

International Conference The Science and Development of Transport ZIRP

Hotel International, Hall MARKET A

8 December 2023







Partners





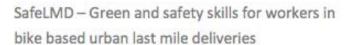


- BGZ Berliner Gesellschaft für internationale
 Zusammenarbeit Project lead
- EXELIA E.E. Project consultancy
- ECQA provides a world-wide unified certification schema for numerous professions
- University of Zagreb experts in logisitics
- European Cyclcists' Federation Cyclist NGO with expertise in safety

Website: https://safelmd.eu

Duration: 2021-2024

Donors: EU Commission – Erasmus+



The booming online trade is transforming the logistics industry and creating new job profiles. The last mile in the supply chain is progressively being taken over by bicycle couriers. This reduces the ecological footprint and makes economic sense, but an increase in bicycle traffic on the roads unfortunately also leads to an increase in accidents.

Job offers for bicycle couriers often merely require reliability and a roadworthy bicycle; at most some companies might offer special inhouse training and further education for this target group.



Vocational training in the EU needs to respond to the changing labour market. How should a tailor-made training for couriers be conceptually designed? How can aspects of safety and environmental protection be integrated into these concepts? What forms of teaching are suitable for this target group? And finally: How to certify the acquired qualifications and competences?

The European partnership of "Safe-LMD" wants to show which competences the bicycle couriers need and how a tailor-made education and training has to look like. In the project, a common competence framework, occupational profile, syllabus and online course with learning material for self-study, a trainer's manual and a scheme for the online examination are being created. All materials will be made available online as an open educational resource in six languages.

Implemented in: Germany, Austria, Belgium, Croatia, Greece

Duration: 2021-2024

Coordination:

BGS Berliner Gesellschaft für Internationale Zusammenarbeit mid

Contact:

Or. des. Destino Tel.: +49 30 80 99 41 18 eMmil: destino8bgr-berlin.de

Project website:

http://mafelmd.eu

Donors

European Commission - Brasmus-

Transmational partners in: Austria: SCDA GmbH Belgium: European Cyclisia' Greece: SXELIA 3.2. Croatia: University of Zagreb









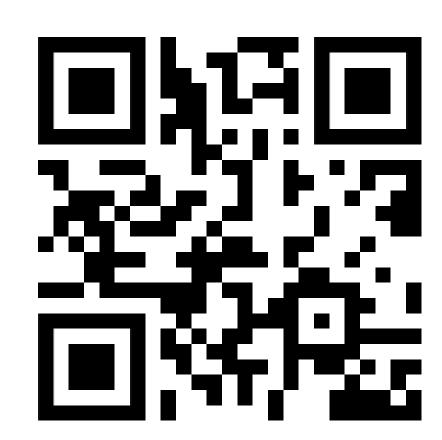
Moto Credit: City Food Lieferwy Rit des Patryal - Stockfolm D Littock.non-1183358335/Disease Stockformin





Results

- A **common competence framework** with occupational requirements for workers in bike-based last mile deliveries.
- Evidence-based, measurable, assessable learning outcomes for VET provision in last mile bike deliveries.
- Curriculum with formal VET learning units on cycle logistics for LMD workers.
- Open Education Resources (Trainers Handbook) for formal and nonformal training delivery and learning in LMD methods.
- Vocational Open Online Course infrastructures & content and an e-book for learners in all partnership languages (incl. Arabic).
- Online examination portal, and ECQA-SAFE LMD Certificate to validate the acquired competences of LMD cyclists
- A statement of support for the social recognition of LMD cyclists' occupational profile & skills requirements.



https://safelmd.eu











- Design of a vocational curriculum with Open Educational Resources (OERs)
- Development of a self-paced online course, enhancing VET suitable to the sector specificities

What next?

- Testing and delivery of a self-paced online course (Thinkific Platform)
- Sectoral recognition of LMD cyclists' skills requirements (national framework)
- Update occupational profiles for the European Classification of Skills, Competences, Qualifications and Occupations (ESCO)
- Setup an **online examination portal, and online examination scheme** for the recognition of LMD cyclists' skills
- Involvement of key stakeholders for the recognition of SAFE-LMD learning outcomes and for supporting the inclusion of the new occupational profile in qualification schemes
- Sharing of outputs with multiplier events, implement measures accompanying the project dissemination, validation of the results and implementation in the national VET systems.





Activities

In the project, the partners implement the following activities:

- Identify the concrete requirements for the job profile of bicycle courier
- Produce a European curriculum for sustainable and safe last mile delivery based on digitally accessible and free Open Educational Resources (OERs)
- Develop and pilot test an online self-learning course for LMD cyclists and provide recommendations for the further design of teaching and learning opportunities
- Sectoral recognition of green & safety skills requirements for LMD cyclists
- Operate an online assessment portal to validate the acquired competences of LMD cyclists
- Update of relevant occupational profiles for the European Classification of Skills, Competences,
 Qualifications and Occupations (ESCO) and creation of qualification specs for LMD cyclists
- Implement measures accompanying the project for dissemination, validation of the results and implementation in the national VET systems.

Dono

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Activities

> Results

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Statement



This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Significance of a Common Competence Framework and Curriculum for Workers in Urban Bike-based Last Mile Deliveries

- Ambitious goal to achieve climate neutrality by 2050 and to transform the economy for a sustainable future.
- Member States commit to create green jobs and cut greenhouse gas emissions.
- The European Classification of Occupations, Skills and Competences (ESCO) supports the labellisation of green skills and knowledge concepts (dataset of ESCO Skills).





Are you familiar with ESCO? ESCO sub-group (933) "Transport & storage labourers"

Vote on the Mentimeter!





European Classification of Occupations, Skills and Competences (ESCO)

Home > The ESCO Classification > Occupations **Occupations** Search occupations Q Search Find 0 - Armed forces occupations bicycle courier 1 - Managers Labourers in mining, construction, manufacturing and transport > Transport and storage labourers > 2 - Professionals Hand and pedal vehicle drivers > bicycle courier > 3 - Technicians and associate professionals Description 4 - Clerical support workers Code 5 - Service and sales workers 9331.1 6 - Skilled agricultural, forestry and fishery workers Description Bicycle couriers collect and deliver packages and mail by bicycle. 7 - Craft and related trades workers Alternative Labels 8 - Plant and machine operators and bike courier cycle messenger bicycle messenger bike messenger 9 - Elementary occupations bicycle courier bicycle dispatch rider bicycle package carrier

bicycle courier

Regulatory Aspect

To see if and how this occupation is regulated in EU Member States, EEA countries or Switzerland please consult the Regulated Professions Database of the Commission. Regulated Professions Database:

http://ec.europa.eu/growth/single-market/services/free-movement-professionals/qualifications-recognition_en

Skills & Competences

Essential Skills and Competences

ensure the integrity of mail analyse travel alternatives act reliably

interpret traffic signals communicate with customers drive two-wheeled vehicles

differentiate types of packages obey traffic rules

Essential Knowledge

geographic areas road traffic laws

Optional Skills and Competences

handle delivery of furniture goods operate GPS systems handle fragile items

drive in urban areas handle delivered packages process payments

follow written instructions organise mail deliveries

solve location and navigation problems by using GPS tools check deliveries on receipt

operate mailing information systems handle mail

bicycle courier.pdf (europa.eu)





Green Skills and Knowledge Concepts





"Action 6 of the **Skills Agenda** emphasises that the green transition requires investments in skills of people and presents a set of concrete actions to support the acquisition of skills for the green transition, including through the definition of a taxonomy of skills for the green transition".

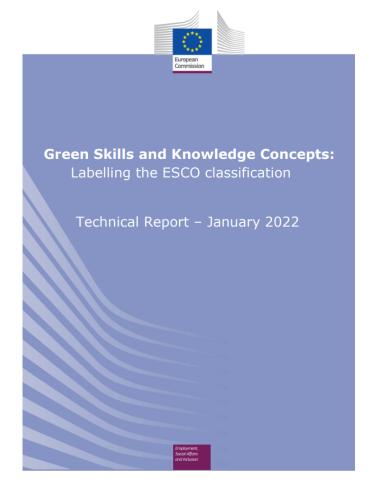
With the **European Green Deal** in 2019, the EU presented a set of policies to drive investments towards a **just and inclusive transition**. As the transition is bringing fundamental transformations in the European economic model, **new jobs are created**, while some jobs are replaced, and others are **redefined**.

The European Classification of Occupations, Skills ad Competences (ESCO) responded to this call to action. ESCO skills and knowledge concepts needed to live in, develop and **support a society which reduces the impact of human activity on the environment** (Cedefop, 2012) are now labelled as **green**.





ESCO Green Concepts



With the **European Green Deal** in 2019, the EU presented a set of policies to drive investments towards a **just and inclusive transition**. As the transition is bringing fundamental transformations in the European economic model, **new jobs are created**, while some jobs are replaced, and others are **redefined**.

The Directorate-General for Employment, Social Affairs & Inclusion's response is described in the **European Skills Agenda**, a five-year plan to strengthen sustainable competitiveness, ensure social fairness and build resilience. Action 6 of the Skills Agenda emphasises that the **green transition** requires

- investments in skills of people and
- concrete actions to support the acquisition of skills for the green transition.

The European Classification of Occupations, Skills ad Competences (ESCO) responded to this call to action. ESCO skills and knowledge concepts needed to live in, develop and support a society which reduces the impact of human activity on the environment (Cedefop, 2012) are now labelled as green.



Significance of a Common Competence Framework and Curriculum for Workers in Urban Bike-based Last Mile Deliveries

- SAFE LMD provides a novel basic non-formal, vocational training program in the safe and sustainable last mile delivery operations in urban context that includes
 - interactive teaching methods and piloting with major educational and sectorial organisations,
 - empowering prospective learners with green skills, to embrace the
 development of the profession of LMD courier to come, and through
 transversal skills to face real life challenges, strengthening competences to
 start a career in the LMD industry.

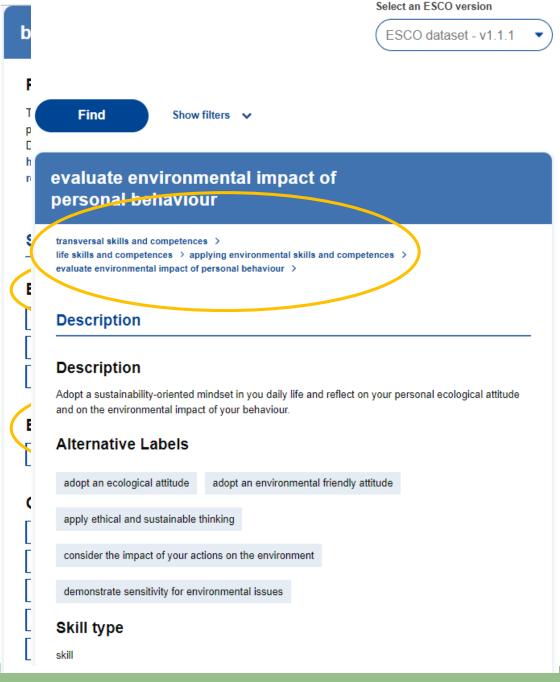




Significance of a Common Competence Framework

Relevant **bicycle courier** professional occupation card defined eu-wide by **ESCO** currently focus on "Essential **Knowledge**" and "Essential **Skills**",

- "Responsibility and Autonomy" is not listed in the occupational card,
- Dis-alignment to the current market needs and trends:
 - need to encompass green skills
 - need to encompass transversal skills, leading towards empowered professionals

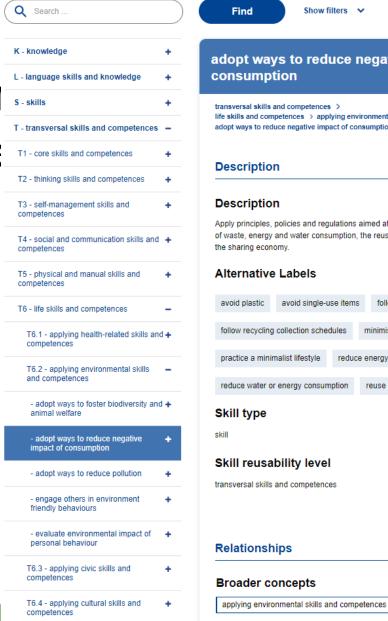


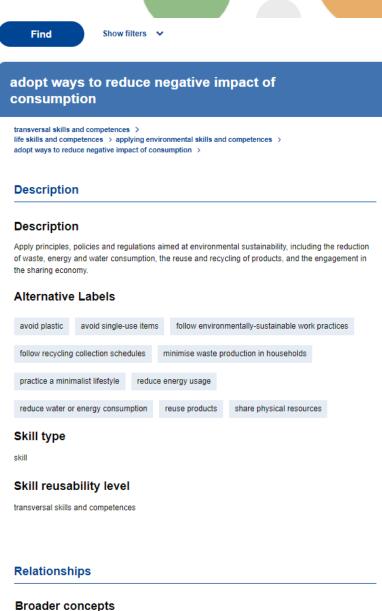




Significance of a Common Framework and Curriculun Bike-based Last Mile Delive

- This creates great opportunities for the sector but also significant gaps in the skills and competences provided by stakeholders - companies and training providers – who too often follow
 - outdated learning objectives
 - non learner-cantered
 - non user-friendly learning methods









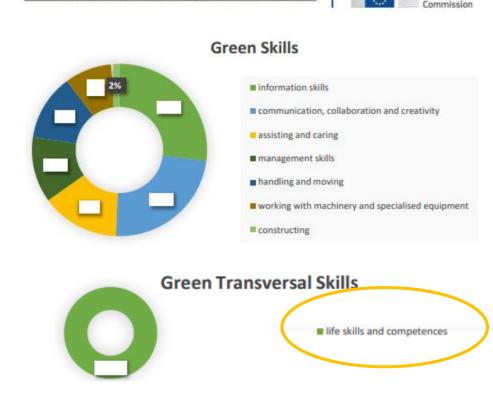
Green, Transversal and Social skills

Green skills and knowledge concepts: the knowledge, abilities, values and attitudes needed to live in, develop and support a society which **reduces the impact of human activity on the environment** (European Centre for the Development of Vocational Training, Cedefop).

Transversal skills: Learned and proven abilities which are commonly seen as necessary or valuable for effective action in virtually any kind of work, learning or life activity. They are "transversal" because they are not exclusively related to any particular context (job, occupation, etc.) (European Skills/Competences, Qualifications and Occupations Classification, ESCO).

The desk research analysis showed that **transversal and social skills** are increasingly in demand in the LMD sector:

- LMD bicycle couriers, will contribute to the green transition of delivery companies, by acquiring green transversal skills (life skills and competences).
- Relevant competences mapped in the matrix are:
 - Communication
 - Teamwork
 - Planning
 - Accountability
 - Client orientation
 - Technological awareness



European Skills, Competences, Qualifications and Occupations





Common Competence Framework

The common competence framework describes **job** related duties and green & safety requirements

Matrix legend

Attitude

The correct attitude, or outlook of the riders, is a required willingness for getting started in competence development. Attitude in turn leads to knowledge development.

Knowledge

This refers to the knowledge gained through training, practice, experience, literature, publications and other sources, such as the internet.

Skill

Skills are the ability to perform a last mile delivery task, by applying the knowledge acquired during training and turning it into actions. This will then inform rider behaviour.

Behaviour

Behaviour is the appropriate conduct for safe and environmentally friendly last mile delivery urban delivery and related actions.

Agency

Agency encourages fast-paced decision making. It facilitates in distinguishing how the human component remains key for efficiency and satisfactory results, even beyond technologised logistics support.

Competence	Attitude	Knowledge	Skill	Behaviour
Efficiency and time management.	Be willing to use innovative technologies. Be flexible, allow for unforeseen delays, arrange back-up solutions and to meet the demands. Be willing to evaluate programmes, equipment to reduce travel time. Maintain a curious, critical mindset.	Master information skills. Know how to use innovative technologies (GPS and digital devices) to improve time management. Recognise importance of selection of bike type in relation to specific urban areas and load. Time management. Knowledge of material and information flows in logistics system. Know how to optimise riding scenarios.	Act to improve journey efficiency and reduce travel time, adopting innovative technologies. Use a variety of bike types to comply with efficiency indicators. Use technologies to optimise materials and information flow. Solve logistic problems with IT tools.	Apply travel alternatives to improve efficiency. Comply with loading plan, weight distribution, time management. Comply with urban access regulations. Resolve problems apply new and creative solutions, avoid occupational stress and fatigue.
- Handling.	Handle cargo with care, including delicate/ dangerous packages to prevent damage.	Knowledge of handling requirements for different types of packages (specialised goods/art/ hazardous, etc). Knowledge of how to move, lifting, sorting materials and products ergonomically/ efficiently.	Ensure the integrity/good condition of packages. Avoid package displacement, damage or loss. Consider differences of packages to foresee the necessary tools required for lifting, securing, handling, delivery.	Comply with recommendations to ensure the integrity of packages, to avoid damage.

common competence framework for workers in urban bike-based last mile deliveries 1.pdf (safelmd.eu)





Target Groups

LMD workers (particularly those operating in fragile "informal" contexts) are severely impacted by the increase in demand and lack of recognized professional frameworks:

 facing difficulties to acquire necessary skills and cope with fast-evolving market requirements

Most informal LMD cyclists likely have

- limited secondary education,
- limited biking abilities,
- limited knowledge of traffic rules and regulations,
- limited knowledge of non-violent communication,
- Difficulty to adopt ICT solutions to navigate the city and to communicating with customers.



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Platform work

Platform work, which is also referred to as the 'gig economy', 'crowd work', or 'on-demand economy', is among the new forms of work increasingly being taken up by young people. It is growing exponentially fast. But platform work often means low and unstable income with no guarantee of having a job tomorrow.

Youth rights



Would you like to know more? Get in touch!



Alex Quinn

<u>Mail me</u>

<u>Platform work | European Youth Forum</u>





Curriculum and educational resources

- Design of a Curriculum Structure
- SAFE LMD training & assessment material
- Handbook for in-house mentors & trainers
- Learner's e-book

Educational resources are:

- 40-60 pages lecture notes,
- 100-130 presentation slides,
- 10-15 case studies,
- 10-15 practical exercises,
- 60-90 multiple choice questions.

Resources per learning units:

- 7-10 pages with lecture notes,
- 17 22 presentation slides,
- 1-3 case studies,
- 1 − 3 practical exercises,
- 10 15 multiple choice questions.

Curriculum Contents

- 1. Knowing goods and packaging
- 2. Handling and administrative procedures
- 3. Road traffic regulations
- 4. Bicycle characteristics
- 5. Basics of safe riding
- 6. Communication skills, customer service
- 7. Social responsibility, entrepreneurship, mentoring





Curriculum

The curriculum places a strong emphasis on transversal skills and social responsibility to empower learners and to lead them to promote safety on the road and sustainable values and in the best case offers them the tools to apply independently skills and competences acquired in complex real life situations.

Curriculum Structure

Learning units	Duration (hours)	ECVET	EQF level
Knowing goods and packaging	6	1	3 or 4
Handling and administrative procedures	6	1	3 or 4
Road traffic regulations	6	1	3 or 4
Bicycle Characteristics	12	1	3 or 4
Basics of Safe Riding	10	1	3
Communication Skills, Customer service	4	1	3 or 4
Social Responsibility, Entrepreneurship, Mentoring	6	1	3 or 4

Learning Unit Structure

Learning unit: Ba	asics of Safe Riding
Unit description	How to safely ride various bicycles in both mixed and separated road infrastructure.
Learning objective	Inform the participants of safe use of various bicycles in both mixed and separated road infrastructure.
Learning outcomes	 To explain safety equipment and set-up on the bicycle. To operate a bicycle in mixed traffic. To evaluate hazards. To negotiate junctions. To plan a safe route.







Learning units	Duration (hours)	ECVET	EQF level	Learning outcomes	Lessons
Knowing goods and packaging	6	2	3 or 4	 To know sorting procedures according to the standard categorisation of goods in handling and transport. To explain basic features of different types of packaging. To understand the principles of determining dimensions and weight of the parcels. To recognise standard marking and labelling of parcels and mail, regarding handling requirements (fragility, temperature, hazard) and priority. To apply safety requirements in handling fragile and hazardous items. 	Basic features of packaging. Marking and labelling. Safety requirements.
2. Handling and administrative procedures	6	2	3 or 4	To identify different categories of goods, parcels and mail. To perform sorting and stacking of parcels according to handling requirements and priority. To select appropriate handling procedure.	Classification and characteristics of goods and mails. Risks and handling requirements. Administrative procedures, documents and liabilities.





LU "knowing Goods and Packaging"

learning unit knowing goods and packaging.pdf (safelmd.eu)

Learning unit: Knowir	ng goods and packaging					
Unit description		dling and transport, basic features of different t I labeling of parcels and mail, safety requiremen	ypes of packaging, determining dimensions and ets in handling fragile and hazardous items.			
Learning objective	respective marking, safety requirements To train participants to determine dimen	corization of goods in handling and transport, bas in handling fragile and hazardous items. Insions, weight, and volume of the parcels, to so and to apply safety requirements in handling for the parcels.				
Learning outcomes	 To explain basic features of diff To understand the principles of To recognize standard marking hazard), and priority. 	cording to the standard categorization of goods ferent types of packaging. If determining dimensions and weight of the para and labelling of parcels and mail, regarding han handling fragile and hazardous items.	cels.			
Lesson 1	lasic features of packaging					
Lessons contribution per learning outcomes	Knowledge The learner knews/ is familiar with/ is able to name or describe	Skills The learner can/ is able to	Responsibilities & Autonomy The learner is responsible for / is able to apply / evaluate			
	Z. To explain basic reactives of	To sort the goods according to the standard categorization in handling and transport	None			
Lesson 2	Marking and labeling					
Lessons contribution	Knowledge The learner knows/ is familiar with/ is able to name or describe	Skills The learner can/ is able to	Responsibilities & Autonomy The learner is responsible for / is able to apply / evaluate			
per learning outcomes	3. To understand the principles of determining dimensions and weight of the parcels 4. To recognize standard marking and labeling of parcels and mail, regarding handling requirements (fragility, temperature, hazard), and priority	None	4. To recognize standard marking and labeling of parcels and mail, regarding handling requirements (fragility, temperature, hazard), and priority			





Online course on sustainable & safe cycle last mile

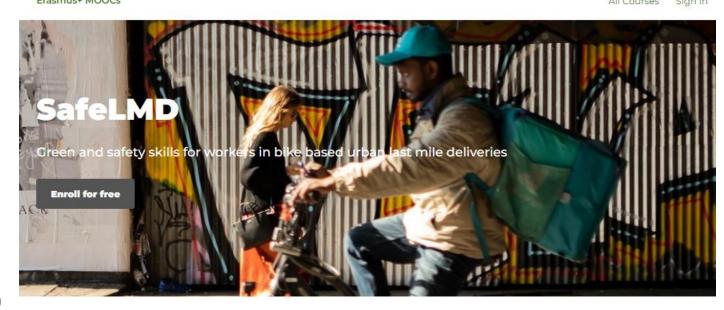
deliveries

Vocational Open Online Course (VOOC) contents & functionalities

- Pedagogical materials for the online course
- pilot run & fine-tuning the safe-LMD Vocational Open
 Online Course (VOOC)

The SAFE-LMD online course comprise learning materials of **40-60** hours (time required to study all materials and complete exercises) and will last approximately **5-6 weeks**.

The duration of each learning unit is 5-7 hours.



SafeLMD curriculum

Introduction to SAFELMD course

SAFELMD Course introductory video

Online course at a glance

Learning Unit 1 Knowing goods and packaging



SafeLMD-Green and safety skills for workers in bike based urban last mile deliveries (thinkific.com)

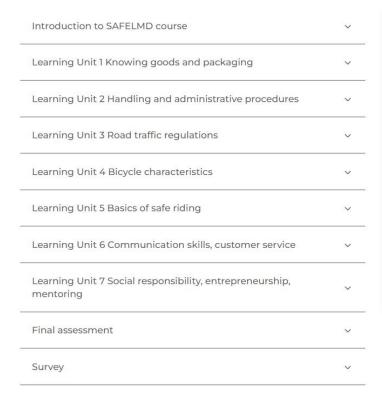




Online course

Erasmus+ MOOCs All Courses Sign In

SafeLMD curriculum





The aim of Safe Last Mile
Delivery is to make cycle
logistics safer and greener.
We develop learning
materials that are tailored to
the needs of LMD cyclists
who can acquire the skills
needed for sustainable
deliveries and safe, accidentfree routes.

	rning Unit 7 Social responsibility, entrepreneurship, ntoring	^
1	Introductory video	
	LU7-Description and learning outcomes	
POF	Lesson 1- Social Responsibility. Sustainable behaviors in urban logistics operations	
PDF	Lesson 2- Entrepreneurship, Sense of Agency	
POF	Lesson 3- Mentoring	
<u></u>	Multiple choice questions	
Fin	al assessment	^
Tx	Instructions on how to take the final assessment	
Sur	vey	^
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사 사 사 사 사	1. Background Information 2. Clarity and comprehensiveness of curriculum structure 3. Usability of materials 4. Clarity 5. Facilitators'roles	^
	1. Background Information 2. Clarity and comprehensiveness of curriculum structure 3. Usability of materials 4. Clarity 5. Facilitators'roles 6. Technical operation of content and communication mechanisms	^





Significance of a Curriculum for Workers in Urban Bike-based Last Mile Deliveries

All actors must take responsibility and embrace the quick transformation by taking advantage of education and business opportunities arising from testing and adopting

- a curriculum for bike-based urban last mile delivery logistic operations
- a certification delivered by ECQA and recognized EU-wide
- an enhanced ESCO "Occupational and Skill card", regulating the professional framework for LMD cyclists.





Significance of a Curriculum for Workers in Urban Bike-based Last Mile Deliveries

- there is no EU-wide certified formal (nor VET training) that is self-paced and learner-centered
- SAFE LMD partners
 - mapped the labour markets' needs (Skill gaps)
 - Designed an effective and tailored (modular) training offer (in line with EQF level 3 4).
- CEP companies and educational institutions/training providers (Austria, Belgium, Croatia, Germany, Greece) commit to **piloting and adopting** the curriculum through the endorsement of a **statement of support** on the recognition of "green & safety" occupational requirements for LMD cyclists.
- New (enhanced) "ESCO Skills card" will ensure alignment to European standards. starting point for the inclusion of LMD cyclist's occupational group into national databases of regulated professions





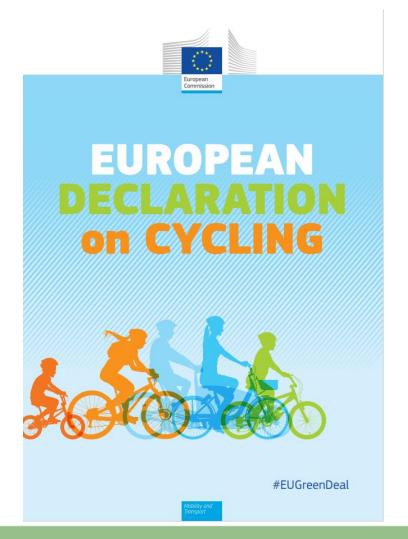
- LMD cyclists' green & safety skills acquired in non-formal & in-formal contexts will be certified by SAFE LMD-ECQA examination
- formation of common educational and occupational standards for LMD workers using bike-based transportation modes in urban last mile deliveries.
- promote the supply, quality and relevance of **VET provision** within the urban logistics sector





EUROPEAN DECLARATION on CYCLING

Commission proposal of a European Declaration on Cycling to the European Parliament and the Council



CHAPTER V:

Improving road safety and security

Everyone should be able to cycle in a safe and secure manner.

We commit to:

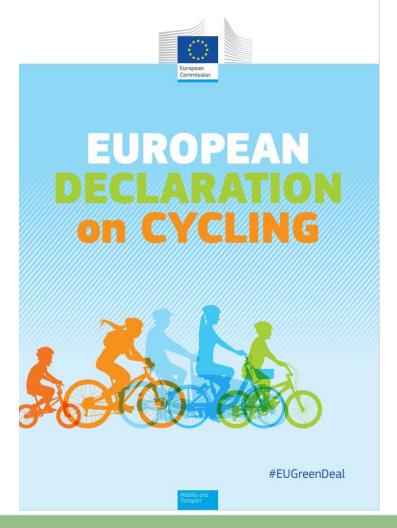
- working towards making Vision Zero14 (no road deaths by 2050) a reality, including for vulnerable road users, while reaching an interim target of a 50% reduction in fatalities and serious injuries by 2030 in line with the Valletta Declaration 15;
- enforcing road safety rules and legislation to ensure the coexistence of different means of transport, with a focus on protecting cyclists and other vulnerable road users;
 - ensuring that the rules on the safety requirements applicable to e-bikes are substantial, and promote their deployment;
- improving security at public bike parking spaces (including bike sharing and multimodal hubs), and increasing efforts to tackle the issue of bike theft;
- 23. strengthening cycle training including teaching children and young people how to cycle and awareness raising campaigns on road safety, in particular on the biggest risks to cyclists, and supporting the safe use of bikes and e-bikes, as well as addressing the awareness of the safety of vulnerable road users during driver training.





EUROPEAN DECLARATION on CYCLING

Commission proposal of a European Declaration on Cycling to the European Parliament and the Council



CHAPTER VI:

Supporting quality green jobs and the development of a world-class European cycling industry

Greater uptake of cycling means more high-quality, local jobs and is beneficial to the EU economy and cycling industry, and also contributes to the objectives of the EU industrial strategy.

We commit to:

- 24. creating conditions to increase the European production of a broad range of bicycles (including e-bikes, speed pedelecs, and bikes for people with disabilities) and their components, including access to materials, equipment and maintenance of a global level-playing field through existing EU trade defence instruments;
- supporting the bicycle service sector, including social economy entities and the circular use of bicycles (reuse, repair and rental):
- 26. ereating favourable conditions to stimulate high-quality jobs and cycling clusters, including in cycling tourism in order to significantly increase the number of cycling-related quality jobs, support SMEs and boost relevant skills and vocational training;
- making the sector more attractive and enabling important job-to-job transitions from other relevant industries;
- recognising the European cycling industry as a partner in the mobility system in order to strengthen resilience, sustainability, circularity and digitalisation in the cycling sector;
- 29. supporting cycling service industries, such as bike sharing and cycle logistics, especially in cities, including by strengthening the integration of cycle logistics into the logistics system.





Join us!

Join us in **piloting** the training within your organisation & company and provide your workers with a ECQA **certificate**?

Reach out to Tiziana Destino | BGZ <u>destino@bgz-berlin.de</u> Don't forget to register to the ECF newsletter to follow up on our news <u>r.fleming@ecf.com</u>