

D2.3 Value Proposition Canvas

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Deliverable

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Value Proposition Canvas

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Version History

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V0.2	21.06.2022	Alexandra Hedesiu	ESC	Peer Review Revision
V0.3	23.06.2022	Mariona Bonsfills	ECO	Final Version
V0.4	28.06.2022	Joana Mundó	ECO	Final Version for Submission

Statement of Originality

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

Executive Summary

The European Union has embarked on a transition to a sustainable, carbon-neutral mobility sector. To do so, the EU promotes and envisages an energy system that prioritises efficiency, preventing energy waste, and an electric market dominated by renewable energy sources. For both the purposes of energy sustainability and efficiency, a more flexible energy usage across the residential, commercial, industrial and mobility sectors will be needed, as well as the development and provision of flexibility services to manage the electric grid. That is, all kinds of electricity users will transition to a more proactive management of their consumption: coordinating it with the necessities of the grid and synchronising it with periods in which energy may be cheaper, and when the power mix may exhibit a larger share of renewables.

The V2Market programme is financed by the European Commission, under the H2020 programme, which aims to develop, test, and adapt to end-user needs the next generation of smart energy services valorising energy efficiency and flexibility at the demand side. The programme sets the focus on electric vehicles and explores the possible pathways to incorporate them into the energy system as storage and flexibility capacity through Vehicle-to-Grid (V2G) and Vehicle-to-Building (V2B) technology.

The project thus intends to develop business model propositions capable of creating value for all the actors involved in the provision of flexibility services through V2B/V2G. This deliverable constitutes the phase of synthesis and culmination of a comprehensive market study to identify and evaluate the possibilities to commercialise V2B/V2G services, also referred to as V2M or V2Market services. As such, this deliverable brings together the findings from the literature review conducted in D2.1 and the first-hand research compiled in D2.2 and provides the final value proposition for each of the ten actors that will be more determinant for the successful escalation of V2Market services: EV users, fleet and car-sharing operators, utility companies, facility managers, charge point operators, DSOs, ESCOs, energy communities, aggregators, and financial actors.

Therefore, this deliverable will offer a concise but all-encompassing overview of how engaging in V2Market services – be it as end-user, an actor in the electric market, or an intermediary actor –, helps each specific actor in fulfilling their needs, minimises the difficulties they presently face in doing so, and creates additional value and gains. That is, it provides actor-specific value propositions: it introduces the role each of the ten actors could play in the provision or contracting of V2Market services, and it details the benefits they shall obtain from doing so.

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List of Acronyms

Acronym	Description
BRP	Balance Responsible Party
D	Deliverable
DERs	Distributed Energy Resources
DSO	Distribution System Operator
ESCO	Energy Service Company
EV	Electric Vehicle
RES	Renewable Energy Sources
V2B	Vehicle-to-Building
V2G	Vehicle-to-Grid
V2H	Vehicle-to-Home
V2M	Vehicle-to-Market
V2Market	Vehicle-to-Market
WP	Work Package

1/ Background and Objectives

This deliverable stands as the third and last piece of a comprehensive market study conducted to identify and assess potential pathways for the commercialisation of V2B/V2G services. It builds on the two previous deliverables – which comprise an interdisciplinary literature review, a SWOT analysis, five Customer Journey Canvases, as well as primary qualitative data from expert interviews and focus groups –, to offer one value proposition canvas for each of the ten actors that will be decisive to launch V2B/V2G to the mass EV-user market: EV users, fleet and car-sharing operators, utility companies, facility managers, charge point operators, DSOs, ESCos, energy communities, aggregators, and financial actors.

Through the elaboration of ten value proposition canvases, this deliverable aims to provide a clear and synthetic overview of the various benefits that each actor shall obtain from either contracting V2B/V2G services, or from participating in its provision. Furthermore, the canvases also contain all the main forms of involvement each actor may adopt. As such these value propositions both provide an evaluation of the ways in which V2B/V2G can fulfil the needs or create additional gains for the ten main actors in the value chain of the services, as well as a marketing tool with which to persuade actors into participation.

It is pertinent to note that in numerous cases, specific opportunities for participation may be shared between actors. This characteristic reflects the capacity of business model diversification the various actors have, and it takes into account the current potential of different agents to perform similar functions.

This deliverable is structured as follows. First, the methodology section outlines the sources that have been used to select the ten actors, as well as to develop the content for each value proposition. It also details how each subsection of the canvas must be interpreted. Subsequently, the actor-specific value proposition canvases are displayed, together with a summarising narrative value proposition for each of the cases. The deliverable concludes by describing how these value propositions will guide other work packages, informing the development of a comprehensive business model for V2B/V2G services.

2/ Methodology and Proposition Interpretation Guidelines

The Value Proposition Canvas is an analytical tool developed by the Swiss business theorist Dr. Alexander Osterwalder, which models the relationship between a product or service to be commercialised and its potential customer(s), with the goal of assessing how well the first can fulfil the interests of the latter¹. A value proposition canvas can therefore be used to evaluate the probability of selling a good or service to various types of customers, rank customer typologies in accordance with those among which commercialisation may face less barriers, and to identify additional features or bundles of services that could better fulfil different customers' needs and desires. In addition, value proposition canvases also constitute insightful resources to better understand how good, appropriate, complete, and uncontroversial a product or service is from the perspective of various customer profiles.

Building on the findings of D2.1 and D2.2, the following ten actors were identified as those with the highest possibilities to benefit from V2M services: EV owners and users, fleet and car-sharing operators, utility companies, facility managers, charging point operators, DSOs, ESCos, energy communities, aggregators, and financial actors. It is pertinent to remark that, as in the two deliverables mentioned, the facility manager category refers to actors in charge of buildings with residential, commercial, industrial or educative purposes, in which energy-intensive activities are conducted (e.g., manufacturing industries, office blocks, or shopping malls). As such, this deliverable made use of the results of the Market Study tools developed in WP2 to elaborate a value proposition canvas for each of these ten actors.

Because Value Proposition Canvases can be at times counterintuitive, the remainder of this section details the structure of the canvases, and the guidelines to interpret each of the subsections.

Firstly, the canvases are divided into two key sections, represented as columns: one concerning the customer profile, and another for the value proposition. Secondly, the customer profile includes three subsections. Customer Jobs refer to the various tasks a customer is trying to accomplish, such as a practical function, economic security or profit, or completion with social norms, values and morality. The subsection of Pains addresses the difficulties or concerns the customer presently experiences when trying to complete her tasks. In the case of Gains, the subsection is intended to map the customer aspirations in relation to the completion of their tasks. It is worth noting that what the customer may desire as gains can range from highly mundane and practical issues, to more socially minded, or emotionally driven ones.

Thirdly, the value proposition column also encompasses three subsections: Product or Service, Pain Relievers, and Gain Creators. This column shows how a product or service creates value for a specific customer typology by helping them perform the tasks they want to accomplish, minimising or solving the difficulties they encounter to do so, and by bringing about customer aspirations (gains). In this manner, the Product or Service subsection concerns the description of that which is to be sold to each specific customer.

¹ Osterwalder, A., Pigneur, Y., Bernarda, G., & Smith, A. (2015). Value proposition design: How to create products and services customers want. John Wiley & Sons.

The subsection Pain Relievers addresses the ways in which the product or service soothes the concrete difficulties or obstacles a customer experiences. Finally, the subsection Gain Creators details how the features and functionalities of the product or service generate or promote the better circumstances that a customer wants to achieve. As such, both the subsections Pain Relievers and Gain Creators are deeply linked and dependent on the Pains and Gains that have been previously identified as part of the Customer Profile.

3. Value Proposition Canvases

3.1 EV Owners and Users

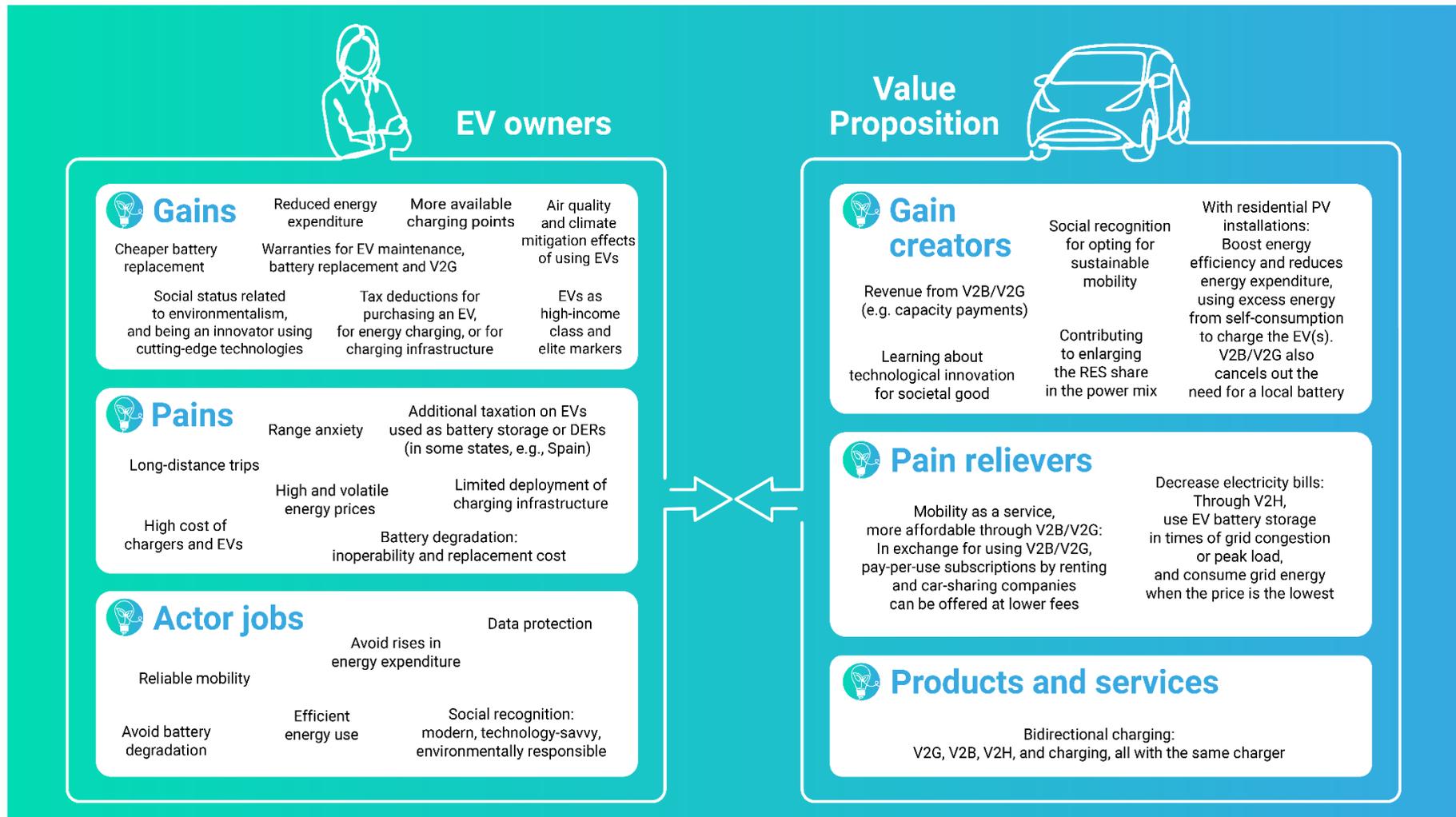


Figure 1: EV Owner and User Value Proposition Canvas

3.1.1 Value Statement

EV Owners and Users

- Through bidirectional EV chargers, avoid peak prices, power your house, maximise your energy efficiency, and gain revenue by helping the grid use renewables!

3.2 Fleet and Car-sharing Operators

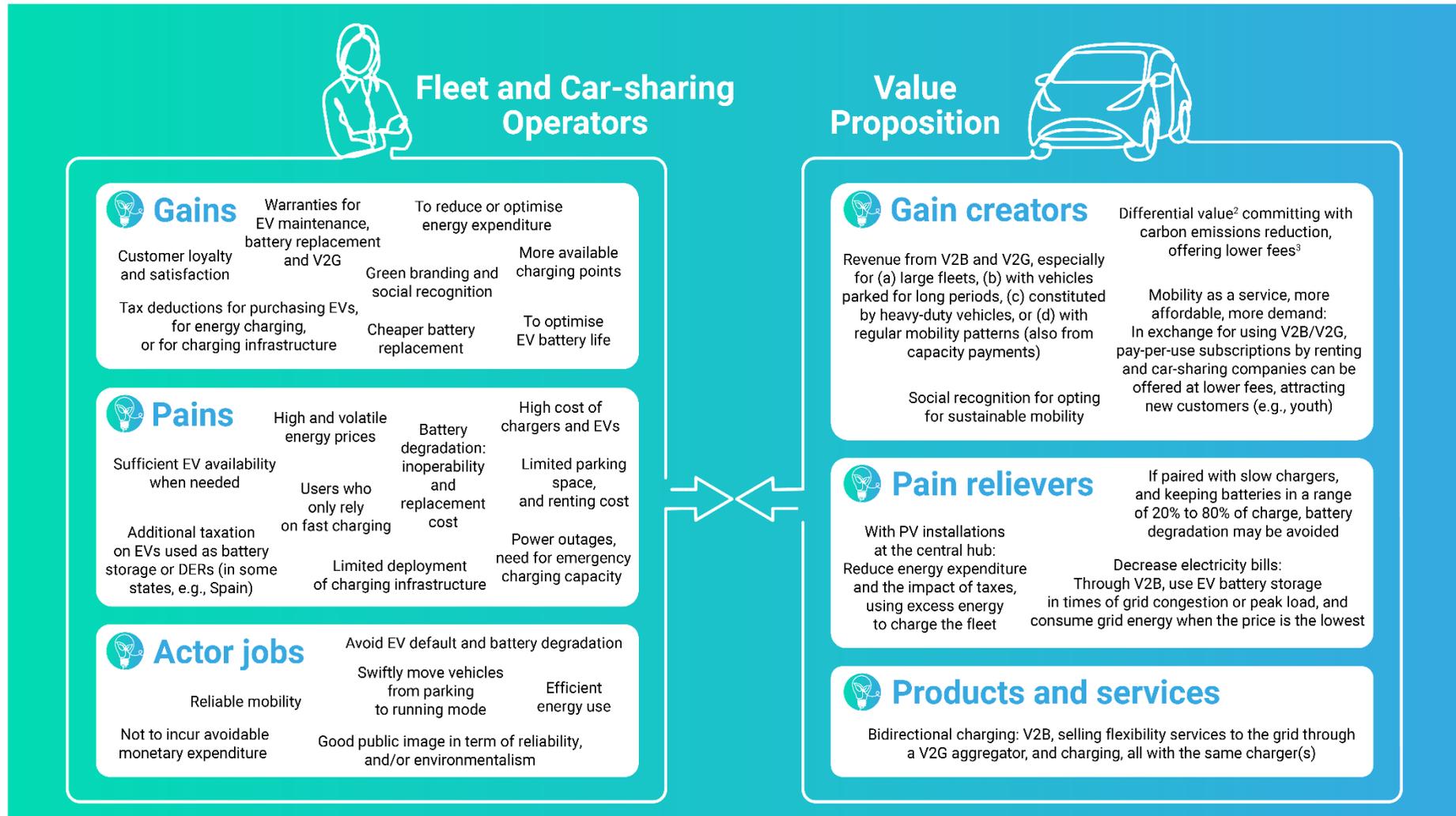


Figure 2: Fleet and Car-sharing Operator Value Proposition

3.2.1 Value Statement

Fleet and Car-sharing Operators

- Use your EVs to power your building during peak prices, offer lower user fees, and gain revenues and recognition helping the grid use renewables!

3.3 Utility Companies

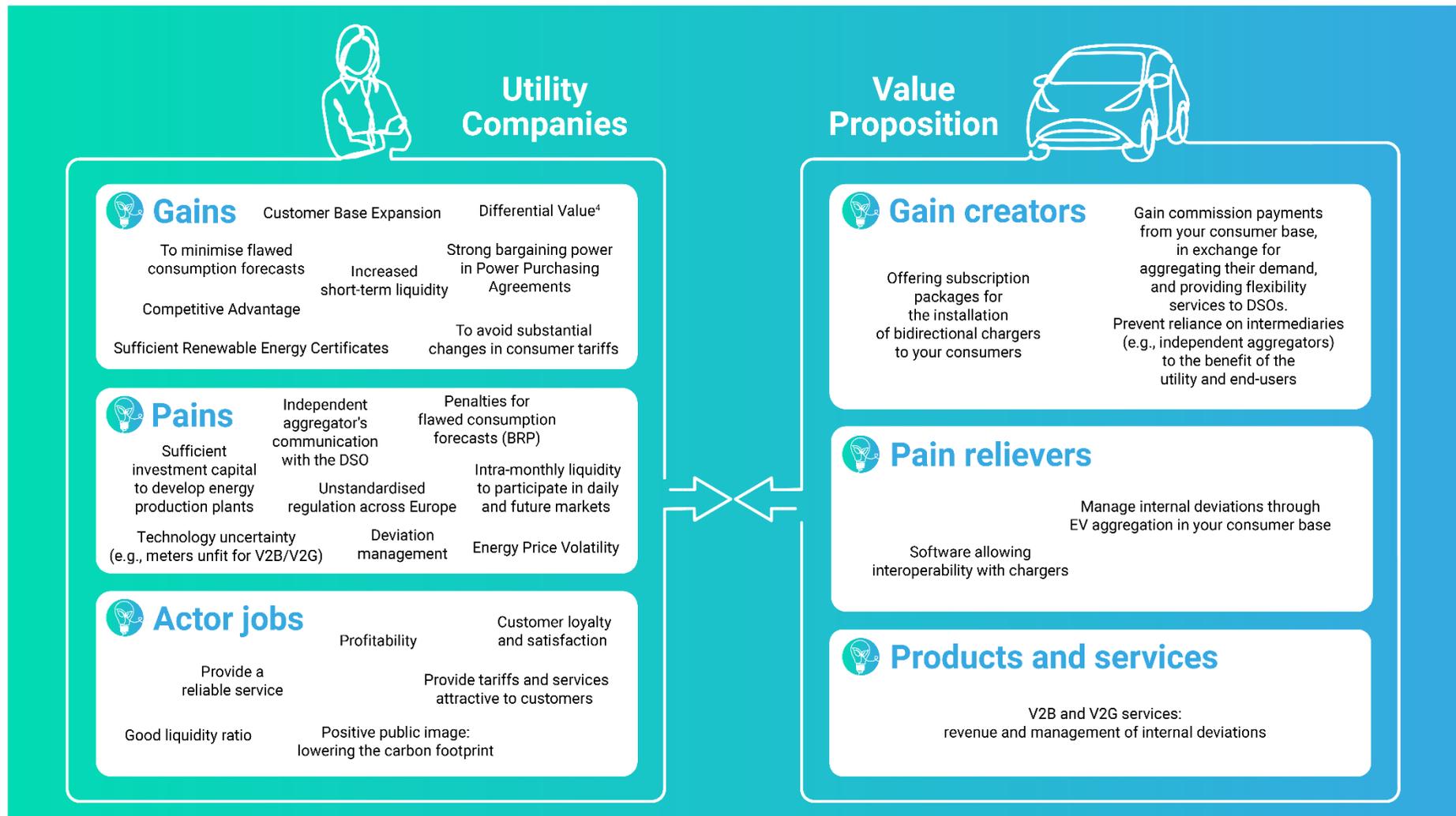


Figure 3: Utility Company Value Proposition Canvas

3.3.1 Value Statement

Utility Companies

- Enjoy the benefits of EV aggregation: contract external services for deviation management, or do it yourself and go further: gain revenues by providing flexibility services to the grid, and prosumption opportunities to your consumers!

3.4 Facility Managers

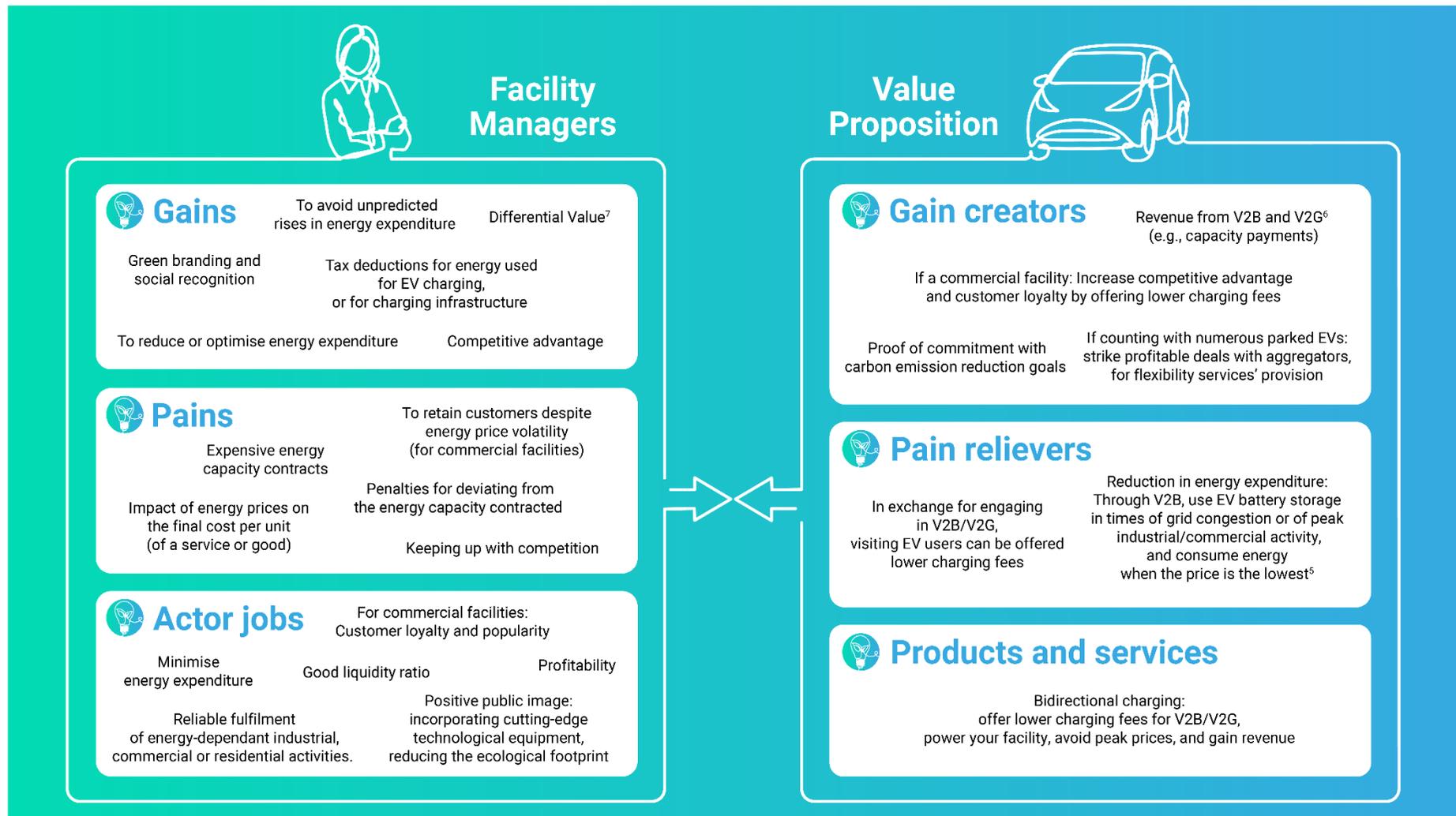


Figure 4: Facility Manager Value Proposition Canvas

3.4.1 Value Statement

Facility Managers

- Be more competitive being greener: offer lower charging fees, power your facility when prices are high, and gain revenue and recognition helping the grid use more renewables!

3.5 Charging Point Operators

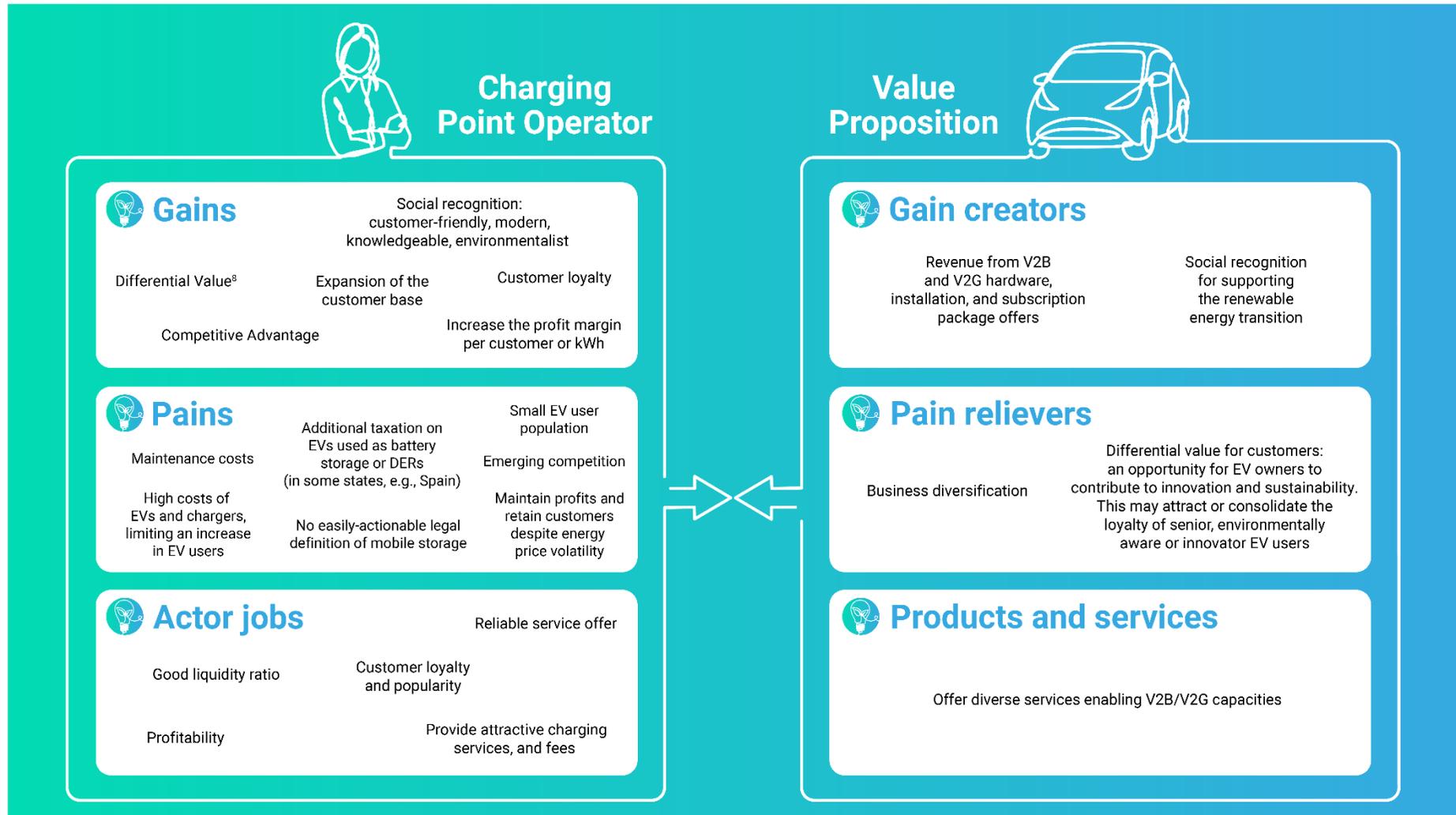


Figure 5: Charging Point Operator Value Proposition Canvas

3.5.1 Value Statement

Charging Point Operators

- Be competitive: offer innovative services to EV users, allowing them to cut their energy expenditure while they help the grid use more renewables!

3.6 DSOs

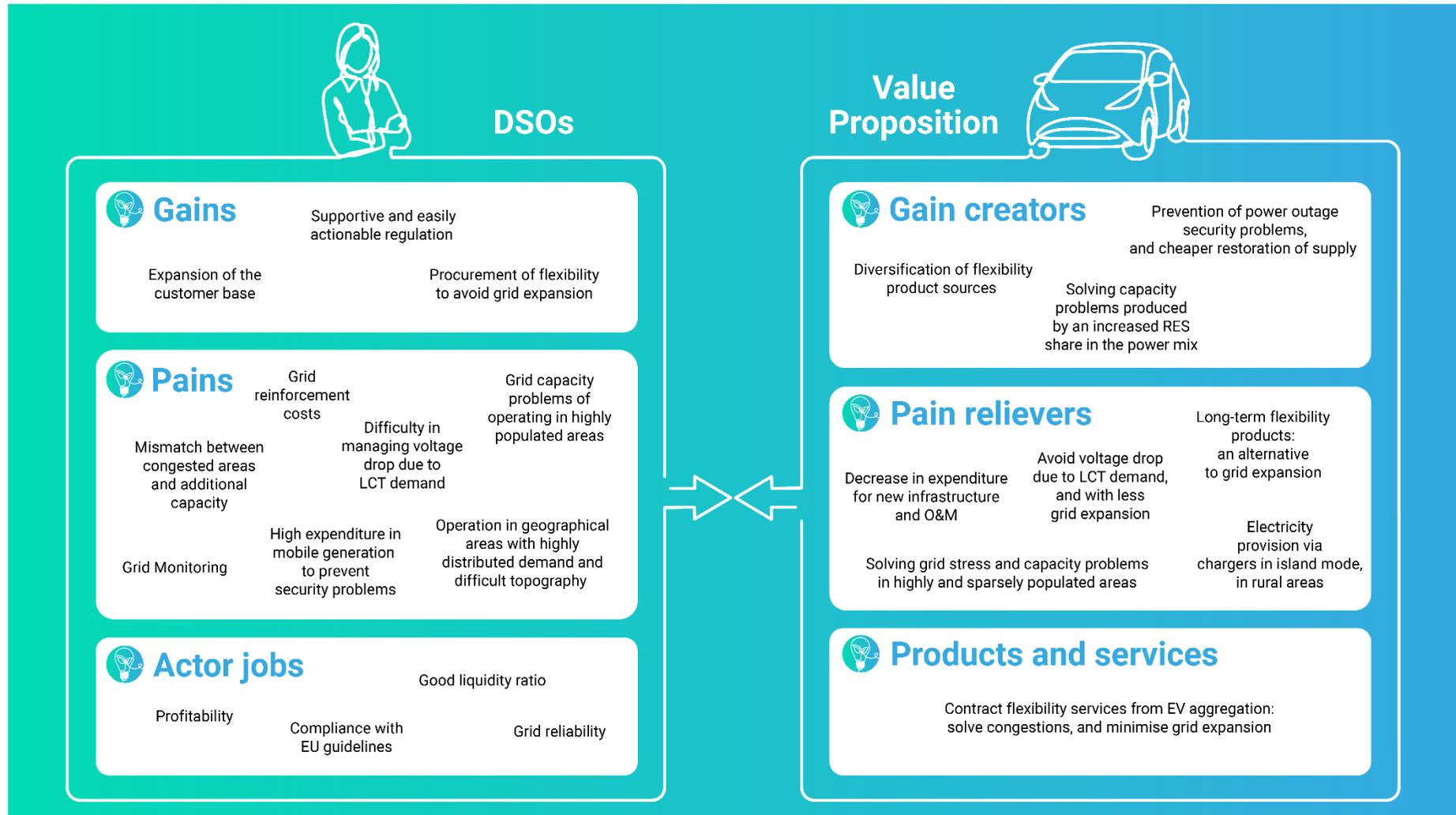


Figure 6: DSO Value Proposition Canvas

3.6.1 Value Statement

DSOs

- Minimise grid expansion, manage congestions and prevent grid stress problems in highly and sparsely populated areas by contracting flexibility services from EV aggregation!

3.7 ESCos

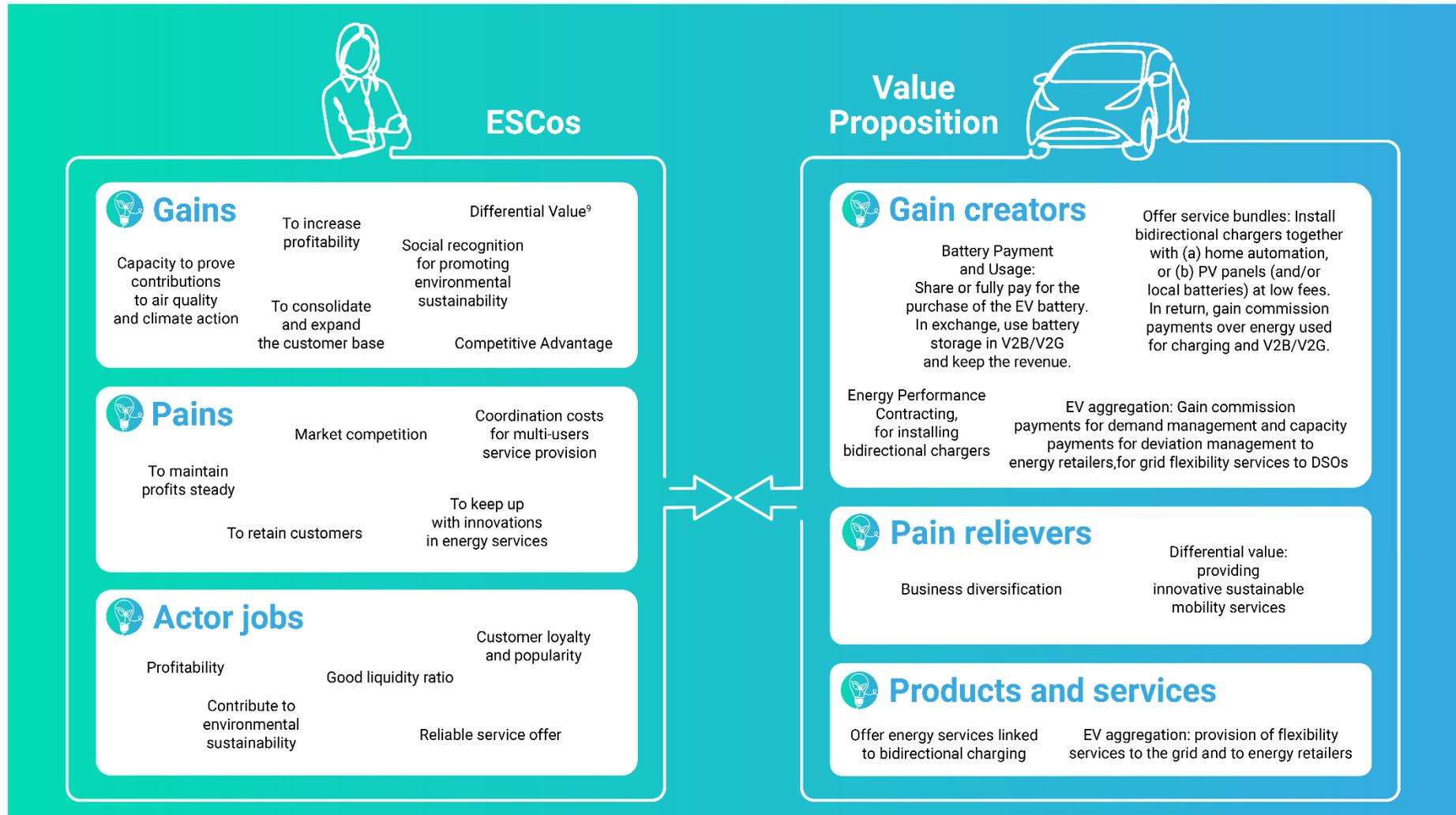


Figure 7: ESCo Value Proposition Canvas

3.7.1 Value Statement

ESCOs

- Be competitive: provide innovative energy services in bidirectional EV charging, helping users cut energy costs, while being more sustainable! And go further, become an EV aggregator and gain revenues by offering flexibility services to DSOs and energy retailers!

3.8 Energy Communities

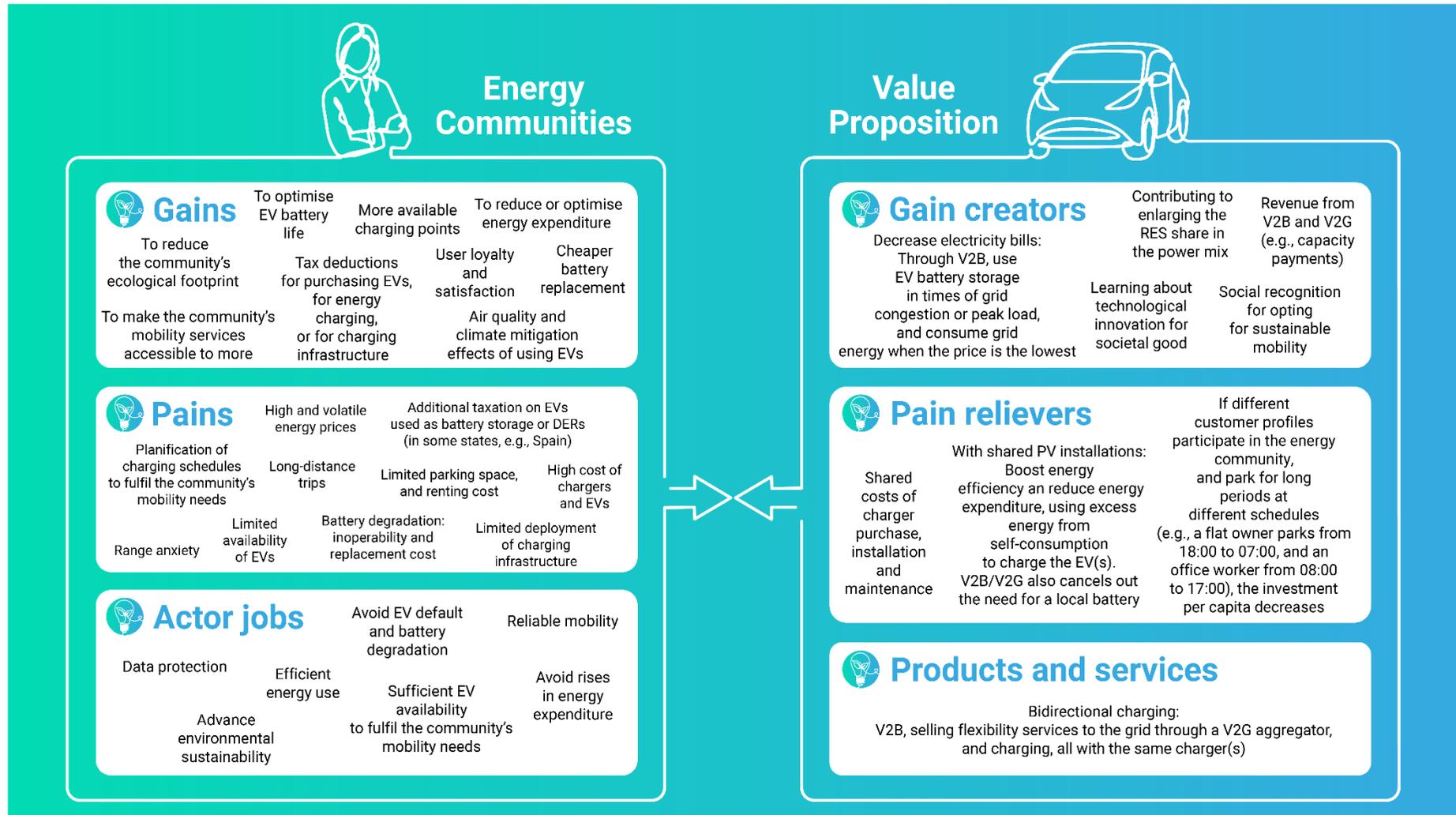


Figure 8: Energy Community Value Proposition Canvas

3.8.1 Value Statement

Energy Communities

- Expand the benefits of using EVs: power your building, avoid peak prices, gain revenues by contracting an aggregator, and help the grid use renewables!

3.9 Aggregators

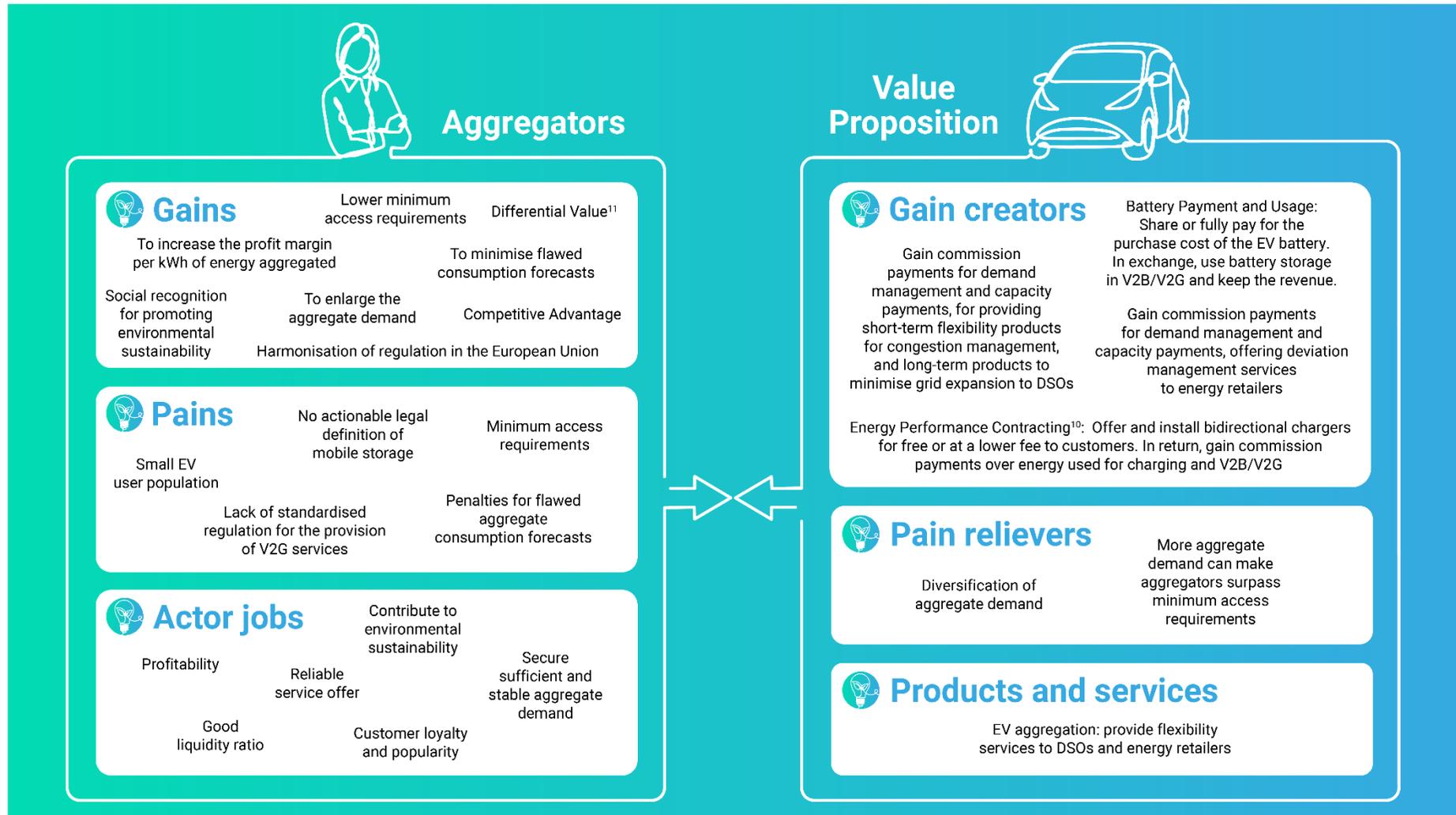


Figure 9: Aggregator Value Proposition Canvas

3.9.1 Value Statement

Aggregators

- Be a front-runner: aggregate EVs and provide flexibility services to the grid and deviation management support to energy retailers!

3.10 Financial Actors

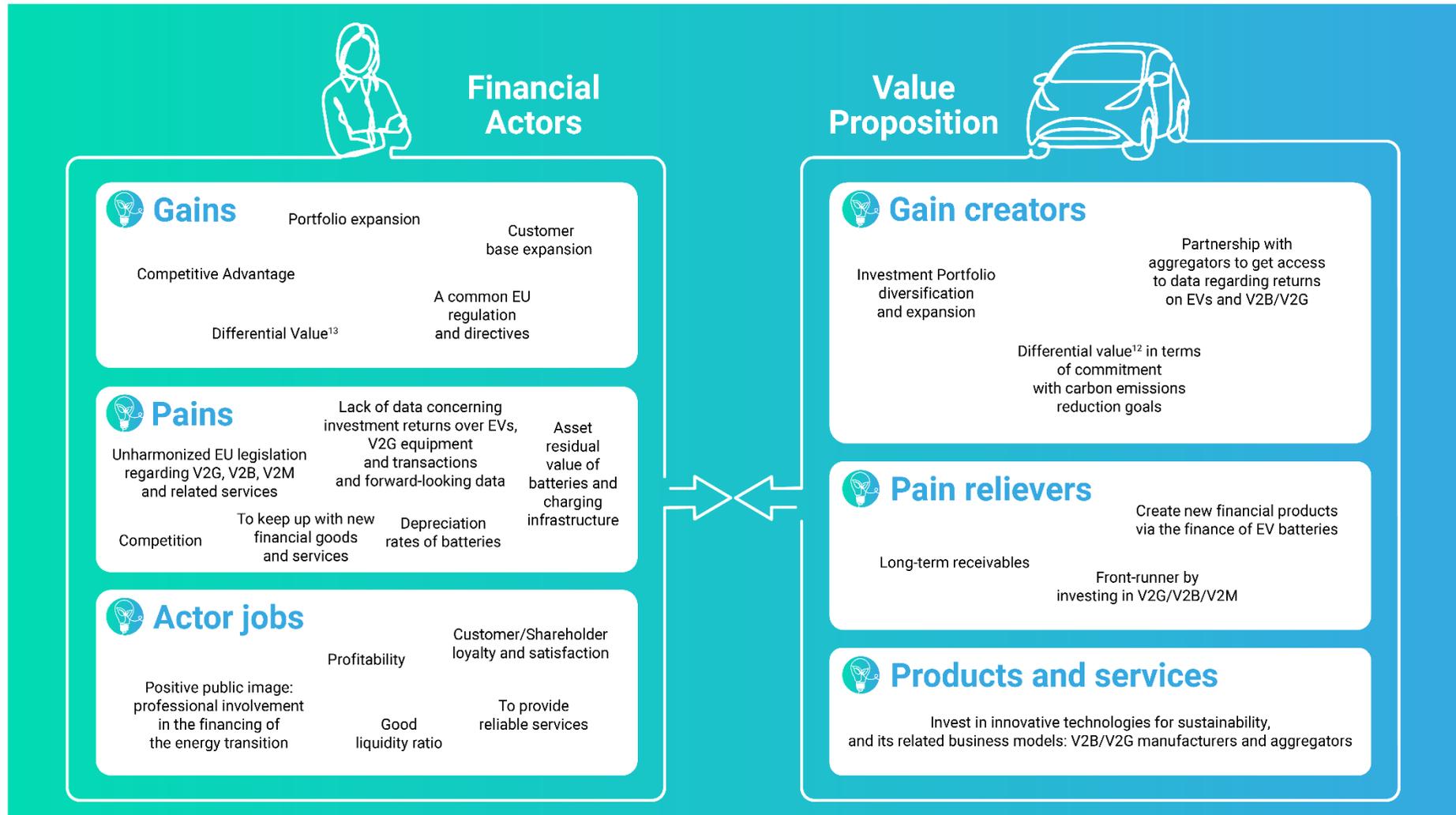


Figure 10: Financial Actor Value Proposition Canvas

3.10.1 Value Statement

Financial Actors

- Invest in innovative sustainable mobility services, that are at the forefront of the European energy transition, and bound to stay in the market!

3.11 Value Proposition Actor Map

To properly understand and contextualise the value propositions described in this deliverable, the following graph maps the main relations and interactions between the ten key actors addressed above. A more comprehensive graph displaying both actor interactions and the content of the value propositions for each of them is available on the website of the V2Market project, and can be consulted through the following link: <https://v2market-project.eu/wp-content/uploads/2022/06/mapa-actors-value-canvas.png> .

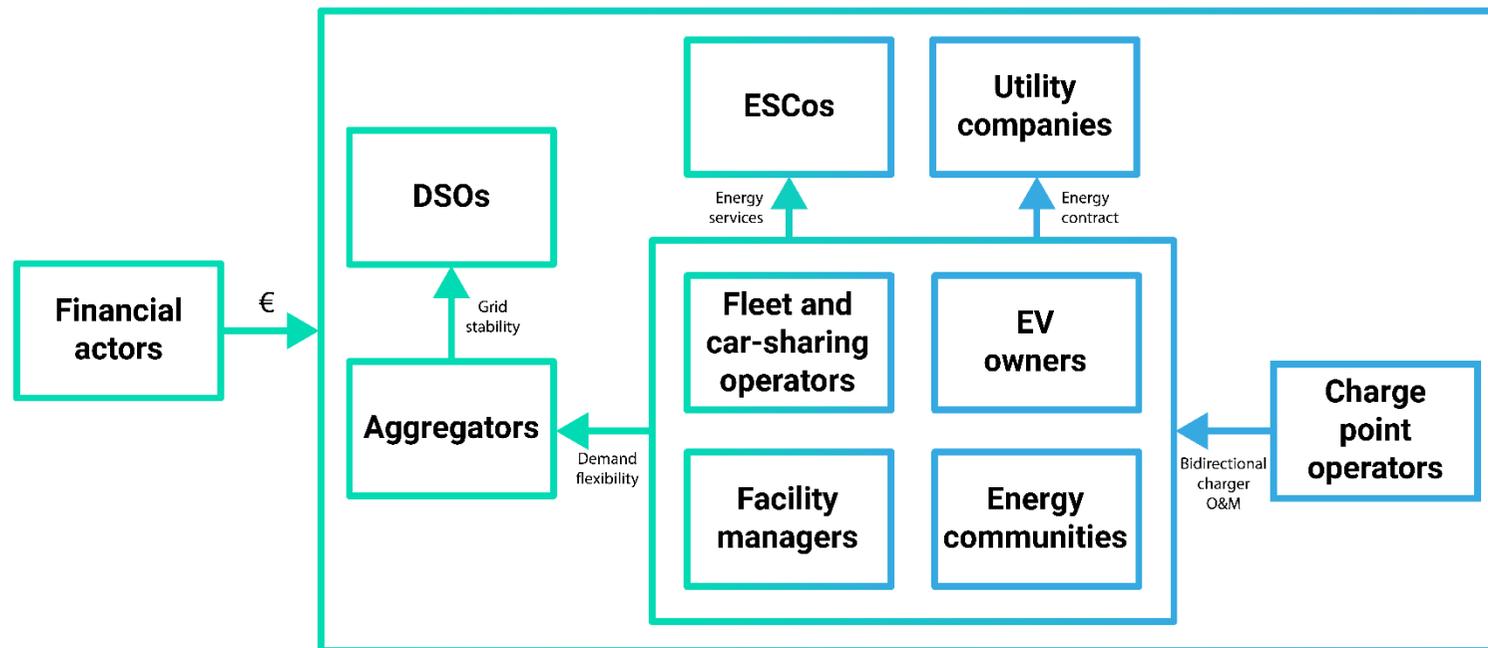


Figure 11: Value Proposition Actor Map

4/ Conclusions and Next Steps

This deliverable has sought to outline the main benefits that ten key customers and stakeholders in the value chain of V2B/V2G services would obtain from contracting them, or from participating in their provision. To do so, it has indicated present needs of each of the ten key stakeholders, as well as the contemporary difficulties and obstacles they face, and it has described how V2B/V2G could contribute to solving or mitigating some or all of them.

The value proposition canvases evince that, should adequate and enabling regulation be set in place, key beneficiaries of the commercialisation of V2Market services would be end-users counting with large or heavy-duty fleets, as well as facilities pursuing energy-intensive activities (e.g., industrial buildings, offices, commercial centres). From the provision site, ESCos engaging in either or both energy service offers or EV aggregation, as well as DSOs in need of flexibility services, also stand out as clear beneficiaries.

Together with the findings of D2.1 and D2.2, the results of WP2 contribute to the V2Market project both a user and stakeholder-centric assessment of the business cases that can be developed to launch V2B/V2G in European markets. As such, it adds to the work of the project a clear understanding of the main needs, and interests of key customers and stakeholders to V2Market services, constituting a highly insightful guide with which to evaluate the economic, social, legal, and technical feasibility of commercialising V2B/V2G. Specifically, these insights from WP2 will be able to inform WP3's analysis of electricity markets and their capacity to integrate flexibility services from EV aggregation. Likewise, the findings of this deliverable will serve as orientation for the elaboration of financial schemes conducted in WP4, and the various contractual arrangements to be designed in WP5.

To conclude, D2.3 will be consulted throughout the remaining WPs in order to validate and assess business model proposals in terms of how adequately they suit the present circumstances of key customers and stakeholders, how profitable they are likely to be for each of them, and whether they align or not with their variegated interests, aspirations, and technical capabilities.