategy of ZEvRA will utilise the Horizon Results Booster initiative. The **Horizon Results Booster** will help ZEvRA maximise the impact of its results. As well as the results booster, the results will take into consideration the EXPLOITT® methodology developed for H2020 and validated by the European Commission. EXPLOITT® is a methodology for industrial exploitation and take-up developed by IK4-IDEKO in the FOCUS EU-Project. The methodology is based on four phases: A) technology assessment, B) business plan, C) competitive intelligence activities and D) clustering activities. The methodology will generate the inputs required by the Horizon Results Booster.

Phase A on technology assessment is integrated by two parts. The first one addresses the technology identification, in which 15 KER project results are identified at proposal stage. These KERs will then, in D6.7 and D6.8, be further characterised and later prioritised. A second part focus on evaluating the technologies behind the most important KERs. The identification of results is done based on the KERs identified at proposal stage and the further characterisation is done for those with a potential to be exploited by using specific templates that were shared with the ZEvRA partners. After the characterisation, all partners will participate in an upcoming workshop in which a prioritisation exercise is done based on the innovativeness of the result, exploitability level, and the impact in industry. The 3-5 most important KERs will be fully evaluated with regards ground identification, contribution-benefits matrix, patents analysis, competitors' analysis, market research, IPR and exploitation claims, standardisation process, and risk assessment. After this evaluation, dedicated business plans will be developed. The version of this deliverable at M24 and M36 will include the findings arising from the prioritisation exercise and the further business models creation.

1 Introduction

1.1 Introduction to ZEvRA and its expected results

By 2030, EVs are projected to make up 75% of new car registrations in Europe due to ICE phase-out regulations. However, EV manufacturing currently produces 80% more CO₂ emissions than ICE vehicles, with production being the most emissions-intensive yet most impactful phase for emissions reduction. To address this, Design for Circularity (DfC) strategies and technologies are emerging across the EV value chain to lessen environmental impacts.

Challenges remain, including inconsistent Life Cycle Analysis (LCA) results across diverse EV designs and the lack of a unified DfC methodology, which complicates identifying effective solutions. Additionally, IPR conflicts between OEMs and suppliers hinder technology and knowledge sharing.

ZEvRA aims to resolve these issues by fostering collaboration among five major OEMs, European universities, and stakeholders in the EV value chain. The project will create a harmonised circularity methodology, supported by digital tools, enabling technology interchangeability and scalability in Europe. This methodology will validate zero-emission solutions for key materials (covering 84% of the material mix) with the Skoda Enyaq as a development baseline.

ZEvRA's main goal is to enhance circularity in light-duty EVs from material supply through end-of-life, supporting the EU's 2035 net-zero CO₂ target. A comprehensive DfC methodology and circularity assessment, based on the 9Rs and focusing on key materials like steel, aluminium, thermoplastics, glass, tires, and REEs, will be developed.

The project will leverage digital tools for manufacturing efficiency, circularity assessment, traceability, and virtual integration into a replicable vehicle. By 2035, ZEvRA aims to improve zero-emission practices in the lifecycle of at least 59% of European EVs, supported by OEMs, Tier 1 suppliers, and academic and industry partners across the automotive value chain.

ZEvRA's approach consists of four phases:

- **Phase 1:** Requirements are defined from three perspectives: (1) life cycle thinking from academia and research, (2) specific needs of the use cases from design teams (including OEMs, suppliers, and material producers), and (3) the full SUV prototype vehicle perspective. These requirements will guide the strategic development of all project technologies.
- **Phase 2:** Requirements are translated into design strategies for both use cases and the full vehicle prototype, with an iterative process between design teams and academia, heavily supported by digital tools.
- **Phase 3:** All technological developments are integrated into a TRL5 test bench-ready vehicle concept and a virtual twin, emphasizing collaboration and feedback across stakeholders. This

phase includes feedback loops to optimise use case technologies for the final prototype, aiming for maximum circularity and zero virgin material use.

- **Phase 4:** Focuses on expanding the impact of validated measures in ZEvRA to transform the EU's EV production landscape toward circular manufacturing. This involves training future designers, promoting circularity acceptance among stakeholders, and addressing regulatory and logistical challenges.

Therefore, the main results of ZEvRA are those coming from the DfC strategy, use cases, digital tools, and training packages. Due to the combination of different types of automotive materials and their manufacturing technologies, a multiplying effect of results is expected within the duration of the project. Task 6.2, titled "Exploitation of Innovations and Circular Business Models", which consist of three exploitation plan deliverables, D6.6-D6.8, amongst other deliverables that correlate to circular business models, market and policy, and internationalisation and liaison related to other initiatives. Task 6.2 will be delivered throughout months 12 – 36 of ZEvRA.

1.2 Exploitable results identified at proposal stage

A Key Exploitable Result (KER) is an influential outcome chosen for its high potential to be applied and create benefits throughout the value chain of a product, process, or solution. It can also play an essential role as a foundation for policymaking, further research, or educational applications. The European Commission, through its Horizon Results Platform, suggests selecting and prioritizing results based on factors like innovation level, exploitation potential, and overall impact.

The ZEvRA project proposal enabled the partners to identify specific exploitation interests. These interests encompass the KERs generated by the project, which are detailed in the following section. This focus on exploitation will guide the effective use of the project's resulting products and technologies, including those developed within the various use cases

Table 2 summarises the KERs, the owners/leaders of each KER, the work package (WP) and task aligned to the KER, and the timeline of the results. ZEvRA will also focus on adapting circular business models (CBMs) to the commercial exploitation routes planned for the KER.

Table 2: List of Key Exploitable Results (KER)

Key Exploitable Results (KER)	Owner(s)	Work Package (WP), Task (T)	Starting month
KER1 (Use case 1): Reshaping of old steel components into new structures using an AI tool	FRA, SKO, EUT, EDAG	WP2 (T2.1) for developing the AI tool WP4 (T4.1) for the steel use case	M3
KER2 (Use case 2.1): 100% recycled wrought aluminium for extruded profiles	FRA, RAF, BEN, UBO, NTNU, UNN, VW, EUT	WP2 (T2.3) for the digital tools, WP4 (T4.2.1) for the physical component development	M3
KER3 (Use case 2.2): 100% recycled casting aluminium for HPDC introducing ribs for 20% better lightweight design	UBO, CRF, END, RAF, EUT	WP4 (T4.2.2)	M3
KER4 (Use case 2.3): 100% recycled aluminium foams from scraps	FRA, HMF, STL, UNN	WP4 (T4.2.3)	M3
KER5 (Use case 3.1): Low CO₂e footprint fibres for recycled thermoplastics (PP for non-structural parts and PA and/or PET for more structural parts) using thermocompression and/or thermostamping	FAU, STL, UNN, RISE, EDAG	WP4 (T4.3.1)	M3
KER6 (Use case 3.2): recycled plastics (up to 70% PCR) for interior parts	FPL, VTT, RISE, TME, SKO	WP4, T4.3 (T4.3.2)	M3
KER7 (Use case 4): Glass- 0% water use and coolant on cutting process. 25% reduction of paint in digital printing. Integration of photovoltaic cells into a panoramic laminated sunroof	VTT, SIS, CON	WP4 (T4.4)	M3
KER8 (Use case 5): Tyres- up to 20% of recycled materials, through pyrolysis and retreating process of C1 and C2 tyres	VTT, SIS, CON	WP4 (T4.4)	M3
KER9: Harmonised circularity methodology, including holistic LCT methodology, LCA, LCC, and SLCA on the use cases	EUT	WP1	M3
KER10: AI tool for steel repurposing	EDAG, FRA, SKO	WP2 (T2.1)- AI HIC simulation (T4.1)- design optimisation	M3
KER11: Virtual twins models of recycled fibre composites vs biobased	RISE, FAU, FPL, UNN	WP2 (T2.2)	M3

KER12: Simulation of Aluminium wrought alloys and castings	UBO, UNN, BEN, NTNU	WP2 (T2.3)	M3
KER13: Traceability of components through digital product passport (DPP)	PLM, FRA, RISE	WP2 (T2.5)	M10
KER14: Automated systemisation of LCT assessment of R9 strategies	FRA, BRA, EUT		M10
KER15: Digital twin	BZN, EDAG, SKO, UNN, BEN, NTNU	T3.4	M18

The development of the identified KERs from the proposal stage will be regularly monitored during the Innovation Board (IB) meetings, which will occur every 3 months as part of Task 7.5 (Innovation Support and Management) that starts at M12 (December 2024). As of this report, several KERs are in progress, while others are yet to start. After M12, BAX and the other partners will concentrate on validating the KERs outlined in the proposal by aligning them with the project's actual implementation, identifying any deviations, and adjusting accordingly. This process and the chosen methodology ensure effective and appropriate development.

2 Aim of the deliverable

Task 6.2, titled “*Exploitation of Innovations and Circular Business Models*”, focuses on creating an exploitation plan for the most promising KERs to support the ZEvRA consortium’s exploitation strategy. The task begins with a comprehensive analysis of KERs identified during the proposal phase, aiming to assess their commercial or social potential as independent products, methods, tools, or services. This analysis will take guidance from the Horizon Results Booster initiative whilst taking into consideration the EXPLOITT® methodology and will be conducted in Q1 of year 2 of the project. The methodology will allow generating the inputs required by the Horizon Results Booster initiative.

Following this, each KER will undergo detailed characterisation, including identifying key owners and partners, specifying the innovation content, defining target customers and the benefits to them, and analysing competitors and competing products through a thorough patent landscape review. A strategic plan will be developed to ensure the exploitation strategy remains competitive and aligns with current policy and market developments. Additionally, circular business models will be designed in alignment with future circular economy (CE) practices, such as the DfC approach demonstrated in ZEvRA, under subtask S6.2.2.

Specific protection measures will be outlined, and a comprehensive risk assessment will be conducted for each KER, covering technological, financial, and legal aspects. Throughout the project, an IPR management strategy will be developed and regularly updated by the innovation board (IB), chaired by Bax, incorporating inputs from all consortium members involved in KER development.

Task 6.2 is led by Bax, with contributions from all partners, and runs from month 12 (M12) to the end of the project (M36). Three key exploitation deliverables will be submitted during this time:

- Deliverable 6.6- Exploitation plan- first version (M12)
 - Initial exploitation report outlining the methodology for the commercial strategy and integration with Task 7.5’s innovation activities.
- Deliverable 6.7- Exploitation plan- second version (M24)
 - Characterisation of KERs and prioritisation results based on initial identification and analysis.
- Deliverable 6.8- Exploitation plan- third version (M36)
 - Final report with business models for selected KERs, refining the exploitation strategy and preparing for post-project commercialisation.

The annual reports will provide an overview of the project’s exploitable outputs and results, including associated business models, to support market readiness beyond the project’s end (>2027). The first report (D6.6), due in month 12, will cover the background and context of Task 6.2, explaining the methodology for crafting a commercial exploitation strategy for the project’s key outcomes. It will also highlight integration with Task 7.5’s innovation support and

management, circular business models, and the role of the External Advisory Board (EAB) in ensuring industrial relevance of the KERs.

The second report (D6.7), due in month 24, will detail the characterisation of the KERs based on the established methodology and include the outcomes of the prioritisation exercise carried out with partners after technology identification and characterisation.

The final report (D6.8), due in month 36, will present business models for the prioritised KERs selected by partners, enabling validation and expansion of the initial exploitation strategy outlined in the proposal and supporting Task 7.5's innovation support and management. Business models will become circular by integrating inputs from S6.2.2.

Task 7.5 complements the exploitation efforts of ZEvRA partners by enhancing industry outreach to better align research with industry goals. This task will improve innovation output by engaging the demo developer, identifying new opportunities, addressing innovation challenges, and facilitating recurring meetings with the EC and key stakeholders. Additionally, Task 7.5 will develop and implement IP policies, including dissemination strategies and mechanisms.

Task 7.5 aims to achieve industry goals and lead to actionable recommendations for innovation support, including:

- Strengthening the EU value chain in priority areas like lightweight, safe, and circular vehicle structures through start-ups, knowledge transfer, and collaborations.
- Attracting and directing EU funding to high-potential development areas.
- Identifying and recommending industrially relevant materials and products for development and technology transfer, while supporting partners in building a globally competitive profile in knowledge, IP, and technology.

Deliverable 6.6 outlines the methodology for developing the exploitation strategy for ZEvRA's project results and outlines the plan to ensure successful commercial uptake after project completion, with further elaboration and advancement of results to be provided in M24 and M36.

3 Methodology

3.1 Horizon Results Booster Initiative

While the principles and strategies outlined in the EXPLOITT methodology remain relevant as a foundational reference for the exploitation plan, we recognise the updated guidance introduced by the European Commission through the Horizon Results Booster initiative.

The Horizon Results Booster is a free service designed to help EU-funded research projects maximise the impact of their results. It provides tailored professional support to address challenges in transforming research findings into valuable, real-world outcomes. The service is available to projects funded under Horizon Europe and offers access to expert mentors with extensive experience in dissemination, exploitation, marketing, and business planning. Key offerings include go-to-market strategies, networking opportunities, and public speaking coaching, all aimed at ensuring research results achieve tangible and lasting impact [1].

The Horizon Results booster aims to lead research and innovation towards societal impact, in doing so it has 3 main steps, personalised support, Dissemination & Exploitation (D & E) building blocks, and D & E add-ons [3]. Through its services, the booster supports research and innovation projects at every stage of dissemination and exploitation, its offerings are as follows:

- Personalised support:
 - Entry level consultations to establish tailored D & E strategies.
 - Ongoing monitoring and follow-ups to ensure plans remain aligned with project objectives.
- D & E building blocks:
 - Assistance in refining strategies, objectives, and identifying KERs.
 - Business planning and exploitation support to advance results toward market readiness.

Additionally, the booster also initiates networking opportunities to connect with stakeholders, it can provide guidance on intellectual asset management (IAM), and there are coaching services for public speaking and creation of audio-visual materials. To effectively utilise the Horizon Results Booster, the following inputs are required:

- Project details:
 - Detailed description of research outputs, technologies, or innovations developed during the project.
 - Initial dissemination and exploitation plans, goals, target audiences.
- Key Exploitable Results (KERs):
 - An inventory of intellectual assets, including technologies, tools, or innovations. Following this report, these will be identified, adjusted, and confirmed, based on those

KERs already identified in this deliverable. These will be provided during the process of technology identification and characterisation during M13-18.

- Technology readiness levels (TRLs) and their relevance to potential applications or markets, there will be templates distributed to the partners of ZEvRA to generate this input.

The tool will also provide preliminary insights into market needs or barriers to exploitation, as well as self-assessment tools like project intentions and initial roadmaps which would be aligned with the EXPLOITT methodology to ensure coherence with the booster requirements.

ZEvRA will make use of the Booster in at least two ways: upon identification and characterisation of the KERs and right after the selection of the prioritised KERs. Upon utilisation of the booster, tailored strategies will be created, which will include comprehensive D & E plans, actionable roadmaps with defined metrics and KPIs, enhanced visibility on the Horizon platform, market readiness tools, and networking and training materials.

3.2 The EXPLOITT® methodology

To maximise the impact of ZEvRA's results, ZEvRA will use the EXPLOITT® methodology to map and define KERs and their market potential, develop initial exploitation plans and roadmaps that can serve as a foundation for the Booster services. ZEvRA will utilise the Horizon Booster initiative to enhance its' dissemination and exploitation strategies, more specifically when integrating circular business models into the business plan. Moving forward, ZEvRA will claim support from the Horizon Results Booster initiative and integrate this guidance and resources to ensure our project outcomes reach a broader audience and deliver greater societal benefits.

The EXPLOITT® methodology was originally developed for H2020 and validated by the European Commission. Created by IK4-IDEKO within the FOCUS EU-Project, EXPLOITT® is a structured methodological approach to industrial exploitation and take-up. The methodology is divided into three main components: developing an exploitation plan and take-up process, designing and implementing a competitive intelligence system, and engaging in clustering activities. The principal goal is to create a preliminary business plan and facilitate the take-up process. The methodology encompasses four key phases: technology assessment, business planning, competitive intelligence activities, and clustering [3]. In Figure 2, the EXPLOITT® methodology for Industrial exploitation is mapped out. It is worth mentioning that the methodology will be complimented by partner contributions from month 12 onwards. The partner contributions will be crucial in assessing, characterising, and prioritising the exploitable results.

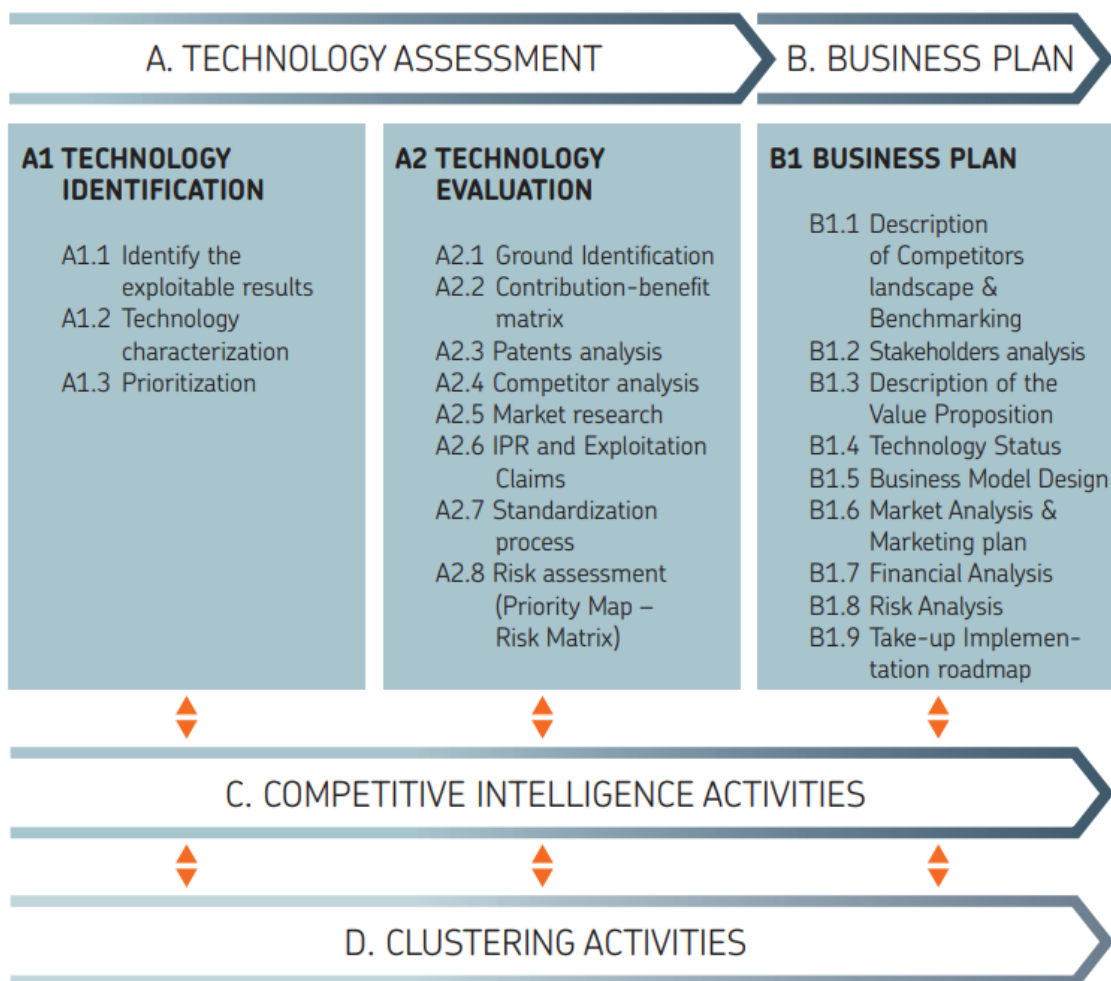


Figure 2: Methodology for industrial exploitation and take-up [3]

3.3 Phase A: Technology Assessment

In the technology assessment phase (A), the project's exploitable results and market potential are identified, with a focus on customers, added value, and cost estimates. This phase prioritises technologies and identifies KERs. Phase A1 (Technology identification) and A2 (Technology evaluation) will be applied in ZEvRA with some adjustments, the relevant material for both exercises will be detailed in the following deliverable D6.7.

Technology assessment (A):

- **A1: Technology Identification:** Partners identify, assess, and prioritise exploitable results, using a template to capture title, market potential, exploitation level, and involved partners. Partners draw on proposal-stage data to highlight results with strong exploitation potential.
 - After initial identification, results are characterised using a dedicated table completed by ZEvRA partners. The outcomes are discussed with the Booster, in order to ensure relevance and validate the next steps.

- A prioritisation workshop will be held online to rank results based on criteria like innovation, exploitability, and industry impact, creating a ranked KER list.
 - KER prioritisation considers whether results stem from RTOs, emphasising those with infrastructure for commercialisation, despite potential challenges with scaling.
 - Prior moving to phase A2, prioritised KERs are discussed with the Booster,
- **A2: Technology Evaluation:** This phase includes eight steps: ground identification, contribution-benefits matrix, patent analysis, competitor analysis, market research, IPR/exploitation claims, standardisation, and risk assessment. Only the 15 prioritised KERs (p-KERs) from the initial KERs identified will undergo detailed evaluation.
 - Ground identification sets the foundation for p-KER exploitation, followed by a contribution-benefits matrix that defines partner commitments.
 - Partners present matrices to align on maximising p-KER benefits.
 - Patent analysis assesses advancements over existing innovations, followed by competitor analysis and market research for demand and viability.
 - IPR claims ensure proper knowledge transfer and commercialisation, supported by a standardisation process for efficient EU/global market entry.
 - A risk assessment, with a risk matrix, prioritises potential barriers like partnership, market, or environmental risks to manage effectively.

To achieve higher TRLs, ZEvRA will explore investment and funding options, including private, public, and industrial partners. The business case analysis will expand to address the full value chain, regulatory landscape to enhance EU impact, and circular business models from S6.2.2.

3.4 Phase B: Business Plan

Part B, "Business Plan", focuses on developing a suitable business plan for the selected p-KER. The coordinator and the IB manager (Bax) will analyse all the information collected and will assess which are the most interesting and viable p-KERs. This phase is integrated by the following stages [3]:

- **B1.1 Description of competitors landscape & benchmarking:** Based on the outcome of the analysis of competitors in the Technology Evaluation phase, a deeper analysis is made for direct competitors, including their products and patents. A benchmarking of the competitors is also included with regards their products' functionalities and characteristics. EXPLOITT proposes a system based on traffic lights pre-defining actions to improve the partnership situation, this will be explained into more detail in the following deliverable D6.7 due in month 24.
- **B1.2 Stakeholders analysis:** This is defined as the systematic examination and evaluation of stakeholders, allowing prioritisation, management, and effect engagement with the stakeholders.

- B1.3 Description of the value proposition: The exploitation manager is responsible for developing the business plan with the most viable KER. This exercise uses the value proposition model canvas.
- B1.4 Technology status: The aim here is to measure the maturity level of technologies. This methodology essentially analyses the entire innovation chain and results in a technology status, granting the technology its technology readiness level (TRL) by assessing it against the parameters. There are 9 TRLs, with the highest being ready for market introduction.
- B1.5 Business model design: The Exploitt® methodology recommends the use of the business model canvas, which defines all aspects that can affect the business. The business model design forms a storyline of the creation, delivery and capture value of the business model.
- B1.6 Market analysis & marketing plan: This is divided into three; a macro-economic analysis of the selected KER, a SWOT analysis, and a marketing plan. The marketing plan considers the analysis, and the market research results obtained in the previous process.
- B1.7 Financial analysis: The aim here is to understand whether the business has a chance to be viable and objectively evaluate the business's potential for success. This process recommends making an operating budget and break-even analysis [1].
- B1.8 Risk analysis: Focused on identifying what could go wrong, evaluating which results should be dealt with, and the strategies needed implementing to deal with such risks. Risks considered included strategic, financial, operational, and compliance.
- B1.9 Take-up implementation roadmap: With the principal aim of the methodology being to find the best way to introduce a project result into the market, the last step is to define actionable steps to meet future business goals and outcomes. The actions will be defined and prioritised, resulting with a roadmap plan.

The Phase B of the EXPLOITT methodology is dedicated at connecting the project with developments outside of the consortium to ensure its ongoing relevance. It will also seek to establish international cooperation addressing supply chain requirements at a global scale. This task is scheduled to begin in M18 (June 2025). The goal is to collaboratively develop meaningful exploitation strategies, with a focus on various types of exploitation - commercial, academic, societal and knowledge-based. Phase B of the methodology is expected to count with the support of the consulting services of the Booster, particularly with regards the integration of circular business models.

3.5 Phase C Competitive Intelligence

Competitive Intelligence (CI) is an ethical, systematic and collaborative process, supported by specific tools for obtaining, analysing distributing and interpreting relevant information about a competitive environment that is transmitted to the executive of an organisation to generate an ideal context for taking decision. CI focus on adjusting the course of developments based on what is happening in the competitive and technological environment associated with the project.

The next bullets summarise the key intelligence topics:

- Patent surveillance: state of the art related to performed research and the results to be obtained within the project.
- Norms and standards surveillance: the norms and standards relating to the developments must be known and changes must be monitored.
- Scientific articles surveillance: scientific and technological developments that may influence the project results.
- Competitor monitoring: knowing what products are already on the market and their evolution can help decision making when bringing our developments to market.
- Monitoring other European projects approved on the same topics.
- Monitoring market evolution: it is important to remain well informed whether market needs have changed or are being met from other emerging technologies.

3.6 Phase D: Clustering Activities

This phase aims to promote business competitiveness by exploiting opportunities jointly. Clusters are useful when there is a critical mass of companies, related organisations, value chain products/technologies/services interested in a certain type of economic activity. A customised methodology for clustering is proposed by the EXPLOITT® methodology since there isn't any single method to create clusters, nor a single definition for clusters. The methodology integrates the following elements:

- Main concerns and needs identified building on a SWOT analysis
- Interactions among the given clusters and technology transfer activities
- Industrial competitiveness from joined forces
- Technology watch for the EU industry
- Roadmapping
- The exploitation of cross-synergies and learning from "Good" practices
- Clusters to suggest new topic and priorities
- Framework of services for addressing needs of the cluster
- The development of new industrial value chains

The methodology is structured on vertical and horizontal priorities:

- Vertical priorities: technology identification and focus, coordination of activities and monitoring, and vision, mission, and roadmap.
- Horizontal priorities: industrial exploitation and take-up, dissemination, and networking actions, technology watch, best practices.

This phase D will be related to two additional tasks in ZEvRA, besides S6.2.1. On the one hand, the previously mentioned S6.2.2 on CBMs targeting EoL and on the other hand with Task 6.3 on Market and policy observatory, recommendations, and internationalisation. Regarding S6.2.2, ZEvRA will increase the uptake of secondary material by EV and other markets, which will be supported by the development of circular business models. This is expected to create new value chains and therefore include the participation of different types of stakeholders with common goals and interests on supporting the implementation of 9R strategies in different sectors. Two major economies will be targeted in S6.2.2, France and Germany, which will allow testing the circular business models and KERs exploitation. This is expected to influence the potential creation of clusters with similar synergies and interests, especially in France and Germany as starting geographical area with further expansion potential. This replicability potential in other areas of the EU will rely on the policy landscape (S6.3.1) and the export capabilities that will be outlined by S6.3.3 (Internationalisation and liaison to other related initiatives). Based on the results obtained in Phases A to C, BAX, together with RKW, FRA, and POL will analyse and evaluate the potential creation of clusters based on the results obtained in T6.3. This will be reported in the last year's deliverable.

3.7 External Stakeholders Board

The External Stakeholders Board is aimed at giving advice with regards scientific, technical, business, sustainability, and commercial aspects. Therefore is expected to give feedback on the business models developed in phase B of the projects with the support of the Booster. The outcomes of the prioritisation process that will be performed at the second year of the project will be shared with the ESB to validate the industrial relevance. This will be done if there isn't any conflict of interest. Feedback from the ESB will be reported accordingly.

4 Exploitation Plan- Next stages

Once the exploitable plan has been presented alongside the exploitable results identified at proposal stage, the next step will be to implement phase A, and start the engagement with the Booster. Additional project results will be identified and characterised in phases A1 and A2, prior to the prioritisation process for selecting the most important KERs for further evaluation. This is expected to be carried out in the second year of the project and count with at least 2 interventions from the Booster. To perform the prioritising task, BAX will organise a workshop with all partners. The workshop will facilitate the selection of the most critical KERs (p-KERs) that will undergo detailed analysis and development in subsequent phases, after being discussed with the Booster.

Under EC guidelines, the prioritisation will be based on three criterium, each assigned a weight between 0, low, and 1, high. The total combined weight of the criterium must equal to 1, for example:

- Innovation (0.3): Assessing the degree of innovation of the exploitable result.
- Exploitability (0.3): evaluating the potential for profit generation from the result.
- Impact (0.4): Measuring the potential industrial impact of the result.

The result of the prioritisation process will be a list of exploitable results, ranked by their potential market/industrial impact. Figure 3 summarises the exploitation plan for year 2 of ZEvRA, including the expected inputs from the Booster.

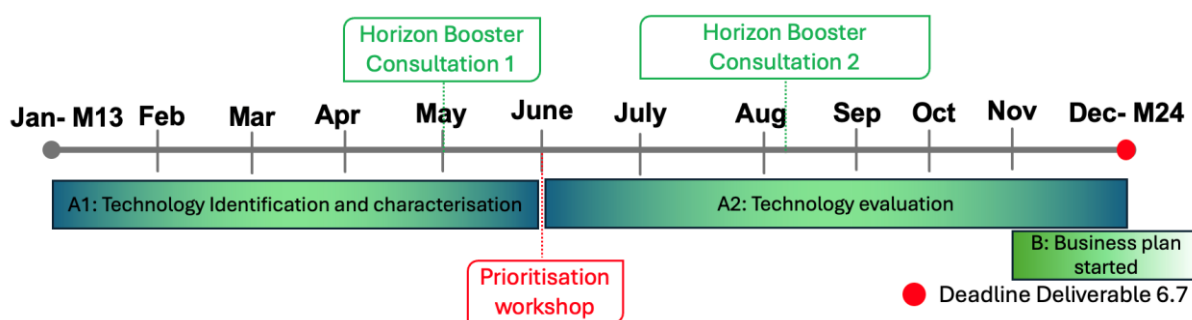


Figure 3: Exploitation plan timeline year 2

Phase B of the project will then focus on developing appropriate business models for these prioritised KERs, closely aligned with the CBM task (T.6.2.2), led by VTT. Phases C and D will be developed afterwards, with additional inputs coming from T6.3.

5 Conclusions

By M12, the partners of ZEvRA project will start the Task 6.2 on the exploitation of innovations and CBMs. The Horizon results booster initiative and the EXPLOITT® methodology have been presented in this deliverable as well as the expected inputs from other tasks. The exploitable results identified at proposal stage have been listed as well as the plan. Around M18 of ZEvRA, these exploitable results will be prioritised according to their innovativeness, exploitability level, and their potential impact. This process will be carried out in a workshop that aims to select the most important KERs of the project (p-KERs). These prioritised KERs will then be analysed in the next phases, where they will be fully evaluated following a certain criteria and prior developing appropriate business models (Phase B) and competitive intelligence strategies (Phase C). Circular business models will be integrated, based on inputs from S6.2.2, and later linked to the work that will be done by T6.3 on regulation, policies, and internationalisation.

6 References

- [1] Horizon Results Booster. Link: <https://www.horizonresultsbooster.eu/>
- [2] Horizon Booster services presentation
- [3] EXPLOITT® methodology for industrial exploitation & take-up, extracted from FOCUS H2020 project (contract No: H2020 FoF-7-2014 – 637090). Available online in www.focusonfof.eu and the corresponding deliverable (D2.2) in <https://cordis.europa.eu/project/id/637090/results>