DELIVERABLE 2.1

CONCEPTUAL FRAMEWORKS REPORT

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The COMMON_ACCESS consortium:

CONTENTS

1. WP2: OBJECTIVES AND AIMS STATED IN THE FUNDED COMMON_ACCESS PROPOSAL

WP2 aims at developing and applying methodologies to understand existing and potential CA practices by mapping the relational dimension of accessibility in urban outskirts and beyond by:

- **defining** key concepts, theories, and statutory requirements of Commoning accessibility;
- **identifying** existing CA practices in urban outskirts and beyond;
- **analysing** the role of communities in sharing (mobility) services, and optimising resources and abilities;
- **exploring** the interdependencies between functional accessibility (physical access) and relational accessibility (social access) resulting from CA practices and how/whether different CA practices have evolved.

For archiving these goals, the WP2 is organized into four tasks as follows:

1.1. Task 2.1: CA conceptual framework (Lead: PoliMi)

The task is finalized to provide a systematic literature review for the definition and the expected context of Commoning Accessibility, including different practices and their interpretation in Europe and the discussion and identification of research gaps.

The systematic collecting and structuring of existing work will be finalized for the development of a working definition of i) commoning accessibility ii) commoning accessibility practices through:

- Review of research database (including Scopus, Google Scholar and Web of Science) for the keywords: commons; commoning; accessibility; community (of transport; of practices; of project); mobility practices; informal transport…
- Analysis of grey literature about existing CA practices and selection and systematization of the main findings, distinguishing papers dealing with theoretical insights and CA practices.
- Collection through an online *Commoning Accessibility Practices Collection Form* of a preliminary Atlas of Communing practices able to consolidate the definitions.
- Glossary for a shared definition of Commoning Accessibility and Commoning Accessibility practices.

1.2. Task 2.2 Inventory of CA practices (Lead: PoliMi)

Based on the main outcomes of Task 2.1. an inventory and classification of existing CA practices in urban outskirts and suburbs via literature review, research projects; thematic platforms (Polis, Eltis, Enoll) planning documents will be finalized to collect examples of CA

practices and the role of communities in sharing services and optimising resources and abilities in urban outskirts and beyond. The Inventory of CA practices will be finalized to produce a webAtlas stru**ctured** as in task 2.1. through the Commoning Accessibility Practices Collection Form.

1.3. Task 2.3 Functional and relational accessibility in CA practices (Lead: PoliMi)

Citizen survey and stakeholders focus groups in two selected testbeds within Provincia di Pavia and Provinca di Bergamo will be implemented to achieve an overview of the forms, statutory functions and activities carried out by the communities in CA practices and existing challenges. In Provincia di Bergamo the testbed will be selected with two main aims:

- experimenting with solutions to improve accessibility to workplaces by solving the last-mile problem, particularly in the plane area (South of Bergamo) which is characterized by a widespread diffusion of productive platforms with limited accessibility via public transport or active mobility options, highly impacting daily work-related trips;
- exchanging and producing policy-related knowledge about the relevance of transition experiments in the fields of accessibility, in line with the contents and aims of WP3, by exploring possible ways of communicating accessibility through citizens' participation and stakeholder engagements while coping, according to the planning strategies already adopted by the authority (see PTCP Provincial 2020 ad its further updates), with the climate-impacting last-mile problem.

In Provincia di Pavia two main goals address the selection of the test bed:

- complementing the mobility and territorial strategies of the Provincial-Territorial Plan (PTAV), creating the conditions for shifting away from car dependency in low- to mid-density settlements with uneven service distribution and high car use in its territory.
- experimenting with forms of physical and social accessibility to reduce the car-dependency, establishing territorial-wise planning paths that straddle different administrative and sectorial competencies (transport and urban planning, welfare system provision) on which Provincia di Pavia is working in the Territorial Plan (PTAV).

1.4. Task 2.4 CA Design Expert tool (Lead: PoliMi)

Development of the casebook from insights collected from task 2.2 and 2.3. and production of a CA design expert tool to design and replicate CA practices, based also on the outcome of WP3 and WP5.

2. INTRODUCTION

Consistent with the objectives of the Common Access project and the activities outlined in Task 2.1, this deliverable provides a literature review, essential for defining the concepts of commoning accessibility and commoning accessibility practices, which will subsequently underpin the collection and systematization of European experiences that align with the provided definitions.

The literature review is anchored in two primary theoretical starting points for developing a conceptual discourse on accessibility as a common good.

Firstly, an analysis is conducted on the extensive literature addressing the concept of commons. This literature, with its variety of approaches and definitions, provides an indispensable foundation for exploring the conditions for conceiving accessibility as a common good, including the conditions under which it is maintained and reproduced through specific practices (commoning practices), enacted by the involved actors (commoners).

Secondly, reference is made to the urban and transport studies literature that considers the role of spatial accessibility as an essential good and relevant condition for social participation and inclusion. As elaborated in the following sections, this latter interpretation is conceived as a basic theoretical assumption guiding the further development of the conceptual framework.

Simultaneously, the authors analysed various definitions of commons to understand how the utilization of a fundamental resource for social inclusion (access to spatially distributed activities) can be viewed not as an individual but as a collective matter. It is thus recognized that accessibility, expressed as the capability and possibility for participation, is not solely shaped by contextual and personal conditions that facilitate or limit individual action, but can also be enabled through collaboration among different individual agents via collective actions and rules.

The social relevance of these practices is particularly evident in spatial contexts where access to activities requires long, resource consuming (e.g., time, money, fuel) motorized travel due to a limited availability of attainable facilities in proximity and where the personal capability or possibility to reach these activities can highly influence individual social participation. Areas characterized by medium-to-low population density such as peri-urban areas, urban outskirts and beyond are among these contexts. This broad definition encompasses a variety of diverse situations generally characterized by lower levels of accessibility to services and activities compared to the so-called "15-minute city" found in dense, compact urban centers. These are places where specific populations, such as youngsters, the elders, and those without easy access to private motorized transport may directly experience limited access and participation. However, these areas also provide opportunities to develop innovative ways to address local challenges and problems. Initiatives may be directly organized and managed by local communities - broadly defined to include private citizens, NGOs, local authorities, and private companies - to meet specific accessibility needs that may not be satisfied by other forms of provision (i.e., proximity and mobility services and infrastructures provided by the market and/or the State).

Responses to these needs, expressed as recurring and sustained practices based on collaboration within a group of people that mobilizes around these processes, promote the idea of accessibility as a common good and are the main focus of research in WP2 of the Common_Access project.

This deliverable details the analysis and framework process, briefly introduced here, initially providing a literature review of the concept of commons and a selection of definitions for framing the concept of commoning accessibility (Section 2). The analysis of accessibility as an essential good (Section 3), grounded in the transport justice literature, is then used to define the conditions under which accessibility can be conceived as a common good. The result, presented in Section 4, illustrates a theoretical-operational framework that provides a set of working definitions applicable for the further development of the Common_Access project. The final part of the deliverable (section 5) deepens the definition of Commoning accessibility practice and illustrates the procedure that has been set to collect examples of Commoning accessibility practices to feed the project inventory to be developed as the main activity of task 2.2.

3. DEFINING THE "COMMONS": FOUR DIFFERENT MEANINGS

The literature on the commons emphasizes the necessity of defining the meaning of this term since it is often ambiguous and used to denote quite different things in different disciplinary domains. Interest in the concept of common goods has been present throughout the development of philosophical, political, and economic thought since its inception (Diggs, 1973), assuming a central role in reflections on the relationship between the public and private dimensions of an individual's social life. While the social life can encompass all the shared actions a political community undertakes to manage and maintain certain resources in the interest of the common good, private life pertains to the projects and actions individuals undertake to achieve their personal objectives (Hussain, 2018). The relationship between what is common and what is private is thus fundamental to many economic considerations on how individuals driven by private interests can actively and collectively collaborate to manage and maintain common goods.

This reflection raises four pertinent questions.

First, what is the nature of the common goods that underpins the development of public life within a political community? Second, what are the forms of access to these goods, and how can individuals with specific private interests benefit from the common good according to rules and norms (if any) that might guarantee its preservation? Third, what communities develop around the commons, meaning who are the commoners, and what preferences motivates their participation? Fourth, what are the methods of management and maintenance of the commons, meaning how this common good is produced and reproduced through the actions of the commoners?

To address these questions, it is crucial to consider that each of the four points mentioned above is subject to continuous evolutionary processes: the "list" of material and immaterial goods that can be considered as commons constantly changes (see, for example, Hess's list of new commons drafted in 2008 which includes knowledge, cultural, medical, neighborhood, infrastructure, traditions, global and market as recently recognized commons), as do the

modes of access to goods, the commoners, and consequently the forms of management and maintenance they establish, in a process where the common is always becoming, an ever-changing outcome of social and institutional processes (Nancy, 2020). Moving away from a neo-communitarian nostalgia that attributes specific emotional values to the ties developed within its members, a community may be defined as contingent and connected by constraints and opportunities of sharing, making room for momentary enactment based on the needs to be achieved. For this reason, it is more appropriate to refer to the notion of commoning rather than commons, as this highlights the processual nature of collective action in making commons (Nikolaeva et al., 2019), considering its natural evolutions over time.

The complexity of the concept of commons and its influence on understanding the relationship between public and social life has led to the development of multiple perspectives on defining and understanding the meaning and functioning of commoning practices. Building on and enriching the classification proposed by Moroni (2024) of the different meanings of commons found in the literature, this review explores various ways to conceive the commons, focusing on the four questions regarding what the commons are, how access is regulated, who are the commoners collaborating in the (re)production of the common itself and what may be the rules for their management and maintenance. The theoretical perspectives that will be illustrated are radically different, if not incompatible, but, taken together, constitute an essential knowledge base for assuming a reasoned theoretical positioning and shaping a coherent definition of accessibility as a common good.

The first definition from the literature conceives commons as goods without a definite owner or as "nobody's resources." This definition is derived from Hardin's (1968) work describing what he termed the Tragedy of the Commons, i.e., the impossibility of preserving certain goods (e.g., natural resources) when access to their use is open, the good is available to all, and there are no specific rules or norms dedicated to its management. From this perspective, everyone can benefit from the immediate personal advantages gained from using such items without considering the negative repercussions of that use on others. With users acting as free riders of this good, there is a potential decay - or the tragedy - of the common itself.

The second definition comes from Elinor Ostrom's (1990) work, which considers commons as common-pool resources (CPR) or "some people's" resources according to Moroni's (2024) interpretation. In Ostrom's view, commons are to be considered goods jointly appropriated by a group with exclusive rights that can exclude others from using them. Consequently, access to these resources is restricted as they are the bounded and exclusive property of a circumscribed set of individuals. These individuals, grouped in defined but flexible arrangements, form a community that can be connected by simple opportunity constraints and share joint benefits from participating in the common. Therefore, no additional ties are necessary - although they may be present - other than those related to the property, use, and management of the good. These same groups also establish the rules for using collectively owned resources through private property (Ellickson, 1993; Moroni, 2014) or private partnerships (Block & Jankovic, 2016) with shared norms that regulate their use. Management and maintenance occur as bottom-up self-governance by the community members and are enabled by keeping a gatekeeping control over access to the common: boundaries are one of the fundamental prerequisites for commons to function effectively and avoid its decay.

The third definition proposed by Moroni (2024) theorizes commons as means to satisfy basic fundamental individual and collective needs that should be granted and preserved for present and future generations (Fattori, 2013; Rodotà, 2012). In this definition, to be contestualized in the Italian debates raised over the privatisation of some relevant public goods as water, commons are interpreted as "fundamental goods" (Ferrajoli, 2013) or "global public goods" (Kaul et al, 1999; Bodansky, 2012) whose availability allows for fulfilling specific citizenship rights. In this sense, commons are the opposite of ownership, they can be conceived as "everybody's resources," belonging to all and they fall outside any market logic (Rodotà, 2012). Specific authorities (e.g., the state) must ensure free and equitably distributed access to these goods to everyone.

Finally, the fourth definition emerging from the literature (Verlinghieri and Venturini, 2018) identifies commons as "complex social and political ecologies" with the potential to form alternative politics (Chatterton, 2010; Hardt & Negri, 2010). In this definition, the common emerges as a collective response and a profound criticism of the dominant economic system, political representatives, and the management of public administrations. It consists of shared interests or values forming the potential base for a community to come together. Thus, it is eminently complex and relational. Commons are thus created and sustained by "communities," i.e., by social networks of mutual aid, solidarity, and practices of human exchange that are not reduced to the market form (De Angelis, 2017). The commonality is identified as the outcome of a process of engagement and relationship in which people participate through their collaborative action and involvement. Consequently, the common is made real through commoning, which reflects dynamic spatial practices. It represents a form of production founded on freedom and autonomy from capital, based on cooperation between subjects who use and, at the same time, produce natural and artificial, material and immaterial commons (Hardt and Negri, 2010). It provides a different non-marketized logic of mutual-aid/self-organization, where there is no 'owner' of such practices; they are not regulated following a top-down logic but self-governed and bottom-up (Chatterton, 2010). The common, then, is a political byword for resistance against the excesses of contemporary capital encroachment and expansion. In the last definition, the theme of the commons and subsequently of urban commoning practices is linked to the perception of a deep crisis in the relationship between the individual and institutions.

Definition	Conditions (*access to the common*)	Who (*the commoners*)	Management and maintainance (*the commoning*)
Commons as «nobody's resources» (*Hardin, 1968*)	**Open-access** situation	**Everyone**, as potential *free riders* of the common	immediate personal advantages related to the unregulated use leading to the **"*tragedy of liberty in a common*"** and the potential decay of the common itself.
Commons as «some people's resources» (*Ostrom, 1990*)	Commons are **bounded and exclusive property** of a circumscribed set of individuals.	A defined, but flexible, **group of individuals (community)** connected **by constraints of opportunity**	Commons are managed and maintained through shared **norms and rules** that regulate its use. Management and maintenance occur as **a bottom-up self governance** by the community members.
Commons as «everybody's resources» (Rodotà, 2012)	Commons are **the opposite of ownership; they belong to all, falling outside any market logic** (Rodotà, 2012).	Everybody has **a right of an equal share** of the commons and must be empowered **by law** to claim equal and direct access to it.	Commons are intended as «**fundamental goods**» due to their **indispensability for satisfying certain "fundamental" rights.** Such definition considers the common as a good which access should be pursued by **public interest and which equal distribution should be potentially granted by an authority**
Commons as «complex social and political ecologies» (Chatterton, 2010; Hardt and Negri 2010)	The Common as a **profound criticism of the dominant economic system.** It consists of **shared interests or values** forming the potential base for community to come together.	Commons are necessarily created and sustained by "**communities**" i.e., by social networks of mutual **aid, solidarity, and practices of human exchange that are not reduced to the market form.** (De Angelis, 2017)	Provides a **different non-marketized logic of mutual-aid/self-organisation**, where there isn't an 'owner' of such practices, they are **not regulated following a top-down logic, but rather self-governed and bottom-up** (Chatterton, 2010).

Fig.1 Four Definitions of Commons – A Synthesis Partially Based on Moroni (2024).

In the proposed definitions, some important distinctions are noted with reference to the conditions, the actors involved and the procedural modalities with which commoning practices can be activated. The focus on accessibility as a common for defining commoning practices leads, in the following sections, to select some of the most relevant elements that emerged from the literature review in order to offer an operational perspective for studying and analysings the existing commoning practices.

4. ACCESSIBILITY AS AN ESSENTIAL GOOD

Accessibility, understood in the present work as the capability of participating in valued spatial activities, has long been recognized as a essential good - a basic requirement for social inclusion and activity participation that satisfies individual and collective needs. It concerns the needed and desired states a person can achieve based on multiple individual, contextual – i.e., related to land use and transport -, and perceptual factors (Sen, 1992; van Wee & Geurs, 2011; Martens, 2016; Pot et al., 2021, Vecchio & Martens, 2021).

From this perspective, accessibility to valued spatial activities and resources can be considered a basic need-satisfier or a means to achieve social inclusion and participation. According to Levine et al. (2019), this goal can be achieved through mobility, which involves physical movement supported by transportation systems; through proximity, which involves physical closeness to specific activities, such as service facilities and connectivity, which involves the delivery of goods and services at one's locaition. All of the previous aspects refer to forms of functional proximity (being physical or virtual) to needed activities. However, it is worth noting that accessibility can also result from the establishment of what Manzini (2020) defines as relational proximity, namely the outcome of intense interpersonal connections between people sharing specific physical and social spaces where opportunities for collaboration and mutual support can emerge. Indeed, accessibility needs may be among those that can be met through community-based collaboration and exchange, as will be deepened in the next sections of the paper.

A shared understanding is that adequate levels of accessibility, whether related to mobility, proximity, or connectivity, should be assured by a public authority to avoid injustice (van der Veen et al., 2020), according to the "basic accessibility concept" under the sufficientarianist approach in the domain of distributive justice (Lucas, 2012; Martens, 2017). Indeed, accessibility can be seen as an enabling factor (Pucci & Vecchio, 2019) that allows participation in other valued, needed, or desired activities, potentially generating further positive outcomes for the individual and enhancing perceived or objectively measured inclusion.

However, several examples indicate that accessibility needs, due to their extreme variety and multiplicity, can be easily unmet or unequally guaranteed for instance, due to State inaction, limited action, or negative outcomes on accessibility resulting from explicit actions that may express themselves in scarcity or lack of adequate transport options or investments and that may be driven by the difficulty of meeting different and conflicting needs and/or low demand for transport. These situations are particularly recognizable in rural environments (Farrington & Farrington, 2005) and low-density contexts where the poor diffusion of service facilities and

social activities, combined with low availability of means of transport alternative to private cars, creates conditions for limited accessibility, especially for certain population groups (e.g., youth, elderly, people without car access), leading to potential inequalities (Lucas et al, 2016; Dorantes et al. 2023). Similarly, the market may also fail to meet accessibility needs when no economic return is attainable without public subsidy, particularly threatening medium to low-density areas and/or financially weaker population groups and needs in the absence of adequate funding. Furthermore, it is important to recognize that accessibility needs are necessarily varied, highly contextual, and constantly evolving, while gender, race, ethinicity, disability, age, caste, class, income etc. have profound impact on both accessibility needs and the satisfaction of those need . New basic accessibility-related demands and needs may arise and not be adequately supported by the services already provided by the state or the market, creating deprivation but also fertile ground for innovation and niche development (Schot & Geels, 2007) and initiating what Seyfang and Smith (2007) define as grassroots innovations.

Possible failures in accessibility provision by the public sector and/or the market, identify situations where inaction - or limited action - is induced by factors such as the need to maintain economically efficient services. However, these examples also define the contexts in which innovative accessibility solutions may be developed through self-organized activities by groups of people sharing the same accessibility needs and providing targeted accessibility-based services. In these situations, a process of commoning can take shape, becoming a collective and collaborative way to co-produce and/or provide accessibility for a community, either replacing or complementing services offered by the state and the market. These are situations where the concept of accessibility shifts from an individual dimension (my access need) to a collective one (our needs), translating into a response to existing conditions (our solution).

In these situations, it is crucial to consider that the roles of the state, the market, and self-organized action will not be isolated but will always be situated within a preexistent institutional, spatial, and social actor-network framework. For example, a self-organized mobility service will utilize assets provided by the public sector (e.g., roads) and market actions (e.g., cars), while being constrained by the regulatory effects of norms, rules and power dynamics,creating a scenario where accessibility can be configured as a commoning process resulting from the interdependence and conjunction between the three main types of accessibility provision.

5. COMMONING ACCESSIBILITY, COMMUNITY OF ACCESS, AND COMMONING ACCESSIBILITY PRACTICES: DEFINITIONS

This deliverable section presents a conceptual framework for examining commoning from an accessibility-based perspective. This approach is developed in light of the literature review on commons/commoning and accessibility previously discussed and builds upon the theorization of commoning mobility proposed by Nikolaeva et al. (2019).

The four definitions provided in section 2 offer diverse perspectives on what should be defined as a common good based on the different conceptions regarding its possible ways of access, use, and management. Considering the objectives of the Common_Acces project, it is essential to reflect on how the concept of accessibility could be conceived as a common good according to each of these four definitions in order to establish a precise theoretical positioning for the further development of the commoning accessibility concept.

The first definition, which considers a common good as a resource without an owner and with free access, does not appear particularly effective when discussing accessibility. Accessibility cannot be considered a given good (e.g., a natural resource); rather, it must be interpreted as something that is produced and reproduced through individual (and potentially collective, as proposed in this paper) action. Indeed, even if insome circumstances the availability of accessibility as a good can be threatened in the long term by its free and unregulated use (think about about free car-based accessibility which eccess can result in the externality of threatening the accessibility of future generations), it must be noted that the same availability of accessibility is actually ensured by creating the necessary conditions for its use. As we have seen, these conditions depend on the combined actions of the state, the market, grassroots community initiatives and even direct interdependence between related individuals, are shaped and influenced at the individual level by personal needs, desires, and capabilities. The main point here is thus primarily related to if and how people can access the resource of accessibility (namely, if they can participate in the spatially distributed opportunities they need or desire based on the existing conditions) and contribute to the (re)production of this resource through their actions and practices rather than on the possible tragedy resulting from ineffective or unregulated use of this good.

Regarding the second definition, it is possible, in certain circumstances, to conceive of accessibility as a common pool resource. Ostrom's definition suggests that a common good is shared, managed, maintained, and (re)produced by a group of people through their regulated, potentially self-governed, and bottom-up actions. According to the author, such use could be more efficient because, through the development of social capital in the form of effective working rules, "those systems are more likely to develop and preserve the networks that the participants have created, and the norms they have adopted" (Ostrom, 1990, p. 14). This definition aligns with the idea that accessibility can be a good produced and reproduced by specific communities through self-governed and self-organized collective collaboration processes, making it suitable to explain the genesis of forms of commoning accessibility. The presence of a community developing accessibility solutions responding to local situations in the interest of the involved communities also aligns with Seyfang and Smith's (2007) definition of grassroots innovation. Furthermore, an important aspect of Ostrom's revolves around the relevance of rules developed by the community to define the criteria for accessing the good (establishing clear boundaries between the community and outsiders) and managing and reproducing the good through its use. In this context, it is possible to imagine that any form of accessibility provision, even self-governed and grassroots, is organized through a set of written and unwritten rules, initially targeting a bounded community involved in its genesis and use. Participation may not necessarily constitute a right of ownership over the shared good with other owners. However, it could rather resemble a private partnership (Block & Jankovic, 2016) among individuals who share the same needs and collectively contribute to constructing

accessibility solutions that address those needs. Finally, defining accessibility as a common-pool resource emphasizes the importance of grassroots action, which complements or substitutes state or market-based accessibility provision in case of inadequacy or failure.

The third definition of commons as "everybody's resource" combines the concept of "common good" and (access to/availability of) "commons" (Rodotà, 2012) with the idea that some form of "public interest" (Moroni, 2017, 2019) should exist related to access and availability to the good itself as a right. Looking at accessibility through the lens offered by this definition supports the idea that accessibility can be configured as a fundamental good, as illustrated in section 3. Indeed, accessibility provision can and should be regarded as a matter of public nature and relevance, justifying the role of some authority, ideally a public one, deputed to ensure that accessibility is attainable and equitably distributed. Therefore, defining accessibility as everybody's resource assumes that a certain sufficient amount of access must be guaranteed as a fundamental enabling factor for social participation and the activation of further opportunities. However, we can still assume that this essential good may be provided through multiple and varied ways, not solely state-managed. For instance, as previously discussed, a community might self-organize and seek solutions to address specific accessibility needs and desires more effectively than state or market-based solutions. Ultimately, what is relevant in connection with this definition is not so much related to the ways in which accessibility is ensured but rather the very fact that accessibility as an essential good and need fulfillers is present, regardless of the means by which it is achieved.

Finally, the fourth definition emphasizes the political relevance of commoning as socio-spatial practices under a non-marketized logic of mutual aid/self-organization, not regulated through a top-down approach but rather self-governed with a bottom-up approach (Chatterton, 2010). Here, commoning assumes a political and ideological value as a critique of the contemporary economic and social system. When applied to accessibility, this definition can be distinguished from the second definition—inspired by the concept of a common-pool resource by Ostrom—since the former attributes a political/ideological value to the process of commoning. The motivations driving commoning development can thus be varied and not solely related to dysfunction or failure of canonical market or state-based forms of accessibility provision but also driven by a desire to build an alternative to the dominant mobility and accessibility system. However, similar to the case of common-pool resources, we can also suppose that self-governed and bottom-up accessibility provision alternatives to the dominant practices may develop within recognizable communities formed by members aligning with similar values and organized by establishing more or less rigid rules contributing to the (re)production of accessibility through collective collaboration.

As observed, each of the four definitions provides interesting points for consideration when we attempt to interpret accessibility as a common good, supporting the process that leads to the definition of commoning accessibility. In the same perspective, it is useful to refer to the contents of the paper by Nikolaeva et al. (2019), which introduces and defines the concept of "commoning mobility". This concept is entirely consistent with and related to the principle of commoning accessibility if we interpret mobility as one of the means to achieve accessibility. By applying the approach of the authors to our subject, commoning can be conceived as a collective reconsideration of the societal value of accessibility and commoning practices as a

collective rethinking of ways in which accessibility is provided and governed. This definition emphasizes the importance of focusing not only on commoning accessibility, which could be conceived as the outcome of the process, but also on the actors - namely the communities contributing to the collective reconsideration of the societal value of accessibility - and the actions they undertake to provide and govern the accessibility common.

A conceptual framework can now be introduced that illustrates the theoretical positioning of the project concerning the definition and the expected context of Commoning Accessibility. The diagram in Fig. 2 starts with the assumption that accessibility is an essential good and identifies commoning accessibility practices as the outcome of a joint form of accessibility provision based on the actions of a community of access.
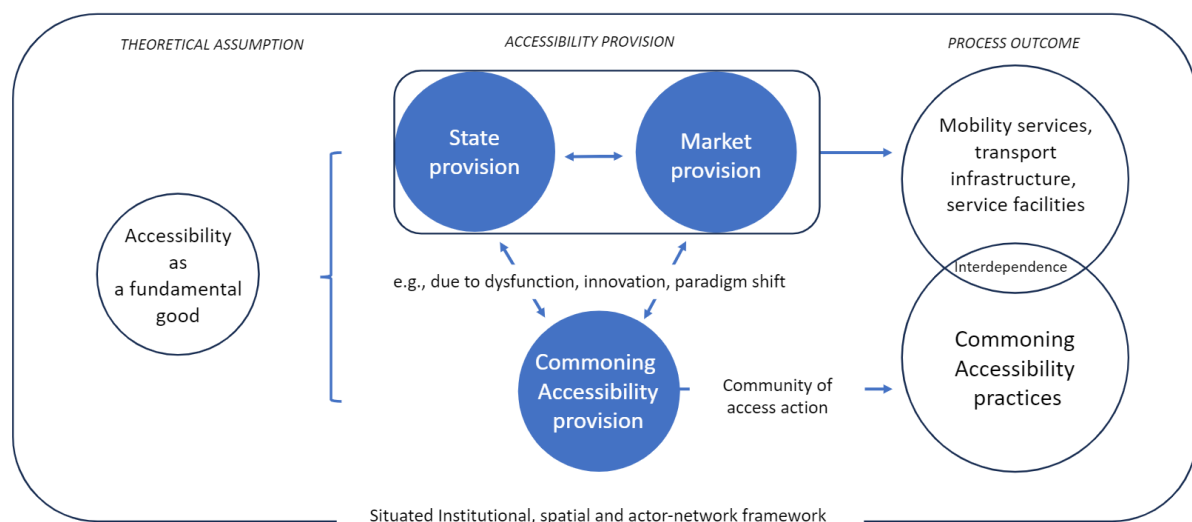

Fig. 2 Theoretical framework to conceive accessibility through commoning

In this process, three constitutive elements emerge, strongly interconnected: namely, Commoning Accessibility, Community of Access, and Commoning Accessibility Practices, each of which deserves a specific definition.

We define **Commoning Accessibility** 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. This process can either develop as an alternative to or in conjunction with market/state accessibility provision and is based on the self-empowering capacity of the community.

We define a **Community of Access** as a defined and relatively bounded self-organized group of people sharing specific accessibility-related needs/desires and commonly searching for a solution resulting in the process of commoning, which ultimately depends on the existence of the community. Commoners can play different roles in a community that is contingent and connected by constraints of opportunity characterized by instability and momentary enactment based on the needs to be achieved.

Consequently, we define **Commoning Accessibility Practices** as a set of actions that materialize in the realized access performed by a community of access, which are both the foundation for the development of the commoning accessibility process and its outcome.

6. UNDERSTANDING AND COLLECTING COMMONING ACCESSIBILITY PRACTICES

Commoning accessibility practices, their analysis, and the reconstruction of their social and spatial implications are at the core of the Common_Access project. These practices, understood as concrete and measurable actions, are the most evident outcome of how a community addresses its accessibility needs by creating and managing the conditions for access. At the same time, Commoning accessibility practices give meaning to the community of access, as it exists and reproduces itself through mobilization around specific accessibility issues that are addressed through these practices and their evolution over time. This relationship is depicted in Fig. 3.
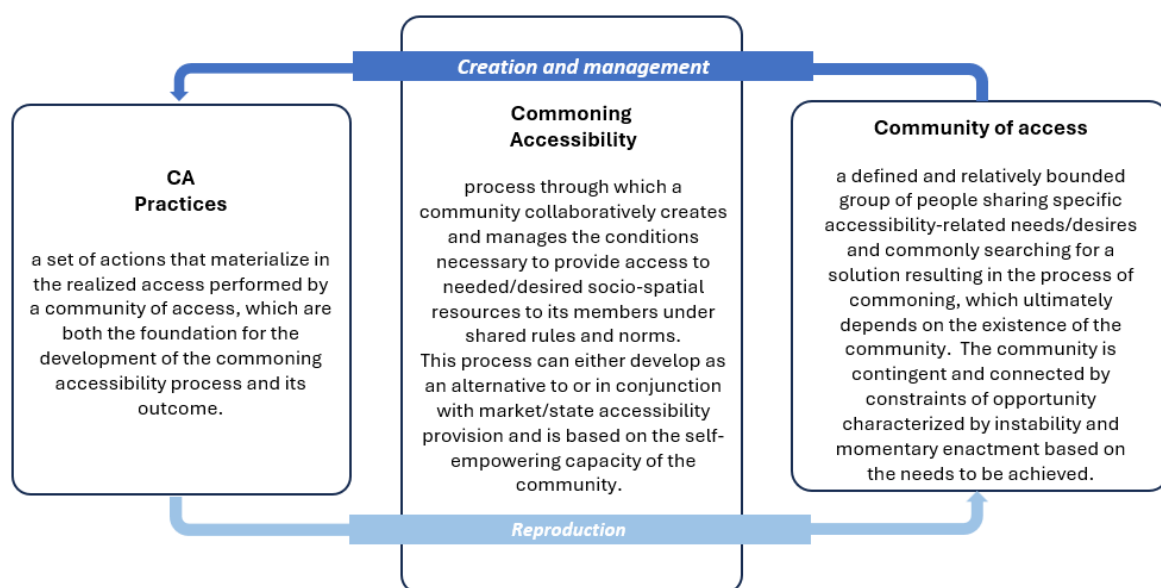

Fig. 3 Relations between commoning accessibility, community of access, commoning accessibility practices

The Common_Access project focuses particularly on commoning accessibility practices to understand their functioning, evolution, and socio-spatial impacts on the communities that create and manage them. The literature presents numerous examples that fit the definition proposed in this paper, while other practices await discovery and analysis. The objective is to achieve an overview of the forms, statutory functions, and activities carried out by communities in commoning accessibility practices and existing challenges, addressing several issues and research gaps that require specific exploration. These include:

- Understanding the various ways in which commoning accessibility practices developed by a community can evolve within the broader political, economic, regulatory, and cultural context in which they arise, identifying possible enablers and barriers, as relevant for the analysis of WP5 in Common_Access.
- Analyzing the relationship between commoning accessibility practices and other forms (state and/or market based) of accessibility provision to understand how the former can be identified as an alternative to the latter and the existing points of convergence.

- Investigating the development and evolution of these practices, including their potential institutionalization/marketization, considering that the commoning process is an ever-changing transformation.

The analysis and collection of practices will also facilitate their classification. Tentatively, we propose dividing them into three macro groups inspired by the conceptualization from Levine et al. (2019): mobility-related accessibility practices, which develop to provide access to needed and desired socio-spatial resources through physical displacement; proximity-related accessibility practices, which do not strictly support mobility but rather the provision of services and activities that can be accessed without the need to travel beyond one's immediate vicinity; connectivity-based accessibility practices considering collaborative actions aimed at improving digital access to the community.

The first group includes community-led initiatives sharing a mix of resources such as (e-)bikes, (e-)cargo bikes, community micro-mobility solutions, Active Travel Hubs, and car clubs. They also encompass citizen-led data initiatives and digital platforms that facilitate the shared use of different transport options. The second group includes proximity-based and connectivity services such as community-run local shops and services, community parcel lockers, local delivery services using cargo bikes, mobile services providing temporary access to amenities, and tactical urbanism to enhance local accessibility. They also consider citizen-led data initiatives and digital platforms that support the sharing of local resources and the development of proximity services. Finally, the third group include, as an example, the direct cooperation to support and extend a local TLC networks to assure widespread digital access, even where this access may not be guaranteed due to high costs.

Commoning accessibility practices will be collected during the project according to the definition provided here through the Commoning Accessibility Practices Collection Form, designed as a tool to compile a global repository of best practices within the Common_Access project. The purpose of this form is to capture and evaluate (un)successful commoning accessibility practices implemented internationally. This form is structured into twelve sections, each focusing on a specific aspect of the practices—from their genesis, implementation, and impact, to the lessons learned and challenges faced, according to the following structure:

- Section 1 – What: Questions asking for general information about the practice, with a focus on the specific aspects of the ±15-minute City touched by the practice.
- Section 2 – Where: Questions regarding the setting, focusing on the territorial characteristics of the area where the practice has developed.
- Section 3 – Why: Questions related to the main aims and historical development of the practice.
- Section 4 – How: Questions concerning how the practice is managed, the accessibility needs it supports, and information about management and costs.
- Section 5 – Who: Questions about the community contributing to the creation and management of the practice.
- Section 6 – For whom: Questions about the recipients.
- Section 7 – When: Questions about the temporal availability of the practice.

- Section 8 – Policy and Institutional Interactions: Questions about the conjunction between the practice and institutional or market actors.
- Section 9 – Impacts: Questions about the observable impacts of the practice.
- Section 10 – Lessons and Challenges: Questions about the challenges that emerged during the implementation process.
- Sections 11-12: Comments, references, personal details.

The form was released in April 2024 and will remain open throughout the entire project

7. A GLOSSARY (TO BE FURTHER IMPLEMENTED WITH OTHER SHARED DEFINITIONS)

Commoning Accessibility 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. This process can either develop as an alternative to or in conjunction with market/state accessibility provision and is based on the self-empowering capacity of the community.

Community of Access as a defined and relatively bounded self-organized group of people sharing specific accessibility-related needs/desires and commonly searching for a solution resulting in the process of commoning, which ultimately depends on the existence of the community. The community is contingent and connected by constraitns of opportunity characterized by instability and momentary enactment based on the needs to be achieved.

Commoning Accessibility Practices as a set of actions that materialize in the realized access performed by a community of access, which are both the foundation for the development of the commoning accessibility process and its outcome.

Accessibility as everybody's resource, as an essential good which provision is collectively intended as a matter of public interest (belonging to the public sphere), explaining a "state-driven" approach on assuring access to people.

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