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# The Yearly Cycle Logistics Barometer

Current State, Lessons Learned & Needs of the  
Sector in Belgium

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Belgian Cycle Logistics Federation  
October, 2023 (First edition)

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## Acknowledgment

This report has been produced and conducted by the Belgian Cycle Logistics Federation (BCLF), supported by its members and all the operators and couriers answering the surveys.

BCLF wants to thank all the contributors for their efforts to develop the sector further, in a professional and structured way.

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## Foreword

The Belgian Cycle Logistics Federation (BCLF) is a non-profit organisation that gathers cycle logistics operators around one common goal: reaching the full potential of cycle logistics in order to mitigate climate change, offer fair and qualitative jobs in the transport sector and participate in the creation of more liveable and sustainable cities.

This study is addressed to policy makers, providing concrete input to support the development of this young sector. It is also addressed to any transporter, retailer or supplier that is interested to understand what cycle logistics is and how it can play a role in its own supply chain. Finally, it is addressed to all citizens, curious on how the cycle logistics sector is contributing to liveable cities.

## Executive summary

Urban logistics activities are constantly increasing to meet the growing demand for deliveries, and our cities become increasingly congested and polluted. This evolution comes with an important societal cost : freight transport accounts for 10 to 15% of vehicle.km in cities, but is responsible for 25% of CO<sub>2</sub>-emissions, 30% of NO<sub>x</sub>-emissions, 50% of fine particles emissions, and 40% of noise pollution<sup>1</sup>.

To address the environmental, and societal challenges of urban delivery, cycle logistics is a relevant and effective solution to meet delivery needs in a sustainable and responsible manner.

However, despite its rapid development, cycle logistics is still far from reaching its full potential. At least 33% of the motorised trips for the professional transport (freight, delivery, services, business) in urban areas could be shifted to (carrier) cycles.

In order to measure the current state, the first key figures of cycle logistics in Belgium have been collected. But, they only take into account the activities of cycle logistics carriers<sup>2</sup>, performing transport for third parties. The data provided by mixed carriers<sup>3</sup> is not representative and detailed enough to bundle in this analysis and professionals with (carrier) cycles<sup>4</sup> were not included (data collection in the sector remains a key working point, at every level<sup>5</sup>).

Nevertheless, the sector is revolutionising transport: in 2 years, the number of parcels transported by cycle logistics carriers have been multiplied by a factor of 3,4 and the turnover of those companies has doubled. Moreover, the number of full-time-equivalents (FTEs) has doubled, creating fair, qualitative and safe jobs where cycle couriers are paid by hour, receiving the right equipment and are majoritarily employed. In 2022, cycle couriers went 2,8 times to the moon, riding more than 1 million km. Finally, the impact of cycle logistics compared to electric or diesel vans is blurring: cycle logistics emitted 20 times less grams of CO<sub>2</sub> equivalent per parcel than if an electric van was used, and 40 times less than if a diesel van was used (based on a life cycle analysis, in 2022)

<sup>1</sup> Lebeau, P., & Macharis, C. (2014). Freight transport in Brussels and its impact on road traffic. Brussels Studies. The Journal of Research on Brussels.

<sup>2</sup> Cycle logistics carriers operate at least 80% of the deliveries with (carrier) cycles

<sup>3</sup> Mixed carriers operate less than 80% of their deliveries with (carrier) cycles

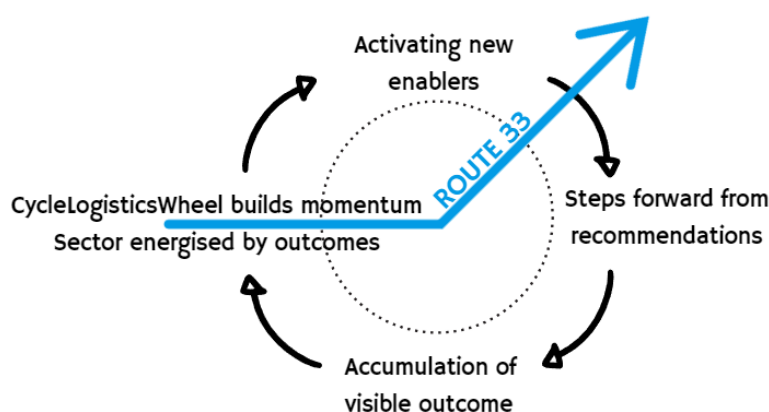
<sup>4</sup> These professionals use the (carrier) cycle to support their business, deliver their products or services

<sup>5</sup> European Commission, Directorate-General for Mobility and Transport, Cartolano, F., Vaghi, C., Chiarilli, S. et al., Study on new mobility patterns in European cities – Final report. Task B, Targeted survey on urban logistics, Publications Office of the European Union, 2022,

In order to develop this ambitious and impactful sector further, **7 central categories of challenges were identified and prioritised**. The 3 most important one's are economic, cultural, and related to infrastructure.

The goal of this first of a kind-study is to offer concrete, actionable and impactful recommendations in order to tackle the challenges the sector faces per category. These recommendations will be put forward by the BCLF to the relevant stakeholder.

This paper suggests to put the recommendations in the context of the dynamics that will develop the sector of cycle logistics. Inspired by the concept of the FlyWheel effect<sup>6</sup>, the Fly Wheel of Cycle Logistics suggests that, by consistently making incremental improvements or investments, the cycle logistics sector can generate positive momentum and



eventually achieve substantial growth or success. In building a sector, there is no single defining action, no one killer innovation, no solitary lucky break, no miracle moment. Rather, the process resembles relentlessly pushing a giant, heavy flywheel, turn upon turn, building momentum until a point of breakthrough, and beyond.

Three central recommendations emerged from the whole working process.

- **Recognize the sector formally.** The BCLF will support it by collecting and disseminating data on the societal cost of urban deliveries and on the positive impact of cycle logistics to be considered as a real alternative
- **Request financial incentives for cycle logistics operators, principals and workforce** because of their qualitative and sustainable contributions (environment, social, economic)
- **Involve the sector in design of infrastructure** to have efficient, safe and shared infrastructure (roads, hubs, lockers).

Finally, all the recommendations and their outcome will be reinforced by FlyWheel effect. It is now time to action it and to ride together on Route 33<sup>7</sup>.

<sup>6</sup> Jim Collins. *Good to great, why some companies make the leap ... and others don't*. (US, 2001). p.164

<sup>7</sup> BCLF event on October 11th 2023 to present sectoral recommendations. Route 33 makes reference to the 33% potential shift.

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## Terminology

### **(Carrier) Cycles**

A cycle can be referred to as a bi-, tri- or quadricycle. In order to include the widest range of cycles on the market, this paper uses the word cycle. Moreover, the word “cargo bike” is widely used and known. Nevertheless, European standards (CEN/TC 333/WG 9) consider “carrier cycles” as a generic term. Therefore, the paper uses the term carrier cycles that refers, among others, to cargo bikes.

### **Parcel equivalent**

There are different valid definitions of a parcel. According to the Belgian Postal Law, a parcel is a 0 to 31,5 kg logistics unit. For logistics carriers, the definition of parcels vary from logistics units of 0 to 10 kg, to logistics units of 0 to 150 kg. For clarity, this paper considers a parcel equivalent as one logistics unit, independently from its content or its weight, size or height.

## List of acronyms

CIE : Cycling Industries Europe  
ECF : European Cycling Federation  
ECLF : European Cycle Logistics Federation  
FTE : Full Time Equivalent  
LCV: Light Commercial Vehicle  
LEZ : Low Emission Zone  
NPO : Non Profit Organisation  
RLVD : Radlogistikverband Deutschland  
SUMP : Sustainable Urban Mobility Plan  
SULP : Sustainable Urban Logistics Plan  
UCC : Urban Consolidation Centre  
UDC : Urban Distribution Centre

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## Introduction

Urban logistics activities are constantly increasing to meet the growing demand for deliveries, and our cities become increasingly congested and polluted.

This evolution comes with an important societal cost : freight transport (incl. construction logistics, facility logistics, waste logistics, cargo and retail, temperature controlled and finally parcels and express<sup>8</sup>) accounts for 10 to 15% of vehicle.km in cities, but is responsible for 25% of CO<sub>2</sub>-emissions, 30% of NO<sub>x</sub>-emissions, 50% of fine particles emissions, and 40% of noise pollution<sup>9</sup>. And the transport of freight is expected to continue to grow. For example, the number of postal (express and parcel<sup>10</sup>) shipments has quintupled in the past ten years in Belgium, reaching 365 million in 2021<sup>11</sup>.

Cycle logistics is a relevant and effective solution to address the environmental, social and urban challenges of urban deliveries, in a sustainable and responsible manner. Indeed, the use of cycles allows for a drastic reduction in societal impact associated with the transportation of goods. As a matter of comparison, **each parcel equivalent delivered by cycle generates a net external benefit of €0.09**, whereas **light commercial vehicles incurs €2.65 of external costs**<sup>12</sup>.

However, despite the relevance of its benefits, cycle logistics is still far from reaching its full potential. While the actual share of delivery trips made by cycle in Belgian cities is estimated to be lower than 1% , the actual potential is around 25% when considering only goods transportation within the city, and 50% for services<sup>13</sup>. Bundled, **at least 33% of the motorised trips for the professional transport (freight, delivery, services, business) in urban areas could be shifted to (carrier) cycles**. This figure could be even higher, as it only takes into account goods transportation weighing less than 200 kg and distances of 7 km or less. Technological innovations allowing for increased capacity of cycles and trailers, in addition to consolidation capabilities that already reduce distances between each delivery point, and adequate regulations could support even further the potential of the sector.

<sup>8</sup> Den Boer, E., Kok, R., Ploos van Amstel, W., Quak, H.J., Wagter, H. (2017). Outlook city logistics 2017

<sup>9</sup> Lebeau, P., & Macharis, C. (2014). Freight transport in Brussels and its impact on road traffic. Brussels Studies. The Journal of Research on Brussels.

<sup>10</sup> In the context of this market analysis, a parcel is a 0 to 10 kg logistics unit. Moreover, this data not only concerns Belgian cities' deliveries, but deliveries all around Belgium.

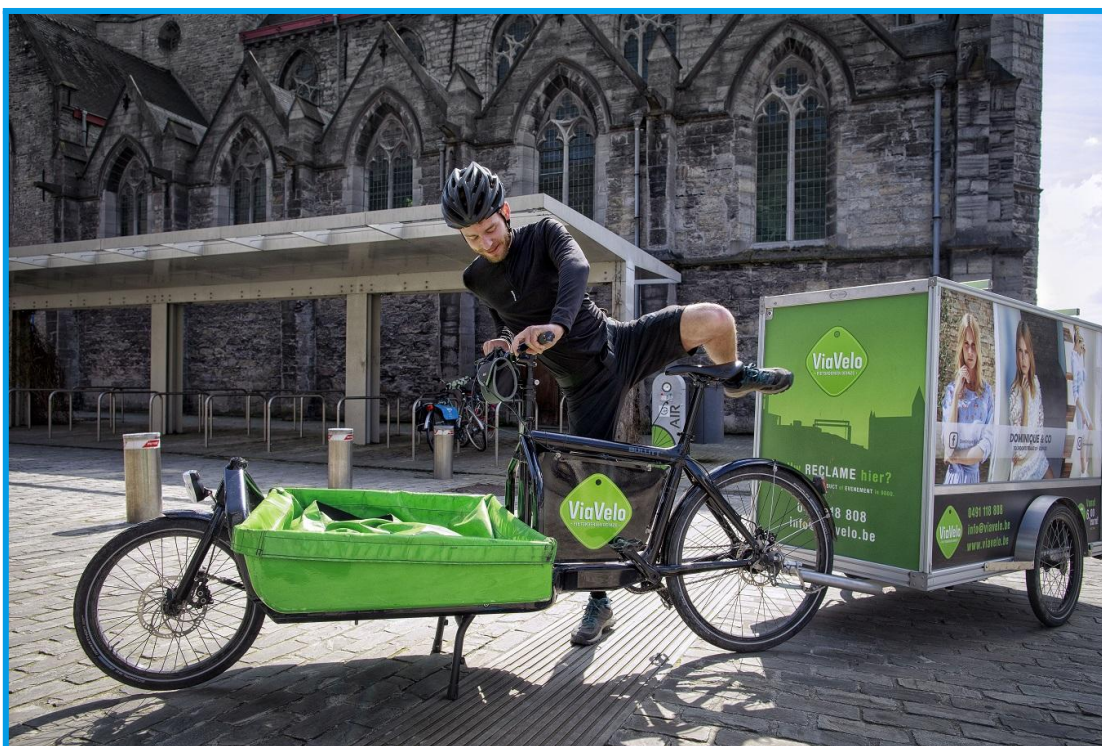
<sup>11</sup> IBPT (2022). Communication du Conseil de l'IBPT du 19 décembre 2022 concernant l'observatoire du marché des activités postales en Belgique pour 2021.

<sup>12</sup> Maes, J. (2017). The potential of cargo bicycle transport as a sustainable solution for urban logistics. University of Antwerp.

<sup>13</sup> Wrighton, S., & Reiter, K. (2016). CycleLogistics—moving Europe forward!. Transportation research procedia, 12, 950-958.

The development of cycle logistics is essential to accelerate the transition towards more sustainable and human-centred cities, and it is crucial to structure this emerging sector. This is precisely the objective of the Belgian Cycle Logistics Federation (BCLF), an objective to which this study on the current state of the sector contributes. This analysis includes identifying the sectoral organisations and specificities, its stakeholders and its workers to understand their needs and the challenges they are facing. With this information, the BCLF and its members will be able to establish a list of recommendations to guide the development of cycle logistics.

To conduct this study, the BCLF relied on several methodological approaches. Firstly, a **survey** was conducted among cycle logistics companies in Belgium to gather data on their specific needs and challenges. Secondly, a **participatory workshop** was organised, bringing together various sector stakeholders to prioritise key issues and discuss common challenges. Additionally, research work was carried out to study **past projects and initiatives** that have contributed to the development of cycle logistics, drawing lessons from their successes and failures. Through these methods, the BCLF provides **concrete and informed recommendations** to support the growth and development of the cycle logistics sector in Belgium.



*Cycle courier, carrier cycle and trailer (credits: ViaVelo)*

## Cycle Logistics in Belgium

### Definition of cycle logistics

If the transport of goods by cycle is an old activity - the first carrier cycles emerged in the 19th century in England - the cycle logistics sector is relatively new. The ECF (i.e., European Cycling Federation) defines cycle logistics as the **transportation of any type of goods from point A to point B by cycle**. It includes logistics operators transporting goods and providing logistics services, manufacturers, retailers and service providers using cycles to deliver goods and services. The definition of the ECLF (i.e., European Cycle Logistics Federation) also includes municipalities using cycles for public services (e.g., street cleaning or park maintenance). The RLVD (i.e., the German Cycle Logistics Federation) and the CIE (i.e., Cycling Industries Europe) on their side, recognise **carrier cycles** as a central element of the definition. Finally, Les Boîtes à Vélo (i.e., the French Cycle Logistics Federation) defines cycle logistics as the professional **transport of goods by (carrier) cycle for a third party**.

Acting as a structuring organisation of the sector, the BCLF adapted the definition of Cycle Logistics to the Belgian context and environment, starting from the definitions of cycle and logistics.

Cycle	Logistics
Any two-, three- or four-wheeled <b>human-powered vehicles</b> fitted with pedals or cranks, and equipped <b>with electric assistance or not</b> <sup>14</sup> .	All activities related to the <b>processing of goods flows</b> (collection, storage, handling, transport, distribution) and <b>associated services</b> (planning, organising, monitoring) <sup>15</sup> .
<b>Cycle Logistics</b>	
All activities and services associated with the <b>processing of good flows with cycles</b> . Intuitively, it majoritarilly includes transportation and distribution of goods, in a private or professional context.	

*Table 1: Definition of cycle logistics*

The BCLF stands as a structuring federation for cycle logistics professionals and this study focuses therefore on cycle logistics activities performed **in a professional context**. As introduced, at least 33% of the professional trips transporting goods and services in an urban context could be done by cycles and carrier cycles. Even though an important part of urban deliveries could be done by regular cycles, technological solutions such as carrier cycles and trailers allow a wider coverage and are therefore central in urban logistics.

<sup>14</sup> Belgian Traffic Laws, Art. 2.15.1

<sup>15</sup> VBO / FEB (2017). Een visie voor de logistiek in België / Une vision pour la logistique en Belgique.

Therefore, in conclusion, the BCLF defines **cycle logistics** as the **professional transportation of any type of goods or service by (carrier) cycles** and the **logistics services** associated such as handling, storing and managing of flows.



*Carrier cycles & cycle couriers in a cycle logistics hub (credits : An Van Gijsegem @Cargo Velo)*

## Market Segments

Within the definition of cycle logistics presented above, different categories of operators can be distinguished, based on the characteristics of the service and the types of flows handled. We highlight **5 different market segments for cycle logistics**<sup>16</sup>.

Market segment in cycle logistics			Impact
Professional carriers (for third parties)	<b>Logistics Service Providers</b>	Specialised in transporting goods (any type), including managing various aspects of supply chain operations (transportation, warehousing, inventory management and distribution).	Potential shift to cycles in urban areas = 25%
	<b>Courier Services</b>	Specialised in express service of parcels and documents. Usually a short mile from A to B transport.	
	<b>Gig-economy</b>	Delivery in service of a platform.	
Professionals with carrier cycles	<b>Delivery Vehicles</b>	Businesses replacing their own LCV or scooters for delivering their goods.	Potential shift to cycles in urban areas = 50%
	<b>Service Vehicles</b>	Technicians or service providers using cycles for delivering professional services at home.	

Table 2: Market segments in cycle logistics

As emphasised in the section defining cycle logistics, the sector can be very wide and blurry. It is therefore important to focus on clear categories so that the recommendations that will come are correctly stated and addressed to the right focus group. **This study will focus on professional carriers** transporting goods for third parties. Handling and transporting goods are their main activities. They are also entitled to the same Belgian social laws.

Nevertheless, the **gig-economy** will not be part of this study even if it is also transporting goods for third parties. Indeed, gig-economy companies rely on platform economy and have a specific cycle business model : they create value by connecting users (consumers, producers, and gig-workers) on an online app. It represents a very specific sector where couriers - often independent contractors, freelancers or short-term contractors - exclusively work on demand. The characteristics of their business model and operations require a

<sup>16</sup> Inspired by Maes, J. (2017). *The potential of cargo bicycle transport as a sustainable solution for urban logistics*. University of Antwerp and adapted to today's market.

specific focus as this sector has its own needs and challenges. In the future, further and larger BCLF studies could also take this sector into account.

The **service vehicle** and **delivery service** categories are professionals using carrier cycles for delivering their services or products. Transport is not their main business and they are therefore not specialised in flow management. They usually enter into the definition of cycle logistics but will be out of scope for this study as it represents another business model than the logistics service providers and courier services. Again, in the future, further and larger BCLF studies could also take these sectors into account.

Finally, as the goal of this paper is to focus on cycle logistics and to create recommendations for its further development, it could still indirectly impact those three last categories (even if the focus is not on them).

## Types of Carriers

The cycle logistics market, as presented in this report, focuses on **cycle logistics carriers** and **mixed carriers**, whether they are logistics service providers or courier services.

### Cycle logistics carriers

Firstly, the **cycle logistics carriers** specialise in the transport of goods for third parties using almost exclusively (carrier) cycles in urban areas. Those companies have in common that they have been created recently. Three main types of organisations are identified:

- **SME's** focusing entirely on cycle logistics. Those are fully integrated logistics and are among others integrated in (inter)national supply chains.
- **NPO's** offering a service of cycle logistics in addition to other services, usually linked to cycling (maintenance, training).
- **Freelancers** doing cycle logistics as side activity.

Those organisations all share strong environmental and social values with the willingness to offer fair and qualitative jobs. A majority of them have a strong anchorage in the circular and local economy. They have been assimilated to courier services in the past but nowadays also developed other market segments, such as parcel deliveries. High customer service is key in all their business activities.

In total, around 30 cycle logistics carriers have emerged in Belgium in the last 20 years. A few of them have stopped their activities or did not develop further. Financial feasibility, lack of infrastructure and low business development are usually part of the reason. Here is a non-exhaustive list of cycle logistics carriers that have stopped their activities recently : AlloVelo (Ostend), Pedal Delivery (Nivelles), Transpire Transport (Brussels), Fietslicht (Vlaams Brabant), Vélociraptor Delivery (Ottignies), Cargocollectief (Deerlijk), Cyclo'plat (Ottignies). On

the other hand, there are at least 23 cycle logistics carriers still operating in Belgium in 2023. They are highlighted in the table below.

Name	Region	Detail	Market Segment
<b>Allez rouler</b>	Klein Brabant	Part of an NPO (Nektari).	Logistics service provider & courier service
<b>Cargo Alost</b>	Aalst	Small freelancer side activity.	Courier service
<b>Cargo Velo*</b>	Antwerp, Brussels, Ghent, Leuven & Mechelen	SME started in 2012. Strong development with its activities in numerous cities	Logistics service provider & courier service
<b>Coursier wallon*</b>	Namur & Charleroi	SME started in 2011, part of the social economy (cooperative).	Logistics service provider & courier service
<b>De fietserij</b>	Aalst	Part of a NPO (Stroom vzw) - social economy aiming at offering opportunities to (long term) unemployed.	Courier service
<b>De fietskoerier**</b>	Antwerp	Oldest bike messenger company in Belgium, started 22 years ago (SME).	Logistics service provider & courier service
<b>De kortse ketting**</b>	Kortrijk	Small side activity with the willingness to develop it further.	Logistics service provider & courier service
<b>Dioxyde de Gambettes*</b>	Brussels	SME started in 2008, part of the social economy (cooperative). Initiated the BCLF.	Logistics service provider & courier service
<b>Ecokoeriers**</b>	Mechelen	Part of an NPO (ConnAct) - social economy whose goal is to put workers far from the job market back on it.	Logistics service provider & courier service
<b>Ecopostale**</b>	International (Brussels)	SME started in 2010. Focuses on express deliveries. Sends worldwide. Urban logistics by (carrier) cycle.	Mainly courier service.



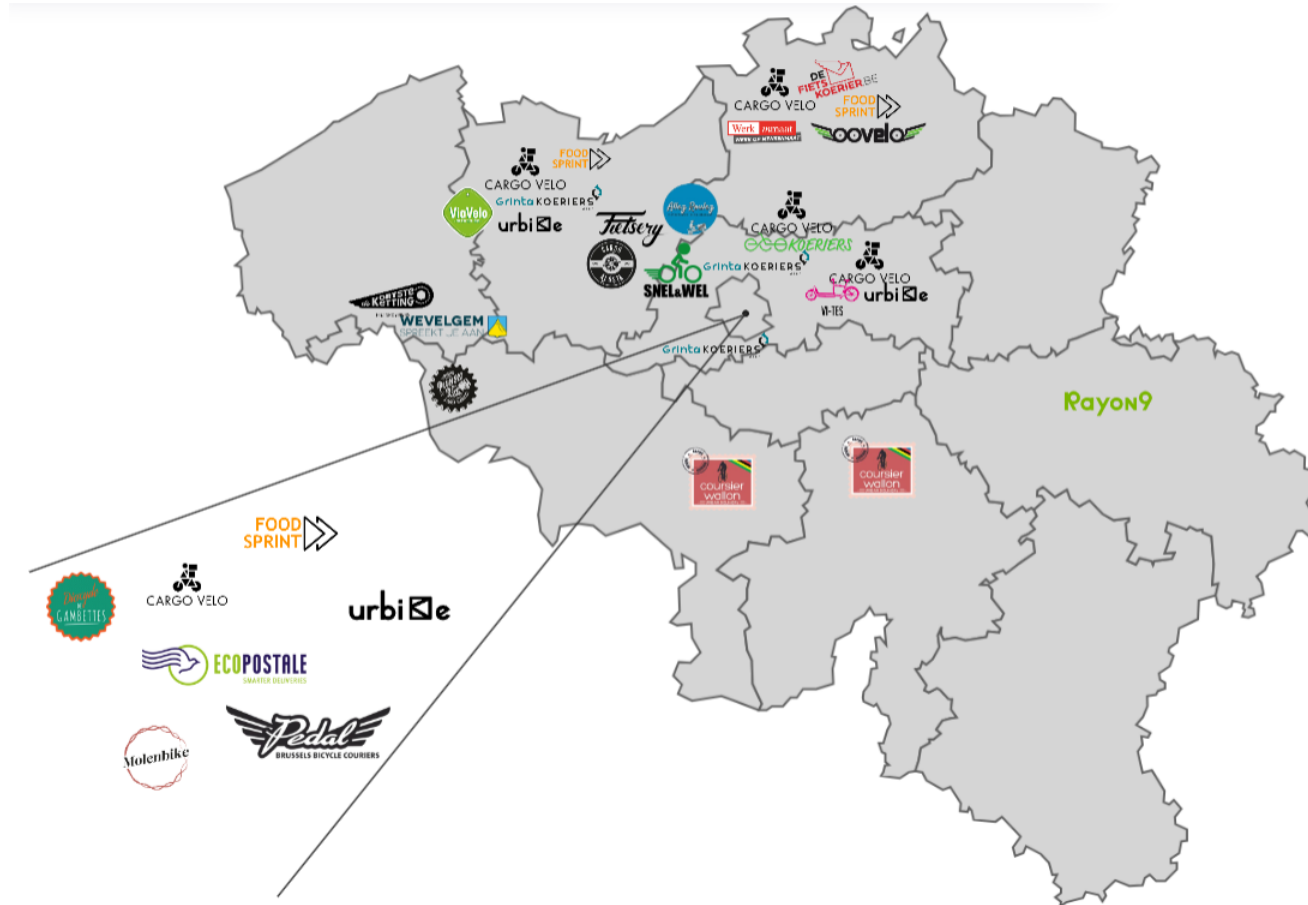
Name	Region	Detail	Market Segment
<b>Fietskoerier</b>	Lier	Part of a NPO (Werkmaat) - social economy aiming at offering opportunities to (long term) unemployed.	Logistics service provider & courier service
<b>Foodsprint**</b>	Antwerp, Brussels & Ghent	SME started in 2021. Specialises in refrigerated food transport.	Logistics service provider
<b>Grintakoeriers**</b>	Asse, Ghent Halle & Vilvoorde	Part of an NPO (IntroGroep) - social economy aiming at offering opportunities to (long term) unemployed.	Logistics service provider
<b>Molenbike</b>	Brussels	SME, part of the social economy (cooperative). Started in 2016 in order to offer a fair and qualitative alternative to couriers from the gig economy.	Logistics service provider & courier service
<b>Oovélo**</b>	Antwerp	SME started in 2015 and active in high end customers activities.	Logistics service provider
<b>PedalBXL</b>	Brussels	SME that focuses on express services.	Courier service
<b>Pignon sur rue*</b>	Mouscron	Small side activity.	Logistics service provider & courier service
<b>Rayon9*</b>	Liège	SME, part of the social economy (cooperative). Started in 2015 and pursues an organic development.	Logistics service provider & courier service
<b>Snel &amp; Wel</b>	Aalst, Ninove & Oudenaarde	Part of a NPO (Steunpunt Welzijn) - social economy.	Logistics service provider
<b>Urbike*</b>	Brussels, Ghent & Leuven	SME, part of the social economy (cooperative). Started in 2017 and offering other services, related to cycle logistics activities (consulting, training, etc).	Logistics service provider

Name	Region	Detail	Market Segment
<b>ViaVelo*</b>	Deinze	SME started in 2015 with a strong development process and social anchoring.	Logistics service provider & courier service
<b>Vi-tes*</b>	Leuven	Historic courier activity started in 2008.	Logistics service provider & courier service
<b>Wevelgemse fietskoerier</b>	Wevelgem	Part of the city - social economy aiming at offering opportunities to (long term) unemployed.	Courier service

*Table 3: Cycle logistics carriers in Belgium*

\* Companies members of BCLF

\*\* Companies cooperating in an interview



Interestingly, not only larger cities such as Brussels (1,2m inhabitants), Antwerp (500.000 inhabitants) or Ghent (270.000 inhabitants) have intensive cycle logistics activities. The city of Aalst (90.000 inhabitants) for example has 3 cycle logistics carriers operating in the municipality. Deinze (45.000 inhabitants) is also a good example of how a company that works closely with the local government and its local businesses can grow into a company where 4 cycle couriers are active.

## Mixed carriers

The second category performing cycle logistics are the **mixed carriers** : (multinational) companies specialised in the transport of goods and logistics for third parties at national and international level. They usually focus on postal delivery services. Some of them have existed since tens of years and transport huge amounts of volumes, with any type of vehicle. Those carriers understand the potential to switch part of their “classic” fleet to cycles in urban areas in order to reach their full potential. One of their challenges is their internal transition as their supply chain is complex and long. Yet, they represent an important shift potential considering their volume and financial means to engage a transition to sustainable transportation of goods.

It is important to note that several carriers have tested the usage of carrier cycles but didn't get through (FedEx, UPS, TNT). The same reasons as for the cycle logistics carrier can be invoked: financial feasibility, infrastructure or complexity of integration.

The table below (non-exhaustive) highlights the important mixed carriers operating in Belgium in 2023.

Name	Region	Detail
Bpost	Belgium	Belgian universal post delivers. Disposes over the biggest number of carrier cycles and trailers in Belgium, mainly in their ecozones.
Cogepart	Brussels	Large logistics company using carrier cycles among others in Brussels.
DHL	Antwerp	Uses their personalised cubicycles in Antwerp. Tested other cities but stopped.
KGS	Brussels	Large logistics company using carrier cycles among others in Brussels.
OnTime	Antwerp	Large logistics company using carrier cycles in Antwerp (principally in the port).
PostNL	Ghent	Started a pilot project in 2023 in Ghent.
Urbeez	Belgium	Transporter exclusively operating with zero emission vehicles and therefore among others cycles.

*Table 4: Mixed carriers in Belgium (non-exhaustive)*

## Cycle Logistics Surveys

### Methodology

For the purpose of this study, two complementary surveys were conducted. The first survey targeted cycle logistics operators as legal entities. The goal was to size the sector based on past data (2020-2022) and to understand and to prioritise the needs and challenges of the sector. The second survey targeted cycle couriers and aimed at better understanding their profiles, as well as using their field expertise regarding the challenges and needs of the sector.

### Cycle Logistics Companies

For the purpose of this survey, 17 answers of companies operating cycle logistics were collected. 15 of them were assimilated during that period to cycle logistics carriers (based on data from 2020 to 2022), the remaining 2 to mixed carriers<sup>17</sup>: this first data collection for the cycle logistics sector is a success. Even though the most important cycle logistics carriers and mixed carriers have completed the survey, it must be noted that the key figures are **conservative estimates**. Yet, it gives an overall picture of the cycle logistics sector. Among the respondents, 3 of them are exclusively operating in Wallonia, 7 exclusively in Flanders, 1 exclusively in Brussels, 3 in both Flanders and Brussels, and the last 3 in the 3 regions.

#### Key figures

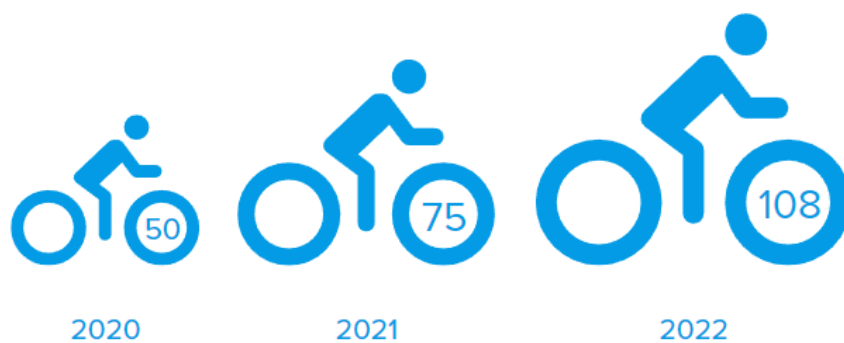
These key figures take into account the activities of **cycle logistics carriers only**, from 2020 to 2022. The data provided by **mixed carriers is not representative and detailed enough** to bundle in this analysis (data collection in the sector remains a key working point, at every level<sup>18</sup>). Of course, if that data would be added, the numbers would rocket drastically. It is the objective to take mixed carriers into account in the future publications of the Barometer.

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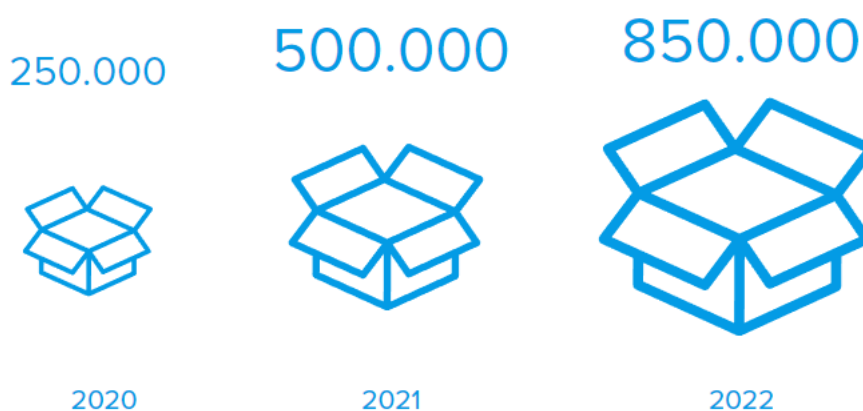
<sup>17</sup> One of the cycle logistics carriers became a mixed carrier in 2023. It proves the sector is dynamic and this study gives a state at a certain point in time.

<sup>18</sup> European Commission, Directorate-General for Mobility and Transport, Cartolano, F., Vaghi, C., Chiarilli, S. et al., Study on new mobility patterns in European cities – Final report. Task B, Targeted survey on urban logistics, Publications Office of the European Union, 2022,

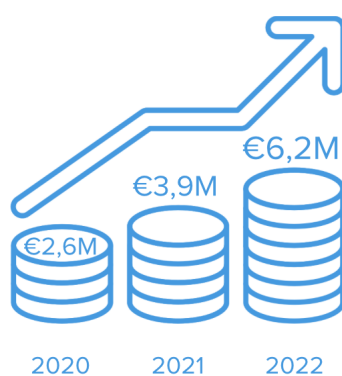
1. FTE's evolution: x2 in 2 years



2. Parcel equivalent delivered: x3,4 in 2 years



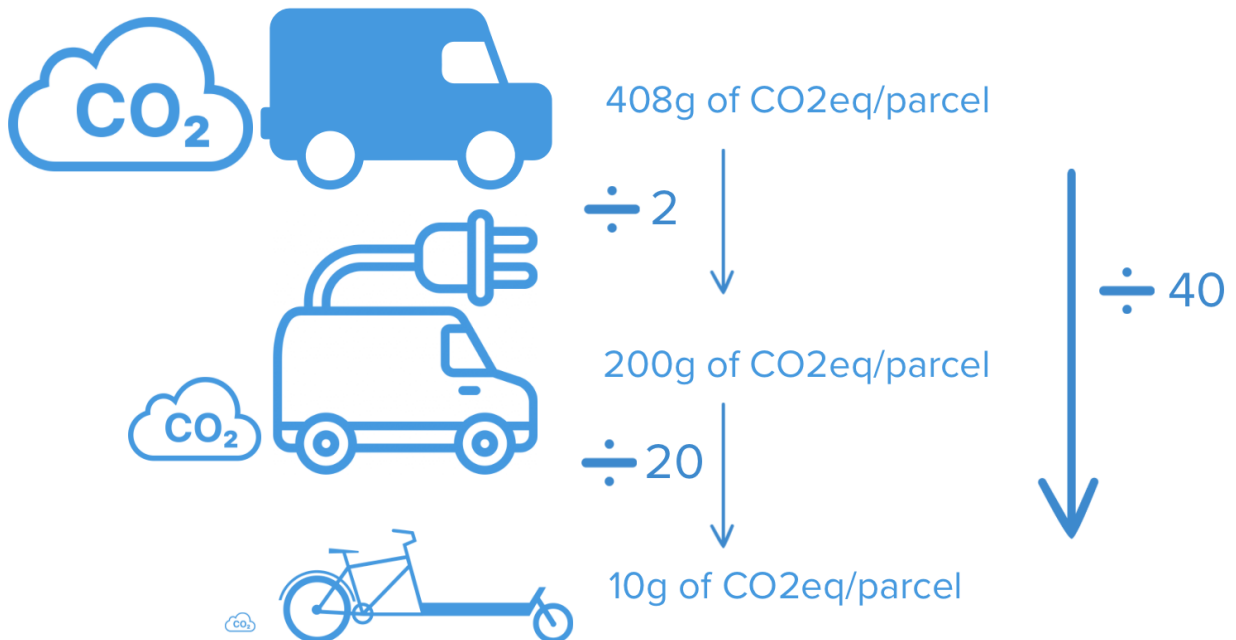
3. Turnover: more than x2 in 2 years



4. Number of km's cycled: x3 in 2 years



5. Comparative scenario (2022)



### Cycle logistics FTE's

Although the number of FTEs working for **cycle logistics carriers** is still relatively low, it has been consistently increasing for the last 3 years. In 2022, cycle logistics carriers employed more than **100 FTEs**, compared to 75 FTEs in 2021 and 50 FTEs in 2020. This rapid increase (+100% in two years) can be explained by the development of existing cycle logistics carriers extending their activities to other towns or cities, and by the arrival of new operators. With the growing restrictions for motorised traffic in cities and the urgent need to improve the sustainability of urban logistics, the number of FTEs is expected to keep increasing at a similar pace.

It is also important to note that the job of cycle couriers is an arduous and tiring activity, which results in a relatively low number of FTEs in comparison with the total number of cycle logistics workers. As highlighted later in this document (cf. Survey results/Cycle logistics couriers), less than 10% of cycle couriers have a full time contract, as courier.

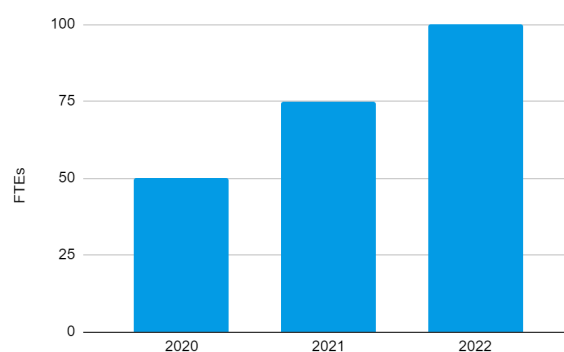


Figure 1: Number of FTEs (cycle logistics carriers)

The average size of **cycle logistics carriers** was 7 FTEs in 2022. Yet, most cycle logistics carriers employed 5 or less FTEs that year.

In addition to cycle logistics carriers, **mixed carriers** allocate a part of their workforce to cycle logistics activities. It is difficult to assess the proportion of their workforce operating in cycle logistics activities as mixed carriers employ tens of thousands of people. It is therefore an important potential.

### Activity

In a similar fashion, the number of parcels equivalent delivered has increased drastically over the past 3 years. In 2020, **cycle logistics carriers** delivered around 250.000 parcels by cycle. In 2021, that number overtook the 500.000 parcels mainly due to the arrival of an important carrier. In 2022, the number of parcels kept rising and reached around 850.000 parcels. It represents a 70% increase compared to 2021.

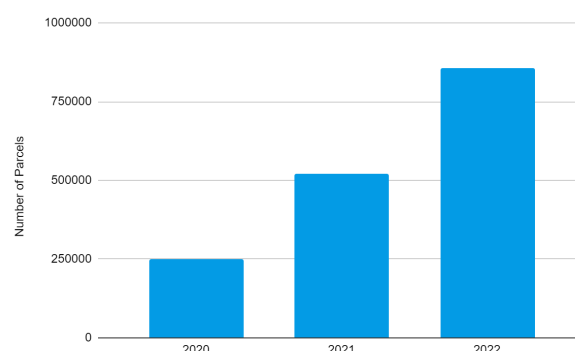


Figure 2: Number of parcels equivalent (cycle logistics carriers)



It is also interesting to highlight the repartition of deliveries per **cycle logistics carrier**. The average volume of activity was 57.000 parcels in 2022. Most cycle logistics carriers have delivered between 10.000 and 100.000 parcels in 2022.

**Mixed carriers** observe a similar growing trend with now millions of parcels equivalent being delivered by cycle every year.

### Turnover

The transportation of goods and other associated logistics services usually represents 76% to 100% of the turnover for the majority of the **cycle logistics carriers**. For some cycle logistics carriers, cycle logistics is not the only activity performed. Regarding **mixed carriers**, the proportion of cycle logistics activities usually corresponds to only 1% to 10% of the turnover. Nevertheless, the annual turnover of mixed carriers reaches tens of millions (if not billions) euros.

Similarly to the level of activity, the turnover of **cycle logistics carriers** is increasing rapidly. From 2,6 millions euros in 2020, the annual turnover rose up to 3,9 millions euros in 2021 (+52% compared to 2020) and 6,2 millions euros in 2022 (+138% compared to 2020, +59% compared to 2021). **Mixed carriers** experience a slower increase in turnover of around 3% per year, namely due to a long term establishment on the market.

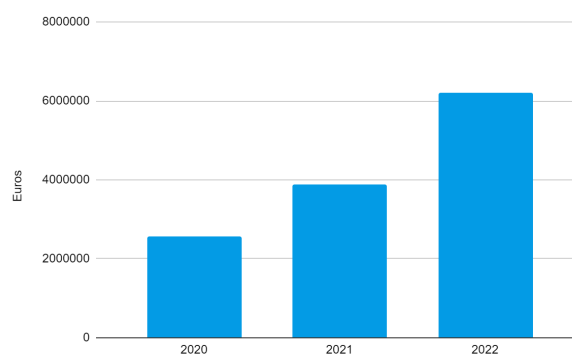


Figure 3: Turnover (cycle logistics carriers)

Similar to the repartition of the volume of activity, the turnover of **cycle logistics carriers** varies from one operator to another. Most cycle logistics carriers have an annual turnover lower than 200.000 euros, while the largest operators have a turnover higher than 1.000.000 euros.

### Impact

The number of kilometres cycled by cycle logistics carriers also rocketed during the last years. They almost doubled from 2020 to 2021 and even tripled from 2020 to 2022. In 2022, **1.090.000 kilometres have been cycled by the couriers of cycle logistics carriers**, namely 27 times the circumference of the Earth, or 2,8 times the distance to the Moon.

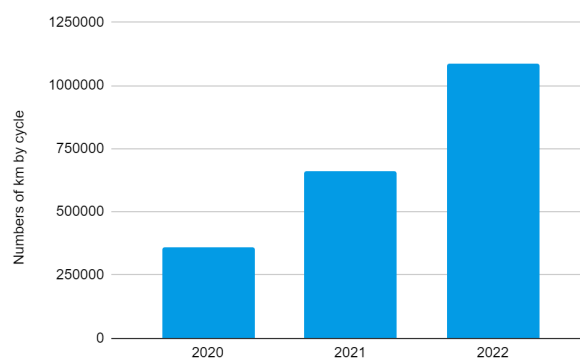


Figure 4: Number of km cycled (cycle logistics carriers)

It is possible to measure the environmental impact of cycle logistics activities in Belgium by referring to the European Commission's template to evaluate the GHG emissions of vehicles. Considering the vehicle cycle<sup>19</sup> and well-to-wheel<sup>20</sup> emissions of carrier cycles, cycle logistics carriers generated **8,6 tons of CO<sub>2</sub>-equivalent** in 2022, or 10 grams of CO<sub>2</sub>-equivalent per parcel. **Mixed carriers** on their side have not communicated their mileage but it is estimated to be millions of kilometres.

If we now compare the emissions of **cycle logistics carriers** with other vehicle alternatives, we observe significant differences. If the mileage had been covered by electric vans, the resulting emissions would have reached 170 tons of CO<sub>2</sub>-equivalent, namely 200 grams of CO<sub>2</sub>-equivalent per parcel. In comparison, delivering with diesel vans would have generated 349 tons of CO<sub>2</sub>-equivalent, namely 408 grams per parcel. Without even considering the higher density of cycle deliveries, carrier cycles generate 95% and 98% less emissions than electric and diesel vans respectively.<sup>21</sup> Therefore, **delivering with cycles emits at least 20 times less GHG emissions than with vans.**

Since 2020, it is estimated that **cycle logistics activities for third parties have avoided 2.200 tons of CO<sub>2</sub>-equivalent** compared to an optimistic scenario where a quarter of these kilometres would have been covered by electric vans, and the rest by vans. It corresponds to the current yearly CO<sub>2</sub>-equivalent emissions of 232 Belgians<sup>22</sup>. If the sector keeps developing and drawing closer to its full potential (25% of urban deliveries), the CO<sub>2</sub>-equivalent emissions avoided could become even more significant and contribute to reaching the Green Deal ambitions. A recent study<sup>23</sup> suggested that cycle logistics activities could contribute to diminishing 2,2% of all CO<sub>2</sub> emissions related to transport in Flanders. That would lead to hundreds of thousands of tons of CO<sub>2</sub> saved at the Belgian scale. Therefore, the sector can have impact and is still far from reaching its potential.

Cycle logistics activities also involve other positive impacts that are harder to quantify. Indeed, using carrier cycles instead of vans or e-vans allows to **reduce the climate change costs, the external congestion costs, the cost of accidents, and the level of noise pollution and therefore improve the livability of urban areas.**<sup>24</sup>

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<sup>19</sup> Vehicle cycle emissions refer to all emissions (or recoveries) originating from the material, manufacturing, and end-of-life treatment of a vehicle.

<sup>20</sup> Well-to-wheel emissions refer to all emissions related to fuel or electricity production, processing, distribution, and use.

<sup>21</sup> Hill, N. (2019). Determining the environmental impacts of conventional and alternatively fuelled vehicles through Life Cycle Assessment.

<sup>22</sup> The Federal Planning Bureau (2021): GHG emissions per capita in Belgium = 9,5 tons of CO<sub>2</sub> equivalent.

<sup>23</sup> Mommens, K., Schelfhout, C. and Macharis, C. (2023). Roadmap verduurzaming goederenvervoer in Vlaanderen (VUB Mobilise).

<sup>24</sup> Maes, J. (2017). The potential of cargo bicycle transport as a sustainable solution for urban logistics (University of Antwerp).

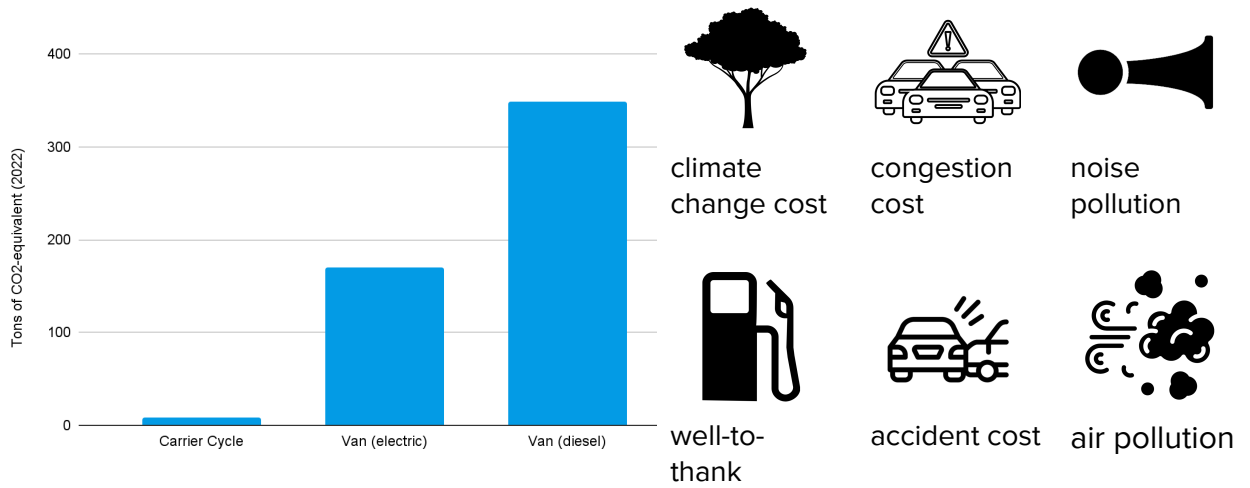


Figure 5: CO<sub>2</sub>-equivalent in 2022 (cycle logistics carriers) and other societal impact

## Cycle Logistics Couriers

For the purpose of this survey, 55 answers of cycle couriers were collected. Those cycle couriers are nearly all working for companies members of the BCLF, with the exception of 5 answers. BCLF members count all together 48 FTE's (including support functions). It shows a first indication that not all cycle couriers work full time. Moreover, it is reasonable to say that the surveys represent cycle couriers very well. It proves cycle couriers stand behind the sector and are willing to contribute to it.

Finally, cycle couriers who answered are operating in 8 cities: Brussels, Deinze, Kortrijk, Ghent, Antwerp, Liège, Namur and Mouscron.



*Cycle courier in Liège (credits: Rayon9)*

## Persona of the cycle couriers

### Main insights

A typical cycle courier today is a man, aged between 26 and 35 looking for an open air job and used to cycle regularly. He has been cycling for 1 to 3 years and expects to continue it for at least the same period of time because, among others, he adheres to the values of the company he works for.

This man profile of cycle couriers is overrepresented in cycle logistics companies. The low diversity of gender, even if in line with the global land transport data, is a problem that, among others, has to be tackled if the sector ambitions a global adoption of cycle logistics.

Please note that, even if women are today not a typical cycle courier profile, they dispose of the same characteristics as the profile described here above (with the exception that they majoritarily started their job as cycle courier less than a year ago).

### Age and gender

**87,3 % of the cycle couriers that answered are men, 9,1 % are women and 3,6 % are of another gender.**

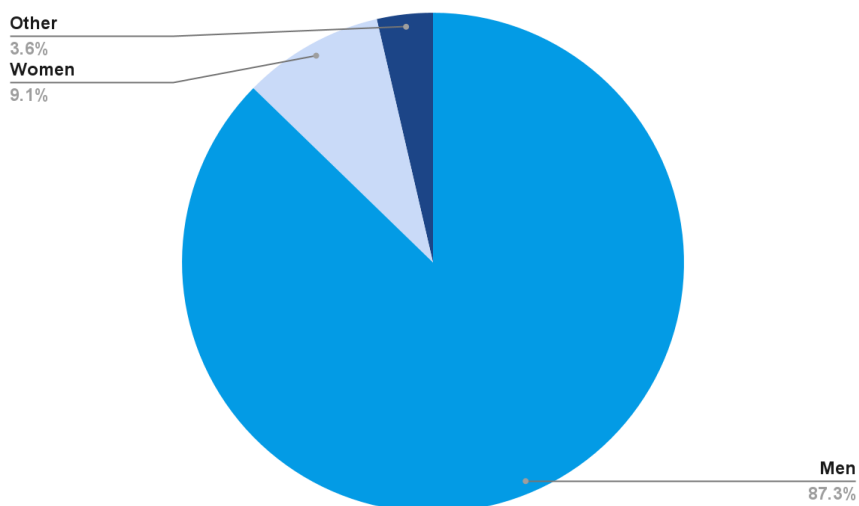


Figure 6: Gender of the cycle couriers

To give some perspective to those results, it is interesting to notice men represent 86% of the land transport workers in the EU and women 14%<sup>25</sup>. That study didn't consider an "Other"

<sup>25</sup>Eurostat 2017. Women in transport - EU platform for change.

classification. Therefore, it is reasonable to admit that cycle logistics follows the general land transport trend. Finally, as a first measure, CIE and ECF initiated the movement “Women in cycling”<sup>26</sup> in order to start tackling this global diversity problem.

The **average age of the cycle couriers is 33,5** (median is 32). The youngest cycle couriers are 18 years old, the oldest is 63. The range is quite large. Therefore, the job is accessible to a broad public. Nevertheless, the majority of cycle couriers are between 26 and 35 years old.

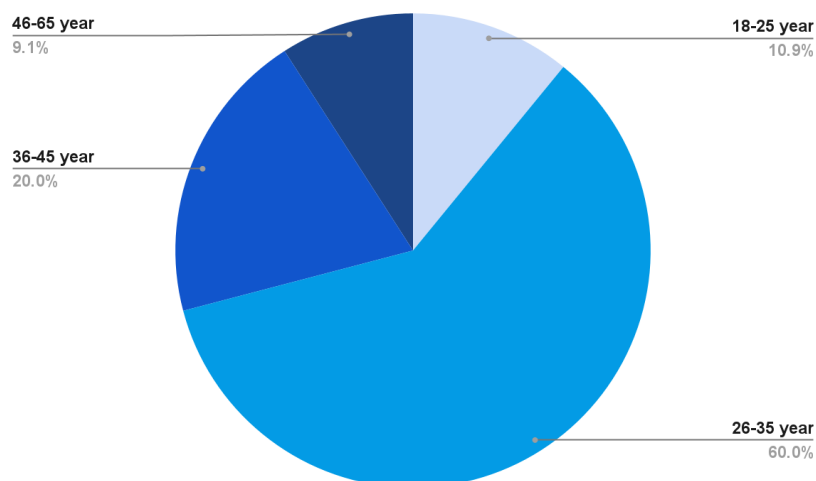


Figure 7: Age of the cycle couriers

#### Reason to perform the job

The motivation and the reason why cycle couriers operate this specific job are usually multiple. Only one cycle courier answered, doing it only for economic reasons. All others answered multiple choices. **75% of the cycle couriers are looking for an open air job** and 66% are driven by the sporting aspect. Those two characteristics are very specific to the cycle courier job.

67% of the cycle couriers chose this job because of the environmental aspect it promotes and supports. Moreover, a cycle courier commented:

*“Sustainability but wider than ecology.”*

<sup>26</sup> <https://cyclingindustries.com/wic>

As a consequence, cycle couriers really emphasise the strong adherence to the values of the company they work for as a reason to choose the job. Indeed, 66% of the cycle couriers chose their job because of it.

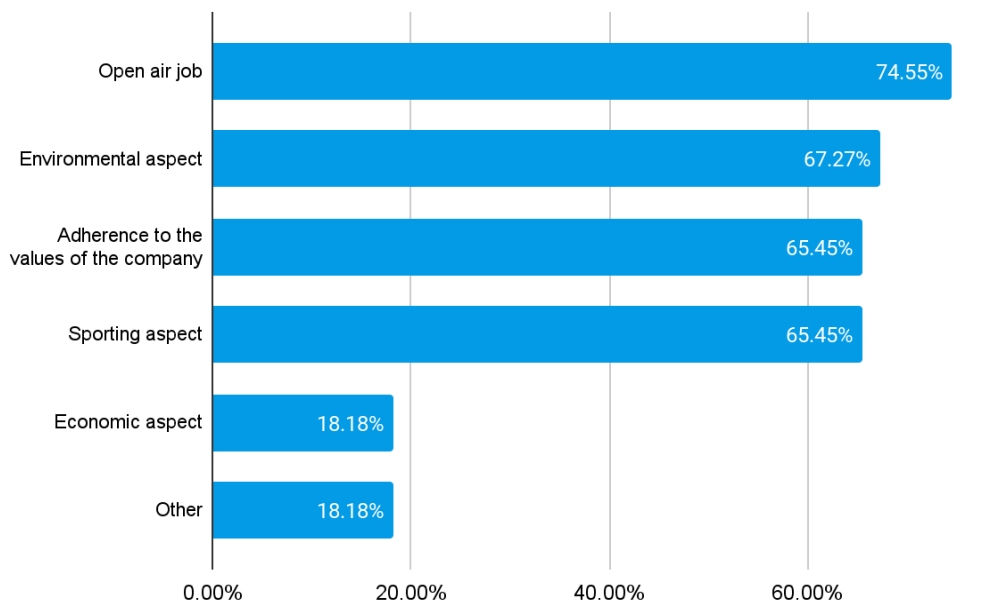


Figure 8: What is the main reason why you chose this job as a courier?

In addition, other open answers added:

*“I wanted a job where I feel good & could be myself”*

*“Need a job a first, then I stay cause of a nice environment of work”*

*“Decent pay and contributing to my city being nicer”*

### Duration of the job

Cycle couriers that participated in the survey also have **experience** in the job. Only 22% of them started as cycle couriers less than a year ago. Nearly 30% of the cycle couriers have already worked more than 3 years as cycle couriers. Therefore, the information following is based on medium and long term experience in the profession.

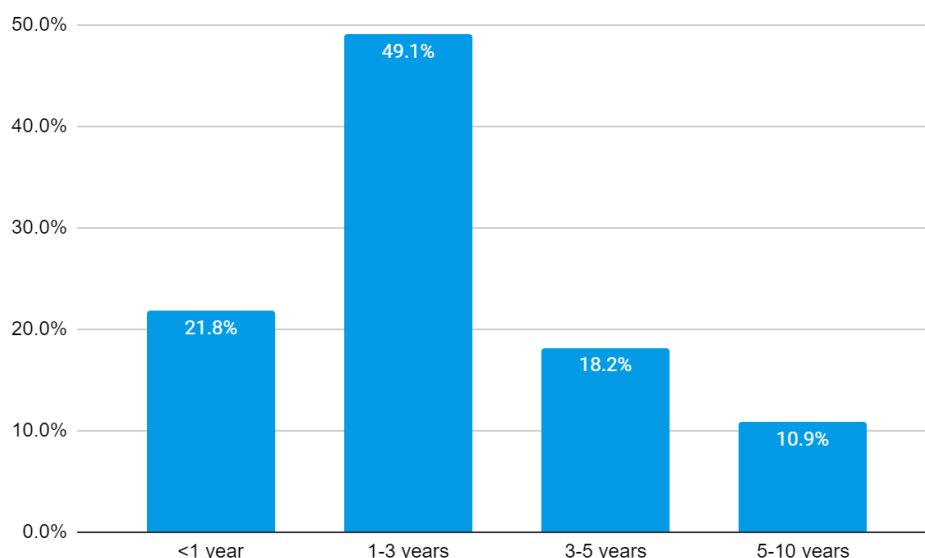


Figure 9: How long have you been working as a cycle courier?

It is interesting to compare the period cycle couriers have already worked as couriers with the duration they expect to continue it.

In general, cycle couriers see themselves continuing the job they perform for at least one year.

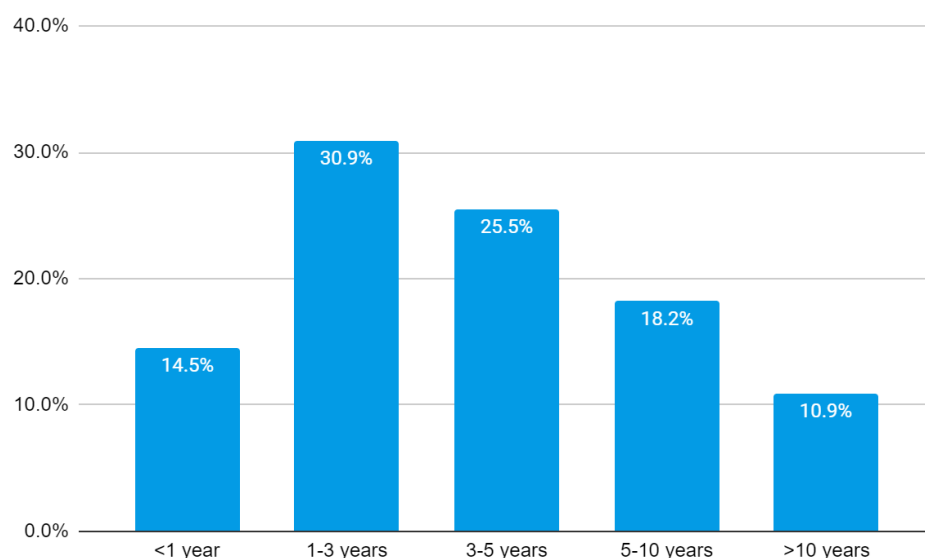


Figure 10: How long do you see yourself still doing the job?

Moreover, while no cycle courier has been active for more than 10 years, almost 11% of the cycle couriers see themselves doing the job in 10 years and more. While 10,9% of the cycle couriers are active for 5-10 years, 18,2% see themselves continuing for the same period.



Lastly, 18,2% have worked for 3-5 years, and 25,5% intend to continue at least for the same period of time.



As a conclusion, cycle couriers intend continuing their job for a longer period than they have been active until now. Therefore, the sector will be more experienced in the years to come.

Finally, 96,4% of the cycle couriers **biked regularly (for leisure, commuting, etc) before starting their job.**

*A cycle courier in action (credits: An Van Gijsegem @Cargo Velo)*

### **The status of cycle couriers**

#### **Main insights**

The majority of couriers have an employment contract (82%). The focus lies on qualitative job conditions for couriers.

Moreover, independently from their status, cycle couriers are almost all paid by hour, which guarantees safe working conditions and financial security.

Finally, a majority of cycle couriers dispose of another job as they don't practise the cycle courier profession full time. Jobs are either performed into the cycle logistics companies in a support function, which brings complementarity inside companies, or in another sector.

Cycle couriers have six different **types of contracts**. A majority of them dispose of a permanent contract, part time (45%) or full time (7%). Cycle couriers benefiting from a fixed duration contract (21,8%) majoritarily use the SMart contracts (18,2%)<sup>27</sup>.

While 82% of the cycle couriers are employees, 18% of them are freelancers. A quarter is because they also manage the activities of their company: they are managers and couriers. This usually occurs in new companies or in companies with low volumes.

The other contracts are students and also one flexijob.

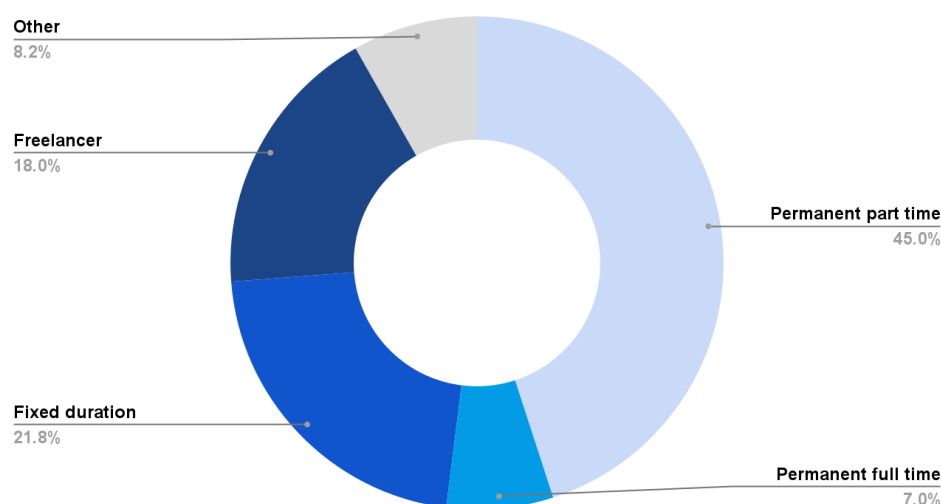


Figure 11: Types of contracts

Nevertheless, 91% of the cycle couriers are **paid by hour** by their company, freelancer or employee. Only one courier is paid by delivery or package. Finally, the freelance managers that cumulate cycle courier and manager are paid by delivery or package. This is explained by the fact their freelance status represents their company and themselves.

Therefore, this represents a characteristic of the sector: companies are usually paid per delivery by their clients. They then act as a buffer and transform it into a payment per hour for their cycle couriers, which ensures them financial security. This is opposed to the system of the gig economy where cycle couriers are paid by delivery.

The **number of working hours worked as a cycle courier per courier** is quite variable.

36,4% of the cycle couriers do it as a full time job, as cycle couriers represent 100% of their revenues.

For the majority of them, their cycle courier job represents more than half of their working hours.

<sup>27</sup> The SMartBe contract allows to hire artists or intermittent workers for one-off performances, offering them social protection as employees.

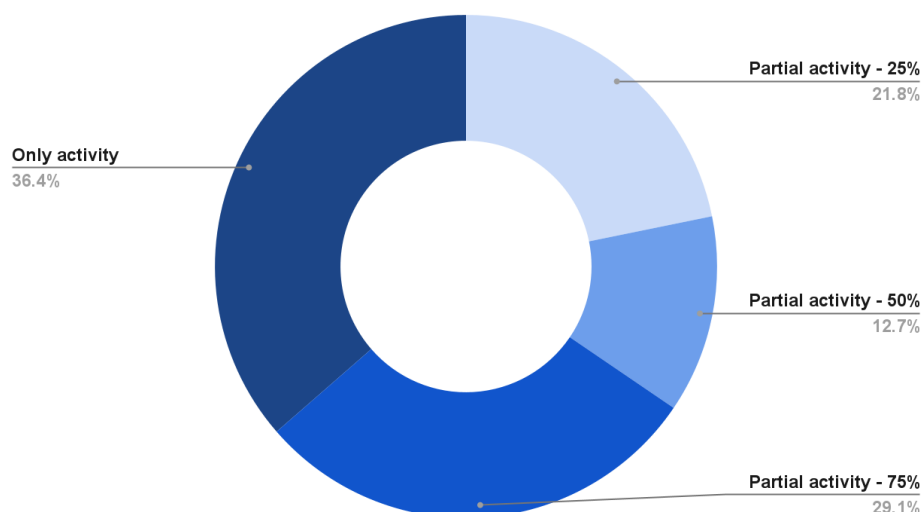
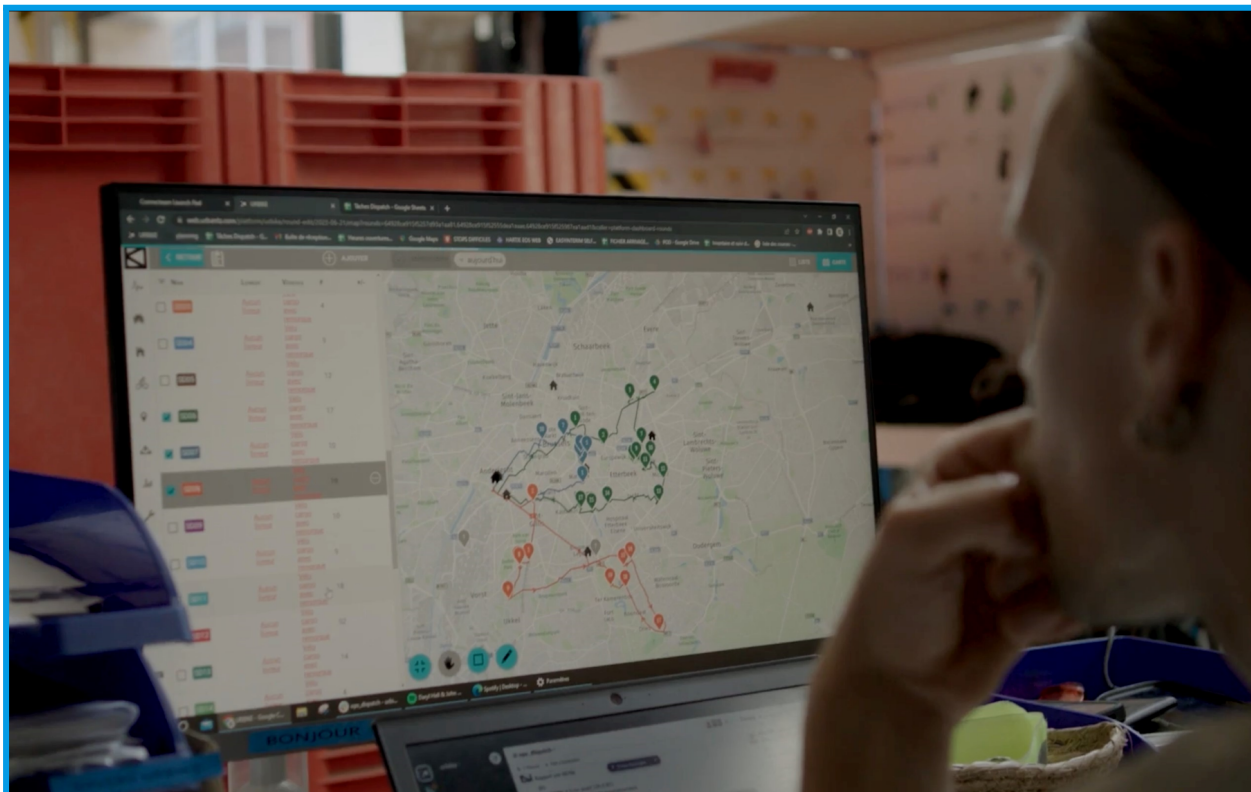


Figure 12: % of working hours worked as cycle courier

Cycle couriers that do not provide all their working hours as couriers usually perform other professional activities. They are of two types:

- Either they have another side or principal activity as artist, photographer, bar owner, illustrator, teacher, student etc.
- Or they perform a support job in the company they cycle for: manager, sales, dispatch, administration, communication, business development, IT, clients relationships, trainer, technical advisor, mechanic. Those activities are complementary with the cycle courier job, reinforces the company culture and participates in the fact that all layers of the cycle logistics companies understand the cycle courier job very well, as the workers usually also cycle as couriers.



*Dispatcher in a hub (credits: urbike)*

Therefore, the job of cycle courier can be combined with other activities, which gives opportunities and flexibility to the cycle couriers and the companies.

*“I’m a physiotherapist and I really wanted to do it half-time. Being a courier was the best opportunity to learn a new job and be part of a big change in Brussels”*

Finally, some cycle couriers do not dispose of a full time job as cycle courier but this job represents 100% of their working hours. Those couriers are therefore not working full time and do not have another profession or function on the side.

*“I love my job. As a neuroatypical (ADHD), moving on a bike a few hours per day makes me feel better.”*

## The job of a cycle courier

### Main insights

Cycle couriers cover distances between 30 and 75 km per day on a (e-)carrier cycle. Cycle logistics companies usually provide all the material to make it as safe and comfortable as possible.

The majority of cycle logistics companies provide training to new cycle couriers in order to learn them the job. Indeed, the profession is relatively new and there doesn't exist a standardised training yet.

Cycle couriers deliver goods directly to private customers (B2C) or to businesses (B2B). Those goods are usually packed. Cycle couriers also declare transporting pallets. What those packages and pallets contain is very variable, as cycle couriers are able to transport a wide range of goods. This gives lots of development opportunities to the sector.

Finally, the job of cycle courier can lead to physical problems due to a repetition of movement or a bad movement. Those problems could be tackled by focusing on warming up and stretching techniques during the training.

### *To whom do cycle couriers deliver?*

Cycle couriers deliver almost all to businesses (B2B, 96,4% of the couriers) and to final customers (B2C, 89,1% of the couriers). Those deliveries entail packages, parcels and material.

22% of the cycle couriers answered also transporting pallets, which are instinctively more dedicated to B2B.

### *What do they deliver?*

The actual content of what they deliver is very varied: medication, dry food, refrigerated food, prepared meals, post (letters, magazines), flowers, books, electric scooters, etc. It is the characteristics of the cycle courier job and the companies they are working for. Therefore, the variety of products they can transport is very large. Again, it **proves the potential for cycle logistic operators - which is not only limited to postal and express services.**

### *Distance cycled*

Only 11% of the couriers cycle distances less than 30km per day when they work. **The majority of them cycle between 30 and 75 km per day.** As reported here above, the sporting aspect is one of the reasons why cycle couriers chose this job. It is in alignment with the data here under. Even if cycle couriers can usually choose between electric assisted cycles and non-electric assisted cycles, it is fundamental to be able to cycle on average distances of 30 to 75 km per day for performing the job.

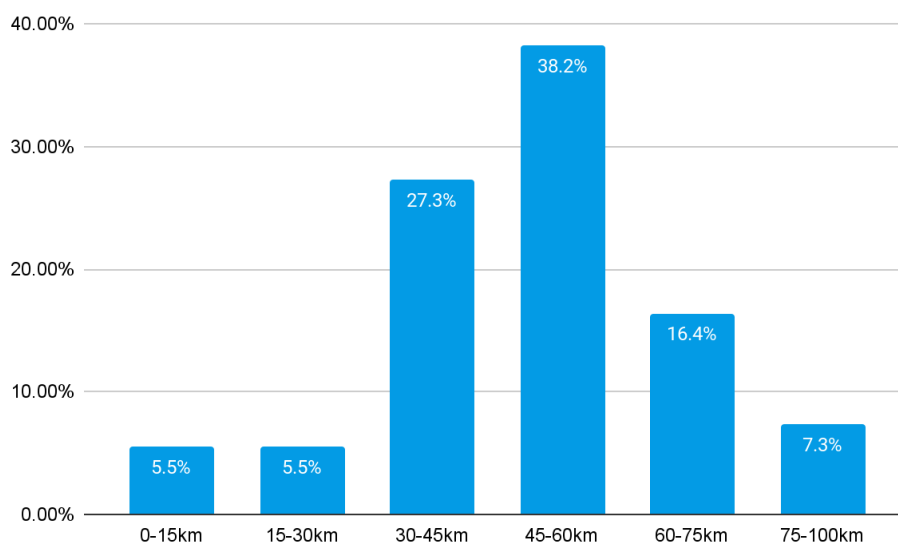


Figure 13: Distance cycled every day

### Type of cycle used

It is not surprising that almost all cycle couriers use **(e-)carrier cycles** for performing their job. Those cycles are able to transport big volumes and weight. In some cases, normal (e)-cycles, longtails, speed pedelecs or even race cycles are suitable. For example, for the transport of mail or post. Those cycles are easier to handle.

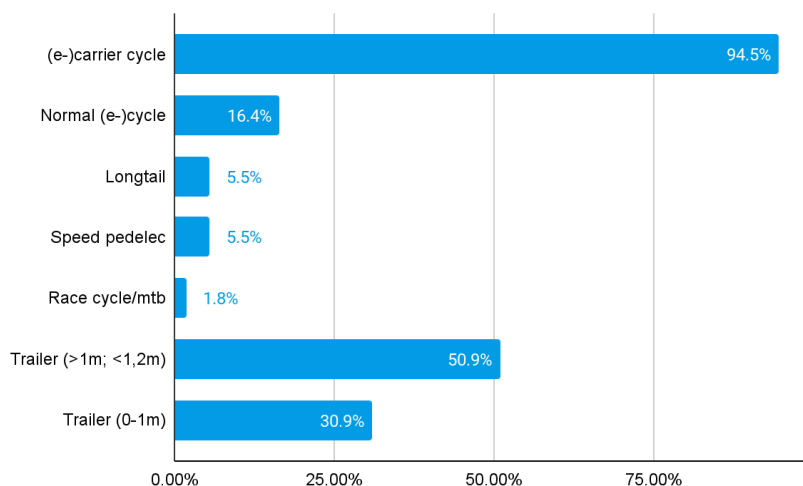


Figure 14: Types of cycle used

Cycle couriers also attach trailers to their cycles. It allows them to transport higher volume and weights and enhances their efficiency. More than half of the couriers use a trailer larger than 1m. Nevertheless, cycle couriers bring to the attention that infrastructure is not always suited for using cycles with trailers, despite its efficiency.

Finally, according to the couriers, the cycles they use are in 82% of the cases **equipped according to legal standards** (incl. bell, brakes and reflectors<sup>28</sup>). 4% don't know.

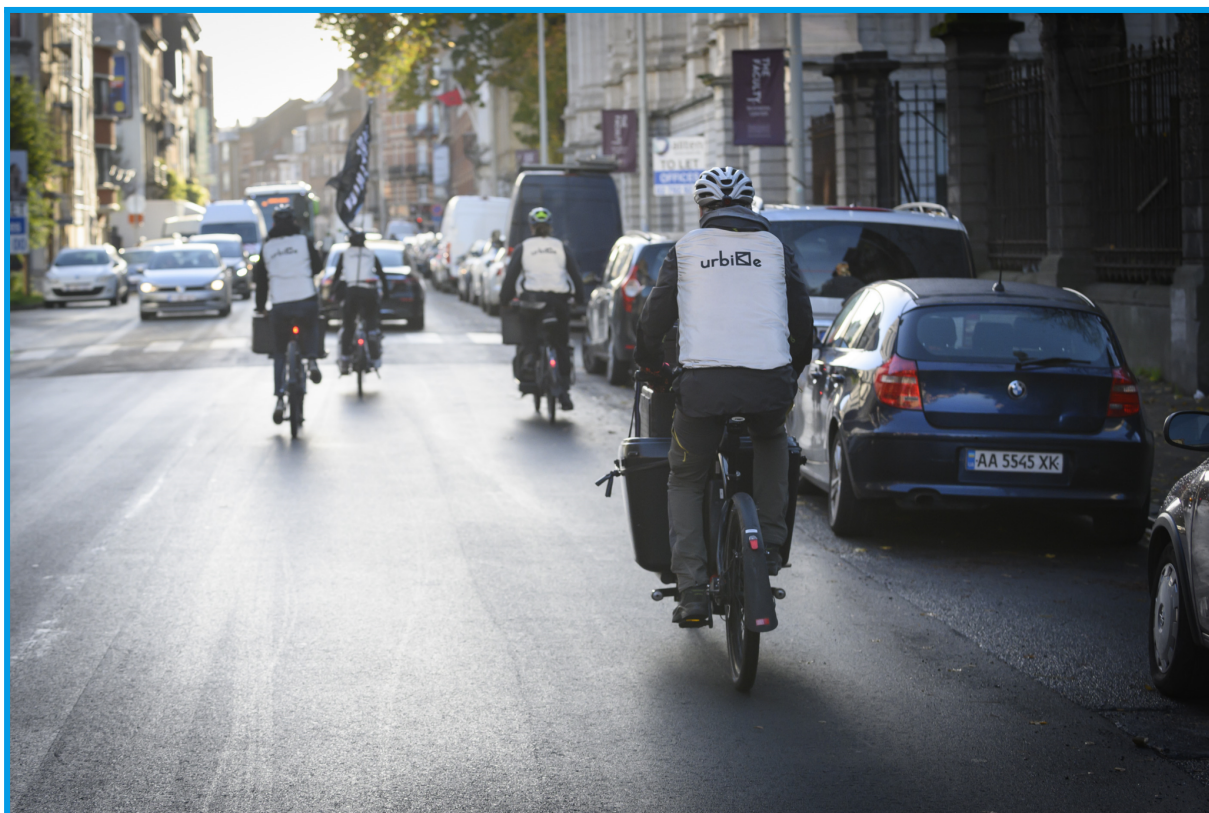
### *Training*

60% of the cycle couriers that answered report having received a specific training from their company before starting their job. 73% of them found the training sufficient to start their job correctly. Therefore 27% of them didn't find the training long enough, qualitative enough, etc.

40% of the cycle couriers answered didn't receive a specific training. 55% of them didn't find it sufficient to start their job.

To sum up, more couriers would have liked training before starting their job. Only 19% of all the cycle couriers do not find training important. That is certainly linked to the fact they are used to cycling.

Finally, **cycle couriers frequently refer to training while offering ideas to tackle some problems** (mastering material, managing physical health, etc).

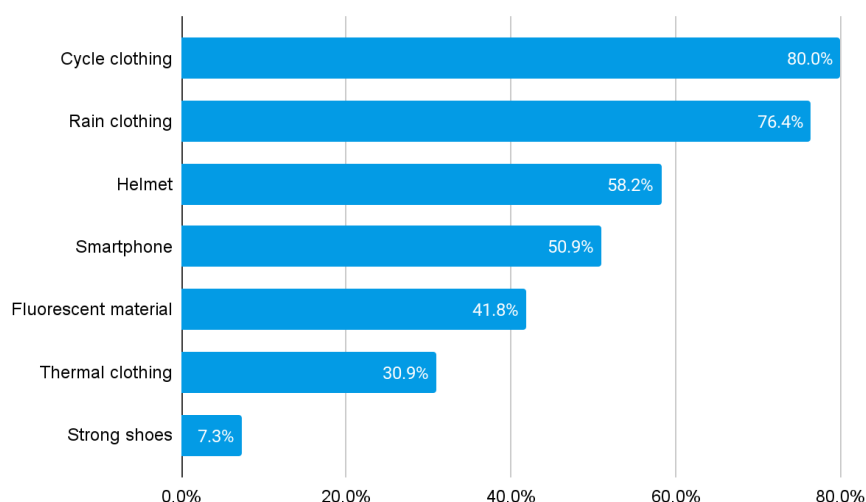


*Practical training session (credits: urbike)*

<sup>28</sup>Belgian Traffic Laws (AR 1/12/1975, updated on 14/07/2023). Art. 82 for cyclists.

### *Additional material*

Cycle courier companies provide cycles to all their employees. A large majority of couriers also receive cycle clothing (80%), rain clothing (76,4%), a helmet (58,2%) and a smartphone (50,9%) for performing their job. Even if it is not a legal prerogative, those equipment are essential for doing the job in safe conditions. It proves cycle logistics companies are willing to offer decent jobs to their employees.



*Figure 15: Additional material provided*

Companies also provide hip bags, socks, gloves, multitools, discounts at brands for cycle clothing, branded jerseys and backpacks. The material provided is adapted to the specificities of all the companies.

Note that freelancers have to own their own material.<sup>29</sup> It explains why the answers are not closer to 100%.

### *Physical health*

**The job of cycle courier** can be hard and demanding: it is **outdoor, exposed to all weather conditions and sporty**. Moreover, cycle couriers handle high volumes and weights of freight.

Nevertheless, 41,8% of the cycle couriers do not experience physical problems due to their job.

When problems arise, the most common are linked to the back (41,8%) which could be due to the position on the cycle or the fact of lifting heavy charges. 25,5% of the couriers also declare having trouble with their legs: that is linked to the repetition of movements they do.

<sup>29</sup> Belgian Law, AR 29/10/2013



Two respondents also mentioned a general fatigue because the job is exhausting and one explained that the weather conditions make him/her sick.

Some cycle couriers specify that the problems do not last. Respondents also say some problems are there because of precedent injuries.

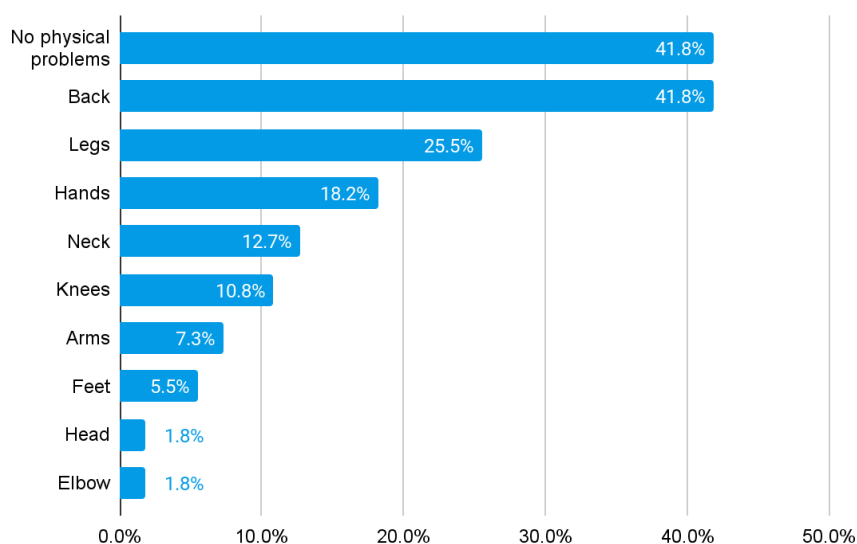


Figure 16: Do you experience physical problems due to your job as a cycle courier?

It is interesting to give some perspective to these problems and to further analyse their cause. In most of the cases, problems occur due to a repetition of movements. May it be for the back, the neck or the legs.

23,6% of respondents declare having problems due to bad movements. It could be linked to a lack of training or a personal miscalculation. One fifth of the cycle couriers concede their age plays a role in the problems they have. Only 3 couriers have physical consequences from an accident, which gives positive indications on the low gravity of the accidents.

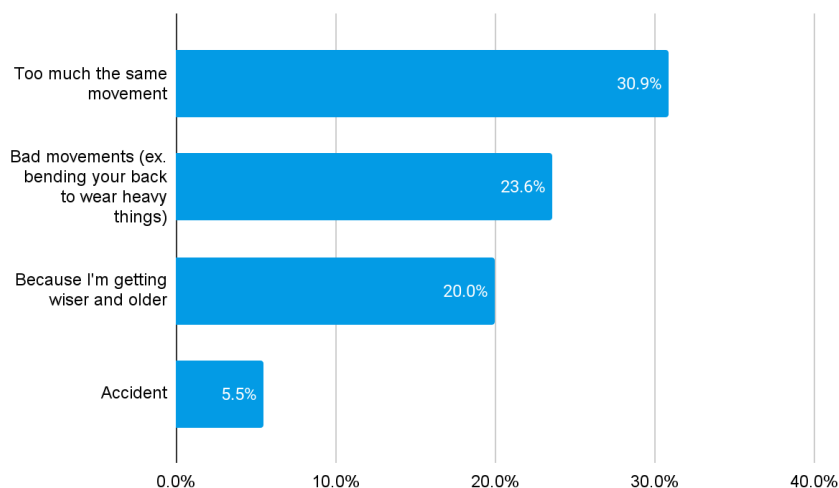


Figure 17: What is the reason behind the physical problem?

Therefore, the causes are clearly multiple: some are attributable to the job itself (too much the same movements, heavy charges), others to personal profiles (getting wiser and older, problems from the past, discipline in stretching and warming up) and finally mixed causes, attributable to the job and the cycle courier responsibility (bad movements, position on the bike, accidents) or even external causes (accidents, weather).

Finally, couriers cite warming up before and stretching after the job as a possible prevention from those physical problems. It could indeed attenuate problems in terms of bad movements, age and repetition of movements. But cycle couriers mention not always being familiar with how to proceed for it.

In general, only 40% declare having had a focus on their physical health before starting their job (independently from the training or not).



Cycle couriers preparing their tours (credits: ViaVelo)

## Safety

### Main insights

There are 4 types of dangers cycle couriers face while performing their job: interaction with other road users, infrastructure, material and the weather. Those aspects could make their job as cycle courier uncomfortable and unsafe.

Nevertheless, incidents are not frequent in cycle logistics. Moreover, their consequences are very limited in terms of material and physical damage. Interaction with other road users (principally motorised vehicles) and difficult weather conditions are the principal causes of incidents.

Finally, cycle courier perception of safety on a range from one (= totally unsafe) to five (=very safe) is on average 3,4. This should be enhanced by tackling the 4 dangers identified and the causes of the incidents.

### General information

Cycle couriers' **perception** on safety on the road is on the mean 3,4 out of 5 (1 = totally unsafe, 5 = very safe). Cycle couriers feel therefore rather more secure than insecure.

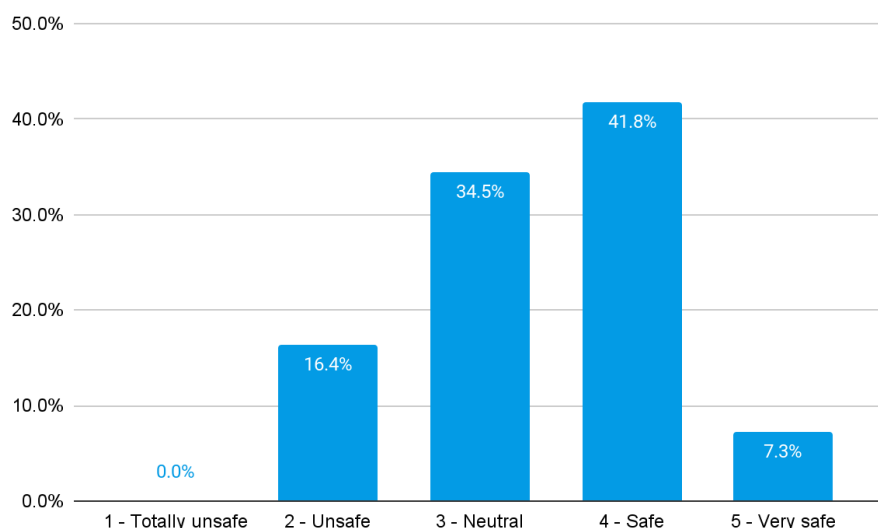


Figure 18: How safe do you feel yourself in traffic as a cycle courier?

**Traffic rules** are majoritarily clear for cycle couriers (1 = totally not clear; 5 = very clear). Nevertheless, a lot of points could be enhanced.

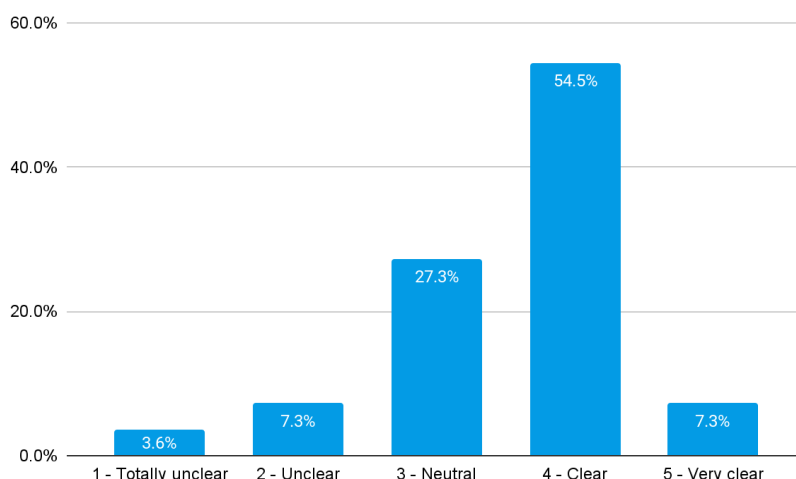


Figure 19: How clear would you say traffic regulations are?

Note that 85% of the cycle couriers always **wear a helmet**, even if it is not compulsory.

#### Type of dangers

Cycle couriers encounter **principally 4 dangers** on the road: interactions with others, infrastructure, material and weather conditions.

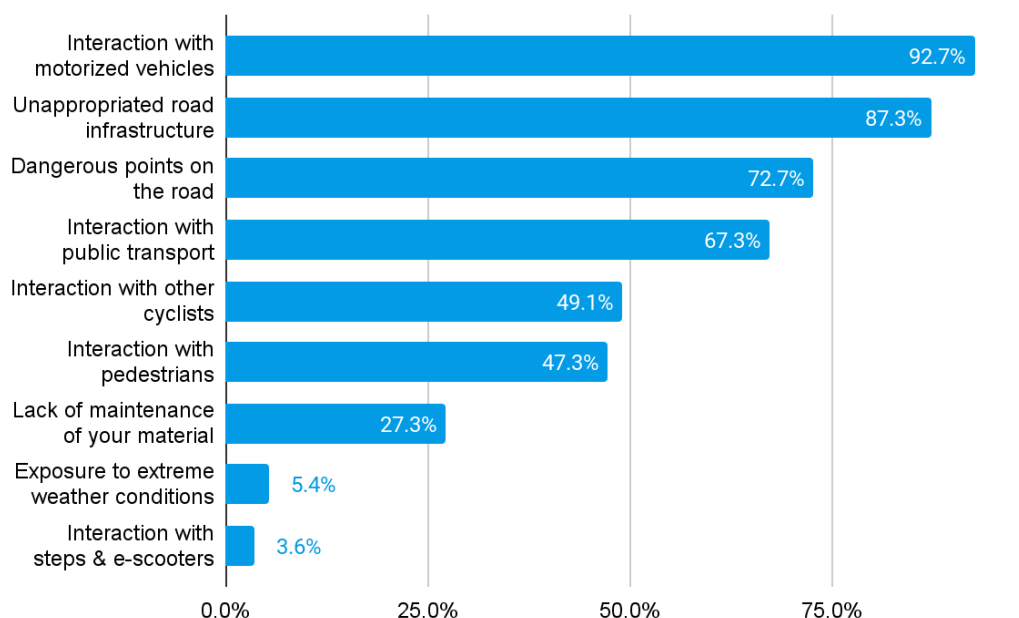


Figure 20: Which dangers do you encounter when exercising your job as courier?

Firstly, a number of dangers are linked to interactions with other road users: 93% of them are due to the interaction with motorised road users (ex. car drivers, parked cars on cycle paths, heavy trucks), 67,3% due to interactions with public transport (buses, tram rails, etc). Almost

half of the participants also point out the interaction with other cyclists and pedestrians as a danger. It must really be a point of attention in the future.

Secondly, a big majority feel danger due to unappropriated road infrastructure (obsolete cycle paths or roads, lack of cycle paths, ...) and dangerous points (crossings, lack of signalisation, etc). Those are the 2nd and 3rd most cited dangers by the cycle couriers.

Cycle couriers emphasise that well maintained material is important. A courier also mentioned *indecent loads (oversized, too heavy, imbalanced)* as a danger.

Finally, cycle couriers point out that the exposure to extreme weather conditions could be a danger. That will be confirmed in the next point on the incidents.

### *Incidents*<sup>30</sup>

On an average experience of cycle couriers from 1 to 3 years, **incidents remain scarce**. 45% of the respondents say they have experienced one incident. Only three cycle couriers reported several incidents (two and three).

The types of incidents are very varied. They can be classified in relation with their causes, that are linked to the dangers identified here above. Usually, the **causes** are interactions with other road users (majoritarily motorised vehicles and public transport), unappropriated road infrastructure, the weather conditions, and human errors.

Causes can also be multiple and a combination of the problems cited here above. In that way, a lack of maintenance of material is never the only cause of an accident. But, combined with other dangers, it leads to incidents. Moreover, interactions with other road users and unappropriated road infrastructure are closely linked as the place of cycles in traffic is crucial for safe conditions.

It is interesting to note that the weather conditions play a crucial role. They are cited frequently in the description of the incidents: slippery roads, snow, etc. Nevertheless, they were hardly cited in the dangers. The reason is probably that it was not a direct proposition in the multiple answers survey, cycle couriers had to add it. Therefore, difficult weather conditions are a danger for incidents.

There are usually little **consequences** in case of incidents. If there are, the ones related are material or physical damage. Those are therefore classified as accidents.

- **Material damage:** in only two accidents material damage has really occurred. First, the whole carrier cycles had to be replaced. Secondly, the wheels were damaged.

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<sup>30</sup> An incident is here defined as an event that has unintentionally happened, but that does not result in damage, harm or injury while an accident is here defined as an event that has unintentionally happened and that results in damage, injury or harm.

- Physical damages due to accidents are scarce. The most common consequences are abrasions (x2), contusion and bruises (x4), a broken arm (x1), a broken hand (x1) & bruised ribs (x1).

In conclusion, the job of cycle couriers is exposed to external risks while doing its job. It is something that can be tackled by focusing on better infrastructure, material and training. Nevertheless, the number of incidents remain scarce and the consequences of it hardly lead to damages.



*Rainy working day in Leuven (credits: Vi-tes fietskoerier)*

## Current Challenges in Cycle Logistics

Firstly, to identify the key challenges in cycle logistics, we crossed two surveys. **Cycle logistics carriers** (15) and **mixed carriers** (2) evaluated the relative importance of a selection of relevant challenges for the sector. They could also identify challenges that were not initially identified in the selection. Then, **cycle logistics couriers** (55) shared valuable insights on the highs and pains of their experience as cycle couriers. It allowed the definition and prioritisation of (new) challenges.

Secondly, the final classification and prioritisation of the challenges were **reviewed, discussed and validated during a workshop** mid-September by the operators that responded to the surveys (13 participants). It brought insightful conclusions.

This cross-sectional approach strengthens the representativity of this report and quality of identified challenges. The challenges were categorised into economic, cultural, infrastructural, policy, material and human resources, and other challenges of the sector.

- Economic challenges (EC) refer to any challenges hindering the economic development of cycle logistics actors such as financial barriers, costs, or market challenges.
- Cultural challenges (CC) refer to the general knowledge of cycle logistics by the wider audience, and its understanding of the societal cost of transport.
- Infrastructural challenges (IC) refer to any challenges related to urban logistics and road infrastructure.
- Policy challenges (PC) refer to any policy elements influencing the development of cycle logistics activities at a local, regional or national level.
- Human resource challenges (HC) refer to any challenges related to human resource management (e.g., recruitment, training, diversity and inclusion).
- Material resource challenges (MC) refer to any challenges related to the availability and suitability of cycle logistics equipment (e.g., cycles, trailers, cycle couriers' equipment).
- Other challenges (OC) refer to any challenge that is not included in any of the above categories.

The tables below highlight the (general and detailed visualisation) of the challenges of the sector and their relative importance according to **cycle logistics carriers, mixed carriers, and cycle logistics couriers**.

## General visualisation of the challenges

The most important challenges for the development of cycle logistics are the economic challenge, the cultural adoption of it and infrastructure.

Firstly, cycle logistics operators identified that the sector still suffers from a lot of lack of knowledge from their stakeholders. That problem has direct consequences as cycle logistics is overlooked as a solution: it is considered, but usually not deeply analysed and understood when it comes to concretely implementing it in sustainable logistics chains. This problem also highly influences the classification of the other challenges, as, for example, the lack of qualitative infrastructure could therefore be the consequence of this lack of knowledge or consideration.

Secondly, the sector of cycle logistics is still relatively new. Therefore, the economic challenge for its development is central. Even if cycle logistics companies have proved their solution was efficient, they still face structural economic challenges in developing their activity.

Thirdly, the infrastructure challenge is central for developing the sector properly. And it is closely related to the policy challenge. Indeed, designing qualitative infrastructure and disposing of logistics infrastructure are usually in support of strong policies. Infrastructure not only participates to attenuate the economic challenge in terms of competitiveness, but it principally makes cycle couriers job safe and decent.

Fourthly, policies have the power to create favourable conditions in order to tackle problems of cultural, economic and infrastructural challenge. Indeed, at every level, local, regional and national, it is essential to be supported in the challenge of the emergence of this new sector. The goal here is to find the right keys to support the sector.

Lastly, human resources, material and other challenges are of relative importance. Nevertheless, two main points emerge from here. Firstly, access to qualified workforce is fundamental as it could benefit both to attenuate cycle logistics economic challenge and enhance cycle couriers profession. Secondly, collaboration among logistics operators would enhance global efficiency. It is complicated to set up but actors point to it as an important challenge.

Legend of the table below:

<b>I</b>	The most important	<b>II</b>	Very important	<b>III</b>	Important	<b>IV</b>	Moderately important	<b>V</b>	Slightly important
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	1	2	3	4	5	6	7	8
<b>Economic Challenge</b>	Economic competitiveness <b>I</b>	Employment cost <b>II</b>	Finding new customers <b>IV</b>	Finding new customers markets <b>IV</b>	Material cost <b>IV</b>	Access to funding <b>V</b>	Organisation of pilot test <b>V</b>	Valorisation of operational data <b>V</b>
<b>Cultural Challenge</b>	Knowledge of cycle logistics as a relevant alternative for urban transport <b>II</b>	Knowledge of societal cost of urban deliveries <b>III</b>	Knowledge of the societal impact of cycle logistics <b>III</b>	Visibility of the sector <b>III</b>				
<b>Infrastructural Challenge</b>	Cycling infrastructure <b>II</b>	Logistics infrastructure <b>III</b>						
<b>Policy Challenge</b>	Effective sustainable mobility policies <b>III</b>	Local support <b>III</b>	Regional & national support <b>III</b>					
<b>Human Resource Challenge</b>	Access to qualified workforce <b>III</b>	Development of training schemes <b>IV</b>	Diversity of the workforce <b>IV</b>	Access to appropriate social secretary services <b>V</b>				
<b>Other Challenge</b>	Collaboration between actors <b>III</b>	Access to appropriate insurance offer <b>IV</b>	Resource/information sharing <b>IV</b>					
<b>Material Resource challenge</b>	Access to appropriate material <b>IV</b>	Access to appropriate IT-systems <b>V</b>						

## Lessons Learned from Key Projects & Initiatives

















Cycle logistics actors are innovative and have already performed and been involved in numerous projects and initiatives that contributed to the development of the sector. This section highlights a number of projects that have successfully or unsuccessfully contributed to this development. The goal is to take the **lessons learned** from the past, replicate what has already worked, improve and correct the pains, and subsequently come up with clever recommendations.

For the purpose of this analysis, **more than 30 projects and initiatives** pursued in Belgium and Europe were documented. The tables below list these projects and initiatives, present an evaluation of the results (positive - green, variable - orange, negative - red or not known - grey), and indicate the relevance of a replication (yes - green, yes with improvements- orange, no - red, not known - grey)

Creation of cycle logistics operators					
Project	Description	City	Results	Replication	ID
Markta	Local market grocery delivery.	Mechelen			PC2 CC3
Wevelgemse fietskoerier	Local market grocery delivery.	Wevelgem, Gullegem & Moorseele			PC2 CC3
Werkmaat	Professionalising their cycle delivery service with people far away from the labour market.	Lier			HR2

### Conclusions

Two projects (Markta & Wevelgemse fietskoerier) focused on delivering groceries from the local open air market to customers. In that way, **inhabitants became aware that the cycle logistics initiative started**, as they could literally see it: customers made their groceries, left them at the supplier and got them delivered the same day at home. This led to the creation of new cycle logistics operators.











Replacing motorised vehicles with carrier cycles					
Project	Description	City	Results	Replication	ID
Test of carrier cycles to replace vans	Mixed operator testing the integration of carrier cycle solutions in its last mile supply chain.	Ghent, Antwerp, Leuven & Roeselare			CC1
Het WWW, lokaal geleverd	Reduce the number of delivery e-commerce vans and switch deliveries to means of transport suited for (large) urban contexts.	Ghent			PC2 EC3 EC4
Simpl	Lidl launched a delivery service by cycle.	Antwerp			EC3 EC4
Slim Naar Antwerpen	The City of Antwerp provides a result-related subsidy for sustainable initiatives. The supplier is obliged to pass on this subsidy to the end customer.	Antwerp			EC3 EC4 PC2
BCKlet	Experimental research project aiming at testing innovative cycle delivery solutions, developing new sustainable urban logistics models, and contributing to the improvement of the status of cycle couriers.	Brussels			EC3 EC4
Les petits riens	Tested the feasibility and efficiency of clothes collection by cycle.	Brussels			CC1 EC6
STALEM	Collaboration between the merchants in Brussels, aiming to valorize their waste.	Brussels			CC1 EC6
CollisActiv'	Financial support for cycle logistics companies and principals per delivery in order to acquire a certain volume and be	France			EC3 EC4 CC1 PC3

	competitive.				
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### Conclusions

Development possibilities for cycle logistics are numerous, in different market segments ( parcel logistics, food logistics, waste logistic, etc). Nevertheless, switching from motorised deliveries to cycle deliveries comes with challenges: technical & financial feasibility, ability to change, etc. A **program such as Slim naar Antwerpen or CollisActiv’ can initiate and support the change** by attenuating the financial barrier. In addition, the focus must be set on the long term sustainability of the solution developed.

### Logistics infrastructure









Project	Description	City	Results	Replication	ID
CULT	Smart consolidation of volume through collaboration (UCC).	Antwerp			OC1 OC2 IC2
R!SULT	Testing the Urban Distribution Centers (UDC).	Mechelen, Ghent & Antwerp			OC1 OC2 IC2
Logistics unburdening of the shop owner in the city centre	Change the delivery address of retailers outside the city to bundle deliveries at their shop efficiently and by cycle.	Mechelen			PC2 OC1 OC2 IC2
In de box	Storage for seasonal private items in the hub.	Mechelen			IC2 EC3
City of Brussels: decarbonised logistics study	Evaluate the feasibility of implementing decarbonised logistics solutions in three neighbourhoods.	Brussels			OC1 OC2 IC2

### Conclusions

CULT and R!SULT are two projects ambitioning to design the future of urban logistics. R!SULT project offers several lessons: **every city should have a UDC**, collaboration between logistics actors is key and **micro hubs allow a better development of carrier cycles, even if it has a higher price tag**. The CULT project started in 2021 but the lessons are not available yet. Nevertheless, a second project was launched in Brussels.

In de box is a project conducted in 2015 that offered storage space for private customers. But it didn't continue. Finally, Mechelen tried to convince all its merchants to change their delivery address to a city hub outside the city centre, in order to bundle all city centre deliveries afterwards and deliver them with carrier cycles. Merchants were difficult to convince but the

solution was from an operational point of view positive. The recommendation is that **a strong policy is needed and merchants have to find their profit in it too**. For example, they use this system now every time a road is under construction and therefore temporarily inaccessible by vehicle.



Road infrastructure					
Project	Description	City	Results	Replication	ID
Carrier cycles on water	Testing the ability to navigate from a depot out of the city to the city centre by boat and then perform the last mile with carrier cycles.	Ghent			OC1 CC2 IC1
Pilot project for trailers between 1m and 1m20	Companies and businesses can apply for a permit to drive a cycle trailer wider than 1 metre (with 1m20 of width maximum) for 2 years.	Flanders			IC1 PC2 PC3
Vademecum fietsvoorzieningen 2022	Describes the standard guidelines for quality cycling infrastructure.	Flanders			IC1 PC2 PC3
Pilot project for trailers between 1m and 1m20	Companies and businesses can apply for a permit to drive a bicycle trailer wider than 1 metre (with 1m20 of width maximum).	Wallonia			IC1 PC2 PC3



### Conclusions





Public authorities are testing in Wallonia and in Flanders the possibility to extend the width of cycle trailers to 1m20. It would offer cycle logistics a new dimension as those trailers can transport standardised European pallets. **The importance of a pilot project testing the dimensions is central in order to analyse the impact of it.** Therefore, collaboration between operators and authorities is essential.







Moreover, in Flanders, there exists a **specific guide that enumerates standard guidelines for designing quality cycling infrastructure**. This could be useful to replicate, extend to other regions and add cycle logistics considerations, as quality cycling infrastructure is one of the key challenges for the development of cycle logistics.

Finally, **multimodality can play a role for the future of cycle logistics**. Nevertheless, currently, almost **only technical feasibility has been tested out**.

Marketing					
Project	Description	City	Results	Replication	ID
Communication campaign for Hand-free shopping”	The merchants who delivered with the cycle couriers needed more visibility. Thus, a leaflet/poster/web page was created for the merchants.	Mechelen			CC1
Conclusions					
Often, stakeholders are not aware of the possibility of cycle logistics. Here, the city of Mechelen offered support to give <b>visibility to a new project</b> .					

Insurances					
Project	Description	City	Results	Replication	ID
Insurances Maif	Design a sectoral insurance package in order for companies to gain time and money to get the right coverage.	France			OC2
Conclusions					
Helping cycle logistics operators with legal and administrative work is efficient. <b>A structural organisation has to take care of it in order that it benefits every company.</b>					

IT					
Project	Description	City	Results	Replication	ID
ULaaDS	Test platforms for on-demand city logistics and experiments with various forms of organisation and control of cycle transport between micro hubs.	Mechelen			OC1 OC2 IC2 MR2
mymarket.brussels	E-commerce platform designed for small to	Brussels			EC3 EC4





	medium local shops to connect the sender, the transporter and the final customer.				CC1 IC2
Hand-free shopping	Stores and trades can have their parcels picked up by a cycle courier service thanks to a mobile app to deliver to final customers.	Mechelen			EC3 EC4 CC1 IC2
City line	Project aimed at connecting urban logistics operators through an intelligent software solution in order to offer shippers a single point of contact.	Wallonia			CC1 IC2 OC1 OC2
NamurBoutik	An online platform to provide digital support to local shops with the will of implementing a fair, responsible and sustainable logistics chain for all stakeholders.	Namur			EC3 EC4 CC1 IC2







## Conclusions

In general, it is a **good idea to bring merchants, logistics operators and customers on a common platform** (mymarket.brussels, Hand-free shopping & NamurBoutik).

In order to reach merchants and to incentivize them to use the platform, a lot of communication is needed. For logistics operators, a minimum density/number of merchants is needed in order to make the system economically viable.

Nevertheless, it is **complicated to make logistics operators work together** (ULaaDS). Indeed, even if the solution offered is efficient from an operational point of view, operators dispose of their own flows. If the innovative solution doesn't bring them a consequent economic and strategic advantage, they won't work together.

Research on the global potential of cycle logistics					
Project	Description	City	Results	Replication	ID
City of Liège: pre-feasibility study of a sustainable urban delivery solution	The study consisted in the critical evaluation of existing solutions and how they could be implemented in Liège.	Liège			CC1 CC2 PC1 IC2 PC2
Stratégie de mise à l'échelle de la cyclo-logistique en Wallonie	This project resulted in a report identifying the key recommendations to support the development of cycle logistics in Wallonia	Wallonia			CC1 CC2 PC1 IC2 PC3
Conclusions					
Before starting mobility plans, cities and regions firstly need to get to know the sector and the potential of it. <b>Studies are usually useful in order to inform administrations and politics on the nature of cycle logistics.</b>					









Cities own flows of logistics					
Project	Description	City	Results	Replication	ID
Upscaling urban sustainable logistics	Bundling cities services at the border of the city and delivering them emission free.	Mechelen			PC2
Ghent sustainable intern logistics	Delivering city services by cycle.	Ghent			PC2
Deinze sustainable correspondence	Cycle courier service to make the city correspondence (mail, administration) sustainable.	Deinze			PC2
Conclusions					
Cities play a central role in the development of cycle logistics operations as they can <b>lead by</b>					



**example.** Beyond their evident role in terms of building quality infrastructure, cities can partner for offering their own services with (local) cycle logistics operators.  
A point of attention is that the tender released to look for operators must be clear before starting the project.

### Implementation of internal cycle logistics solutions

(Those projects were analysed but are out of the scope of this study. Indeed, they concern “professionals with carrier cycles”. Nevertheless, they can serve as inspiration.)

Project	Description	City	Results	Replication	ID
CPAS Berchem-St-Agathe	The project consists in the development and implementation of carrier cycle delivery services in the public centre of social support of Berchem-St-Agathe.	Brussels			CC1 EC6
Les cuisines Bruxelloises	Explore the potential and feasibility of carrier cycle deliveries for prepared meals.	Brussels			CC1 EC6
cAIRgo bike	A project that promotes the use of carrier cycles in Brussels (with a specific focus on professionals here).	Brussels			CC1 HR2
Ma Cyclo-entreprise	It offers specialised training for supporting either the launching of a cycle logistics activity or the transition to cycle logistics.	France			PC2 PC3 CC1 HR2

### Conclusions

Another way to support the implementation of new cycle logistics activities is to directly implement solutions in companies with the **support from external experts**. In that way, a roadmap is created in order to implement a new activity. Again, the most important focus must be set on the long term sustainability of the solution developed so that the project becomes independent from external resources.



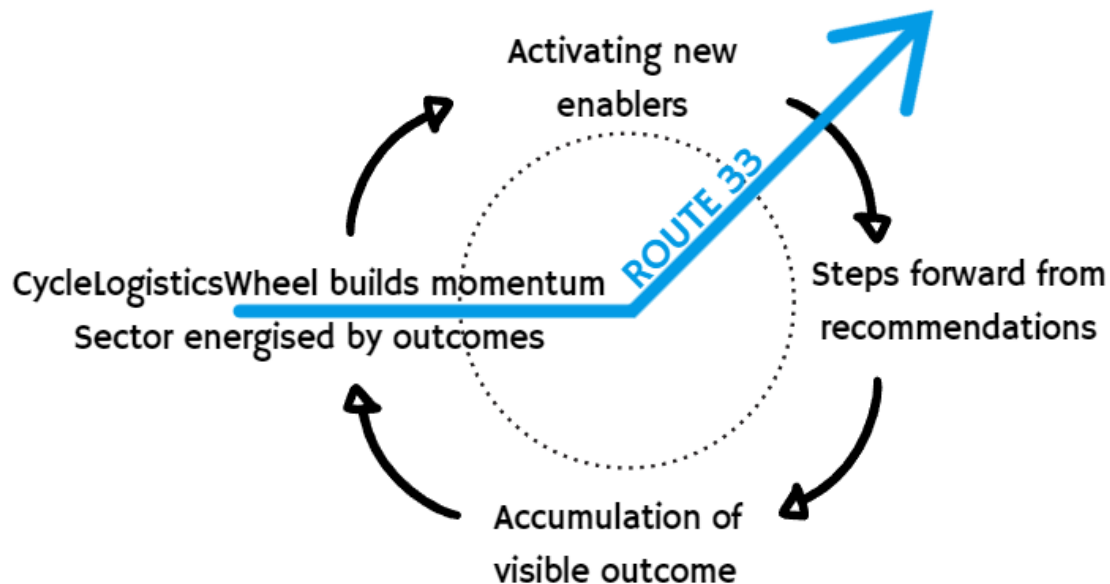
*Cycle couriers departure from a loading ramp (credits: An Van Gijsegem @Cargo Velo)*

## The plan for Cycle Logistics Development

The goal of this last section is to formulate concrete, actionable and impactful recommendations in order to activate the enablers which will tackle the challenges. These recommendations will be put forward by the BCLF to the relevant stakeholder.

### The FlyWheel effect

We want to put the recommendations in the context of the dynamics that will develop the sector of cycle logistics. Inspired by the concept of the FlyWheel effect<sup>31</sup>, it suggests that, by consistently making incremental improvements or investments, the cycle logistics sector can generate positive momentum and eventually achieve substantial growth or success. The key idea is that the getting momentum is initially very hard to get, but that each small push or effort contributes to the overall rotation of the wheel, and as it turns faster and faster, the sector becomes more efficient, effective, and successful. It is a **continuous, self-reinforcing process where small, consistent efforts lead to significant outcomes** and sustained momentum over time.

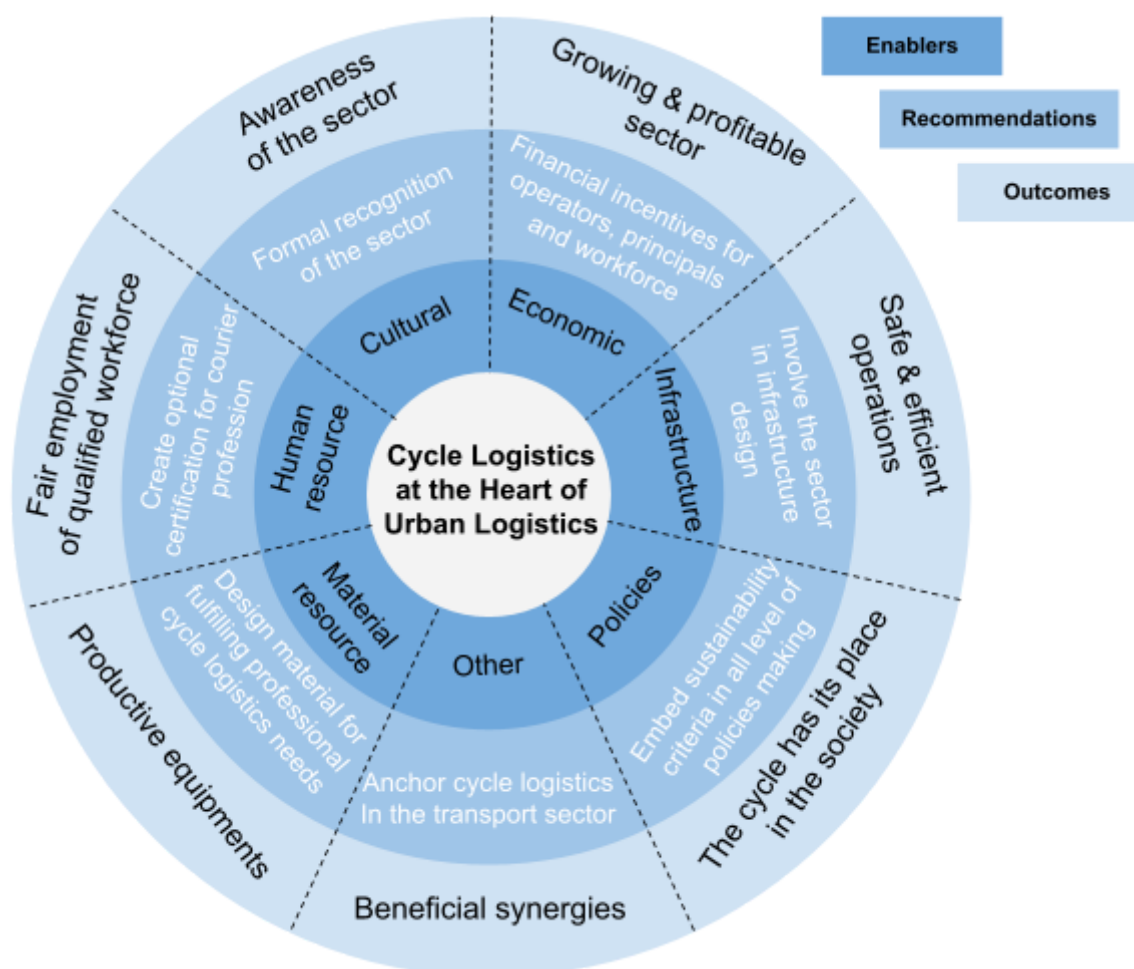


<sup>31</sup> Jim Collins. *Good to great, why some companies make the leap ... and others don't.* (US, 2001). p.164

## The Cycle Logistics Wheel

The chart below visualises the different categories of enablers and their expected outcomes. The enablers and outcomes per category are inspired from the challenges identified previously<sup>32</sup>. In order to activate the enablers, recommendations are cited. In the wheel here under, one main recommendation has been selected per category. They are addressed to external stakeholders and the BCLF's role is to spread them. The detailed wheels per category can be found here under, where actions towards the BCLF are also cited.

Finally, as explained by the concept of the FlyWheel, every activated recommendation will benefit several enablers and outcomes, through different categories. The wheel will turn continuously and faster and faster as more and more enablers are activated through recommendations.



<sup>32</sup> Indeed, some challenges (= enablers) can, if activated, directly tackle other challenges (= outcomes).

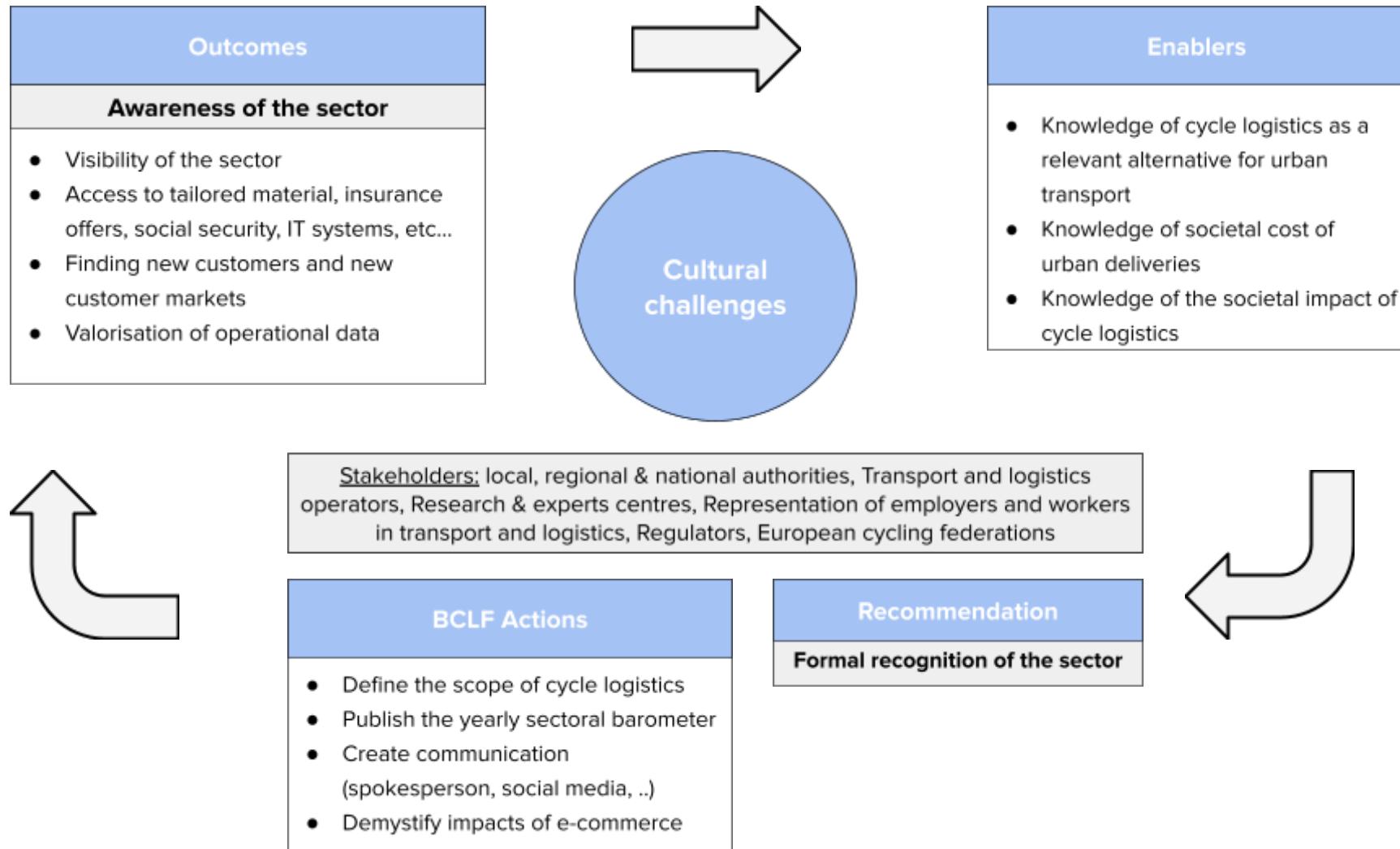
## The FlyWheel applied to each category

In order to focus on every category separately, specific Fly Wheels were created. They gather all the enablers, the recommendations (= to be activated by external stakeholders), the actions (= to be activated by the BCLF) and the outcomes per category.

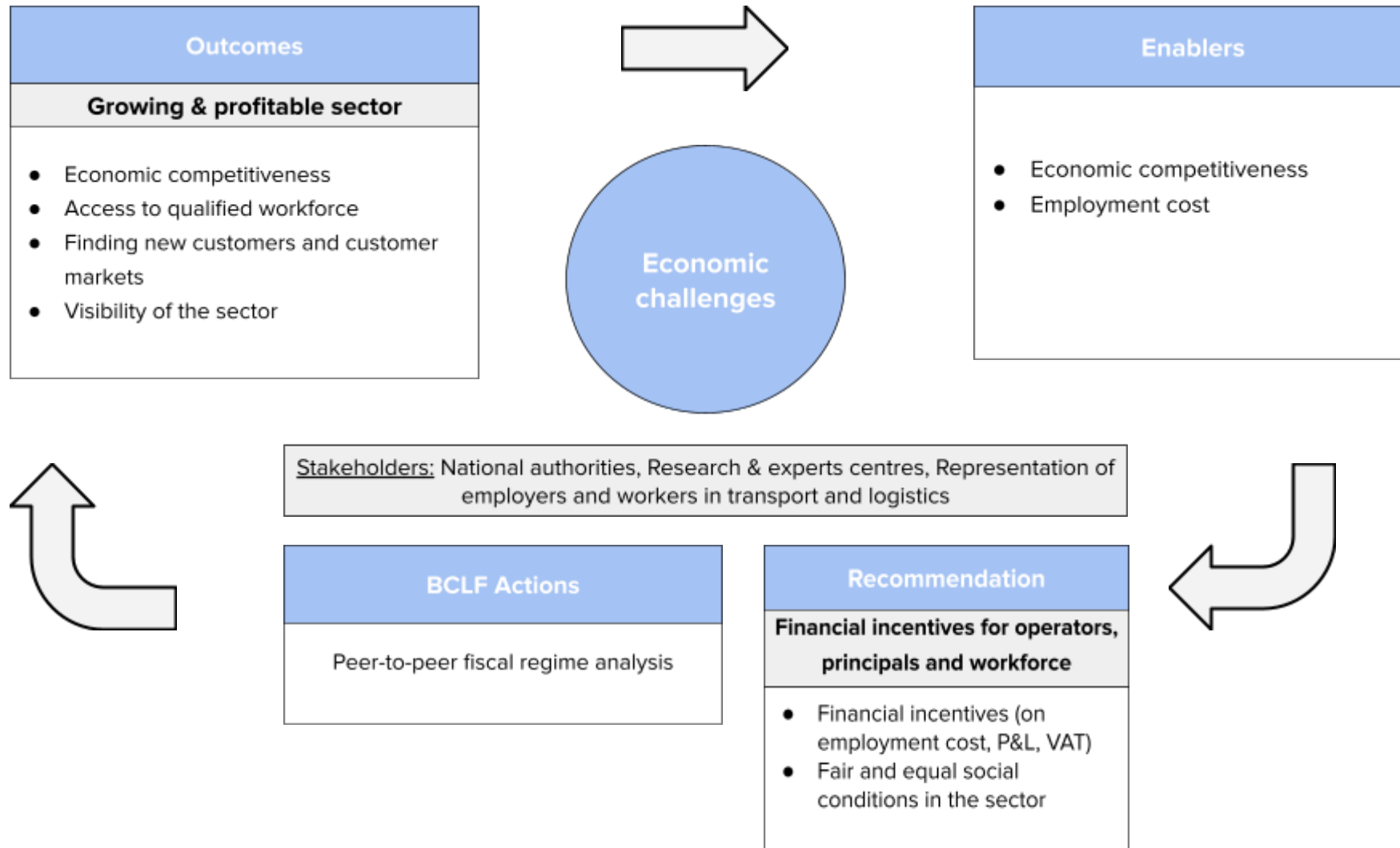
Finally, the ecosystem of cycle logistics is very wide. The sector is surrounded by stakeholders that could activate the recommendations. Here is a non-exhaustive list of stakeholders that could support the development of the sector:.

- Transport and logistics operators (cycle logistics carriers, mixed carriers & others)
- Representation of employers and workers in transport and logistics (federations, unions, SFTL, le collectif des coursiers, etc)
- Mobility federations (GRACQ, fietsersbond, voetgangsbeweging, walk.brussels, tous à pied, etc)
- Local, regional & national authorities (politics, administrations, etc)
- Research & experts centres (VUB Mobilise, VIL, Logistics in Wallonia, fietsberaad, BBL, SMart, Provelo etc)
- European cycling federations (CIE, ECF, CONEBI, B&V, RLVD, etc)
- Manufacturers (companies, etc)
- Regulators (IBPT, ITLB, NBN, etc)
- Sectoral federations (COMEOS, AGORIA, FEBIAC, etc)
- Other modes of transport (rail, water, air)

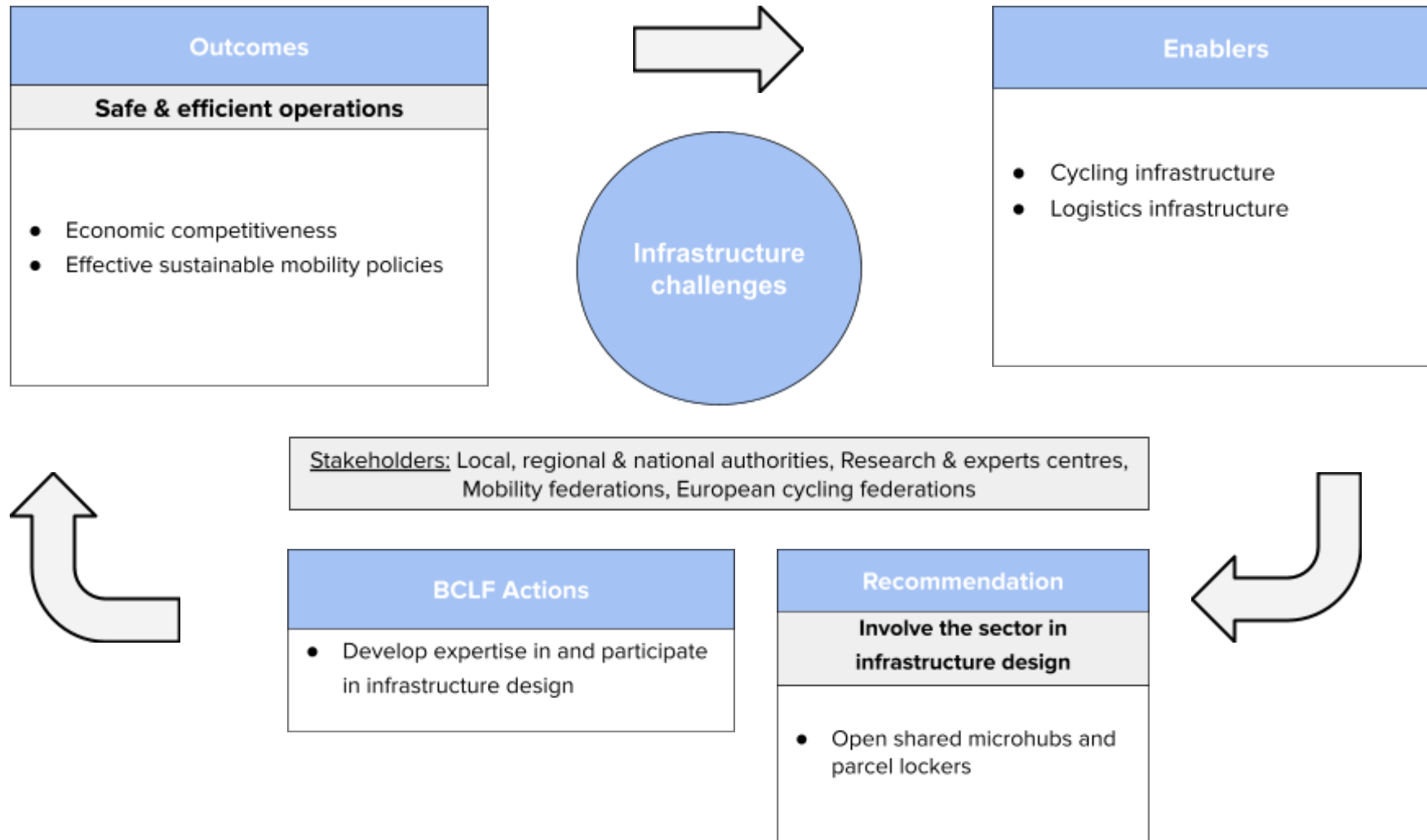
Cultural



Economic

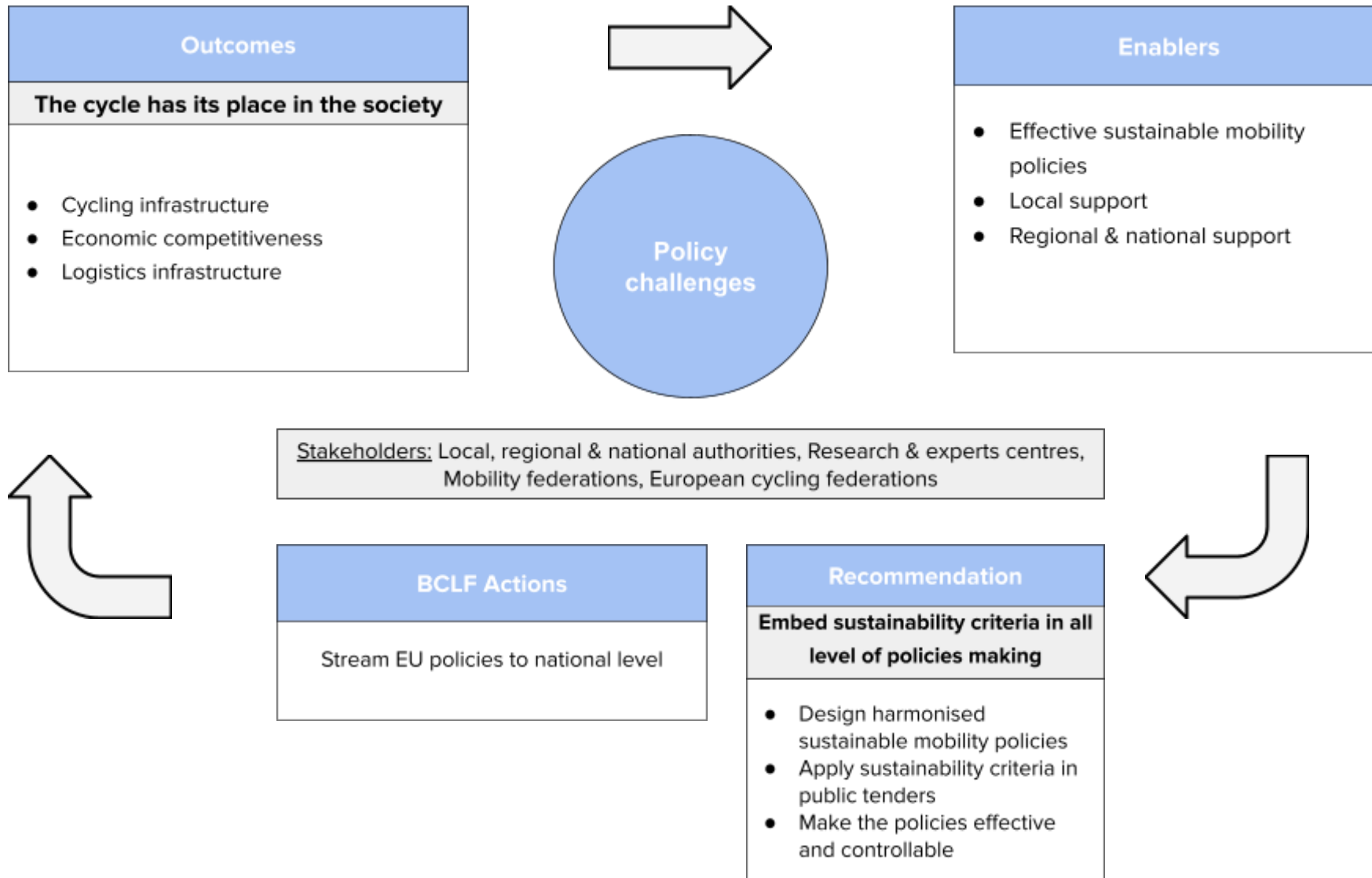


Infrastructure

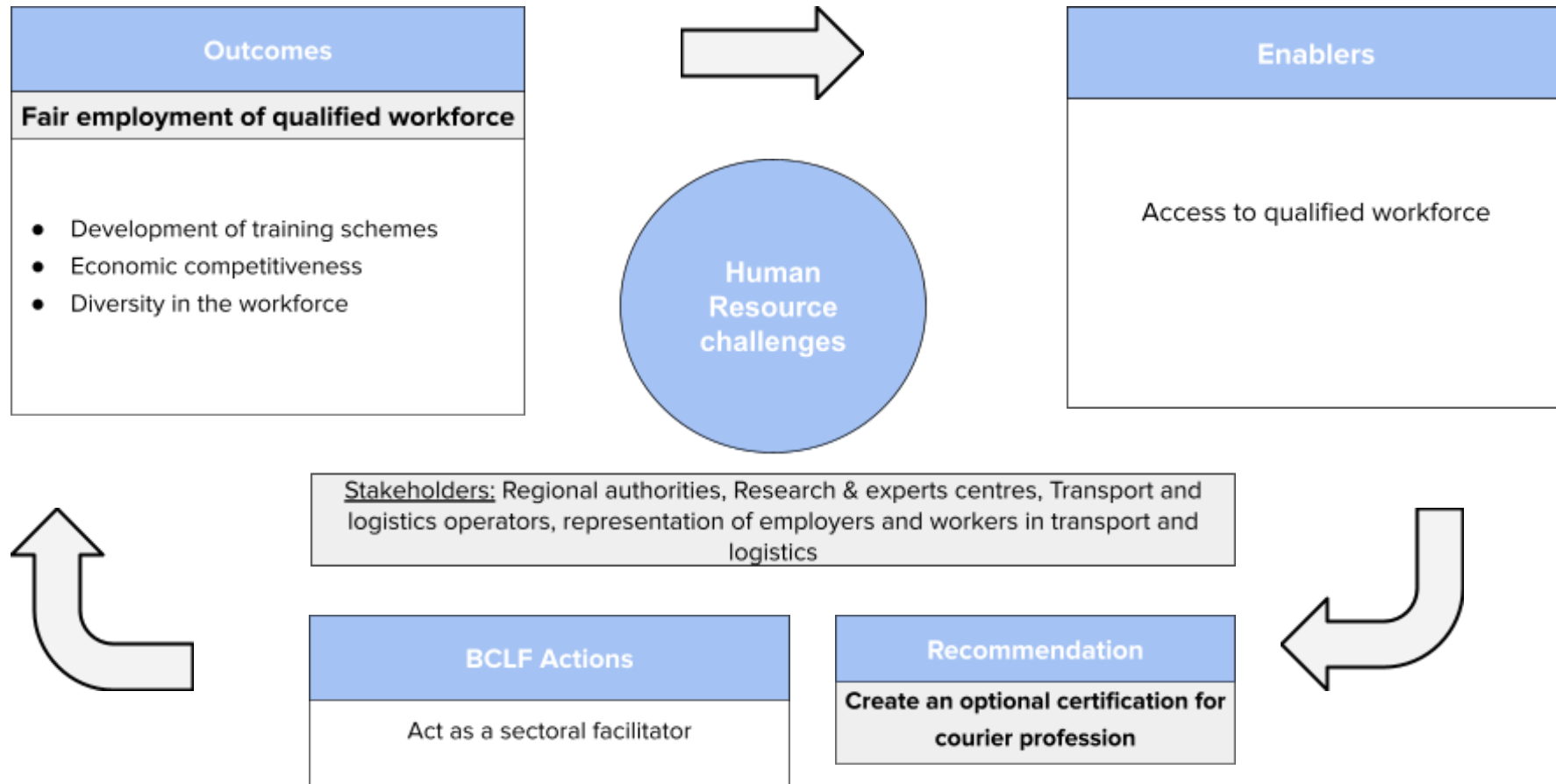




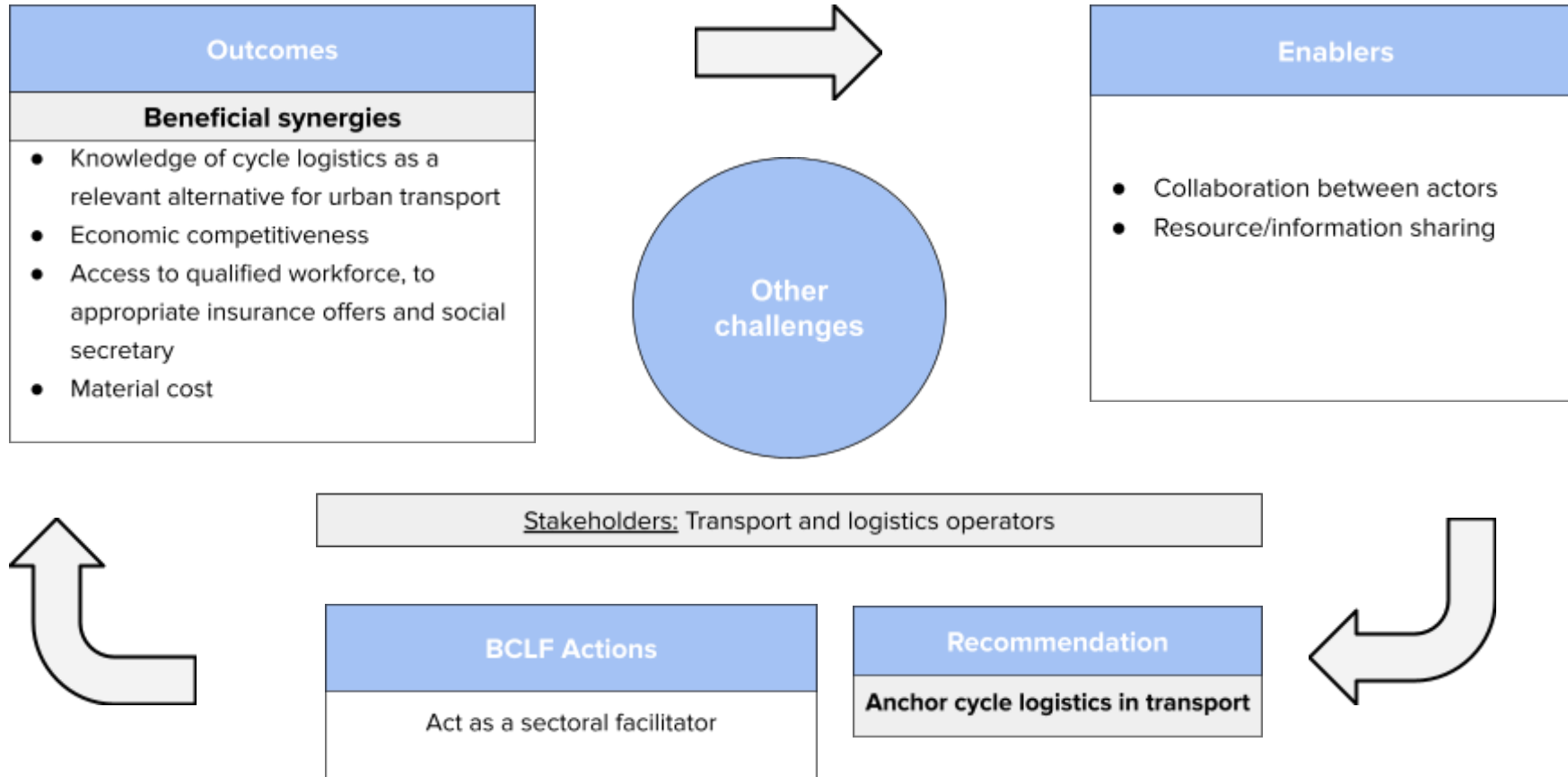
Policy



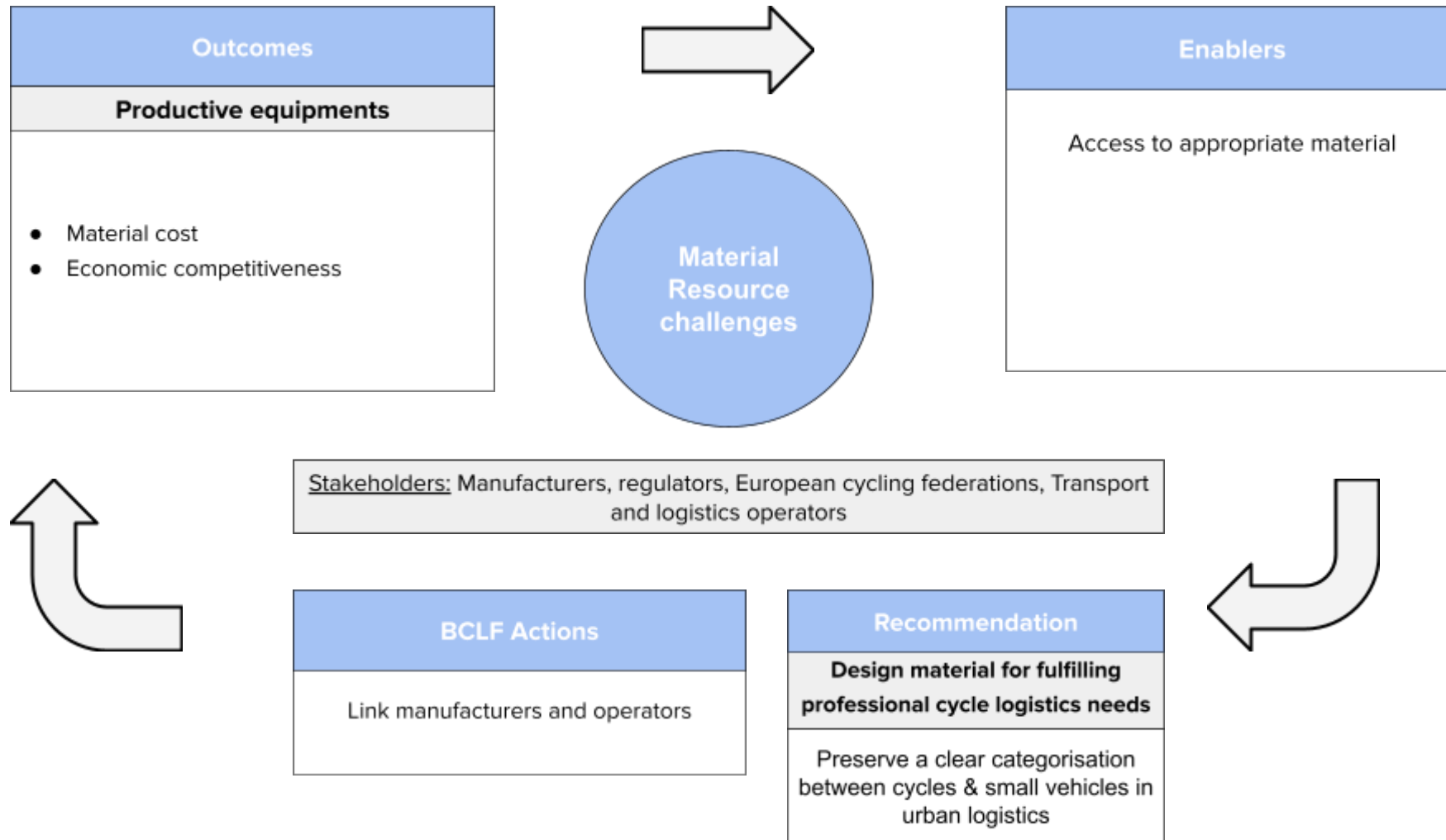
Human resource



Other



Material resource



## Conclusion

Launching a new (sub)sector is not happening overnight. Yet, a bunch of convinced entrepreneurs started years ago to design the sustainable future of urban delivery. Those pioneers not only looked at the economic viability of their solution: they also focused on the environmental aspect, which makes it challenging. Finally, in a context of casualisation of the job of cycle courier, social conditions of their solution also became central, as they rapidly understood it was essential to offer sustainable job conditions to develop a sustainable sector in time. Cycle logistics is revolutionising transport, not only in the form, but also in depth.

The sector is growing and is becoming mature. Its base is solid and is now ready to spread nationwide. Nevertheless, it is now hurting some structural barriers that it can not overcome on its own.

The Belgian Cycle Logistics Federation has undertaken to identify the main challenges faced by the sector, to determine the structural enablers, and to formulate the recommendations that will unlock the development of the sector.

In order to activate the enablers, 14 recommendations have been formulated. Those recommendations are addressed to the stakeholders of the sector. They have the power to initiate the development of Cycle Logistics and to accelerate its growth via the FlyWheel effect. . The BCLF, at its side, has identified a list of actions to support the development of the sector and to facilitate the interactions with the stakeholders.

The synergy of cycle logistics with other means of transport is proven and essential.

Nevertheless, it is crucial to catch the full potential of cycle logistics now as it offers concrete solutions to several problems. If the only solution for more liveable cities is a blind support towards the shift from diesel vans to electric vans in urban areas, the situation in some years will inevitably be the same as today. Only the question will be different: how to replace *electric* vans in order to mitigate the negative externalities ( congestion costs, usage of public space, climate change, air pollution, accidents, ...)?

This research doesn't stop here as we are only at the beginning of the global structuration of the sector. Therefore, it is worth publishing the Barometer of Cycle Logistics on a yearly basis to assess the progress. It is also essential to extend the study to all market segments.

