



D1.2 Risk and Innovation Management Plan

Project ref. no.	HORIZON-CL5-2024-D5-01-06 GA. N.º 101192375
Project title	Shifting to zero-emission logistics with right-sized, mission-focused, N1 eLCVs
Project duration	1 st January 2025 – 30 th June 2028 (42 months)
Related WP/Task	WP1 / T1.1 Project coordination and management, T1.2 – Quality, data management & ethics
Dissemination level	PUBLIC
Deliverable type	REPORT
Document due date	M4 (30.04.2025)
Actual delivery date	M6 (06.06.2025)
Deliverable leader	EUT
Document status	Final v1.0



Deliverable information sheet

Version	Date	Author	Document history/approvals
0.1	24/04/2025	EUT, BAX	Draft version
0.2	26/04/2025	VUB, EUT, ALK, CER, GRU, TOI, BAX	Revision and contribution of specific sections by WP leaders
0.2	28/04/2025	BAX, FIT	Revision by cross readers
1.0	29/04/2025	Project Coordinator (EUT)	Validation and release of final version
2.0	06/06/2025	BAX	Adjusted content to Public version, additional insights
2.0	06/06/2025	Project Coordinator (EUT)	Submission

Executive summary

Project summary

Shift2Zero, Shifting to zero-emission logistics through right-sized, mission-focused, N1 e-LCVs

Current market dynamics in EU reveal a gap between supply - existing N1 vehicles, and demand - evolving needs of urban logistics and climate targets. In 2023, 1.2M new LCV registrations were diesel-powered, and only 108,200 battery electric. Last-mile logistics, the least efficient and most complex part of the supply chain, presents significant opportunities for improvements at vehicle and operations levels. Dynamic requirements and increasing environmental impact require innovative solutions from the automotive industry, both from high volume OEMs and new entrants. S2Z aims to capitalize on the benefits of both vehicle platforms in the N1 segment - represented by IVECO's eDaily multipurpose platform, and Alke's ATX design-for-purpose platform - ultimately contributing to "Shifting to zero-emission logistics through right-sized, mission-focused, N1 e-LCVs".

To achieve this vision, S2Z proposes a 4-step user- and mission-centric design approach placing end-users and their needs at the core of all project activities. To this end, S2Z involves 5 LSPs & mobility operators as partners: Gruber, DHL, Diakinisis, Clem, DPD. As a result, S2Z will co-develop and shape at least 6 novel N1 concepts with enhanced and safe functionalities leading to tighter market fit, particularly in the segments of e-commerce, returns and cold deliveries.

Innovative concepts, from modular cargo bodies to vehicle control strategies with optimized tyres & brakes, as well as dual transport of people & freight, will be physically prototyped and tested in real-life operations in 6 pilot sites (Belgium, Greece, Italy, 2 in Norway, Poland).

S2Z brings a multidisciplinary consortium of 30 partners from 10 countries to cover the complete automotive and logistics value chains, complemented by policymakers to effectively ensure route to market: overcoming barriers for the adoption of S2Z eLCVs, reducing operational costs and environmental impact in scalable urban & sub-urban operations.

D1.2 Risk and Innovation Management Plan Executive summary

This deliverable has been created by the Coordination team. D1.2 is located within the transversal WP1, Project Management, dedicated to coordinating and managing all the project's activities. Its goal is to ensure an efficient risk and innovation management during the project lifetime.

This deliverable is the base for the activities to be performed in the whole project, being all the WPs affected by potential risks that may have impact on the project success and being the innovation management the crucial axis for a potential upscale and deployment of Shift2Zero solutions beyond the project timeline.

D1.2 is a document released at the beginning of the project and is aimed to be used and updated by WP leaders, who are responsible to complete it based on the input collected by the different partners during the whole project lifetime. It is also an important guide for the Work Package leaders, for the monitoring and implementation of the risk and innovation management strategy.

Specifically, the Risk and Innovation Management Plan includes:

- A section on risk management: procedures, identification of risks (both identified in the proposal stage and new risks identified until now, as well as

unforeseen risks), their likelihood and impact and their contingency and mitigation plans

- A section on the innovation management, as well as the management of the project innovations, potential and strategies for their implementation and market adoption.

This deliverable follows a methodology that was developed by both EUT and BAX, based on their large experience in coordinating European R&D projects, and which has demonstrated effectiveness, in particular in projects with large consortia and multidisciplinary teams.

D1.2 is submitted in line with the Grant Agreement, without any delays nor differences in scope, goals and contents.

D1.2 complements D1.1, Project Management Plan, delivered in month 2.

D1.2 is also very relevant to WP8 deliverables related to the exploitation of the Shift2Zero results, namely D8.1-6-7 (Communication, Dissemination and Exploitation plans, M4, 18, 30), D8.2 (policies for scaled up deployment, M42), and in particular D8.4 (Route to market roadmap and exploitation strategies, M42).



Table of contents

Deliverable information sheet	2
Executive summary	3
Table of contents	5
List of figures	6
List of tables	7
Terminology and Acronyms	8
1. Introduction	9
1.1 Objectives of the deliverable	9
1.2 Structure of the deliverable	9
2. Risk Management	10
2.1 Methodology to be followed	10
2.1.1 Introduction.....	10
2.1.2 Categorization of risks.....	10
2.1.3 Risk impact assessment.....	11
2.1.4 Risk register.....	12
2.1.5 Risk management and responsibilities.....	13
2.2 Risks identified at month 4 of the project	15
3. Innovation management	18
3.1 Innovation Tools	20
3.1.1 Overview of tools.....	21
3.1.2 Shift2Zero & the Innovation Readiness Levels (IRLs).....	21
3.2 Methodology to be followed	22
3.2.1 Innovation Framework & resources.....	25
3.2.2 Roles & distributed responsibilities.....	25
3.3 Initial diagnosis	26
3.3.1 Results register.....	28
3.3.2 IPR log.....	29
3.4 Next steps	29
4. Conclusion	30

List of figures

Figure 1. PRINCE2 methodology for the assessment and categorization of risks.	12
Figure 2. Innovation management and lifecycle. Source: Specht, 2002	18
Figure 3. Innovation Radar methodology. Source: JRC	20
Figure 4. Canvas summarizing the main blocks of discussion within the Innovation Readiness Levels (domains, scale levels and phases). Source: Bax	22
Figure 5: Logistics Trend Radar 7.0 (Source DHL).....	23
<i>Figure 6: Innovation Management in S2Z, overview: interlinked tasks & tools.....</i>	<i>24</i>
Figure 7. The Innovation Roadmap in Shift2Zero, detailing stages and collaborative innovation.	29



List of tables

Table 1. Risks identified at month 4 for the project.....	16
Table 3. Project Result Template	26
Table 3. First list of results including preliminary strategies for IPR.....	28
Table 4. First list, additional results, including preliminary strategies for IPR.....	28



Terminology and Acronyms

A&FM	Administrative and Financial Manager
CA	Consortium Agreement
CINEA	European Climate, Infrastructure and Environment Executive Agency (the funding agency)
D	Deliverable
DISSM	Dissemination Manager
DM	Data Manager
DoA	Description of the Action
DPO	Data Protection Officer
EAB	External Research & Innovation Advisory Board
EC	European Commission
EU	European Union
E&DC	Exploitation & Dissemination Committee
E&IM	Exploitation and Innovation Manager– IPR Advisor
GA	General Assembly
GDPR	General Data Protection Regulation
IRF	Internal Financial Report
IPR	Intellectual Property Rights
KER	Key Exploitable Result
KPI	Key Performance Indicator
MS	Milestone
PC	Project Coordinator
PM	Project Manager
PMB	Project Management Board
POPD	Protection of Personal Data
QAP	Quality Assurance Procedure
RP1	1st reporting period
RP2	2nd reporting period
S2Z	Shift2Zero
TC	Technical Coordinator
TRL	Technology Readiness Level
WBS	Work Breakdown Structure
WP	Work Package
WPL	Work Package Leaders



1. Introduction

This deliverable has been created by the Coordination team. D1.2 is located within the transversal WP1, Project Management, dedicated to coordinating and managing all the project's activities. Its goal is to ensure an efficient risk and innovation management during the project lifetime.

1.1 Objectives of the deliverable

D1.2 main goal is to ensure an efficient and timely management of the different risks and innovations of the project. This deliverable is the base for the activities to be performed in the whole project, being all the WPs affected by potential risks that may have impact on the project success and being the innovation management the crucial axis for a potential upscale and deployment of Shift2Zero solutions beyond the project timeline.

D1.2 is a document released at the beginning of the project and is aimed to be used and updated by WP leaders, taking into account inputs from all partners during the whole project lifetime. It is also an important guide for the Work Package leaders, for the monitoring of the risks and implementation of the mitigation plans and innovation management strategy.

1.2 Structure of the deliverable

The Risk and Innovation Management Plan includes:

- A section on risk management: procedures, identification of risks (both identified in the proposal stage and new risks identified until now, as well as unforeseen risks), their likelihood and impact and their contingency and mitigation plans
- A section on the innovation management, as well as the management of the project innovations, potential and strategies for their implementation and market adoption.

2. Risk Management

2.1 Methodology to be followed

2.1.1 Introduction

Risk management refers to the systematic application of procedures to the tasks of identifying and assessing risks and then planning and implementing risk responses (counter - measures / actions). This provides a disciplined environment for proactive decision making. Risks need to be identified, assessed and controlled.

The **purpose** of Shift2Zero Risk Management Strategy is to proactively identify and systematically assess and control uncertainty and, as a result, improve the ability of the project to succeed. The **Risk Management Strategy** describes the tools, techniques and specific rules for risk management that should be applied as well as the responsibilities in terms of a risk management effective procedure development.

The Shift2Zero Risk register is in the folder [S2Z Risks Register.xlsx](#) and contains both risks identified in the proposal phase and new risks arising during the project execution.

2.1.2 Categorization of risks

Categorization per predictability

A first categorisation is done by predictability, with examples to illustrate them:

2.1.2.1 Foreseen Risks

These are identifiable in the planning phase of electric logistics innovation projects. Examples include:

- Technological development delays
- Homologations and urban authorizations complex procedures and timeline

2.1.2.2 Unforeseen Risks

These arise unexpectedly:

- Unexpected lockdown or geopolitical disruption affecting the project execution
- Unexpected resistance from drivers / logistics service providers to test the Shift2Zero vehicles

Categorization per by nature and/or organizational responsibility

Risks are categorised according to their nature and/or their organizational responsibility, with some examples given below per category:

2.1.2.3 Managerial and organizational risks

- Poor internal communication between partners (e.g. between OEMs, or between industrial/research partners)
- Withdrawal of a partner with unique knowledge, or high researcher turnover

2.1.2.4 Technical / technological risks

- Immature TRL of some components to be integrated
- Difficulties getting enough high-quality data, and/or integrating data in municipality mobility systems

2.1.2.5 Strategic risks

- Mismatch between research goals and stakeholder needs
- Shifting policy or regulatory environment (e.g. zero emissions zones, incentivization policies)

2.1.2.6 Operational risks

- Urban pilot sites delay in permit approvals
- Difficulties to reach enough respondents to surveys for the requirements definitions and validation activities

2.1.2.7 Financial risks

- Higher costs of technical developments than expected
- Underestimated pilot costs (e.g. transport of vehicles to different places, insurance etc.)

2.1.2.7 Compliance and legal risks

- Urban data privacy restrictions or GDPR violations when capturing data
- Failure to obtain permits for public demonstrations (e.g. Brussels case)

2.1.2.8 Exploitation /market risks

- Low uptake of the project results by the targeted stakeholders
- Component owned by a single partner who blocks the potential exploitation of a project result

2.1.3 Risk impact assessment

Shift2Zero adopts the PRINCE2¹ methodology, which assesses any potential negative or positive risk by its cause, likelihood, impact, timing, and the choice of response. Hereinafter, Shift2Zero includes the list of main risks associated to its activities, evaluating the likelihood and severity for each described risk:

- **Likelihood:** Estimated probability that the risk will materialize. Low (L), Medium (M), High (H).
- **Severity:** Potential impact of the risk in the project implementation: Low-Not Significant (L): risks that can affect success indicators of a Task. The Task leader will manage the risk, and the work package leaders informed; Medium-Consequence (M): Risks that can seriously affect the success indicators of a particular WP. The WP leader manages risk, the PC is informed, and the risk escalates to the PMB; High-Critical (H): risks that can seriously affect the

¹ <https://www.prince2.com/eur/prince2-methodology>

success indicators of the whole project. The Project Coordinator manages the risk, which will be escalated to the Project Officer level if needed.

LIKELIHOOD	High (3)	MODERATE	UNACCEPTABLE	UNACCEPTABLE
	Medium (2)	ACCEPTABLE	MODERATE	UNACCEPTABLE
	Low (1)	ACCEPTABLE	ACCEPTABLE	MODERATE
		Low (1)	Medium (2)	High (3)
		IMPACT		

Figure 1. PRINCE2 methodology for the assessment and categorization of risks.

2.1.4 Risk register

The Shift2Zero Risk Register takes the format of spreadsheet. The risk register is available in the shared repository, [S2Z Risks Register.xlsx](#).

Once a new risk is identified, entries are made on the Risk Register. The risk register will be shown at each review meeting with CINEA. For each entry in the Risk Register, the following fields should be recorded:

- **Risk identifier:** Provides a unique reference for every risk entered into the Risk Register. It will typically be a numeric or alpha-numeric value.
- **Risk author:** The person who raised the risk.
- **Date registered:** The date the risk was identified.
- **Work Package:** The work package is affected by the risk.
- **Risk category:** Shift2Zero Risk Management strategy establishes the following categories to handle the risks that may arise. Within those two categories, risks may be classified a further step by subcategories (performance, schedule, quality, legal, resources, ethical, IPR, etc):
 - Project Management risks: conflicts of interest, confidentiality, decision making procedures or simply different working habits.
 - Technical risks: risks that arise in the integration of critical technologies, and/or sub-systems dependent on them as well as arise from an underpinning technology not maturing in the required timeframe.
 - Other risks such as external factors, etc.
 - The management of this consortium reserves the right to add, modify or delete risk categories if needed.
- **Risk description:** In terms of the cause, event (threat or opportunity) and effect (description in words of the impact).
- **Probability and impact:** The scales for estimating probability and impact in SHIFT2ZERO project are: Low (L), Medium (M), High (H).
- **Proximity:** States how close to the present time the risk event is anticipated to happen (e.g. imminent, within stage, within the project, after the project).
- **Response to risk:** Measures to cope with the risk. Each risk has a Contingency plan described in the column “Contingency Plan” of the Risk Register.
- **Risk state:** It normally refers to whether a risk is active or closed.
- **Risk owner:** The person responsible for managing the risk (there can be only one responsible for each risk).

- **Risk executor:** The persons that will execute the actions described in response to the risk. There is no need to be the same person as the risk owner.

2.1.5 Risk management and responsibilities

2.1.5.1 Procedures for risk registration and monitoring

Risk registering: Shift2Zero Risk registration is implemented in WP1 as a continuous process throughout the entire lifecycle of the project.

The Risk Register will be actively maintained with biweekly updates by **WP leaders, coordinated through the Project Management Board**, by tracking changes and ensuring traceability of risk evolution and response actions.

- Any newly identified risk must be reported to the Work Package Leader and Technical Coordinator and recorded in the Risk Register.
- If the risk is assessed as having a **Medium or High** probability and impact, it must also be communicated to the Project Management Board.
- Risks with **High likelihood** and **Medium or High severity** will prompt an immediate review and may be escalated to the Project Coordinator. Established thresholds will guide the timely shift from mitigation strategies to contingency planning.

Risk monitoring: it is conducted at Project Management level as well as at WP and partners level, by the following means:

- **Project management risks** will be monitored and discussed in the **Project Management Board**, concretely in the physical board meetings and online conferences. Here, general organisation, all aspects of collaboration, potential conflicts, implementation of the work plan etc. in all WPs are regularly monitored.
- **Technical risks** will be monitored and discussed in the **Project Technical Board**, again in the physical and virtual board meetings. Here in particular, the match of requirements and technical process is monitored, procedures and collaboration are discussed and aligned.
- **Other risks** will be monitored and discussed in the **Project Management Board**.

The risk matrix (Low/Medium/High impact vs. likelihood) included in the risk register will be used to visually assess and prioritize risks. This matrix will support decision-making and resource allocation during review meetings.

Reporting and Timing: To keep track and adjust risk management to the actual project status, the Periodic Reports delivered to CINEA will include a particular Risk Assessment section.

Risk tolerance: Any risk identified in the Risk Register must be monitored and addressed as soon as it is detected during the lifespan of the project.

2.1.5.2 Procedures for risk management

Risk management is the structured process of identifying, assessing, and addressing potential events that could impact the project's success. It includes mitigation plans to proactively reduce the likelihood or impact of risks, and contingency plans to react effectively if risks actually occur:

Mitigation Plan

Purpose: To reduce the likelihood or impact of a risk **before it happens**.

Goal: Reduce the likelihood or impact of a risk.

Key Characteristics: proactive approach, implemented in advance to avoid or minimize the risk, aims to reduce the probability or lessen the severity of the risk. Built during the proposal phase or during the project when a new potential risk is identified.

Every risk identified must have a mitigation plan defined and implemented.

Contingency Plan

Purpose: To respond effectively **if and when the risk materializes**.

Key Characteristics: reactive approach, is implemented after the risk event occurs; aims to contain damage, recover, or keep the project on track. Often described as a "Plan B" or fallback strategy.

Every risk materialized must have one or more contingency plans defined and implemented.

2.1.5.3 Responsibilities

Roles and responsibilities: The Risk Assessment process is built into the structure of the project at the overall Project Management Level (WPL, GA, CA) as well as the work package (milestones defined for each work package, well-defined responsibilities) and partner level (efficient communication and reporting channels, well-defined commitments).

The responsible for the Risk Management Strategy is the Coordinator (PC and TC).

Any impact to the original planning must be communicated by the responsible partner to the corresponding WP Leader and to the Project Coordinator. The PC, TC and the corresponding WP Leader decide on who is the risk owner and the risk executor for each risk, being the risk owner, the responsible for managing the risk, and the risk executor, the person that will execute the actions described in the response to the risk.

The risk owner presents a proposal on alternatives and the contingency plan to solve the problem. The Technical Coordinator and the WPL approve or reject the risk owner's proposal. If rejected, the risk owner shall present a new proposal until it is approved.

The **Technical Coordinator** is responsible for keeping the Risk Register updated and accessible to all Shift2Zero members through the project Repository.

The **Project Coordinator** is responsible for monitoring the Risk Management in the Project Management Board.

2.1.5.4 Dedicated KPI for risk management

A Key performance indicator (KPIs) will be used to monitor the effectiveness of mitigation actions, including time to resolution, satisfaction degree etc. (within the Management KPIs, see in D1.1 Project Management Plan). Lessons learned will be logged after significant risk events.

2.2 Risks identified at month 4 of the project

A list of identified risks at month 4 of the project (end April 2025) is summarized in the next page:



Table 1. Risks identified at month 4 for the project

Risk No.	Author (who raised it /manages it?)	Date registered	Description	WP No(s)	Risk category (management / technical / operational /strategic /...)	Risk mitigation measures	Likelihood level	Severity level	Proximity (imminent / within stage / within project / after project)	Did you apply the risk mitigation measures? (to avoid the risk)	Did your risk materialise?		Did you apply contingency measures (to manage the risk if it happened)	Comments on how the risk was effectively handled (time to resolution, satisfaction...) If the risk mitigation and contingency measures couldn't be applied, please explain why.	Risk Status (active / closed)
											YES/NO	In which period? 1 (M1-12), 2 (M13-M18), 3 (M19-36), 4 (M37-M42)			
1	EUT	proposal stage	One or more partners are not able to fulfil their obligations to produce agreed deliverables, dropping out of the consortium	1	management	The GA will assemble and discuss if other partners can cover the shortfall, and the consortium is able to meet with the workplan. The work is organised so failure to produce one key deliverable does not preclude us from creating all other key deliverables.	Low	High	within project	YES	YES	1	YES	Partner INP withdrew from the project, in the week of the Kick Off Meeting. As this partner was the main logistics service provider in the Wroclaw pilot, the severity of this withdrawal was high. A contingency plan was immediately in place during the eKOM, allowing the entrance of a new partner with same or even higher relevance, DPD. The amendment is being revised by the EC.	active, being closed (AMD pending from PO)
2	VUB	proposal stage	Lack of engagement with stakeholders to capture ecosystem needs & requirements	2	technical	The consortium partners have extensive experience working with stakeholders including industry and practitioners across Europe and will be supported by networks and local partner to facilitate access.	High	Medium	within period	YES	NO	1		Continuous engagement of S2Z partners and their stakeholders, broader outreach to their extended networks, participation in networking events and logistics fairs (e.g. Munich fair), on-site visits in key locations of logistics operations (e.g. LSP distribution centers, vehicle inspection points).	active
3	CER	proposal stage	Data confidentiality restrictions preventing partners to provide detailed data for designs, digital tools, life cycle inventory compilation (LCA)	5-3-6-4-7	technical	Use aggregated data from partners and/or other data sources where necessary. Industrial partners have agreed to share the needed data with the partners in charge of the design and development of the different solutions affecting them.	Medium	Medium	within project	Ongoing	YES	2,3,4	YES	This risk will materialize during data integration and extraction in Tasks 5.1 and 5.2. To address it, we have already defined a clear set of KPIs that specify exactly which data are required for KPI calculation and decision analytics. In Tasks 5.1–5.2 we will detail these data requirements and convene workshops and working groups with pilot sites and OEMs to identify practical, confidentiality-compliant extraction methods. This proactive engagement both minimizes missing data and allows us to adapt our assessment approach to the information partners are willing to share. Furthermore, Task 5.4 (Fleet Management Platform) together with Tasks 5.3 and 5.5 (Optimization and Simulation Tools) will document how data are used, processed, stored and disclosed—ensuring full traceability and controlled third-party access while preserving partner confidentiality.	active
4	EUT	proposal stage	Conflicts across user needs and technical requirements, vehicle designs do not meet user needs	3	technical	All requirements are assessed and prioritized in T3.1 for designs development in WP3's subsequent tasks.	Medium	Medium	within period / project						active
5	ALK	proposal stage	Lack of dialogue between IVE and ALK hampering knowledge transfer across N1 OEMs	4	technical	A dedicated task (T4.4) is created to ensure that continuous dialogue, facilitated by IDI and BAX; both OEMs have been strongly collaborating already during proposal preparation	Low	Medium	within period / project						active
6	CER	proposal stage	Collection of technical and operational requirements insufficient to properly design digital solutions	5	technical	Identification of functional and non-functional requirements will start in close synchronization with WP2 and WP7, involving all pilot partners to ensure appropriate input collection. Business Process Modelling Notation and Unified Modelling Language will be used to standardize the design process and minimize uncertainties.	Low	Low	within period	Ongoing	YES	2	Not yet needed	The technical design phase at the operational and fleet management levels will initiate in the coming months. Close alignment across WP2, WP5, WP6 and WP7 ensures that solution development remains focused on pilot sites' needs, keeping this risk low by continuously validating requirements through iterative feedback loops with stakeholders.	active



Risk No.	Author (who raised it /manages it?)	Date registered	Description	WP No(s)	Risk category (management / technical / operational /strategic /...)	Risk mitigation measures	Likelihood level	Severity level	Proximity (imminent / within stage / within project / after project)	Did you apply the risk mitigation measures? (to avoid the risk)	Did your risk materialise?		Did you apply contingency measures (to manage the risk if it happened)	Comments on how the risk was effectively handled (time to resolution, satisfaction...) If the risk mitigation and contingency measures couldn't be applied, please explain why.	Risk Status (active / closed)
											YES/NO	In which period? 1 (M1-12), 2 (M13-M18), 3 (M19-36), 4 (M37-M42)			
7	GRU	proposal stage	Challenges or delays in obtaining permissions to carry out demonstrations from local or national authorities	6	Technical	The consortium partners are in contact with relevant authorities who are aware of intended demonstrations. Project partners have discussed contingent plans and built flexibility in timelines to account for such issues.	Low	Medium	within project						active
8	GRU		No available driver to operate new vehicles. Could result from general shortage of drivers or lack of motivation.	6	Operational	Organize dedicated info sessions to explain the strategic importance of the new vehicles and highlight benefits for drivers.	Low	Medium	within project						
9	GRU	proposal stage	Prototype vehicles are not available for real-life demonstrations in the different site required	6	Technical	A dedicated internal planning will be designed and reviewed in T6.1 by OEMs and site leaders to confirm the demonstrations, including some buffer.	Low	High	within project						active
10	TOI	proposal stage	Lack of alignment between impact methodologies across sites or KPIs to report to 2ZERO partnership	7	management	A dedicated impact framework is designed by M8 to ensure compatibility of methodologies and KPIs, in alignment with WP2 and T5.1 on data requirements and feasibility to retrieve and share.	Low	Medium	within project	Ongoing	No			An overall impact assessment framework is being developed (first draft due M8, August), following a 5-step approach: research, analysis, synthesis, enrichment, finalization. A preliminary list of KPIs covering all impact areas have been drafted during M4, and will be reviewed by relevant S2Z partners. A benchmark of State-of-the-art methodologies have been collected and reviewed. To ensure alignment across methodologies for Shift2Zero, a Multi-Criteria Decision Analysis Framework approach will be taken, allowing the coverage of all S2Z's impact areas: economic, environmental, safety and societal. Further mitigation measures for aligning impact methodologies across pilot sites and ensuring 2ZERO partnership KPIs are evaluated, will be integrated into the impact assessment framework.	active
11	BAX	proposal stage	Communication & dissemination of project developments does not reach objectives set	8	management / technical / other	A detailed plan will be developed and updated regularly, involving targeted C&D means and multiple channels.	Medium	Medium	within project	Ongoing	No	-		A detailed C&D plan is currently being developed under D8.1 Communication & Dissemination strategy - due on M4. This includes the target groups, channels and key messages, as well as the KPIs which will be monitored throughout project implementation. Should any problems arise, new & additional channels will be used to communicate and disseminate the project updates. In addition, if deemed necessary to increase outreach and external engagement, the consortium can consider non-monetary incentives, such as invitations to closed-group events or networking opportunities.	active
12	ALKE	23/4/25	Type approval and/or insurance coverage issues prevent the demos from taking place at the respective pilot sites	6	technical / operational	Preventive monitoring by OEMs and those in charge of the various pilots to anticipate viable solutions on this front	Medium	Medium	within project	YES	NO	3, 4			active
13	TOI	23/4/25	Not getting sufficient and quality data on time from the demonstrations to be able to carry out impact assessments.	7	management	Integrate data collection activities in demonstration preparation and implementation activities. Regular calls between WP5, WP6 and WP7 to align data related issues and activities. Sufficient PM budget for partners providing data. (See also Risk 3)	Medium	Medium	within project	Ongoing	NO				active

3. Innovation management

“A culture of valorisation should be at the heart of the EU research & innovation policy”. **Shift2Zero** embraces the EU Valorisation Policy² and the EC expectations on Horizon Europe impact as guiding principle of our work on **Innovation Management**. This activity, framed within T1.3, has the ambitious goal to fulfil a **dual role**: support the implementation of **WP1** complementing the quality assessment and risk monitoring, as well as liaise with **WP8** on project results valorisation, scalability and knowledge exchange.

Key concepts

Innovation management allows to support the **entire lifecycle** of technology development, from fundamental research to product and market introduction, aligned with the progress in the scale of TRL (Technology Readiness Level), from TRL1 to TRL9. To do so, it provides a **set of tools** that project partners can collaboratively apply to contribute to this progress, adding tailored value to each development stage. Chapter 3.1 will present some of those tools that Shift2Zero partners will use.

Specialised literature (Specht, 2002) has often differentiated between **technology, R&D and innovation management**: whereas technology management is focused on the transition from theory to prototype (development and pre-development activities), R&D management complements it both, upstream on ideation for basic principles of research, and downstream, in the transition from prototype to invention. Finally, **innovation management** is focused on the evolution from **invention to innovation**, achieved when a **new or significantly improved** product, good or service has been introduced and widely accepted by the market³ - completing the cycle and monetizing the R&D investment.

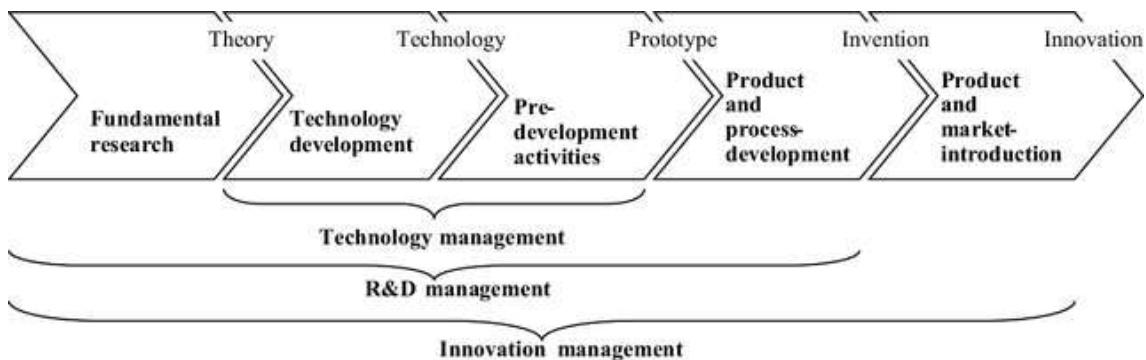


Figure 2. Innovation management and lifecycle. Source: Specht, 2002

As anticipated, Fig. 2 reflects how innovation management encompasses all the process: the **Shift2Zero partners** already applied it in the **proposal stage**, for project conceptualisation and ideation that supported getting the proposal approved (hence, raising the €10M contribution requested from the EC). Now, it will also be used during

² https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/eu-valorisation-policy_en#why-we-need-an-eu-valorisation-policy

³ <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Innovation>

42 months until project completion to deliver the expected results and impacts, assessing the return generated on those €10M, for partners involved and the EU society.

On the other hand, it's important to reflect on other key terms and specific concepts when working on innovation management. For instance, the different **types of innovations**, as we will be applying and assessing them during the implementation of this task:

- Most of the project innovations and expected results in Shift2Zero will classify under the category of **product or service innovations**, being one of the 4 main groups officially defined by the **Oslo Manual** (OECD, reviewed in 2018)⁴. However, acknowledging the disruptive impact than other non-technological innovations can have, Shift2Zero will also pursue **innovations at business model level**, as classified in the **10 types of innovations** by the Doblin Group (Larry Keeley).
- Shift2Zero adheres to the principles of **Open Innovation** (Henry Chesbrough, 2003), which further develops R&D collaborative models for innovation management fostering the involvement of the **external environment** in all stages of the process (**innovation funnel**), from ideation to commercialization. Several innovation models have followed this paradigm: we have reviewed other relevant cases focused on our context (mobility R&D in Horizon Europe), studying specific models like the **User-centric Innovation process** of the **IN2CCAM project**⁵.
- Finally, Shift2Zero develops **market-pull innovations**, hence, driven by the needs identified and co-created with specific users, as opposed to technology-push innovations. In Shift2Zero, we position Logistics Service Providers as the project end-user and innovation ultimate beneficiary. We do acknowledge the influence of policies (**policy-push**), from Low Emission Zones to financial incentives, in the development and adoption of project innovations.

The Innovation Potential of Shift2Zero

The Shift2Zero innovations are not only user-driven but grounded on **excellent scientific research**. When preparing the application, we reflected on the potential impact of the Shift2Zero innovations, identifying **7 major R&D themes** where we could clearly address specific challenges in the State of the Art. Those areas are complementary, reflecting the **systemic vision** of the project, connecting themes from vehicle design, hardware and software, to the logistics operations and business models as well as the related future policies requirements and standards.

Overall, we believe the **innovation potential** of Shift2Zero is based on 3 main pillars:

- **Right-sized modular vehicles**: allowing to overcome the trade-off between one size fits all (multi-purpose platforms) and costly design-for-purpose vehicles.
- **Mission-centric solutions**: fit to market developments, adjusted to specific requirements and considering the evolution of future needs.
- **Scalable innovations**: tested and piloted in real-life operations across 5 EU sites, with the potential to be adopted by LSPs with large international fleets.

⁴ https://www.oecd.org/en/publications/oslo-manual-2018_9789264304604-en.html

⁵ https://in2ccam.eu/wp-content/uploads/2023/10/IN2CCAM-D1.3-Innovation-Management-Plan-v1.0_Log.pdf

3.1 Innovation Tools

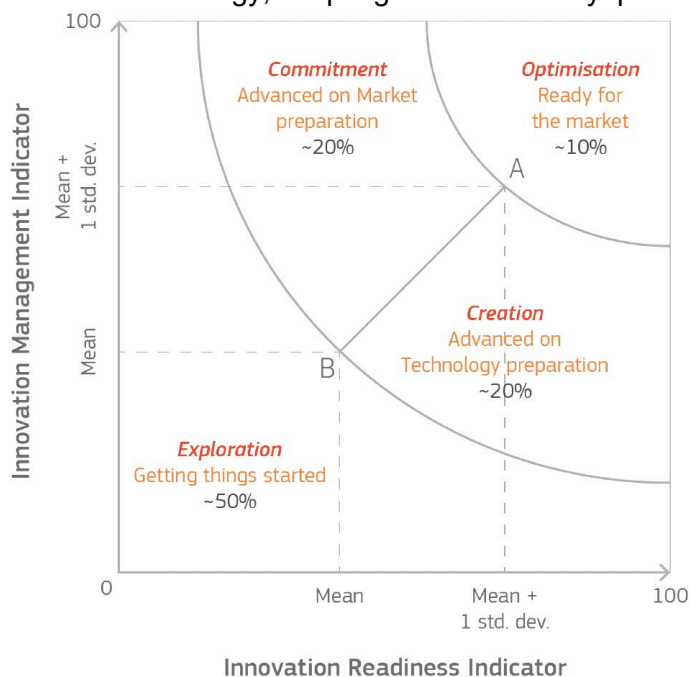
Several tools are available and have been usually applied to assess the market potential and readiness of project innovations. Before presenting an overview of them, as well as our proposed approach, we would like to highlight the importance of the **Innovation Radar**, being the official methodology endorsed and promoted by the EC.

The Innovation Radar (IR) Methodology

It was originally launched in 2014 by DG CONNECT to respond to the challenge of understanding the greatest potential of technological innovations towards impacting EU society and citizens. The **specific methodology** was detailed by the JRC in 2015⁶ and is highly based on the **completion of 2 questionnaires**: a survey of 16 questions for each of the project innovations and a survey of 11 general questions to be answered at project level. The aggregate results of the answers allow to assess the **2 innovation indicators** (Innovation Potential and Innovator Capacity) based on **5 key criteria** (innovation management, innovation readiness and market potential; innovator’s ability and innovator’s environment). Those will eventually map all project innovations in **4 categories**: exploring (50% of the total; “getting things read”, early phases), business ready (20% of the total; “advanced on market preparation”, focus on technology development), tech ready (20% of the total; as opposed to business ready) and market ready (10% of the total; “outperforming”, focused on optimisation).

Shift2Zero draws inspiration from this methodology, adapting some of the key questions from both surveys as included in our Project Result template (see Table 3). We will also explore adapting the categories and criteria to our results categorisation (as shown in Figure 3), to facilitate comparisons and compliance with the IR database⁷.

Figure 3. Innovation Radar methodology. Source: JRC



The MCPI: Market Creation Potential Indicator

Complementary to the IR methodology, the JRC created in 2020⁸ an **additional indicator** derived from the assessment of the IR database. The MCPI is constructed

⁶ <https://publications.jrc.ec.europa.eu/repository/handle/JRC96339>

⁷ <https://innovation-radar.ec.europa.eu/>

⁸ <https://publications.jrc.ec.europa.eu/repository/handle/JRC121066>

adapting a series of questions and replies from the IR standard survey (already presented), and applying some specific decision rules, eventually scoring from 1 (minor) to 5 (very high). The **MCPI standard** allows to compare innovation performance across countries, types of entities or innovation topics/sectors.

3.1.1 Overview of tools

Besides the innovation standard endorsed and promoted by the EC, there are other popular innovation tools widely applied by innovation managers in Horizon Europe projects:

- **Risk matrix:** scoring and calibration system to measure the probability of failure (0-100%) of a project based on how familiar the intended market (X axis) is and how similar is the innovation compared to current offering (Y axis).
- **S-curve:** visual representation of technological/product lifecycle, mapping (R&D) effort (X axis) and performance/adoption (Y axis) to classify innovations in 4 stages (emerging, rapid/exponential growth, late-stage growth, decline).
- **Stage-gate & funnel:** industry standard to manage new product development, it combines 5 stages (phases from scoping to launch) and 5 gates (evaluation milestones with specific go/no-go checks), it allows to manage risks, reach market faster and engage multiple users in the decision-making
- **Real Win Worth it screen (R-W-W):** used to identify and fix problems during product development, it is based on a 17-question survey on 3 overarching guidelines (can we win? Is it real? Is it worth it?),
- **Monnier Innovation Matrix (MIM):** 2 axis, Offer (Y, idea) vs Demand (X, market), qualify and map innovations in 7 MIM levels to evaluate their technical level and/or the relevance of a new service

3.1.2 Shift2Zero & the Innovation Readiness Levels (IRLs)

Having summarised the standard and available Innovation Tools, we now focus on presenting the proposed approach to be used in the innovation management sessions: the **Innovation Readiness Levels (IRLs)**. IRLs are modelled by Bax based on the standard Technology Readiness Levels (TRLs) and are particularly appropriate to manage **mission-driven innovations** like the ones in Shift2Zero. We expand from the original TRL scope of innovation management, typically focused on a narrow technology feasibility, to also integrate other relevant factors (e.g. societal, aligned with the latest Societal Readiness Pilot from Horizon Europe).



Figure 4. Canvas summarizing the main blocks of discussion within the Innovation Readiness Levels (domains, scale levels and phases). Source: Bax

The application of this methodology demands to connect factors, levels and phases from 3 different parts inherently interconnected within innovation management:

- **Key factors within the 4 PEST domains** for scalable impact: Policy, Economy, Society and Technology. This allows us to understand several questions regarding the context and level playing field where innovations need to be deployed, e.g. if there's political buy-in, the feasibility of a business case, or the alignment of different relevant stakeholders.
- **Three scale levels:** at Macro (national/EU level), Meso (regional or industry-level), Micro (localised innovations).
- **Three Readiness Phases:** from design, to develop and deliver.

Having stated our proposed approach, we would like to reinstate our determination to liaise with the official practices and platforms from the EC including:

- **Horizon Europe results**⁹: centralized repository to submit and promote our innovations, highlighting our potential to collaborate or actual needs
- **Horizon Results Booster**¹⁰: maximising the impact of our innovations through the collaboration with other projects, partners and experts

3.2 Methodology to be followed

The main goal is to create an inspiring environment that motivates and supports project partners to fully exploit the potential of the Shift2Zero R&D results and innovations during and upon project successful completion. EUT will lead this task (T1.3) with the support of BAX, as there're strong synergies with other tasks led by Bax, particularly with:

⁹ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/horizon-results-platform>

¹⁰ <https://www.horizonresultsbooster.eu/>

- **T8.4 (Exploitation and route to market):** identify market barriers, define business cases and exploitation strategies
- **T6.4 (Replicability and transferability across pilots):** assessment of pilot benefits, knowledge transfer of results and learnings, roadmaps from pilots to deployment.

T1.3 will aim to boost even further the innovation capacities of the consortium, interlink partners' efforts for the proper project development and provide resources, to better manage their innovation efforts during the project and, at the same time, advise participating corporations and research centres/universities about implementing successful innovation strategies beyond the project's framework. Key goals are:

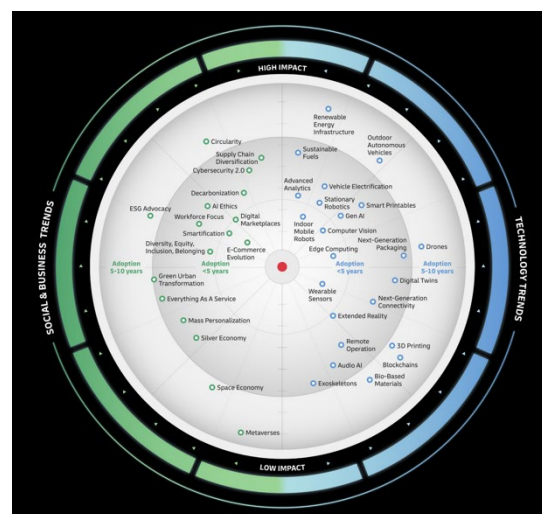
- Increase the collaboration between partners.
- Train and advice partners on how to stimulate innovation and establishing the necessary management structures.
- Provide tools for sharing ideas and promoting the innovation culture.
- Promote the innovation culture inside the consortium.
- Collect and plan all the possible unexpected project outcomes, in terms of novel products, business models and architecture of the value chain.
- Monitor the progress and achievement of R&D results compared to initial goals, as well as partner efforts regarding IPR actions.

Liaison with technology surveillance and knowledge management

Besides T8.4 and T6.4, it is important to highlight the connections that Innovation Management (T1.3) will also have with the **Shift2Zero knowledge transfer task (T8.3)**, particularly the Observatory & external cross-fertilisation (ST8.3.2) as well as the Clustering & Stakeholder Advisory board (ST8.3.3).

The **Shift2Zero observatory**, which will be available in the project website, will provide relevant insights to the partners on the latest developments in selected areas of the State of the Art, particularly in the **7 selected R&D themes**, being able to review and compare the innovation potential of our project innovations. This will be very helpful, for instance, to complete the Project Result template (Table 3 below presented). The Observatory will build upon other observatories recently established in SotA Horizon projects (e.g. ULaaDS¹¹, URBANIZED¹²), while establishing a fluent cooperation with the **EU Mobility Observatory**¹³, being the standard reference of EU Mobility R&D.

Figure 5: Logistics Trend Radar 7.0 (Source DHL).



Additionally, we will also draw inspiration from similar established mechanisms in leading entities, starting with project partners. E.g., **DHL** has been working for

¹¹ <https://ulaads.eu/insights/>

¹² <https://urbanized.eu/insights/>

¹³ https://urban-mobility-observatory.transport.ec.europa.eu/index_en

years on the **DHL Logistics Trend Radar**¹⁴: similarly to the IR methodology, DHL maps two main group of trends (technological and societal & business) according to 2 axes: high vs low impact (Y axis) and market introduction, from 0 to 10 years (X axis).

On the other hand, **ALICE** has established their **Knowledge Platform**¹⁵ as a reference repository of centralised information on project innovations, State of the Art insights and other activities, from trainings to webinars. We will explore the liaison with that platform to promote our content while engaging with the extended network of ALICE members.

Finally, regarding the **Clustering & Stakeholder Advisory board**, it is worth highlighting the role that both will play in our Innovation Management activities:

- **Clustering** with other SotA projects: we already identified a list of 12 relevant projects where Shift2Zero partners are involved and have direct access to the SotA developments. Most of them are on-going and will conclude before Shift2Zero, e.g. DISCO, ZEFES, URBANE or EMPOWER. Additionally, it is worth highlighting the flagship project **LeMesurier**¹⁶, a Coordinated Support Action (CSA) established as a reference for the 2ZERO Partnership, that is actively collecting KPIs from all relevant projects to centralize their aggregated impact.
- **Stakeholder Advisory board**: a selected list of high-level experts as well as additional stakeholders will engage with the project on a regular basis to advise on project implementation. Part of their support will be dedicated to discuss about the status of expected results and their innovation potential.

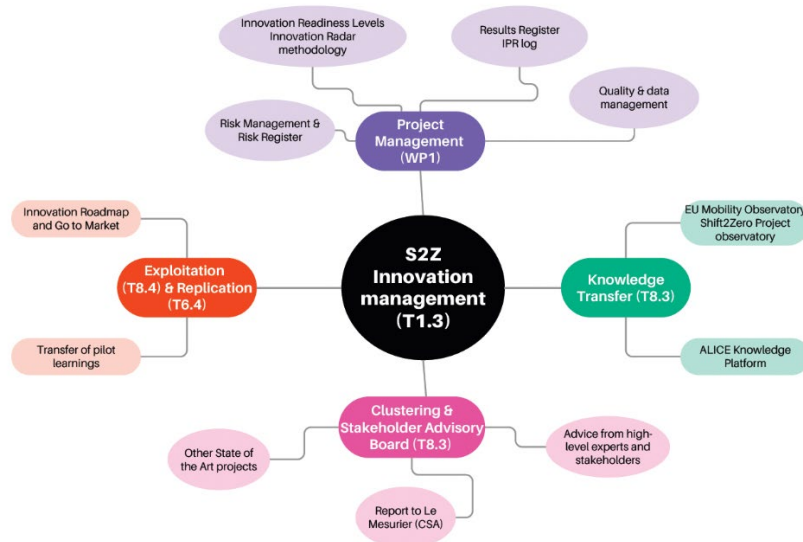


Figure 6: Innovation Management in S2Z, overview: interlinked tasks & tools

¹⁴ <https://www.dhl.com/gb-en/home/innovation-in-logistics/logistics-trend-radar.html>

¹⁵ <https://knowledgeplatform.etp-logistics.eu/>

¹⁶ <https://lemesurier-project.eu/about-lemesurier/>

3.2.1 Innovation Framework & resources

The innovation management process will be performed under a framework of three main stages, including the following activities:

- 1- **Initial diagnosis (M1-M12)**: compilation of the first input provided by partners during the Grant Agreement Process and upon project kick-off, review of initial expectations and plans in dialogue with key partners.
- 2- **Innovation management practices & sessions** throughout the project (**M12-M42**): list of responsibilities and series of dedicated workshops with partners to jointly identify barriers and provide guidance. We expect to host them online, but we'll explore the possibility to combine them with the physical General Assemblies.
- 3- **IPR results**, aligned with business model and exploitation plans defined (**M30-M42**): a final update on IPR efforts achieved and future plans, coherently aligned with final business models and exploitation plans designed (to be reported both in D1.5 and D8.4).

The following elements of documentation shall be highlighted due to their universal importance:

- **IPR Log**: a central inventory list of any IPR used/brought into the project's work and therefore results.
- **Results Register**: a repository to identify any potentially exploitable or publishable result, and document its innovative nature, verification of TRL, IPR and ownership aspects.
- **Risk Register**: a repository to inform on detected risks, mitigation and countering measures, and opportunities.
- **Milestones Register**: a repository to follow up on the established milestones, which includes a register of important changes and decisions.

The Risks and Milestones registers had already been presented and are available in the SharePoint: [S2Z Deliverables & milestones planning.xlsx](#), [S2Z Risks Register.xlsx](#). while the [IPR Log](#) and the [Results Register](#) are now also available in the project Sharepoint - a first iteration of complete content will be soon completed, updating the input from the proposal.

3.2.2 Roles & distributed responsibilities

Innovation management is a shared responsibility across the consortium, as all partners should contribute and support EUT and BAX. To this end, different partners are expected to deliver specific roles towards a successful achievement of this activity:

- **Responsible of project result**: complete the dedicated Project Result Template, providing timely and quality input, updating it if relevant.
- **WP leaders**: identify and include relevant R&D results within their WP in the results register; support the lead author of each R&D result to complete their information, ensuring it's updated.
- **Project Management Board**: review regularly (e.g. once per quarter) the list of results, including it as an item in the agenda of the bi-weekly calls, validating status and suggesting actions for improvement.

- Author of deliverables and milestones:** Shift2Zero aims to leverage the submission of deliverables and the achievement of project milestones as an opportunity to capture and review information on project results. Therefore, we will ensure that any technical deliverable submitted includes a dedicated reflection on IPR and exploitation, connecting with the list of R&D results included in the register: key deliverable authors are expected to communicate with BAX and EUT to update on this topic.

On the other hand, BAX together with EUT will organize and facilitate a series of dedicated workshops on innovation management: we expect to perform a minimum of 3 sessions during project implementation, e.g. in M12, M24, M36, upon the completion of key milestones, from user needs to development of solutions and completion of physical pilots. Sessions can be hosted online, facilitated by tools like Miro, or potentially included in the agenda of the physical meetings (GAs).

3.3 Initial diagnosis

During the first year of project implementation our focus on this task will be the setup of the main monitoring tools for IPR management (see 3.2.1 and 3.2.2) as well as the consolidation of the preliminary input shared by partners, validating any change compared to proposal expectations. That could be related to both, external factors e.g. market evolution or political & legal context, as well as internal e.g. update on the company strategy & roadmap, and restructuring of technological priorities.

The focus of our efforts on IPR management will be the KERs (Key Exploitable Results) of the project. Our starting point to build the list of KERs in Shift2Zero will be the main R&D results identified in the proposal within selected areas of expertise, where we ambition to progress beyond the State-of-the-Art. Additional results can be included in the list, and it will be part of the responsibility within this task to identify them and assess their potential to become KERs.

As next step, we will start working together with the selected partner(s) related to each of the R&D results to complete the following Project Result Template for each of the 9 R&D results preliminary identified: a first draft of this template should be ready by M12.

Table 2. Project Result Template

Result Name	(List the relevant Project Result/Aggregate Project Result/Key Exploitable Result)
Description	(Please describe the project result that will be developed)
Type	(Select among the options below, you can add a new one if not mentioned) Publications and reports Technical Specifications, requirements and standards Policies and Procedures Software & IT services Business & governance models ...
URL	(add link/URL of project result, if available and relevant)
Advance of the state of the art	(How does the project result contribute to progress beyond State of the Art?) (Add some technical information as broader context to justify your claims)



Innovation	(What are the benefits associated to your project result (e.g. either as a product, service, educational tool, for policy support, etc.)					
Components (if Aggregate Project result)	(List all project results linked to this Aggregate Project result)					
	#	Project Name	Result	Short description		
	1	(add link to the page describing the Project result)		(Please provide a short description of the component and how it contributes to the Aggregate result)		
	2					
	3					
IP and related IPR management						
IP background	Please describe all IP elements related to the result owned by the project partners. This could include software, copyright, proprietary tools, or know-how (e.g. educational training). Each result can have several IP components associated.					
	Element	Short description	IP Owner	Type of protection or licensing used	Protection or licensing actions used	Terms and conditions needed for IP for exploitation
Third party IPs	Please list all IP third party components: IP owned by external entities					
	Name	Short description	IP Owner	Type of protection or licensing action used	Protection or licensing actions used	
IP Siderground	Please list all IP components relevant to the project but developed externally by any of the partners during the projects' implementation (summary of the components of this aggregate result)					
	Name	Short description	IP Owner	Type of protection or licensing action used	Protection or licensing actions used	



3.3.1 Results register

Both tables 3 and 4 below list the 9 R&D results preliminarily identified in Shift2Zero upon proposal submission, including the partners involved in co-developing them. The content is already transferred into the results register hosted in the Project SharePoint, to facilitate visibility and monitoring.

Table 3. First list of results including preliminary strategies for IPR

S2Z result/outcome	Partners involved
Refrigerated cargo body with PCM movable panels	COL; ALK, EUT
Refrigerated cargo body with blowing eutectic evaporators	COL; IVE, EUT
Optimised heating system & intelligent thermal management strategies	AIT
Holistic control strategy integrating optimised tyre designs & regenerative braking system	IKA, MIC, BRE
Swappable concept to enable seamless transshipment	PAX; TØI
Novel frontal bonnet & interior door trim for safe ergonomic cabin	IDI
Bi-directional charging strategies & standards	LPIM; IVE

Two additional software results were identified as relevant, also including dedicated strategies for IPR management as preliminary foreseen by project kick-off:

Table 4. First list, additional results, including preliminary strategies for IPR

S2Z result/outcome	Partners involved
Agent-based simulation tools & models	VUB, CERTH
S2Z urban logistics management platform	CERTH; IKA, LPIM, VUB

Shift2Zero Innovation Roadmap

The 9 Shift2Zero results presented will follow a similar process in terms of go to market and the role performed by the different project stakeholders in that process. The innovation roadmap presented below summarises the dual role of LSPs, where the market-pull innovation starts on their needs and how they'll support the testing of the innovations. On the other hand, policymakers support the market adoption with the setting of the appropriate policy context. On the other hand, innovators from the automotive industry and academia will collaborate to co-develop replicable and standardised solutions, with the ultimate goal of impacting >50 EU cities and >30M consumers by 2030.



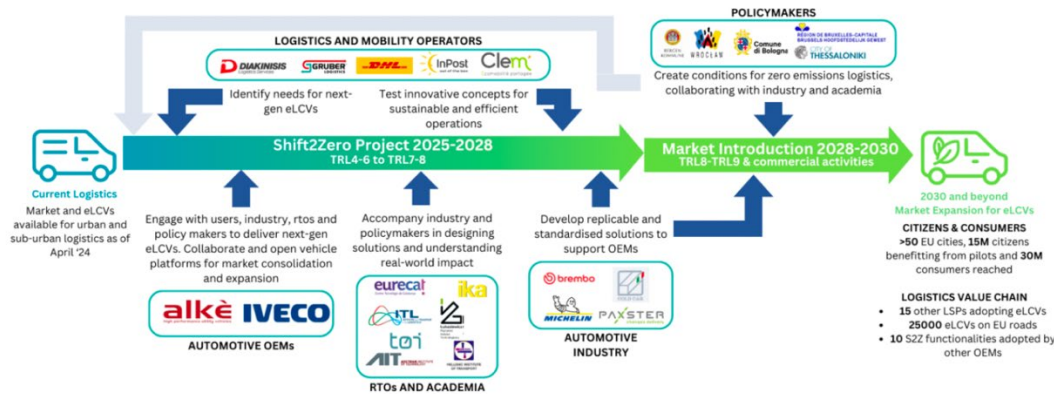


Figure 7. The Innovation Roadmap in Shift2Zero, detailing stages and collaborative innovation.

3.3.2 IPR log

BAX and EUT aim to manage all IPR efforts (planned and achieved) in a centralized online repository, monitoring partners' activity to facilitate guidance and avoid overlaps. We take as starting point the input shared by partners in the CA under the dedicated attachment 1, listing relevant background IP.

The IPR log has already been created and is available online in the project Sharepoint, to facilitate visibility and monitoring: as next step, we will review and update the main information related to those key R&D results and the relevant IPR strategies.

Aligned with our motivation to liaise with established platforms of the EC and their services offered, **we will encourage Shift2Zero partners** to explore the opportunities available at the **European IP Helpdesk**¹⁷ and **Horizon IP Scan**¹⁸. The main target are SMEs and startups but it is available for all project beneficiaries, supported by in-site and online training on how to safeguard the Background IP highlighted as well as how to better define collaborations with other partners in terms of new jointly generated IP.

3.4 Next steps

We detail below the list of actions we're currently working on that we aim to finalise during the initial diagnosis phase, by M12 at the latest, including:

- Adapting the Canvas of the IRLs towards the specific scope of the project
- Reviewing the list of relevant R&D projects and identifying synergies and relevant developments within our 7 selected R&D themes matching Shift2Zero innovations.
- Completing the first iteration of content for the Results Register and the IPR Log uploaded in the project SharePoint.
- Explore the application of the different Innovation Tools presented for the Shift2Zero results, starting with the Innovation Radar Methodology
- Plan the agenda of the first innovation management workshop, considering different feasible options for relevant dates, including the upcoming GA in Bergen (September'25)

¹⁷ https://intellectual-property-helpdesk.ec.europa.eu/regional-helpdesks/european-ip-helpdesk_en

¹⁸ https://intellectual-property-helpdesk.ec.europa.eu/services/horizon-ip-scan_en

4. Conclusion

The D1.2 Risk and Innovation Management Plan is a key document created at the start of the Shift2Zero project. It helps all partners manage risks and support innovation throughout the project. It provides clear steps and tools to handle possible problems and make the most of new ideas that come up.

D1.2 is designed to be used and updated during the entire project. It also connects closely with other parts of the project, especially the ones that deal with communication, exploitation, and planning how to bring Shift2Zero results to the market.

The main next steps starting from this document are summarized below:

- **Keep the plan updated:**
All partners should regularly update the plan when new risks or innovations are identified.
- **Use it across all work packages:**
Work package leaders should follow the plan to guide their activities and align their work with the overall strategy.
- **Track progress:**
Regular reviews should be held to ensure that the risk and innovation actions are working well, i.e. in biweekly Project Management Board meetings and in General Assembly meetings.
- **Support exploitation-related deliverables:**
Use the content of the plan to help prepare upcoming deliverables, especially those about scaling up and market adoption (like d8.2 and d8.4).
- **Collect feedback:**
Gather feedback from team members to improve the plan and share lessons learned for future projects.