

# 1 INTRODUCTION

## 1.1 REDEFINING MOBILITY: FROM OWNERSHIP TO USERSHIP

In most European cities today, shared vehicles like mopeds and scooters are abundantly available to the public, facilitating transportation. The emerging trend in which the consumer pays for vehicle use as a service and foregoing legal ownership of the vehicle is the figurehead of a transformation. This transformation has taken place in our approach to consumption, ushering in a heightened awareness of the ecological, societal, and developmental consequences of consumer choices.<sup>1</sup> In recent decades, this awareness has sparked a resounding call for change, driving a reassessment of consumption patterns and consideration of more sustainable alternatives. Central to this paradigm shift is the transition from the conventional model of legal ownership to the innovative landscape of temporary usership within the realm of mobility. The necessity for this transition is broadly acknowledged by policymakers and their strategies to support the transition are encouraged through *inter alia* development of policy and legislative initiatives such as the European Union's sustainability agenda.<sup>2</sup> The underlying philosophy of such usership models align with the principles of a circular economy, where vehicles are designed for longevity, repairability, and recycling. By promoting repair and reuse,

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- 1 O.K. Mont (2002) 'Clarifying the concept of product-service system' *Journal of cleaner production* 10(3), pp. 237-245; European Commission, 'A New Deal for Consumers' (Brussels, 11 April 2018) COM(2018) 183 final; J. Valant (2015) 'Consumer protection in the EU – policy overview' *European Parliamentary Research Service*, DOI: 10.2861/575862; B. Keirsbilck and E. Terryn (2021) 'Duurzaamheid en consumentenrecht' *Revue de Droit Commercial Belge-Tijdschrift voor Belgisch Handelsrecht* 2021/10; B. Keirsbilck, E. Terryn, J. Eyckmans, S. Rousseau, D. Voinot, *Servitization and circular economy: economic and legal challenges* (1<sup>st</sup> Edition, Intersentia, 2023); E. van Gool, 'De nieuwe Richtlijn Consumentenkoop en duurzame consumptie' in: E. Terryn, I. Claeys, *Nieuw recht inzake koop & digitale inhoud en diensten* (Intersentia, 2020); V. Mak (2019) 'Consumentenbescherming bij servitization' *Preadviezen Vereniging voor de vergelijkende studie van het recht* 2019-1, pp. 69-98.
  - 2 European Commission 'A new Circular Economy Action Plan For a cleaner and more competitive Europe' (Brussels, 11 March 2020) COM(2020) 98 final; European Commission, 'A New Deal for Consumers' (Brussels, 11 April 2018) COM (2018) 183 final; European Commission 'Sustainable and Smart Mobility Strategy – putting European transport on track for the future' (Brussels, 9 December 2020) COM(2020) 789 final; European Institute of Innovation & Technology 'Evaluation of shared mobility to support decarbonisation' (18 January 2021) <[https://eit.europa.eu/sites/default/files/200256-d04\\_id0022273\\_evaluation\\_of\\_shared\\_mobility\\_to\\_support\\_decarbonisation\\_report.pdf](https://eit.europa.eu/sites/default/files/200256-d04_id0022273_evaluation_of_shared_mobility_to_support_decarbonisation_report.pdf)> accessed 6 September; European Institute of Innovation & Technology 'Co-creation of transition guidance tools private sector engagement report' (December 2020) <[https://eit.europa.eu/sites/default/files/200256-d07\\_id0021303\\_co-creation\\_of\\_transition\\_guidance\\_tools\\_private\\_sector\\_engagement\\_report.pdf](https://eit.europa.eu/sites/default/files/200256-d07_id0021303_co-creation_of_transition_guidance_tools_private_sector_engagement_report.pdf)> accessed 6 September 2023; J. Valant (2015) 'Consumer protection in the EU – policy overview' *European Parliamentary Research Service*, DOI: 10.2861/575862.

mobility usership extends the lifespan of vehicles and reduces the need for constant replacements. In addition, providers of mobility usership have incentives to focus on durability, efficiency, and user-friendliness, which could also lead to innovations and higher-quality products. While the sustainability benefits of mobility usership have not been conclusively proven, policy makers agree that the transition from ownership to usership can make an important contribution to helping the European Union (EU) achieve its sustainability goals and growth in the EU if the transition is encouraged and developed in a responsible manner.<sup>3</sup> In addition, policymakers recognise that this transition can bring benefits to consumers through access to new services, a wider variety of choices, and lower prices.<sup>4</sup> The usership model also encourages more efficient use of resources, which can contribute to the EU's sustainability agenda and the transition to the circular economy.<sup>5</sup> At the same time, mobility usership raises questions regarding the applicability of the existing consumer law framework, since this new business model has not been taken into account when designing the consumer protection directives in the past. This uncertainty could slow down the transition to mobility usership in Europe and prevent its benefits from being fully realised. Consumers may be reluctant to make the lifestyle or financial decisions necessary for this transition due to the ambiguity about their rights and obligations; for example, what exactly are the rights (and obligations) of a consumer who participates in a usership model in the event of a defective vehicle? Where can the consumer report such a defect and can the consumer terminate their participation because of such a defect? At the same time, this uncertainty also affects providers in a mobility usership model when the legal framework within which they

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3 European Commission 'A new Circular Economy Action Plan For a cleaner and more competitive Europe' (Brussels, 11 March 2020) COM(2020) 98 final; European Commission, 'A New Deal for Consumers' (Brussels, 11 April 2018) COM (2018) 183 final; European Commission 'Sustainable and Smart Mobility Strategy – putting European transport on track for the future' (Brussels, 9 December 2020) COM(2020) 789 final; European Institute of Innovation & Technology 'Evaluation of shared mobility to support decarbonisation' (18 January 2021) <[https://eit.europa.eu/sites/default/files/200256-d04\\_id0022273\\_evaluation\\_of\\_shared\\_mobility\\_to\\_support\\_decarbonisation\\_report.pdf](https://eit.europa.eu/sites/default/files/200256-d04_id0022273_evaluation_of_shared_mobility_to_support_decarbonisation_report.pdf)> accessed 6 September; European Institute of Innovation & Technology 'Co-creation of transition guidance tools private sector engagement report' (December 2020) <[https://eit.europa.eu/sites/default/files/200256-d07\\_id0021303\\_co-creation\\_of\\_transition\\_guidance\\_tools\\_private\\_sector\\_engagement\\_report.pdf](https://eit.europa.eu/sites/default/files/200256-d07_id0021303_co-creation_of_transition_guidance_tools_private_sector_engagement_report.pdf)> accessed 6 September 2023; O.K. Mont (2002) 'Clarifying the concept of product-service system' *Journal of cleaner production* 10(3), pp. 237-245; B. Keirsbilck and E. Terryn (2021) 'Duurzaamheid en consumentenrecht' *Revue de Droit Commercial Belge-Tijdschrift voor Belgisch Handelsrecht* 2021/10.

4 European Commission, 'A New Deal for Consumers' (Brussels, 11 April 2018) COM (2018) 183 final; European Commission 'Sustainable and Smart Mobility Strategy – putting European transport on track for the future' (Brussels, 9 December 2020) COM(2020) 789 final; European Commission 'The New EU Urban Mobility Framework' (Strasbourg, 14 December 2021) COM(2021) 811 final; B. Keirsbilck and E. Terryn (2021) 'Duurzaamheid en consumentenrecht' *Revue de Droit Commercial Belge-Tijdschrift voor Belgisch Handelsrecht* 2021/10.

5 European Commission, 'A New Deal for Consumers' (Brussels, 11 April 2018) COM (2018) 183 final; O.K. Mont (2002) 'Clarifying the concept of product-service system' *Journal of cleaner production* 10(3), pp. 237-245.

operate is unclear and providers do not have a clear idea of their obligations toward consumers.<sup>6</sup> In addition, there is a risk that regulatory grey zones could be used to avoid rules designed to protect the consumer as the weaker party. Although the rationale of the weaker party in most cases also applies to a mobility usership model, the reality is that this model falls outside a large part of the EU consumer law acquis simply because there is no transfer of ownership given the limitation of their scope to sales contracts. Nonetheless, as will be argued below, many of the policy targets underlying these instruments applicable to sales contracts also apply to mobility usership contracts. Consequently, the question arises as to whether consumer protection applies and, if not, whether the protection should be extended and if this would lead to desirable results with regard to sustainable consumption.

After all, the consumer has far-reaching rights in case of a consumer sale, while the consumer of mobility usership does not have these because the business model does not fall within the scope of consumer law directives that apply to consumers of consumer sales, because it requires ownership to pass. At the same time, this means that the Unfair Commercial Practices Directive and the Unfair Contract Terms Directive do provide a level of protection to the mobility usership consumer. However, to create a level playing field between sales-based contracts and use-based contracts, mobility usership needs to be constructed in a way that safeguards consumers' rights.

## 1.2 OPERATIONALISATION

The important and topical concept of mobility usership is central to this study and is therefore defined and operationalised to construct a model to be used for the purpose of this research. Mobility usership is a Product-Service System (PSS) that provides consumers with a combination of (the use of) products and services, often in an integrated and holistic manner. Instead of selling a physical product, a provider implementing a PSS approach also offers complementary services that enhance the value, functionality, and overall experience of the product for the consumer. The main rationale behind PSS is to move away from the traditional focus on selling individual products and towards providing solutions that address the broader needs and desires of consumers. This approach can improve sustainability and consumer satisfaction and has the potential for ongoing income through service contracts or subscriptions. PSS offers

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6 C. Lavigne, S. Rousseau 'Trust and Consumers' Attitudes towards Product-Service Systems: Comparing Flanders and the Netherlands' in: B. Keirsbilck, E. Terryn, J. Eyckmans, S. Rousseau, D. Voinot, *Servitization and circular economy: economic and legal challenges* (1<sup>st</sup> Edition, Intersentia, 2023), pp. 15-32.

consumers a more comprehensive solution that meets consumers' needs and preferences while potentially reducing waste and resource consumption. This concept has gained significance in discussions about sustainability and circular economy practices as it encourages a shift from the linear take-make-dispose consumption model to a more circular and resource efficient approach.<sup>7</sup> Although various classifications of PSS are proposed, for this research a classification of three main categories is adopted, namely the (1) product-oriented services, (2) use-oriented services, and (3) result-oriented services.<sup>8</sup> This classification is visualised in Figure 1. With (1) product-oriented services, the provider sells a product and additionally offers services and/or support on its most efficient use. On the other end of the spectrum, (3) a result-oriented service is a service in which the user only buys the output of the product, e.g. outsourcing or a pay-per-service model. For the purposes of this study, however, only (2) use-oriented services, visualised in the light grey box of Figure 1, will be evaluated because this approach aligns with the current existing mobility solutions that target the transition from ownership to usership.

7 B. Keirsbilck and E. Terryn (2021) 'Duurzaamheid en consumentenrecht' *Revue de Droit Commercial Belge-Tijdschrift voor Belgisch Handelsrecht* 2021/10; R. Antikainen, R. Baudry, A. Gössnitzer, T.K.M. Karppinen, M. Kishna, F. Montevercchi, F. Müller, C. Pinet and R. Ugla (2021) 'Circular business models: product-service systems on the way to a circular economy' *European Network of the Heads of Environment Protection Agencies – Interest Group on Green and Circular Economy* <[https://epanet.eea.europa.eu/reports-letters/reports-and-letters/circular\\_business\\_models\\_interest-group-green-and-circular-economy.pdf](https://epanet.eea.europa.eu/reports-letters/reports-and-letters/circular_business_models_interest-group-green-and-circular-economy.pdf)> accessed 4 September 2023; A. Tukker (2004) 'Eight types of product-service system: eight ways to sustainability?' *Business strategy and the environment* (Special Issue: Innovating for Sustainability) 13(4), pp. 246-260; A. Tukker (2015) 'Product services for a resource-efficient and circular economy—a review' *Journal of cleaner production* 97, pp. 76-91; A. Annarelli, C. Battistella, and F. Nonino (2016) 'Product service system: A conceptual framework from a systematic review' *Journal of cleaner production* 139, pp. 1011-1032; O.K. Mont (2002) 'Clarifying the concept of product-service system' *Journal of cleaner production* 10(3), pp. 237-245; P. Roman, G. Thiry, C. Muylaert, C. Ruwet and K. Maréchal (2023) 'Defining and identifying strongly sustainable product-service systems (SSPSS)' *Journal of Cleaner Production* 391, 136295; C. Muylaert, G. Thiry, P. Roman, C. Ruwet, R. De Hoe, and K. Maréchal (2022) 'Consumer perception of product-service systems: Depicting sector-specific barriers in the mobility, clothing and tooling sectors' *Frontiers in Environmental Science* 10, DOI: 10.3389/fenvs.2022.1048554; S. Kurpiela and F. Teuteberg (2022) 'Strategic planning of product-service systems: A systematic literature review' *Journal of Cleaner Production* 338, 130528; J. Hojnik (2018) 'Ecological modernization through servitization: EU regulatory support for sustainable product-service systems' *Review of European, Comparative & International Environmental Law* 27(2), pp. 162-175.

8 For a more detailed discussion of the other categories within the classification, see: A. Tukker (2004) 'Eight types of product-service system: eight ways to sustainability?' *Business strategy and the environment* (Special Issue: Innovating for Sustainability) 13(4), pp. 246-260. For various classifications of PSS, see: S. Behrend, C. Jasch, J. Kortmap, G. Hrauda, R. Firzner, D. Velte, *Eco-Service Development. Reinventing Supply and Demand in the European Union* (Sheffield: Greenleaf Publishing Limited, 2003); J.C. Brezet, A.S. Bijma, J. Ehrenfeld, S. Silvester (2001) 'The Design of Eco-Efficient Services; Method, Tools and Review of the Case Study Based 'Designing Eco-Efficient Services' Project' Ministry of VROM – Delft University of Technology; Zaring O. (ed.) (2001) 'Creating Eco-Efficient Producer Services, report of an EU project' (Gothenburg Research Institute, Gothenburg).

Figure 1: Operationalisation PSS and use-oriented services

Product-Service System				
Value mainly in (use of) vehicle	<div> <div>Service content (intangible) <i>Service component</i></div> <div>Product content (tangible) <i>Use component</i></div> </div>			Value mainly in service
<i>Pure vehicle</i>	(1) <b>Product-oriented service</b>	(2) <b>Use-oriented service</b>		(3) <b>Result-oriented service</b>
		<b>Exclusive use (a), (b)</b>	<b>Shared use (c)-(h)</b>	
		The vehicle does not shift in ownership.		
		The provider has ownership of the vehicle, and is also often responsible for maintenance, repair, and control.		
		The consumer uses the vehicle long-term.	The consumer uses the vehicle short-term.	
		The consumer pays a periodic fee for the use of the vehicle.	The consumer pays for (each) use of the vehicle.	
		The consumer has unlimited and individual access to the leased vehicle.	The consumer has limited and shared access to the vehicle. The same vehicle is sequentially used by different consumers.	

The use-oriented service exists in two models: exclusive mobility use and shared mobility use.<sup>9</sup> All mobility usership consists of a use component and a service component. These models are listed from left to right in Figure 1 because the oblique line illustrates that the balance of these components shifts from a predominant use component to a predominant service component.<sup>10</sup> Above, Figure 1 shows the exclusive use and shared use model with a concise indication of the characteristics that distinguish these models. Note that mobility

9 There is a third model, namely product pooling (also known as ride hailing or ride sharing), which resembles simultaneous product/vehicle renting or sharing. However, this model is excluded from the study because the study concerns individual mobility use and therefore not taxi services such as Uber or Lyft. For more information on product pooling model, see: A. Tukker (2004) 'Eight types of product-service system: eight ways to sustainability?' *Business strategy and the environment* (Special Issue: Innovating for Sustainability) 13(4).

10 Note: The size of the display of the categories (1), (2), and (3) is not a true proportional representation of these categories, but were adjusted for this study, to facilitate elaboration of the use-oriented service category in the figure.