

VALUE FRAMEWORK FOR SUSTAINABLE CHARGING INFRASTRUCTURE

A MOBILITY PATH TO NET-ZERO

The 1.5° challenge

Car manufacturers across the globe are pledging to go electric and electric vehicle (EV) sales are expected to exceed those of traditional vehicles by 2030. To reach the 1.5° goal of the Paris agreement, fast vehicle electrification must be accompanied by equally rapid deployment of charging infrastructure, increased renewable energy usage and grid updates. Improving the business case, minimizing the financial risk for private investment and allocating public funds is required to accomplish a sustainable and fair transition.

The question is “how to support a fast and sustainable transition to net-zero transport”

A value framework to guide industry action

The WBCSD [Mobility Decarbonization project](#), part of the [Transforming Urban Mobility program](#), is bridging the gap to 100% EV fleets by aligning the industry on common technologies and policies that support efficient energy and transport integration along with positive user experience for a fast adoption. The proposed Value Framework helps businesses and policymakers understand how to accelerate change and play a leadership role.

According to the IEA Net Zero Emissions scenario, reaching 1.5° by 2030 implies:

350 million

Driven electric vehicles



20x more charging stations

>USD **\$100 billion**

Investments in chargers only

>USD **\$100 trillion**

EV technology and grid investment



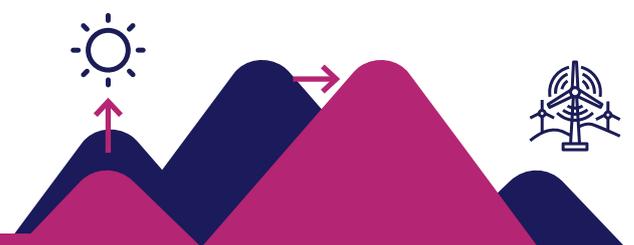
Fair and sustainable transition

A lack of charging infrastructure is continuously stated as the #1 barrier for EV fleet scale-up

Shared value in mobility transition

Connected and cost-optimized operations of EV fleets can accelerate deployment of accessible infrastructure and enable efficient energy and transport integration, bringing value to people, businesses, and cities. Flexible consumer engagement in energy markets improves the infrastructure business case and lowers overall emissions. Shared charging infrastructure increases the value of space, while multimodality ensures accessibility and increased utilization.

The distributed and flexible nature of EVs enables more renewable energy sources (RES) on the grid, while remunerating consumers for their grid balancing



WHAT BUSINESSES RECOMMEND

Address the needs of different EV fleets

By setting fuel economy standards and proposing incentive schemes that differentiate user groups, stimulate fleet up-scaling and help development of EV secondary markets, grid balancing and shared infrastructure.

Engage and incentivize flexible consumers

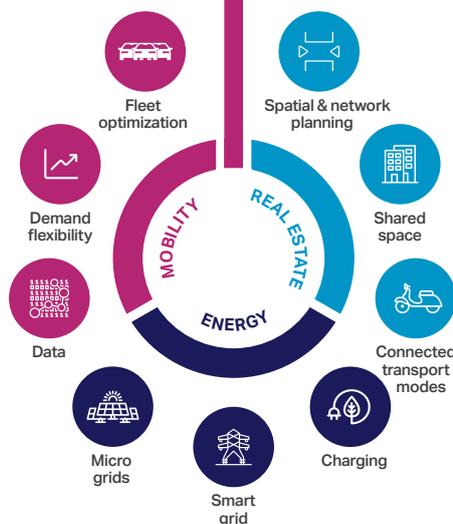
By establishing regulation that enables and incentivizes energy market participation and stimulates enabling technology investments.

Agree on data-sharing principles

By collaborating on defining a common digital framework for tailored infrastructure planning and needed data for energy flexibility market participation.

Incentivize and streamline charging integration

By unlocking asset energy flexibility, streamlining authorization processes, creating legal requirements for minimum public and private infrastructure deployment and establishing financial mechanisms to bridge investment gaps.



Encourage deployment of smart grid technologies

By incentivizing development and implementation of smart grid technologies such as managed charging, smart metering, building energy management systems and advanced network management tools, including mandating deployment of smart charging and introducing innovative and dynamic tariff systems.

Unlocking shared value through technology innovation and favorable policy frameworks can increase the efficiency of EV fleets and improve the business case for sustainable infrastructure uptake.

Establish coordinated strategic planning and management

By taking a leading role in strategic planning, ensuring sustainable deployment through advanced planning, analytics and mobility management tools.

Share space and charging infrastructure

By proposing incentives and space access policies that promote shared and accessible overnight charging infrastructure.

Connect transport modes

By coordinating spatial and mobility planning to develop mobility charging hubs that optimize the charging cost, improve accessibility and increase options for charging placement.

Maximize charging from renewables

By setting low carbon energy requirements in buildings, removing existing barriers to local RES consumption and incentivizing deployment of microgrid technologies, such as energy management systems and storage.

Join the coalition of mobility, energy and real-estate partners

The group calls for the rest of the supply chain to join us in aligning roadmaps for bridging the investment gap and establishing national coalitions for action. For more information, please contact [Urška Skrt](#), Manager, Mobility, WBCSD.

BUSINESS CALL TO ACTION

As a driver of an EV, this Value Framework resonated with me as I know first-hand the shared value yet to be broadly realized across the mobility, energy and real estate sectors. The necessary industry action required to bridge this gap is addressed in the provided highly relevant use cases and serves as a key tool to accelerate decarbonization strategies within cities and business.

Peter Oosterveer

Chief Executive Officer and Chairman of the Executive Board, Arcadis

There is no Planet B, and we must act now to make mobility more sustainable. Acceleration of electric mobility is undoubtedly a key part of it, and it can only be successful if it goes hand in hand with the development of the relevant charging infrastructure. An infrastructure that can ensure efficiency and convenience, while meeting users' expectations.

Andrian Cainarean

Head of Mobility Partnerships and Energy Transition at Arval BNP Paribas Group

With a rising number of electric vehicles (EVs) on the road, there is a critical need to have the right EV charging infrastructure in place and the right power capacity to support. Combining intelligent EV charging, power management and energy storage solutions delivers real customer benefits and ensures smarter and more sustainable energy management for the grid.

Craig McDonnell

Senior Vice President and General Manager, Energy Transition & Digital, EMEA at Eaton

We are proud to support the launch of WBCSD's Value Framework for sustainable charging infrastructure. Electric vehicles may be silent but the path to net-zero mobility must be loud and clear. Smart technologies are critical to the growth of sustainable charging infrastructure, especially in urban environments. EDP has been actively working to provide and develop the right solutions, leading this transition with two major commitments. First, electrifying 100% of our light duty vehicle fleet, and 50% of our heavy-duty fleet by 2030. Second, doubling the number of charging points installed across Portugal, Brazil and Spain in 2025. We are committed to accelerating the expansion of electric mobility. This is a challenge that increasingly requires cooperation between companies, sectorial organizations and policy makers. We encourage other companies in this ecosystem to join us.

Miguel Stilwell d'Andrade

CEO of EDP

As we already entered the Decade of Action, even with the progress made so far, it is crystal clear that additional actions are needed to fully capitalize on the current momentum and to push 100% EV fleet adoption into the exponential growth rate needed to meet the Global Goals.

Alberto Piglia

Head of e-Mobility, Enel X

Light weight solutions are critical to extend the range of electrified cars and help to save energy. In addition, specialized materials such as polyamide compounds enable fast and safe charging.

Frederique van Baarle

Head of High Performance Materials Business Unit, LANXESS

Mercedes-Benz AG is accelerating from EV-first to EV-only: That means by the end of this decade Mercedes-Benz will be ready to go 100% electric – where market conditions allow.

Ola Källenius

Chairman of the Board of Management, Daimler AG and Mercedes-Benz AG

Microsoft is pleased to announce our collaboration with the World Business Council for Sustainable Development (WBCSD) at COP26. Microsoft is committed to supporting the automotive industry through its shift to connected, electrified vehicles and intelligent transportation systems driven by the need for our world to significantly reduce carbon emissions. As a member of WBCSD and its Mobility Decarbonization partner coalition, Microsoft hopes to help grow EV fleets by aligning automotive, energy, real estate and public sectors on common technologies, a common data model and policies that support efficient energy and transport integration.

Sanjay Ravi

General Manager of Automotive, Mobility & Transportation Industry, Microsoft

We still have some way to go to get the infrastructure in place and its important energy networks. We need to work with governments to map out where critical infrastructure is needed to enable a faster rollout of charging points.

Duncan Burt

Chief Sustainability Officer, National Grid

Faced with climate change and global warming, the world needs transport not only to be smart and safe, but to be sustainable and integrated. Sustainable charging infrastructure is an important building block to complement zero-emission public transit.

Marjan Rintel

Chief Executive Officer, Nederlandse Spoorwegen (NS)

PARTNERS



ABOUT WBCSD

WBCSD is the premier global, CEO-led community of over 200 of the world's leading sustainable businesses working collectively to accelerate the system transformations needed for a net zero, nature positive, and more equitable future.

We do this by engaging executives and sustainability leaders from business and elsewhere to share practical insights on the obstacles and opportunities we currently face in tackling the integrated climate, nature and inequality sustainability challenge; by co-developing "how-to" CEO-guides from these insights; by providing science-based target guidance including standards and protocols; and by developing tools and platforms to help leading businesses in sustainability drive integrated actions to tackle climate, nature and inequality challenges across sectors and geographical regions. Our member companies come from all business sectors and all major economies, representing a combined revenue of more than USD \$8.5 trillion and 19 million employees.

Our global network of almost 70 national business councils gives our members unparalleled reach across the globe. Since 1995, WBCSD has been uniquely positioned to work with member companies along and across value chains to deliver impactful business solutions to the most challenging sustainability issues. Together, we are the leading voice of business for sustainability, united by our vision of a world where 9+ billion people are living well, within planetary boundaries, by mid-century.

www.wbcsd.org

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