



RESKILLING

Deliverable D1.1

Project presentation and inception report

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Project acronym: RESKILLING

Project title: Research initiative for Enhancing and Adapting Workforce SKILLS for Implementing TraNsport Automation with Employment Growth

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List of Acronyms	
Acronym	Definition
AB	Advisory Board
AHP	Analytic Hierarchy Process
BM	Business Models
CA	Consortium Agreement
CBA	Cost-Benefit Analysis
CCAM	Connected, Cooperative, and Automated Mobility
CDE	Communication, Dissemination and Exploitation
CMS	Content Management System
DMP	Data Management Plan
DPIA	Data Privacy Impact Assessment
DRT	Demand-Responsive Transport
EB	Ethics Board
EC	European Commission
eFMEA	Extended Failure Mode and Effects Analysis
EJTIR	European Journal of Transport and Infrastructure Research
EntreComp	European Entrepreneurship Competence Framework
ETRR	European Transport Research Review
ETT	Engagement Tracking Tool
EU	European Union
FAIR	Findable, Accessible, Interoperable, and Reusable
GA	Grant Agreement
GDPR	General Data Protection Regulation
HE	Horizon Europe
IOOI	Input - Output - Outcome - Impact
IP	Intellectual Property
IPR	Intellectual Property Rights
IRR	Internal Rate of Return
KIP	Key Impact Pathways
KN	Key Needs
KPIs	Key Performance Indicators
M	Month
MaaS	Mobility-as-a-Service
NPV	Net Present Value



List of Acronyms	
OA	Open Access
PB	Partner Board
PC	Project Coordinator
PCG	Project Core Group
PMT	Project Management Team
PO	Project Officer
R&D	Research & Development
R&I	Research & Innovation
SC	Stakeholder Community
SMEs	Small and Medium-sized Enterprises
SoA	State-of-the-Art
SRIA	Strategic Research and Innovation Agenda
SSE	Social Skill Ecosystem
SSH	Socia Sciences & Humanities
SWOT	Strengths, Weaknesses, Opportunities and Threats
T	Task
TM	Technical & Innovation Manager
UCs	Use Cases
WP	Work Package



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Executive Summary

The current document provides the Project Inception Report. It includes the overall main objectives of the project and the essential core items of it (project factsheet, overall approach, governance scheme, core innovation, key expected impacts), whilst, finally, it provides an analytical working plan including specific objectives and anticipated outcomes for each task of its expected work packages as it is delineated in the context of the Grant Agreement.

The Inception Report is a living guide of the project throughout its whole duration and, as such, subject to changes and updated that will happen in near and more distant future of the project.

The Inception Report has been prepared by the Project Management Team of the project, with the support of the Project Core group and the active contribution of the RESKILLING Consortium.



1. Introduction

1.1 Purpose of the document

The current document, the so-called D1.1: Project presentation and inception report, aims to elaborate on the RESKILLING project essential elements as well as on the research/innovation approach that will be followed for the realization of every activity of its workplan.

1.2 Intended Audience

This Deliverable will serve as a workplan reference document for the project and its Consortium for the whole course of its duration.

1.3 Interrelations

D1.1: Project presentation and inception report addresses all activities of the RESKILLING project workplan.

2. RESKILLING Project at a Glance

2.1 Short factsheet

Table 1 : RESKILLING short factsheet

RESKILLING factsheet	
Contract Number	101147328
Project acronym	RESKILLING
Project full name	Research initiative for Enhancing and Adapting Workforce SKILLS for Implementing TraNsport Automation with Employment Growthmodels for Worldwide adoption
Call topic	HORIZON-CL5-2023-D6-01-05 CCAM effects on jobs and education, plans for skills that match the CCAM development, and prerequisites for employment growth (CCAM Partnership)
Type of Project	Research & Innovation Action
Start date	01.01.2025
Duration	36 months
Total Budget	1 999 815.62€
EC Contribution	1 999 815.62€

2.2 Rationale

The rapid advancement of Connected, Cooperative, and Automated Mobility (CCAM) is transforming the European transport sector, bringing both opportunities and challenges for the labour market and broader socioeconomic structures. While CCAM technologies promise increased efficiency, safety, and sustainability, their widespread adoption will inevitably reshape employment patterns, workforce skills, and the socioeconomic fabric of transport-dependent industries.

Despite the growing momentum of CCAM deployment across the EU, there remains a significant knowledge gap concerning its impact on transport employability and labour dynamics. Automation and digitalization are expected to disrupt traditional job roles, requiring a workforce transition towards new skill sets. However, the extent to which job displacement, reskilling needs, and employment shifts will occur remains uncertain. At the same time, the broader socioeconomic consequences, including regional disparities, economic inequality, and workforce adaptability, must be thoroughly analysed to ensure an inclusive and fair transition.

In light of the EU's strong commitment to sustainable and digital transport solutions, understanding the labour market implications of CCAM is essential for designing effective policies and strategies. Policymakers, industry stakeholders, and educational institutions require evidence-based insights to develop targeted mitigation strategies, reskilling initiatives, and regulatory frameworks that not only support workers and businesses but also maximise the benefits of CCAM. Without proactive intervention, there is a risk of labour market mismatches, social inequalities, and economic disruptions, making it imperative to address these challenges in a timely manner.

To support this transition, the RESKILLING project aims to provide a comprehensive assessment of CCAM's impact on transport employment and its broader socioeconomic consequences across the EU. By doing so, it contributes to the EU's objectives related to sustainable transport, social cohesion, and

economic resilience, ensuring that the shift to automation benefits all stakeholders equitably. Anticipating and responding to these changes is essential for securing a future-proof workforce and maintaining the EU's leadership in innovative and sustainable mobility solutions.

2.3 Project Vision, Aim and Objectives

RESKILLING is based on a **social innovation driven approach** considering the CCAM-related technological developments often put forth by experts and/or governments, but it necessitates both the in-depth examination of every profession connected to CCAM services for the mobility of people and goods, the consideration of different social aspects and geographical variations, as well as the engagement of the whole stakeholder community (focusing on the different professionals' types), ensuring that a SSH approach is applied throughout all project's phases and activities and via the application of RESKILLING Co-Innovation Framework that will foster the collaboration and engagement of diverse stakeholders, including professionals, experts, and beneficiaries, to co-create and implement solutions that are contextually relevant and sustainable.

THE VISION: RESKILLING envisions to implement a strategic approach, which will empower the workforce and businesses of Europe's mobility (of people and goods) sector, to effectively cope with the anticipated changes in the sector from CCAM deployment, but also to actively participate in advancing and refining the sector.

RESKILLING aims to propose, implement, apply and validate a comprehensive approach, guided by **inclusivity, co-creation, and social innovation** principles, which will **efficiently and sustainably coordinate a range of novel services and tools**, fostering optimal adaptation of the mobility sector (covering both people and goods) to the deployment of CCAM solutions and services. This will range from **analysing the socio-economic and employment impacts** of CCAM across the entire value chain to facilitating businesses and workers in mitigating drawbacks and leveraging opportunities brought about by CCAM deployment. This involves **innovating business models and employing mechanisms and tools for skill enhancement and adaptation**, with an emphasis on their **replication and transferability** potential and customised **scalability for adoption** throughout the EU. RESKILLING aspires to create a CCAM innovation system capable of not only generating innovation but also delivering solutions to societal challenges.

RESKILLING will achieve its vision and aim through the following key objectives:

Table 2 : RESKILLING key objectives

KO#1	To establish a robust community of stakeholders actively involved in the project, along the full CCAM value chain, fostering collaborative development of project outcomes and promoting the as wide as possible outreach, multi-layered replication and take-up of the project results.
Relevant WPs	WP2, WP4, WP5, WP6
Key expected results (ER)	[ER1] Stakeholder mapping & engagement methodology, [ER6] Multi-layered replication & multimodal transferability, [ER7] Tailored strategies & pathways for EU-wide adoption, [ER10] Guidelines and policy recommendations
Link to impact Key Performance Indicators (KPIs):	KPI3 _{short} ; KPI4 _{short} , KPI14 _{short} , KPI16 _{short} KPI2 _{med} , KPI3 _{med} , KPI6 _{med} : KPI10 _{med} , KPI12 _{med} , KPI2 _{long} , KPI9 _{long} , KPI12 _{long}

KO#2	To investigate in depth the short-, medium- and long-term employment effects of CCAM development
Relevant WPs	WP3, WP4
Key expected results (ER)	[ER2] CCAM professions and skills mapping and taxonomy, [ER3] Employment and socioeconomic effects of CCAM, [ER4] CCAM Employment & Skills Observatory.
Link to impact Key Performance Indicators (KPIs):	KPIs: KPI1 _{short} , KPI2 _{short} , KPI8 _{short} , KPI10 _{short} , KPI5 _{med} , KPI7 _{med} , KPI1 _{med} , KPI2 _{med} , KPI1 _{long} , KPI4 _{long}
KO#3	To enable businesses and workers to mitigate negative effects of CCAM, by making use of opportunities provided by CCAM deployment in passenger and freight transport towards sustainable employment growth and improve capacity for (social) innovation to strengthen society's preparedness to act proactively.
Relevant WPs	WP4, WP5
Key expected results (ER)	[ER5] Novel CCAM Business Models Toolkit, [ER6] Multi-layered replication & multimodal transferability, [ER7] Tailored strategies & Pathways for EU-wide adoption, [ER8] Socially innovative CCAM skill ecosystem & scenarios of implementation, [ER10] Guidelines and policy recommendations, [ER11] Roadmap on socio-economic transition to CCAM
Link to impact Key Performance Indicators (KPIs):	KPI2 _{short} , KPI3 _{short} , KPI14 _{short} , KPI15 _{short} , KPI16 _{short} , KPI11 _{short} , KPI11 _{med} , KPI2 _{med} , KPI8 _{med} , KPI9 _{med} , KPI10 _{med} , KPI6 _{long} , KPI7 _{long} , KPI8 _{long} , KPI9 _{long} , KPI10 _{long} , KPI12 _{long}
KO#4	Ensure necessary skills are available and up-scaled across a wide range of fields.
Relevant WPs	WP4
Key expected results (ER)	[ER9] New (re)training curricula and modules
Link to impact Key Performance Indicators (KPIs):	KPI5 _{short} , KPI6 _{short} , KPI4 _{med} , KPI3 _{long}

3. Project Governance

3.1 RESKILLING Governance Scheme

RESKILLING project encompasses **20 partners** and **6 interdependent Work Packages (WPs)**. Hence, it is important to establish a governance and management structure that is able to meet the challenges of a successful project implementation. It is designed in such a way in order to achieve the following goals:

- Lean structures and procedures for agile and cost-effective project management;
- Balanced distribution of activities & responsibilities among all partners;
- Efficient vertical and horizontal information flow, especially between tasks and Work Packages;
- Proactive conflict resolution mechanisms;
- Thorough assessment of potential risks involved;
- Optimal assignment of experienced personnel to the scientific, technical and managerial tasks.

The project structure (*Figure 1*) is defined as to allow reliable overall coordination, efficient communication, clear decision procedures, work flow giving rise to Deliverables meeting time and quality requirements, all performed in accordance to the European Commission Grant Agreement (GA) and the project Consortium Agreement (CA).



Figure 1: RESKILLING Project Management structure

3.2 The Consortium

The RESKILLING Consortium has been strategically structured to ensure a comprehensive and multidisciplinary approach, integrating expertise from three key categories:

1. **Research and Academic Institutions** (7 partners): This group includes CERTH, VTI, VUB, ZLC, CTL, LIST, and TSI. These partners contribute substantial expertise in research and education, fostering innovation and knowledge transfer within the project.
2. **Industry Partners** (7 partners): Comprising VDI/VDE-IT, DBL, ECORYS, Bax, Beceptum, 3DHUB, and EUROPCAR, these organisations bring an essential entrepreneurial and practical perspective, bridging the gap between research outcomes and real-world applications.
3. **European and International Associations** (6 partners): Represented by POLIS, UITP, FEHRL, ECTRI, EURNEX, and IRF, this category provides access to an extensive network of stakeholders. These include key actors from the transport research community, public transport operators, road infrastructure managers, municipalities, cities, industry representatives, standardisation bodies, and a diverse range of SMEs.

This well-balanced composition ensures that the consortium leverages both academic excellence and industrial expertise while fostering strong stakeholder engagement across multiple sectors critical to the project's success.

The RESKILLING Consortium also demonstrates a strong pan-European representation, encompassing partners from all major European regions: Northern Europe (Sweden, Belgium), Central Europe (Germany, Switzerland), Southern Europe (Greece, Italy, Spain), Western Europe (the Netherlands), and Eastern Europe (Latvia). This geographical diversity ensures a broad range of perspectives, facilitating the exchange of region-specific insights and best practices in transportation and logistics.

In addition to its geographical reach, the consortium possesses significant expertise in the Social Sciences and Humanities (SSH), integrated across multiple partner organisations. Notably, the Consortium Coordinator has a strong background in SSH, reinforcing the project's ability to address human-centric and socio-economic dimensions of reskilling within the transport sector.

Furthermore, the consortium maintains strategic collaborations with the CCAM Partnership. Several consortium members, including CErTH, VDI/VDE-IT, and FEHRL, actively participate in the Partnership, with some holding leadership positions in key CCAM clusters (e.g., VTI). This engagement strengthens the consortium's ability to align its objectives with broader European mobility and automation initiatives, ensuring synergies with ongoing research and policy developments.

In summary, the RESKILLING Consortium unites a well-balanced blend of geographical, disciplinary, and strategic expertise, creating a robust foundation for addressing the multifaceted challenges within the transportation and logistics sectors. The consortium's diverse composition, encompassing academic institutions, industry partners, and policy stakeholders, enhances its capacity to generate innovative and impactful solutions. Leveraging its extensive network and collaborative synergies, the consortium is well-positioned to drive forward research, knowledge transfer, and the development of practical interventions that promote sustainable and inclusive workforce transitions in the context of technological advancements.

3.3 Consortium bodies

The main consortium bodies of the project can be summarised as follows:

3.3.1 The Partner Board (PB)

The Partner Board (PB) serves as the highest decision-making body within the RESKILLING Consortium, ensuring the strategic direction, effective governance, and smooth execution of the project. Each project beneficiary is represented in the PB by one designated member, with an appointed proxy to act in their absence.

The PB holds overarching responsibility for the project's direction and decision-making, including:

- **Budget Allocation:** Approving budget distribution in compliance with the European Commission (EC) Grant Agreement.
- **Consortium Composition:** Managing the participation of new partners and addressing issues related to defaulting members.
- **Project Modifications:** Overseeing amendments to the technical specifications in Annex 1 of the Grant Agreement (GA) and adjusting work activities between partners.
- **Strategic and Technical Oversight:** Reviewing and endorsing significant technical, financial, and resource allocation decisions, including modifications to the Description of Action (DoA) and effort distribution.
- **Contractual and Administrative Responsibilities:** Handling contractual matters with the EC, financial planning and control, as well as administrative arrangements.
- **Dissemination and Exploitation:** Defining strategies for promoting project results, knowledge dissemination, and stakeholder engagement.

The PB plays a pivotal role in ensuring the project's success through the following core functions:

- **Strategic Planning & Oversight:** Define and maintain project objectives, targets, and implementation strategies.
- **Performance Evaluation:** Monitor project progress, approve milestone achievements, and assess deviations from the work plan.
- **Risk Management:** Identify and mitigate risks that may affect project execution.
- **Consortium Governance:** Approve modifications to the Consortium Agreement, decide on the inclusion of new partners, and manage any necessary contractual adjustments.
- **Conflict Resolution:** Act as the highest authority for resolving internal disputes.
- **Financial and Resource Management:** Oversee budget allocation and financial planning, ensuring optimal resource distribution.
- **Quality Assurance:** Establish and enforce quality procedures for project deliverables.
- **External Relations:** Manage interactions with external stakeholders, including press, standardization bodies, and relevant policy forums.
- **Operational Coordination:** Supervise reporting processes, schedule meetings, and ensure adherence to administrative protocols.

Through its comprehensive governance framework, the Partner Board ensures that the RESKILLING project remains aligned with its objectives while maintaining compliance with EC requirements and fostering collaboration among consortium members.

3.3.2 The Project Core Group (PCG)

The Project Core Group (PCG) serves as the executive decision-making body of the project, ensuring strategic alignment and effective governance. It consists of the Project Management Team and the WP, each responsible for overseeing their respective WPs.

The PCG plays a critical role in shaping the project's overall direction, particularly in areas related to technology, innovation, and exploitation. It is responsible for high-level strategic decisions that significantly impact the project's success and the broader objectives of the consortium. Through its leadership, the PCG ensures that all project activities remain coherent, efficient, and aligned with the project's goals.

The key responsibilities of the PCG can be summarised as follows:

- Makes executive decisions on strategic project matters, ensuring the project maintains its innovative and technological edge.
- Influences the overall outcomes and success of the consortium by addressing key challenges and identifying opportunities for improvement.
- Provides guidance on the project's direction, ensuring alignment with EU priorities and stakeholder needs.
- Proposes and recommends amendments to the EC Grant Agreement, subject to ratification by the Partners Board (PB), when necessary.
- Approves policies, standards, quality measures, and procedures related to intellectual property rights (IPR) and knowledge management, safeguarding innovation and ensuring proper handling of project-generated knowledge.

Through these responsibilities, the PCG acts as a driving force behind the project's success, facilitating informed decision-making and fostering a structured approach to innovation, exploitation, and knowledge management.

3.3.3 The Project Management Team (PMT)

The Project Management Team (PMT) plays a central role in ensuring the effective coordination and execution of the project. It is composed of the Project Coordinator (PC) and the Technical & Innovation Manager (TM), each holding key responsibilities in project oversight, quality assurance, and strategic decision-making. The Project Coordinator (PC), Mrs. Matina Loukea from CERTH (Psychologist / CERTH Scientific Associate), serves as the primary interface with the European Commission (EC). She is

responsible for overall project coordination, quality assurance, and risk management, ensuring compliance with project objectives and regulatory requirements. The Technical & Innovation Manager (TM), Dr. Ingrid Skogsmo from VTI (Senior Research Leader), is responsible for overseeing the technical and innovative aspects of the project. Additionally, she ensures adherence to data governance and ethical standards, playing a key role in Data and Ethics Management.

The PMT functions as the primary consensus-building body for project coordination, with a broad scope of responsibilities that include:

- Monitoring, reporting, and conflict resolution, ensuring smooth collaboration across project partners.
- Financial oversight and accountability, ensuring efficient resource allocation and compliance with financial guidelines.
- Supervising the technical progress to guarantee timely completion of project activities while ensuring methodological compatibility and complementarity.
- Overseeing technical discussions and meetings, presiding over key technical gatherings, and proposing mitigation strategies in case of technical challenges.

To ensure seamless project execution, the PMT undertakes the following activities:

- Conducts regular virtual meetings (telcos) and physical meetings when necessary to facilitate coordination.
- Monitors progress across all WPs, ensuring alignment with the project's timeline and objectives.
- Establishes and guides task forces to address specific technical or management challenges when needed.
- Prepares and organises Partner Board meetings, ensuring that key decisions are well-informed and effectively communicated.
- Discusses and decides on cross-WP and project-wide issues, ensuring coherence in decision-making.
- Acts as an intermediary in case of conflicts that cannot be resolved at the WP level, facilitating constructive resolution mechanisms.

By executing these responsibilities, the PMT ensures the project remains on track, fosters collaboration among partners, and upholds the highest standards of quality, innovation, and ethical compliance throughout its duration.

3.3.4 The Quality Control Board (QCB)

The Quality Control Board (QCB) is responsible for supervising the high quality and in-time implementation of the RESKILLING workplan and its planned outcomes (milestones & deliverables). The QCB consists of the following members:

- the Quality and Risk Manager (Evangelos Bekiaris, CERTH),
- the Project Coordinator (Matina Loukea, CERTH),
- the Technical & Innovation Manager (Ingrid Skogsmo, VTI),
- one internal expert (or more) assigned by each project beneficiary
- one expert from the AB

The internal expert(s) assigned by each partner will be at least a Senior Researcher or Project Manager, not directly involved in the project, with extensive know-how in the topic of the specific deliverable, excluding its authors. Members of the different forums of the project will be considered as potential reviewers especially for the public deliverables. Also, as will be indicated in D1.2: "Project Quality, Ethics and Risk Assessment Plan" that will provide the peer review plan of the Deliverables, for some selected Deliverables, Advisory Board members will be asked to provide their review in addition. The QCB will ensure the conformity of all project Deliverables with their respective requirements (i.e., the RESKILLING GA and the current Quality Plan).

3.3.5 The Ethics Board (EB)

The Ethics Board (EB) is responsible for ensuring that all project activities comply with ethical standards and regulatory requirements. Its overarching objective is to guarantee that all evaluation activities, including those related to case studies, adhere to relevant ethical guidelines and legal frameworks.

As part of Task 1.4 – "Data Management, Gender, and Ethics", the EB is co-chaired by Dr. Katerina Toulidou (CERTH), Ethics Manager, and Dr. Ingrid Skogsmo (VTI), Technical Manager (TM). In addition, one representative by each case study will also participate, who will be responsible and oversee the compliance of their activities with the determined ethics principles. The board will develop key deliverables to establish and enforce ethical compliance:

- Project Quality, Ethics, and Risk Assessment Plan & Ethics and Data Privacy Manual (D1.4):
 - Defines the ethical requirements of the project, including necessary approvals for data collection.
 - Provides an overview of ethical requirements—both internal and external—for all participating countries and organizations.
 - Includes a Data Privacy Impact Assessment (DPIA) to ensure compliance with General Data Protection Regulation (GDPR) and other applicable frameworks.
 - Ensures that ethical approvals for case study activities are collected and monitored throughout the project's duration.
- Data Management Plan (DMP):
 - Issued as D1.3 (Month 6) and updated in D1.4 (Month 18) and D1.5 (Month 36).
 - Specifies the types of data generated, outlining its exploitation, verification, and reusability.
 - Ensures compliance with FAIR principles (Findability, Accessibility, Interoperability, and Reusability), detailing data collection methods using GDPR-compliant templates.
 - Identifies open-access layers and specifies security measures to prevent unauthorized access to personal data and data-processing infrastructure.
 - Describes anonymization and pseudonymization techniques and outlines informed consent procedures for data processing.
 - For further details on data management, refer to Section 1.2.8 "Research Data Management" of the Grant Agreement (GA), p.132.

The Ethics Board will also monitor gender and equity issues to promote balanced representation across gender, age, and socio-economic groups. Any deviations from the established principles will be flagged, and corrective actions will be required from the relevant partners. This includes ensuring compliance with regional authority approvals in each participating country and case study.

The Ethics Board will conduct continuous assessments to address all emerging ethical concerns. Any adjustments required to align with ethical standards will be promptly communicated to project partners, ensuring adherence to best practices in data protection, research integrity, and stakeholder inclusivity.

3.3.6 The Advisory Board (AB)

The Advisory Board (AB), chaired by IRF, will provide continuous strategic guidance and expert consultation to the Project Management Team (PMT) throughout the duration of the project. Composed of high-level experts, the AB will ensure that the project remains aligned with international developments, best practices, and related initiatives. In this capacity, it will also include representatives from key concertation and twinning actions planned within the project, fostering synergies with complementary activities at the European and global levels.

The RESKILLING AB will bring together experts from a diverse range of sectors relevant to the project, ensuring a well-rounded perspective. It will include at least representatives from:

- CCAM and mobility related entities



- Labour unions
- Industrial associations
- Social sciences and academia

The AB will be formally established by Month 4 of the project (April 2025), with subsequent updates in Month 12 (December 2025) and Month 24 (December 2026) to ensure continued relevance and expertise. Its members will represent at least six EU Member States, including Germany, France, Italy, and Spain, ensuring broad European representation.

The AB will play a critical role in steering the project through expert recommendations and strategic oversight. Its core responsibilities include:

1. **Review of key deliverables**, conducting evaluations of selected RESKILLING project deliverables (as will be outlined in D1.2).
2. **Risk mitigation and strategic oversight**, providing an annual review of risk mitigation strategies, ensuring the project remains resilient to emerging challenges.
3. **Participation in project events**, engaging in various project-organised events to facilitate knowledge exchange and stakeholder collaboration.
4. **Involvement in the Stakeholder Forum**, actively contributing to the Stakeholder Forum, reinforcing the project's engagement with external actors.
5. **Consultation on emerging challenges**, offering expert guidance on any extraordinary challenges that arise throughout the project's lifecycle.

By ensuring a continuous exchange of insights and expertise, the Advisory Board will play a crucial role in maintaining the project's relevance, impact, and alignment with broader European and international CCAM-related transport and mobility initiatives.

4. Overall Approach

4.1 The concept

The RESKILLING project is built upon a social innovation-driven approach, acknowledging that in order for CCAM technological advancements to be truly effective and sustainable, they must be contextually adapted and socially inclusive. This necessitates a comprehensive examination of professions linked to CCAM services, considering both social aspects and geographical variations, while actively engaging the entire stakeholder ecosystem. The project places a particular emphasis on professionals from various sectors, ensuring that Social Sciences and Humanities (SSH) principles are embedded throughout all project phases and activities.

At the heart of this approach is the **RESKILLING Co-Innovation Framework**, which serves as a collaborative platform that fosters engagement, co-creation, and interdisciplinary knowledge exchange. It brings together professionals, experts, policymakers, industry representatives, and end-users, to co-design and facilitate implementation of skills development strategies that align with evolving industry demands. This participatory methodology ensures that solutions are not only technologically viable but also socially responsible and responsive to real-world workforce needs.

A successful transition to CCAM ecosystems hinges on the ability to anticipate, address, and adapt to evolving workforce requirements. In this context, RESKILLING places a strong emphasis on ensuring the availability and enhancement of critical skill sets across diverse professional domains. Our initiative recognises that deployment of CCAM technologies and services will reshape job roles, create new employment opportunities, and require a workforce equipped with new and adaptive competencies. Therefore, through research-driven insights and targeted interventions, we aim to support individuals and organisations in navigating this transformation by fostering lifelong learning pathways and reskilling initiatives.

To achieve this, RESKILLING integrates multi-disciplinary methodologies, tailored skill development programs, and capacity-building activities into actionable options aiming to empower professionals across all levels of the CCAM value chain. This holistic strategy will be designed to help proactively mitigating potential negative employment impacts, ensuring that workers are prepared, adaptable, and well-positioned to seize emerging opportunities. By reinforcing skill-building efforts across technical, digital, and socio-behavioural domains, we envision a future where the workforce is resilient, diverse, and fully capable of leveraging the socio-economic benefits of CCAM advancements.

Through these targeted measures, RESKILLING aspires to create a human-centric, inclusive, and future-proof mobility ecosystem, ensuring that technological progress in CCAM is matched with equitable workforce development and sustainable employment pathways.

4.2 Working methodology

RESKILLING is organised over a 36-month period with 6 work packages that actively support the various undertakings of the project. Stakeholders concerned with employment and growth, and covering professionals of the mobility sector (for people and goods), are the targeted users of RESKILLING's tools and results ("end-users" in the following). They play a pivotal role throughout the entire process, which encompasses (i) **exploration**, pinpointing the emerging employment and upskilling needs for mobility professionals across the entire CCAM value chain; (ii) **co-creation and co-design** entail bringing together stakeholders to collaboratively iterate and refine ideas; (iii) **assessment and validation** are carried out by both end-users and stakeholders. This process is facilitated through the project's case studies. A structured and dedicated impact assessment framework is also employed to gauge the effects of the project's outcomes. The methodology of the project evolves around **3 main pillars**, outlined in the following sections.

4.2.1 Pillar I: Stakeholders Engagement

Effective stakeholder engagement is a fundamental pillar of the RESKILLING project, ensuring a collaborative, inclusive, and impact-driven approach. The project's success hinges on the active participation of diverse stakeholders, fostering continuous dialogue and knowledge exchange. To achieve this, RESKILLING establishes a dedicated Stakeholders' Community (SC), which serves as a dynamic network and communication hub within the CCAM ecosystem. This community enables ongoing interaction, collaboration, and contribution from stakeholders throughout the project's duration and across its various initiatives.

RESKILLING's stakeholder engagement strategy is firmly rooted in citizen science principles, ensuring that input from professionals, industry representatives, policymakers, and end-users informs the project's development. This approach is structured around three key phases:

1. **Scoping and Community Establishment:** This initial phase involves stakeholder identification and engagement, aiming to map out the impacts of CCAM on employment, skills development, and training requirements. Through a series of consultations, stakeholders provide valuable insights into challenges, sector-specific needs, and the broader socio-economic implications of CCAM deployment. This participatory process helps to define potential solutions and assess whether they require customisation for specific industries, regions, or demographic groups.
2. **Co-Creation & Collaborative Design:** Within this phase, solutions, interventions, and training strategies are co-designed with stakeholders, ensuring they are practical, user-centred, and contextually relevant. Drawing on best practices in participatory design and human-centred innovation, this stage ensures that the needs, concerns, and aspirations of end-users—including the current and future workforce, educators, and businesses—are fully integrated into the project's outputs. This collaborative effort leads to the prototyping of innovative training tools, methodologies, and policy recommendations, fostering a cohesive strategy for workforce adaptation to CCAM developments.
3. **Reflection and Legacy:** Following the implementation of interventions, a structured evaluation and reflection phase ensures that all developed tools, methods, and solutions are assessed, refined, and optimised. Stakeholders provide feedback to enhance project outcomes, ensuring that insights gained throughout RESKILLING are translated into actionable, scalable, and enduring strategies. This phase is crucial for ensuring that the project's legacy extends beyond its duration, offering sustainable guidelines, frameworks, and policy recommendations for ongoing workforce adaptation in CCAM.

By embedding stakeholder engagement at every stage of the project, RESKILLING aims to create a sustainable, high-impact initiative with far-reaching benefits for mobility professionals, policymakers, industry leaders, and the wider community. The participatory approach not only enhances the project's relevance and effectiveness but also ensures that reskilling and upskilling efforts are aligned with real-world workforce needs. Ultimately, RESKILLING fosters a resilient and future-ready workforce, empowering professionals to seamlessly transition into the evolving CCAM landscape while strengthening the overall competitiveness and inclusivity of the mobility sector.

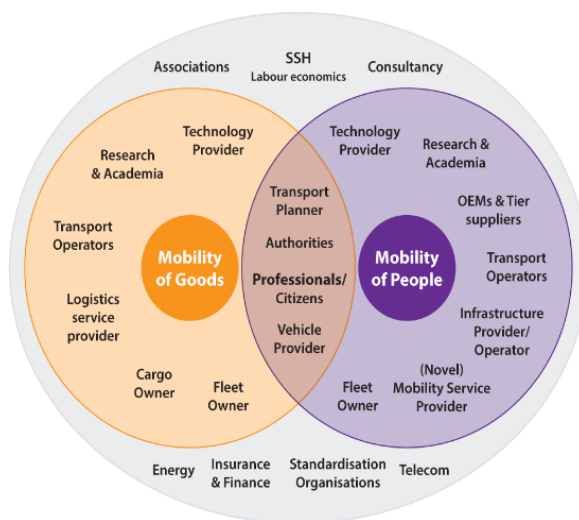


Figure 2: RESKILLING value chain (to be revisited in T2.1)



4.2.2 Pillar II: Jobs, Skills & Education

The primary objective of this pillar is to assess the potential impact of CCAM service deployment on employment, professions, and skill requirements over the short (2030), medium (2040), and long term (2050). This includes analysing the transformations in existing roles, the emergence of new job opportunities, and the evolving demand for skills and education. The project will consider a diverse range of professions spanning the entire CCAM-related value chain, including manual and skilled labour ("blue collar"), administrative and office-based roles ("white collar"), and mixed-collar positions, updating the preliminary identification presented in Figure 2.

A particular emphasis will be placed on understanding the transformative impact of technology on job roles, as well as identifying critical professions necessary to achieve mobility objectives. This analysis will encompass professionals involved in home deliveries, healthcare-related mobility, procurement, and implementation, alongside roles situated beyond the vehicle industry but directly or indirectly connected to CCAM. The research will adopt a comprehensive, evidence-based approach by synthesizing insights from previous projects, industry reports, and academic literature. To enhance the robustness of the analysis, forecasting models will be applied to predict how job markets may evolve under varying levels of CCAM penetration. These models will provide quantitative estimations of the number of jobs that may be created, transformed, or displaced. Additionally, scenario analysis will be conducted to explore different potential futures, linking these projections to specific job categories and the skills required across the CCAM value chain. This approach will enable a nuanced understanding of the workforce implications associated with CCAM deployment.

The impact of CCAM on employment and skills will be also assessed within a broader socioeconomic framework, considering effects across the entire value chain. A comprehensive cost-benefit analysis (CBA) will provide quantitative projections of workforce changes, helping to forecast short-, medium-, and long-term employment trends. Key areas of investigation include:

- **Employment Effects:** Changes in working conditions, shifts in responsibilities, and depreciation of existing skills (e.g., transition from traditional driver roles).
- **Socioeconomic Impacts:** Income distribution, geographic workforce shifts, and the availability of entry-level job opportunities.
- **Workforce Inclusivity:** Particular attention will be given to vulnerable workforce groups, such as youth, immigrants, elderly workers, and individuals with disabilities, who may face specific barriers in adapting to CCAM-driven transformations.
- **Sector-Specific Variations:** Distinctions between public and private sectors, levels of automation (L3–L5 mobility solutions), and regional/national labor market differences.

A taxonomy of knowledge and skills will be developed, alongside a skills matrix that will classify evolving competencies. This will facilitate a targeted approach to workforce adaptation, ensuring that both reskilling (updating existing skills) and upskilling (acquiring new competencies) align with future labour market needs.

4.2.3 Pillar III: Growth & (Social) Innovation

RESKILLING explores three key strategic areas that can drive job creation and employment growth, while enhancing innovation capabilities and the competitiveness of CCAM solutions and businesses. These areas include:

1. **Human capital development:** This involves designing (re)skilling journeys and training profiles that support both primary and lifelong learning along the entire CCAM value chain. The approach will also include an analysis of workforce skills transferability and integration within multimodal transport systems, ensuring that workers can seamlessly transition across roles within an evolving mobility ecosystem.

2. **Business models & schemes for CCAM innovation and job promotion:** The project will examine sustainable and scalable business models that encourage the development of new job opportunities, foster entrepreneurial initiatives, and promote CCAM-related employment growth across various sectors.
3. **A systemic approach for EU-wide scalability:** RESKILLING will propose strategies to facilitate tailored and context-specific CCAM deployment, ensuring that workforce adaptation efforts can be effectively scaled across the European Union, considering national

In addition to the three strategic areas, RESKILLING will develop a shared mission for a socially innovative CCAM skills ecosystem. This ecosystem will enable stakeholders, policymakers, educational institutions, and businesses to collaborate in defining and shaping training and (re)skilling pathways that are not only technically relevant but also socially desirable and inclusive. Future scenarios will be co-created to outline how these transformations could unfold, accompanied by strategies for effectively disseminating and implementing them.

In overall, the RESKILLING project will be launched with a **structured exploratory phase** designed to revisit the CCAM value chain, establish and refine co-creation activities, and ensure a comprehensive, **multi-level stakeholder engagement** strategy spanning national, EU, and international contexts. To achieve this, the project will leverage a **dedicated Stakeholder Community (SC)** and an **Advisory Board**, which will serve as pivotal mechanisms for facilitating cross-sectoral dialogue, knowledge exchange, and strategic collaboration. These efforts will be further reinforced through a series of **European and international collaborative activities** designed to facilitate the transfer of expertise, leverage best practices, and promote cross-sectoral knowledge exchange. A key focus will be on **establishing synergies with relevant initiatives**, such as the CCAM-ERAS project, with which preliminary discussions for cooperation have already been initiated. These collaborations will contribute to harmonizing strategic efforts, ensuring that RESKILLING's approach is aligned with broader CCAM research and innovation agendas. Additionally, these activities will play a crucial role in shaping coordinated strategic planning within WP2. This integrated approach will ensure that RESKILLING's methodologies and outcomes are grounded in real-world needs, stakeholder expectations, and the evolving landscape of CCAM deployment.

A core component of the research focuses on **evaluating the short-term (by 2030), medium-term (by 2040), and long-term (by 2050) impacts of CCAM** on various professional roles within both passenger and freight transport, with particular emphasis on **specialised workforce groups (WP3)**. This comprehensive assessment will be complemented by an **in-depth analysis of the socio-economic and employment effects of CCAM** across the entire value chain, considering **different automation penetration levels (Levels 3 to 5)**.

The insights derived from these analyses will be **integrated into the project's Use Cases, shaping the definition of Case Studies (WP4)**. These Case Studies will **validate and enhance WP3 findings through real-world data collection**, in close collaboration with **other relevant initiatives**. The findings will directly contribute to the **optimisation of project solutions and tools**, ensuring that **businesses and workers can effectively navigate the transition to CCAM technologies**. The overarching goal is to **mitigate potential socio-economic disruptions** while simultaneously **leveraging new opportunities arising from CCAM deployment in road-based transport**.

To this end, the project will **develop innovative business models**, including the creation of a **Business Model Toolkit for future CCAM service development and workforce upskilling (WP4)**. By **aligning cutting-edge mobility solutions with human capital development**, RESKILLING will introduce **targeted training modules** designed to equip professionals with **CCAM-specific skills**. This initiative will **ensure workforce readiness across multiple sectors**, fostering **sustainable employment growth** and reinforcing **social innovation capabilities**. Additionally, WP4 will provide **stakeholder-tailored, data-driven insights**, facilitating the **replication and transferability of CCAM solutions** across **diverse deployment contexts, geographical regions, and transportation modes**.

WP5 will establish a **comprehensive evaluation and impact assessment framework** to measure the effectiveness of the project's interventions. Data collection will **begin from the outset**, ensuring robust support for **implementation, validation, and scalability planning**. The outcomes of the **Case Studies will be synthesized into a structured impact assessment**, based on **predefined evaluation layers**. Simultaneously, WP5 will design **tailored scalability strategies**, enabling the **systematic adoption of CCAM across the EU**. Policy recommendations and guidelines will be developed, leading to the formulation of a **Roadmap for socio-economic adaptation**, ensuring that **CCAM deployment aligns with workforce evolution and employment sustainability**.

WP6 will manage **multi-dimensional outreach and dissemination activities** (in close collaboration with WP2), while also addressing **intellectual property (IP) protection and exploitation strategies**. The entire research process will be **governed by established management mechanisms in WP1**, ensuring **compliance with ethical standards, risk mitigation protocols, and overall project governance**.

This methodological approach ensures a holistic, multi-level assessment of CCAM's socio-economic impacts while fostering stakeholder-driven co-creation, workforce adaptation, and long-term policy integration.

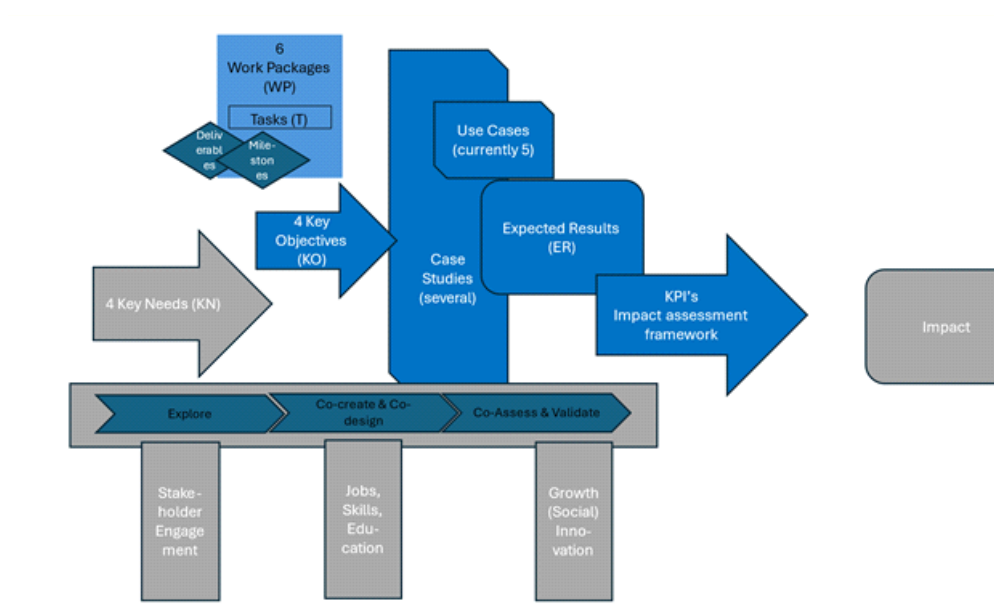


Figure 3: RESKILLING methodological framework

The table below gives an overview of RESKILLING's six Work Packages, and the list of Tasks per each, their leading entities (and physical persons corresponding to them) and their overall schedule (start and end month) in the framework of the project.

The Task leaders are in charge of the actual execution and coordination of the work inside the Task, and of reporting the progress of work to the WP Leaders, which in turn report to the PMT.

Table 3 : List of RESKILLING Work Packages and Tasks and their leaders.

WP/Task No	WP/Task title	Lead beneficiary entity	Lead physical person	Start month	End month
WP1	Project management & coordination	1- CERTH	Matina Loukea	1	36
T1.1	Project administrative and financial coordination	1- CERTH	Matina Loukea	1	36

WP/Task No	WP/Task title	Lead beneficiary entity	Lead physical person	Start month	End month
T1.2	Technical and innovation management	2-VTI	Ingrid Skogsmo	1	36
T1.3	Quality control and risk mitigation	1- CERTH	Evangelos Bekiaris	1	36
T1.4	Data management, gender and ethics	2-VTI	Ingrid Skogsmo	1	36
WP2	Stakeholder community engagement	3-POLIS	Manon Coyne	1	36
T2.1	Stakeholder mapping	3-POLIS	Manon Coyne	1	24
T2.2	Stakeholder engagement methodology	3-POLIS	Manon Coyne	1	28
T2.3	Stakeholder engagement and community report	3-POLIS	Manon Coyne	1	36
T2.4	Advisory Board & International Cooperation	20-IRF	Gonzalo Alcaraz	1	36
T2.5	Liaison with CCAM Partnership and relevant initiatives	8-FEHRL	Adewole Adesiyin	1	36
WP3	Short-, medium- and long-term employment and socio-economic effects of CCAM	7-ZLC	M. Teresa de la Cruz	1	30
T3.1	Professions and jobs related to the entire CCAM value chain	7-ZLC	M. Teresa de la Cruz	1	12
T3.2	Employment effects of CCAM	13-ECORYS	Jasper Tanis	3	18
T3.3	Effects of CCAM on special workforce groups	1-CERTH	Matina Loukea	3	18
T3.4	Socio-economic effects of CCAM	5-VUB	Evy Rombaut	12	30
T3.5	RESKILLING Use Cases	1-CERTH	Matina Loukea	12	18
WP4	Towards job creation, growth and innovation	4-VDI/VDE	Fabienne-Agnes Baumann	6	36
T4.1	Business models & schemes for CCAM innovation and jobs promotion	14-Bax	Ignacio Magallon	6	32
T4.2	Matching innovative mobility systems with human capital development and social innovation	4-VDI/VDE	Fabienne-Agnes Baumann	6	32
T4.3	Training modules for updated and enhanced CCAM-specific professional skills	7-ZLC	M. Teresa de la Cruz	9	32
T4.4	Case studies	15-Beceptum	Marc Zinkel	18	30
T4.5	CCAM Employment & Skills Observatory	1-CERTH	Evangelos Bekiaris	6	36
T4.6	Multi-layered replication & multimodal transferability	18- EURNEX	Armando Carrillo Zanuy	24	36

WP/Task No	WP/Task title	Lead beneficiary entity	Lead physical person	Start month	End month
WP5	Impact Assessment & Roadmap	5-VUB	Evy Rombaut	1	36
T5.1	Impact assessment	10-CTL	Sevket Oguz Kagan Capkin	1	36
T5.2	Pathways to impact: tailored scalability for EU-wide adoption	14-Bax	Víctor Ferran	24	36
T5.3	Guidelines and policy recommendations	5-VUB	Evy Rombaut	24	36
T5.4	Roadmap to support the socio-economic transition to CCAM	1-CERTH	Matina Loukea	24	36
WP6	Communication, Dissemination & Exploitation	12-ECTRI	Caroline Almeras	1	36
T6.1	Communication, Dissemination & Exploitation strategy	12-ECTRI	Caroline Almeras	1	18
T6.2	Dissemination tools and events	12-ECTRI	Giuseppe Garofalo	1	36
T6.3	RESKILLING inventory	11-LIST	Marie Gallais	12	36
T6.4	Exploitation activities	13-ECORYS	Jasper Tanis	18	36

The upper level interrelation of RESKILLING components is depicted in the following figure.

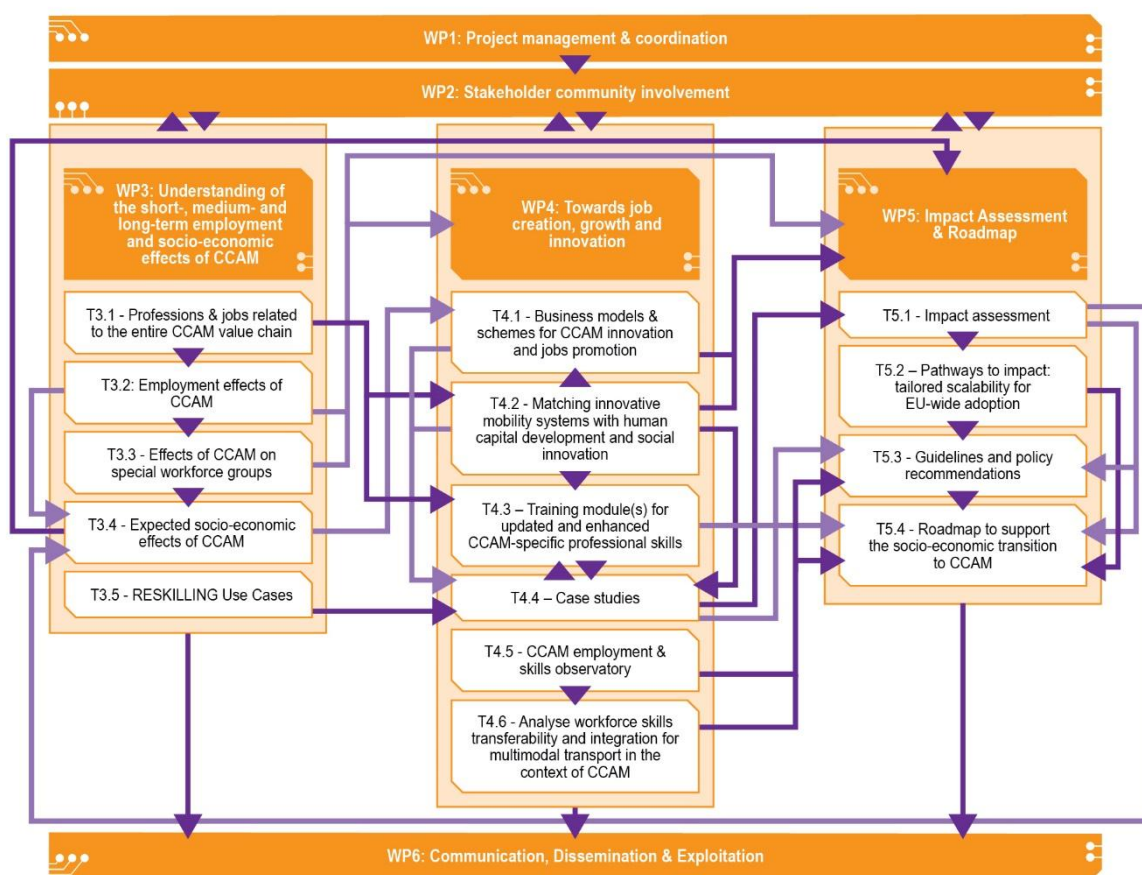


Figure 4: Graphical presentation and inter-relation of RESKILLING components.

RESKILLING will run for 36 months, as shown in the following Gantt Chart.

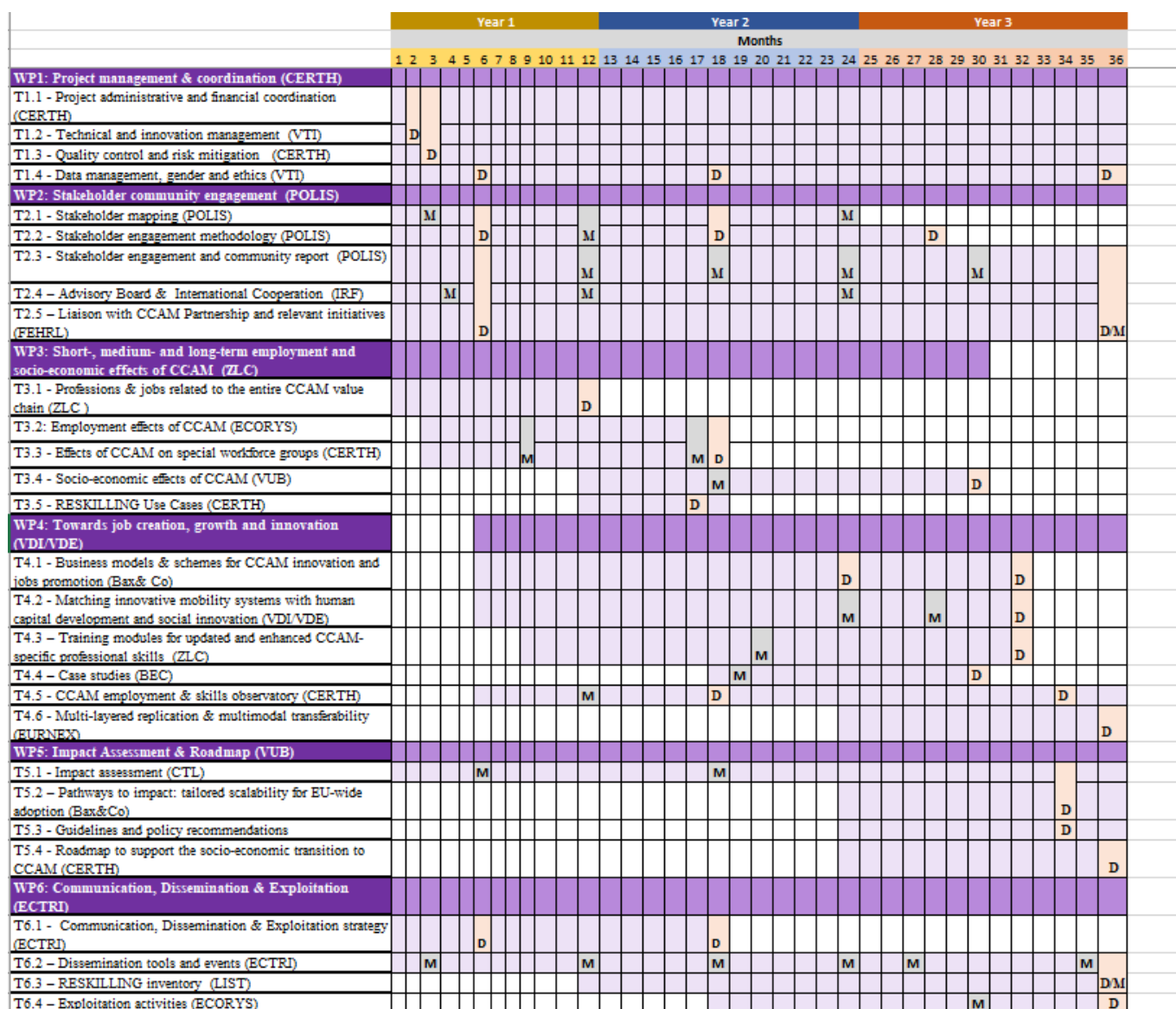


Figure 5: RESKILLING Gantt Chart

5. Expected Impacts & Core Innovation

While transportation remains a key economic driver, it is also undergoing profound transformation, particularly with the anticipated deployment of CCAM. The successful implementation of CCAM technologies relies not only on technological advancements but also on the readiness and adaptability of the workforce. Ensuring that transport workers—widely regarded as the sector's most valuable asset—actively engage in and benefit from this transition will be a decisive factor in the sector's future sustainability. However, significant challenges persist. The transport workforce is aging, and certain professions already suffer from persistent labour shortages, exacerbated by highly demanding working conditions. The introduction of automated transport systems is expected to further disrupt employment patterns, raising concerns about job displacement in specific roles, such as truck driving. In contrast, new employment opportunities may emerge, particularly in fields related to Intelligent Transport Systems (ITS), mobility services, and digital infrastructure management. The *European Commission's Staff Working Document from 2024 on CCAM [EC, 2024]* outlines also its vision for accelerating CCAM deployment, emphasizing that Europe must maintain and extend its industrial leadership while fostering employment growth and innovation across the continent.

Despite concerns regarding job automation, CCAM deployment also presents a transformative opportunity to improve working conditions and create high-quality jobs that appeal to a broader workforce, including women, young people, elderly workers, and individuals with disabilities. The shift towards customer-oriented mobility services (e.g., the emergence of "proactive mobility assistants" replacing traditional bus drivers) exemplifies how automation can redefine roles rather than eliminate them. However, for this transition to be inclusive and equitable, it is imperative to develop a **workforce strategy** that supports upskilling, reskilling, and job creation across the entire CCAM value chain, encompassing both passenger and freight transport.

A comprehensive understanding of the societal, economic, and environmental implications of CCAM is essential to ensure that no worker is left behind. This requires evidence-based policy frameworks, reskilling programs, and attractive employment opportunities that accommodate evolving industry needs. Furthermore, the active participation of workers and key stakeholders—including public authorities, transport operators, infrastructure providers, trade unions, and educational institutions—is vital for shaping a sustainable and fair transition.

From the challenges and opportunities outlined above, four (4) key needs (KNs) emerge, summarising the fundamental requirements for ensuring a successful and inclusive workforce transition in the CCAM era:

- **KN1: Need for enhanced and evidenced situational awareness of the CCAM-related socioeconomic impact, focusing on employment:** There is a pressing need for comprehensive and evidence-based assessments of CCAM's impact on employment, skills demand, and socioeconomic structures. This includes a better understanding of societal, economic, and contextual needs, as well as an examination of regional and cultural differences that may affect workforce adaptation.
- **KN2: Need for workforce development & knowledge enhancement in the CCCAM sector:** The CCAM sector requires clearly defined skillsets, evolving job roles, and dedicated reskilling mechanisms to ensure workforce readiness. New opportunities should be identified, including the potential for better working conditions and higher-quality jobs that appeal to traditionally underrepresented workforce groups, such as women, young professionals, elderly workers, and individuals with disabilities.
- **KN3: Need for upholding and extending the competitiveness of Europe, ensuring long-term growth and employment prospects:** To maintain Europe's global leadership in mobility innovation, efforts must be made to balance job creation with technological advancements. This includes:
 - Defining and assessing job growth opportunities enabled by CCAM technologies while mitigating potential job losses.

- Conducting comprehensive analyses of workforce education, skills, organisational structures, and labour implications across the entire CCAM value chain, including freight transportation.
- Identifying prerequisites for fostering job creation, entrepreneurship, and business innovation within the CCAM sector, through knowledge-driven and socially innovative approaches.
- **KN4: Need for new governance arrangements for enhancing interaction and enabling synergies and co-creation among the key stakeholder groups:** The transition to CCAM requires enhanced governance frameworks that foster synergies among key stakeholders, including:
 - Public authorities, cities, and municipalities (to support policy development and infrastructure adaptation).
 - Transport and mobility service providers (to facilitate seamless workforce integration).
 - Labour unions, employers' associations, and educational institutions (to ensure that workforce policies align with industry transformations).
 - Social and interest groups (to advocate for inclusivity, equity, and fair labor conditions in CCAM implementation).

5.1 Expected impacts and innovation potentials

RESKILLING directly contributes to the expected impacts of the *Safe, Resilient Transport and Smart Mobility Services for Passengers and Goods* destination, aligning with the European Commission's Strategic Plan. The project aims to advance the objective of achieving "*safe, seamless, smart, inclusive, resilient, and sustainable mobility systems for people and goods through user-centric technologies and services, including digital technologies and advanced satellite navigation services.*" This is accomplished by fostering a clear understanding of the societal needs and impacts of CCAM, with a particular focus on employment and socio-economic dimensions. RESKILLING develops essential tools—including business models, (re)skilling and training mechanisms, a taxonomy of affected and emerging jobs, and skills requirements—to support CCAM deployment. Furthermore, it establishes a structured Roadmap to ensure the availability of a properly skilled workforce, thereby facilitating the large-scale adoption of CCAM technologies.

In this context, RESKILLING makes significant contributions to the following key areas:

1. **Accelerating CCAM Implementation for Passengers and Goods:** By ensuring the availability of a sufficiently skilled workforce, RESKILLING mitigates potential barriers to CCAM adoption, including those related to workforce acceptance, regulatory compliance, and engagement with labour unions and key industry stakeholders.
2. **Enhancing the Multimodal Transport System:** The project identifies opportunities for the efficient transfer of skills and job roles across different transport modes, particularly in relation to the automation of operations. This supports the development of a more integrated, resilient, and future-ready transport ecosystem.
3. **Improving Transport Safety and Reducing Accidents:** Through its focus on workforce training and reskilling, RESKILLING enhances the safe operation of CCAM technologies. By equipping fleet operators, controllers, and other relevant professionals with the necessary skills, the project contributes to minimising the risks of accidents, incidents, and fatalities associated with CCAM vehicles and infrastructure.

The overarching objective of RESKILLING is to support the European Commission's ambition of positioning Europe as a global leader in the CCAM domain. The project enables the workforce to be equipped with the necessary competencies to navigate the evolving CCAM landscape, empowering them to assume both leadership and operational roles in a sustainable and circular manner. These objectives are realised through the development of innovation-driven outcomes, including:

- The creation of novel business models that align with the demands of the CCAM ecosystem.
- The development of targeted reskilling tools to address emerging labour market needs.

- Mechanisms for the replication and transferability of best practices across different regions and transport sectors.

To attain the previously mentioned goals, the RESKILLING initiative sets its sights on the following **Expected Results (ER)**, which collectively contribute to preparing the workforce for the transition towards CCAM:

- **ER1: Stakeholder mapping & engagement framework:** A systematic approach to identifying and engaging key actors impacted by CCAM deployment, considering geographical, economic, and socio-demographic constraints. This effort builds on insights from projects like SHOW and Drive2theFuture to ensure effective stakeholder integration and establish communication channels that facilitate co-creation.
- **ER2: CCAM professions and skills taxonomy:** A comprehensive mapping of existing and emerging occupations across the entire CCAM value chain, identifying potential job displacements and new employment opportunities. This work leverages findings from SKILLFUL, WETRANSFORM, ECORYS studies, and the European Skills Agenda, incorporating the latest labour market trends.
- **ER3: Employment & socioeconomic impact analysis:** A detailed assessment of CCAM's direct and indirect impact on employment, workforce dynamics, and socioeconomic factors. This analysis integrates knowledge from EU-funded projects (Drive2theFuture, PAsCAL, SKILLFUL, WETRANSFORM), scientific literature, and stakeholder consultations through co-creation processes.
- **ER4: CCAM Employment & Skills Observatory:** An online knowledge hub consolidating insights on CCAM-related job shifts, required skills, and emerging roles. This observatory will serve as a centralised resource for stakeholders, facilitating ongoing monitoring and adaptation to workforce changes.
- **ER5: Business model innovation toolkit:** A strategic toolkit designed to support the evolution of CCAM-related business models, assessing market opportunities, adaptation needs, and best practices derived from other disruptive innovations in the transport sector.
- **ER6: Multi-layered replication & transferability framework:** Establishing a Replication & Transferability Incubator to explore the scalability and cross-modal application of RESKILLING outcomes beyond road transport. This initiative will examine commonalities and specificities across various deployment sites and mobility modes.
- **ER7: Tailored strategies for EU-wide adoption:** The development of scalability strategies to facilitate the broad implementation of RESKILLING's outputs across diverse EU contexts. This work incorporates stakeholder input and aligns with previous projects (SHOW), while integrating business, policy, and societal considerations.
- **ER8: Socially innovative CCAM skills ecosystem & implementation scenarios:** Identification of sustainable pathways for (re)skilling, ensuring an effective workforce transition in response to CCAM-driven employment shifts.
- **ER9: New (re)training curricula and modules:** The design and implementation of targeted (re)training programs, developed in alignment with emerging skill needs and drawing from established training initiatives (SKILLFUL, Drive2theFuture, SHOW). These curricula will balance academic and vocational elements, catering to diverse workforce profiles.
- **ER10: Policy guidelines & recommendations:** Development of policy frameworks and strategic guidelines, offering actionable insights for EU, national, and regional decision-makers to maximise labour market benefits and mitigate potential disruptions from CCAM deployment.
- **ER11: Socioeconomic transition roadmap for CCAM:** A comprehensive roadmap outlining a structured strategy for an equitable and sustainable workforce transition in the CCAM era, ensuring long-term socioeconomic resilience.

These outcomes collectively support the European workforce in navigating the transformation brought by CCAM, ensuring inclusive, sustainable, and forward-looking employment solutions. While through these innovations and impacts, the project bridges technological advancements with workforce adaptation, ensuring a sustainable, inclusive, and future-proof labor market for CCAM deployment.

A key element of RESKILLING's approach is a **collaborative co-creation process** that ensures the integration of identified value chain needs into the project's operational and business layers. This participatory methodology enhances stakeholder engagement and fosters a more effective and inclusive transition towards CCAM adoption.

A core component of RESKILLING is the establishment of a **comprehensive evaluation and impact assessment framework** (Task 5.1). This framework serves as the foundation for assessing the project's outcomes and integrating them with the results of **case study validation** (Task 4.4). Through this structured approach, RESKILLING creates an interconnected methodology that systematically evaluates its impacts both during the project's lifecycle and beyond its completion. KPIs have been defined for three timeframes: Shorter term, KPI_{short}, to be achieved during the project, near term, KPI_{med} (up to two years) after the project's end (at times labelled "outcome") and , long term ,KPI_{long} , 10-15 years after the project end ("Impacts").

RESKILLING is designed to generate **credible, measurable, and sustainable** results, ensuring alignment with the expected impacts of the *HORIZON-CL5-2023-D6-01* topic. The project's contributions reinforce the broader goals of Horizon Europe by fostering a skilled workforce, promoting the adoption of CCAM technologies, and ensuring a socially responsible transition to automated mobility solutions. The following table will further detail how RESKILLING supports the call's "Expected Impacts."

Table 4 : Expected impacts as reflected in CL5-2023-D6-01-05 vs RESKILLING

Expected Impact I: Improved understanding of the short-, medium- and long-term employment effects (e.g. working conditions, shifts in responsibilities, future roles and driver's skills depreciation) and wider socio-economic effects (income segregation, geographic dispersion, availability of entry level jobs) resulting from CCAM deployment, taking into account the full range of professions associated with CCAM services for the movement of people and goods.
RESKILLING addresses this expected impact by developing the following Expected Results (ER): • ER 2: CCAM professions and skills mapping and taxonomy of knowledge and skills • ER 3: Employment and socioeconomic effects of CCAM • ER 4: CCAM Employment & Skills Observatory
Key Impact Pathways (KIP) and KPIs related to these Expected Results are: • <u>KIP #1: Creating high-quality new knowledge (Scientific)</u> ○ KPI11_{short}: Quantitative and qualitative estimation of CCAM employment effects across the whole mobility products and CCAM services value chain. • <u>KIP #3: Fostering diffusion of knowledge and Open Science (Scientific)</u> ○ KPI8_{short}: Full operating open observatory, capable of fulfilling and mapping all recognised stakeholder clusters needs, also interfacing other relevant connected classification data sources; ○ KPI4_{long}: Open observatory integrated in CAD Knowledge Base on (CAD) and systemically used by the CCAM Community as a reference node for CCAM deployment. • <u>KIP #5: Creating more and better jobs (Economic/Technological)</u> ○ KPI10_{short}: CCAM skills taxonomy and matrix covering over 70 relevant professions (existing &

¹ Key Performance Indicators (KPIs) are assigned sequential numbers within each cluster (in the project indicators, outcomes and impacts). However, it's important to note that KPIs sharing the same number across different clusters are not interlinked.

new) across the CCAM value chain.

- KPI7_{med}: CCAM partnership adopting and following relevant taxonomy and matrix into its formal strategy documents.

Linked deliverables and Milestones (and lead Tasks/WP for the respective D, M):

D3.1 Professions & jobs related to the entire CCAM services value chain	Task 3.2
D3.2 RESKILLING Use Cases definition	Task 3.5 (builds on T4.4 work)
D3.3 Short, medium and long-term employment effects of CCAM	Task 3.2, 3.3
D3.4 Short, medium and long-term socioeconomic effects of CCAM	Task 3.4
D4.6 CCAM Employment & Skills Observatory	Task 4.5

MS16 Skills matrix	WP 3
MS17 Short-, medium- and long-term employment and socio-economic effects of the CCAM deployment	
MS18 CCAM employment & Skills observatory setup	

Obstacles/barriers to achieve impact & mitigation actions (from GAP part B, to be further revised)

Obstacles/barrier:

Matter of synchronisation/ correspondence of the project's outcomes with the emerging legislation (e.g., related to business models, skillsets, roles concerning the CCAM domain)

Mitigation action:

The legislation and regulatory aspects will be closely monitored by the Consortium (T3.2, T3.3, T3.4, T5.1), establishing a dedicated legislative foresight team responsible for scanning and forecasting potential future regulatory changes in the CCAM domain. This team will analyse trends and emerging policy discussions from various sources, throughout the project's duration, including think tanks, industry reports, and legislative bodies. The team will collaborate with legal experts and policymakers to ensure that the project anticipates and prepares for potential legislative shifts. Additionally, the policy recommendations derived from the project, will build and recommend adaptations on the latest legislation, while the project will incorporate flexibility into its framework to accommodate anticipated changes, ensuring that outcomes can be adjusted as new regulations emerge.

Expected Impact II: High awareness within the stakeholder community about the effects of CCAM on jobs, along the entire CCAM value chain, and recommendations on how to address those effects.

RESKILLING addresses this expected impact by developing the following Expected Results (ER):

- **ER1:** Stakeholder mapping & engagement methodology
- **ER6:** Multi-layered replication & multimodal transferability
- **ER7:** Tailored strategies & pathways for EU-wide adoption
- **ER10:** Guidelines and policy recommendations

Key Impact Pathways (KIP) and KPIs related to these Expected Results are:

- **KIP #2: Strengthening human capital in R&I (Scientific)**
 - KPI3_{short}: Recognition of at least 10 main groups and 50 sub-groups of stakeholders in the future

- CCAM future business ecosystem;
- KPI4_{short}: Active evidenced feedback to project outcomes of at least 2 representatives per each stakeholders' sub-group
- KPI3_{med}: Constant update and extension of CCAM stakeholder ontology within CCAM partnership; at least 2 official updated releases on an annual basis.
- KPI12_{long}: At least 15% of the successful CCAM deployments, following project's results and tools.
- **KIP #4: Generating innovation-based growth (Economic/Technological)**
 - KPI9_{short}: Clear roadmap on optimal steps to effectively integrate current and new workforce streams into CCAM deployment
 - KPI6_{med}: Strategies and pathways adopted across Europe in at least 20 CCAM deployments.
 - KPI5_{long}: CCAM required skills, as emerging from the project, exist in the labour market and they cover at least 80% of relevant deployment needs (by 2050).
- **KIP #7: Addressing EU policy priorities & global challenges through R&I (Societal)**
 - KPI14_{short}: Guidelines and policy recommendations recognised and adopted by CCAM partnership – (among other, part of ERTRAC roadmap).
 - KPI10_{med}: Guidelines and policy recommendations fostered in at least 10 CCAM deployments across Europe.
 - KPI9_{long}: Guidelines and policy recommendations adopted by relevant EC Directives and translated/ adjusted into national roadmaps.
- **KIP #9: Strengthening the uptake of R&I in society (Societal)**
 - KPI16_{short}: Concrete replication plans for at least 20 deployment sites, addressing all transport modes.
 - KPI2_{med}: At least 10 more sites in Europe applying replication plans successfully.
 - KPI2_{long}: At least 30% of all mobility (for people and goods) stakeholders in Europe aware of CCAM employment opportunities.

Linked deliverables and Milestones, and lead Tasks/WP for the respective D, M:

D2.1 – Stakeholder mapping and engagement plan	Task 2.1, 2.2
D2.2 – Update of Stakeholder mapping and engagement plan	Task 2.1, 2.2
D4.5 - Case studies results and transferability to other modes	Task 4.4
D4.6-7 CCAM Employment & Skills Observatory (&update)	Task 4.5
D4.8 – Multi-layered replication & multimodal transferability	Task 4.6
D5.1 – Evaluation and impact assessment	Task 5.1,5.2
D5.2 – Guidelines and policy recommendations	Task 5.1, 5.2, 5.3
D6.1 Communication, Dissemination and Exploitation (CDE) strategy	Task 6.1-6.4
MS1-MS3 Stakeholder mapping (1 st , 2 nd , final version)	WP 2
MS4-5 Advisory Board (AB) set up; yearly meetings & concertation events	WP 2
MS18 CCAM employment & skills Observatory setup	WP 4

Obstacles/barriers to achieve impact & mitigation actions (from GAP part B, to be further revised)

Obstacle/barrier:

Stakeholder mapping is too wide, thus not possible to address their interests effectively or conflicting

interests (Lik: Medium; Sev: Medium)

Mitigation action

Periodic feedback will be gathered, including input from stakeholders through engagement reports (T2.3), to promptly detect any emerging challenges regarding the RESKILLING ability to address the interests and needs of the different stakeholder groups. A well-structured mechanism for stakeholders to offer essential feedback will be set up (T2.2) that will proactively identify potential concerns, while – if necessary- the coordinator will propose additional mitigation measures with the Partners' Board (PB). (Lead: WP2)

Obstacle/barrier:

Insufficient stakeholder active engagement (Lik: Medium; Sev: High)

Mitigation action

Stakeholder engagement will be continuously monitored and systematically reported through the Engagement Tracking Tool (ETT), which will track participation across all project levels and tasks, with regular updates provided by Consortium partners (Task 2.3). To further ensure sustained involvement, regular feedback loops—such as surveys and interviews—will be established to assess stakeholder satisfaction and promptly address any concerns. These mechanisms will enable the project to maintain strong engagement and adapt its approach as necessary. Additionally, incentives for active participation will be provided, including recognition in project outputs, networking opportunities, and access to exclusive project insights. These incentives are designed to encourage stakeholders to engage more deeply and contribute meaningfully to the project's success (lead WP2).

Expected Impact: Prerequisites for job creation and job growth through strategies that aim to boost innovation capabilities and develop competitive CCAM solutions and associated businesses.

RESKILLING addresses this expected impact by developing the following Expected Results (ER):

- **ER5:** Novel CCAM Business Models Toolkit
- **ER6:** Multi-layered replication & multimodal transferability
- **ER7:** Tailored strategies & Pathways for EU-wide adoption
- **ER8:** Socially innovative CCAM skill ecosystem & scenarios of implementation
- **ER10:** Guidelines and policy recommendations
- **ER11:** Roadmap on socio-economic transition to CCAM

Key Impact Pathways (KIP) and KPIs related to these Expected Results are:

- **KIP #4: Generating innovation-based growth (*Economic/Technological*)**
 - KPI9_{short}: Clear roadmap on optimal steps to effectively integrate current and new workforce streams into CCAM deployment.
 - KPI5_{long}: CCAM required skills, as emerging from the project, exist in the labour market and they cover at least 80% of relevant deployment needs (by 2050).
- **KIP #5 Creating more and better jobs (*Economic/Technological*)**
 - KPI11_{short}: (Re)skilling scenarios for at least 20 existing professions and 10 emerging/new ones for CCAM deployment
 - KPI8_{med}: Re/upskilling of affected workers successfully performed for at least 50% of them (by 2040).
 - KPI6_{long}: Better qualified personnel, 5% decrease of sector's unemployment, softer jobs, facilitation of special workforce groups
- **KIP #6 Leveraging investments in R&I (*Economic/Technological*)**

- KPI2_{short}: Business model toolkit covering in an economical, sustainable way at least 50% of CCAM-affected jobs;
- KPI3_{short}: Business model toolkit successfully applied in at least 2 project case studies with positive assessment results
- KPI9_{med}: At least 10% of CCAM deployments in Europe using the BM toolkit get financially viable.
- **KIP #7 Addressing EU policy priorities & global challenges through R&I (*Societal*)**
 - KPI14_{short}: Guidelines and policy recommendations recognised and adopted by CCAM partnership – (among other, part of ETRAC roadmap).
 - KPI5_{short}: At least 20 novel (re/up)skilling/ training schemes identified and fully prioritised;
 - KPI10_{med}: Guidelines and policy recommendations fostered in at least 10 CCAM deployments across Europe.
 - KPI6_{med}: Strategies and pathways adopted across Europe in at least 20 CCAM deployments.
 - KPI15_{short}: Roadmap to be adopted by CCAM partnership
 - KPI11_{med}: Alignment to the Roadmap from at least 30 stakeholders in at least 15 deployment sites.
 - KPI9_{long}: Guidelines and policy recommendations adopted by relevant EC Directives and translated/ adjusted into national roadmaps.
 - KPI10_{long}: Alignment to the Roadmap from at least 30 stakeholders in at least 15 deployment sites.
- **KIP #9 Strengthening the uptake of R&I in society (*Societal*)**
 - KPI16_{short}: Concrete replication plans for at least 20 deployment sites, addressing all transport modes.
 - KPI2_{med}: At least 10 more sites in Europe applying replication plans successfully.
 - KPI7_{long}: Business model toolkit systemically used in at least 50% of CCAM deployments across Europe.
 - KPI8_{long}: Business model toolkit successfully penetrating in the market, with over 10 applications /years.
 - KPI12_{long}: At least 15% of the successful CCAM deployments, following project's results and tools.

Linked deliverables and Milestones, and lead Tasks/WP for the respective D, M:

D4.1 Novel Business Models for CCAM and RESKILLING Toolkit	Task 4.1
D4.2 Update of the Novel Business Models for CCAM and RESKILLING Toolkit*	Task 4.1
D4.6 CCAM Employment & Skills Observatory ^{*2}	Task 4.5
D5.1 Evaluation and impact assessment*	Task 5.1, 5.2
D5.2 Guidelines and policy recommendations*	Task 5.1, 5.2, 5.3
D5.3 Roadmap on socio-economic transition to CCAM	T5.4
MS 21 Horizontal Social Innovation network	WP 4
MS 22 Reskilling Journeys	

Obstacles/barriers to achieve impact and mitigation actions (*from GAP part B, to be revised*)

Obstacle/barrier:

Poor quality of collected assessment data (Lik: Low, Sev: High)

Mitigation action

Data quality is continuously monitored with dedicated processes to mitigate the risk. Alternative monitoring

² * Indicates deliverable that is linked to more than one Expected Impact

strategy will be deployed if needed (Lead: WP5)

Obstacle/barrier:

Low market penetration and adoption of project's outcomes (e.g., CCAM employment & skills Observatory stays inactive after project due to lack of interest or Novel CCAM BM toolkit underused) due to inefficient exploitation strategy (Lik: Medium, Sev: Medium)

Mitigation action:

The exploitation strategy will be revised by the PCG and the Exploitation leader (ECORYS) and the Coordinator. An evaluation of the revised strategy will follow up shortly to address its efficacy. The Consortium associations (6) plus CERTH are committed to continue the operation and outreach of project's results for at least 3 years after the end of the project; to allow them to become known, fostering their use and link to the CCAM partnership and its Knowledge Base, as well as other relevant partnerships and initiatives (Lead: WP6)

Expected Impact: Support the development of educational plans and activities (e.g. for curricula, Lifelong learning initiatives) as well as reskilling efforts to develop human capital in innovative mobility systems and services through education and training, thereby realising the benefits of a large deployment of CCAM solutions.

RESKILLING addresses this expected impact by developing the following Expected Results (ER):

- **ER8:** Socially innovative CCAM skill ecosystem & scenarios of implementation
- **ER9:** New (re)training curricula and modules
- **ER10:** Guidelines and policy recommendations
- **ER11:** Roadmap on socio-economic transition to CCAM

Key Impact Pathways (KIP) and KPIs related to these Expected Results are:

- **KIP #2 Strengthening human capital in R&I (*Scientific*)**
 - KPI5_{short}: At least 20 novel (re/up)skilling/ training schemes identified and fully prioritised.
 - KPI6_{short}: At least 10 fully developed and adapted training curricula.
 - KPI7_{short}: At least 3 novel training modules fully developed and successfully assessed within the case studies.
 - KPI4_{med}: 3 to 6 additional training modules of the suggested schemes fully developed and applied, tackling more confined workforces of CCAM.
 - KPI3_{long}: At least 3 project's training modules turning to reference/ standardised trainings offered by respective/authorised organisations (i.e. UTP).
- **KIP #5 Creating more and better jobs (*Economic/Technological*) and KIP #8 Delivering benefits and impact via R&I missions (*Societal*)**
 - KPI11_{short}: (Re)skilling scenarios for at least 20 existing professions and 10 emerging/new ones for CCAM deployment.
 - KPI8_{med}: Re/upskilling of affected workers successfully performed for at least 50% of them (by 2040).
 - KPI6_{long}: Better qualified personnel, 5% decrease of sector's unemployment, softer jobs, facilitation of special workforce groups.
 - KPI11_{long}: 5% improvement of the Quality of Life of CCAM human capital (due to their jobs improvement) (*only for KIP #8*).
- **KIP #7 Addressing EU policy priorities & global challenges through R&I (*Societal*)**

- KPI14_{short}: Guidelines and policy recommendations recognised and adopted by CCAM partnership – (among other, part of ETRAC roadmap)
- KPI10_{med}: Guidelines and policy recommendations fostered in at least 10 CCAM deployments across Europe.
- KPI9_{long}: Guidelines and policy recommendations adopted by relevant EC Directives and translated/ adjusted into national roadmaps.
- KPI15_{short}: Roadmap to be adopted by CCAM partnership.
- KPI11_{med}: Alignment to the Roadmap from at least 30 stakeholders in at least 15 deployment sites.
- KPI10_{long}: 5% improvement of the Quality of Life of CCAM human capital (due to their jobs improvement).

Linked deliverables and Milestones, and lead Tasks/WP for the respective D, M:

D4.2 Update of the Novel Business Models for CCAM and RESKILLING Toolkit*	Task 4.1
D4.3 Scenarios for social innovative skill ecosystems and implementation recommendations	Task 4.2
D4.4 New (re) training curricula and schemes, developed in the project	Task 4.3
Contributor to D5.2 Guidelines and policy recommendations*	Task 5.1, 5.2, 5.3
Contributor to D5.3 Roadmap on socio-economic transition to CCAM	T5.4
MS 20 (Re)training curricula & modules ready for case studies	WP 4
MS 21 Horizontal Social Innovation network*	
MS 22 Reskilling Journeys*	

Obstacles/barriers to achieve impact and mitigation actions:

Obstacle/barrier:

Poor quality of collected assessment data Lik: Low, Sev: High)

Mitigation action

Data quality is continuously monitored with dedicated processes to mitigate the risk. Alternative monitoring strategy will be deployed if needed (Lead: WP5)

Obstacle/barrier:

Low market penetration and adoption of project's outcomes (e.g., CCAM Employment & Skills Observatory stays inactive after project due to lack of interest or Novel CCAM BM Toolkit underused) due to inefficient exploitation strategy (Lik: Medium, Sev: Medium)

Mitigation action

The exploitation strategy will be revised by the PCG and the Exploitation leader (ECORYS) and the Coordinator. An evaluation of the revised strategy will follow up shortly to address its efficacy. The Consortium associations (6) plus CERTH are committed to continue the operation and outreach of project's results for at least 3 years after the end of the project; to allow them to become known, fostering their use and link to the CCAM partnership and its Knowledge Base, as well as other relevant partnerships and initiatives (Lead: WP6)

5.1.1 Innovation Potentials

RESKILLING introduces a series of novel contributions designed to fundamentally reshape workforce adaptation strategies within the CCAM ecosystem. These contributions integrate technological



advancements, socio-economic considerations, and policy support to create a comprehensive and sustainable workforce transition framework.

- **A first-of-its-kind Taxonomy of the CCAM Value Chain:** RESKILLING will develop the taxonomy mapping the entire CCAM services value chain, systematically identifying required skills, competencies, and emerging job roles. This taxonomy will be aligned with established frameworks, such as ESCO and other recognised international classifications to ensure consistency and applicability across different sectors and regions.
- **Skills Matrix and Visual Workforce Framework:** A dynamic skills matrix will be established to systematically analyse current and future skill needs, employment shifts, and workforce trends. This visual framework will provide actionable intelligence for training providers, policymakers, industry stakeholders, and businesses, supporting evidence-based decision-making and workforce planning.
- **Business Innovation & Social Entrepreneurship in CCAM:** RESKILLING introduces a structured approach to leveraging new business opportunities in CCAM, particularly supporting innovative and socially driven enterprises. By developing tailored strategies and best practices, the project will promote sustainable business models that align workforce transformation with social responsibility and economic viability.
- **Social Skills Ecosystem Mission:** RESKILLING will pioneer a stakeholder-driven framework that aligns technological advancements, workforce training, and social imperatives. This mission-oriented approach ensures that CCAM workforce development remains human-centred, prioritising inclusivity, ethical considerations, and social sustainability.
- **Comprehensive, Data-Driven Workforce Monitoring Platform:** To support continuous adaptation to evolving workforce demands, RESKILLING will establish a real-time monitoring platform that tracks job transformations, skill requirements, and labour market trends. This platform will provide data-driven insights to policymakers, businesses, and training institutions, enabling proactive workforce strategies and minimizing skill mismatches.
- **Replication & Transferability Incubator:** RESKILLING will develop a scalable and adaptive model to facilitate the transferability of CCAM workforce strategies across multiple transport sectors and geographic regions. This incubator will foster a resilient, cross-sectoral transition, ensuring that workforce adaptation strategies can be replicated in various transport modes and policy environments.
- **Long-Term Exploitation & Market Integration Strategy:** RESKILLING ensures the sustainability and market uptake of its innovations through market entry strategies, business case development, and intellectual property protection mechanisms. By focusing on the commercialization of research outputs, the project guarantees that its results will remain impactful beyond the project's funded duration, transforming research into tangible, market-ready solutions.

Through these novel contributions, RESKILLING establishes a **comprehensive, scalable, and sustainable framework** that not only addresses current workforce adaptation challenges but also **anticipates future shifts in the CCAM ecosystem**, ensuring a smooth and inclusive transition toward **automated and connected mobility solutions**.

6. Project Technical Activities Workplan

6.1 WP1: Project management & coordination – CERTH [M1-M36]

6.1.1 WP Objective(s)

The primary objective of this Work Package is to ensure the effective implementation, coordination, and governance of the project in alignment with the European Commission's guidelines, the Grant Agreement, and the Consortium Agreement. This will be achieved by applying well-defined governance principles, quality assurance mechanisms, and risk management strategies to support excellence and innovation throughout the project's lifecycle.

6.1.2 WP overall methodology

The general purpose of the project management activities are financial, administrative, scientific and knowledge and innovation aspects, i.e. coordination of activities, analysis and design of objectives and events, planning the work according to the objectives, risk management, allocation and controlling of resources, assigning tasks, controlling project executions, tracking and reporting progress, analysing the results based on the facts achieved, forecasting future trends in the project, quality management, conflict resolution, identifying, managing and controlling changes, project closure, monitoring of dissemination activities.

The management structure of the RESKILLING project, as outlined in Section 3 and illustrated in *Figure 1*, is designed to ensure the efficient allocation and coordination of resources, enabling the project to be executed within the predefined scope, quality standards, timeline, and budgetary constraints.

The project management framework is built upon a robust governance model, leveraging the consortium and its dedicated bodies (as detailed in Section 3). This structure establishes clear decision-making processes, facilitates seamless collaboration among partners, and ensures proactive risk management. By adhering to these principles, the project management approach effectively addresses the complexities associated with multi-stakeholder coordination and guarantees the successful delivery of project outcomes.

Within WP1, the following key objectives will be pursued to ensure the effective coordination, quality management, and governance of the RESKILLING project:

- **Efficient Project Implementation:** Overseeing the administrative and technical execution of the project in alignment with European Commission guidelines, the Grant Agreement, and the Consortium Agreement, while applying robust governance mechanisms (as outlined in Section 3).
- **Comprehensive Quality Management:** Establishing and maintaining a quality management system that clearly defines responsibilities across all relevant entities to ensure consistency, transparency, and accountability.
- **Integration of Social Innovation Principles:** Embedding co-creation, co-design, and social innovation approaches into project methodologies to enhance stakeholder engagement and maximize societal impact.
- **Risk Management & Governance:** Identifying and systematically addressing all governance-related risks, implementing mitigation strategies to safeguard project objectives.
- **Inclusivity & Gender Balance:** Promoting diversity, equal representation, and gender balance across all project activities to foster an inclusive research and innovation ecosystem.
- **FAIR Data Management:** Ensuring all project data is managed in accordance with FAIR principles (Findability, Accessibility, Interoperability, and Reusability) to enhance knowledge sharing and long-term usability.

The project management approach builds upon well-established management methodologies and best practices successfully implemented in previous EU-funded projects coordinated by CERTH and VTI. The RESKILLING project benefits from a robust and interdisciplinary management structure, bringing together partners with complementary expertise, ensuring a smooth execution of activities and the successful achievement of its ambitious objectives. The management framework is designed to optimise resource allocation and ensure the project's completion within the defined scope, quality standards, timeline, and budgetary constraints.

To facilitate the efficient and timely implementation of activities by RESKILLING's multidisciplinary team, dedicated communication mechanisms and coordination procedures have been defined and agreed upon. These mechanisms will enhance project governance, collaboration, and decision-making, ensuring seamless coordination across all Work Packages. A detailed description of these processes, quality assurance measures, ethical considerations, and risk mitigation strategies will be provided in Deliverable D1.2 – "Project Quality, Ethics, and Risk Assessment Plan," scheduled for submission in M3 of the project (March 2025).

6.1.3 Methodology on Task level

T1.1: Project administrative and financial coordination – CERTH [M1-M36]

In alignment with the roles and responsibilities outlined in Section 3, the key coordination activities within Task 1.1 are structured to ensure smooth project management, effective communication, and proactive risk mitigation. These activities are summarised as follows:

- 1. Continuous communication with the European Commission:** To maintain efficient and streamlined communication with the European Commission (EC), a single point of contact has been designated. The Project Coordinator, Matina Loukea (CERTH), serves as the liaison, ensuring that all interactions with the EC are well-coordinated and consistent.
- 2. Project supervision, financial accounting & budget monitoring:**
 - Ongoing financial oversight and budget reporting are conducted to support project partners, track financial status, and address administrative or management-related requests.
 - To anticipate and mitigate risks, partners receive continuous support in financial and administrative matters.
 - A shared digital workspace (Google Drive) has been developed for collaborative document management. This will soon be migrated to a shared digital workspace on the Teams, offering enhanced accessibility and functionality for the entire consortium.
- 3. Monitoring of WP progress:** The progress of individual WPs will be monitored in collaboration with the Technical & Innovation Manager (VTI), following the project's governance framework. The shared digital workspace will serve as a progress tracking tool, ensuring transparency and timely reporting.
- 4. Conflict Resolution Mechanism:** To address and resolve potential conflicts among project participants, a structured escalation process has been established:
 - Initial efforts by involved partners to resolve the issue independently.
 - Escalation to the Task Leader (if applicable).
 - Escalation to the WP Leader (if applicable).
 - Involvement of the Technical & Innovation Manager.
 - Escalation to the Project Coordinator.
 - Notification to the Project Core Group (PCG).
 - If no resolution is achieved after these steps, the matter will be formally escalated to the European Commission.

5. Approval of deviations & amendments

- While technical and financial deviations from Annex 1 will be documented in periodic reports, a dedicated internal reporting process will be conducted every six months.
- All deviation requests will be assessed, and the Project Officer (PO) will be consulted to determine whether official amendments are required.

6. Governance of Project Teams & Meetings

- The Project Coordinator chairs and manages the key project meetings, including the Partner Board (PB), Project Management Team (PMT), and Project Core Group (PCG) meetings.
- At the WP level, WP Leaders are responsible for organising and chairing their respective WP meetings.
- At the Task level, Task Leaders oversee and facilitate their designated meetings.

7. Project reviews and reporting : In collaboration with Technical & Innovation Manager (VTI), the Project Coordinator is responsible for organizing all formal and informal project reviews with the European Commission, as per the Grant Agreement's timeline.

8. Leadership and decision-making within the Project Core Group (PCG)

- The PCG plays a pivotal role in guiding the project's overall technological, innovation, and exploitation strategy.
- It is responsible for setting policies, standards, quality assurance, intellectual property rights (IPR) management, and publication procedures.
- Additionally, the PCG proposes necessary amendments to the EC Grant Agreement (GA), subject to ratification by the Partner Board.
- All major decisions made by the PCG remain under the overarching authority of the Partner Board.

This structured approach ensures that the project remains on track, mitigates risks, fosters collaboration, and maintains alignment with both consortium objectives and European Commission expectations.

T1.2: Technical and innovation management – VTI [M1-M36]

The **Technical and Innovation Management** of the project is designed to ensure that all planned outcomes are successfully achieved to the highest possible degree. This involves not only overseeing technical progress but also proactively addressing challenges, guiding WP and Task leaders, and fostering continuous innovation. A strong focus is placed on maintaining external connections and interactions to align project activities with broader industry advancements and policy developments. These efforts are undertaken in close collaboration with the RESKILLING Advisory Board to enhance strategic alignment and knowledge exchange. The Technical and Innovation Manager, Dr. Ingrid Skogsmo (VTI), leads these efforts with the support of the RESKILLING Consortium. Together, they ensure that the project remains on track both technically and strategically.

The distinct tasks of the technical management are as follows:

1. Project supervision support:

- Assist CERTH in the supervision of the project by providing continuous technical oversight and support.
- Ensure that all project partners are aligned with the overall technical direction and ambitions of the project.
- Facilitate issue resolution and risk mitigation through proactive monitoring.

2. WP monitoring: Oversee the technical progress of WPs in coordination with CERTH, ensuring adherence to the project schedule and utilise the shared digital workspace as a tracking tool for transparency and streamlined reporting.

- 3. Approval of Technical Deviations:** Support the Project Coordinator in evaluating and approving requests for deviations from the original technical and financial plan (Annex 1), while also in the implementation of the structured six-month review process to assess deviations and communicate with the Project Officer (PO) regarding necessary amendments.
- 4. Continuous technical oversight & risk mitigation:**
 - Provide day-to-day monitoring of technical activities across all WPs and Tasks.
 - Offer guidance and technical solutions to WP and Task leaders when challenges arise.
 - Implement a robust risk assessment and mitigation strategy to proactively address potential issues.
- 5. Ensuring high-quality project outcomes,** through overseeing the development and iterative review of Deliverables, scientific publications, and implementations and ensuring alignment with project objectives and collaborate with responsible partners to maintain high standards.
- 6. Innovation management and external synergies:**
 - Continuously identify opportunities where RESKILLING can introduce innovative advancements beyond the current State-of-the-Art (SoA).
 - Foster external collaborations by creating synergies with industry, academia, and policy-makers.
 - Cooperate with the RESKILLING Advisory Board (AB) and Task 2.5 to facilitate liaison activities with the CCAM Partnership and other relevant initiatives.
- 7. Organisation of project reviews:** Lead the coordination of informal and official project reviews with the European Commission in collaboration with CERTH, ensuring comprehensive technical input and structured reporting for review sessions.
- 8. Technical reporting & documentation:** Organise, consolidate, and issue official technical reports for the European Commission and project stakeholders, including the biannual technical progress reports and other official technical publications arising from project activities.
- 9. Oversight of events, workshops, and stakeholder engagement,** through also a centralised calendar for tracking all project events, workshops, focus groups, surveys, and interviews (currently under development in cooperation with WP2 and WP6) that will also facilitate potential synergies across multiple project activities to optimise engagement and knowledge sharing.

By integrating technical coordination, risk management, innovation-driven collaboration, and external engagement, the Technical and Innovation Management framework ensures that the project not only meets its objectives but also contributes to advancing the broader CCAM and reskilling landscape.

T1.3: Quality control and risk mitigation – CERTH [M1-M36]

The Consortium Quality Policy ensures the implementation and maintenance of a comprehensive quality management system, defining responsibilities across all relevant entities and guaranteeing that all Deliverables and tangible project outcomes meet contractual obligations. This policy is designed to uphold scientific rigor, procedural consistency, and compliance throughout the project's lifespan.

To ensure a uniform and high-standard approach to Deliverable preparation, a set of guidelines has been established. These guidelines govern the structure, formatting, and development process of project reports, ensuring:

- Efficient, structured, and timely preparation of Deliverables.
- Consistency across all 28 Deliverables to be submitted to the European Commission.
- Coherent presentation and alignment with contractual obligations.

The Quality Manager, Dr. Evangelos Bekiaris (CERTH), along with the Quality Control Board (QCB) (Section 3.3.4), oversees quality assurance throughout the project's duration. Their responsibilities include:

- Conducting quality reviews at key milestones and in response to contractual amendments.
- Monitoring technical progress to ensure scientific integrity, coherence, and consistency across all activities.
- Ensuring that co-creation, co-design, and social innovation principles are effectively integrated into project outputs.

All project governance-related risks and mitigation measures will be systematically addressed through an annual risk management process, outlined in Deliverable D1.2 (Month 3). The risk assessment will follow the **Extended Failure Mode and Effects Analysis (eFMEA)** methodology [Bekiaris & Stevens, 2005], an enhanced approach that goes beyond conventional technical risk assessments to incorporate also behavioural, legal/regulatory, operational, etc. Risks to be recognised can be also either horizontal to the project or WP/Tasks/case studies specific ones.

The eFMEA based risk assessment process is designed in such a way so as to:

- **Identify potential failure modes** for a product or process.
- **Assess the risk associated** with those failure modes and prioritise issues for corrective action.
- **Identify and carry out corrective actions** to address the most serious concerns.

The ranking process in each iteration will be conducted by the PCG, whilst the reference point will be the existing risk registry in the GA. Finally, each iteration outcomes will lead to the corresponding update of the risk registry in the participant portal. The key steps of the methodology are the ones described below:

- **Step 1:** Initial risk area identification (type of risks) –in collaboration with all partners
- **Step 2:** Risk definition and classification
- **Step 3:** Risk rating (Severity[S], Occurrence Probability[O], Detectability[D], Recoverability[R])
- **Step 4:** Calculation of Overall Risk Number
- **Step 5:** Overall Risks calculated classification in Severity Levels
- **Step 6:** Proposal of mitigation strategies (especially for the most severe risks identified)

Table 5: Risk numbers and severity levels in eFMEA

Overall Number	Risk	Severity Level	Mitigation Possibility
513-1000		I-Extremely severe	Very High
217-512		II-Severe	High
65-216		III-Moderate	Medium
9-64		IV-Slight	Low
1-8		V-Insignificant	Improbable

The overall risk number is estimated via the following formula:

$$\text{Risk Number} = S * O * \left\lceil \frac{D + R}{2} \right\rceil \quad (1)$$

Risk assessment within the RESKILLING project is a cross-cutting activity, influencing and drawing input from all project activities. Given its strategic importance, the process is designed to be collaborative and inclusive, ensuring a comprehensive evaluation of risks and mitigation measures.

While CERTH will take the lead in coordinating risk management efforts, the active participation of all RESKILLING partners will be essential for providing diverse perspectives and domain-specific insights.

This collective approach enhances the accuracy and effectiveness of risk identification and response strategies. Furthermore, the RESKILLING Advisory Board will play a key consultative role, particularly in identifying optimal mitigation actions. Their expertise will help refine the risk management framework, ensuring that proactive, evidence-based solutions are implemented to safeguard project outcomes.

T1.4: Data management, gender and ethics – VTI [M1-M36]

A comprehensive Data Management Plan (DMP) will be developed as a key component of RESKILLING's research framework. The initial version of the DMP will be delivered in Month 6 and will be updated at Months 18 and 36 to reflect any advancements, regulatory updates, or project-specific adjustments. The DMP will define, structure, and guide the collection, processing, sharing, and preservation of data throughout the project's lifecycle, adhering to FAIR principles (Findable, Accessible, Interoperable, and Reusable).

Key aspects of the DMP include:

- **Data Generation and Use:** A detailed inventory of the data types generated, their intended use, and exploitation plans, ensuring transparency and reusability.
- **Open Access Strategy:** Defining which datasets will be **openly** accessible while ensuring GDPR compliance and data protection measures.
- **Data Collection and GDPR Compliance:** Data collection will strictly follow General Data Protection Regulation (GDPR) standards, utilizing enhanced GDPR-compliant templates and guidelines. Close collaboration with the Ethics Board and data-handling partners will ensure full adherence to ethical and legal requirements.
- **Data Curation and Preservation:** Secure storage, accessibility provisions, and long-term preservation strategies to enable verification and future reuse of datasets.
- **Data Security Measures:** Ensuring data protection, secure storage, and recovery mechanisms to mitigate any potential breaches or losses.

To reinforce privacy protection and ethical compliance, a Data Privacy Impact Assessment (DPIA) will be conducted, evaluating and mitigating risks associated with data processing activities. In this context:

- Data management roles will be clearly defined, distinguishing between data controllers and processors among the project partners.
- Special attention will be given to ethical considerations, particularly for activities involving human participants, in close collaboration with the RESKILLING Ethics Board (section 3.3.5).
- The Ethics Plan (also part of D1.2) will outline the necessary ethical requirements for conducting validation activities, including the identification of specific permits and approvals needed for research involving human subjects.
- Standardised templates for internal ethical applications and informed consent forms will be developed to ensure uniformity and compliance in participant engagement.

RESKILLING is fully committed to inclusivity and gender balance across all project activities. Gender participation will be actively monitored in line with the gender dimension aspects defined in the GA (page 130). Furthermore:

- Efforts will be made to achieve gender parity in research participation, leadership roles, and stakeholder engagement.
- Equity-related issues will be systematically tracked to ensure diverse representation across age groups, mobility limitations, and socio-economic backgrounds in all project activities.

By integrating robust data governance, ethical oversight, and inclusivity strategies, RESKILLING ensures a transparent, responsible, and legally compliant research environment that maximises impact while safeguarding the rights and privacy of all involved stakeholders.



6.1.4 Interrelations to other WPs and Activities

Regarding the interrelations to other WPs, the administrative, financial and strategic project management activities are cross-cutting to the whole project workplan, as the activities described herein are referring to horizontal governance principles and mechanisms. Similarly, activities related to Technical and Innovation Project Management, Quality control and Risk Mitigation and the Data Management, Gender & Ethics are interrelated to all work packages.

6.1.5 Expected outcomes

Table 6: WP1 Deliverables

Deliverable	Deliverable Title	Lead Beneficiary	GA Due Date (Month)	Short Description	Success Criteria	Related tasks
D1.1	Project presentation and inception report	CERTH	2	Detailed project management plan, including detailed WP/Tasks scheduling, allocation of responsibilities among partners, interdependencies among tasks and full definition of governance scheme layers with tasks and roles assigned to each.	-	T1.1 T1.2
D1.2	Project Quality, Ethics and Risk Assessment Plan	CERTH	3	Definition of Quality Control Board (QCB) and responsibilities assigned respectively, encompassing the methodology for risk assessment strategy (on project level) against which the annual project risk assessments will be performed.	-	T1.1 T1.2 T1.3
D1.3	Data Management Plan (DMP)	VTI	6	Data Management Plan detailing what data the project will generate, whether and how it will be exploited or made accessible for verification and re-use, and how it will be curated & preserved following the FAIR principles, defining their way/means of collection (against enhanced GDPR compliant templates) and identifying the open access layer. Allocation of specific roles in the Consortium in compliance with the GDPR requirements will be defined.	Specific Data Management Plan procedures, following the FAIR principles	T1.4
D1.4	Update of Data Management Plan (DMP)	VTI	18	Update of project Data Management Plan utilising knowledge gained.		T1.4
D1.5	Final update of Data Management Plan (DMP)	VTI	36	Final update of project Data Management Plan utilising knowledge gained.		T1.4

6.2 WP2: Stakeholder community engagement – POLIS [M1-M36]

6.2.1 WP Objective(s)

RESKILLING WP2 is dedicated to the engagement of external stakeholders in the project activities and research. Three main objectives guide the work package:

1. Structure and harmonised outreach - adopt a strategic approach to effectively engage stakeholders and relevant actors affected by and involved in jobs and skills transformation in the CCAM context;
2. Create and consolidate a community - ensure solid connections to facilitate future collaboration on the topic of jobs and skills in the mobility sector, during and beyond the project lifetime;
3. Organise and sustain concertation activities - exploit existing initiatives to capitalise on their work and results, at European and international levels, through exchanges and with the support of an Advisory Board.

6.2.2 WP overall methodology

The methodology chosen for stakeholder engagement relies on a thorough definition of the categories and sub-categories to involve. This definition is regularly reviewed during the project since it is the foundation of research activities that bring the project's expected results to life. Two tasks aim to ensure the methodology is appropriate for the different stakeholder types and monitor each category's contributions and exploitation. Key tools will be developed for these tasks, which are described in the following sections. Finally, two additional tasks are dedicated to fostering a dynamic and multifaceted collaboration throughout the entire project lifecycle. This will be achieved through twinning and concertation activities, ensuring strong engagement with the CCAM Partnership, and actively involving external experts from diverse fields via the RESKILLING Advisory Board. These efforts will not only enhance knowledge exchange and synergies but also ensure the seamless integration of RESKILLING's research and innovation activities into a broader context. By avoiding duplication of previous work and leveraging expert insights, the project will remain aligned with real research needs, ensuring continuous monitoring, guidance, and impact-driven innovation as it progresses.

6.2.3 Methodology on Task level

T2.1: Stakeholder mapping – POLIS [M1-M24]

The main outcome of this task will be a comprehensive MIRO Board mapping at least 10 main stakeholder groups and over 50 sub-groups relevant to the RESKILLING project. This board will be collaboratively drafted by the partners involved in the task, with input and consultation of all RESKILLING partners and the Advisory Board members. The first version will be developed by Month 3 (March 2025), while a second version will be revised and expanded in Month 12 (December 2025), and a third and final version will be ready by Month 24 (December 2026).

To develop the first version, a structured four-step approach will be followed:

i) The first step will be to build on the CCAM value chain and its relevant actors, identified in the RESKILLING Grant Agreement. In addition, the stakeholders categories from the impact's section of the RESKILLING GA, originally developed to inform the project's Communication, Dissemination, and Exploitation Plan, will serve as the basis to develop the work in this task). A second step, to enhance and validate the initial stakeholder mapping, is the review of previous projects' and relevant initiatives work in terms of stakeholders identification and categorisation, such as the Horizon 2020 projects SHOW, Drive2thefuture, WE-TRANSFORM, and the CCAM and 2ZERO partnerships. Next to projects and



partnerships, a literature review will also support the listing of relevant stakeholders and their categorisation, to ensure it is as complete, structured, logical and representative as possible.

iii) After defining a robust list of relevant stakeholders, the requirements and expectations from the project partners towards external stakeholders will be also defined in coordination with other WPs, focusing on the work plan detailed in the RESKILLING GA, but also with insights from the project's consortium members. This will enable a listing of all phases of the project development, and all related activities, where stakeholder contribution and involvement will be needed, under what format, and from which stakeholder types exactly. This way, potentially missing contributions will be identified.

In parallel, benefits of cooperation with RESKILLING will be singled out for each stakeholder type, highlighting reasons why they would be interested in joining the project's effort. These benefits will be included in the mapping and serve as motivation to be shared when reaching out to stakeholders in case they hesitate supporting or joining specific RESKILLING activities.

iv) The final step of task T2.1 will be refining the MIRO board to ensure clarity and usability, so it can be exploitable for subsequent tasks and engagement monitoring. The MIRO board will have one overview page with main stakeholder categories, and subpages per stakeholder group and it will serve as a dynamic and actionable tool, ensuring effective collaboration throughout the project lifecycle.

POLIS will draft an initial stakeholder map using the MIRO platform. Partners involved in the task will provide feedback based on their respective fields of expertise. CERTH will contribute to the identification of stakeholder categories related to traffic management, as well as to the research and academic domains, in collaboration with VTI and VDI/VDE-IT. UITP will focus on stakeholders in the public transport automation sector. ZLC will support the definition of stakeholder engagement plans for the logistics sector. Deep Blue will leverage contacts and strategies from previous projects, such as CONDUCTOR. EUROPCAR will bring its expertise on automotive fleets management and the associated ecosystem. IRF will facilitate the engagement of stakeholders from the road transport sector. In addition to providing feedback on the stakeholder categories, partners will offer inputs on the expected contributions and potential benefits associated with each stakeholder type within their area of expertise.

T2.2: Stakeholder engagement methodology – POLIS [M1-M28]

The main outcome of this task is a **robust stakeholder engagement methodology establishing the RESKILLING Stakeholder Community**, including an engagement timeline, a description of engagement tools and community channels, and of different categories' relevance for the project and benefits from contribution. To draft this methodology, 3 steps will be taken, as specified below.

i) The methodology will be closely aligned with the stakeholder mapping conducted in the T2.1. Using the list of project phases and activities, an engagement timeline will be defined, capturing all major events and main milestones of the project, in connection with WP6 and the CDE plan, highlighting promotion and community engagement opportunities, such as the RESKILLING annual virtual Stakeholder Engagement event, to present and/or discuss the RESKILLING results. Next to that, specific engagement timelines per stakeholder group will be also defined, linked to the project research milestones such as the workshops, surveys, and interviews planned in WP3, 4, and 5. Consultation of the WP and task leaders will support refining of these timelines.

ii) The methodology will also detail the channels used to set up and maintain the RESKILLING Stakeholder Community. Both online tools and presential events will support the community. Regarding the online engagement, a dedicated session on the project website, displaying opportunities for external stakeholders and promoting the contribution of specific stakeholders. Such opportunities and promotions will be enhanced also through the project's social media accounts, increasing the valorisation of external engagement and incentivizing broader participation. Regarding the in-person engagement, dedicated events and meetings will be organised facilitating direct interaction, allowing stakeholders to exchange



knowledge, engage with project findings, and contribute expertise, while also increasing representativity of current CCAM developments and social impacts.

iii) The methodology will have a structured approach, inspired from the stakeholder mapping framework, with an overall approach and dedicated strategies for specific stakeholder groups to ensure effective outreach. It will also include a plan for monitoring and reporting on stakeholder engagement, describing the tools developed and the frequency and responsibility distribution to ensure complete monitoring.

POLIS will build the methodology and prepare the reporting tools to be included in it, and partners involved in the task (CERTH, ECTRI, TSI, IRF) will provide feedback on the structure and tools' usability. They will contribute to the specific methodologies planned for the stakeholder groups related to their expertise, and review the overall document.

T2.3: Stakeholder engagement and community report – POLIS [M1-M36]

The task will define a structured framework for reporting on stakeholder engagement, ensuring a systematic assessment of participation and impact. The Stakeholder Engagement Report will be structured according to the stakeholder engagement plan, covering the different stakeholder categories and their relevance to the project, the engagement timeline, quality, and benefits, and the performance of the engagement channels.

To measure engagement effectiveness, Key Performance Indicators (KPIs) will be defined, from both quantitative and qualitative perspectives. Quantitative indicators will relate to the number of stakeholders involved, as well as the number of contributions, and proportions of the population they represent. Qualitative metrics will focus on the content and impact of stakeholders' contributions to the RESKILLING deliverables, as well as on their perceived benefits of engagement and interest in continued participation in the community.

To facilitate continuous monitoring and structured reporting, two monitoring tools will be developed:

- an Engagement Tracking Tool (ETT) will be prepared to cover all quantitative KPIs;
- a Repository will collect and analyse GDPR-compliant stakeholder contributions, including meeting reports, recordings and relevant contributions.

The Stakeholder Engagement Report will be drafted in Month 6, and be updated every six months, while the tools will be updated on a monthly basis with contributions from WP2 partners, and discussed during the WP2 monthly meetings.

POLIS will develop an initial version of the monitoring tools and request CERTH's review and refinement, leveraging its expertise as the sole partner involved in this task. Both POLIS and CERTH will oversee the implementation and proper use of these tools, while all WP2 partners will be responsible for their completion and data input. The monitoring tools will be updated on a monthly basis, with key insights and findings summarised in the bi-annual reports to ensure continuous evaluation and improvement.

T2.4: Advisory Board & International Cooperation – IRF [M1-M36]

The main outcome of this task is a group of experts, advising partners on processes and results exploitation, and being punctually solicited for targeted consultations. This group will be consulted as needed for targeted insights and will play a crucial role in evaluating and assessing the project's progress, direction, strategies, and actions. The Advisory Board (AB) will be composed of experts in CCAM, labour and employment considerations, work laws, and social sciences and humanities (SSH). To ensure broad representation and expertise, the board will consist of organisations such as labour unions and industrial associations, CCAM and industry representatives, regional growth stakeholders, employment authorities, and social scientists/academia. The AB members will represent a diverse geographical spread of at least six EU Member States (three of which being, including Germany, France, Italy and Spain). This group will be set up by Month 4 (April 2025) with subsequent updates planned at Month 12 (December 2025) and Month 24 (December 2026), aligning with the Stakeholder Mapping updates.



The setup and maintenance of the Advisory Board (AB) will be carried out in six steps:

- i. Based on the suggestions from project partners, key stakeholders within the CCAM value chain, and insights from the exploitation plan, **a comprehensive list of relevant experts will be compiled.**
- ii. From the list of potential candidates, **the 15 most relevant-to-the-project contacts will be selected** to form the core AB, with an additional reserve list of 10-15 experts to be contacted as needed.
- iii. A **detailed roadmap for AB engagement** will be created, outlining the expected roles and contributions of members. Additionally, a formal AB consent form will be prepared to ensure formal agreement from all participants.
- iv. The selected 15 experts will be **contacted through partners' outreach efforts**, inviting them to join the AB. This engagement will ensure alignment with project objectives and expectations.
- v. Once the experts are contacted, the roadmap will be shared with them, and they will be asked to sign the AB consent form, **formalising their participation.**
- vi. **Annual meetings** will be organised with the AB to present project updates, gather feedback, and ensure active participation. The first meeting will be held in Month 12 (December 2025) to introduce the project, share progress, and collect initial insights.
- vii. **Ongoing** monitoring of AB engagement will be carried out to ensure active involvement. If necessary, replacements or additions to the board will be made to maintain the board's relevance and effectiveness.

The second part of T2.4 focuses on fostering **international cooperation** with stakeholders, groups, and initiatives outside the European Union. The primary goal is to expand RESKILLING's key organisations from non-EU countries, such as R&D centres, national transport authorities, and industry organisations from regions like Singapore and Australia, will be included. These contacts will be invited to the annual virtual Stakeholder Engagement events which will feature representatives from at least four non-EU countries each time. The event will serve as a platform to gather feedback on RESKILLING results, ensure their visibility at an international level, and foster global collaboration. In addition, twinning activities will be planned with selected stakeholders to support long-term cooperation and further validate the international applicability of RESKILLING outcomes.

The list of contacts will be established based on first suggestions in the RESKILLING GA, and additional suggestions by the project partners. Involvement will be monitored through the same tools, as the stakeholder engagement report (ETT and Repository).

The setup and maintenance of international cooperation will be carried out in four steps:

- i. Define timeline and responsibilities for the various tasks associated with international cooperation.
- ii. Identify and select organisations to participate in the cooperation, ensuring that at least four non-EU countries are represented in the engagement.
- iii. Invite them to the annual virtual Stakeholder Engagement events and monitor participation and contribution through the engagement tracking tools.
- iv. Organise dedicated twinning activities with selected international stakeholders, aiming to enhance long-term cooperation and validate the international applicability of RESKILLING outcomes.

IRF will lead the compilation of two preliminary lists, one identifying potential Advisory Board members and another comprising international entities for cooperation activities, in cooperation with the task partners (CERTH, VTI, UITP, ECTRI, Bax) that also have strong networks in both European and International levels. Task partners will review and refine these lists, providing additional input before they are shared with the entire Consortium for final validation. Moreover, IRF will oversee all aspects of the AB's annual meetings, including logistics, content coordination, and liaison with the Consortium, while other partners will contribute by providing relevant content. Regarding international cooperation, IRF will engage with relevant organisations, inviting them to stakeholder activities and concertation events to foster collaboration and knowledge exchange.

T2.5: Liaison with CCAM Partnership and relevant initiatives – FEHRL [M1-M36]

The main outcome of this task is the development of a structured interaction plan for regular exchange, contributions and learnings from CCAM partnership and other relevant initiatives.

The first part of the task focuses on establishing a liaison with the CCAM Partnership. This will involve a comprehensive review of the CCAM Partnership's Strategic Research and Innovation Agenda (SRIA) and its Code of Conduct in order to identify areas where RESKILLING can contribute, particularly in supporting KPI monitoring efforts. Additionally, opportunities will be explored to integrate CCAM Partnership activities into the RESKILLING knowledge map, user groups, stakeholder engagement, and the wider project's ecosystem. Finally, a dialogue with the CCAM Partnership's Cluster 6 will be established, ensuring that the findings and knowledge generated by the RESKILLING project are shared effectively. This effort will be led by RESKILLING partners involved in the CCAM Partnership (and in particular its Cluster 6), and through the CCAM Association Multicluster meetings.

The second part of the task is the liaison with other relevant initiatives. A list of associations, (on-going and completed) projects, and initiatives relevant to RESKILLING's objectives will be created based on the RESKILLING partners' networks and the examples provided in the GA., Notable initiatives to be included are CCAM-ERAS, FAME, PASCAL, SKILLFUL, and WE-TRANSFORM among others. These contacts will be included in the stakeholder mapping, and the task will ensure regular coordination of interactions, which will be monitored through the ETT and the Repository, with an update in the WP2 monthly meetings.

One of the main features of the second part of the task is the cooperation with the sister project, CCAM-ERAS (CCAM-Employment Realization through the Acquisition of Skills). The first discussions have already taken place which include a dedicated agenda point with presentations from CCAM-ERAS representatives and a subsequent discussion at the RESKILLING KoM in February 2025. This cooperation will be followed up throughout the duration of the project.

The structured interaction plan to be included in D2.3 and updated in D2.4 will be drafted by FEHRL based on input from the review of CCAM's strategic documents and liaison with other initiatives. The review of CCAM's SRIA and Code of Conduct will be done by VTI, ECTRI, POLIS, UITP, CERTH and IRF. They will also be responsible for disseminating the results to the CCAM Partnership. The liaison with other initiatives will be done by partners involved in these initiatives e.g. FAME project - UITP, WE TRANSFORM project – POLIS, SKILLFUL project – EURNEX etc.. The liaison with CCAM-ERAS, because of its strategic importance to RESKILLING, will be led by CERTH and VTI.

6.2.4 Interrelations to other WPs and Activities

WP2 will rely on valuable methodological insights from the research work packages (WP3, WP4, WP5) to refine its approach. At the same time, WP2 will support the exploitation of external stakeholder contributions through its tools and coordination efforts, ensuring seamless outreach and engagement across all project activities.

Additionally, WP2 will provide inputs for WP6 from the beginning of the project, and will also rely on WP6 channels for promotion and communication. Coordination with that work package will be fundamental to organise fruitful events and ensure quality interaction with external stakeholders.

6.2.5 Expected outcomes

Table 7 : WP2 Deliverables

Deliverable	Deliverable Title	Lead Beneficiary	GA Due Date (Month)	Short Description	Success Criteria	Related tasks
D2.1	Stakeholder Mapping & Engagement Plan	POLIS	M6	Robust stakeholder engagement methodology establishing the RESKILLING Stakeholder Community, incl. timeline, description of engagement tools and community channels, and relevance/benefits	At least 10 main groups and over 50 sub-groups of stakeholders 50 stakeholder sub categories involved, Project good reputation, Beyond project exploitation	T2.1, 2.2, 2.4, 2.5
D2.2	Update of Stakeholder Mapping & Engagement Plan	POLIS	M18			
D2.3	Stakeholder Engagement report	POLIS	M6	Key activities, outcomes, and channels that have been established to endure beyond the project's lifetime, ensuring long-term impact and sustainability.	User-friendly tracking tools, joint monitoring of several partners, clear report	T2.1, 2.2, 2.3, 2.4, 2.5
D2.4	Update of Stakeholder Engagement report	POLIS	M36			

6.3 WP3: Short-, medium- and long-term employment and socio-economic effects of CCAM – ZLC [M1-M30]

6.3.1 WP Objective(s)

The objective of WP3 is to analyse both the direct and indirect impacts of CCAM deployment on various professions and job types throughout the entire CCAM value chain. By considering the full spectrum of the value chain and different penetration levels of mobility solutions with automation levels 3 to 5, WP3 aims to:

- Identify current and future professions and job roles associated with CCAM services for both passenger and freight mobility.
- Assess the employment impacts of CCAM deployment in the short (2030), medium (2040), and long term (2050), with a particular focus on specific workforce groups.
- Investigate the broader socioeconomic effects of CCAM, considering how automation may reshape labour markets and workforce dynamics.

6.3.2 WP overall methodology

WP3 will employ a comprehensive, mixed-method approach to assess the direct and indirect impacts of CCAM deployment on professions and employment across the value chain. The research will begin with extensive desk research, reviewing existing literature, policy documents, and prior studies, including insights from the CCAM Partnership's SRIA. To complement this, stakeholder engagement will play a central role, involving workshops, structured interviews, and focus groups with industry representatives, labour unions, policymakers, and academia. These interactions will provide qualitative insights into workforce transitions, emerging skill demands, and employment challenges linked to CCAM adoption.

To quantify future employment trends, forecasting methodologies will be applied, modelling workforce transformations under different CCAM deployment scenarios (2030, 2040, 2050). Additionally, a stakeholder-focused cost-benefit analysis (CBA) will evaluate aggregated impacts on job creation, reskilling needs, and socioeconomic factors. All findings will contribute to a structured understanding of how CCAM will reshape employment, guiding policy recommendations and workforce adaptation strategies.

6.3.3 Methodology on Task level

T3.1: Professions and jobs related to the entire CCAM value chain – ZLC [M1-M12]

Task 3.1 aims to identify and analyse the various professions and job types impacted by the deployment of CCAM across the entire value chain. To achieve this, the task objectives are :

- Mapping existing and emerging job roles related to CCAM.
- Developing a comprehensive taxonomy of affected/emerging jobs, including required skills and competencies..
- Aligning the taxonomy with different levels of automation and corresponding training requirements.

For this, there will be considered a wide range of professions related to the manufacturing, operation, connected services, and decommissioning of autonomous vehicles, including software, hardware, and support. This includes roles for blue-collar, white-collar, and mixed-collar workers in scenarios involving the transportation and mobility of people, goods, and hybrid situations. The different roles and responsibilities involved in providing a complete service together with the corresponding skill requirements will be considered.

During the first phase (M1-M6), desk research will be conducted. Specifically :

- i. In-depth analysis of relevant projects, studies and initiatives. A preliminary list of key projects and initiatives to be analyzed has been identified and will be updated as the task progresses (M1 and M12):
 - [SKILLFUL project](#)
 - [Research Study on the social dimension of the transition to automation and digitalisation in transport, focusing on the labour force](#)
 - [FAME](#)
 - [PAsCAL](#)
 - [WeTransform](#)
 - [Drive2theFuture](#)
 - [SHOW](#)
 - [Augmented CCAM](#)
 - [Study on exploring the possible employment implications of connected and automated driving](#)
 - The Open-Social Innovation Challenge, [funded by the German Federal Ministry of Education and Research](#)
 - [National Digital Education Space & Platform](#) by The Federal Government of Germany
 - [Drive Sweden](#)
 - [UPSKILL- Skills and Labour Markets in the Digital and Green Transition](#)
 - [IN2CCAM](#)
 - [AVENUE](#)
 - [SkillUP](#)
- ii. Comprehensive literature review of key reports such as the [European Skills Agenda](#) and the [Future of Jobs Report 2023](#), as well as an analysis of over 20 scientific publications.
- iii. Content analysis of relevant job advertisements (e.g., LinkedIn, EURES) and other relevant sources will be performed to capture real-world trends in emerging CCAM-related roles.

In the second phase (M7-M10), the task will focus on developing a structured taxonomy of affected and emerging jobs along with the required skills and competencies. This taxonomy will be aligned with different levels of automation and the corresponding training needs, leveraging insights from the *Drive2theFuture* project and the [ESCO classification](#) to ensure consistency with existing European frameworks. Additionally, stakeholders will be engaged through targeted consultations during this task, to ensure a comprehensive perspective on the evolving job landscape and skills needs.

ZLC will lead T3.1 with the support of CERTH, leveraging its expertise from related to RESKILLING projects, and POLIS that will facilitate the consultations with the stakeholders. UITP, 3HUB and EUROPCAR will represent the industry/end users sectors, contributing to the validation and review of task outcomes to ensure practical relevance and applicability.

T3.2: Employment effects of CCAM – ECORYS [M3-M18]

The objective of Task 3.2 is to examine the direct and indirect impacts of CCAM deployment on various professions and job types across the entire CCAM value chain, as defined in Task 2.1, encompassing both mobile and non-mobile jobs. The analysis will address impacts on both existing professions and emerging job roles resulting from CCAM innovations.

The assessment will cover short-term (2026-2030), medium-term (2030-2040), and long-term (2040-2050) horizons, updating the timeframe used in the “employment implications of connected and automated driving” study [Smit, et al, 2021]. The task will adopt a research gap analysis approach from Month 3 to Month 8 to define its scope and objectives. This analysis will identify underexplored areas and ensure that RESKILLING complements rather than duplicates existing studies. Upon identifying gaps, qualitative and quantitative assessments—including forecasting models and scenario analysis—will generate insights into CCAM-related employment impacts.

Given the extensive body of R&I projects and policy studies that have already assessed CCAM-related employment effects, RESKILLING will prioritise filling knowledge gaps rather than replicating previous analyses. Innovations in CCAM solutions, along with shifts in adoption timelines, may necessitate updating previous assumptions. The research gap analysis will guide the selection of areas requiring further investigation.

A dedicated kick-off meeting in Month 3 or Month 4 will gather all partners contributing to Task 3.2. The meeting will serve to:

- Define relevant research questions aligned with the task's objectives and scope.
- Capitalize on partners' prior experience in CCAM employment studies, particularly referencing the *Study on the social dimension of the transition to automation and digitalisation in transport, focusing on the labour force* [EC, 2021] and other relevant sources to establish an inventory of existing research.

The inventory of employment effects will support distinguishing between quantified employment effects and those assessed qualitatively. Some quantified effects may need to be updated, particularly where CCAM adoption timelines have shifted.

A skills matrix will be developed to support the research gap analysis, mapping different penetration levels of CCAM solutions against the range of affected professions and job types identified in Task 3.1. This matrix will provide a structured visual representation of the areas requiring further study.

From Month 9 onwards, the project will apply forecasting models and scenario analysis to quantify employment effects for underexplored or outdated areas, focusing on how job markets might evolve with varying degrees of CCAM penetration, providing estimates on the number of jobs that may be created, transformed, or lost. Scenario analysis will then explore different potential futures, linking these projections to specific job types and skills required within the CCAM value chain. This analysis will feed directly into the skills matrix, helping to visually map out the expected employment effects across different professions and job types, with a focus on both existing and emerging roles.

The methodological approach will be refined and finalised following the completion of the research gap analysis and employment effects inventory in Month 8. Two co-creation workshops will be organised in Month 9 and Month 17, respectively, involving at least 20 experts representing the relevant RESKILLING stakeholder groups. These workshops will also link affected and new jobs to the Business Models of WP4.

Ecorys will assume the lead role in Task 3.2, with the active support of CERTH and ZLC, drawing on a wide range of resources, including the findings of the 2020 DG RTD Study on the anticipated employment impacts of connected and automated driving, as well as insights from R&I projects, such as SKILLFUL. The collaborative effort will capitalise on the collective expertise of the partners, particularly their experience in previous R&I projects and policy studies. All partners contributing to this sub-task will actively participate in the kick-off meeting for Task 3.2, with the aim of aligning their contributions with the objectives defined during the meeting. Following the kick-off, partners will provide input in accordance with the agreed work plan, leveraging their accumulated knowledge and lessons learned from prior involvement in relevant projects and studies.

T3.3: Effects of CCAM on special workforce groups – CERTH [M3-M18]

Task 3.3 aims to complement the work of Task 3.2 by conducting an in-depth analysis of specific workforce groups and their needs related to re-skilling, re-employment, competitive advantages and disadvantages, and employment opportunities and risks associated with CCAM.

Building upon the preliminary identification of relevant workforce groups (M3-4), as outlined below, this task will refine the final list of target groups while identifying their specific needs, challenges, and opportunities related to CCAM integration. The following workforce groups have been initially identified as particularly relevant for this analysis:

- Women

- Older workers (those within 10 years of retirement)
- Young individuals entering the labour market
- IT-illiterate workers
- Immigrants
- Workers with disabilities
- Workers at risk of social exclusion (e.g., single parents, individuals from large families, low-income groups, and those from remote and/or rural areas)

To systematically assess the needs, opportunities and obstacles for and with these groups, the following actions will be undertaken:

1. Comprehensive Literature Review (M4-10): A review of at least 10 key reports will be conducted, covering workforce transitions, re-skilling programs, and employment policies relevant to CCAM. The analysis will incorporate EU-level studies, national strategies, and sector-specific white papers to ensure a well-rounded perspective on challenges and best practices.
2. Stakeholder Interviews (M10-15):
 - At least 20 interviews with CCAM-related job providers, including employers, industry leaders, and HR professionals, to gain insights into hiring trends, skill demands, and employment barriers.
 - At least 20 interviews with representatives from affected workforce groups, ensuring diversity across demographics, sectors, and geographical locations.
 - Semi-structured interviews will be conducted to maintain comparability across responses while allowing flexibility.
 - Participation of key stakeholders, such as representatives from the European Disability Forum, the European Ageing Network, the AGE Platform, and the European Youth Forum, will be ensured.
3. Stakeholder Validation Workshop (M17): The findings from the literature review and interviews will be presented and discussed in a dedicated workshop (M17). This event will be organised in conjunction with the co-creation workshop of Task 3.2 to facilitate stakeholder engagement, gather feedback, and validate or refine the outcomes.

CERTH will lead Task 3.3, with ZLC providing support as the overall coordinator of WP3 and ECORYS leading Task 3.2. This collaborative framework will ensure that insights and findings from all WP3 tasks are systematically synthesized and integrated into the assessment of CCAM-related impacts on specialized workforce groups. Furthermore, TSI and Europcar will contribute critical expertise in bridging research and industry perspectives, ensuring that the diverse needs, challenges, and priorities of these specialised workforce groups are effectively identified and addressed.

T3.4: Socio-economic effects of CCAM – VUB [M12-M30]

Building on the outcomes of previous WP3 tasks, this task will investigate the socio-economic impacts of CCAM across the entire value chain, encompassing all affected stakeholders and worker groups as defined in T2.1 and T3.1. Different penetration levels of mobility solutions with automation levels 3-5 will be considered, examining various passenger and goods transportation operations and services.

The characteristics of the affected jobs will be analysed and linked to a stakeholder focused cost-benefit analysis (CBA) at an aggregated level. The CBA will assess the economic viability of implementing different CCAM services, using economic evaluation methods, such as Internal Rate of Return (IRR), discounted payback period and Net Present Value (NPV). In a next instance, the benefits need to be quantified and monetised. This task will develop cost benefit analyses from a multi-stakeholder perspective, recognising that the costs and benefits of CCAM deployment differ across actors, e.g. cost-savings from the mobility service provider point of view can at the same time decrease service quality from a passenger point of view. Therefore, the analysis will systematically evaluate trade-offs and synergies among different stakeholders to provide a balanced assessment of CCAM implementation's broader economic and societal implications.

In first instance, the stakeholder and worker groups as defined in WP2, will be mapped to costs related to different mobility solutions. Different scenarios of mobility solutions will be considered, based on the business models and schemes resulting from T4.1. For each scenario, a comprehensive list of costs and benefits will be compiled for all stakeholders, based on objective data and literature review, that will be verified by the stakeholder groups in a first survey. Following this, a preliminary analysis will be conducted and the stakeholders will be consulted again for validation and consensus building in a follow-up workshop. In summary, stakeholders will be engaged throughout the whole CBA process for the collection of specific economic data, verify and validate findings, or build consensus on future steps.

Through the CBA specific KPIs from T5.1 will be referenced, enabling a quantification of expected changes and projections across short-, medium-, and long-term horizons. The consultations and meetings will be coordinated alongside those outlined in WP3, T4.1, and T4.2.

VUB will lead this work package, with substantial support from CERTH and the Technical & Innovation Manager, VTI. POLIS will play a key role in facilitating stakeholder involvement, ensuring the integration of diverse perspectives. ZLC, as the leader of WP3, will provide overarching support, while CTL will contribute to the development of the methodology as the impact assessment leader. ECORYS will supply input from Task 3.2, validating the perspectives from an industrial standpoint. Additionally, TSI will represent the insights of public institutions, reinforcing the geographical balance across Europe and broadening the scope of the analysis.

T3.5 RESKILLING Use Cases – CERTH [M12-M18]

Within this task, the final use cases (UCs) of the project will be defined, serving as a framework for data collection, in-depth analysis, and the implementation of Case Studies in Task 4.4. These use cases will focus on individuals and groups directly or indirectly affected by the provision of CCAM services and related operations. They will build upon and refine the preliminary UCs already identified (in relation to the preliminarily case studies described in the RESKILLING proposal), integrating insights from all other WP3 tasks to ensure a comprehensive and evidence-based approach.

Starting from the defined UCs, this task will also map different stakeholder needs and priorities, ensuring that the use cases capture diverse perspectives and address potential gaps. This process will provide a holistic understanding of how CCAM services impact various user groups, including operators, end-users, and supporting entities.

The final UCs will be developed in a stepwise, user-system interaction approach, detailing:

- All relevant conditions and operational constraints.
- Functional success criteria and performance targets.
- Key requirements and restrictions from both a user and system perspective.

These requirements will then be translated into a structured methodology for data collection and analysis, ultimately guiding the implementation of Case Studies in Task 4.4.

CERTH will lead Task 3.5, with the support of VTI, which serves as the Technical Manager and is also responsible for organising one of the project's Case Studies, as outlined in the preliminary case study framework. Additionally, Beceptum will play a key role in this task, leveraging its expertise as the leader of the Case Studies task, ensuring that use cases are practical and aligned with real-world CCAM deployment scenarios. Further contributions will come from FEHRL and Europcar, both of which are expected to actively participate in the implementation of Case Studies, providing sector-specific knowledge and industry perspectives. Lastly, VDI/VDE will also be engaged in this task, serving as a critical link to WP4, facilitating the integration of Task 3.5 findings into the broader framework of skills development, workforce adaptation, and innovative business models within the CCAM ecosystem.



6.3.4 Interrelations to other WPs and Activities

WP3 plays a pivotal role in bridging insights from stakeholder mapping (WP2) with training development (WP4) and impact assessment activities (WP5). Specifically, findings from stakeholder consultations in Task 2.1 will inform the job-mapping process and the analysis of employment and socio-economic impacts conducted within WP3. In turn, WP3 will supply critical input to WP4 for the development of training profiles, (re)skilling journeys, and tailored training modules. Moreover, WP3 will contribute socio-economic data and use case outcomes to WP5, supporting the comprehensive impact assessment of CCAM deployment.

6.3.5 Expected outcomes

Table 8: WP3 Deliverables

Deliverable	Deliverable Title	Lead Beneficiary	GA Date (Month)	Due	Short Description	Success Criteria	Related tasks
D3.1	Professions & jobs related to the entire CCAM services value chain	ZLC	12		This report will present a thorough analysis of the jobs impacted by CCAM deployment and the emerging roles anticipated in the future. It will also provide an in-depth assessment of the skills associated with both existing and new job profiles, offering valuable insights into the evolving workforce landscape within the CCAM ecosystem.	Taxonomy of affected/emerging jobs and skills requirements	T3.1
D3.2	RESKILLING Use Cases definition	CERTH	17		Definition and analysis of the Use Cases that will serve as a guide for the project's case studies.	Definition and analysis of at least 6 Use Cases.	T3.5
D3.3	Short, medium and long-term employment effects of CCAM	ECORYS	18		This report will provide a comprehensive analysis of both the direct and indirect impacts of CCAM deployment on various professions and job types across the	Identification of CCAM-related employment effects and skills matrix provision.	T3.2 and T3.3

Deliverable	Deliverable Title	Lead Beneficiary	GA Date (Month)	Due	Short Description	Success Criteria	Related tasks
					entire CCAM value chain. It will also address the specific effects on specialized workforce groups.		
D3.4	Short, medium and long-term socioeconomic effects of CCAM	VUB	30		This report will present a thorough analysis of the socioeconomic impacts of CCAM across the entire value chain, taking into account all affected stakeholders and worker groups. It will also assess the varying effects at different penetration levels of mobility solutions, particularly those with automation levels 3-5.	Impact assessment of CCAM across the entire value chain.	T3.4

6.4 WP4: Towards job creation, growth and innovation – VDI/VDE [M6 – M36]

6.4.1 WP Objective(s)

Building on the findings produced in WP3 and in previous projects and studies on CCAM, the main objectives of this work package are to enable existing businesses and workers already employed in road-based passenger and freight transport to mitigate negative effects and make use of opportunities provided by CCAM deployment through business model *innovation* and (re)skilling. In addition, CCAM-related innovation and disruption in the mobility sector can lead to the creation of new businesses and start-ups, thereby generating jobs. These emerging business and related employment opportunities will also be addressed by supporting business model development. The tasks subsumed under work package 4 also aim to contribute to the creation of decent jobs and to sustainable employment growth along the CCAM value chain by supporting skill formation that meets the demands of different professional groups. Additionally, the replication and multimodal transferability of major WP4 outputs will be facilitated through dedicated activities. Stakeholders of different categories benefit from networking opportunities and knowledge transfer opportunities offered in this WP. In this context, WP4 will create room, and improve stakeholders' capacity for social innovation.

6.4.2 WP overall methodology

WP4 adheres to RESKILLING's commitment on stakeholder involvement and co-creation based on the stakeholder involvement methodology (T2.2). It puts participation, capacity-building and knowledge exchange in front and center by hosting workshops and implementing a series of labs and case studies that involve stakeholders and co-creates services in the form of consultancy and toolkits for business model development, training modules and a CCAM Employment & Skills Observatory. All tasks in WP4 employ qualitative methods, primarily structured literature review based on categories derived from the objectives of each task and semi-structured interviews with stakeholders.

6.4.3 Methodology on Task level

T4.1: Business models & schemes for CCAM innovation and jobs promotion – Bax [M6 – M32]

This task is driven by:

- the evaluation of business model opportunities arising from CCAM deployment, particularly for SMEs and Start-ups,
- the compilation of a needs analysis concerning business model adaptation and innovation in the context of (preparedness for) CCAM deployment and
- a literature review to identify good practice regarding business model development and adaptation in the face of (disruptive) innovation in the areas of technology, services and regulation.

The methodology will follow a three step approach:

1. **Scientific Literature Review.** The task will begin with an extensive literature review focused on business model adaptation and innovation in the context of CCAM deployment. This review will:

- Examine existing CCAM business models with a particular emphasis on SMEs and start-ups.
- Identify best practices from various industries regarding business model development and adaptation in response to disruptive technological, service, and regulatory innovations.

- Assess prior research on social entrepreneurship and incentive structures for socially innovative business models.

2. Needs Analysis and Stakeholder Engagement. To ensure the relevance and applicability of the findings, a structured stakeholder engagement process will be conducted (in cooperation with WP2), including:

- Stakeholder Interviews: A minimum of 60 key stakeholders, including representatives from SMEs, start-ups, industry leaders, policymakers, and academia, will be interviewed. These interviews will help in identifying key business model challenges and opportunities in the CCAM landscape.
- Workshops: A workshop with at least 30 participants will be organised to gather collective insights, discuss findings from the literature review, and validate emerging business model frameworks.
- Collaboration with the Stakeholder Advisory Board (T2.2): The insights from stakeholders will be cross-referenced with feedback from the advisory board to ensure alignment with industry needs.

3. Business Model Innovation and Adaptation Framework. Based on the literature review and stakeholder insights, a comprehensive analysis will be conducted to identify business model opportunities and innovation requirements. This will involve:

- Creating a matrix of business model opportunities in relation to CCAM deployment, categorising them by market segments, technological readiness levels, and regulatory frameworks.
- Identifying innovative approaches to business model adaptation in response to evolving CCAM developments, including regulatory shifts and technological advancements.
- Exploring new incentive mechanisms to foster social entrepreneurship and socially innovative business models.

The ultimate goal is to develop a **business model toolkit** for future CCAM services, whose form and function will be shaped by research into stakeholders' needs. The toolkit will be derived from the matrix of business model opportunities and the need for business model innovation in relation to CCAM deployment. It will include:

- Static Elements such as business model canvases, policy recommendations, and structured guidelines.
- Dynamic Elements, such as coaching services, interactive workshops, and online learning modules (nuggets) designed to support business model adaptation.

The toolkit will be validated in real-world case studies to assess its effectiveness in helping SMEs and start-ups navigate CCAM-related business model challenges with case studies (T4.4).

Task 4.1 will be led by Bax and supported by CERTH that will be involved as the main use cases coordinator in the link with business models, while Beceptum will be responsible for link with the case studies. VDI/VDE-IT will coordinate WP4 and oversee scenario development. VUB will ensure alignment between business models and guidelines and policy recommendations. ZLC will focus on integrating training curricula and schemes. FEHRL will align with CCAM partnership and relevant initiatives. CTL will oversee impact evaluation, while ECORYS will assess employment effects and align with business models. 3DHUB and EUROPCAR will provide the industry's perspective.

T4.2: Matching innovative mobility systems with human capital development and social innovation – VDI/VDE [M6 – M32]

This task is geared at infusing social innovation into the development of training and (re-)skilling futures, in order to align the CCAM innovation system with societal needs and preferences as detected by the analyses of effects of CCAM deployment undertaken in WP3. To achieve this aim, Task 4.2 is organised along three core activities.

Firstly, a literature review and at least 20 semi-structured interviews will be used to identify and validate good practice examples which give an indication on how technological innovation can be successfully coupled with social innovation and skill development.

Analytic categories for the structured review will be derived from the main research questions of T 3.2, 3.3 and 3.4. In order to match insights from the good practices with knowledge about the socio-economic and employment effects of CCAM, the literature analysis will focus on the societal impact of the examples (based on the Input - Output - Outcome - Impact (IOOI)-scheme) and especially the socio-economic and employment effects seen in these examples. In addition to the impact itself, the analysis will also focus on how the impact was perceived by relevant stakeholders and whether effects were intentional or unintentional. Interviews are conducted in order to discuss in more depth the good practice examples identified through the literature review and to match them with challenges and opportunities arising from socio-economic and employment effects of CCAM deployment (T3.2, 3.3 and 3.4). Interview partners are chosen from the stakeholder map (T2.1) and from the context of the good practice examples such as project managers or other involved parties. Where appropriate, the scheduling of interviews will be closely coordinated particularly with Task 4.1 and Task 3.2 to avoid duplication of efforts and stakeholder fatigue. In any case, findings are scrutinised for relevant findings on the potential for or examples of innovative business models and social entrepreneurship, that will feed into Task 4.1. All partners involved in Task 4.2 will also be asked to give their feedback on the guiding questions for the interviews and on the selection criteria for good practice examples.

Secondly, up to eight (Re)skilling Journeys are developed as digested results from T3.1, 3.2, 3.3 and 3.4. Each (Re)skilling Journey represents a prototypical learner (persona) and outlines potential learning pathways towards selected job or professional profiles in the CCAM value chain (as elaborated in T 3.1). Taking into account the insights gained in T3.2 and T3.3, personas will cover different ages, genders, blue/white/mixed collar professions and jobs, special workforce groups, vocational and academic learning backgrounds. Personas are commonly embedded in a story that also represents learners' goals as well as preferences and expectations. The selection of relevant profiles for the personas will be done collaboratively with partners involved in this task (CERTH, ZLC, VUB, VTI and ECORYS). These partners will also be involved in feedback loops during the iterative development of the (Re)Skilling Journeys. In this context, insights from the implementation of the case studies in T4.4 will also be infused into the (Re)Skilling Journeys. They will provide additional input for the development of CCAM-related schemes, curricula and training modules (T4.3) and input for the co-creation labs (see below). The Journeys will be made available by Month 28 through the RESKILLING website and/or the RESKILLING Inventory (T6.3).

Thirdly, a preliminary mission for a social skills ecosystem that is shared by relevant stakeholders ("Quadruple Helix") will be developed, including policy recommendations for (re-)skilling vis-a-vis CCAM deployment and ideas for innovative forms of teaching, learning and work practices. To this end, three interdependent co-creation labs will be realised. The participant group will remain consistent across all three labs. This continuity is intended to foster collaboration, facilitate knowledge exchange, and gradually build a strong horizontal network by Month 24. The labs represent a participatory process and a capacity-based approach to building futures. Accordingly, the goal of the labs is to:

- equip stakeholders with the capacity to act upon (re)skilling demands posed by CCAM deployment and to shape CCAM induced innovations so that they are socially innovative;
- strengthen or build a network between and increase readiness of different categories of stakeholders for CCAM deployment;
- create an appreciation for change that leads to a higher degree of comfort with uncertainty and disruptive innovation;
- make tacit knowledge explicit;
- stimulate creativity.

The first co-creation lab is scheduled to take place around Month 15. In preparation for shaping a shared mission for a CCAM innovation system, the second lab will introduce participants to the social skill ecosystem model as a heuristic tool for envisioning diverse future scenarios of CCAM deployment. This approach aims to encourage participants to critically reassess their perceptions, identify potential blind spots, and refine their understanding of (re)skilling needs within the evolving CCAM landscape.

The social skill ecosystem (SSE) model, as applied in this context, is a place-based approach to (re)skilling that fosters economic, civic and educational participation, facilitates horizontal cooperation and vertical integration and connects the worlds of living, working and learning.

The second lab will take place around Month 21 and is supposed to raise awareness about socio-economic/employment effects of CCAM deployment in the short-, medium- and long-term. Participants will be invited to review and give feedback regarding the (Re)skilling Journeys and good practice examples: How can participants relate to the personas and what would they like to add/change? Which inspiration do participants take from the good practice examples for social innovation in the face of technological innovation?

The goals of the third lab around Month 27 are to develop a shared mission for a CCAM-related social skill ecosystem as well as three different future scenarios for the missions' implementation in which stakeholders also define their (future) role.

At this stage insights gained through the case studies (T4.4) will be presented to the participants to take them into account for scenario building. Moreover, participants will be supported in the definition of a dissemination strategy for the mission and the formulation of (policy) recommendations and guiding principles for the CCAM innovation system.

After each lab, the implementation will be reflected with the partners involved in T4.2. Participants are also encouraged to provide feedback at the end of each session. This allows for iterative optimization of the lab format. A report on the preliminary mission and the process leading up to it will be shared through the RESKILLING Inventory by Month 32.

While T4.2 is led by VDI/VDE-IT, the collaboration with the partners involved in this task is essential. All partners represent a resounding board regarding the selection of participants for the co-creation labs, and for reflecting on the results reached in each session and how they should feed into the next lab session, into other tasks and ultimately, the deliverable of T4.2. All partners' expertise is also drawn upon in the process of choosing a final set of good practice examples from a preselection undertaken by the task leader. Partners CERTH, ZLC, VUB, VTI and ECORYS are particularly important for the development of the (re)skilling journeys and the respective personas. In addition, coordination with partner Bax will take place on an ad-hoc basis whenever insights are gained in T4.2 concerning business model development.

T4.3: Training modules for updated and enhanced CCAM-specific professional skills – ZLC [M9 – M32]

This task builds upon the (re)training requirements identified in T3.1, also considering the needs of specific workforce groups of (T3.3), together with the training profiles outlined in T4.2. Main outputs will be the prioritisation and development of at least ten curricula (five focusing on retention and five on new job roles). At least three of them will be fully developed and evaluated in RESKILLING Case Studies (T4.4).

The insights and findings from related projects, such as SKILLFUL, Drive2theFuture, and SHOW, will be thoroughly examined to build upon existing knowledge and push beyond the current state of the art. This analysis will help identify gaps, best practices, and innovative approaches, ensuring that the RESKILLING project delivers novel contributions to the evolving landscape of CCAM workforce development.

The methodology will follow a structured approach, described below, to ensure the effective development and prioritisation of (re)training schemes, curricula, and training modules while fostering collaboration with existing initiatives:

- 1. Prioritised (Re)training Schemes:** a prioritized list of at least 20 (re)training schemes will be developed using the Analytic Hierarchy Process (AHP). This method enables the ranking of training schemes by comparing them pairwise in terms of their impact on an overall goal, incorporating input from both project partners and stakeholders via workshops and structured surveys.

2. **Training Curricula:** From these prioritised (re)training schemes, RESKILLING will select at least 5 curricula for retaining existing jobs and at least 5 curricula for new/emerging jobs for further development. The selection will be done i) avoiding overlapping with curricula and training schemes already developed within the SKILLFUL, SHOW and Drive2theFuture projects, ensuring diversity across mobility professionals, educational levels (university, vocational), and transport sectors (passenger and freight).

Key target groups include public and private mobility operators, authorities, service providers (MaaS, DRT, e-commerce), safety drivers (onboard and remote), and added-value service providers (e.g., escorts for children and persons with disabilities).

3. **Comprehensive Training Modules:** At least three of the above curricula will be selected for full development and testing in RESKILLING Case Studies, with content finalized by Month 20 to meet milestone MS20. After the assessment, feedback will be implemented so courses are optimised. The modules will be aligned with recognised frameworks such as the ESCO classification, the European Entrepreneurship Competence Framework (EntreComp), and the Pact of Skills.
4. **Creation of connections:** Connections will be established with the CCAM Knowledge Base developed within the Fame EU project and the EU Common Evaluation Methodology developed in the project funded under the topic HORIZON-CL5-2024-D6-01-05.

ZLC will take the lead in this task, ensuring seamless integration with the outputs from WP3, particularly T3.1. CERTH will contribute valuable input and feedback, with a specific focus on addressing the needs of special workforces as outlined in T3.3. VDI/VDE-IT will contribute as the leader of the entire work package and will also oversee the connection to T4.2. Academic partners VUB, TSI, and CTL will support ZLC by providing their research expertise. Additionally, UITP and IRF will represent end-user perspectives, ensuring that the task's outcomes align with the practical needs of stakeholders.

T4.4: Case studies – Beceptum [M18 – M30]

Task 4.4 includes the composition, implementation and evaluation of case studies based on the use cases deriving from T3.5. The aim is to conduct at least six case studies, that are representative for project outcomes so far and mobility areas and scope. Task 4.4 needs to ensure to generate practical evidence and data and to provide evaluations for excellent project results and recommendations.

In order to achieve aims, objectives and final deliverables, task 4.4 follows a four-step approach with several applied methodologies.

- 1) **Longlisting and selection of case studies:** Case study long list will be compiled by sourcing from T3.5 defined use cases. In order to down-select to at least six case studies, a short list will be generated based on a) selection and prioritisation criteria to be defined, b) description and design outlines for relevant potential case studies and c) a feasibility and expected effectiveness assessment with respective implementation and execution partners. Step one will be concluded with a respective selection documentation. Partner involvement is provided by different measures in preparation and conduction of step 1. WP3 elaborations will be closely tracked following a monitoring approach / scouting principle and supported by respective partner alignments. Long-list candidates will be either ideated or suggested and aligned with the partners. Selection assessments will be conducted together with the partners and final short list and down select assessed and aligned.
- 2) **Case study design:** For the selected case studies an initial concept will be composed. Building on a template / strawman per case study, conceptual elements will be pre-filled and further developed with the respective case study owner. The case study concept template foresees scope, timeline and subject descriptions, high level process charts, delivery model outlines, roles and responsibilities amongst involved partners, functional and technical staffing information and

customer specification as well as data model and data evaluation concept. Further design steps include required tools, case study prerequisites and instructions. Case study design is concluded with an implementation and execution plan. Step 2 will deliver at least six case study concept documentations. Partner involvement is driven by collaborative case study concept design activities and alignments.

- 3) **Case study execution:** In the execution phase each case study needs to start with the implementation of the case study environment. Case study environments might range from physical implementations, simulation environments, staff briefings, production of interview and feedback schemes to tool configurations and dummy preparations. After implementation, case studies will be executed according to plan, timelines, and concepts, accompanied with ongoing data gathering, data quality assurance and data analysis pilots. Step 3 closes with executed and documented case studies. Partners are involved in terms of case study implementation efforts, case study execution and ongoing quality monitoring.
- 4) **Results evaluation:** In the final phase lessons learned, case study observations and findings as well as gathered data will be analysed. Analysis results are going to be brought in context and assessed against the predefined evaluation criteria. Finally results will be evaluated in terms of impact, effectiveness, execution success and implications in regards to final projects deliverables, i.e. recommendations for guidelines, policies and RESKILLING roadmap. Step 4 and thus WP closes by delivering case study evaluation documentations. Case study execution partners are fully involved in result evaluation and documentation activities above, WP3 partners will interface in terms of result alignment and injection to final project deliverables.

The partner involvement outlined above is conducted, but not limited to the consortium partners CERTH, VTI, VDI/VDE-IT, UITP, ZLC, FEHRL, DBL, CTL, TSI, EUROPCAR, while the task is lead by Beceptum.

T4.5: CCAM Employment & Skills Observatory - CERTH [M6 – M36]

Within this task, an online observatory will be developed to provide comprehensive and dynamic insights to diverse users and stakeholder groups regarding both jobs impacted by CCAM and the new skills and emerging job roles identified in the project. The observatory will serve as a central knowledge repository, aggregating data from multiple sources with a particular emphasis on the project's findings. Unlike generic information platforms, it will be designed to deliver personalised insights tailored to stakeholders' specific needs, preferences, and priorities.

To achieve these objectives, the following steps will be undertaken:

- **User-Centered Data Collection & Feedback Loop:** Starting from the beginning of this task (Month 6), continuous engagement with observatory users will be established to identify areas of interest, specific needs, and information gaps that should be addressed. Additionally, preferences regarding data presentation and usability will be gathered to ensure an intuitive and effective user experience. To ensure the observatory remains relevant and user-centric, a continuous feedback mechanism will be implemented throughout Months 18-36. This will enable users to share their satisfaction levels and usability experiences with the observatory, and to suggest specific improvements. Additionally, insights gathered from the RESKILLING Case Studies will be incorporated, ensuring that the platform evolves based on real-world applications, stakeholder needs, and emerging trends in CCAM-related employment and skills development.
- **AI-Powered Search & Advanced Data Integration:** A state-of-the-art AI-powered search engine will be developed, offering advanced search capabilities that enable users to filter information based on keywords, predefined categories, and thematic relevance. The observatory will also incorporate an ontology framework, aligning with established taxonomies such as ESCO, existing employment-related databases (e.g., the FAME project knowledge base, which will be enhanced with CCAM employment aspects), and potentially other external data sources to broaden its applicability and relevance.

Internally, the observatory will be closely linked with:

- The RESKILLING Inventory (T6.3) – ensuring that findings on skills development and workforce needs are systematically incorporated.
- Stakeholder Typologies (T2.1) – ensuring that insights and services are tailored to the needs of specific user groups identified within the project.

CERTH will lead this task, ensuring the development, maintenance, and continuous update of the RESKILLING Observatory as a dynamic platform for workforce monitoring in the CCAM ecosystem. POLIS and ECTRI will support dissemination, stakeholder engagement, and structured feedback collection, while ZLC and VDI/VDE will ensure alignment with WP3 and WP4 outcomes. Bax will contribute to integrating the Business Models Toolkit, enhancing the Observatory's role in workforce adaptation strategies. Additionally, LIST will connect the Observatory with the RESKILLING Inventory (T6.3), while Europcar will provide industry insights also from case studies. 3DHUB will offer expertise on additive manufacturing-related professions and skills, broadening the Observatory's scope to emerging job roles and technological advancements.

T4.6 - Multi-layered replication & multimodal transferability - EURNEX [M24 – M36]

The methodology for conducting the activities in this task in Months 24-36 is grounded in research and significantly leverages the consortium's expertise and the work undertaken in the project's earlier phases. This task is dedicated to exploring the potential for replicating and transferring RESKILLING outcomes, focusing on the Business Model toolkit (T4.1), training profiles (T4.2), and training modules (T4.3) developed for CCAM in the context of road transport to various CCAM deployment sites, regions, and other modes of transportation, including rail, aviation, and maritime. To achieve this, we will establish a **Replication and Transferability Incubator**, which will focus on examining both commonalities and distinctive features among different deployment sites and transportation modes, in close cooperation with T5.2. To achieve the desired objectives and Deliverable 4.8: Multi-layered replication and multimodal transferability (in the form of a report) in Month 36, particular emphasis will be placed on the following five subtasks:

- **Subtask 1: Data Compilation** – compiles and analyses the key characteristics, challenges, and skill requirements of rail, aviation, and maritime transport. A review of the literature and industry reports will highlight unique attributes, challenges, and essential skills related to these transport modes.
- **Subtask 2: Evaluation of the Transferability of Reskilling Solutions** - assesses the feasibility of adapting reskilling solutions for various deployment sites and investigates options for multimodal transport. This subtask aims to adapt the project's effective reskilling practices to different transport modes while identifying the key factors affecting their successful implementation. The consortium's expertise will be used by focusing on the use cases from T3.5 and the case studies from T4.4 to identify effective and possible transfer reskilling solutions.
- **Subtask 3: Identification of Core Competencies**— identifies the core competencies that can be applied across various sites and modes. To begin with, we will use skills databases such as the Skills Matrix (T3.2) to identify key competencies. Then, we will conduct a thorough analysis of the skills database to identify competencies that are transferable across different transport modes.
- **Subtask 4: Stakeholder Engagement** - engage with key stakeholders from various sites, including rail, aviation, maritime, and CCAM domains. These stakeholders include industry professionals, policymakers, training providers, and relevant associations from the community defined in WP2.
- **Subtask 5: Addressing Industry Perspectives** - recognises industry-specific perspectives on skill requirements, regulatory considerations, and integration barriers within the rail, aviation, maritime, and CCAM domains. This involves understanding the unique needs and industry challenges to develop effective reskilling solutions.

The results of each subtask will be gathered in the Replication & Transferability Incubator. The Incubator will continue to operate beyond the project's duration as an integral part of the CCAM Employment & Skills Observatory (T4.5). It will centralise all gathered knowledge, making it accessible to consortium members and stakeholders, thus facilitating continuous learning and adaptation of reskilling solutions.

This task is led by EURNEX, with TSI, CERTH, and DBL responsible for evaluating common reskilling solutions applicable to the modes and sites analysed in T4.4 under Subtask 2. The assessment will focus on identifying scalable and adaptable reskilling strategies to enhance workforce adaptability across various transport modes. In Subtask 3, CERTH, Bax, TSI, and DBL will collaborate to identify transferable core competencies that are critical for workforce mobility and cross-sectoral employability. This joint effort will leverage interdisciplinary expertise to develop a comprehensive framework for competency transferability, supporting the broader objectives of the project.

6.4.4 Interrelations to other WPs and Activities

Work Package 4 is closely linked with several other work packages and related tasks, ensuring a comprehensive and integrated approach. In particular, WP4 relies on WP2 for stakeholder involvement, as tasks such as interviews, workshops (T4.1, T4.2), training module development (T4.3), and case study implementation (T4.4) require effective engagement. The stakeholder mapping exercise (T2.1) and engagement methodology (T2.2) are therefore crucial prerequisites for WP4's successful execution. Similarly, WP3 provides essential insights through its analyses of CCAM deployment effects (T3.1–T3.4), which serve as a foundation for developing (re)skilling journeys in T4.2 and informing social innovation in the CCAM (re)skilling ecosystem. Additionally, T3.5 lays the groundwork for case studies in T4.4, while findings from WP3 serve as key data sources for the CCAM Employment & Skills Observatory (T4.5), supporting projections and tracking labor market demands.

WP4 also contributes to WP5 by providing valuable inputs on business model development, CCAM skill ecosystem scenarios, training modules, and multimodal transferability insights, all of which will inform the Guidelines and Policy Recommendations (T5.3) and the Roadmap (T5.4). Furthermore, WP6 plays a role in consolidating WP4 results through the Reskilling Inventory (T6.3), ensuring a structured and accessible repository of deliverables. WP4 activities will also be widely disseminated via Reskilling's social media channels, website, publications, conference presentations, and project events, ensuring broad visibility and impact.

6.4.5 Expected outcomes

Table 9: WP4 Deliverables

Deliverable	Deliverable Title	Lead Beneficiary	GA Date (Month)	Due	Short Description	Success Criteria	Related tasks
D4.1	Novel Business Models for CCAM and RESKILLING Toolkit	Bax	M24		This deliverable contains the business models in CCAM developed within the project in a matrix format, it will map opportunities and needs for innovation in CCAM based on the use cases (T3.5) and verified with the case studies (T4.4).	Description of the BMs evaluated and map the opportunities and needs in the BMs in CCAM.	T 4.1
D4.2	Update of the Novel Business Models for CCAM and RESKILLING Toolkit	Bax	M32		The second version of the deliverable will include the toolkit designed to support the development and adaptation of business models, facilitating strategic adjustments to align with the evolving landscape of autonomous and connected mobility	Full assessment with literature review, interviews and workshop and toolkit completed and validated with case studies.	T 4.1
D4.3	Scenarios for social innovative skill	VDI/VDE-IT	M32		This deliverable provides stakeholders	• Engagemen t of relevant	T 4.2

Deliverable	Deliverable Title	Lead Beneficiary	GA Date (Month)	Due	Short Description	Success Criteria	Related tasks
	ecosystems and implementation recommendations				(education and training institutions, workers unions, social partners, the realm of public administration, and public and private sector businesses) with a blueprint for shaping the CCAM innovation system in a way that it is socially innovative, meets (re)skilling demands and tackles societal challenges	stakeholders in the project and willingness of relevant stakeholders to collaborate in the co-creation labs • Receptiveness of stakeholders to approach of social innovative skill ecosystems • Quality and significance of results produced in WP 3 and through desk research and	

Deliverable	Deliverable Title	Lead Beneficiary	GA Due Date (Month)	Short Description	Success Criteria	Related tasks
					interviews in T 4.2	
D4.4	New (re) training curricula and schemes	ZLC	M32	Analysis of the (re)training curricula and programs developed within the project, focusing on how they address the newly identified skills and (re)training needs associated with CCAM deployment.	Development of at least ten curricula (five focusing on retention and five on new job roles). At least three of them fully developed	T4.3
D4.5	Case studies results and transferability to other modes	Beceptum	M30	This deliverable includes at least six conducted case studies, comprising case study concept, applied tools and solutions, data model and evaluation criteria, effectiveness and result assessment. Building on case study analysis results, recommendations for guidelines and project roadmaps will be derived.	Documentation of all conducted case studies, case study result assessments and derived recommendations	T4.4
D4.6	CCAM Employment & Skills Observatory	CERTH	M18	Drat version of the observatory SW tool and accompanied report	Description and analysis of the observatory	T4.5

Deliverable	Deliverable Title	Lead Beneficiary	GA Date (Month)	Due	Short Description	Success Criteria	Related tasks
						and S/W tool draft version working	
D4.7	Update of CCAM Employment & Skills Observatory	CERTH	M34		Final version of the observatory S/W tool and accompanied report	Description and analysis of the observatory and S/W tool final version working, integrating the feedback collected by involved stakeholders and the project's case studies.	T4.5
D4.8	Multi-layered replication & multimodal Transferability	EURNEX	M36		This deliverable aims to evaluate and implement adaptable reskilling solutions across different transport modes and sites, involving comprehensive data collection, stakeholder engagement, and the identification of core competencies.	Effective stakeholder collaboration, practical solutions, and centralised knowledge sharing	T 4.6

6.5 WP5: Impact Assessment & Roadmap – VUB [M1 – M36]

6.5.1 WP Objective(s)

Building on the outcomes of WPs 3 and 4, an impact assessment will be conducted to evaluate the project's influence on workforce adaptation and skills development in the mobility of people and goods sector. This assessment will establish a framework to measure the socio-economic effects of CCAM deployment on employment, education, and training while ensuring tailored scalability for EU-wide adoption. Additionally, it will provide evidence-based guidelines and policy recommendations to accelerate CCAM uptake and support decision-makers. Finally, the findings will contribute to the development of a comprehensive Roadmap, facilitating a structured socio-economic transition towards CCAM implementation.

6.5.2 WP overall methodology

In this workpackage, an impact assessment framework will be developed to evaluate socio-economic consequences of CCAM deployment. Conduct systematic reviews, identify KPIs, engage stakeholders, and integrate case study validations. Furthermore, scalability pathways for EU-wide adoption of RESKILLING results will be explored. Next, the competitiveness of CCAM solutions is assessed, tailored scalability strategies are defined, and findings integrated from related tasks. Guidelines and policy recommendations will be formulated based on outcomes of WP3, WP4, T5.1, and T5.2. Stakeholders will be engaged to develop and validate recommendations, and promote findings. Lastly, an EU Roadmap for the socio-economic transition to CCAM will be developed and strategic framework will be presented, which will define job growth prerequisites, identify cross-sectoral skill applications, and align with European initiatives. The outcomes of this WP will encompass a validated impact assessment framework, designed to evaluate the socio-economic implications of CCAM in the EU. Additionally, the WP will deliver scalability strategies to facilitate the widespread adoption of CCAM solutions, along with policy recommendations aimed at supporting regulatory and institutional adaptations. A comprehensive roadmap will also be developed, providing a structured guide to navigate the socio-economic transition towards CCAM deployment across the EU, ensuring alignment with sustainability and inclusivity objectives.

6.5.3 Methodology on Task level

T5.1: Impact assessment – CTL [M1 – M36]

Task T5.1 aims to develop a comprehensive impact assessment framework to evaluate the socio-economic consequences of CCAM deployment on employment, education, training, and workforce adaptation. This assessment will also integrate results from case study validations (T4.4) to ensure a well-connected and holistic evaluation framework.

The methodology for this task follows a structured multi-phase approach, ensuring that each stage of the assessment contributes to a holistic understanding of CCAM's impact on workforce adaptation and socio-economic parameters. The phases outlined below provide a clear path from conceptual framework development to final reporting.

1. Review and Framework Development (M1–M12): This phase focuses on establishing the foundational structure of the impact assessment framework. It includes a comprehensive literature review, identification of key indicators, stakeholder engagement, and development of the overall framework to be used for evaluation. Firstly, a comprehensive review of existing impact assessment frameworks will be done, focusing on societal impacts of automation and reskilling, linked to initiatives like the FAME project. The next step involves identifying key performance indicators (KPIs) and evaluation metrics to assess employment trends, workforce skill adaptation, education, working conditions, and technology acceptance. These KPIs will serve as a foundation for measuring the socio-economic impact of CCAM deployment.

Following this, the strategy will be aligned with the Stakeholder Engagement process to ensure collaboration with CCAM stakeholders, refine impact assessment needs, and align with EU policy objectives. Finally, the RESKILLING Impact Assessment Framework will be defined, detailing its structure, key components, and methodology for evaluating the socio-economic and workforce impacts of CCAM.

2. Data Collection & Analysis (M6–M24): This phase is dedicated to gathering, processing, and analysing relevant data that will provide insights into the socio-economic and workforce impacts of CCAM deployment. The data collection will be carried out systematically to ensure accuracy and relevance. Initially, the focus will be on establishing data collection guidelines to define data types, sources, sampling methods, and quality assurance protocols. In parallel, the phase will work on the designing and deployment of surveys and interviews to further conduct awareness surveys and expert interviews to assess skill enhancement and technology acceptance. Thus, this phase will gather outcomes from the use case studies (T4.4) to validate initial impact projections and assess workforce adaptation across different contexts. This will then apply the quantitative and qualitative analysis through utilising mixed-method approaches, combining statistical data analysis with qualitative insights from stakeholder interactions.

3. Impact Evaluation & Reporting (M18–M36): The final phase focuses on evaluating the impact based on collected data, refining key performance indicators, and producing a conclusive report that includes insights, validation results, and policy recommendations (in cooperation with T5.3). After the initial two phases, the task will further revisit its KPIs and framework, based also on the case studies findings and stakeholder feedback to further enhance its performance. After that, the assessment of short-, medium-, and long-term effects will analyse the following areas:

- *Labour Market:* Job retention, workforce shortages, new job roles, and growth in jobs.
- *Working Conditions & Quality of Life:* Job attractiveness, health & well-being, flexible work adoption, and inclusivity metrics.
- *Education & Competency Development:* Upskilling/reskilling rates, innovation metrics, and lifelong learning facilitation.
- *Technology Awareness & Acceptance:* Survey-based public perception assessments.
- *Adoption & Deployment Impact:* Stakeholder satisfaction, replication site engagements, and skill framework scalability.

In the end, the final impact assessment outcomes will be reported to visualise the compilation of findings into D5.1, providing recommendations for scalability and policy interventions.

T5.1 is led by CTL, with key contributions from several partners. CERTH supports the assessment by providing expertise in data collection and integration, ensuring that the socio-economic impacts of CCAM solutions are effectively analysed. VTI brings research expertise in transport economics and workforce adaptation, contributing to the evaluation of automation's long-term effects on employment and skills. POLIS, as a network of mobility stakeholders, ensures that real-world perspectives and policy considerations are incorporated into the assessment. VDI/VDE-IT plays a role in the technological and innovation-related impact analysis, offering insights into how emerging mobility solutions reshape industry needs. VUB provides expertise in socio-economic modelling and policy analysis, enhancing the robustness of the evaluation framework. Additionally, Bax and Beceptum contribute with specialised consulting insights, helping to frame the assessment in a way that is actionable for policymakers and industry stakeholders. This collaborative effort ensures a comprehensive impact assessment, addressing both the opportunities and challenges presented by CCAM deployment.

T5.2: Pathways to impact: tailored scalability for EU-wide adoption – Bax [M24 – M36]

Task 5.2 aims to explore the pathways for scaling the project's results to ensure the broad adoption of the RESKILLING results adoption across the EU. To achieve this, a systemic approach will be applied, integrating the needs and challenges of all relevant stakeholders while accounting for critical factors across the **business, societal, and policy domains**. This comprehensive approach will ensure that scalability strategies are both **practically viable** and **impact-driven**.

This task will build upon the relevant outputs of recent projects, such as SHOW, and will align closely with key tasks within RESKILLING. In particular, it will leverage insights from the business model assessment (T4.1) and the impact framework defined in T5.1, complementing the quantified impact assessment. Additionally, it will integrate findings from T4.6, which focuses on replication and multimodal transferability, ensuring that scaling strategies are adaptable to different transport contexts.

The key activities to be conducted within this task are the following:

- **Competitiveness assessment of CCAM solutions and services** that will evaluate the new opportunities enabled by emerging business models, assessing their economic viability and the broader socioeconomic benefits they generate beyond transport—such as their potential impact on urban planning, housing, and accessibility.
- **Definition of strategies towards scalability (pathways to impact) tailored to different EU realities**, to maximize the positive impacts of CCAM use cases, building upon insights collected in the Delphi Study performed in SHOW (e.g. feasibility of CCAM use cases under different contexts).

Task 5.2 will be led by Bax, with collaborative contributions from CERTH, VUB, ZLC, and 3DHUB, which will play a key role in defining the scalability strategy. The task will also benefit from the support of UITP, FEHRL, ECTRI, and IRF, which will provide valuable insights for mapping stakeholder needs beyond the scope of RESKILLING.

T5.3: Guidelines and policy recommendations – VUB [M24 – M36]

In this task, guidelines and policy recommendations will be formulated regarding the facilitation of this rapidly developing mobility transition, based on the outcomes of WP3 and WP4 and the assessment outcomes from T5.1 and T5.2. As such, it will identify challenges and risks or unintended consequences that have arisen from CCAM implementation, such as potential job displacement, skill gaps, or ethical considerations.

This task consists of the following key phases:

- **Data collection & analysis:** Collect insights from WP2, including stakeholder feedback, current policies, and existing challenges. This data will be analyzed to identify key challenges and opportunities related to workforce skills and employment growth, as well as gaps between current practices and desired outcomes.
- **Stakeholder Engagement:** Workshops and consultations will be organized, in cooperation with WP2, to gather insights and validate findings from RESKILLING, supplemented by surveys and interviews with key stakeholders to gather detailed perspectives.
- **Development of Recommendations:** In first instance, initial guidelines and policy recommendations will be developed, based on the assessment findings. A matrix will be developed, outlining different types of interventions (e.g., regulation, financing, standardisation) needed at various governance levels (local, regional, national, European). This draft will be presented to stakeholders for feedback and refinement.
- **Validation and Finalisation:** This phase will include dedicated consultations and presentations at EU transport conferences to refine and finalize the recommendations. Validation workshops will be also conducted to ensure the recommendations are practical and actionable.
- **Promotion and Dissemination:** The final guidelines and policy recommendations will be promoted at relevant policy-based events and platforms and distributed to decision-makers at local, regional, and European levels in WP6.

This methodology aims to create comprehensive and actionable, stakeholder-informed recommendations that address identified challenges and maximise positive impacts on workforce skills and employment growth. By involving stakeholders at every stage, the recommendations will be well-informed and widely supported. All the while, we ensure the process is inclusive, engaging a diverse range of stakeholders, maintain transparency throughout the process to build trust and buy-in from stakeholders and are prepared to adapt the recommendations based on emerging trends and feedback.

VUB will lead this task with support from CERTH and the Technical & Innovation Manager (VTI). Also, CTL as impact assessment leader and Bax regarding scalability will be involved. The other partners in this task ZLC, 3DHUB, UITP, ALGOWATT, Beceptum and TSI are involved to ensure perspectives are validated from both industrial partners as well as public institutes and to ensure a geographical spread in Europe.

T5.4: Roadmap to support the socio-economic transition to CCAM – CERTH [M24 – M36]

Building upon the findings and outcomes of the RESKILLING project and especially on the guidelines and policy recommendations of T5.3, this task will develop a comprehensive EU Roadmap to guide the fair socio-economic transition to CCAM. The Roadmap will provide a structured and forward-looking approach to addressing employment, skills, and innovation challenges related to CCAM deployment, ensuring a sustainable and inclusive transformation.

More specifically, the Roadmap will:

- Present a strategic framework to facilitate an equitable transition to CCAM, considering socio-economic impacts and workforce adaptation.
- Define prerequisites for job growth, enhanced innovation capabilities, and evolving skill demands across three timeframes: short-term (until 2030), medium-term (until 2040), and long-term (until 2050).
- Identify opportunities for cross-sectoral skill application by integrating CCAM-related workforce competencies into other transport modes, such as rail, aviation, and maritime.
- Emphasize scalability requirements and the broader adoption of RESKILLING's outcomes, acknowledging variations across transport ecosystems, value chain roles, and regional policies across Europe.
- Be developed in close collaboration with the RESKILLING Stakeholder Community (in cooperation with T2.2) to ensure alignment with stakeholder expectations, industry needs, and regulatory frameworks.
- Define a shared vision, key indicators, priority actions, and R&I priorities to support the large-scale deployment of sustainable and inclusive CCAM solutions.
- Establish synergies with other European research and policy initiatives, with a particular focus on the CCAM Partnership and cross-border mobility considerations.

To ensure a holistic and evidence-based roadmap, the following methodologies will be applied:

- **Social Impact Considerations:** Evaluating the societal implications of CCAM on employment, workforce inclusion, and job quality.
- **Innovation & Adaptation Strategies:** Identifying mechanisms, solutions, and policy instruments to enhance the efficiency and sustainability of the CCAM transition, focusing on addressing employment, skills, and innovation challenges
- **Key Performance Indicators (KPIs):** Establishing measurable metrics to assess the progress and effectiveness of socio-economic adaptation strategies.
- **Alignment with European Initiatives:** Mapping specific projects and programs that align with the Roadmap's objectives, with a particular focus on the CCAM Partnership and broader EU mobility strategies.
- **Risk & Opportunity Assessment:** Utilizing FMEA (Failure Modes and Effects Analysis) and SWOT methodologies to analyse potential challenges, risks, and mitigation strategies associated with the socio-economic transformation of CCAM.

CERTH will lead this task with the strong support of the Technical & Innovation Manager (VTI) and all WP leaders, ensuring that the diverse findings of RESKILLING are effectively translated into actionable insights for the RESKILLING Roadmap. The participation of ECORYS (leader of T3.2 on CCAM employment effects), CTL (responsible for impact assessment), and Bax (leading tasks on business models and pan-European adoption) will significantly enhance its scope, ensuring a comprehensive



approach to addressing labour market transformations. Additionally, RESKILLING's association partners - FEHRL, UITP, and IRF - will ensure that the Roadmap is fully aligned with the latest sectoral advancements and policy developments. TSI's contribution will reinforce geographical balance, particularly focusing on Eastern Europe, while 3DHUB will strengthen the Roadmap's industry-related insights.

6.5.4 Interrelations to other WPs and Activities

This WP receives input from WP2, WP3 and WP4. In particular, it will use the stakeholder mapping from T2.2, it will leverage insights from the business model assessment (T4.1) and the impact framework defined in T5.1, the use case studies in T4.4 and additionally, it will incorporate findings from T4.6.

6.5.5 Expected outcomes

Table 10: WP5 Deliverables

Deliverable	Deliverable Title	Lead Beneficiary	GA Date (Month)	Due	Short Description	Success Criteria	Related tasks
D5.1	Evaluation and impact assessment	CTL	34		This deliverable includes the project's impact assessment based on the project KPIs and the Case Studies results. Description of the different pathways to impact defined and tailored strategies for EU-wide adoption will be included.	Development of comprehensive impact assessment framework, contributing to a holistic understanding of CCAM's impact on workforce adaptation and socio-economic parameters	T5.1 T5.2
D5.2	Guidelines and policy recommendations	VUB	34		This deliverable will formulate guidelines and policy recommendations for the identification of actions for supporting and expediting the adoption of CCAM.	Guidelines and policy recommendations validated by the stakeholders	T5.3
D5.3	Roadmap on socio-economic transition to CCAM	CERTH	36		Roadmap on socio-economic transition to CCAM outlining a future-oriented strategy for establishing the necessary conditions	Roadmap ready, ensuring alignment also to the CCAM partnership priorities.	T5.4



Research initiative for Enhancing and Adapting Workforce SKILLS for Implementing TraNsport Automation with Employment Growth

Deliverable	Deliverable Title	Lead Beneficiary	GA Date (Month)	Due	Short Description	Success Criteria	Related tasks
					for job growth, enhanced innovation capabilities, and skill requirements in the short, medium and long term		

6.6 WP6: Communication, Dissemination & Exploitation – ECTRI [M1 – M36]

6.6.1 WP Objective(s)

The main objectives of WP6 are as follows:

1. Develop and implement a comprehensive Communication, Dissemination and Exploitation (CDE) strategy that includes regular monitoring of KPIs (with scheduled updates across the project lifecycle). While implementing the CDE strategy, it is also key to ensure effective information flow across all consortium partners
2. Create and maintain a distinctive visual identity for the project that resonates with different stakeholder groups, implementing it consistently across all communication materials (from website content to brochures)
3. Develop and maintain a dynamic, comprehensive inventory of project outcomes that serves as both an internal resource and external knowledge base
4. Establish a robust exploitation framework for project results, including detailed IPR protection measures, market entry strategies, and commercialisation plans that extend beyond the project's lifecycle
5. Promote strategic partnerships and knowledge exchange through participation in major industry events, scientific conferences, and collaboration with other EU projects to maximise project impact and create lasting synergies

6.6.2 WP overall methodology

The methodology to implement for WP6 is multilayered and will be further coordinated through periodical WP6 meetings with all partners involved.

The first layer focuses on strategic planning, which firstly involves assessing the consortium's communication capabilities and conducting comprehensive stakeholder mapping through T2.1. These initial efforts allow for the creation of targeted messages for specific stakeholder groups via project-dedicated or partners' communication channels.

The implementation phase coordinates communication activities across multiple channels, with ECTRI taking the lead in managing website content and partner communications - distributing responsibilities and tasks across the consortium. All online materials will remain accessible for at least three years after project completion. Implementation includes on-site scientific dissemination - targeting high-impact journals. Project findings will be presented at major events like TRA, TRB, and ITS World/Europe, and during several other relevant occasions.

The final layer focuses on monitoring and improving effectiveness through a comprehensive feedback system and regular review sessions. This includes continuous assessment of KPIs, development of corrective measures (when needed), and strategy adjustments based on performance metrics. This systematic approach ensures that the communication strategies put in place remain effective and adaptable throughout the project lifecycle.

6.6.3 Methodology on Task level

T6.1 – Communication, Dissemination & Exploitation strategy – ECTRI [M1 – M18]

T6.1 will establish a unique and recognisable visual identity that reflects the project's goals and messages, implemented consistently across all communication materials. We will select specific assets tailored to each target group to facilitate their identification with the visuals. During the first months, we will run a campaign to gather information from consortium partners about their communication channels, capacity, and target audience. This will enable educated planning from the beginning. This step is key as it allows for capitalising on existing partners' communication resources to multiply the outreach of the project's dissemination activities (especially in case of partners being umbrella organisations such as POLIS, UITP, and IRF). It will also help planning the publication of project results in conference proceedings and peer-reviewed scientific journals. Further, we will be in contact with the WP2 Leader (POLIS) to have regular updates on the stakeholder mapping. Collecting information on the stakeholder types will be key to identify specific target audience and therefore tailor effective messages specific to the stakeholder types identified for the project. The joint effort will collect data on types of stakeholder groups and subgroups, association names, and communication channels they are receptive to. This aspect is crucial in shaping a pool of users' representatives, policy makers and other relevant stakeholders with a key role in the field. This list will be used to engage with the stakeholder for various purposes, from regular project updates to stakeholders' contribution to specific project tasks.

The combination of the two collected datasets (consortium communication capabilities and stakeholder mapping) will pave the way for the creation of additional data-driven and achievable KPIs to complement those outlined in the GA (including RESKILLING website and social media metrics, creation of logo, number of press releases and newsletters, events participations, stakeholder and AB events, conference proceeding publications, etc). The new KPIs will enrich the CDE plan development and updates, measuring consortium social media impressions, newsletter reach, publication count, partner website views, and third-party mentions (including CCAM partnership, international collaborations, and project participants).

We will track these metrics through a centralised monitoring system accessible to all project partners. Partners will regularly update their communication achievements (reached during the activities in T6.2 in this system - Dissemination tools and events). These reporting efforts will have a clear distinction between communication and dissemination activities against the requests specified by the Contracting Authorities general guidelines [EC, 2022]. The Task Leader will send regular reminders to ensure timely updates of the monitoring system. The CDE will provide an exploitation framework that will define exploitation activities for the project's lifetime and establish the exploitation roles of each partner involved and Intellectual Property (IP). This aspect will be gradually more detailed with the project progress as there will be more clarity on what can be exploited in the future. As the project develops and outputs become clearer, we will refine this plan with more specific exploitation opportunities. Additionally, we will actively promote our technical and scientific findings through presentations at conferences and publications in peer-reviewed journals. To optimise this process, we will ask partners about their connections to relevant scientific events and conferences, allowing us to leverage these relationships to enhance our scientific dissemination efforts.

During these activities, the contribution of CERTH and ECORYS are key. CERTH's participation will encompass overall support and feedback on specific task outcomes, reviewing the CDE strategy and its developments, and provide directions concerning exploitation and IP aspects. ECORYS will be directly involved in the draft of the CDE strategy and CDE updates instead, with a particular focus on the exploitation framework - define exploitation activities and roles for the project's lifetime and IP elements.

T6.2: Dissemination tools and events – ECTRI [M1 – M36]

The project website presence will be established by M3, with constant communication between ECTRI (responsible for the purchase of the website domain) and CERTH (in charge of the website structure development, host, and overall maintenance). The agreed-upon domain is **reskilling-project.eu**.

Once the project's online presence is established, the Task Leader (ECTRI) will implement a clear website content management system where partners take turns drafting articles, ensuring also the minimum number of website articles, as specified by the GA KPIs, is met. Each partner will follow a structured content calendar and propose topics they are competent with and that align with the project's vision and progress. Partners will feed the website news section based on their work done in other WPs, and their knowledge on the latest CCAM-related technology advancements. To start, we will focus on explaining the project's basic purpose and aims. To ensure high-quality content, the WP leader will work with CERTH and VTI to create the first articles, which will serve as templates and set quality standards for future content from other partners.

We will ensure constant exchange with T6.4 and T4.6 to incorporate the project's inventory and have the website integrated into the Observatory, respectively. The Task Leader and CERTH will make arrangements to ensure website maintenance following the end of the project, including responsibilities on news posts and ensuring the domain remains active post-project.

ECTRI, as the task leader, will establish dedicated social media channels to increase project visibility. These will be initially promoted by the whole consortium and the engaged Stakeholder Community to increase followers. The choice of platforms will be guided by data from the T6.1 activities on stakeholder identification (in turn, achieved through communication with T2.1 - Stakeholders Mapping). By analysing which social media platforms our target audiences use most frequently, we can make informed decisions about where to focus our communication efforts. For example, while we initially considered using 'X' (formerly Twitter), we may instead prioritise alternative platforms like BlueSky if our stakeholder analysis shows that is where our audience is most active. We will make the final platform selection based on concrete data about our stakeholders' preferences and usage patterns.

ECTRI is responsible for drafting visual material - following the principles established in T6.1 to guarantee branding consistency. CERTH will be responsible for the creation of two videos (in M3 and M36, respectively) - supported by ECTRI as needed. The task activities involve developing newsletters and press releases. Their release is coordinated by ECTRI and CERTH, respectively, but their content will require the contribution of relevant partners.

Scientific dissemination is included in the activities and will target high-impact journals such as the European Transport Research Review (ETRR); Sustainability; Transport Research Part D; Transport Research Part E; IEEE Transactions on ITS; Transportation Research Record; European Journal of Transport and Infrastructure Research (EJTIR); Transportation Science; Sustainable cities and society; IET Intelligent Transport Systems; IJEHSS; GPH-International Journal Of Social Science And Humanities Research; and Social Sciences & Humanities Open.

The WP leader will coordinate contributions to the project website and other ad-hoc channels (e.g., newsletters, content for brochures, OA publications, social media) across the whole consortium through internal tracking records. This tool will assign news, articles, and content creation to publish on rotation basis to a variety of partners - based on their activities progress and CCAM-related knowledge of latest technologies and updates. To further promote project knowledge sharing, the project will present its findings at major relevant events including TRA, TRB, ITS World/Europe, and various other prestigious conferences. Partner participation will be determined based on relevant area of expertise, preferences, and availability. To ensure efficient resource use, the WP Leader will maintain a shared events calendar for the project duration, making it an open repository available for consultation for the Consortium. The events calendar will be constantly updated by all consortium partners based on their field of expertise and

networks. Partners can sign up for specific events through this system, preventing overlapping attendance and optimising both travel costs and time investment.

As per the final event to be held in M35, ECTRI will coordinate with WP2 and WP5 leaders to establish event fundamentals. This includes defining clear objectives and key messages for the event, conducting thorough analysis of the stakeholder database to identify target participants (with the help of WP2), and selecting an appropriate venue and date that maximises attendance potential. Content-related WPs will focus on developing comprehensive presentation materials based on project results (interactive sessions and workshops to underline project principles like co-creation and inclusivity).

RESKILLING, with the support also of WP6, will participate in joint activities with other HE/H2020 projects to increase visibility and create synergies. Moreover, RESKILLING partners will update the European Partnership on Connected, Cooperative and Automated Mobility on findings and provide data for CCAM KPI monitoring.

During these activities, the contribution of all participants is key as detailed above. They will contribute to feeding the website news section, promoting dedicated social media and writing content for posts, identifying and participating in relevant events to promote project outputs, and publishing findings in open-access peer-reviewed journals.

T6.3 – RESKILLING inventory – LIST [M12 – M36]

To enhance the RESKILLING website, a dynamic and user-friendly inventory will be developed and continuously updated to reflect the latest project outcomes. The RESKILLING Inventory will serve as a central knowledge hub, fostering transparency, accessibility, and collaboration among stakeholders. It will combine structured data processing, personalised user guidance, and open access resources, making it a valuable tool for workforce reskilling. It will cover key areas such as CCAM's impact on employment and society, social innovation and workforce growth, and policy recommendations, guidelines, and roadmaps, consolidating outcomes and input from the respective WPs (WP3, WP4 and WP5) of the project. The inventory will be also linked to the T4.5 Employment & Skills Observatory, ensuring seamless integration of content and insights.

The RESKILLING Inventory is designed to ensure efficient data sharing, secure access, and up-to-date insights.

- It will use standardised templates to maintain uniformity in data exchange.
- Contents will be organised into multiple categories reflecting the needs and expectations of different types of stakeholders thus enabling the generation of personalised recommendations
- The inventory will be regularly updated with new insights and findings to keep content relevant.
- Analytics provided by the WP6 leader will be implemented to track usage patterns of the inventory and drive continuous improvements in its functionalities.

To maintain a structured and well-organised repository, the RESKILLING Inventory will integrate multiple data sources and frameworks:

- It will source data from WP2, WP3, and WP5, ensuring comprehensive content coverage.
- The T4.5 Observatory will feed structured content into the RESKILLING Inventory for seamless data access.
- The inventory content will be managed by a Content Management System (CMS) framework, ensuring smooth management and updates.

Users will be able to engage with the Inventory through two main paths, offering both personalised recommendations and open exploration.

1. Recommendation Process :

- The user completes a questionnaire to assess their needs.

- Based on the responses, the system provides personalised recommendations from the RESKILLING Inventory.
 - No personal data will be stored in the system; however, each time the users connect, they have the option to generate and download a PDF report with tailored recommendations for future reference.
2. Direct Access to the Inventory:
- The user browses an access catalogue with structured and categorized content.
 - Open-access materials are available for free exploration without restrictions.

To ensure efficient performance, security, and accessibility, the RESKILLING Inventory will follow a structured deployment approach:

- **Data Collection & Transformation:** contents (from the CMS's API) and questionnaires (from XLSX, JSON or the CMS's API for e.g.) are processed and converted into structured JSON files (or other relevant web standard data format).
- **Website Development:** the platform is built using components such as Gatsby and SurveyJS, enabling an interactive and responsive static website.
- **Hosting & Accessibility:** The RESKILLING Inventory Website is securely deployed on the CERTH HTTPS server, ensuring reliable access for users.

Activities from T6.3 are performed with the contributions of key partners active in the WP2, WP3, T4.5 and WP5 for data collection and harmonisation, as well dissemination of the offered solution.

T6.4 – Exploitation activities – ECORYS [M18 – M36]

The objective of Task 6.4 is to implement exploitation activities aimed at ensuring the business and commercial viability of the RESKILLING project's results and outputs. . This will follow the exploitation framework developed in Task 6.1 (D6.1, which will define the contributions required from each project partner to guarantee the long-term success and sustainability of the project's outcomes. The exploitation plan will also provide a detailed approach for protecting and managing any new Intellectual Property (IP) generated during the project, outlining specific procedures for handling jointly owned IP. These procedures will include the use, licensing, and commercialization of IP in line with the Grant Agreement (GA) and the Consortium Agreement (CA).

As input, the exploitation framework will look at tools, applications, curricula and reports developed by other relevant R&I projects in this domain. A pre-selection will be conducted to identify tools, applications, curricula and reports that have been successfully deployed after the completion of the respective projects.. The RESKILLING project team will analyse the best practices and lessons learned from these cases to enrich the exploitation framework and exploitation strategy.

Moreover, the exploitation plans are to be synchronized with the partners' aims and interests, in accordance with their IPRs and the project's overall IPR strategy. This objective will identify the required actions and timeframes, to lead to sustainable exploitation plans.

Ecorys will lead Task 6.4, with the active support of ECTRI and CERTH. All exploitable results from the RESKILLING project will be systematically linked to the work and activities of the CCAM Partnership through the project's partners involved in the initiative. These partners include VTI and POLIS, who act as co-leaders of Cluster 6, UITP as co-leader of Cluster 1, and CERTH, FEHRL, and VDI/VDE-IT as members of the CCAM Partnership. Furthermore, all tasks will contribute to the exploitation of their respective outputs. Task leaders such as CERTH, ZLC, LIST, and Bax will be responsible for ensuring the effective exploitation of the results they generate. Industry-oriented partners, including Beceptum, EUROPCAR, and 3DHUB, will also play a pivotal role in this process, bringing their market-oriented perspectives to maximize the impact of the project's innovations. CTL, EURNEX, and IRF will facilitate the connection between the exploitation strategy and their respective tasks within RESKILLING, enhancing the overall coherence of the project's impact strategy. The comprehensive exploitation strategy will delineate the

specific contributions of each partner involved in Task 6.4, with particular emphasis on guiding task leaders in effectively leveraging their results to ensure broad uptake and sustainability.

6.6.4 Interrelations to other WPs and Activities

WP6 will have regular coordination with WP1 to ensure all communication and dissemination activities align with project management guidelines and quality standards. WP6 will also benefit from the WP1 comprehensive overview of the project to gain insight useful to solid planning of communication, dissemination, and exploitation activities.

WP6 works in close collaboration with WP2 to establish a pool of users, policymakers, and stakeholders at national, European and international levels. WP6 will align its communication strategy with the stakeholder mapping and engagement activities of WP2. WP2 and WP6 will closely collaborate to target the relevant audience for the project Final Event (T6.2).

WP6 will disseminate WP3-related findings about CCAM's employment and socioeconomic impacts through various channels, including scientific publications and conferences. For this, close coordination and communication with the WP3 Leader and related Task leads is key.

WP6 will support WP4 in promoting and exploiting key outputs like the CCAM Employment & Skills Observatory and the Business Model toolkit. The website (T6.2) and the inventory (T6.3) are also linked to WP4's Observatory.

WP6 will collaborate with WP5 on disseminating guidelines, policy recommendations, and the final roadmap. The content-related WPs, especially WP5, will contribute to developing the program for the final event.

6.6.5 Expected outcomes

Table 11: WP6 Deliverables

Deliverable	Deliverable Title	Lead Beneficiary	GA Due Date (Month)	Short Description	Success Criteria	Related tasks
D6.1	Communication, Dissemination and Exploitation (CDE) strategy	ECTRI	6	This report will present the Communication, Dissemination & Exploitation (CDE) strategy for the RESKILLING project, including information on the development and progress of the CCAM employment & skills inventory, as well as the project's exploitation framework.	In-depth preliminary analysis of consortium capacity, stakeholders mapping, and knowledge of stakeholders channels of communication. Additional, more specific, trackable metrics for monitoring dissemination goals that monitor consortium-specific channels traffic, publication targets, and stakeholder participation. Detailed system for partners to communicate with each other on respective activities and report and monitor their communication/dissemination work	T6.1, T6.2, T6.3, T6.4
D6.2	Update of the Communication, Dissemination and Exploitation (CDE) strategy	ECTRI	12	Update of the Communication, Dissemination, and Exploitation (CDE) strategy for the RESKILLING project, encompassing a detailed overview of the development and progress of the CCAM Employment & Skills Inventory. This	All key success criteria mentioned for D6.1 and learn communication with other WPs (through various channels outside beyond consortium meetings) to have the best knowledge on nature of certain project outcomes to better understand to whom to address when making them sustainable and exploitable after the project end	T6.1, T6.2, T6.3, T6.4

Deliverable	Deliverable Title	Lead Beneficiary	GA Due Date (Month)	Short Description	Success Criteria	Related tasks
				report will also include insights into the project's exploitation framework, outlining how the project's outcomes and innovations will be leveraged for long-term impact and sustainability.		
D6.3	Final update of Communication, Dissemination and Exploitation (CDE) strategy	ECTRI	36	Final report on the Communication, Dissemination & Exploitation (CDE) strategy for the RESKILLING project, including information on the development and progress of the CCAM employment & skills inventory, as well as the project's exploitation framework.	All key success criteria mentioned for D6.1 and D6.2 and comprehensive evaluation of all KPI targets met throughout the project, including web stats, social media engagement (though project and partners' channels), events participation, and publications. Similarly, assessment of the final size and engagement level of the Stakeholder Community (SC) together with connections to WP2. Constantly monitoring the evidence of successful engagement with international stakeholders through Advisory Board and Concertation meetings. Similarly, careful keeping track of successful coordination and knowledge transfer with the CCAM Partnership	T6.1, T6.2, T6.3, T6.4
D6.4	Exploitation plan	ECORYS	36	Report on the on the key exploitable products, channels for exploitation	Generation of sustainable exploitation plans for the RESKILLING key exploitable results.	T6.4



Research initiative for Enhancing and Adapting Workforce SKILLs for Implementing TraNsport Automation with Employment Growth

Deliverable	Deliverable Title	Lead Beneficiary	GA Due Date (Month)	Short Description	Success Criteria	Related tasks
				and exploitation schedule beyond project's lifetime		



7. Conclusions and future reporting expectations

This document serves as the Inception Report for the RESKILLING Project, outlining its objectives, work plan, methodology, key roles, and anticipated outcomes for each Task within the project's WPs, as defined in the GA. It establishes a structured foundation for project implementation and coordination, ensuring alignment with the project's strategic goals.

Given the multi-phase nature of the project, certain tasks with later start dates and extended operational timelines beyond the first project year may have their work plans initially defined in a provisional manner. These elements are expected to evolve based on project developments, stakeholder inputs, and emerging insights. Consequently, the Inception Report itself should be considered a dynamic, living document, subject to refinements and updates as the project progresses. Any modifications to the Grant Agreement or adjustments to the project's scope will be incorporated into subsequent iterations of this document.

Furthermore, all forthcoming progress reports will use this Inception Report—along with any revisions and updates made throughout the project's lifecycle—as a primary reference document, ensuring consistency in reporting and alignment with the Grant Agreement provisions.

This approach guarantees that the RESKILLING project remains adaptable and responsive, fostering a structured yet flexible framework for achieving its intended impact.

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