



2021-1-DE02-KA220-VET-000029639

**Green and safety skills for workers in bike based
urban last mile deliveries**



RESEARCH METHODOLOGY

R1 - T1. Tools and guidelines for skills gathering activities in Bike-Based LMDs

MARCH 1, 2022

EXELIA



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1. ACRONYMS AND ABBREVIATIONS

BGZ	BGZ Berliner Gesellschaft für internationale Zusammenarbeit mbH
CEP	Courier, Express, Parcel
CVET	Continuous Vocational Education and Training
E+	Erasmus+
ECF	European Cyclists Federation ASBL
ECQA	European Certification and Qualification Association
EU	European Union
GPS	Global Positioning System
HE	Higher Education
HR	Human Resources
IVET	Initial Vocational Education and Training
KPI	Key Performance Indicator
LMD	Last-Mile Delivery
MOOC	Massive Open Online Course
OERs	Open Educational Resources
SME	Small-Medium Enterprise
UZ	University of Zagreb
VET	Vocational Education Training



2. INTRODUCTION

The global surge in e-commerce has resulted to an impressive increase in Last-Mile Deliveries (LMD), rendering the Courier, Express, Parcel (CEP) sector one of the fastest developing and most profitable in the EU, with annual revenues of 79 billion euros & over 1.4 employees. In order to minimize CO2 emissions, a number of EU cities (e.g., Berlin, Amsterdam) have pledged to achieve Zero-Emission Deliveries in line with the European Green Deal. Correspondingly, major economic operators (e.g., DHL, IKEA) & SMEs have already switched to conventional & electronic bike-based vehicles for urban deliveries. This new surge has created the need to raise the quality & relevance of vocational training – mainly offered by CEP companies – and provide LMD workers with safety and green skills to respond to new work environment requirements and ensure accident-free routes.

SAFE-LMD is an Erasmus+ KA2 project, which aims to tackle this skills deficit and work for bike-based LMD workers' development, making them part of a green skills response strategy, and equip them with resources and materials covering the topics pertaining to safety.

The first result of the project comprises tasks that work towards defining the specifications (basis) for common competence framework, which will lead to the development of a comprehensive learning outcome-oriented curriculum on sustainable and safe bike and e-bike based LMD operations with a balanced mix of theoretical content and work-based components, suitable and readily available to be embedded into existing formal and informal (vocational) training offerings for LMD workers across the EU. This report is the outcome of R1-T1, namely **“Tools and guidelines for skills gathering activities in Bike-Based LMDs”**.

This methodology seeks to provide SAFE-LMD partners with appropriate tools & guidelines for mapping the current and future workplace requirements and skills needs in the field of bike and e-bike based last mile deliveries. In particular, the methodology will guide R1 skills needs gathering activities, setting the ground for the identification of skills required to sustainably and safely carry out urban parcel deliveries with electronic and conventional bike-based vehicles, and shortages in the labour market. It will deliver step-by-step instructions to partners on how to contribute to gathering and documenting relevant skills evidence, addressing:

- Research and data collection methods
- Information collection tools
- Target groups
- Sampling & data sources
- Data collection targets
- Implementation steps and timeline

The report is structured as follows. Section 3 lays out the methodological approach and defines research objectives. Sections 4 and 5 detail the research methods and provide the information collection tools to

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be used by partners for gathering relevant skills and training evidence. Section 6 prescribes the research stages and implementation steps. Section 7 sets data collection targets (i.e. KPIs) per project partner. Section 8 presents an action plan for the implementation of the first Result (R1), and section 9 presents the online registries to store skills intelligence.



3. METHODOLOGICAL APPROACH

3.1. TARGET OCCUPATIONAL GROUP

The project's main target groups are:

1. Learners

This group includes formal & informal last mile workers using conventional & electric bikes, cargo bikes, and pedal vehicles.

2. Training Providers

This pertains to training departments of CEP companies, training institutions that provide bike rider training, territorial administrations or schools that organize cycling courses, cycling Instructors, and civil organizations offering employment opportunities to groups with fewer opportunities.

3. Companies

This group refers to public & private enterprises active in urban logistics, as well as food, retail companies with own delivery services.

4. Sectoral actors, public authorities and Social Partners

These actors could be EU/National organizations representing the CEP industry, trade unions, associations of employers, or accreditation bodies. They could also be public institutions engaged in the discourse of precarious employment conditions and aiming for their improvement.

The project results and the methodology will primarily address bike-based LMD workers, to obtain a more precise picture of the workplace realities and risks/challenges they face.

In addition, SAFE-LMD will set forward an inclusion strategy to best address the needs and support the social and economic integration of individuals with fewer opportunities, providing employment pathways with fair and safe conditions in a fast-growing field via appropriate, flexible vocational training. The focus will be on the following groups:

- Low-skilled adults & individuals struggling to perform in formal education systems
- Unemployed, people in precarious employment conditions
- Individuals with less than 9 years of schooling (early school leavers)
- Young people in the border of social exclusion and partial or intermittent work integration
- Immigrants and refugees with inadequate social, educational, cultural capital to integrate effectively into the labour market and/or to pursue up skilling pathways.



3.2. RESEARCH QUESTIONS

The purpose of SAFE-LMD skills needs gathering activities on bike-based last mile logistics (R1-T1) is to help define the actual workplace requirements with regards to sustainability and safety techniques and methods thus providing an informed basis for the formulation of up-to-date, tailor-suited to sector specific needs, competence framework. The formulation of the competence framework, in turn, will set the basis for the development of a comprehensive learning outcome-oriented curriculum on sustainable and safe bike and e-bike based LMD operations to be embedded into existing formal and informal (vocational) training offerings for LMD workers across the EU.

This report seeks to address the following main questions:

- What are the current and future bike-based LMD green/safety skill needs and training requirements relating to safety and sustainability?
- What are the current and future risks faced by LMD cyclists?
- How tailored to the sectoral needs of the CEP labour market is the current supply of green/safety skills, as evidenced by existing formal (Higher Education, Vocational Education & Training) and non-formal (online courses, seminars) LMD related educational and training provision?

3.3. RESEARCH METHODS

Information collection on safe and sustainable bike-based LMD skills and training requirements will be a combination of desk and field research.

1. Desk research.

It will be the primary activity for gathering evidence on workplace requirements for LMD professionals to define the current skills demand and will revolve around three (3) axes:

- a) Skill needs evidence from academic publications & relevant studies/articles,
- b) Contemporary green/safety skills requirements as evidenced from **online job vacancies**, and
- c) Available training offerings aiming towards LMD cyclists.

Further to the above, secondary research will be also employed to collect information on existing formal and non-formal sustainable/safe bike-based LMD **training provision**. Dedicated desk research reporting forms will be used to facilitate the documentation of evidence.

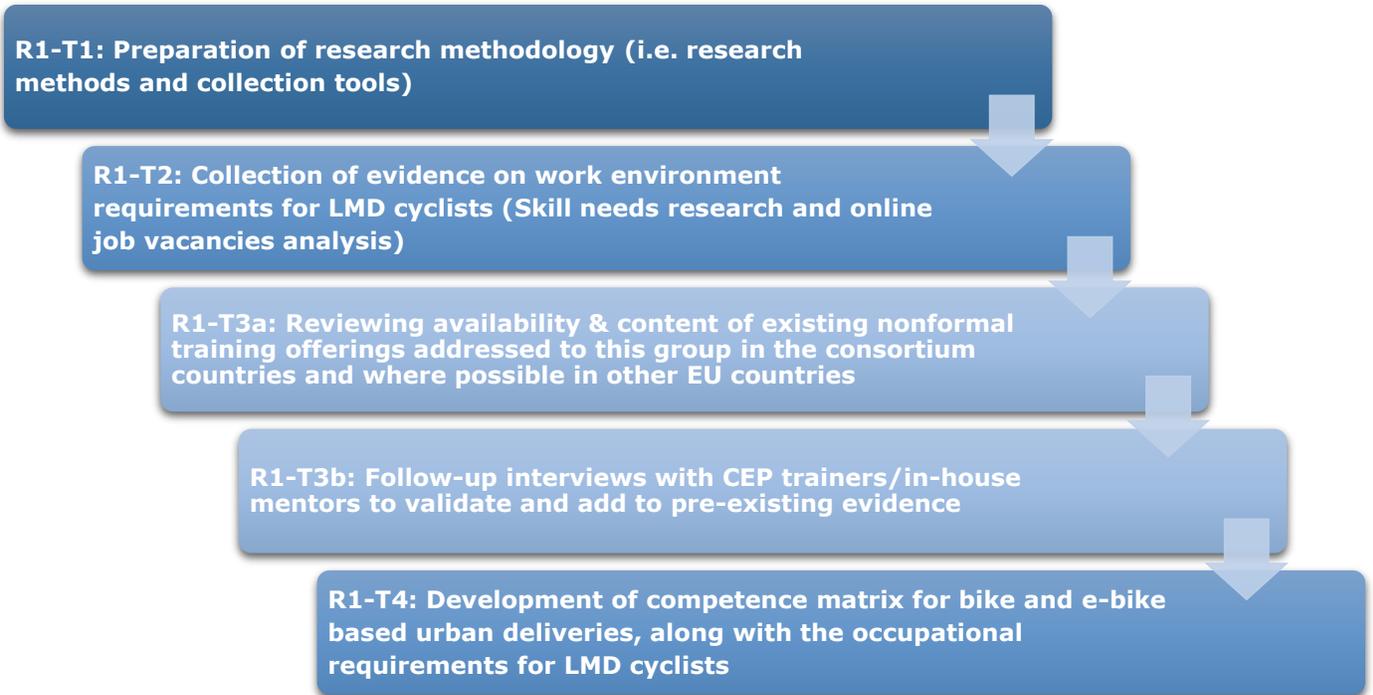
2. Field research.

Field research will be implemented through an **online survey on green/safety skills needs**, actual green/safety skills of bike-based LMD workers, and future tendencies in the field, primarily addressed to employers and field experts, as well as LMD professionals. In addition, semi-structured interviews with selected target groups' representatives will optionally be carried out to provide complementary insights into the CEP labour market.



3.4. PROGRESSION OF TASKS

Figure 1: Progression of tasks leading to the production of the first result





4. SECONDARY RESEARCH

4.1. DESK RESEARCH ON SKILLS REQUIREMENTS, RISKS AND CHALLENGES FOR LMD CYCLISTS

Desk research will be carried out to collect skill needs evidence from academic publications & relevant studies/articles, and analyse risks faced by LMD cyclists in own country. The purposes are:

- to identify trends in skills supply, as regards the CEP field
- to analyse risks and challenges faced by CEP employees.

This research will enable the partnership to define the current level of green/safety related skills and competences within the labour market and compare it with the sum of skills and attributes needed in typical bike-based LMD jobs (skill demand), so as to determine the skills mismatch. Also, findings will enlighten partners on challenges and risks dealt by LMD employees while operating CEP.

A common approach will be employed to ensure that all information will be collected and reported in a consistent and clearly structured manner. The reporting form will be the main information collection tool to be used by project partners for documenting all relevant evidence/information, as retrieved from multiple secondary sources.

Table 1: Desk research reporting form | Relevant studies/articles (incl. example)

Type	Title	Author	Source	Sector/Oc cupation	Skills Requirements	Risks and Challenge s
Article	Skills Required To Be A Last Mile Ambassador In Delivery & Packaging Industry	Gayathri Vasudevan, Executive Chairperson and Cofounder of LabourNet	Industry Outlook	Delivery & Packaging	<ul style="list-style-type: none"> - Communication skills (Speaking clearly so listeners can understand, Listening to others and asking questions, Understanding spoken and written information, Write clearly so other people can understand, Read and understand work-related materials) - Reasoning and Problem Solving (Analyzing ideas and use logic to determine their strengths and 	



					<p>weaknesses, Following guidelines to arrange objects or actions in Specific order, Use reasoning to discover answers to problems, Noticing when something is wrong or is likely to go wrong)</p> <ul style="list-style-type: none"> - Technological Literacy (Ability to read and use maps to reach the customer's location) - Managing oneself, time, people and things - Working with people (Look for ways to help people, Be aware of others' reactions and understand the possible causes, Persuade others to approach things differently) - Assets (own two-wheelers, own smartphones) 	
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The rationale is that existing training provision can act as a proxy measure of skill supply in the labour market. However, courses can only “signal” skills and competences, which does not necessarily mean that graduates do actually possess these skills or this is the only way to acquire green/safety skills and competences, as the latter can be acquired in different ways. Nevertheless, given the complexity of innovation landscape and the dynamics in the labour market, information on existing academic and commercial curricula can provide valuable insights (further to those provided by employers and field experts) into the available skill supply whilst revealing potential labour market mismatches and imbalances.



4.2. ONLINE JOB VACANCIES ANALYSIS

Data collection should focus on recent job vacancies descriptions, articles, and studies, preferably within the timeframe of the last 5 years. This is because bike-based LMD is an evolving sub-sector of the CEP industry. The project seeks to capture the latest developments in the field, aspiring to design a comprehensive and up-to-date curriculum that will address not only the current, but also the future training and skills requirements.

Evidence from relevant job vacancies will be utilised to:

- a) Identify skills mismatches and,
- b) Formulate the SAFE-LMD learning outcomes, as statements of what a learner knows, understands and is able to do upon completion of the learning process.

Table 2: Desk research reporting form | bike-based LMD relevant online job descriptions (incl. example)

Source	Sector	Requirements (skills demand)	Responsibilities
https://packaly.com/become-a-bike-courier/	CEP	<ul style="list-style-type: none"> - A business registration number or registration through our partner - Your own bicycle to deliver on - A smartphone with iOS 12+ or Android 6+ <ul style="list-style-type: none"> - A Packaly backpack - Safety equipment (e.g., helmet, bike lights) <ul style="list-style-type: none"> - You need to be 18+ - A great attitude and a big smile 	<ul style="list-style-type: none"> - Deliver retail parcels - Use Packaly’s Rider App



4.3. COLLECTION OF EVIDENCE ON EXISTING TRAINING PROVISION FOR LMD CYCLISTS

This activity aims to identify the current level of green/safety skills among last mile bike riders by:

- c) Reviewing the availability and content of existing educational and VET courses (formal educational provision), incl. also broader LMD courses currently offered in the EU, to identify green/safety components, and evaluate whether they have the potential to equip new recruits with the relevant skills to support the CEP sector.
- d) Reviewing non formal training provision, such as commercial, online courses, seminars, and workshops to evaluate their effectiveness in addressing existing LMD workers' skills needs as regards safety and sustainability.

The focus will be on courses & seminars provided by CEP companies (e.g., Deliveroo Rider Academy, VELOVER, DHL courses) and cycle training programs offered by public administrations & civil organisations (e.g., Bikeability). The rationale is that educational offerings can act as a proxy measure of skills supply. Follow-up interviews with CEP trainers & in-house mentors will be conducted by BGZ, UZ and ECF, to provide additional insights and validate pre-existing evidence.

The data will be gathered from secondary sources of information, such as academic and online course directories (e.g. academiccourses.com), academic publications, study guides, learning materials, and university brochures. All partners will contribute with evidence from own country, while ECF will review the available course offerings from the EU-27 and BGZ will compile the collected data. Similar to the research on skills requirements, a common approach will be employed for documenting information on existing training programs.

Project partners should collect, analyse and present the outcomes of the data analysis for their own country, before forwarding country-specific data and outcomes to the Task Leader (BGZ).



Table 3: Desk research reporting form for presenting information gathered on existing green/safe LMD training provision for bike-based LMD workers

Course title:	
Qualification / Accreditation / Certificate	
Institution / Provider	
Provider's legal status	<input type="checkbox"/> Public <input type="checkbox"/> Private
Country	
Type of learning	<input type="checkbox"/> Higher Education <input type="checkbox"/> Vocational and Education Training (VET) <input type="checkbox"/> Online course (e.g. MOOC) <input type="checkbox"/> Seminar <input type="checkbox"/> Workshop <input type="checkbox"/> Other (please specify)
Mode of study (check all that apply, e.g. in case of blended learning)	<input type="checkbox"/> Classroom-based learning <input type="checkbox"/> Distance learning <input type="checkbox"/> Blended (classroom and distance learning) <input type="checkbox"/> Combined (classroom-based and apprenticeship) <input type="checkbox"/> Work-based learning <input type="checkbox"/> Other (please specify)
Duration	
Scope of course	
Target audience	
Core Modules / Topics addressed	(please fill in all information available)
Knowledge/skills/competences (to be) obtained upon the completion of training	(please fill in all information available)
Source	(link)

(Please copy the table as many times as needed)



Table 4: Example: “Vocational training and validation of knowledge and competences in CEP sector”

Course title: Basics on how to use the Armadillo safely	
Qualification / Accreditation / Certificate	
Institution / Provider	Velove
Country	Sweden
Type of course	Non-formal
Mode of study (check all that apply, e.g. in case of blended learning)	<input type="checkbox"/> Class-based learning <input type="checkbox"/> Work place-based learning <input checked="" type="checkbox"/> Online course (e.g. MOOC) <input type="checkbox"/> Other type of distance learning
Duration	45 hrs.
Scope of course	Learn about what is unique about the Armadillo e-cargobike, ride safely and develop skills needed to get the most out of the bike.
Target audience information	Bike-based LMD professionals
Core Modules / Topics addressed	<ul style="list-style-type: none"> - Safety - Riding efficiently - Customer communication - Correct use of equipment
Knowledge/skills/competences (to be) obtained upon the completion of training	<p><u>Knowledge</u> Upon successful completion of the program, learners will know/be familiar with:</p> <ul style="list-style-type: none"> - Fundamentals of using the Armadillo bike, - Benefits of the Armadillo in terms of environmental protection <p><u>Skills / Competences</u> Upon successful completion of the program, learners will be able to work with an Armadillo in a variety of conditions of escalating complexity:</p> <ul style="list-style-type: none"> - Basic handling skills in different weather conditions - Basic handling skills in case of faulty bike/equipment - Communication skills for customer satisfaction - Maximizing uptime.
Source	https://www.velove.se/velover



5. FIELD RESEARCH

Field research will be carried out to examine LMD skills needs and work environment realities. This research activity has a threefold purpose: a) to determine the most valued and needed vertical and transversal skills in the bike-based CEP field, b) to highlight existing skill imbalances in the labour market, and c) to pinpoint green and safety training realities & recruitment difficulties in the CEP sector. Field research will comprise an online survey and interviews with LMD employers and knowledgeable experts.

5.1. SURVEY ON LMD SKILL NEEDS AND WORK ENVIRONMENT REALITIES

5.1.1. FORMAT

A structured questionnaire (Annex A) will be the main instrument for gathering survey data. The questionnaire will be used to establish a structured, organized and well-documented way to collect insights on actual workplace requirements, difficulties to recruit and retain staff and future priorities/tendencies in the bike-based CEP field.

A web-based approach will be employed for reasons of practicality, and to facilitate data collection, coding, and analysis process. The questionnaire is structured in a clear and simple manner to encourage participation and facilitate communication with target groups. Direct communication (by e-mail or phone) with survey respondents shall take place to establish an initial contact, allowing also to ask for additional evidence or clarifications on certain aspects concerning the set of skills and competences that bike-based LMD workers need to possess to work with safety.

The survey questionnaire comprises of mostly close-ended questions, as they are easier and quicker for respondents to answer, offer better coding, analysis and comparison possibilities, and can clarify question-meaning for respondents through response choices. Open-ended questions are included, so as to let respondents locate skills that are not covered in the built-in questionnaire and pre-defined statements. To ensure consistency and facilitate data analysis, the questionnaire will be developed, communicated and completed in English. Where feasible, and in cases where communication can only be established in national language(s), project partners may translate both the questionnaire and responses (in case of additional comments, communication, etc.).

5.1.2. THEMATICS

The questionnaire employs and is developed in such a way to explore the following themes:

- a) Cycling/Safety Skills : road safety, driving behavior, equipment maintenance and service
- b) Green Skills: Selection of routes, environmental protection rules, energy efficient driving, use software/applications



- c) General Delivery : Communication and interaction with customers, compliance with hygiene standards, use route planning technologies, secure equipment and orders, time management, handle payments, familiarity with EU regulations

IMPORTANT NOTICE: Partners shall protect personal data and respect privacy, in full compliance with the provisions of the applicable EU legislation (“General Data Protection Regulation”). This means that the survey shall be communicated to target groups and stakeholders through emails to those subscribed in partners’ contact lists, emails to generic business email addresses (e.g. enquiry@ or info@), and posts in project’s, partner organizations’ (incl. affiliates) and third parties’ social media and websites.

5.1.3. TARGET GROUPS

According to the scope and objectives, the main groups that should comprise the target population of the survey are the following:

Table 5: Target groups of the survey

LMD bike/ e-bike professionals	VET and WBL providers	Companies	Sectoral actors and Social Partners
Formal LMD workers using conventional & electric bikes, cargo bikes, and pedal vehicles.	Training departments of CEP companies	Public & private enterprises active in urban logistics	EU/National organizations representing the CEP industry
Informal LMD workers using conventional & electric bikes, cargo bikes, and pedal vehicles.	Training institutions that provide bike rider training	Food, retail companies with own delivery services	Trade unions
	Territorial administrations or schools that organize cycling courses		Associations of employers
	Cycling Instructors		Accreditation bodies
	Civil organizations offering employment opportunities to groups with fewer opportunities		



5.1.4. GEOGRAPHICAL SCOPE AND SAMPLING

According to the SAFE-LMD Application Form, the sample shall be primarily drawn from the countries represented in the project consortium (Germany, Greece, Austria, Croatia, Belgium), and secondarily from the rest EU countries.

The minimum number of responses to be collected must be no less than 150, in order to reach the Key Performance Indicator (KPI) prescribed in the Application Form, and meet project expectations.

The distribution of answers among the project partners will be based on:

- a) Partners' type of organisation (e.g. university, association, educational authority VET provider)
- b) Partnership countries' population
- c) Partners' capacity to reach stakeholders, as demonstrated from their participation/access to relevant networks and associations.

Table 6: Factors that determine answers' distribution among project partners

Partner	Type of organisation	Country	Population	Networks
BGZ	Non-governmental organisation/association	Germany	83,190,556	Berlin-Brandenburg Association of Transport and Logistics, Berlin Agency for E-mobility and the Chamber of Commerce and Industry of Berlin, State of Berlin, Berlin Chamber of Small Businesses and Skilled Crafts, VLS-network of Teachers for Forwarding and Logistics, German Branch of the International Organization for Migration
EXELIA	Small and medium sized enterprise	Greece	10,678,632	Private and public vocational training institutions (IEK), Association of Greek Transportation Specialists (HITC)
ECQA	Small and medium sized enterprise	Austria	8,935,112	Job Role Committees (JRC)
UZ	Higher education institution (tertiary level)	Croatia	3,888,529	Croatian Post Inc., DPD Croatia, City of Zagreb



ECF	Non-governmental organisation/association	Belgium	11,492,641	Cycle-Friendly Employer Consortium, Scientists for Cycling network, Network of Cities and Regions for Cyclists, Cycling Forum Europe, Women in Cycling
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Taking into consideration the above factors (i.e. population distribution, type of organisation, partners' access to stakeholders), an indicative target number of answers per consortium country and project partner is presented in the following table.

Table 7: Target number of answers per consortium country and project partner

Partner	Country	Target number
BGZ	Germany	40
EXELIA	Greece	27
ECQA	Austria	27
UZ	Croatia	21
ECF	Belgium	35
TOTAL		150

5.2. INTERVIEWS WITH CEP TRAINERS AND IN-HOUSE MENTORS

5.2.1. FORMAT AND THEMATICS

An interview-based research on how the CEP sector recognizes/handles green and safety skills requirements will be launched, with BGZ, UZ and ECF each conducting 2-3 interviews to provide additional insights and validate pre-existing evidence.

The rationale is that interviews can help to collect in-depth qualitative information, providing increased flexibility and allowing for more detailed answers from respondents. This activity includes the collection of experience-based views and perceptions from CEP trainers and in-house mentors, particularly referring to the type of bike-based LMD skills and attributes that are in high demand in the labor market, as well as the profile of LMD professionals.

CEP companies' trainers and in-house mentors will be asked to contribute to the research by reporting their experiences in training candidates with the skillset required to work as a LMD rider. As already mentioned, their extended knowledge on the matter will be recorded through a purpose made questionnaire (Annex B), addressing a number of issues such as a) the job profile of bike-based



professionals in LMD, b) the identification of the most valued green and safety skills, and c) evaluating available training provision and its effectiveness to address skill shortages.

Guidelines for conducting the interviews:

1. Get prepared for the interview. Be sure about the type of information you want to obtain through the interview and to whom you are going to speak. Before the interviews, partners should gather basic facts about the interviewee's professional profile.
2. Inform the interviewee about the scope of the survey and the means you will use to record his/her views.
3. Choose the most appropriate methods to record interviewees' answers. Recording answers can be done by taking notes, audio or video recording. Taking notes allows the interviewer to record the most critical points from the discussion, whilst making the production of the final report easier as there is no need to go through large files of transcripts.
4. Build a rapport with the interviewee. It is important to use words and actions that will make the respondent feel welcome and give him the desire to commit to the discussion, in order to gain the interviewee's confidence and get useful insights about the topic under investigation. To build a rapport, you can also conduct the interview in a comfortable and open space, offer amenities to the interviewee, and inform the interviewee when the results will be published and how he/she can have access to them.
5. Ask questions that lead to targeted answers. Phrase questions in a way that you will receive detailed answers rather than simple "Yes" or "No". It is recommended that you should focus on the aspects that you have not managed to retrieve sufficient information during the stage of desk research. Keep in mind that the purpose of the interviews is to find out the needed green/safety skills and training requirements for bike-based LMD professionals.
6. Time to end the interview. It is important to know when you must end the interview. This may occur the time you understand that the interviewer feels tired with the process or he/she does not provide any new information. A good practice is to summarize the key points and provide the respondent with a last opportunity to complement/expand or clarify any already mentioned points.

* Upon the completion of interviews, project partners need to prepare a summary report, presenting the answers provided by respondents and highlighting the main conclusions drawn from the discussion.

5.2.2. TARGET GROUPS

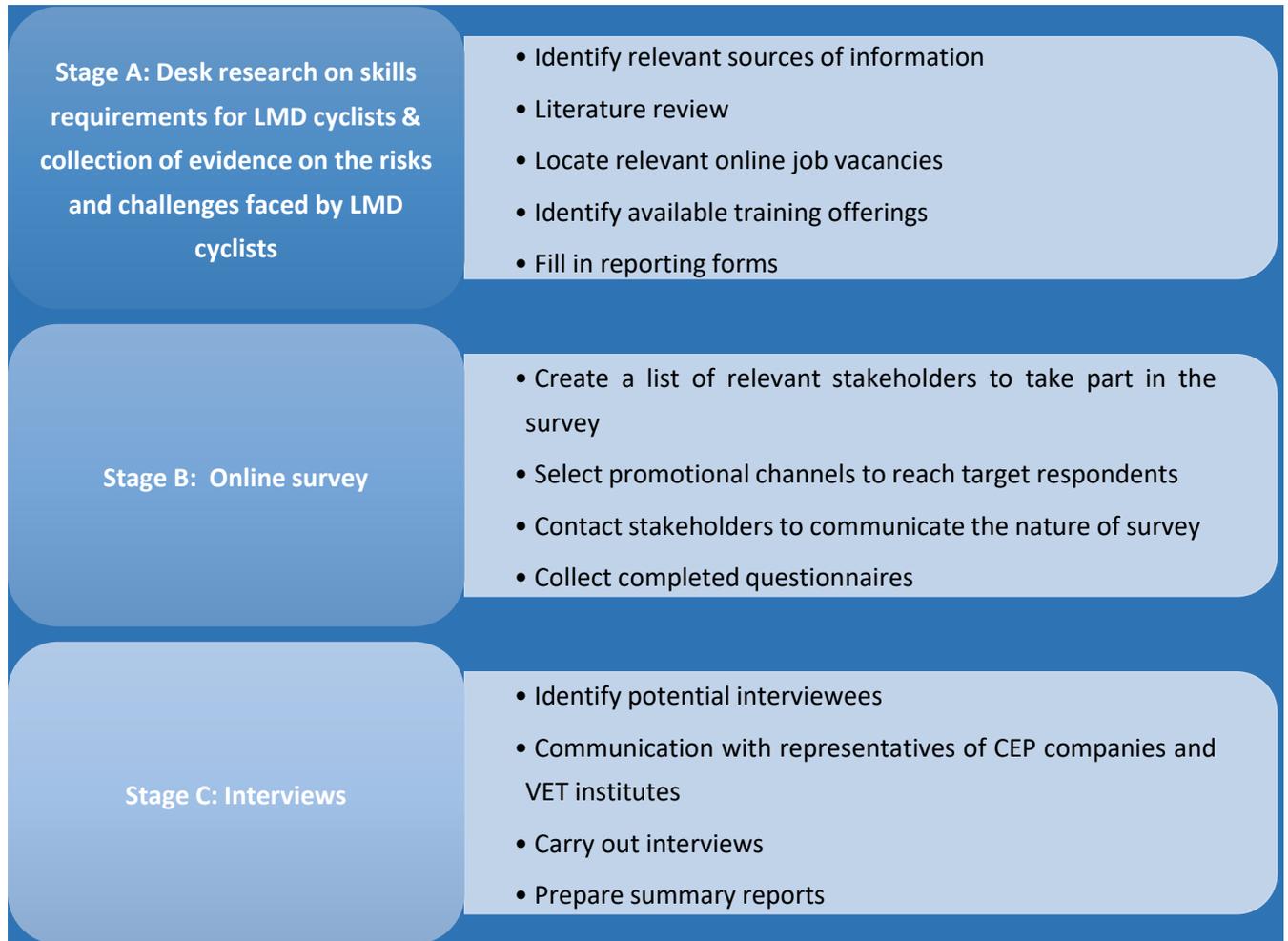
The target audience to get involved in semi-structured interviews are exclusively CEP trainers and in-house mentors.

6. RESEARCH STAGES AND IMPLEMENTATION STEPS

Research will be implemented in 3 stages to guarantee the collection of adequate VET and occupational evidence that will provide an informed basis for the formulation of the SAFE-LMD common competence matrix for the occupational profile of workers in bike-based last mile deliveries.



Figure 2: Stages of research to formulate SAFE-LMD LMD common competence matrix





7. DATA COLLECTION TARGETS AND KPIs

To ensure the quality of data collection and results, it is pertinent for all partners to have a clear perception of research objectives. To this end, a series of quantitative data collection targets have been set to guide green/safety skills gathering activities, and evaluate the achievement of activity goals against the defined Key Performance Indicators (KPIs) in the SAFE-LMD Application Form.

Table 8: Key Performance Indicators (KPIs) per partner

Partner	Desk research on challenges and skill needs (Literature review)	Desk research on online job vacancies	Desk research on educational & training offerings	Field research: Online Questionnaire	Field research: Interviews
BGZ	3 articles/sources	3 online job vacancies	Evidence from own country	22-25 completed questionnaires	2-3 Follow up interviews
EXELIA	3 articles/sources	3 online job vacancies	Evidence from own country	25-30 completed questionnaires	*Optional
ECQA	3 articles/sources	3 online job vacancies	Evidence from own country	23-25 completed questionnaires	*Optional
UZ	3 articles/sources	3 online job vacancies	Evidence from own country	25-30 completed questionnaires	2-3 Follow up interviews
ECF	3 articles/sources	3 online job vacancies	Evidence from EU-27	15-20 completed questionnaires	2-3 Follow up interviews
TOTAL	15 articles/sources	15 online job vacancies	Min. 30 training offerings	125-150 completed questionnaires	Min. 6-9 Follow up interviews



8. IMPLEMENTATION CHART

Table 9: Chart of implementation for Result 1 (R1)

	Partners / Months	Mar 22	Apr 22	May 22	Jun 22
R1: Common competence framework for workers in Urban bike-based last mile deliveries	BGZ				
Research methodology to guide additional skills intelligence gathering activities in bike-based LMDs (R1-T1)	EXELIA				
Provide feedback on research methodology (R1-T1)	All partners				
Coordination and compilation of collection of evidence on work environment requirements for LMD cyclists (R1-T2)	BGZ				
Collection of evidence on work environment requirements for LMD cyclists (R1-T2)	All partners				
Update online registry (R1-T2, R1-T3)	EXELIA				
Collection of evidence on existing training provision for LMD cyclists in own country (R1-T3)	BGZ, UZ, EXELIA, ECQA				
Review course offerings from EU-27 (R1-T3)	ECF				
Conduct 2-3 follow-up interviews with trainers (R1-T3)	BGZ, UZ, ECF				
Conduct follow-up interviews (optional)	EXELIA, ECQA				
Definition of a common competence framework for LMD cyclists (R1-T4)	BGZ				
Contribute to skills requirements definition (R1-T4)	UZ, ECF				
Provide feedback on common competence framework (R1-T4)	All partners				



9. REGISTRIES TO STORE SKILLS INTELLIGENCE

EXELIA will set up and update an online registry to store skill/training evidence gathered within R1. The registry will provide an open access point for information on sustainable/safe LMD skills needs & training provision.

For this purpose, the free of charge and openly accessible tool “Airtable” is recommended to be used. Each partner will have viewing access and will send their respective research findings relevant to skill needs/training offerings to EXELIA, who will be responsible for updating the registry.



Name	Name of organisation	Country	Attachments	Date of entry	Email	Type of adult provider	Comments
1	IAF	Lithuania		20/3/2022	prsc.pavadiuotoja@gmail.com	VET provider	
2	IAF	Lithuania		20/3/2022	ingaja@gmail.com	VET provider	



ANNEX A: SURVEY QUESTIONNAIRE

What is the purpose of this survey?

The purpose of this survey is to determine the set of skills, knowledge and competences required by Last Mile Delivery (LMD) cyclists to respond to new work environment requirements and ensure accident-free routes. Your input will aid the SAFE-LMD partnership construct a common competence (framework) matrix for the occupational profile of workers in bike-based last mile deliveries leading to the development of learning outcomes for the design of a SAFE LMD curriculum to be embedded into existing formal & non-formal training provision.

Who should participate?

LMD cyclists, VET providers, employers and employees, head of trainer departments and workplace trainers, representatives from Courier, Express and Parcel Services (CEP) companies, as well as field experts (bike retailers, Cycle Logisticians, cycling instructors etc.), academics, and researchers.

How long does it take?

Approximately 10 minutes.

Thank you very much in advance for your participation and valuable contribution!

All participants (by providing their email) will have early access to SAFE-LMD learning outcomes and the online course!

10.1. RESPONDENT PROFILE

10.1.1. Country

10.1.2. Email *(Optional, provide in case you want to have early access to SAFE-LMD learning materials and the online course)

10.1.3. What is your job function?



- CEP employer / company owner
- Food/Retail employer/ company owner
- Executive officer / manager in a CEP company
- Executive officer/ manager in a food/retail company
- Executive / member of a sectoral organisation (e.g. professional union, trade association)
- Academic / Researcher in logistics
- Academic/Researcher in transport/ transportation engineering
- Field expert / Consultant in logistics
- Field expert / Consultant in transport/ transportation engineering
- Last Mile employee/ worker
- Representative of urban logistics
- Cycling Instructor/ Road safety instructor
- Other (please specify)

10.1.4. What is the type of your organization?

- CEP company
- Food/Retail company with own delivery services
- Public administration Education/Training provider
- Sectoral association
- Professional union
- Other (please specify)

10.1.5. If you are an employer or executive officer or HR manager, how many Last Mile workers does your company have?



- None
- 1-4 employees
- 5-9 employees
- 10-20 employees
- 21-49 employees
- More than 50 employees
- Do not know / Do not want to answer

10.2. FAMILIARITY

10.2.1. How familiar are you with LMD services?

- Very familiar
- Somehow familiar
- Slightly familiar
- Not at all familiar

8.2.2 Have you ever worked in LMD or related services?

- Yes
- No

10.2.3. How many years of work or research experience do you have in LMD-related projects/services?

- No experience
- < 1 year
- 1-2 years



- 3-4 years
- 5-6 years
- > 6 years

10.3. KNOWLEDGE / SKILL REQUIREMENTS

10.3.1. In your experience, to what extent do LMD cyclists need to have the skills to:

	Very high	High	Average	Low	Very low
Cycling/Safety Skills					
Understand national safety requirements concerning condition of vehicles, equipment and cargo (including preventive vehicle maintenance checks and energy wasting damages)	○	○	○	○	○
Follow road safety regulations and adopt a safe driving behavior	○	○	○	○	○
Maintain equipment	○	○	○	○	○
Work in extreme weather conditions cycling	○	○	○	○	○
Manage fatigue	○	○	○	○	○
Follow measures to avoid recurrence of traffic accidents and violations	○	○	○	○	○
Understand procedures to follow in case of an accident	○	○	○	○	○
Be familiar with health, safety and first aid techniques	○	○	○	○	○



Use proper driving posture	<input type="radio"/>				
Green Skills					
Select routes based on sustainability	<input type="radio"/>				
Follow environment protection rules in packaging operations	<input type="radio"/>				
Apply energy efficient driving techniques	<input type="radio"/>				
Use software/applications aiming to reduce energy waste	<input type="radio"/>				
General Delivery Skills					
Communicate effectively with employers	<input type="radio"/>				
Interact with customers/ Customer service (including knowledge of customer privacy regulations)	<input type="radio"/>				
Comply with hygiene standards (e.g. food conservation)	<input type="radio"/>				
Use route planning technologies (GPS and other navigational applications), as well as other digital devices	<input type="radio"/>				
Load, organize and secure equipment and orders	<input type="radio"/>				
Be efficient in time management	<input type="radio"/>				
Exhibit problem-solving skills and resilience under pressure	<input type="radio"/>				



Be licensed to drive	<input type="radio"/>				
Handle payments and fraud	<input type="radio"/>				
Be familiar with carrier liabilities and return policies	<input type="radio"/>				
Be familiar with EU & national CEP regulations & legislation (e.g. registration of e-bikes, health record requirements)	<input type="radio"/>				

10.3.2. In your experience, what additional skills (other than those discussed above) do LMD cyclists need to have/acquire to work safely and environmentally-conscious?

10.4. CURRENT SUPPLY (KNOWLEDGE AND SKILLS)

In your experience, to what extend do LMD cyclists have the following skills?

	Very high	High	Average	Low	Very low
Cycling/Safety Skills					
Understand national safety requirements concerning condition of vehicles, equipment and cargo (including preventive vehicle maintenance checks and energy wasting damages)	<input type="radio"/>				
Follow road safety regulations and adopt a safe driving behavior	<input type="radio"/>				
Maintain equipment	<input type="radio"/>				



Work in extreme weather conditions cycling	<input type="radio"/>				
Manage fatigue	<input type="radio"/>				
Follow measures to avoid recurrence of traffic accidents and violations	<input type="radio"/>				
Understand procedures to follow in case of an accident	<input type="radio"/>				
Be familiar with health, safety and first aid techniques	<input type="radio"/>				
Use proper driving posture	<input type="radio"/>				
Green Skills					
Select routes based on sustainability	<input type="radio"/>				
Follow environment protection rules in packaging operations	<input type="radio"/>				
Apply energy efficient driving techniques	<input type="radio"/>				
Use software/applications aiming to reduce energy waste	<input type="radio"/>				
General Delivery Skills					
Communicate effectively with employers	<input type="radio"/>				
Interact with customers/ Customer service (including knowledge of customer privacy regulations)	<input type="radio"/>				



Comply with hygiene standards (e.g. food conservation)	<input type="radio"/>				
Use route planning technologies (GPS and other navigational applications), as well as other digital devices	<input type="radio"/>				
Load, organize and secure equipment and orders	<input type="radio"/>				
Be efficient in time management	<input type="radio"/>				
Exhibit problem-solving skills and resilience under pressure	<input type="radio"/>				
Be licensed to drive	<input type="radio"/>				
Handle payments and fraud	<input type="radio"/>				
Be familiar with carrier liabilities and return policies	<input type="radio"/>				
Be familiar with EU & national CEP regulations & legislation (e.g. registration of e-bikes, health record requirements)	<input type="radio"/>				

10.5. LMD WORKFORCE CHALLENGES

If a LMD worker, what are the main challenges you face in your job? (Select all that apply)

- Lack of real-time coordination
- Handling Ad-hoc requests
- Lack of effective technological resources
- Locating customer addresses
- Strict delivery deadlines



- Meeting customer standards
- Too much competition from other employers in the CEP sector
- Lack of the level of work experience expected by the organisation
- Lack of qualifications expected by the organisation
- Language barriers
- Lack of job security/benefits
- Lack of personal time
- Unfair treatment
- Traffic
- Vehicle/Equipment Breakdown
- Other (please specify)
- Not applicable

10.6. TRAINING / WORKFORCE DEVELOPMENT

10.6.1. If an employer or executive officer / manager, how regularly do you review the skills and training needs of your LMD staff team?

- Every three months
- Every six months
- Annually
- 2-yearly
- Not at all
- Not applicable



10.6.2. What are the main barriers to providing LMD specialized training to your workforce?
(Select all that apply)

- Lack of appropriate training offerings in the CEP field
- Lack of flexible, convenient training offerings in the CEP field
- Training is too expensive
- Employees are too busy to undertake any training and development
- Training is not a priority for our organisation
- No difficulties in providing training to our workforce
- Language
- Other (please specify)
- Not applicable

10.6.3. If an employer or executive officer/manager, what type of contract is most common among your workforce?

- Fixed-term contract
- Full-time contract for an indefinite period
- Part-time contract for an indefinite period
- Agency staff or temporary employment contract
- Zero Hours Contracts
- Self-employment contract
- An internship employment contract
- Apprentice agreement
- No contract
- Other (please specify)



10.6.4. If an employee, what type of contract do you currently have?

- Fixed-term contract
- Full-time contract for an indefinite period
- Part-time contract for an indefinite period
- Agency staff or temporary employment contract
- Zero Hours Contracts
- Self-employment contract
- An internship employment contract
- Apprentice agreement
- No contract
- Other (please specify)

ANNEX B: INTERVIEW GUIDE

Instructions: Let the interviewee tell his/her story in each section and use the follow-up questions below as probes¹. Upon the completion of interviews, prepare a summary report presenting the answers provided by interviewees and highlighting the main conclusions drawn from the discussion, as regards green and safety skills for bike-based LMDs and training requirements.

QUESTIONS

1. When you think of environmental friendly last mile delivery, what kind of vehicles come to mind?

Probe: Bicycle?

E-bike?

Alternatively-fuelled motorbike?

2. Do you think that the demand for LMD workers outpaces supply in the labour market?

¹ Interview probes: An important part of interviewing is following up on things people tell you. Your initial question opens the door to an issue, and your interviewee's response is a first draft of an answer to your question. One that draft is on the table, you need to ask more questions to get the full story (Source: <https://msu.edu/>).



Probe: Why does this happen?

- Recent technology development?
- Complexity?
- Limited training provision?

3. Can you describe the usual job profile of a LMD worker?

4. What kind of delivery skills and competences are in high demand today?

Probe: How important is the use of technology applications?

How significant are communication skills?

5. Which are the main factors hindering the safe use of green methods in the CEP sector?

Probe: High financial cost

Availability/access to resources

Lack of sufficient training

6. Is there enough training supply for green LMD safety-related skills? Who should be responsible for offering training in this field?

Probe: Higher Education Institutions?

Vocational Education & Training (IVET & CVET)?

Commercial courses?

MOOCs or/and online courses?

7. Could you share your insight into the socioeconomic status of the LMD workforce?

Probe: Contract type?

Job safety?

Thank you for your time. Do you have any questions that you would like to ask of me?



ANNEX C: INVITATION EMAIL

Subject: SAFE-LMD project – Invitation to participate in a survey on green/safety skills in bike-based LMDs

Dear Sir/Madame,

We would like to invite you to take part in a survey on the most needed green/safety skills to work in bike-based LMD, and labor market realities.

The global surge in e-commerce has resulted to an impressive increase in Last-Mile Deliveries (LMD), rendering the Courier, Express, Parcel (CEP) sector one of the fastest developing and most profitable in the EU, with annual revenues of 79 billion euros & over 1.4 employees. In order to minimize CO2 emissions, a number of EU cities (e.g., Berlin, Amsterdam) have pledged to achieve Zero-Emission Deliveries in line with the European Green Deal. Correspondingly, major economic operators (e.g., DHL, IKEA) & SMEs have already switched to conventional & electronic bike-based vehicles for urban deliveries. This new surge has created the need to raise the quality & relevance of vocational training – mainly offered by CEP companies – and provide LMD workers with safety and green skills to respond to new work environment requirements and ensure accident-free routes.

We consider your help vital in identifying the most valued skills related to LMD and the CEP field. Your contribution will assist us to develop a comprehensive and up-to-date training course in LMD safety and related green skills that will be made freely available to the public in 2022.

The survey takes around 15 minutes to complete and will be open until 31 March 2022.

Click here to participate {Insert the link of the online questionnaire}

Thank you very much for your contribution.

Signature

The SAFE-LMD project aims to deliver a joint curriculum and Open Educational Resources (OERs) on sustainable, safe bike-based LMD operations to be embedded into existing formal & non-formal vocational education. The SAFE-LMD project is being funded under Erasmus+.

If you do not wish to participate in this survey and don't want to receive any more invitations please send an e-mail with subject "Unsubscribe from SAFE-LMD list" to {email account to be used by each partner – e.g. exelia@gmail.com}



ANNEX D: Reporting form for skills and challenges form desktop research

Type	Title	Author	Source	Sector/ Occupation	Skills Requirements	Risks and Challenges
Article						
					-	
					-	
					-	
					-	
					-	



ANNEX E: Reporting form for bike-based LMD relevant online job descriptions from desktop research

Source	Sector	Requirements (skills demand)	Responsibilities
		-	-



ANNEX F: Reporting form for information gathered on existing green/safe LMD training provision for bike-based LMD workers

Course title:	
Qualification / Accreditation / Certificate	
Institution / Provider	
Provider's legal status	<input type="checkbox"/> Public <input type="checkbox"/> Private
Country	
Type of learning	<input type="checkbox"/> Higher Education <input type="checkbox"/> Vocational and Education Training (VET) <input type="checkbox"/> Online course (e.g. MOOC) <input type="checkbox"/> Seminar <input type="checkbox"/> Workshop <input type="checkbox"/> Other (please specify)
Mode of study (check all that apply, e.g. in case of blended learning)	<input type="checkbox"/> Classroom-based learning <input type="checkbox"/> Distance learning <input type="checkbox"/> Blended (classroom and distance learning) <input type="checkbox"/> Combined (classroom-based and apprenticeship) <input type="checkbox"/> Work-based learning <input type="checkbox"/> Other (please specify)
Duration	
Scope of course	
Target audience	
Core Modules / Topics addressed	(please fill in all information available)
Knowledge/skills/competences (to be) obtained upon the completion of training	(please fill in all information available)
Source	(link)