DELIVERABLE 4.1

CONCEPTUAL COMMONING ACCESSIBILITY ACCEPTANCE FRAMEWORK AND RESEARCH OUTLINE

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The COMMON_ACCESS consortium:

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0. WP4 objectives and aims stated in the funded Common_Access proposal

WP4 aims at developing and applying methodologies for estimating the potential impacts of CA (transition) experiments. WP4 will generate insights on the impacts of CA experiments (including shared mobility platforms and micro-mobility solutions) on travel behaviour and access to opportunities in the urban outskirts and beyond. Utilizing Social Impact Assessment methodology, it will also critically consider the broader social-distributional impacts associated with the social and spatial transformations that CA practices and experiments elicit.

It will do so by:

- Providing an assessment framework for CA practices for use in policymaking
  Assessing behavioural effects of CA practices in the outskirts. To study the motivations behind different CA solutions and the possible travel behavioural impacts.
- Assessing social-distributional impacts on local communities

Specific tasks include:

Task 4.1a CA Acceptance analysis – Conceptual framework and methodology development Lead: UGent. Partners involved: Provincie Oost-Vlaanderen M1-M22

Acceptance analysis of CA experiments by different user groups and different CA practices. Developing a conceptual framework that captures the motivations behind commoning accessibility practices in urban outskirts through an extensive literature review. Subsequently, a methodology will be developed to test, evaluate and refine this framework. The acceptance analysis will be tested in the Provincie Oost-Vlaanderen.

Role of applicants: UGent will develop the conceptual framework and methodology, with input by local academic partners. Application by UGent, in collaboration with Provincie Oost-Vlaanderen

Task 4.1b CA Acceptance analysis – methodology application and testing framework
Lead: UGent. Partners involved: Provincie Oost-Vlaanderen. M6-M30
Main activities: Data collection on Ghent Metropolitan areas. Test the conceptual framework developed in task 4.1 in the Ghent metropolitan areas to understand the motivations behind commoning accessibility practices. Data collection will be done through the methodology developed in Task4.1a, deploying focus groups.

Task 4.2 Impacts on travel behaviour – Conceptual framework development and testing
Lead: UGent. Partners involved: Provincie Oost-Vlaanderen. M18-M30
Developing a conceptual framework that captures the impacts of commoning accessibility practices in urban outskirts on travel behaviour. This will be done through a literature review.

Subsequently, the methodology developed in 4.1a and applied in 4.1b will be used to test, evaluate and refine this framework.
Insights obtained from Task4.1 and Task 4.2 will be translated into an assessment framework for CA practices which will be of practical use for local initiatives and local authorities. *Role of applicants*: *UGent will develop the conceptual framework and methodology, with input by local academic partners*

Task 4.3 CA Qualitative practices social impacts Lead PoliMI. Partners involved UvA, UoW, TUM, Provincia di Bergamo and Provincia di Pavia –Duration 18-30
Communities survey development, using Social Impact Assessment methodologies, for an in-depth assessment of social and distributional impacts associated with CA practices and experiments. Qualitative assessment of local changes directly or indirectly associated with the CA experiments and practices that might influence citizens' and communities' well-being, behaviours or perceptions, including their perception of safety, severance, inclusion, etc. The method will be test in Provincia di Pavia and Provincia di Bergamo. *Application by PoliMI, in collaboration with Provinica di Pavia and Provincia di Bergamo. Inputs from all academic partners*

It is important to note that, in agreement with the project consortium, a decision has been made to deviate from the originally proposed methodology. The objectives, however, remain unchanged: this WP aims to assess the acceptance of CA practices and their impacts on travel behaviour. Instead of developing and applying an agent-based model, this WP will develop two conceptual frameworks: one on acceptance and one travel behaviour related to CA. These conceptual frameworks will be tested through focus groups and qualitative surveying.

1. Introduction

1.1. Motivation and background

1.1.1. On accessibility

Accessibility has gained growing attention in both academic research and urban planning over the past decades. Given its important role in achieving climate neutral mobility, as well as its links with wellbeing and various social outcomes (De Vos et al., 2013; Farrington & Farrington, 2005; Lucas, 2012), research and practice have increasingly focused on ways to improve it, exemplified by the growing popularity of the X-minute city concept (Büttner et al., 2024; Moreno et al., 2021). Two observations can be made regarding this development, specifically concerning the X-minute city concept.

First, attention has been primarily going to dense, central urban neighbourhoods. These often well connected and less car-dependent areas, with high levels of public transport provision, are more suited to accessibility improving ideas such as the X-minute city concept. In contrast, more peri-urban and rural areas, which are typically less connected, more car-dependent and have lower levels of public transportation, present specific challenges for improving accessibility. Although many scholars have addressed the question of how to ensure accessibility to essential facilities and services in peri-urban and rural areas (Frank et al., 2021; Handy et al., 2005; Moseley, 2023; Vitale Brovarone & Cotella, 2020), the X-minute city concept has so far paid limited attention to these areas.

Second, the social dimension of accessibility – and by extension mobility – has often been overlooked in research. According to (2019), accessibility is the product of proximity, referring to physical closeness to activities; mobility, involving the physical movement supported by transportation systems; and connectivity, referring to the delivery of goods and services to one's location, either virtually or physically. This approach results mainly in a focus on travel times and land-use provisions. Accessibility, from an individual's point of view, is than the potential to engage in spatially dispersed activities (Hansen, 1959), with the transportation system as a means to provide people with this opportunity (Miller, 2018). This has been extended with digital connections such as the internet relating to the connectivity element of accessibility (Levine et al., 2019). According to Martens (2016), accessibility can either be measured from a person's perspective or from a location's perspective. The first looks at what the accessibility is of a person to different destinations, including other persons. The latter looks at what the accessibility is of a location to different persons or other destinations. Either way, since accessibility always involves someone accessing something (or someone else), accessibility can be considered as having an individual component and a contextual component (Hansen, 1959). The individual component consists of individual socio-economic and demographic characteristics such as income, age, digital literacy, and car ownership, physical characteristics such as physical ability to walk or cycle, and perceived accessibility (Pot et al., 2021). This last one is important as it indicates how different individual attitudes and behaviour determine different levels of accessibility. The contextual component consists of built environment characteristics, such as the location of facilities, transportation infrastructure and transportation options (modes), and situational characteristics, such as weather conditions. This also includes the resistance associated with reaching locations (Miller, 2018). Accessibility is than expressed as a function of these individual and contextual components.

However, accessibility also has a social component or dimension. This is what Manzini (2022) described as 'relational proximity', underscoring that accessibility is not just a functional matter but intertwines with social practices, interdependencies, and relations. Accessibility can also be a product of social relations, capital and networks, which is often overlooked in accessibility research. Referring back to Levine et al.'s (2019) definition, which defines accessibility as a product of proximity, mobility, and connectivity, a social dimension can be integrated into each of these components. Examples include forms of shared mobility such as carpooling, bicycle libraries, repair cafés, self-organised transport to school, community transport, and mobile public services.

Tackling these two shortcomings, focussing on the social dimension of accessibility while drawing attention on peri-urban areas, forms the backdrop of this study. In doing so, it can learn from ideas and practices that rethink mobility and accessibility in peri-urban areas from a social perspective.

1.1.2. Commoning accessibility

To this end, the concept of 'commoning accessibility' is introduced, building on and further extending the concept of 'commoning mobility,' coined by Nikolaeva et al. (2019). The term 'commoning mobility' emerged from the question how to reconceptualise mobility not only to facilitate a low-carbon transition but also to ensure that this transition is fair and just. This is particularly relevant given that the movement of people and goods remains a significant contributor to greenhouse gas emissions. This issue is further complicated by the prevailing belief in economic growth, and its dependence on mobility, whose benefits are unevenly distributed across regions and population groups. Commoning mobility is a concept that offers a perspective to disentangle ourselves from this cultural "lock-in" (Urry, 2009) that supports high-carbon mobilities.

Commoning mobility is described as a new politics of mobility transitions, grounded in the logic of the commons, that can critically examine mobility-related scarcities and their enclosures, challenging the politics of austere mobilities (Nikolaeva et al., 2019). In a synthesized and abstracted sense, commoning can be understood as a process or activity that involves the re-appropriation of common goods—such as products, services, processes, knowledge, and culture. In this context, it specifically refers to the "right to mobility" (Hardt & Negri, 2009), often emerging as a response to the dispossession and enclosure of these goods under financialization (Chatterton, 2010; Fournier, 2013). This is done through shared and collaborative practices, which can involve rethinking forms of ownership, democratic decision-making, management and community participation.

Where this logic of scarcity, responded by austerity, is unfair because it overlooks the 'right to mobility' (Cresswell, 2006), commoning mobility actively considers this by placing agency with the people whom this mobility concerns. It involves initiatives and actions that emphasize the shared responsibility for the impacts of mobility on societies and communities (Nikolaeva et al., 2019).

In the Common_Access project, we argue that this logic can be extended to accessibility. Theorising on this, Lanza and Pucci (2024), drawing on Moroni (2025), identified four interpretations of "commoning" that may be relevant to accessibility. Hardin (1968) describes commons as goods without definite owners, or as nobody's resources (Moroni, 2025), leaving everyone to have full right to use them and no one to exclude others from that right. This also means an absence of specific rules or norms related to the management of the common. Ostrom (1990), on the other hand, defines the commons as 'common pool resources', or as some people's resources. The right of use of these commons is well-delineated by rules and is exclusively limited to a defined group of people. Consequently, they also have the right to exclude others from the use of these commons. This group of people can be seen as a community, although merely connected by simple opportunity constraints and shared interests. A third, more recent, interpretation refers to the commons as everybody's resources, where everyone should have access to (Rodotà, 2012). This means that no one should have an exclusive right to them. The common becomes relevant as it is a means to fulfil certain basic fundamental, individual or collective, rights (or needs). While the first two interpretations revolve around different forms of ownership, the third refers to the opposite of ownership (Moroni, 2025). Finally, in a fourth and more radical interpretation, commons are not only seen as material resources, but rather as 'complex social and political ecologies' (Chatterton, 2010; Hardt & Negri, 2009) with the potential to form alternative politics by creating an alternative to the economy (Esteva, 2014). This approach critiques dominant economic and political systems by fostering shared values that allow communities to self-organize. Commons are sustained through mutual aid, solidarity, and cooperative practices, free from market dependency (Angelis, 2017). Through commoning, a set of dynamic spatial practices emerges, allowing people to engage in collaborative, self-governed actions that resist capitalist encroachment and operate without top-down ownership (Chatterton, 2010; Hardt & Negri, 2009).

Drawing on these conceptions of commoning, accessibility can be conceived as a common good, as "a fundamental good whose provision satisfies specific citizenship rights" (Lanza & Pucci, 2024, p. 13). Commoning accessibility can then be defined as "the process through which a community collaboratively creates and manages the conditions necessary to provide access to needed/desired socio-spatial resources to its members under shared rules and norms" (p. 17). Figure 1, by Lanza & Pucci (2024) illustrates the theoretical interpretation of commoning accessibility. It is suggested that this process can evolve alongside or independently of market- or state-provided accessibility, either replacing or complementing existing services. In either case, these commoning forms of accessibility emerge in contexts or situations where accessibility needs are unmet or unequally provided by state or market, or as an alternative to these existing provisions (see interpretation on commoning by Esteva (2014)). The former can occur because of state inaction or limited action – for example, when the state does not provide a bus line to a particular neighbourhood or only runs it once – or due to policies aimed at improving accessibility for certain areas or groups that unintentionally disadvantage others. For instance, increasing the frequency of one bus line may divert funds away from establishing a line in another area, or investing in a bus line accessible only to those with physical mobility could limit options for people with disabilities. The same applies to accessibility provided by the market, which may fail to meet accessibility needs when the investment is not expected to yield an economic return. These situations are particularly true for peri-urban and rural areas (Farrington & Farrington, 2005) and for financially weaker population groups. Also, accessibility needs are dynamic and constantly evolving, in space and across population groups, giving fertile ground to innovation and niche development (Schot & Geels, 2007). Commoning accessibility provision is then realised through a community of access action, which shares specific accessibility related needs. This process results in and gives form to commoning accessibility practices (CAPs), which are the materialised outcome of commoning accessibility .

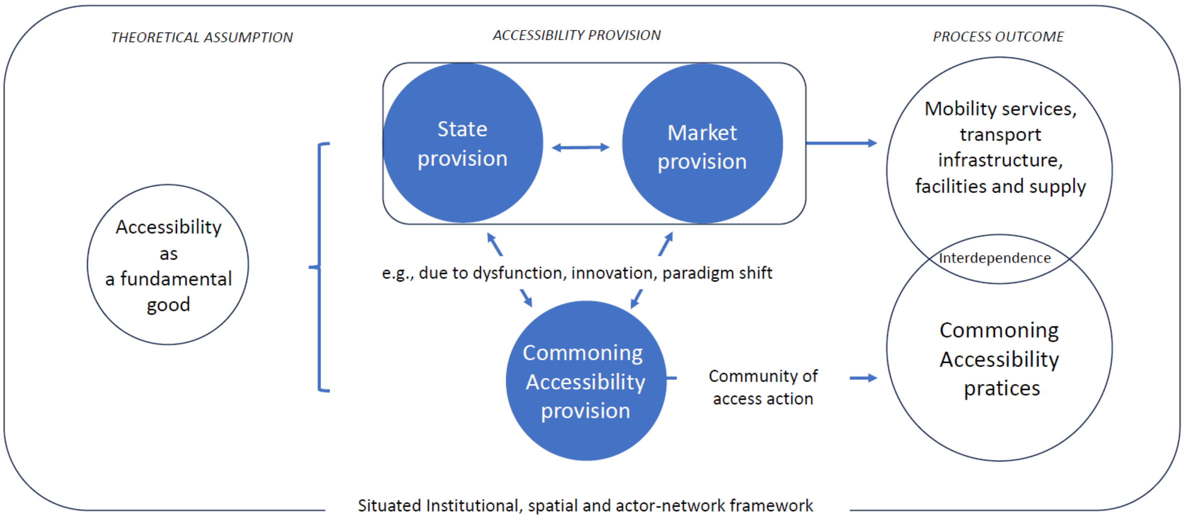

Figure 1: Theoretical framework to conceive accessibility through commoning (Lanza & Pucci, 2024)

CAPs cover a wide range of practices, from carpooling, car sharing and voluntary transport to community hubs, repair cafés and community owned digital exchange platforms. In their attempt to conceptualise commoning accessibility, Lanza & Pucci (Lanza & Pucci, 2024) made a categorisation of CAPs. Three types of CAPs can be broadly distinguished. Mobility-based practices encompass commoning accessibility initiatives, in which access to resources (such as services, goods, products, or knowledge) is enabled by sharing, co-producing, or co-managing forms of mobility (be it a service, a vehicle, or a trip) through the process of commoning. Examples include … Proximity-based initiatives concern practices where access to a resource is provided by increasing the physical proximity to this good. Connectivity-based initiatives relate to providing digital access to a resource. Hicks et al. (2025), however, argue that this categorisations appears to be too restrictive to cover all CA practices. Drawing on Halden et al. (2005), they frame commoning accessibility provision across three domains: people, places and connections. 'People' refers to ensuring that the needs of all citizens are met, which involves community planning processes as well as policies for social inclusion in service delivery (e.g., healthcare, education, leisure, and retail). 'Places' refers to land use planning processes that incorporate the spatial and geographical dimensions of planning and placemaking. Finally, 'connections' capture both transport planning and electronic network coverage, including policies that prioritise investment, regulate mobility, and align transport and digital connections with broader geographical and social policy. In this work, we will follow the categorisation of Lanza and Pucci (2024).

These forms of accessibility provision are not new and occur widespread; for instance, various forms of community transport already provide for more of the transport needs of non-car owning households than public transport (see for example Gray et al. (2006)). However, they remain understudied in mobility and accessibility research, specifically from a commoning perspective (Nikolaeva et al., 2019). Studying mobility and accessibility through a commoning lens, means recognising and actively engaging with the broad range of actors, practices and knowledge that shape this mobility and accessibility, reflecting a society centric (Karner et al., 2020) approach to mobilities research. This approach could contribute to what Nikolaeva et al. (2019) describe as a radical politics of mobility transitions and which, to our belief, could be extended to accessibility. This would not only enable more sustainable futures, but also fairer futures.

1.2. Research objectives and research questions

Understanding commoning accessibility means both understanding accessibility through a commoning lens as well as understanding the practices associated with it. To this end, we aim to better understand actions of the people, or commoners, that shape these practices. More specifically, we aim to understand the reasons why people participate (or do not participate) in CAPs, how their travel behaviour looks like, and how participation in CAPs has an impact on their travel behaviour. As already noted before, not all forms of CAPs necessarily involve mobility. Consequently, this study will specifically focus on mobility-based and proximity-based initiatives (Lanza & Pucci, 2024) that do involve some form of mobility in which travel behaviour can be analysed.

The **objective** of the research in WP4 is to develop an assessment framework on (1) **the acceptance** of CA (practices) (referring to 'acceptance analysis' Task 4.1 in project proposal), and (2) on **the impacts of CA on travel behaviour** (referring to 'Impacts on travel behaviour' Task 4.2 in project proposal). Two broad research questions follow from these two objectives.

RQ1: How can we understand the acceptance of (participating/engaging in) CA (practices)?

RQ2: What is the impact of CA (practices) on travel behaviour?

Deliverable 4.1 focusses on acceptance and will propose a conceptual framework for understanding the acceptance of commoning accessibility. Consequently, research questions 1 (RQ1) will be further specified in section 2 and 3. RQ2 will be worked out in a follow-up deliverable.

2. Literature review: Acceptance of commoning accessibility

For better understanding CA and the practices associated with it, it is important to understand why people do commoning accessibility, and why they engage or participate in CAPs. Participation in, use of or engagement with can be studied from two perspectives: from the perspective of those that that do this and from the perspective of those that do not do this. The first perspective corresponds to the question why people participate in CAPs, the second corresponds to the question why people do not participate in CAPs. In order to study both these perspectives, the concept of acceptance offers valuable insights.

To develop a comprehensive understanding of the concept of acceptance, we will draw on both general literature of technology acceptance, literature specific on the acceptance of mobility services and literature on the motivations related to various commoning practices. Since, to the best of our knowledge, no studies exist on the acceptance of, what we describe as, CA practices, we will mainly rely on studies on related mobility practices, such as shared mobility services (car or bicycle sharing, car-pooling, etc.), and other type of commoning practices (from bicycle kitchens to community gardens and 'common resource dilemma's').

2.1. Defining acceptance

The concept of acceptance has mainly been studied in relation to new technologies, services or systems. This can be a new phone application, renewable energy infrastructure, a shared mobility service or a road pricing system. Acceptance is seen as the willingness or openness to use a certain system (see for example Ausserer and Risser (2005)). In other words, it deals with a specific reaction that people give to a system. Upham et al. (2015) describe it as "a favourable or positive response (including attitude, intention, behaviour and – where appropriate – use) relating to a proposed or in situ technology or socio-technical system, by members of a given social unit (country or region, community or town and household, organization)" (pp. 103). This can be either in a mandatory setting (services that are imposed to a specific context (a city, a company, …) where the potential users are obligated to use or accept the service) or voluntary setting (services that are introduced to a specific context but where the potential users have a choice to use it or not)(Venkatesh et al., 2003).

In these interpretations, acceptance is closely linked to use and depends on how the system in question answers to the user's needs. Consequently, it is generally measured as the actual use behaviour or intention to use (Venkatesh et al., 2003). Moreover, acceptance refers to individuals' reactions to a particular system, specifically corresponding to the use or adoption of that system, either intended or realised.

Some authors make a distinction between acceptance and acceptability (see for example (Bala et al., 2023; De Paepe et al., 2023; Schade & Schlag, 2003; Vlassenroot et al., 2010). Schade & Schlag (2003) describe acceptance as the respondent's attitudes and behavioural reactions after experiencing a certain system and acceptability as the prospective judgement (attitudes) before such future introduction. However, many studies do not make this distinction as acceptance is seen as both the intention to use and the actual use behaviour (Venkatesh et al., 2003).

Also insights from acceptance studies of energy technologies might be insightful. Although this concerns another type of technology, studies demonstrate that there are other types of reactions than acceptance that people make in relation to a certain services or system, such as support, uncertainty, resistance and apathy, among others (Devine-Wright, 2008). Batel et al. (2013) argue that it is crucial to make a distinction between support and acceptance. In their view, (social) acceptance can be a very top-down view on people's relation with a certain system or service (i.e. one either does or does not accept something that is out there or that is imposed) and might ignore all these other types of responses, including support. That is why, they argue, it should be examined whether acceptance is the response present or there is more. Ricci et al. (2008) also note that the conception of acceptance "is too narrow and misses other key aspects and dimensions by which people make sense of new technologies and 'consume' them" (pp. 5878). These observations are supported by Upham et al. (2015), who point at the risk of oversimplification of complex interactions. This raises the question if this is also the case for CA practices and, consequently, whether acceptance is the appropriate concept to study the reactions of individuals or a community to CA practices – or in other words, the relationship between individuals or a community and CA practices. We will argue that the concept of acceptance, under the condition that it is adjusted to the specificities of commoning (accessibility), can be a useful concept to study the interactions between a community and CA practices.

2.2. What kind of acceptance: By whom and of what?

Before doing this, it should be defined what kind of acceptance we are considering: acceptance by whom and of what? As already anticipated to before, acceptance can be a fuzzy concept as it is approached in different ways. Van der Laan et al. (1997) made a basic distinction between two types of acceptance. User acceptance considers the evaluation of the use of a system, while social acceptance deals with the indirect evaluation of the consequences of a system. In the context of CA practices, both user acceptance and social acceptance are pertinent, as this study seeks to understand how individuals are willing to engage with certain practices, how the impacts of these practices are perceived, and ultimately how these perceptions influence the adoption of the practice.

2.2.1. Defining types of acceptance: An acceptance type framework

Upham et al. (2015), however, provide a more comprehensive framework to conceptualise the types of acceptance, delineating to whom and what it concerns (Table 1).

First of all, they distinguish three different levels on which acceptance can be analysed. i) The macro, or also general policy or country level involves the acceptance of a technology in general as a whole, corresponding to *general acceptance*. ii) The meso, or also local or community level concerns the acceptance of specific infrastructures that this technology entails, corresponding to *community acceptance*. It focusses on the response to a certain technological infrastructure. iii) The micro, or also household, organisation or end-user level involves the acceptance of a specific application or use related to this technology, corresponding to *market acceptance*. This last level of acceptance aligns with *user acceptance* as defined by Van der Laan et al. (1997).

Translating this to commoning accessibility, the macro level refers to the broader acceptance of commoning accessibility, either in general or in aggregate – understood as a supplement or alternative to accessibility provision by the state or market. This level also encompasses the (national) policy conditions influencing commoning and accessibility. This includes specific policy priorities, the administrative and institutional context and specific laws and regulations, as outlined in an analytical policy framework tailored for commoning accessibility by Prins et al. (2025). The meso level corresponds to the necessary infrastructure for CA to happen, with impact on the local community. This infrastructure may be material (e.g., a bicycle depot for a bicycle library), digital (e.g., an application facilitating bicycle reservations in a bicycle library), or social (e.g., agreements between a municipality and a bicycle library to offer discounts to lower-income groups). Additionally, this level includes localized laws and regulations that influence commoning practices and accessibility, such as parking regulations that promote car sharing initiatives. At the micro level, the focus is on the acceptance and (intended) use of specific commoning accessibility practices.

Second, Upham et al. (2015) identify three different types of actors to whom acceptance may concern: organised political groups (decision makers and key members of the political system in a given society, community or town), organised stakeholder groups (both commercial and non-commercial), and the public (a community, a household or individuals). Each of the three levels of acceptance may pertain to any of these three types of actors, resulting in nine types of acceptance.

TABLE 1: TYPE OF ACCEPTANCE FRAMEWORK FROM UPHAM ET AL. (2015)

Actor groups and social acceptance at the three levels.

		Level		
		General/Policy	Local/Community	Household/Organization/ End User
Actor group	Political	*National acceptance* (by national, formally instituted decision makers)	*Local political acceptance* (by local, formally instituted decision makers)	*User acceptance* (by individual citizens with views on energy policy)
	Stakeholder	*Stakeholder acceptance* (by other nationally active market and nonmarket policy groups)	*Local stakeholder acceptance* (by other locally active market and nonmarket policy groups)	*Stakeholder acceptance* (by commercial and other organized users)
	Public	*Public acceptance* (by the general population as citizens with views on national policy)	*Local public acceptance* (by the local population as citizens with views on national policy)	*End-user acceptance* (by household, organization and individual end-users)

2.2.2. Acceptance type framework applied to commoning accessibility

For the purpose of studying acceptance in relation to CA, this framework has been adopted to CA specifically (Table 2). Although all types of acceptance can be applied to CA, in the scope of this study, it has been decided to specifically focus on *public acceptance,* including three sub-types. First, *end-user acceptance* refers to the acceptance of active players (individuals or groups of individuals) who determine the appropriate use of a practice for their specific circumstances – in this case accessibility needs, amongst others. This type of acceptance has an impact on overall social acceptance, as a practice's perceived utility by individuals or groups is reflected to other levels and to other actors (Upham et al., 2015). *End-user acceptance* concerns the willingness of individuals or groups to participate in CA practices, including both (potential) users and non-users. Some clarification is needed regarding the actors involved in *end-user acceptance*, as it may overlap with the actors involved in *stakeholder user acceptance*,. In the case of *stakeholder user acceptance*, stakeholders form an organized group representing a shared interest. However, groups of individuals in the context of *end-user acceptance* can also be organized, for example, by forming a 'community' that represents a collective/shared interest or need. Notably, both types of groups may relate to both forms of acceptance, depending on the role they assume at a given moment (see next paragraph). In the context of *end-user acceptance*, a group functions as an end-user, demonstrating (potential) interest in making use of the practice. In contrast, within *stakeholder user acceptance*, their interest is not necessarily tied to direct use but rather to the broader impact of use on the community as a whole or their specific community. Second, *general public acceptance* concerns the acceptance of CA in general by the general population or "lay public" of a given region. It encompasses individual's views on CA as supplement or alternative to market- or state-provided accessibility (Lanza & Pucci, 2024), as well as their perspectives on general or national policies, laws, and regulations supporting CA. Third, l*ocal public acceptance* pertains to citizen's views on infrastructure as well as policies, laws, and regulations related to CA with specific impact at the local level, for example, how individual's perceive parking space regulations freeing up space for car sharing.

Upham et al. (2015) note that an individual (or group of individuals) may fall into more than one dimension, depending on the social role that they take on in a particular moment. In the context of commoning, this relates to the "fluidity of commoners" observed by Zapata

Campos et al. (2020), referring to the different roles commoners might take on in the process of commoning. This perspective builds on Hardt and Negri's (2009) notion of the commons as open and porous, as well as Goffman's (1959) concept of identity as fluid and continuously reshaped. In one moment a group or individual may be actively taking part in a CAP (borrowing a bicycle from a bicycle library) taking the role of 'end user', corresponding to *end-user acceptance.* In another moment this individual or group may be advocating for better regulations regarding bicycle libraries, taking on the role of 'public advocates', corresponding to *general stakeholder acceptance*. However, the "fluidity of the commons" may also refer to the shifting role individuals take on between commoners and non-commoners. In community-based car sharing (CBCS), for example, vehicles remain privately owned, but access to them is collectively shared. At one moment, a CBCS participant who owns a car may use it for personal purposes, while at another, they may lend it to someone else. Conversely, a participant borrowing a car through the CBCS system may, at a different moment, choose to rent a vehicle from a commercial company. In a first instance, this person may choose to participate in CBCS car sharing because of motives directly related to commoning (e.g. positive attitude towards the idea of commoning), in another instance, they may do so because of financial incentives from the local government to shed a license plate. This dynamic illustrates the "fluidity of commoners" (Zapata Campos et al., 2020), wherein individuals fluidly transition between roles – in this case acting as owners, borrowers, or renters – depending on the context. This flexibility enables members to navigate between the commons, the state, and the market as circumstances require.

This dynamic is key to understand the acceptance of commoning accessibility. Acceptance should not be seen as a static or fixed reaction, but rather as a dynamic one that emerges and shifts based on specific circumstances – in turn determining accessibility needs. It depends on the role an individual assumes at a given moment and on which specific aspect (the *level)* of acceptance is being considered.

TABLE 2: TYPE OF COMMONING ACCESSIBILITY ACCEPTANCE FRAMEWORK, ADOPTED FROM UPHAM ET AL. (2015). ACCEPTANCE TYPES IN BOLD FORM THE FOCUS OF THIS STUDY

SOCIAL ACCEPTANCE	**Levels of social acceptance analysis**	*General acceptance*	*Local acceptance*	*Use acceptance*
Dimensions or components of acceptance	Actors / Level	General/Policy (CA in general and CA related policies, regulations, etc.)	Local/Community (CA related (local) infrastructure, either material, digital, legislative, organisational and social)	Household/Organisation/End-User (Specific CA practices and the use of or participation in it)
Political acceptance	Political (decision makers and key members of the political system in a given society, community or town. *Eg: regional/national ministers or officials*)	General Political acceptance • Political views by (national) decision makers on CA in general, and policy legislations that support commoning accessibility • *Eg: Political view by (national) decision makers on community participation and ways to regulate this*	Local Political acceptance • Political views by (local) decision makers on CA infrastructure • *Eg: Political views by (local) decision makers on the use of a municipality building for housing a bicycle library*	Political User acceptance • Political views by *(national or local) decision makers on* the existence, presence and use of specific CAPs • *Eg: Political views on the existence and functioning of a community-based car sharing platform*
Stakeholder acceptance	Stakeholder (investors, businesses, local government, community representatives. *Eg: non-profit org. that supports CAPs, municipal officials*)	General Stakeholder acceptance • (Nationally active) Stakeholders' view on CA in general and on specific laws and regulations supporting CA • *Eg: national cycling interest group's (Fietsersbond) view on the growing cooperation between cycling libraries and local municipalities*	Local Stakeholder acceptance • (Locally active) Stakeholders' views on CA infrastructure • Eg: *Elderly organisation's view on the social services that takes responsibility for managing a voluntary transport scheme*	Stakeholder user acceptance • Acceptance by stakeholder groups that can affect or be affected by CA(P) application • *Eg: Elderly organisation's view on a voluntary transport scheme* • *Eg: Schools' (or parent committees') view on a bicycle library, as this promotes cycling to school*

Public acceptance	Public (citizens: individuals, groups of individuals, communities. *Eg: parent committees, elderly organisation*)	**General Public acceptance** • Citizen's view on CA in general as 'supplement or alternative to market or state provided accessibility' • Views on CA related policy & regulations • *Eg: view on subsidies for shedding license plate*	**Local public acceptance** • Citizen's view on CA infrastructure • *Eg: Individuals' view on the use of a municipality building for housing a bicycle library* • *Eg: Individuals' view on the social services that takes responsibility for managing a voluntary transport scheme*	**End-user acceptance** • Willingness/openness of individuals or groups (communities) to use CAP • *Eg: willingness to use a bicycle library* • *Eg: willingness to volunteer for a voluntary transport scheme*

2.2.3. Study focus: end-user acceptance

This study focuses on *public acceptance*, with particular emphasis on *end-user acceptance*, encompassing both individuals and organised groups (i.e., communities). The motivation behind this choice lies in the observation that CA is really a process that people, be it more loosely tied individuals or close communities, do. Although the presence of CA and the conditions to which they are subject are determined by political and institutional context, as well as by a range of other actors, it is vital to understand how the communities themselves experience this. However, given that acceptance of CAPs is likely influenced by broader perceptions of CA in general, as well as relevant infrastructures, laws, policies, and regulations, *end-user acceptance* cannot be considered in isolation from *general public* and *local public acceptance*. Therefore, *public acceptance* should be understood holistically, where the acceptance of CA(Ps) emerges from a complex interplay of perceptions across these different facets that shape commoning accessibility.

We define *end-user acceptance* of CA(Ps) as the specific reaction of individuals or groups to CA(Ps) that leads to either the intention to use/participate in or the actual adoption of CA(Ps), including the underlying motivations. *Public acceptance* of CA(Ps) additionally considers individuals' or groups' reactions to CA related policies and infrastructure, and the impact of these policies and infrastructure on end-user acceptance

2.3. Frameworks and determinants of acceptance

Central to the acceptance literature is the question regarding which factors or determinants influence acceptance and, to a lesser extent and with implications to market and policy application, how acceptance could be improved. First, the determinants of acceptance considered important depend on the theoretical perspective from which it is approached, as it can be examined through various disciplinary lenses. Upham et al. (2015) summarise four key perspectives: economics, social psychology, sociology and human geography, and cultural theory. From the economic perspective, acceptance is expressed as a utility function, where individuals make rational decisions based on a cost-benefit trade-off, often directly related to the characteristics of the system itself. In contrast, the social psychology approach shifts away from economic rationality, focusing more on psychological elements such as attitudes, norms, and emotions. The sociology and human geography perspectives emphasize instead the importance of contextual influences. They consider how individuals are connected to, and partly shaped by, their social, political, and physical environments, including the habits, routines, and practices that are structured by these contexts. Lastly, cultural theory explores how cultural worldviews shape acceptance.

Second, the determinants of acceptance depend on the type of technology, service or system studied. Based on a literature review of acceptance studies of semi-automated mobility services through a socio-psychological lens, Bala et al. (2023) distinguished four types of factors or determinants that influence acceptance: socio-economic and demographic factors, service or system-specific factors, travel behaviour patterns, and socio-psychological factors. In terms of socio-economic and demographic factors, gender, having children or not, and residential location play a role. Curtale et al. (2021) also observed the relevance of income and education level for the acceptance of shared electrical cars. Service specific characteristics that matter are cost per km, membership cost, access distance and waiting time (Fagnant & Kockelman, 2015; Krueger et al., 2016) or response time (Stoiber et al., 2019), access time (on-foot), egress time (on-foot), in vehicle travel time, service frequency, seating capacity (number of persons on board), on-board comfort and unexpected delay (Gurumurthy & Kockelman, 2020; Lavieri et al., 2017). Travel cost and travel time (compared to other available alternatives) are considered most important. In terms of travel behaviour patterns, travel habits such as mode use and the frequency of this use play a role. According to Schade and Schlag (2003), acceptability for technological innovations is primarily a function of attitudes and influenced by additional system-specific characteristics. Also Vlassenroot et al. (2010) make a distinction between general factors (covering socio-economic and demographic factors and socio psychological factors) and service-specific factors (covering perceptions of the characteristics of the service) for the acceptance of intelligent transport systems. Studies indicate that incorporating socio-demographic and system-specific characteristics into the framework enhances its explanatory power (Curtale et al., 2021).

However, most studies on the acceptance of technology, and mobility services in specific, are situated within the social psychology domain and, consequently, focus on socio-psychological factors, with Ajzen's (1991) Theory of Planned Behaviour (TPB) serving as a foundational framework. This behavioural theory, which builds on the Theory of Reasoned Action (Fishbein, 1979), assumes that behaviour is a result of rational choices. Behaviour is determined by behavioural intention, which in turn is determined by three main elements: attitudes, subjective norms and perceived behavioural control. A manifold of other behavioural theories and frameworks have followed and have been used to explain acceptance, also accounting for less rational behaviour (including, for instance, habits). One of the main comprehensive ones is the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003). Section 2.6 will focus on critiques on using a socio-psychological lens for studying acceptance, and will propose how a social practice theory lens can be useful instead.

2.4. Unified Theory of Acceptance and Use of Technology (UTAUT)

This theory used eight behavioural acceptance theories to identify underlying constructs, and consolidated them into a single unified theory. It entails four constructs that function as determinants of user acceptance, which is expressed as behavioural intention and use behaviour. *Performance expectancy* (PE) is the perception of the usefulness of a system. *Effort expectancy* (EE) entails the perceived ease of use of a system. *Social influence* (SI) is the extent to which an individual perceives that significant others believe they should adopt or use the new system. Finally, *facilitating conditions* (FC) is the perception of the existence of (organisation, technical, social, …) infrastructure that supports the use of a system. These four constructs influence *behavioural intention*, which in turn influences *use behaviour*.

Facilitating conditions also directly influences *use behaviour*. Four mediating factors exist that influence the relationship between the constructs and behavioural intention or use behaviour: age, experience, gender and voluntariness of use.

This theory has later been extended to UTAUT2 (Venkatesh et al., 2012), with three extra constructs – *hedonic motivation*, *price value* and *habit* – and some changes in the mediating relationships between the constructs. *Hedonic motivation* (HM) is the fun or pleasure derived from using a certain system. *Price value* (PV) is the evaluation of the perceived benefits of the system versus the financial costs involved in using it. *Habit* (H) is seen as prior behaviour and is measured as the extent to which someone beliefs the behaviour is automatic. An important difference between the two theories is that the UTAUT was developed for mandatory settings and the UTAUT2 for voluntary settings, leaving the mediator 'voluntariness of use' out of the equation.

Extensions to the UTAUT(2) framework have been made to account for more complex contexts and behaviours (Bala et al., 2023; Tamilmani et al., 2021). For example, Schaefer et al. (2022) studied the acceptance of shared mobility services in a rural context in Germany and added four new constructs. Perceived Social Usefulness is the perceived benefit of shared mobility services for one's own social environment. Perceived Entertaining Usefulness is the fun factor of using new digital applications. Affinity for Technology Interaction describes the affinity of technological interaction with new digital applications. Personal Innovativeness in IT is the curiosity about a new digital technology. However, these additional constructs can arguably be categorized within UTAUT2: Perceived Social Usefulness aligns with Performance Expectancy, Perceived Entertaining Usefulness corresponds to Hedonic Motivation, and both Affinity for Technology Interaction and Personal Innovations in IT fall under Effort Expectancy. It is also worth noting that this framing is quite individual-centric, not only because it focuses on individual attitudes, but also because these attitudes are oriented towards self-experienced benefits. For the case of commoning accessibility, it may be hypothesised that attitudes also concern non-individual related outcomes, such as environmental and community impacts. Next, Alalwan et al. (2017) introduced Trust as an extra component for studying the acceptance of electric car sharing services. Curtale et al. (2021) incorporated Anxiety-free experience, Personal Attitude (environment-friendly attitude, indicating the intention of an individual to reduce the environmental impacts of their mobility), and Trust (in operators). However, they conclude that Trust and Effort Expectancy are captured via Anxiety-free Experience, thus acting as an internal mechanism (Tamilmani et al., 2021).

Also, previous studies have combined the UTAUT(2) framework with other theories (for a complete review, see Tamilmani et al. (2021)). For example, Singh (2020) uses the Expectation Confirmation Model to extend the UTAUT framework to understand users' post-adoption behaviour. Migliore et al. (2022) combined the UTAUT2 and the Innovation Resistance Theory to consider both enablers and barriers to the adoption of mobile payment systems.

The reason for departing from the UTAUT2 framework is threefold. First, since it is a unified theory, it captures different aspects of various behavioural theories, eliminating overlapping constructs. Second, it has been widely used and verified as a framework to explain the acceptance of a broad range of mobility-related services (Bala et al., 2023; Bernhard et al., 2020; Curtale et al., 2021; Schaefer et al., 2022; Vlassenroot et al., 2010). Third, the framework has proven to be flexible to adapt: components can be added and other theories can be used to extend the framework.

However, the UTAUT2 framework has been mainly used for explaining the acceptance of technologies or innovations from a sociopsychological perspective. In the context of commoning accessibility, which extends beyond a specific technology or innovation, different angles are needed exploring.

2.5. Conceptual Framework for Acceptance of Commoning Accessibility (CFACA)

2.5.1. Rationale and motivation of the framework

In this study, we build on the UTAUT2 framework and extend it by incorporating additional elements from theories beyond the sociopsychology and with application to other domains than technology adoption, creating a more comprehensive approach to understanding the acceptance of commoning accessibility. These new elements may take various forms, including new components (either endogenous or exogenous), new relationships (internal or external), reinterpretations of existing components and relationships, or extensions of existing components that make them more explicitly applicable to commoning accessibility.

The extension of the UTAUT2 framework is based on three main observations, or shortcomings if you will. First, this approach acknowledges that while the UTAUT2 framework primarily focuses on individual acceptance and motivation, commoning accessibility is inherently a collective and social process that does not always emerge from purely rational, individual decision-making. This last point aligns with criticism to utility theory in transport research, which argues that it fails to recognise that the way we travel is a product of more than rational decisions aimed at avoiding disutility (see Kent (2022)). Commoning practices are shaped by a social and cultural context, which may affect individual views and decision making. As well, decisions – in participation in and governance of the practice – are often taken collectively. Second, while the UTAUT2 framework distinguishes between extrinsic and intrinsic motivation – reflected in the components *performance expectancy* and *hedonic motivation* – it does not explore intrinsic motivation in depth and conflates all extrinsic motivations without differentiating between external pressure and internalized values. It is reasonable to assume that individuals engage in CA not solely due to utility-driven (extrinsic) or pleasure-seeking (hedonic) motivations but rather through a more nuanced and complex interplay of motivational factors and values. Third, commoning accessibility occurs within an institutional and political context, where policies, laws and regulations shape the formal and informal conditions for these practices.

Table 3 explains how the existing UTAUT2 components and the additional components relate to the conceptual framework for the acceptance of commoning accessibility.

2.5.2. Overview framework

Figure 2 and Table 3 illustrate the framework. This conceptual acceptance framework examines the *end-user acceptance* of commoning accessibility (practices) from a social-psychological lens. We propose a multi-level framework because it integrates perceptions of factors operating at different levels of analysis: individual, community (or social), and institutional levels. Each level captures different aspects of commoning accessibility acceptance, from individual perceptions of the practice and its governance structure, to the role of the social environment, and institutional influences. These levels are expressed in the framework through different components and relationships.

At the core of the framework, the individual level, are sociopsychological factors that capture the perception of CA practices at an individual level. This level is primarily based on UTAUT2, and extended with the Self-Determination Theory (SDT) to account for more complex types of motivations. This level mainly reflects individual decision-making at a personal level.

However, in line with the first criticism, individual choices are not made in isolation. Therefore, we introduce a community level. This level emphasizes the collective nature of commoning accessibility, considering how individual decisions are influenced by group dynamics, social norms, and governance structures within the practice. At this level, attention is paid to how social relationships and cultural factors shape individual habits and practices. Theories on commons governance provide insights to this level by focusing on collective rules and decision-making processes, and how these impact individual motivations to participate in CA practices. At this level, Self-Determination Theory further contributes by explaining how extrinsic motivations can become more regulated (becoming more autonomous) through social interactions and group influence, both from within the practices as from outside of it.

Finally, the institutional level considers the role of policies, regulations, and laws that either enable or hinder commoning accessibility practices. This level acknowledges that even if individuals and communities accept commoning accessibility at an individual and community level, it still requires the right institutional context to keep existing and functioning well. It also includes contextual and geographical factors, such as the built environment, transport infrastructure, and available mobility options, which directly affect the feasibility and sustainability of CA practices.

By integrating these three levels, this framework attempts to provide a comprehensive view on commoning accessibility acceptance from a socio-psychological perspective, recognizing that individual choices, social influences, governance approaches, and institutional factors are interconnected in shaping participation.

The relative importance of the components and relationships proposed in this conceptual framework will depend on the specific CAP in question. Some practices, such as a community-based carsharing scheme, may be more utility-driven – addressing the need for using a (affordable) car – rather than pleasure-driven, making *performance expectancy* more relevant than *hedonic motivation*. In such cases, *price value* may play a more significant role, whereas, for example, in a collective cycling trip to school, this may be less prominent. Additionally, the relative importance of these components and relationships may vary depending on the individual and the role they assume. For instance, a person using a volunteer-run transport scheme may do so primarily due to a lack of alternative options – indicating a strong *performance expectancy* component. In contrast, the volunteer providing the ride may be motivated by a strong personal conviction in the importance of supporting individuals with limited mobility options – indicating a strong *intrinsic motivation* or *regulated extrinsic motivation* component.

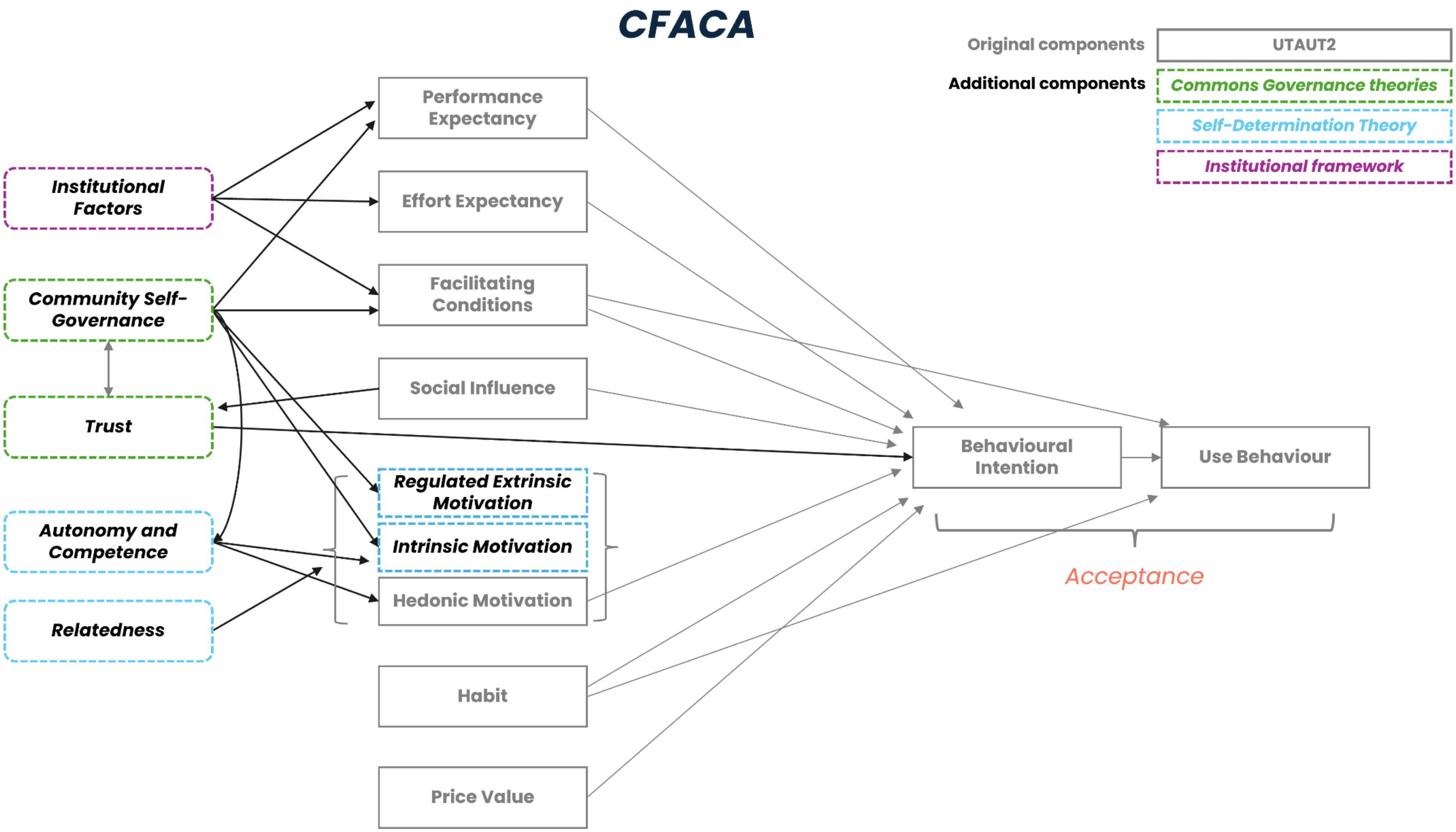

Figure 2: Conceptual Framework for the Acceptance of Commoning Accessibility (CFACA), adopted from Venkatesh et al. (2012) and Deci and Ryan (2000) and edited by author. Note: not all inter-component relationships are indicated because of readability reasons.

TABLE 3: TABLE 3: COMPONENTS OF THE CONCEPTUAL COMMONING ACCESSIBILITY ACCEPTANCE FRAMEWORK, ADOPTED FROM VENKATESH ET AL. (2012) AND EDITED BY AUTHOR.

Conceptual Framework for the Acceptance of Commoning Accessibility (CFACA) Components				
Name of component	**Abbre-viation**	**Description**	**Example**	**Influence on other components**
UTAUT2 framework				
Performance Expectancy	PE	The perception of the usefulness of the CAP. This component entails perceptions of how the CAP answers to one's instrumental needs, such as mobility or accessibility needs, covering external regulation (in extrinsic motivation).	*Participating in a community-based car sharing club because it gives access to a car, which increases accessibility options.*	Behavioural Intention
Effort Expectancy	EE	The perceived ease of use of the CAP. It relates to the complexity and readability of the practice, as well as the steps required for participation.	*Participating in a community-based car sharing club because borrowing a car in this way is very easy and straight forward.*	Behavioural Intention
Social Influence	SI	The perception of how significant others view CA(Ps) and participation in them, as well as whether they believe one should engage in a CAP.	*Participating in a community-based car sharing club because my friends tell me to do so.*	Behavioural Intention, Trust
Facilitating Conditions	FC	The perception of the existence of (organisational, technical, social, ...) infrastructure that supports the participation in a CAP.	*Participating in a community-based car sharing club because an application exists that makes it very convenient to reserve a car.*	Behavioural Intention, Use Behaviour
Hedonic Motivation	HM	The fun or pleasure derived from participating in a CAP	*Participating in a community-based car sharing club because it's enjoyable to borrow someone's car.*	Behavioural Intention

Price Value	PV	The evaluation of the perceived benefits of the CAP versus the financial costs involved in participating in it.	*Participating in a community-based car sharing club because it is cheaper than buying a car or than renting a car through a conventional car sharing scheme.*	Behavioural Intention
Habit	H	The extent to which someone believes participating in a CAP is automatic and 'routine-like'.	*Participating in a community-based car sharing club because i do it for a long time and i got used to it.*	Behavioural Intention, Use Behaviour
Behavioural Intention	BI	The intention to use or participate in a CAP.	*The intention to join a community-based car sharing scheme.*	Use Behaviour
Use Behaviour	UB	The actual use of or participation in a CAP.	*Participating in a community-based car sharing scheme.*	
Additional components				
Institutional Factors	IF	The perception of the institutional context, including local or national policies, laws and regulations that facilitate participation in a CAP.	*Participating in a community-based car sharing scheme because the local government offers compensation for relinquishing your license plate and joining the scheme.*	Effort Expectancy, Facilitating Conditions
Community Self Governance	CSG	The perceived degree of involvement/participation in the practice, specifically in collective decision and rulemaking.	*Participating in a community-based car sharing scheme because you can negotiate with your neighbours the conditions for using their car.*	Regulated Extrinsic Motivation, Intrinsic Motivation, Trust, Autonomy and Competence

Trust	T	The degree to which someone trusts the CAP and the members involved.	*Participating in a community-based car sharing scheme because in the event of an accident, the scheme provides insurance coverage and the user will cooperate to ensure an efficient reimbursement process.*	Community Self-Governance, Behavioural Intention
Autonomy and Competence	AC	The perception that the CAP contributes to one's feelings of autonomy and competence.	*Participating in a community-based car sharing scheme because in this way you can travel where you want to go whenever you want to go*	Intrinsic Motivation, Hedonic Motivation
Relatedness	R	The perception that participating in the CAP fosters a sense of belonging and personal connection.	*Participating in a community-based car sharing scheme because you like to share with and connect to like-minded people.*	Regulated Extrinsic Motivation, Intrinsic Motivation, Hedonic Motivation
Regulated Extrinsic Motivation	REM	Motivation that is driven by external factors, but that is integrated within your own values, beliefs and identity.	*Participating in a community-based car sharing scheme because you are aware of the negative societal and environmental impacts of cars (& car ownership) and would feel guilty when buying a private car, despite the scheme being less convenient than owning a personal car. Because it really aligns with your personal values and deep belief in sustainability and shared responsibility.*	Behavioural Intention

Intrinsic Motivation	IM	Motivation that is autonomously and driven by intrinsic factors: because it is personally meaningful, interesting, or fulfilling.	*Participating in a community-based car sharing scheme because you really like it: you find it interesting to do and it contributes to your personal growth.*	Behavioural Intention

2.5.3. Theories and literature that inform the framework

2.5.3.1. Self-governance and decision-making

As Lanza and Pucci (2024) argue, commoning accessibility does not fully align with Hardin's (1968) interpretation of the commons, which assumes that a shared resource is open to all and at risk of depletion due to overuse ('the Tragedy of the Commons'). Instead, certain forms of commoning accessibility align more closely with Ostrom's (1990) perspective, where a commons is a collectively managed resource with well-defined boundaries and governance mechanisms. Rather than being freely available to all, commons in Ostrom's view are governed by a self-organized group that establishes rules and conditions for access and use, ensuring sustainability and equitable distribution.

For example, a group of neighbouring parents organizing shared cycling assistance for their children represents a form of commoning accessibility that fits Ostrom's model. In this example, the group of 'commoners' is well defined, with specific governance rules determining participation and responsibilities. Unlike Hardin's model, where commons risk overuse and depletion, this type of commoning is not 'reduced' through increased use/participation; instead, it depends on continued collective organization and trust among participants. We hypothesise that the way participation is governed, including involvement in decision and rulemaking, influences acceptance of CAPs.

A substantial body of commoning literature explores motivations and governance strategies within different types of commons. One key area of focus is 'commons dilemmas' or 'resource dilemmas' (Kopelman et al., 2002), which examines how groups, and individuals within groups, balance individual benefits with collective sustainability. While Hardin (1968) proposed that privatization or state intervention were the only solutions to prevent resource depletion, Ostrom (1990) demonstrated that communities can self-organize and successfully manage commons without external control, provided they establish effective governance structures. She drafted eight principles for effective and sustainable common pool resource management (Ostrom, 1990), that is, to direct the decision-making process in a collective, beneficial direction. These are: 1) clearly defined boundaries; 2) rules should fit local circumstances; 3) participatory decision making; 4) effective monitoring of resource use; 5) sanctioning (and rewarding) for misuse; 5) conflict resolution; 7) the right to organise themselves; and 8) commons work best when nested within larger networks.

Moreover, other studies demonstrate that the success of self-governed commons is closely linked to cooperation, trust, communication, and group identity. Balliet et al. (2011) found that cooperative behaviour is more likely when group members trust each other and anticipate continued collaboration in future activities. Similarly, Messick et al. (1988) showed that communication between group members fosters cooperation, while Brewer & Kramer

(1986) emphasized the importance of a shared group identity or sense of solidarity in resolving commons dilemmas. These findings suggest that commoning accessibility initiatives may be more likely to succeed when participants feel involved, engage in ongoing dialogue about shared goals and responsibilities, and establish a sense of belonging or relatedness (Baumeister & Leary, 1995). This last point will be explored further in the next section.

To understand how collective decision making and participation in the governance of CAPs, by collaboratively setting out rules and boundaries, increases involvement and thereby motivation to participate in CAPs

- We include the component *community self-governance* (CSG), which represents the perceived degree of involvement/participation in the practice, specifically in collective decision and rulemaking. CSG is expected to positively influence PE, HM, and AC (see below)
- We include *trust* (T) which influences GSC – and vice versa – and BI

Furthermore, some studies have explored the role of personality traits and value orientations in commons behaviour. Sheldon and McGregor (2000) found that individuals with higher intrinsic values are more likely to engage in cooperative and sustainable management of resources, whereas those with higher extrinsic values are more prone to short-term self-interest, increasing the risk of commons depletion. Similarly, Palmer et al. (2020) observed that inclusive participation in activities that promote sustainable livelihoods in the Brazilian Amazons fosters cooperative behaviour and strengthens intrinsic motivation to conserve the forest commons. Although these findings specifically pertain to commons as defined by Hardin (1968), which do not directly apply to CAPs, they may still be relevant to commoning accessibility. Both forms of commoning involve a community and depend on effective cooperation and the negotiation of rules and conditions within the practice (Lanza & Pucci, 2024).

These findings suggest that intrinsic motivations play a crucial role in the effective and sustainable management of commoning accessibility practices. They also suggest that intrinsic motivation may be more influential than extrinsic motivation in the acceptance of CA(Ps), particularly when acceptance is associated with more sustainable and committed participation. This raises the question of whether participants in CAPs are primarily driven by intrinsic or extrinsic motivations. To better understand the complexity of these motivational forms, we draw on Self-Determination Theory.

2.5.3.2. Self-Determination Theory

The Self-Determination Theory (SDT), developed by Deci and Ryan (2000), is a comprehensive theory of human motivation that distinguishes between autonomous and controlled forms of motivation. It posits that motivation exists on a continuum, ranging from intrinsic motivation (engaging in an activity for its inherent enjoyment or interest) to extrinsic motivation (engaging in an activity due to external rewards or pressures), where the first is more autonomous and the latter more controlled. Contrary to the UTAUT2 framework, the STD identifies different degrees of internalization within extrinsic motivation, from externally regulated behaviour (fully controlled by external factors) to integrated regulation (where external goals align with personal values and identity – so becoming more autonomous and moving to the intrinsic side of the spectrum). Internalization involves actively converting an external motive into personally accepted values, allowing individuals to integrate originally external behavioural regulations.

For instance, let us assume a hypothetical case of someone who joins a local community-based car sharing scheme. That person may do so because *the activity itself* is personally meaningful and brings personal fulfilment (*intrinsic motivation*), or because they personally, derives pleasure and fun from it (*hedonic motivation*). Undirected trips (Hook et al., 2022) are an example of intrinsically or hedonically motivated mobility activities. That person may also do so to achieve an outcome separate from the activity itself (*extrinsic motivation*). In other words, this person has certain accessibility needs. However, extrinsic motivation exists on a spectrum, from controlled to autonomous. That person may really need a car to go to work appointments but cannot afford to buy one and the community-based car sharing scheme is the cheapest option – extrinsic motivation, but fully externally controlled, called *external regulation* in SDT). This is what falls under *Performance Expectancy* in the UTAUT2 framework. Otherwise, that person may do so because feeling guilty about buying a private car and consequently 'forcing' him/herself to join the car sharing scheme – still externally controlled, but with internal pressure, called *introjected regulation* in SDT. That person may also do so because of finding it meaningful to join a community initiative that tries to diminish car ownership and its negative consequences on society and the environment, even though it is not so convenient as compared to buying a private car – still externally driven, but more close to intrinsic motivation, called *identified regulation* in SDT. Lastly, that person may do so because it really aligns with his/her personal values and deep belief in sustainability and shared responsibility: the behaviour is fully internalized into his/her identity and values – most autonomous form of externally driven motivation, called *integrated regulation* in SDT. Studies demonstrated various autonomous forms of extrinsic motivation for other types of commoning practices. For example, in the cases of affordable housing initiatives, urban gardening and community centres, Fournier (2013) found that through commoning, participants reclaim the right to collective use by prioritising use value over exchange value. Zapata Campos et al. (2020) also observe that when participants of a bicycle kitchen open their space to users, they publicly present an alternative set of values based on the use value of the space rather than its exchange value – a process they refer to as 'frontstaging the backstage'. However, as these same authors note, commoning is not only about an outcome, it is also about the process or the activity. Doing something *because of* the activity itself, is considered as being driven by intrinsic or hedonic motivation.

It is important to note that the pleasure derived from participating in, for example, a community-based car sharing scheme (*hedonic motivation*) may also be externally influenced. For instance, the enjoyment may stem from receiving a reward, such as a more financially beneficial reimbursement compared to personal vehicle use. In this case, the hedonic motivation is externally driven. This demonstrates that externally driven behaviour is more nuanced, and can get complex, especially in the context of commoning accessibility.

At the core of SDT are the pursuit of three basic psychological needs: autonomy (the need to feel in control of one's actions), competence (the need to feel effective and capable), and relatedness (the need to feel connected to others). When these needs are satisfied, individuals are more likely to develop autonomous motivation, fostering higher engagement, well-being, and long-term persistence in activities (Deci & Ryan, 2000). Conversely, environments that undermine these needs lead to controlled motivation or amotivation, reducing intrinsic engagement and long-term commitment.

We postulate that CAPs that enhance feelings of autonomy, competence and relatedness, are expected to foster intrinsic motivation and forms of more self-determined or autonomous extrinsic motivation to participate in these practices. For instance, Zapata Campos et al. (2020) found that empowerment, the pursuit of an alternative lifestyle, escaping consumerist society, and collective learning motivated individuals to participate in a bicycle repair kitchen. In her study about different forms of commoning in Canada and Spain, Fournier (2013) found that these initiatives reproduce social relationship patterns that afforded participants some degree of autonomy from the market. This idea aligns with the fourth definition of commoning identified in Lanza and Pucci (2024), which conceptualizes commoning as an alternative political practice (Chatterton, 2010; Hardt & Negri, 2009), serving as both a collective response and a fundamental critique of the dominant economic system. Similarly, Nitschke (2020) observed that the association of freedom with (auto)mobility remains strong among non-commercial car sharers, particularly concerning independence, flexibility, and comfort. However, car ownership simultaneously imposes a form of coercion, contradicting this perceived freedom. He argues that non-commercial car sharing challenges this coercion, enabling more deliberate and conscious car use. Instead of being bound by the sunk costs of private car ownership, car sharing participants can select the most appropriate mode of transport for each trip. More explicitly, in the context of MaaS adoption, Schikofsky et al. (2020) found a positive relation between feelings of autonomy, competence and relatedness on the one hand, and increased perceived usefulness, ease of use and hedonic motivation on the other hand.

- We include a component *autonomy and competence* (AC), which encompasses the perception that the CAP contributes to one's feelings of autonomy and competence. This component has impact on one's identified & integrated regulation, intrinsic motivation, *effort expectancy* and *performance expectancy*.
- We include a component *relatedness* (R), which entail the perception that participating in the CAP fosters a sense of belonging and personal connection.
- We include *regulated extrinsic motivation* (REM) to account for more autonomously driven forms of extrinsic motivation, ranging from introjected regulation to identified and integrated regulation.
- We include *intrinsic motivation* (IM) to account for motivations that is intrinsically driven – coming from the activity itself, and not from the associated outcomes – and highly autonomous and self-determined.
- AC influences IM and REM, which in turn influence BI
- R influences IM, REM and HM, which also influence BI
- *Performance expectancy* equals extrinsic motivation in the form of external regulation

2.5.3.3. Institutional factors and policy conditions

As previously mentioned and highlighted by Prins et al. (2025), commoning practices "do not take shape in a policy vacuum but are inevitably part of complex and uneven relations and assemblages of governance" (p. 1). Governance structures influencing commoning practices extend beyond the internal dynamics of rule-making and negotiation within the practices themselves. These practices, or the development of them, they argue, involve a diverse range of actors, including national, regional, and local governments, businesses, and civil society organizations. Furthermore, commoning practices are deeply shaped by the institutional context in which they unfold, including the policy conditions that define this context. This refers to the *general* and *local acceptance* levels identified in Table 2Table 2. It is reasonable to assume that the institutional context and its policy conditions influence the *end-user acceptance* of CAPs. We will demonstrate this by drawing on the CA policy framework developed by Prins et al. (2025).

They identify two ways in which policy conditions impact commoning accessibility: by shaping both the process of commoning and the ways in which accessibility is conceptualized and pursued. This, thus, involves both the commoning conditions and the accessibility conditions. It establishes the conditions under which individuals and communities unite, mobilize, and organize, influencing not only the governance of commoning practices but also their broader societal objectives.

Three policy dimensions are important in this matter. First, policy priorities determine the extent to which both commoning – and conditions for commoning to emerge such as, for example, community engagement and active citizenship – and accessibility are prioritised and supported. For example, initiatives that are in line with national mobility directives aiming for higher bicycle uptake, might get funded more easily. Availability of funding might result in better conditions and visibility of the initiative and consequently motivate people to participate. Blomley (2008) demonstrates how a private development project in an impoverished neighbourhood in Vancouver gave fertile ground for residents to organise themselves and start cleaning up the place, reclaiming a right to the neighbourhood. The perception of injustice arising from a 'gentrification' project, which can be seen as a specific policy priority regarding urban development, may serve as a motivating factor for residents to engage in the initiative, fostering collective action in response to perceived displacement and injustice. Second, laws and regulations set the formal parameters within which commoning accessibility practices operate. It stipulates under which conditions communities can organise themselves, and how accessibility objectives are incentivised, hindered or facilitated. For instance, a local law that provides financial compensation to car owners for handing in their license plates and joining a car sharing scheme may serve as a motivational driver, incentivizing participation in the initiative (Stad Gent, 2025). For example, Dégage, a Belgian community-based car sharing scheme, explicitly mentions this regulation in Ghent to motivate people to participate. Finally, the administrative and the institutional context shapes the practical implementation and sustainability of as well as the need for commoning initiatives. For example, a poorly distributed charging network for electrical vehicles in rural areas, might affect the feasibility of an electrical car sharing scheme (Sturzaker et al., 2024 in Prins et al., 2025). Alternatively, when charging points are widely available, this might incentivise people to participate in the scheme. Also, accessible ways to funding might stimulate the emergence of small-scale local initiatives.

Policy conditions, as described in previous paragraph, can thus be seen as either facilitating factors or impeding factors.

- We include the component *institutional factors* (IF) to include all types of policy conditions, including policy priorities, laws and regulations, and the administrative and institutional context, that either facilitate or hamper the participation in or use of a CAP.
- Institutional factors that act as facilitator, positively influence FC and EE.
- Institutional factors that act as impeders , negatively influence FC and EE

2.6. Alternative frameworks for analysing acceptance

2.6.1. Reflections on socio-psychological perspective

Some important sidenotes should be made regarding the use of a socio-psychological framework for analysing the acceptance of commoning accessibility (practices), which can be synthesised into five points.

1) First of all, it still takes individual perceptions as a foundation for understanding acceptance. It may take into account how forms of collective decision making influence individual acceptance, however, it does not explain how this collective decision making process actually takes place and shapes the practice. It considers individual acceptance, but not collective adoption - how a practice in a given social, cultural or geographical setting emerges and is being accepted.
2) Second, although the proposed conceptual framework seeks to account for external contextual influences by incorporating 'institutional factors' as an additional component, it may still be argued that a socio-psychological perspective tends to overlook the broader environment. Besides institutional influences, CA practices are also shaped by geographical features, for example, whether they take place within or outside a city, the available (transport) infrastructure, and even weather conditions, to name just a few.
3) Third, it assumes a static view of practices, often capturing only a snapshot of attitudes, beliefs and motivations towards acceptance. However, CA practices are dynamic and evolving, for example habits, meanings and infrastructures change over time. Socio-psychological frameworks are excellent for understanding initial (individual) adoption and acceptance (including attitudes and motivations), but are not well suited for understanding the long-term transformations of them (emergence, change, persistence or disappearance).
4) Fourth, the role of power and inequalities in practices and in how these practices enable accessibility are underrepresented – both within and outside of the practice. When studying acceptance of CA through a socio-psychological lens, questions revolve around which factors drive people to participate in a practice. However, it should also be questioned who participates, who has access, who benefits (or not) and why this is the case. The existence of a CA practice and the acceptance of it also says something about the accessibility conditions that this practice aims to respond to. It equally says something about the reasons why those who are subject to the same accessibility conditions cannot or do not want to participate. However, socio-psychological models rarely engage with distributional issues, social equity, or power relations, which are central in CA debates. This last point will be further scrutinized in Deliverable 4.3 (Task 4.3).

5) Fifth, socio-psychological frameworks do not consider how certain practices are accepted (or not) in relation to or in co-occurrence with other practices or social dynamics.

Some of these considerations can be understood through Giddens' (1984) structuration theory, which addresses the interplay between 'structure' and 'agency' in explaining social phenomena. Socio-psychological approaches often overemphasise agency (focusing on individual attitudes, perceptions, and motivations, i.e. the mental process inside the minds of individuals), while, for example, access-based approaches within transport research tend to overemphasise structure (focussing on contextual influences such as economy, politics and urban planning) (see Kent, 2022). Structuration theory, however, posits that social ordering results both from human action and from the constraints imposed by rules and resources.

For this reasons, it is pivotal to look at other theories or frameworks that might offer a different perspective on how to understand the acceptance of CA practices, specifically taking into account this agency-structure balance. One of such theories is social practice theory.

2.6.2. Social Practice Theory as alternative for studying the acceptance of CA

Practice theory is an umbrella term that covers social science approaches that embody a structuration perspective and that challenge the idea that behaviour can be reduced to either rational, individual choices or to deterministic structural constraints (Urry, 2012). Rather than being seen as a purely individual choice, everyday action and routine human behaviour is understood as embedded in shared social practices, influenced equally by the surrounding environment as by personal decision-making (Hitchings, 2011 in Kent, 2022). In this way, it shifts focus away from individual decision-making and social structures toward socially embedded practice, overcoming the dualism of structure and agency (or the 'what' and the 'who'). Or, as Kent (2022) frames it, "social practice theory welds components of structure into the capacities of the travelling agent" (p. 234).

One such practice theory, amongst many others, is the Social Practice Theory (SPT) of Shove et al. (2012). It explains how everyday activities – like cooking, cycling, or borrowing someone else's car – become common and change over time.

A social practice is something that people do regularly. Reckwitz describes it as "a routinized type of behaviour which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge" (Reckwitz, 2002, p. 249). These practices do not just emerge because people personally decide to, they exists because they are part of a shared social system. Put simply: people do not just decide to cycle or carpool; these activities depend on the availability of bikes or cars, rules, and cultural attitudes towards this activity.

SPT (Shove et al., 2012) posits that the existence of a practice depends on the integration of three key elements: materials, competences, and meanings. Materials refer to the physical resources and infrastructures necessary for carrying out the practice; for example, a bicycle library requires bicycles that can be borrowed, a depot where the bicycles can be stored and a booking system to reserve the bicycles. This links to the *local/community level*, concerning the infrastructures that involve CA practices, in the 'types of acceptance framework' discussed earlier. Competences encompass the skills and knowledge needed to perform the practice effectively, such as the ability to ride a bicycle, navigate traffic safely, knowing how to reserve a bicycle in the library and knowing how to deal with or 'negotiate' the rules and conditions set by the practice (see Kent & Dowling, 2013). Various studies highlight that knowledge and awareness of a given practice or system play a role in the acceptance of (shared) mobility services (Gupta et al., 2012; Schade & Schlag, 2003; Schaefer et al., 2022). Also knowledge and skill creation are recognized as key aspects of commoning practices and are even described as the very 'thing' that is being commoned. Examples include acquiring the skills to repair bicycles in shared bicycle kitchens (Zapata Campos et al., 2020) and learning how to cultivate food in urban gardening commons (Fournier, 2013). Lastly, meanings relate to the cultural and social significance attributed to the practice. This element includes matters of the mind such as affect, believes, emotions, motivations and attitudes. In this sense, it partly overlaps with the attitudinal and motivational components in socio-psychology, with the main difference that 'meaning' not only includes personal perceptions, but also cultural and social perceptions. For instance, cycling may be viewed as an environmentally sustainable and cost-effective mode of transport, or alternatively, as an inconvenient means of mobility, depending on societal views and cultural context. The same applies to sharing a bicycle through a bicycle library, which may be perceived either as a sustainable alternative to the consumer society or as an inconvenient burden that demands too much effort.

This SPT is also very useful to explain how practices emerge, persist, and change over time. If one of the elements changes or disappears, the practice itself may evolve or vanish. This might be of particular relevance for the acceptance of CAPs.

SPT identifies three key mechanisms through which practices evolve over time: recruitment, retention, and defection. Recruitment occurs when more people adopt a practice, often influenced by supportive policies or awareness campaigns. For example, a bicycle library may grow in popularity as more people recognize it as a cost-effective and sustainable alternative to private bike ownership. Retention refers to the process by which a practice becomes routine and normalized; if borrowing a bike from a bicycle library becomes convenient and widely accepted, it may integrate into daily mobility habits. Conversely, defection happens when a practice declines or disappears due to changing conditions. If the bicycle library loses funding, faces logistical challenges, or if private bicycle ownership becomes more accessible and affordable, participation may decrease, leading to the eventual decline of the practice. Kent (2022) interestingly conceptualises transport practices like private car use as an exceptionally successful process of recruitment (or failed defection if you will). This view, she claims, highlights the need for alternative mobility options. Can we also look at CA practices in this way, as an example of a successful process of recruitment in some communities or areas, but a more limited one in others? Or, alternatively, as an example of successful defection, away from the 'conventional' practice, for some communities and areas, but a limited one in others?

Watson (2012), however, applies another lens on how practices may change over time. He identifies three ways. First, the elements which constitute the practice may change: meaning, materials and competences can change so that a practice may become more or less appealing. Second, a change in the people doing the practice may occur. For a practice to be sustained, it requires a sufficient number of people who actively carry it out – the so-called 'carriers' of the practice. Third, a change may occur through shifting relationships between practices, or what is described as the 'bundling' of practices. Practices do not occur in isolation, but form loose-knit patterns shaped by their co-location and co-existence. They often restrict, enable, or influence one another. As Van Eennoo and Boussauw (2023) pointed out that it is relevant to explore how mobility practices, such as car driving in their case, intersect with other practices, we believe this could also be relevant for commoning accessibility practices (see also Kent & Dowling, 2013). For example, borrowing a bicycle for a child may be very appealing in contexts where cycling to school is common practice, but less so where the school run is usually done by car. Changes through these three ways may then have implications on the recruitment, retention or defection of a practice.

We will use a study of Kent and Dowling (2013) to demonstrate how SPT can be used for analysing mobility practices. They applied a social practice approach to commercial car sharing to study how this practice emerges, persists and challenges private car-based mobility. They observed changes across the constitutive elements. For example, changes in materials such as the need for key collection, a reservation system, registering milage, etc. has an impact on what it 'means' to share a car. They argue that through car sharing, the car is rather seen as a shared commodity than as a privately owned asset. This shift is accompanied by a sense of 'freedom' linked to the absence of ownership responsibilities, resonating with what Berry and Maricle (1973) describe as 'the burdens of ownership.' Competences also evolve, particularly regarding digital literacy for reservations, the ability to plan ahead, and, crucially for CA, the negotiation of rules around planning and access with other participants. Can we make the same observations about other CA practices?

Moreover, SPT illustrates that acceptance is, unlike socio-psychological frameworks do, not only about personal motivations and attitudes, it also depends on whether a practice is well-supported by infrastructure, easy to do, and socially accepted. For example, Burghard & Scherrer (2022) found that compatibility with daily life routines, ease of use, trialability, observability and visibility are important factors in the acceptance of commercial car sharing and ridepooling. Additionally, this rootedness of practices is influenced by and takes place within a cultural and social setting, offering understanding of how it may become habitual and embedded in everyday life.

From a methodological perspective, since it takes the practice itself as the primary unit of analysis, SPT allows researchers to simultaneously engage with all actors involved in the practice – users, volunteers and others. This contrasts with socio-psychological frameworks, which tend to examine each stakeholder individually, focusing on individual attitudes and behaviours separately rather than as part of a shared social process.

Links between Social Practice Theory and Social Psychology?

Shove (2010) explicitly made clear that socio-psychological theories and practice theories are under no circumstances compatible. However, Kent (2022) observes that in transport studies, the meaning element is often less thoroughly studied than the elements of competencies and materials. She argues that this lies in the fact that there is still disagreement under social practice scholars on how to characterise meaning, emotions and motivations, as recognised by Shove et al. (2012). Additionally, practice theory is often deployed to avoid the individualistic focus of traditional socio-psychological theories. For this reason, she argues that insights from psychology should not be dismissed altogether, since "the discipline of psychology has pioneered and refined methods to identify the emotions and motivations that comprise elements of practices" (Kent, 2022, p. 238) . As she writes, even though socio-psychology and practice theory originate from contrasting ontological and theoretical perspectives, psychological methods for examining emotions and motivations – especially those refined in transport studies – can still help to inform a practice-oriented approach. However, she does not further specify on how this could exactly be done. In the light o studying the acceptance of CA practice, we remain attentive to these reflections.

3. Research questions

The main research question this Deliverable deals with is how we can understand the acceptance of CA practices; and which framework or perspective is useful in obtaining this pursuit. In section 2.2 we argued to focus on *end-user acceptance*. Following its definition, we aim to understand what the reasons are for participation in CA practices from the perspective of the users/participants. In section 2.5 we developed two distinct approaches on how to understand participation in CA practices. A socio-psychological perspective offers an individualist view - emphasising 'agency' – on acceptance, while a social practice theory perspective focusses on the practice itself instead of the agent – bridging agency and structure. Consequently, two sub-research questions can be formulated:

RQ1.1: How can we understand the acceptance of CA practices from a socio-psychological perspective?

- What factors influence the acceptance of CA practices? Using the conceptual framework developed as a tool to answer this research question, this leads us to the question: which components of the conceptual framework are relevant in the acceptance of CA practice? This framework helps us a guideline to pose some specific questions. Based on this, we can formulate a list of sub-questions.

For each of the components present in the framework, we want to understand what their role (and relevance) is in explaining the acceptance of CA practices. This means on the one hand understanding how important these components are, and, on the other hand, understanding their specific meaning in relation to acceptance. This also involves understanding how these perceptions are being made and how meaning is being constructed.

- What is the role of *performance expectancy*?
    - What is the role of functional utility?
    - Which functional aspects are considered important?
- What is the role of *effort expectancy*?
    - What is the role of the useability and the user friendliness?
- What is the role of *facilitating conditions*?
    - Which kind of factors or conditions are acting as barrier and as facilitators?
- What is the role of *social influence*
    - What is the role of individual's social environment and of social norms?
- What is the role of *institutional factors*?
    - Which kind of factors? Institutional context, policies, laws and regulations; do they act as facilitators or barriers?
- What is the role of *price value*?
    - Which type of comparisons are made?
- How autonomous are motivational drivers?
    - Which type of motivation can be identified: Intrinsic, regulated extrinsic or hedonic?
    - Which specific motivation compiles this: Fun & pleasure, group belonging, guilt, environmental/ economic/ societal believes, …? And how are these motivations linked to other components in the framework?
- What is the role of *community self-governance*?

    - What is the role of having a voice in the decision and rulemaking of the practice?
    - What is the role of rule negotiation and for what is this done?
- What is the role of *trust*?
    - Trust in the other commoners, in the organisation?
- What is the role of feelings of autonomy and competence in participation in the CAP?
    - Which kind of feelings of autonomy and which kind of competences?
- What is the role of relatedness in participation in the CAP?
    - Relatedness to what and to whom?
- What is the role of habits and routines?
    - How is participation in the CA practice being perceived as being a habit or a routine?

Next to the research questions that relate to the components of the framework, additional, more open, research questions are also relevant. First of all, are there other factors, processes or relationships that play a role in the motivation for participating in a CAP?

- Which aspects make commoning within a specific practice difficult or easy to do, and how does this relate to acceptance?
- Why are these CAPs important in peri-urban contexts? Does this peri-urban context enable or hinder specific aspects of the practices? Does this context play a role in the acceptance of the practice?
- Why do the participants prefer the commoning form over alternatives (market or state provided forms)? Because of not having an alternative, are acting as a supplement or rather as a complement? How does this relate to the components present in the framework?
- Can CA shift the perception of accessibility (and mobility as a means to achieve accessibility) from something that has to be achieved and owned individually, to something that can be accomplished and shared collectively?
- …

RQ1.2: How can we understand acceptance of CA practices from a social practice theory perspective? This research question will be further explored in a next deliverable.

- How is taking part in a CAP embedded in everyday practices? Can it be seen as a means to reconstitute other, deeply entrenched, everyday practices, such as car ownership (Nitschke, 2020)?

4. Study area and CA practices case studies

4.1. Study area: Merelbeke-Melle

The study area or testbed area for this project Is Merelbeke-Melle. Criteria for selecting this study area were defined by the project team, specifically in WP1. Primary selection criteria can be grouped into two categories. First of all, the area should be 'peri-urban' . To define this, WP1 defined a couple of sub-criteria. These include population density, the degree of urbanisation (expressed through levels of built environment), some accessibility indices related to 15min city compliance (such as access to services and to public transport), and car ownership. Second, there should be CA practices present that are worth studying in our work package. Secondary criteria involved

4.1.1. Description of study area

Merelbeke-Melle is a municipality in the southwest of Ghent (see Figure 3), nestled along the southern bank of the Scheldt River and the "ring channel" that links two branches of the river. The municipality is the result of a recent administrative merger between the former municipalities of Merelbeke and Melle, officially united in January 2025.

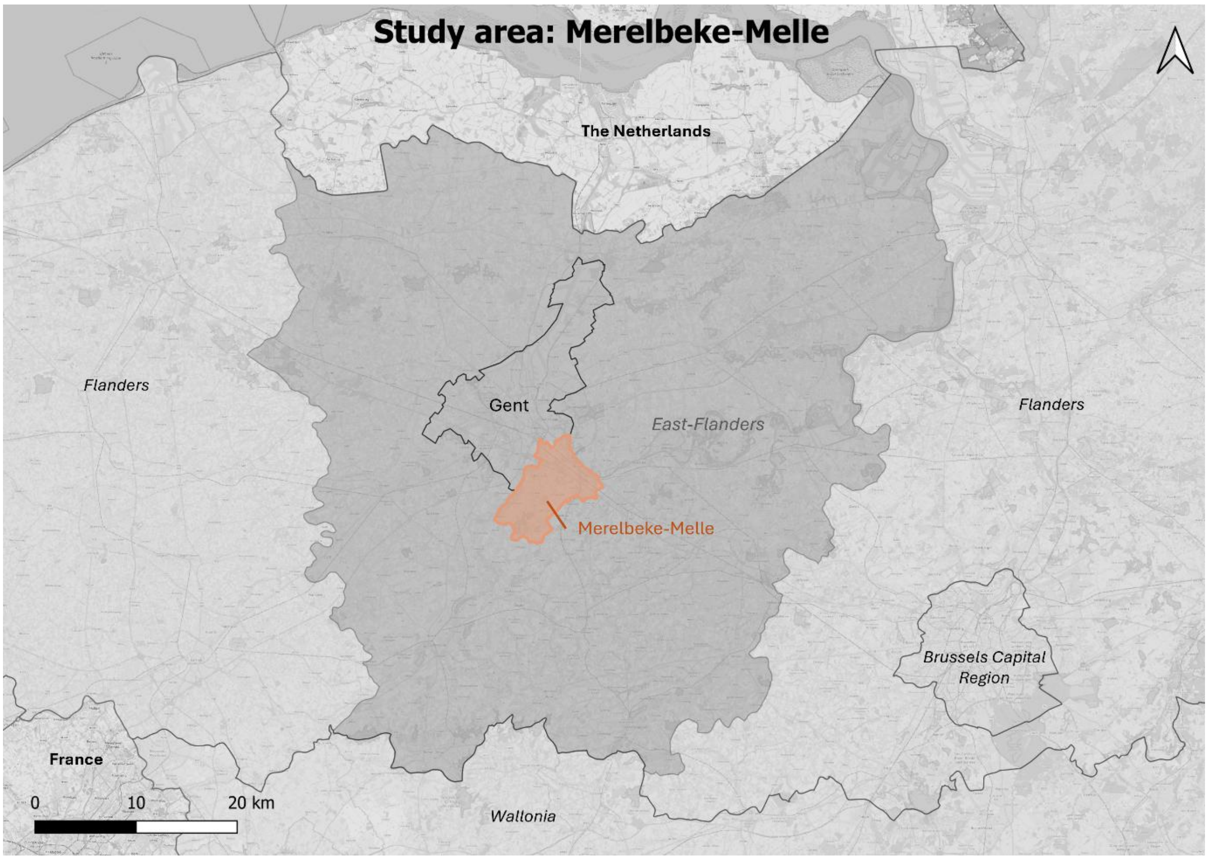

Figure 3: Study area Merelbeke-Melle within the Province of East-Flanders.

First written evidence goes back to the 12th century, referring the ‘Van Merelbeke’ family, and to the 13th century when Hildegardis van Melle married Rudolf van Schelderode (Bogaert & Verbeeck, 1989). By the 19th century, the area had become a popular retreat for wealthy residents of Ghent seeking a peaceful life outside the city.

Today, Merelbeke-Melle can be considered part of the greater Ghent metropolitan area. It covers an area of 52 km² and is home to around 37,000 residents (Provincie in Cijfers, 2025). The municipality consists of two main towns – Merelbeke and Melle - named after the original municipalities, and several smaller villages. Its northern parts, bordering Ghent, are densely urbanized, while the southern parts are more rural.

Merelbeke-Melle is well-connected by public transport, with three train stations, offering direct services to both Ghent and Brussels. The area also hosts key higher educational institutions, including the Veterinary Medicine campus of Ghent University and the Agro- and Biotechnology department of Ghent College.

Despite a nearby highway, most traffic between Ghent and southern East Flanders flows through two main local roads, which pass through the heart of the municipality. This leads to heavy through-traffic and frequent congestion, a major concern among residents. Traffic safety and mobility are often at the centre of local discussions.

The municipality also has its so called ‘citizens platforms’, which are quite present. Partly supported by the local government, these are voluntary-led assemblies of engaged citizens that want to work on more liveable neighbourhoods. They do so through dialogue with citizens, local organisations and the municipality, building bridges between different pillars of society. Some of them support local commoning accessibility initiatives, such as Op Wielekes, a bicycle library for children.

4.2. CA practices case studies

Over the course of the project, six CA practices were identified to be included in WP4. Five of these initiatives are located in Merelbeke-Melle of which four are working on a regional scale and one is a local initiative. One other unique local initiative was selected in another municipality, in the Province of West-Flanders, in the west of Belgium.

Subsection 4.2.1 and 4.2.2 will expand on the initiatives themselves: how they function, what their main goals are and how they can be understood as CA practices. Each initiative is framed within the CA practices classification scheme developed in Deliverable 2.2 (Lanza et al., 2025).

4.2.1. CA practices in Merelbeke-Melle

4.2.1.1. Community-based car sharing: Dégage

What began as a small grassroots initiative in Ghent has grown into Belgium's largest community-based car-sharing scheme. In 1994, a group of neighbours already involved in a Local Exchange and Trading System (LETS) came together around a shared need and idea: "once in a while we need a car, but most of the time it sits unused and costs unnecessarily much" (Dégage, 2024). They decided to start sharing a car. Interest quickly spread, and as more people and vehicles became involved, new challenges arose — including legal, insurance, and organisational issues. To address these, the group established a non-profit organisation with a legal entity: Dégage.

Today, Dégage counts over 6,000 members across Flanders, with nearly 500 cars and 25 bicycles registered. The initiative identifies itself as a commons, governed in a bottom-up way by citizens and volunteers.

Through Dégage, members can lend or share their vehicles on a non-profit basis. Membership requires a one-off fee of €45 and a refundable deposit of €75, with no recurring costs. Users pay a per-kilometre rate, which covers internal expenses (such as the salaries of five employees, platform maintenance, and collective insurance) and a reimbursement for car owners that reflects the real fixed costs of ownership (insurance, taxes, maintenance). In this sense, Dégage operates as a cost-sharing rather than profit-making model. Users record their mileage themselves, while billing and insurance are centrally managed by Dégage. Members have access to the entire fleet across Flanders.

Before joining, new members must attend an introductory meeting where the rules, conditions, and common concerns are discussed. Participation levels vary: some members simply lend or borrow cars occasionally, while others take a more active role in the community, for instance by organising promotional activities or events.

Dégage operates with five paid employees and relies heavily on volunteers. Each active neighbourhood or region has a local volunteer known as a "neighbourhood antenna," who serves as a contact point and promotes the initiative locally.

Dégage's mission is to foster socially connected and liveable neighbourhoods by reducing car dependency (see TABLE 4TABLE 4). It seeks to connect people through sharing, relieve individuals from the burdens of car ownership, and contribute to low-traffic environments. By freeing up parking space, the initiative aims to create more room for community activities and other uses of public space.

TABLE 4: CLASSIFICATION OF DÉGAGE FOLLOWING DEL2.2

Typologies of CA practice	Aim of commoning	The community	Functioning, institutional relations and evolution
• Mobility-based, direct through vehicle sharing	• Promoting more sustainable behaviour through car sharing • providing access to cars to car-less households • fostering community ties • promoting less parking spaces • promoting more car-less living	• Bounded community through membership fee • 6000 members • active and less-active members • various forms of decision making between users • a strong network of volunteers, with local rootedness • community subsequent to genesis of initiative • maintained through -platform (and some digital and physical relationships) • Organising of (promo and bonding) activities	• Autonomous from institutional actors (IA) • Providing complementary & substitutive service to private vehicle ownership • Providing complementary & competitive service to market (car-sharing market) • socially-oriented (non-profit) • no funding • restrictive policy schemes • facilitating policies

Dégage has been most popular in urban areas but is gradually expanding into more peri-urban and rural regions, albeit still on a limited scale. While no precise figures are available, the Merelbeke-Melle area counts approximately 100 members and around 20–25 shared cars (see FIGURE 4).

This form of community-based vehicle sharing can be understood as a process of commoning accessibility, as material assets are collectively shared and managed within a community. The initiative provides a general framework of rules and conditions, but it is the *commoners themselves* who negotiate and determine the specific terms of vehicle use. In this way, access to vehicles – and, by extension, access to the opportunities those vehicles enable – is collectively organised and maintained. Furthermore, the practices of these commoners have tangible spatial effects: by reducing individual car ownership and use, they also contribute to a collective reconfiguration of public space, particularly through the freeing up of parking areas.

Although Dégage maintains connections with market actors (such as insurance providers) and governmental bodies (for instance, through parking regulations for shared vehicles or funding schemes), it is ultimately the commoners who co-produce accessibility through their everyday practices of sharing and collaboration

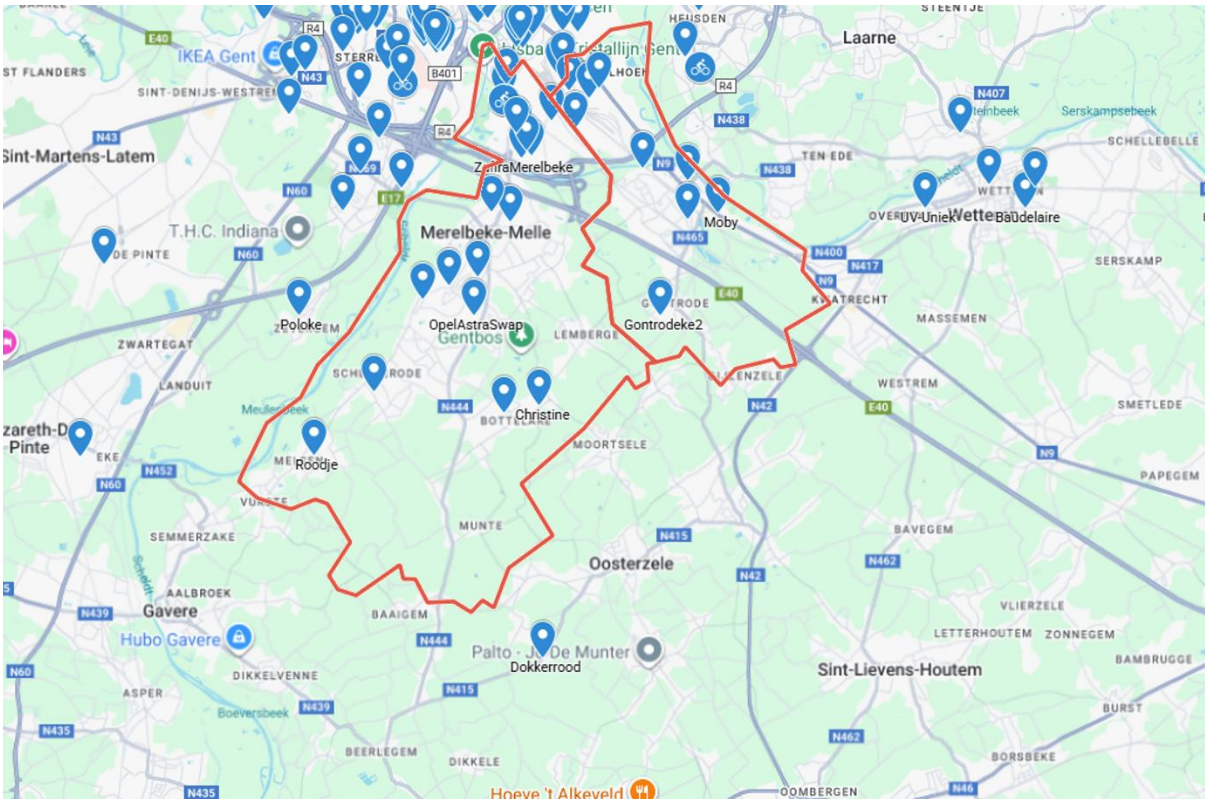

FIGURE 4: REGISTERED DÉGAGE VEHICLES IN MERELBEKE-MELLE

4.2.1.2. Community-based car sharing: Cozywheels

Cozywheels is another community-based, non-commercial car and bicycle sharing initiative in Belgium. It originated from Autopia, a non-profit organisation that had been supporting community-based car sharing in Flanders since 2003 (Cozywheels, 2025). Following a rebranding in 2022, Cozywheels became part of Mpact, a Belgian non-profit organisation that promotes the sharing and circular economy, particularly within the field of mobility.

Mpact is a key player in sustainable and shared mobility in Belgium. It also supports two of the other initiatives studied in this project: Op Wielekes and Mobitwin. In addition, Mpact facilitates carpooling, home-sitting, and house exchange schemes. Across these initiatives, its guiding vision is one of social inclusion, with specific attention to people who are less mobile or face economic challenges.

Within this broader mission, Mpact maintains Cozywheels as a service platform by providing a reservation tool, monthly billing, and shared insurance. It also engages municipalities to help set up the initiative locally. A key distinction from Dégage lies in its sharing model: Cozywheels operates through small, closed sharing groups (see TABLE 5Table 5). Members can only share vehicles within their group, although they may join multiple groups. These groups are locally embedded and enjoy considerable autonomy in setting internal rules. Group members sign a collective contract and manage mileage registration among themselves, which often fosters stronger personal connections.

Billing is handled through Cozywheels' system, but unlike Dégage, members transfer payments directly to one another rather than through the organisation. Cozywheels also offers support for groups interested in jointly purchasing a vehicle—a process that remains complex in Belgium, as each car can legally have only one owner.

Cozywheels remains smaller than Dégage and faces similar challenges in expanding beyond urban areas. In Merelbeke-Melle, the initiative is still in an early stage, with an estimated 5 to 20 members.

TABLE 5: CLASSIFICATION OF COZYWHEELS FOLLOWING DEL2.2

Typologies of CA practice	Aim of commoning	The community	Functioning, institutional relations and evolution
• Mobility-based, direct through vehicle sharing	• Promoting more sustainable behaviour through car sharing • providing access to cars to car-less households • fostering community ties • promoting less parking spaces • promoting more car-less living	• Bounded community through membership fee • more closed community through "sharing groups" • active and less-active members • various forms of decision making between users in sharing group • community subsequent to genesis of initiative (some pre-existent) • maintained through platform (and some digital and physical relationships)	• Fully promoted by IA • Providing complementary & substitutive service to private vehicle ownership • Providing complementary & competitive service to market (car-sharing market) • socially-oriented (non-profit) • partly? funding • restrictive policy schemes • facilitating policies

4.2.1.3. Bicycle library for children: Op Wielekes

Op Wielekes is a bicycle library that provides bicycles to children up to 18 years old. The idea was thought of by Lieven D'Hondt, who, 12 years ago, suddenly realised he had stacked too many unused yet still valuable bicycles in his attic (Desloovere, 2025). This gave spark to setting up a bicycle sharing and repairing system in a nearby depot in a neighbourhood in Ghent. As of 2025, there are approximately 150 bicycle libraries in Flanders, of which more than 30 Op Wielekes depots.

The concept is that people can become member by paying a yearly fee of about €35 with a social tariff available for those with lower incomes (Op Wielekes, 2025). Members can borrow a children's bicycle and exchange it as often as needed as their child grows. The depot ensures that all bicycle are kept in excellent condition. Most depots also offer repairing services, so when a bicycle needs to be fixed it can be done there only paying for the material costs.

Op Wielekes is supported by Mpact, who assists initiators in setting up a depot locally. Different forms of governance are possible, but most depots are initiated and managed by local volunteers, neighbourhood working groups, schools or smaller non-profit organisations. Municipalities often contribute by offering logistical support. The initial stock of bicycles is usually acquired through donations or via partnerships with local authorities that can access discarded bicycles. For example, Op Wielekes offers a membership option in exchange for donating a bicycle. Another local fundraising campaign was set up in Ghent, that invited people to donate an old children's bicycle and for every bicycle donated, Op Wielekes would offer a membership to a child in a more vulnerable situation.

The initiative pursues two main goals (see TABLE 6). First of all, it aims to improve access to quality bicycles for all children, including those who cannot afford it. Second, by reusing and repairing bicycles, it wants to contribute to waste reduction and the promotion of a circular economy.

What makes this initiative an example of a commoning accessibility practice, is its non-profit, local volunteer-run set up which offers access to bicycles to children in the neighbourhood. In this sense, the bicycle depot can be considered as a kind of 'community asset', following Ostrom's (1990) definition of the commons. While individual members do not directly govern or own the depot's assets, they gain access under collectively agreed conditions and by covering only the material costs associated with maintenance. Members can contribute to the community asset by donating bicycles, which is then taken care of by the depot. Although Op Wielekes as an overarching organisation, local depots retain autonomy in shaping specific rules and terms, allowing for negotiation between volunteers and members. Furthermore, by providing children access to bicycles, the initiative also fosters learning processes – some depots even offer cycling lessons for children. In this way, access to cycling, both as a skill and as a means of mobility, is commoned through Op Wielekes. Finally, one may also wonder how children's access to bicycles influences their parents' cycling behaviour and broader household mobility practices.

TABLE 6: CLASSIFICATION OF OP WIELEKES FOLLOWING DEL2.2

Typologies of CA practice	Aim of commoning	The community	Functioning, institutional relations and evolution
• Mobility-based, direct through vehicle lending • Proximity-based, service hub for bicycle repair	• Promoting more sustainable mobility behaviours • providing access to bicycles to children to different layers in society • circular economy: fighting the waste of bicycles, recycling materials	• Bounded community through membership fee (although very open) • restricted to people with children (or grand-children, …) • active and less-active members • not much in person engagement • direct negotiation for rules with Depot, each depot sets own rules • community subsequent to genesis of initiative • maintained through platform (and some digital and physical relationships)	• Partly promoted by IA • Providing complementary & substitutive service to private bicycle ownership (market) • socially-oriented (non-profit) • partly? Funded • Funded through donations (bicycles) and logistical support (depot) • Policy not clear • Cooperation between ngo's & municipality

4.2.1.4. Voluntary transport: Mobitwin

Mobitwin is a social, voluntary mobility service in Belgium designed for people who are less mobile and have low incomes. The service started in 1982 as an experiment under the name "Minder Mobielen Centrale" (MMC), translated as "less mobile central", initiated by Mpact (Mobitwin, 2025). Over time it expanded to a network of more than 200 local centres across Flanders, Wallonia and Brussels, involving thousands of users and volunteers. In 2024 the organisation officially adopted the name Mobitwin to reflect its inclusive mobility mission. As of 2025, it has 240 centrals with 40 000 members and 3000 volunteers across Belgium.

The service is coordinated locally by a dispatch or volunteer coordination centre (central), often in partnership with a municipality, OCMW or social service body (see Table 7). Users can ask for specific trips to any kind of activities or appointments. The local central then connects these users to volunteer drivers, who use their own vehicles to pick them up and take them to their destination. The user pays a small annual fee and a modest per-kilometre contribution; the volunteers receive a small volunteer reimbursement.

Membership criteria are determined by the organisation and is limited to people with restricted mobility. This includes people with restricted physical mobility, low income groups and groups with no nearby public transport options.

Mobitwin can be considered as an example of commoning accessibility because volunteers are using their free time and their own vehicle to help people with restricted mobility options reaching destinations and activities. The initiative provides the general rules and conditions (pick-up time, waiting times, fee, etc.), however, users and volunteers remain free to discuss specific request. A user may, for instance, ask the volunteer to help with carrying groceries, or to assist them with walking to a doctor's appointment. In this sense, accessibility is not only produced by Mobitwin itself, but also between users and volunteers. In this initiative, we also see that governmental actors are involved, however, the actual accessibility is commoned between users and volunteers.

TABLE 7: CLASSIFICATION OF MOBITWIN FOLLOWING DEL2.2

Typologies of CA practice	Aim of commoning	The community	Functioning, institutional relations and evolution
• Mobility-based, direct through (voluntary) community transport Mobitwin by Mpact	• Providing trips for people with reduced mobility (including physical mobility, low income and no access to PT) • Fostering social inclusion	• Bounded community through membership (free) (although very open) • bounded community: only people with 'mobility restrictions' • active and less-active members • in person engagement between user and volunteer • Direct negotiation for some rules between user and volunteer • Each 'centrale' sets own rules, but general rules directed by Mpact	• Fully promoted by IA • Providing complementary, substitutive and competitive service to market (taxi) • substitutive service to private vehicle use • Complementary / substitutive service to PT (government) • socially-oriented (non-profit) • Funded • Supportive policy schemes • Cooperation between ngo & municipality, or social services

		• community subsequent to genesis of initiative • maintained through platform (and some digital and physical relationships)	

4.2.1.5. Repair café: Repair café Merelbeke

Repair cafés are places or events where people can bring broken items – such as small electronics, clothing, toys or bikes – to be repaired free of charge (or for minimal material cost), under the guidance of volunteer repairers. Importantly, repair is done together: both visitors and volunteer repairers can engage jointly in repairing. The idea originated in the Netherlands, but over the last years repair cafés, along with workshops to share tools and reparing skills became a worldwide phenomenon (Repaircafe.org, 2025; Terzioğlu, 2021), with . Many forms or constellations of repair café exist; from well organised event-bounded repair cafés to more spontaneous, bottom-up occasions.

Overall, four main 'action' goals guide repair cafés: environmental, social, formative/educational and economic. Repair cafés aim to have an ecological impact by reducing waste through repairing and recycling materials. Next, repair cafés are a social place where people can meet. Bringing together people in the neighbourhood also helps in reintegrating more isolated or marginalised groups. They are also a formative place, where people can learn and exchange ideas and competences. Visitors and repairs can not only learn specific repair skills, but they can also learn about the act and importance of repairing itself. Finally, through the reuse of materials, repair cafés support the circular economy. Repairing skills increase citizens' purchasing power, in this way, stimulating participants to think about new business models.

According to Repairtogether.be (2025), there are about 280 repair cafés in Belgium. However, many repair cafés may not be registered by this website, so the actual amount might be higher. As this map shows, most repair cafés are registered in Wallonia, with a high concentration in non-urbanised areas as well.

The repair café in Merelbeke is an initiative organised by the De Zorgband, an overarching municipal social service. They try to have 3 to 5 repair events per year in Merelbeke. Volunteers are frequent visitors and mainly are specialised in one specific repairing skill, such as electronics, textile, and knife sharpening. Visitors cannot make an appointment and should, consequently, wait their turn. This stimulates interaction among visitors and volunteers. The volunteer repairers can charge material costs and should be transparent about this to the visitors. Visitors can leave a voluntary donation (a tip) to the repair café in turn. This money is then used to cover some general expenses and offer food and drinks to the volunteers.

The repair café facilitates access to repairing goods and products (Table 8). The volunteer repairers share their time and repairing skills and knowledge with visitors, who come with a specific repairing request. In this way, the visitors do not only get access to repaired goods, but also access to higher quality goods. Additionally, repairing skills and knowledge are shared between visitor and volunteer, as often the repairer is assisted by the volunteer. Repairer and visitor can negotiate on specific terms of repairing: what is possible, what not, by when, at what material cost? Sometimes, tools are shared as well between repairers.

TABLE 8: CLASSIFICATION OF THE REPAIR CAFÉ FOLLOWING DEL2.2

Typologies of CA practice	Aim of commoning	The community	Functioning, institutional relations and evolution
• Proximity-based, direct offering of a repairing service 	• Providing access to getting something repaired • Sharing repairing skills and knowledge • Facilitating social contact • Providing a place for creative working and carrying out hobby's	• Open community (the repair café is open to everyone) • More bounded community for the volunteers: anyone can join but mainly those join with some repairing skills. • active and less-active members (difference visitors and volunteers) • in person engagement between visitor and volunteer • Direct negotiation for some rules between visitor and volunteer • Repair café sets own rules, but volunteers can set specific rules • community both subsequent and pre-existent to genesis of initiative	• Fully promoted by IA, however, also promoted by volunteers • Providing complementary, substitutive and competitive service to market (professional repair) • Providing substitutive and complementary service to market (buying new) • socially-oriented (non-profit) • Funded (very little) • No clear link with policy schemes • Cooperation between municipality social services and volunteers

		• maintained through physical relationships	

4.2.2. CA practice in Diksmuide

One other CA practice has been identified outside of the testbed area.

4.2.2.1. Mee-Rij-Bankjes

Mee-Rij-Bankjes, freely translated as 'drive-along-benches', is an initiatives that aims to facilitate hitchhiking in more rural and remote areas where public transport is not (always) available and getting somewhere without a car is hard. Benches on main village squares or access roads are equipped with a sign-post that indicates that people sitting on the bench are asking for a ride to a nearby town. The sign-posts include some rules about hitchhiking which apply both to the driver and to the passenger.

The concept comes from Germany and has been applied in some municipalities in the German speaking part of Belgium. Since 2024, it has been for the first time tested in Flanders, in Diksmuide, a small town in the west of West-Flanders (Gemeente Diksmuide, 2024). It concerns two small villages (or rather settlements), Lampernisse and Oostkerke, both at about 7km from Diksmuide that are very poorly connected to Diksmuide with public transport. Each of the two villages and Diksmuide have one or more benches that are used as drive-along-benches. The municipality emphasises that this initiative is a temporary transport solution in response to a lack of decent public transportation. In the end, the municipality still strives to have better public transport options, but this is a regional (Flemish) responsibility. In this sense, the initiative act as a 'complement' to existing services (see Table 9).

The initiative is organised by the tourism service of the municipality and is funded partly by the European LEADER programme and partly through local funds. It started in the summer of 2024, and since it has received a lot of interest by other municipalities. Although the initiative has not been formally evaluated yet, the responsible person from the tourism service behind this project already indicated that success is limited. This is mainly attributed to the fact that it was not born from within the community but has rather been driven by the municipality. Differences between the two villages probably exist in this matter: the initiative might be more supported in (the slightly larger) Oostkerke because of a very engage citizens' committee.

This initiative fits within the commoning accessibility idea, in that trips between small villages and a town are managed between residents through offering free rides. The municipality provides a set of ground rules, such as the free character and non-obligatory character of a ride, minors should be accompanied by adults or with permission of them, the passenger is allowed to take a picture of the license plate (for safety reasons) and the community should 'promote and sustain' this initiative. However, what this last point exactly means is not entirely clear. Apart from these ground rules, the participants are free to negotiate request, such as (future) drop-off/pick-up location and time, between themselves.

TABLE 9: CLASSIFICATION OF THE MEE-RIJ-BANKJES FOLLOWING DEL2.2

Typologies of CA practice	Aim of commoning	The community	Functioning, institutional relations and evolution
• Mobility-based, community car-pooling: providing rides 	• Providing rides to neighbouring towns • Address inadequate and inefficient public transport supply • Promote community ties	• Open community: everyone is welcome • active and less-active members: occasional / frequent lifters / lift-givers • in person engagement between lift-giver and lifter • Direct negotiation for some rules between lift-giver and lifter • general rules provided by the municipality (dep. Tourism) • community subsequent or pre-existent to genesis of initiative • maintained through physical relationships	• Fully promoted by IA: municipality and LEADER (EU) • 'made possible' by local lift-givers • Providing complementary service to PT (government), municipality clearly states they do not aim to substitute PT! although • Socially-oriented (non-profit) • Entirely funded • Policy not clear? • Cooperation municipality and LEADER, (limited) engagement from neighbour councils

5. Methodology

5.1. Data collection method – focus groups

To get a better understanding of the acceptance of CA practices, it was decided to conduct focus groups. Focus groups are a qualitative research method in which a small group of participants discuss a specific topic guided by a moderator (Cyr, 2019; Morgan, 1996). The reason for choosing focus groups as a data collection method for understanding the acceptance of CA practices and associated travel behaviour is fourfold. First, focus groups are particularly useful for exploring topics that are not yet well understood; although we recognise that the object of study is not new, commoning accessibility as defined in this project is a new concept within accessibility and transport research which requires an exploratory research approach. Second, focus groups centre on the participants and allows them to express their own views. They can be empowering for the participants (Cyr, 2019). This links to a third consideration, which is the social form of focus groups: focus groups allow for an in-depth view on the lived experiences of the participants and are consequently well suited for examining how people think, feel, and interact in relation to a shared experience. Lastly, a focus group methodology places the participants in a social setting where people that have a shared experience can interact with each other. The participants can query each other and explain themselves, offering insights on agreement or disagreement (Morgan, 1996). Focus groups are particularly effective at studying group norms, group meaning, and group decision-making processes (Bloor et al., 2001). Since CA is a collective process, where decisions and actions are often taken jointly, a focus group setting enables reflection on these processes. This is described as the "emic nature" of focus groups, where data is gathered from the perspective of the subject (Cyr, 2019).

As such, focus groups are a strong tool for providing insights into the sources of complex behaviours and practices – depending on which approach is applied. This allows researchers to uncover both individual perspectives and how those are shaped by broader social contexts. Because CA is fundamentally social and collective in nature (Lanza & Pucci, 2024), this makes focus groups particularly well-suited for studying acceptance and travel behaviour related to commoning accessibility practices. Participation in CA involves not only individual motivations, but also shared values, mutual responsibilities, and group (and/or community) dynamics. Focus groups allow participants to articulate and compare their reasons for engaging in CA, reflect on how it fits into and impacts their everyday mobility, and reveal tensions and shared norms or values that influence participation. In this way, this data collection method mirrors the collective character of the practices being studied, offering rich insight into both individual and group-level understandings of CA.

5.1.1. Sampling method

The target population for our focus groups consisted of participants in CA practices in peri-urban areas. Aligning with studying "end-user acceptance", this includes both "users" and volunteers. Both profiles make an essential contribution to what the practice is and how it functions. We decided not to include organisers, as in the case of these case study initiatives, they tend to have a more 'distant' role which is not related to direct use of or participation in the practice.

As described in section 4.2., six initiatives were identified that could be considered as relevant CA practices to be studied in this project. Until Octobre 2025, four focus groups were conducted, two more are planned for November 2025, covering four of the six initiatives identified (Cozywheels, Dégage, Op Wielekes and the repair café). More focus groups, including on the two initiatives not yet covered (Mobitwin and Mee-Rij-Bankjes), are intended to be planned in the next months if practically feasible. Table 10 provides an overview of the conducted and planned focus groups.

TABLE 10: DETAILS ON FOCUS GROUPS

FG number	Date	Initiative	Topic	Approach	Sampling strategies	# of participants
FG1 (pilot phase)	19/03/2025	Dégage & Cozywheels	P2P carsharing: acceptance	Socio-psychological framework: open questions with statement exercise	Email to members list via organisation, Facebook post in local residents' group	5
FG2 (pilot phase)	05/05/2025	Dégage & Cozywheels	P2P carsharing: acceptance	Socio-psychological framework: open questions with statement exercise	Email to members list via organisation, Facebook post in local residents' group	4
FG3	13/10/2025	Repair café	Repair café: acceptance and travel behaviour	Social practice theory: open questions and (adjusted) statement exercise	Email to volunteer list via organisation, flyers at repair café, Facebook post on social services page, gatekeeper contacting participants	8
FG4	20/10/2025	Op Wielekes (Merelbeke-Melle)	(Children's) Bicycle library: acceptance and travel behaviour	Social practice theory: open questions and (adjusted) statement exercise	Email to members list via organisation, flyers at cycling depot, Facebook post in local residents' group, gatekeeper contacting participants	6

FG5 (planned)	18/11/2025	Repair café	Repair café: acceptance and travel behaviour	Social practice theory: open questions and (adjusted) statement exercise	Email to volunteer list via organisation, flyers at repair café, Facebook post on social services page, gatekeeper contacting participants	TBC
FG6 (planned)	24/11/2025	Op Wielekes (Deinze)	(Children's) Bicycle library: acceptance and travel behaviour	Social practice theory: open questions and (adjusted) statement exercise	Email to members list via organisation, flyers at cycling depot, in-person recruitment at depot Facebook post in local residents' group, gatekeeper contacting participants	TBC
FG7 (intended)	TBD	Mobitwin	Voluntary transport: acceptance and travel behaviour	Social practice theory: open questions and (adjusted) statement exercise	Email to volunteer list via organisation, flyers at social services centre	TBC
FG8 (intended)	TBD	Mobitwin	Voluntary transport: acceptance and travel behaviour	Social practice theory: open questions and (adjusted) statement exercise	Email to volunteer list via organisation, flyers at social services centre	TBC
FG9 (intended)	TBD	Mee-Rij-Bankjes	drive along benches: acceptnace and travel behaviour	Social practice theory: open questions and (adjusted) statement exercise	TBD	TBC

Two focus groups were conducted on community-based, non-profit car sharing in spring 2025. This included both individuals who rent a vehicle ("users") and those who make their vehicle available to others ("owners"). For the focus groups on Op Wielekes, it was decided to only target the parents and not the children, since the latter is a specific participants groups which requires adjusted methods. Additionally, in most of the cases, especially for the very young children, it are the parents that decide to become member of the cycling library and to participate in it and not the children. For the focus group on repair café, both visitors and repairers (volunteers) were targeted. For the planned focus groups on Mobitwin (voluntary transport) only the volunteers (mainly "chauffeurs" and some "dispatchers") were targeted. Initially we also aimed at targeting users, but this seemed to face some practical barriers. Most of the users are older, and sometimes more isolated, people. Inviting them to a focus group would require very intensive in-person recruitment and was discouraged by the organisation. Face-to-face interviews at their residence location would have been an alternative option, however, we decided to only focus on the volunteers since their contribution in 'providing' accessibility is essential.

Since there were no other sample requisites in relation to the research questions, we applied a convenience sampling technique (Taherdoost, 2016) Different recruitment strategies were applied, depending on the initiative. For all focus groups for all initiatives, a registration link was provided to keep track of the potential participants including their residence location.

For all initiatives, participants, visitors and volunteers were emailed through a members list by the organiser or facilitator. A short email was provided with a brief description of the project and included a call for participation in the focus group. For some initiatives, the repair café and Op Wielekes, paper flyers were distributed at the event/depot. On some occasions, in-person recruitment was done by attending the events or locations and directly engaging with the attendees. Additionally, Facebook posts were made on local residents groups. All these communication forms included a registration link to keep track of the potential participants including their residence location. For Op Wielekes Merelbeke and the repair café in Merelbeke, a gatekeeper assisted in recruiting participants by calling members and approaching them in-person.

5.1.2. Conducting the focus groups

For each focus group, a script or protocol was developed that served for guiding the conversation rather than defining it. The focus groups were designed according to a "funnel" pattern (Morgan, 1993). A set of fixed, very open questions was placed at the beginning in order to start broad and put as less 'meaning on the table' as possible. These questions were then followed up by a set of more specific and variable open questions. As a consequence, the conversation went from very broad to more specific and focussed in relation to the research questions. Additionally, an exercise was developed that aimed at 'testing' the relevance of the components in the conceptual framework.

At the beginning of each focus group, the participants were asked to fill out a short survey including socio-demographic and travel behaviour-related information. The survey was standardised as much as possible across the different case study initiatives, leaving only a couple of initiative-specific questions.

Focus groups were conducted in two phases: a pilot phase and a main phase. The pilot phase aimed at testing the focus group method, specifically the socio-psychological approach to acceptance including the tailored exercise. Two main changes were applied to the main phase. While focus groups in the pilot phase only focused on acceptance, focus groups in the main phase also focus on travel behaviour. This change was applied because of practical reasons: since recruitment for focus group participation went very slow and difficult, we thought it would be advisable to tackle the two main research questions of this work package at once. Second, the pilot phase analysed acceptance from a socio-psychological perspective. After deliberate discussion among the project team members, it was decided to deviate from this approach and shift towards a social practice theory approach (as explained in section 2.5.4.) in the main phase.

5.1.2.1. Pilot phase – community-based car sharing

The pilot phase involved the first two focus groups on community-based car sharing. An exercise was developed specifically for testing the developed conceptual framework. In this sense, it applied a socio-psychological perspective on acceptance, as described in section 2.5.

In the exercise, participants were asked to rank statements regarding participation in the initiative from "very important" to "not important". Statements were derived directly from the conceptual framework components. Statements derived from the UTAUT2 components were based on Venkatesh et al. (2003) and Duarte and Pinho (2019) and were adopted according to the specific CA initiative at study. Statements derived from the additional components were based on the respective literature that informed these additional components. Additional to ranking these statements, participants were asked to discuss whether they agreed on the ranking others placed and talk about their perceptions, feelings and reasoning. Through the discussions this exercise evoked, we aimed to obtain more detailed accounts of how participants gave meaning to the different components presented (expressed via simple statements). The exercise consisted of 3 sets of each 8 to 10 statement.

5.1.2.2. Main phase

After evaluating the two focus groups conducted in the pilot phase and discussing the approach within the project team, some adjustments were made. First, more open-ended questions were included that suited a social practice theory approach. Second, the statement exercise was adjusted in order to deviate from the socio-psychological approach, leaving out some statements and adding new ones that were more probing towards commoning elements and focussed more on the different elements of social practice theory (materials, competences and meaning). The statement exercise was positioned more in the background and functioned as a guiding tool, ensuring sufficient space for participants' open interpretation and meaning-making.

In October 2025 two focus groups were conducted, one on the repair café and one on Op Wielekes. Two more are planned in Novembre, on each of these two initiatives.

5.2. Data analysis method

The primary objective of this study is to understand the acceptance of CA practices. In this matter, we want to understand why people participate in such practices: what are the reasons for participation, use or engagement. Since we changed the approach between the pilot and the main phase and the main phase has not been concluded yet, Deliverable 4.1 will only focus on the analysis concerning the pilot phase. For the pilot phase, we aim to understand the acceptance of CA practices from a socio-psychological lens, focussing on end-user acceptance, as defined in section 2.2.3. As a starting point, we developed a conceptual framework (CFACA), based on a literature review. This framework identifies determinants influencing participation or the intention to participate in CA practices. It includes attitudes, motivations, beliefs and contextual/structural factors. The goal of the data analysis is then twofold: on the one hand, we aim to verify this conceptual framework and see which components can be found in the data and which ones not. On the other hand, we aim to unravel new topics, relationships and concepts that are relevant to the acceptance of CA practices, but that are not included in the conceptual framework. This also includes re-formulating existing concepts and relations.

Philosophical stance

In this sense, our ontological stance is best described as contextualist, drawing on elements of both critical realism and relativism (Braun & Clarke, 2006). While our conceptual framework (CFACA) treats constructs such as performance expectancy and social influence as useful theoretical categories for explaining acceptance, we recognize that these constructs are accessed only through participants' meaning-making. In this sense, we adopt an abductive logic (Thornberg, 2012), allowing theory and data to inform one another. Abduction, in this context, allows for a back-and-forth movement between theory and data: we approach the data with a sensitizing framework, but remain open to discovering new or unexpected insights that might revise or extend that framework. We remain attentive both to how participants describe and make sense of acceptance (a relativist orientation) and to how these descriptions may reflect underlying mechanisms shaping participation (a critical realist sensitivity). For this reason, we apply a hybrid deductive/inductive thematic analysis (see Fereday & Muir-Cochrane, 2006).

Our approach is based on the widely used thematic analysis framework developed by Braun and Clarke (2006, 2021). We begin with a theory-driven perspective and progressively incorporate data-driven elements. We rely on Braun and Clarke's approach because, unlike Boyatzis' (1998) method – where themes are typically pre-defined (either from theory or data) and then applied to the dataset – Braun and Clarke allow themes to emerge iteratively during the coding process (Stevens, 2022).

Coding approach and theme development

In practice, we first develop a code manual containing theory-informed code categories derived from our conceptual framework (deductive phase). This manual serves as a flexible guide for the initial coding. The code categories equal the components from the framework. While these categories shape how we engage with the data, the codes themselves are not pre-specified in detail; they are developed through close reading of the data and remain open to refinement. For this structured yet flexible phase, we draw on the methods of Fereday and Muir-Cochrane (2006) and Bixter et al. (2019).

We then code the full dataset using a hybrid deductive–inductive approach. This means we use the theory-informed code manual as a framework to guide coding (deductive), while also remaining attentive to new ideas, meanings, or concepts that emerge from the data but fall outside the pre-defined categories (inductive).

Finally, we construct themes by examining how both the deductively and inductively developed codes relate each other as wel as relate to, expand on, or challenge the theory-informed code categories in the manual. In doing so, we allow for both theoretical confirmation and conceptual innovation in the development of our final thematic structure.

Some clarification is needed regarding the differences between code categories, codes and themes. Where code categories are organising categories that group similar codes based on theoretical constructs or emergent ideas (Fereday & Muir-Cochrane, 2006), codes are short, descriptive labels more close to the data (Braun & Clarke, 2021). Themes, then, are analytic patterns of meaning in the data that say something about the research questions and describe a broader or shared meaning (Braun & Clarke, 2021 in Stevens, 2022).

The focus group design reflected this hybrid approach: the open-ended question section aligned more with a relativist stance, while the exercise component corresponded to a critical realist orientation.

Both parts of the focus group were analysed using the same hybrid thematic analysis framework. In both parts, we applied the theory-informed code categories from our conceptual framework as a guiding structure during coding. However, we remained open to new codes and meanings that did not fit these categories. The key distinction lies in how the data were generated: in the open-ended discussion, participants' responses were more spontaneous and less structured by theory, while in the exercise, the data were more directly shaped by the theoretical constructs. While we drew on the same coding manual throughout, we remained aware that inductive insights might be more prominent in the first part, and deductive alignment more pronounced in the second. Nonetheless, all coding was conducted within a unified analytical process that allowed themes to be constructed across both parts.

6. Next steps

The next steps of WP4 include:

- Carrying out remaining (planned and intended) focus groups
- Analysing the focus groups from the pilot phase through a socio-psychological lens using the CFACA
    - Based on this, we aim to refine the CFACA towards a Framework for the Acceptance of Commoning Accessibility (FACA)
- Analysing the focus groups from the main phase through a social practice theory lens
    - 1) Analysing acceptance
    - 2) Analysing travel behaviour impacts
- Based on this, we aim to develop 1) a better and more nuanced understanding of acceptance (Task 4.1 and follow up of Deliverable 4.1) and 2) a framework for understanding travel behaviour impacts of commoning accessibility practices (Task 4.2 and Deliverable 4.2)
- Task 4.3 (Deliverable 4.3): working out a methodology and framework to study and analyse social impacts associated with CA practices

7. Results

To be worked out

7.1. Results from the pilot phase: acceptance of community-based car sharing

To be worked out

7.2. Results from the main phase: acceptance and travel behaviour through a social practice lens

To be worked out

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