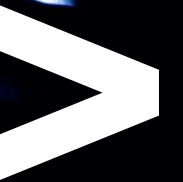
A futuristic car is shown from a low angle, positioned in a dark tunnel. The tunnel walls are lined with bright, glowing blue light strips that create a strong sense of depth and perspective. The car's surface is highly reflective, mirroring the surrounding light. The overall atmosphere is sleek and high-tech.

Electric Mobility

EV Charging Platforms
Vendor Assessment 2.0



With the energy transition more pressing than ever, eMobility is becoming big business

EVs and plug-in hybrids are expected to rise significantly between 2020 and 2030 (EU), with 30% of new vehicles expected to be electric by 2030.

If we want to stay comfortably within the recommended limit of 10 electric vehicles (EV) per public charging point, **we need more EV charging infrastructure.**

The IEA estimates that we could need **25.3 million public charging points globally by 2030**, translating to a **capacity of 0.6TW.**

In particular, **fast chargers** are needed to support long-distance travel and reduce charging times. Furthermore, an increase in bi-directional charging infrastructure and smart charging technology supports grid flexibility, allowing EVs to charge at optimal times to reduce grid strain and to act as batteries by feeding energy back into the grid at time of high energy usage.



Source : [Delta.ee](https://delta.ee)

This opens a new potential value pool for entrants into the fast, growing charging market.

Accenture helps clients to identify **new business models, partnerships and ecosystems** and supports companies in getting their IT strategy right to grow their EV charging business and place their investment bets to decide on **what to build versus buy**.



Accenture conducts its 2nd EV Charging Platform Vendor Assessment

Accenture led an EV Charging Platform Vendor Assessment in 2019 covering the global EV market, roaming platforms, aggregators and virtual power plants. Given the speed of change in the industry and the offerings available, Accenture updated the assessment, **EV Charging Platform Vendor Assessment V2.0**, to cover vendors with dedicated white-label platform SaaS for EV charging.

The EV Charging Platform Vendor Assessment V2.0 is centered on pure SaaS vendors with a dedicated white-label platform solution for EV charging.



The assessment focuses on the EV charging software that is required when companies want to become active in eMobility, specifically when they want to become a **Charging Point Operator (CPO)** and/or an **eMobility Service Provider (eMSP)**.

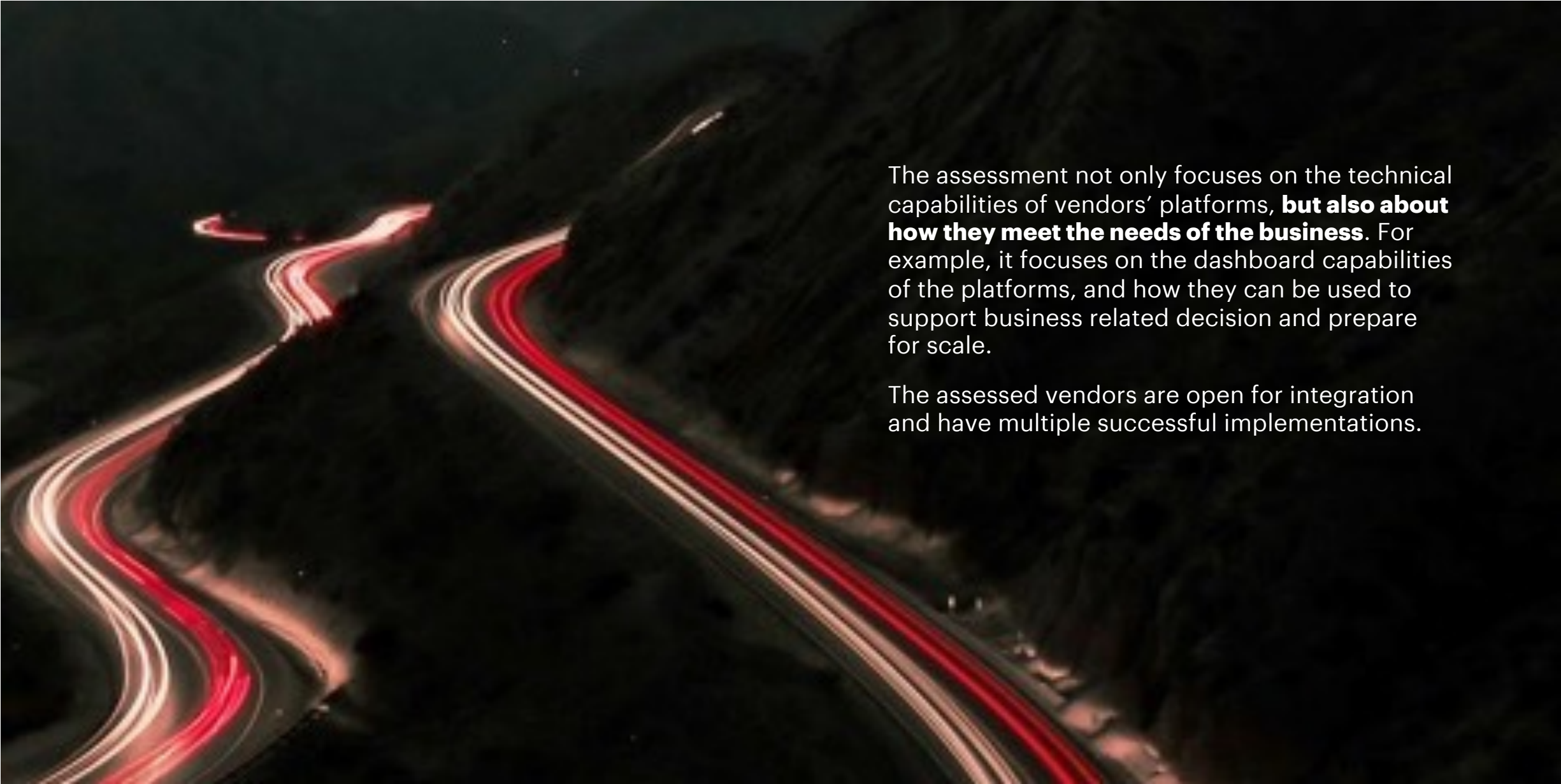
Charge Point Operators

- Operate their own network of chargers for private, B2B and/or public chargers Maintain and operate physical charging stations
- Make sure that the network is up and running and that EV drivers of all eMSPs can access it
- Support EV drivers in case of errors with chargers

eMobility Service Providers

Provide their customer (EV Drivers) with EV charging services

- Offer those services by providing charging cards or mobile apps with which customer can access the chargers
- Take care of the network monetization, and must support different pricing models (e.g. pre-paid, post-paid)
- Support EV drivers in case of non-functioning app/cards, invoices and transactions



The assessment not only focuses on the technical capabilities of vendors' platforms, **but also about how they meet the needs of the business.** For example, it focuses on the dashboard capabilities of the platforms, and how they can be used to support business related decision and prepare for scale.

The assessed vendors are open for integration and have multiple successful implementations.

EV charging platforms offer the core capabilities required by companies trying to support the following use cases. During the assessment we rated the different vendors based on their coverage of the following use cases:



B2C home chargers, enabling the connection of **single home charger** and linkage to an EV driver account. The system offers easy charger installation and sign-up for the EV driver via a customer portal.



B2B office chargers, enable the connection of **multiple office chargers** and linkage to B2B account. The system offers a facility managers' portal which supports the implementation of flexible tariffs and load management capabilities.



B2C and B2B semi public charging, offers the ability to **change a charger's mode from private to public** (i.e.: enable roaming). The system supports easy set-up of technical roaming connections.



B2G public charging, allows **municipalities and public charging CPOs** to operate chargers in the public domain where chargers have their own grid connection. Operational excellence is key. Direct payment is supported.



B2B direct current (DC) fast charging, offers specific **monitoring and insights regarding grid usage** needed in the operation of DC fast chargers. The platform is integrated with an external payment terminal provider.



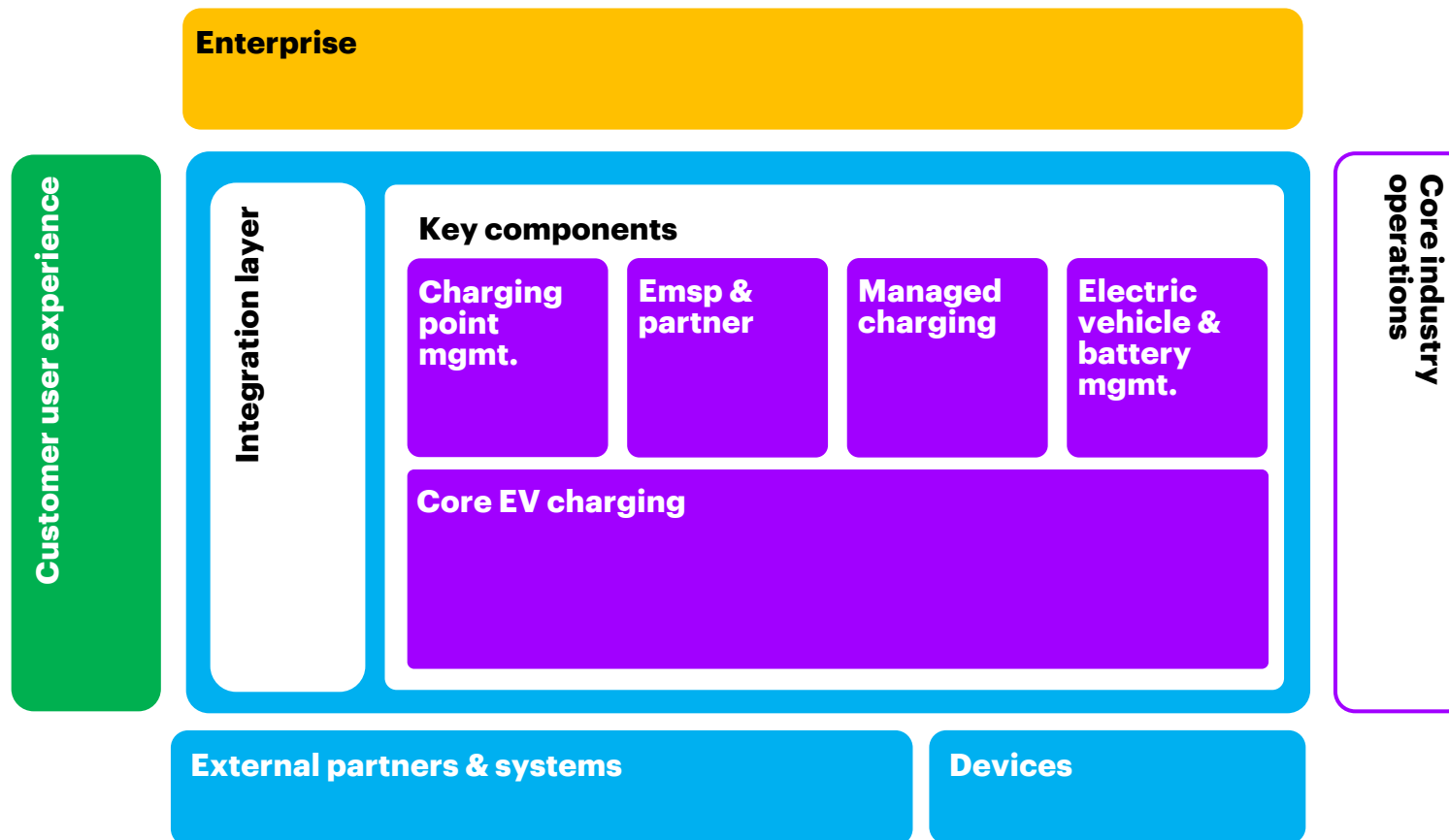
B2C and B2B public charging cards, offer **tokens for public charging** and **related subscriptions** with access to the CPO network by peer-to-peer roaming connection or via roaming hub integrations.

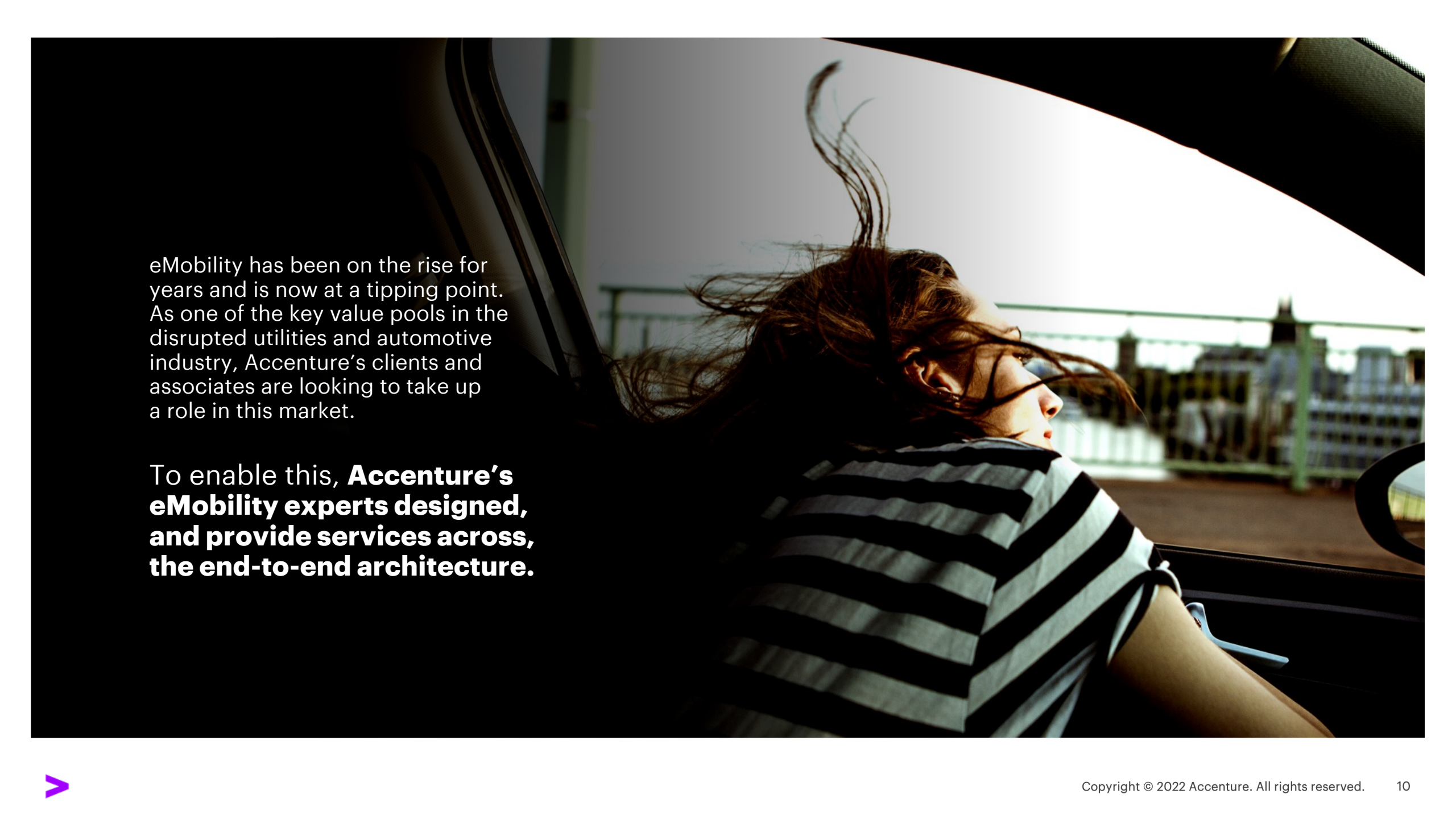
EV Charging Platforms

Architecture and core capabilities

Accenture created a functional architecture overview highlighting the key components of EV Charging Platforms

Accenture EV Charging functional architecture





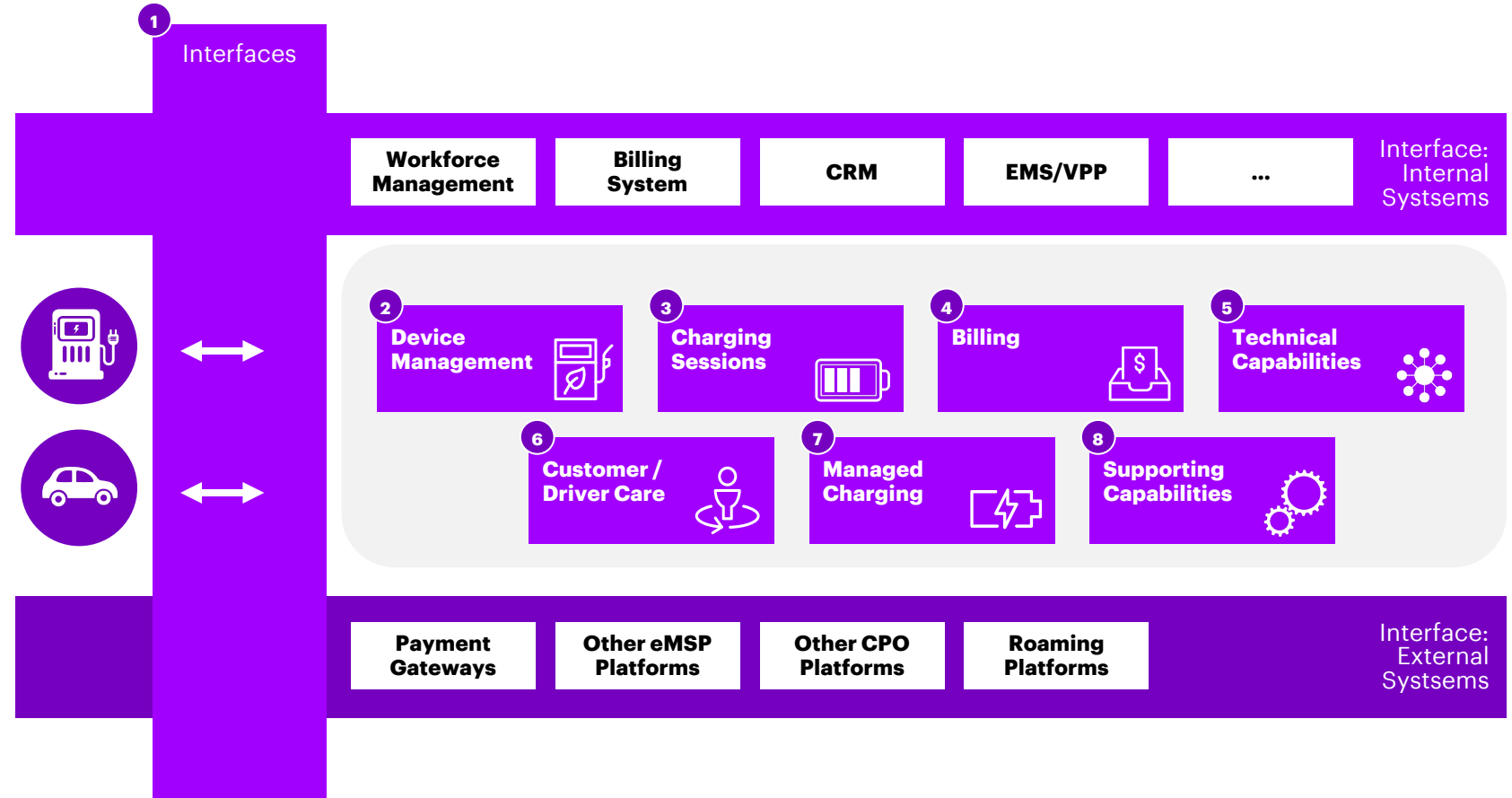
eMobility has been on the rise for years and is now at a tipping point. As one of the key value pools in the disrupted utilities and automotive industry, Accenture's clients and associates are looking to take up a role in this market.

To enable this, **Accenture's eMobility experts designed, and provide services across, the end-to-end architecture.**

This assessment focuses on the back-end systems required when companies want to become CPO and/or eMSP


focusing on the Core EV Charging element of the High Level E2E Architecture.

In particular, the EV charging software vendor landscape, created by the Accenture's **eMobility team**, focuses on the **back-end software systems** required when active in eMobility, specifically when active in **EV charging**.



The capabilities offered by charging platforms can be grouped in 8 large domains





**Charging platforms
can function as a
standalone system
or can be integrated
with internal and/or
external systems**

Vendor Assessment

Findings and key takeaways

**Accenture
conducted an
in-depth assessment
of the most relevant
EV Charging Platform
providers**





1,5-hour interview, including an **end-to-end demo**, as well as a series of questions (+- 200) based on the capabilities defined in **our preestablished functional architecture**. Before the interview, the vendors also shared the **technical documentation** regarding their platforms.



8 key platform vendors identified and interviewed regarding a range of capabilities within the topics of fleet charging enablement, managed EV charging, EV charging technical advisory and EV platform services.



In-depth questions to assess and rank their capabilities, resulting in **a series of documentation** that defined vendors' capability rating **as a standalone and compared to other vendors**, including on a heatmap.



Accenture discovered that some vendors were particularly strong at **billing, managed charging, technical capabilities** and core EV charging functionalities. Accenture also identified **2 clear market leaders** who demonstrated very advanced capabilities compared to the market standard.





**Based on these
interviews, Accenture
observes 6 major
trends in EV charging
platform development**



Scalability with bulk functionalities

As sales of EVs and demand for charging stations rise, the EV-Platform vendors are preparing their platforms for scale **to meet demand** with **bulk functionalities** and high focus on technical **system performance**.



Increasing focus on smart charging

Cloud based smart charging (mainly load balancing) as a critical enabler for B2B use cases with multi-brand charger base, including reducing grid strain and increasing valuable data collection.



Development of user-specific portals

As tailored and **seamless reimbursement** procedures are more highly sought after by customers, we see key vendors increase capabilities such as specific portals for **employers', fleet** managers, **facility** managers and **lease** companies.



Increased integration capabilities

Platforms mainly focus on **pure EV charging functionalities** and rely on **integration for enterprise capabilities** covering CRM, invoicing, and payments. There is an increased level of **maturity** in terms of **integration capabilities** including API's, documentation, and onboarding procedure.



Security

Compliance with **ISO15118** and other **standards** are increasing including higher security measures as drivers become more concerned about their EV data and EV charging data.



Active M&A and IPO play

There is consolidation in the market from high levels of **M&A** and **IPO** activity e.g. Greenflux was acquired by DKV, Everon is part of the planned EVbox IPO, Has.to.be acquired by ChargePoint, and Allego is planning an IPO.

What can Accenture offer

Our dedicated offering

Accenture has a dedicated EV practice team ready to support its client with the eMobility transition

...and is also **supported by umlaut**, our recent acquisition that offers engineering services to clients

60+ eMobility related projects successfully delivered

4200+ Experts, engineers and enthusiasts

50+ EV Charging **experts**

200+ eMobility experts

2 EV Charging IoT **delivery center**

2+ **Decades** of successful deliveries and completions

120 Locations **all over the world**

50+ Locations **all over the world**

20+ **Innovation Centers** to inspire our clients



Across this functional architecture, we provide advisory and implementation services for our clients:



CPO and eMSP journey advisory

- Capabilities assessment & roadmap strategy
 - Hardware & software considerations
-



Build / Buy / Improve

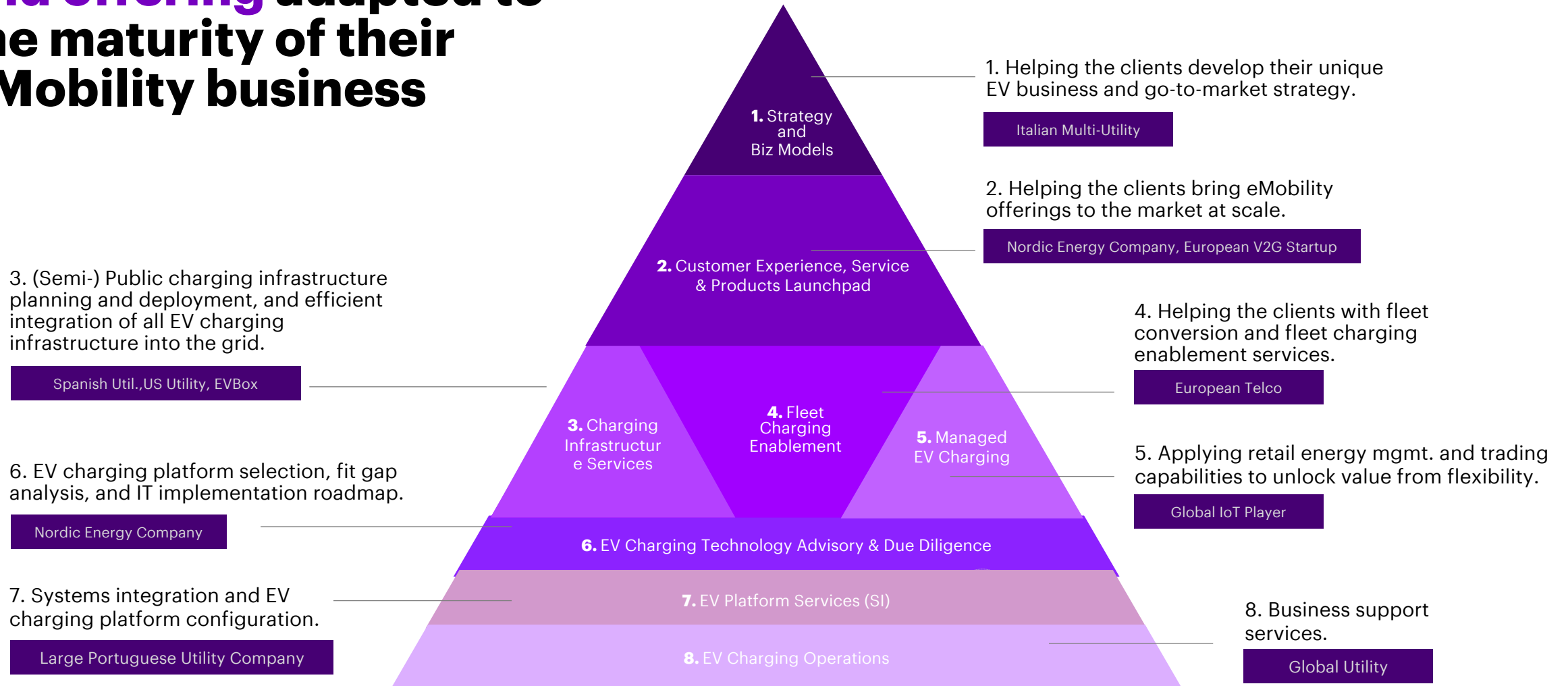
- Support customers to decide on the **buy/make approach** for EV Charging platform
 - **Buy** Support customers to select the right EV charging platform
 - **Make + Buy** Assess maturity of existing platform and/or platform requirements support customers to ideate, build, improve, test and scale platform
 - **Make + Buy** Facilitate integration with existing systems + implement customization
-



M&A process advisory

- Support customers in eMobility related M&A process(es)
- Technical and Software Due Diligence for M&A process and comparison
- Post - M&A strategy consolidation

Accenture supports clients with an **end-to-end offering** adapted to the maturity of their **eMobility business**



Accenture credentials

Accenture has demonstrated strong capabilities in the EV Charging Tech Advisory & Due Diligence and EV Platform services capabilities

Large Portuguese Utility company preparing for international scaling

- The client presented its use-cases, which were thereafter analyzed, challenged and complemented with improvements, market and competitor trends.
- During workshops with business and IT, as-is architecture was built, and scenarios regarding to be architecture were defined.
- A phased roadmap was constructed on how to evolve to the target architecture landscape.



Platform architecture for a Large Nordic Financial Institution

- Mapped business needs to platform requirements and defined target architecture (microservices and APIs).
- Architecture and strategic support defining their new mobile cloud platforms and ecosystem services.
- Advisors for the architecture board and Business units.



Accenture and Free2Move eSolutions are joining forces to accelerate energy transition

- Unlock customer and companies transition to e-mobility with innovative charging services, across private and public destination (eMSP).
- Design, install and manage revolutionary private and public charging devices, as well as a complete suite of fast charging systems.
- Technology to use parked electric vehicles to stabilize the electrical grid to promote the spearhead of renewable energies, and manage batteries lifecycle.



German start-up partnered with Accenture to become a full E2E EV charging energy supplier

- Accenture and the client selected the most relevant capabilities to support their future growth in the EV space.
- Architecture supported the client in both its B2C and B2B(2E) products definition.
- Accenture co-created with the client the design of the core competencies and provided in an agile manner the IT integration of its EV charging services..



**... as well as extensive experience
related to other capabilities**

Leading Italian utility company decides to launch e-Mobility services

- Accenture helped the client with a benchmark of EVs charging point providers, new technologies and start-ups in the e-Mobility industry.
- Building an ecosystem of technology Partner & Supplier, design of the governance model.
- Deployment Plan Strategy & go-to-market strategy.



Major oil and gas multinational seeking to develop its eMobility offer

- Accenture helped in integrating existing fuel card into the EV service so that drivers could use one single cards.
- Performed product management functions to refine the target market for the service.
- Delivered a full beta version to UK users within 3 months before launching.



Global market leader producing charging stations willing to support its increasing growth

- Accenture helped in defining the required blueprint roadmap within 10 weeks that delivers the required business value.
- Designed the high-level customer journeys for most important distribution channels.
- Accelerated client's migration to SAP S/4HANA to deliver more business value.



Cost assessment for a major European telco willing to electrify its commercial fleet

- Accenture developed a detailed picture of the “current state”, summarizing the carbon target, emissions trends and critical insights.
- A scenario-modelling tool was developed to simulate how the rate of electric vehicles deployments might affect the business’s carbon footprint, capital and operating costs relative to a “business as usual” fleet replacement cycle.



Accenture's Thought Leadership on Electric Mobility

1.

Accenture Connected Energy Growth Models Point of View

Accenture's study on the most promising connected energy business models, **centred on DERs and eMobility to identify where value will exist in 2030.**



2.

EV : More than a new powertrain

Accenture's study on the expected number of EVs on the road and how this acceleration toward EV production **is shaking up the automotive industry.**



3.

Mobility Study

Accenture's Fjord led this study with Volkswagen Group to learn **what motivates people's transport-related decisions** in particular environments.



4.

EV Value Chain

Accenture's study of why car manufacturers need to rethink their **ecosystems, the customer journey and the entire value chain.**



5.

EV charging: From E to Me

Thought leadership on the **acceleration of smart charging** as a facilitator to the energy transition.



6.

Accenture at COP26

Accenture participated extensively at the COP26 to deliver **on Accenture's Sustainability Value Promise** of creating value and impact for all stakeholders.



Contact us



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About Accenture

Accenture is a global professional services company with leading capabilities in digital, cloud and security. Combining unmatched experience and specialized skills across more than 40 industries, we offer Strategy and Consulting, Interactive, Technology and Operations services—all powered by the world’s largest network of Advanced Technology and Intelligent Operations centers. Our 674,000 people deliver on the promise of technology and human ingenuity every day, serving clients in more than 120 countries. We embrace the power of change to create value and shared success for our clients, people, shareholders, partners and communities. Visit us at www.accenture.com.

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