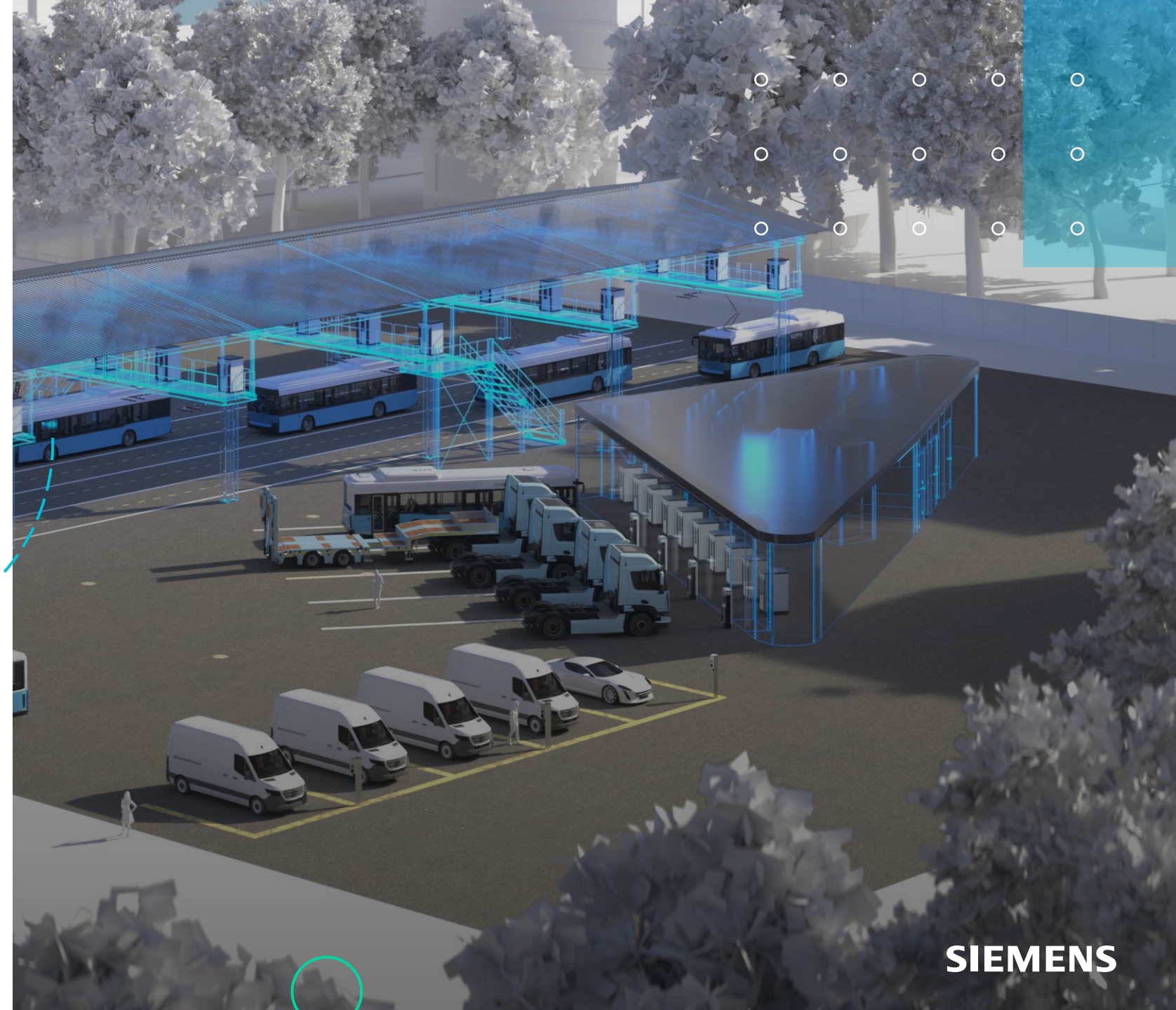
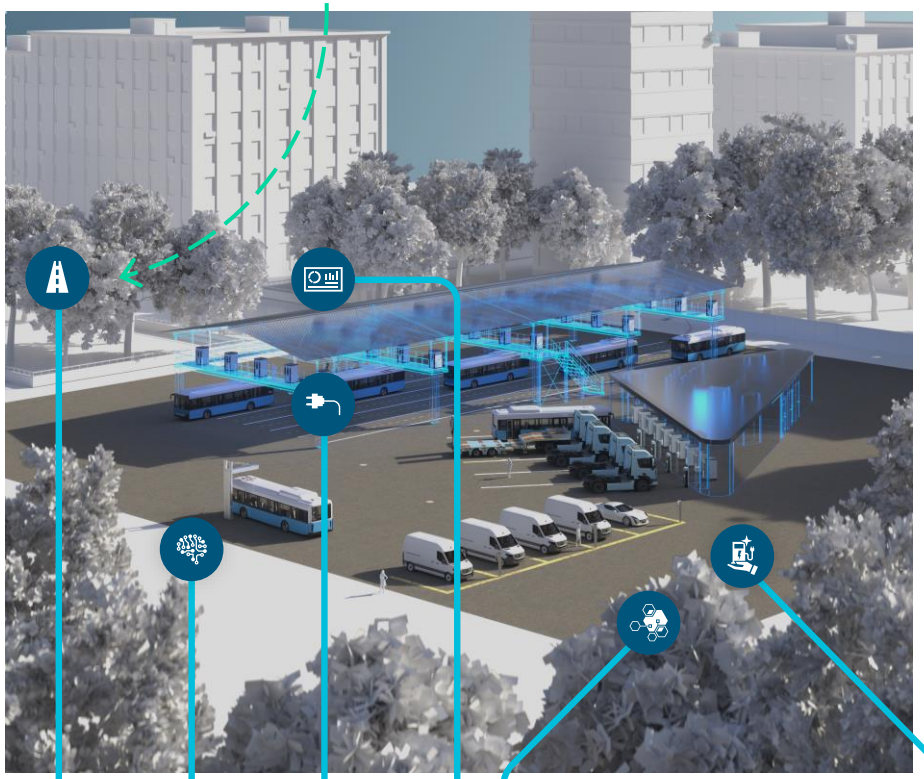
Intelligent, efficient,
reliable and future-proof

Developing the future of eFleet charging

START



Siemens.ca/fleetelectrification



Stages of an exciting journey

Your journey to successful electrification

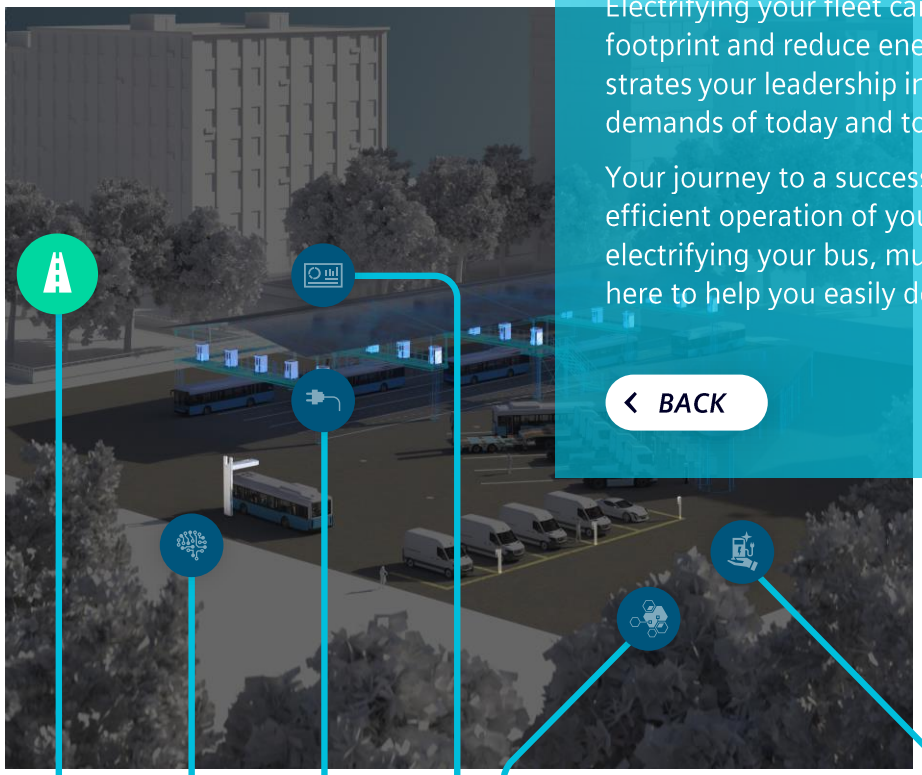
Intelligent planning

Building up a smart charging infrastructure

Efficient management of charging operations

Service beyond charging

Embrace the transition together



Electrifying your fleet can not only help reduce your carbon footprint and reduce energy consumption, but it also demonstrates your leadership in adopting technology that meets the demands of today and tomorrow.

Your journey to a successful deployment of a sustainable and efficient operation of your electrified fleet starts here. Whether electrifying your bus, municipal, or commercial fleet, Siemens is here to help you easily deploy and manage your eFleet depot.

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01

Your journey to successful electrification

Bus fleets

Municipal fleets

Commercial fleets

Construction & mining fleets

01

Your journey to successful electrification

Charged with passion

Electrifying your fleet is exciting and at the same time can be a challenging journey. We at Siemens are committed to supporting you every step of the way to help you find the perfect solutions for your specific needs.

Intelligent planning

Every successful journey begins with thorough planning. Depot concept development, consultancy about grid connection and financial solutions, followed by customer specific simulations – and you are all set to go.

Right charging infrastructure

Depending on your electrification needs, we offer you the necessary hardware, whether you need AC or DC charging.

Depot grid connect

Siemens electrical equipment (make-ready), as well as our integration of photovoltaics or battery storage options, provide a proven, integrated offering for sustainable installations at your facility.

Digital solutions

Be sure that charging operations of your fleet will run smoothly and efficiently.

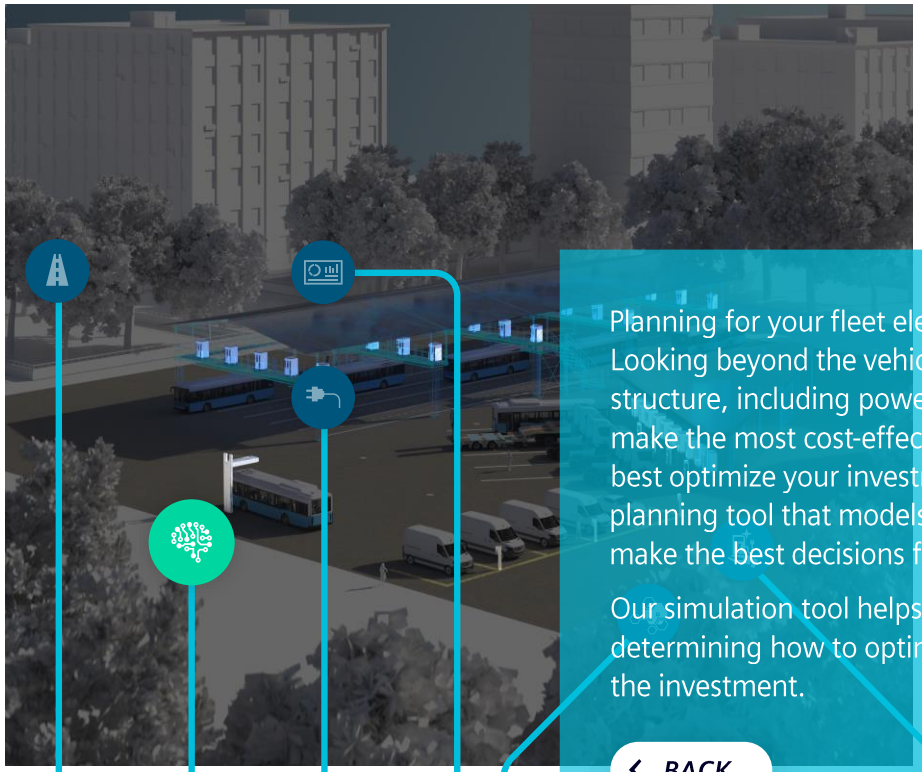
With us you get a dedicated digital solution for what ever need you have during your electrification phase.

Connected services

With our cloud-based and comprehensive classical services, your fleets will be well cared for and available whenever you need them.

02

Intelligent planning of the electric infrastructure



Planning for your fleet electrification is critical to your success. Looking beyond the vehicle and considering the charging infrastructure, including power distribution requirements, will help you make the most cost-effective implementation decisions so you can best optimize your investment. Siemens has developed an effective planning tool that models prospective electrification to help you make the best decisions for your fleet charging infrastructure.

Our simulation tool helps our partners consider key elements when determining how to optimize charging infrastructure and maximize the investment.

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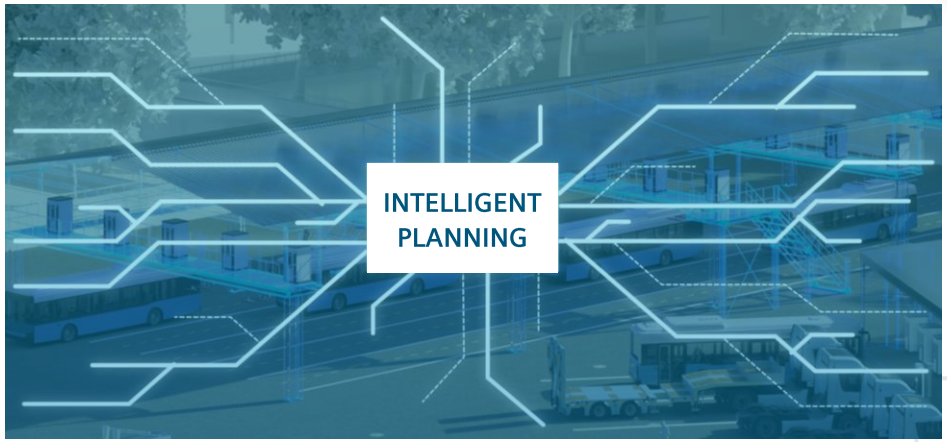


02

Intelligent planning of the electric infrastructure

Build a reliable foundation with effective upfront planning

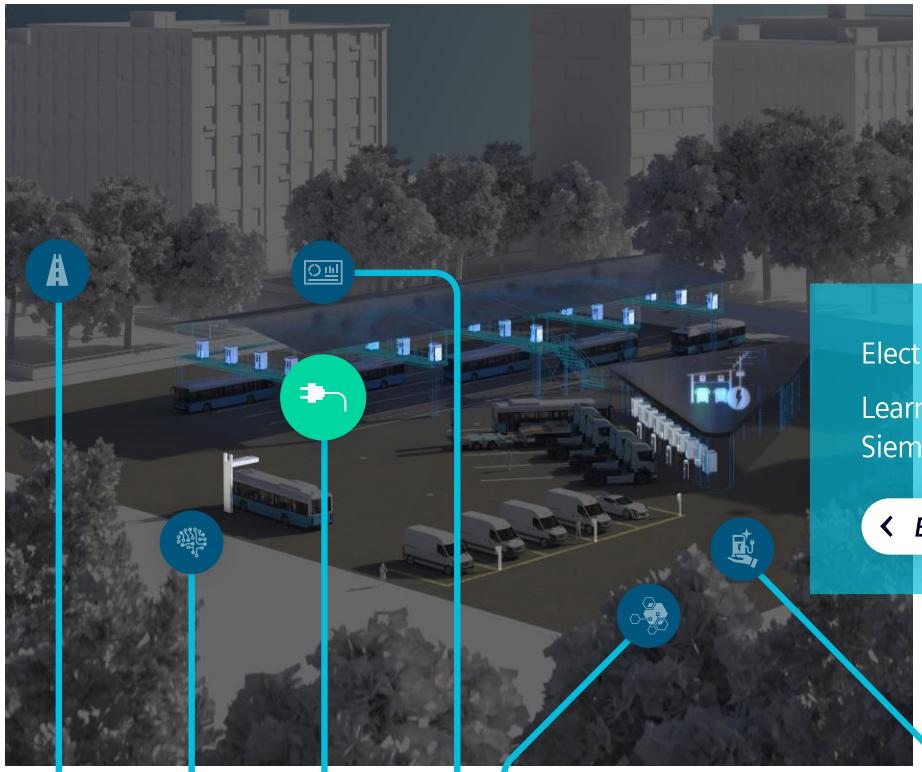
Analyzing and aligning all relevant parameters – such as route data of your fleet, available energy at the grid edge, existing IT infrastructure, physical space and boundary conditions etc. – requires support of a strong partner. Siemens supports you in elaborating the most effective transition plan and the most reliable operational package.

YOUR BENEFITS

- Effective/easy and secure transition to an electrified depot
- Smart depot layout based on charging simulation of existing and new sites
- Future-proof technology setup
- Efficient, safe and reliable operation of your charging infrastructure
- Optimized costs (CAPEX and OPEX)

03

Building up a smart charging infrastructure



Electrifying a depot is more than installing a charger.

Learn more about the depot ecosystem and how Siemens can ensure a smart infrastructure for your fleet.

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Building up a smart charging infrastructure

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LEARN MORE ›

SICHARGE UC product family for DC charging[1]
For public buses, trucks and heavy-duty vehicles

LEARN MORE ›

VersiCharge AC series
For AC charging, whenever you need it

1 UL Standard

The perfect hardware to charge your electric fleet

DC and AC charging – can be deployed in a depot. Siemens has charging equipment to provide power to all types of electric vehicles; buses, trucks, heavy-duty vehicles or electric cars.

Our SICHARGE UC portfolio, as well as our VersiCharge AC series porfolio offers you both AC and/or DC charging options.

YOUR BENEFITS

SICHARGE UC™ product family for DC charging
Flexible and space saving with
- Various connection options
- Robust, durable design for outdoor usage
- Optimized CAPEX and OPEX
- Interoperability and future-proof
- Up to 950 V

VersiCharge AC series™
Modular and flexible configuration
- Smart load management and monitoring options
- Integrated authentication, metering and billing functions
- Scalable design with smart building integration

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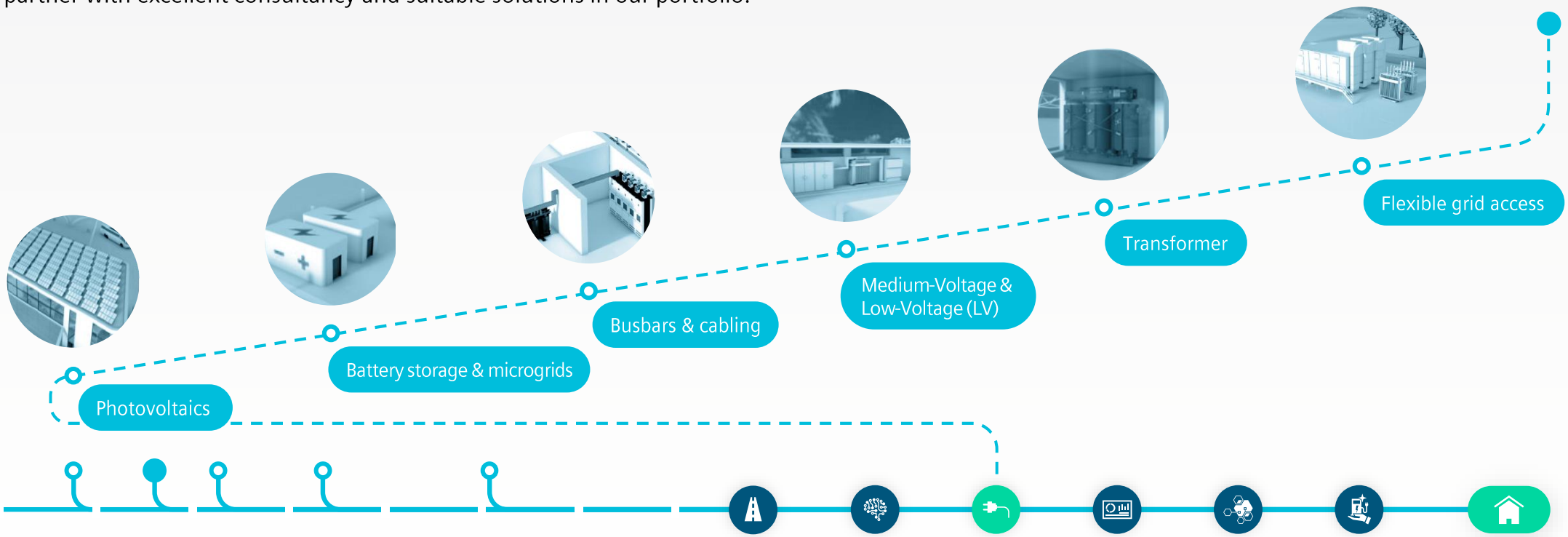
Depot grid connect

Robust and reliable – for all your needs

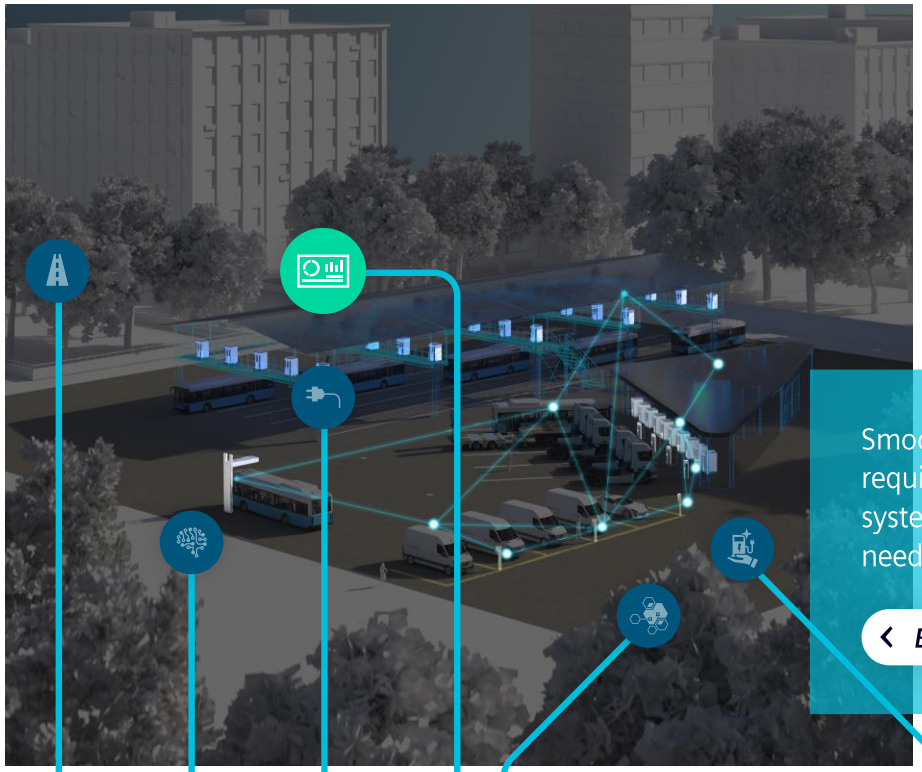
The electrification of your depot needs to be robust and have reliable grid access with transformers, medium-voltage switchgear, low-voltage distribution and cabling. Siemens offers electrical equipment that has been in operation for over a hundred years.

The integration of photovoltaics for a direct renewable energy supply, as well as battery storage for buffering purposes and second life battery usage can help bring your depot electrification to the next level of sustainable energy supply. Siemens is the right partner with excellent consultancy and suitable solutions in our portfolio.



04

Efficient management of charging operations



Smooth, reliable and efficient operation of your eFleet requires an intelligent management of the entire eco-system. Our digital solutions offer everything you need to manage your charging infrastructure.

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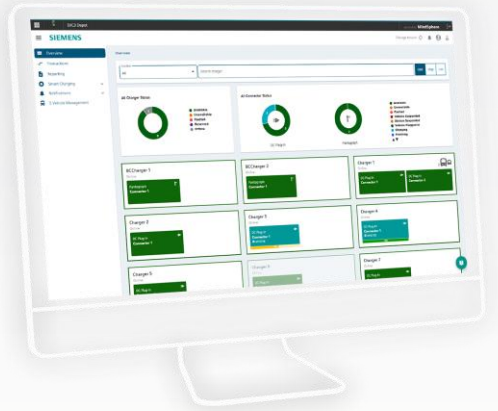

04

Efficient management of charging operations

CONTINUE ON NEXT PAGE ›

NOW

Connect

- **Reporting and monitoring**
  View dashboards of your system status
- **Notifications and remote reset**
  Stay informed about status and events
- **Smart charging**
  Control your chargers to manage the load

COMING SOON

Control

Robust energy optimization
Optimized charging based on vehicle/route scheduling, power constraints, energy prices

- Live monitoring of planned versus actual
- Adaptive optimization to deviations

Digital solutions for best-in-class efficiency

Siemens is releasing a focused portfolio of digital solutions to make your life easier by increasing uptime, reducing CAPEX and OPEX as well as integrating charging and depot management.

The CONNECT package, supporting the management of chargers, is the first of a series of software modules to be released. We are working on further solutions to support the operation of your fleet and your whole depot, including controlling your energy consumption and costs.

YOUR BENEFITS

Transparent operations
Fact based decisions | Comprehensive statistics | Real time tracking of KPIs

Efficient usage of grid connection
Infrastructure protection | Smart charging | Load limitation

Reducing your energy costs
Charging at load tariffs | Dynamic scheduling | Configurable strategy

Increased availability
Monitoring of chargers and charging processes | Event driven notifications

Smooth integration
Existing and new depots | Open interfaces | Communication via OCPP

Your first digital step in fleet electrification

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Reporting and monitoring

View dashboards of your system status
- Historical reporting & statistics
- Troubleshooting & detailed views

Notifications and remote reset

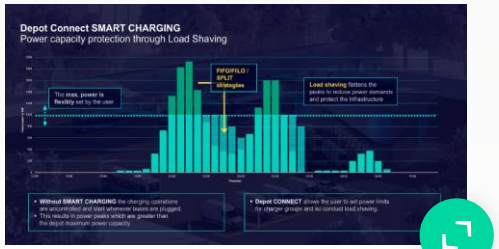
Stay informed about status and events
- In-App and email event driven notifications
- Remote charger resets

Smart charging

Control your chargers to manage the load
- Assign control groups power constraints (hourly/daily/weekly)
- Control charging in a group according to preset strategies, e.g. First-In-First-Out, First-In-Last-Out, or SPLIT

*Higher performance with the **connect** package*

Profit from lower costs and a comprehensive solution for operation, protection and maintenance of your charging infrastructure.



YOUR BENEFITS

Transparent operations

Stay informed at all times | Understand your charging operations | Track KPIs in real time

Smooth integration

Manage charging in existing & new depots | Seamlessly integrate systems with API interfaces | Ensure interoperability with OCPP communication

Reducing your energy costs

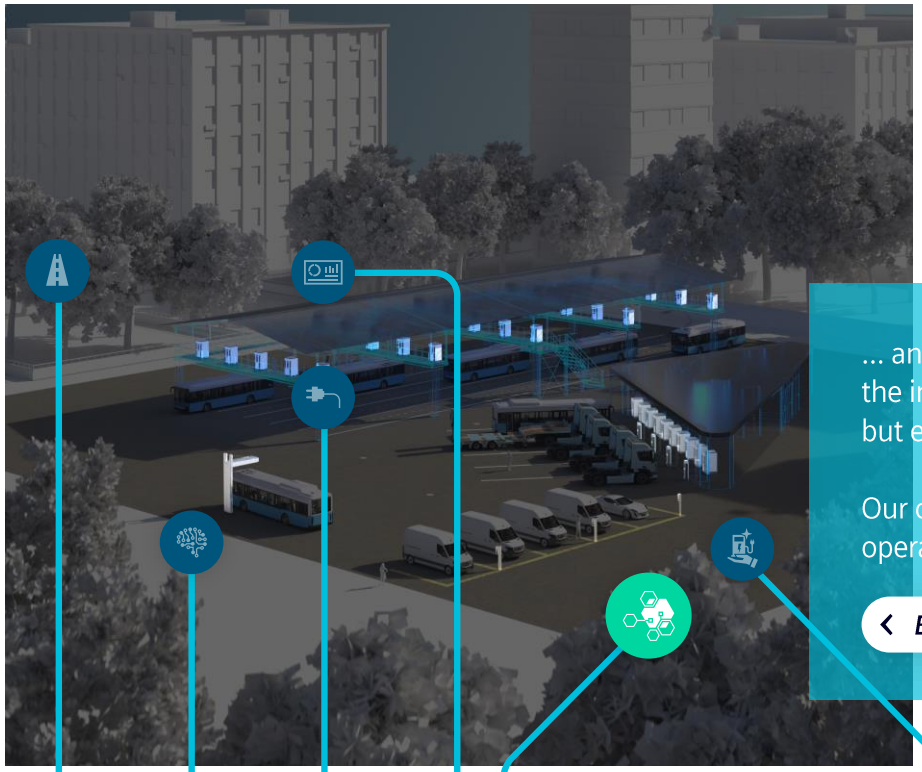
Reduce power requirements | Charge at low-cost hours | Tailor charging strategy

Increased availability

Monitor your charging operations | Reduce maintenance with remote reset | Improve response time with event driven notification

05

Services that go beyond charging



... and we are only satisfied when you are, not only during the initial installation of our hardware and digital solutions, but especially with a view of future challenges.

Our care packages offer tailored services to keep your operation up and running.

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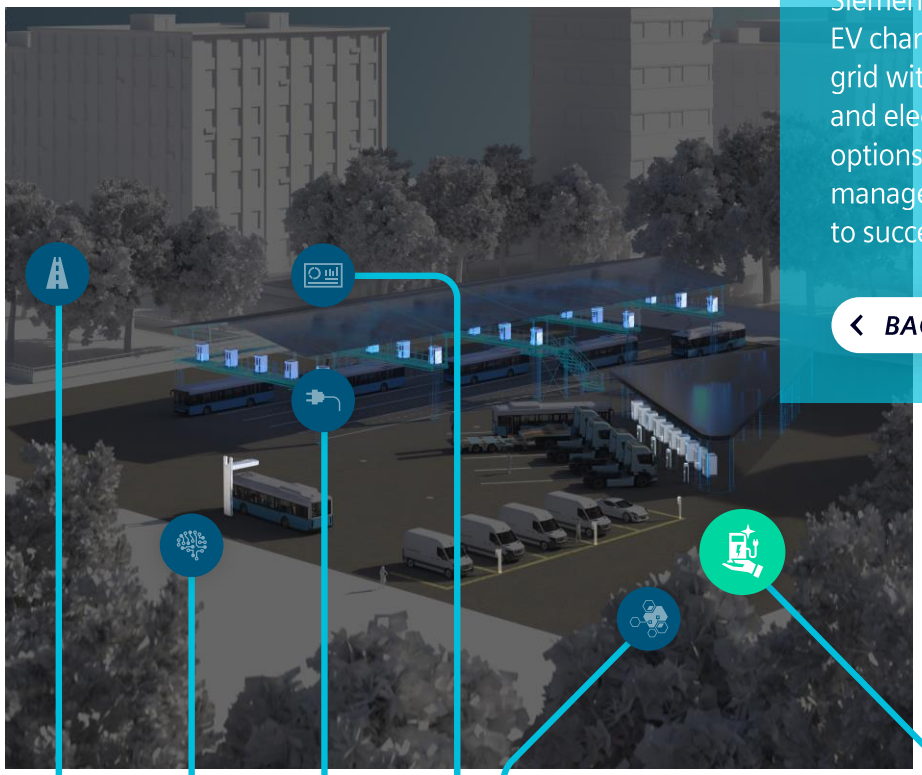
05

Services that go beyond charging

With tailored services

We offer you world-class services and support throughout the lifecycle of your charging equipment, thus assuring the maximum uptime and highest availability of your fleet.



Siemens offers PlugtoGrid™, an end-to-end set of solutions for EV charging infrastructure. Easily connect your chargers to the grid with Siemens' eMobility open protocol charging technology and electrical power distribution solutions, as well as flexible options like energy storage, renewable power integration, and managed cloud services. PlugtoGrid™ delivers what you need to succeed with your electrification transformation.

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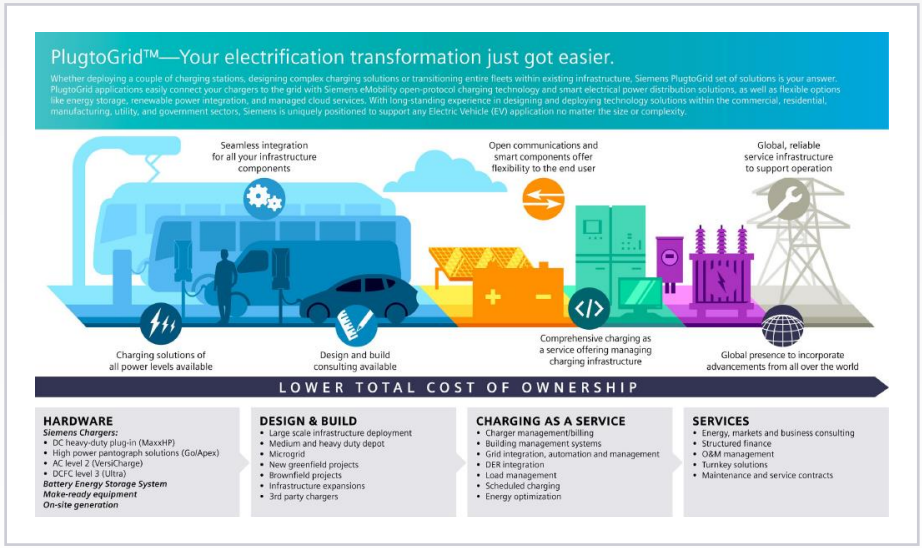
Embrace the transition together



PlugtoGrid™

Embrace the transition together

Today, it's all about electrification and an all-electric future. Many companies have already embraced the transition or are in the process of embracing it. With our experience and expertise, you can be sure that your journey will also be as successful as you wish.

Should it be about comprehensive planning and simulation, providing the right hardware and managing your operations, we will be by your side along this exciting journey.

SIEMENS.CA/EMOBILITY

Nuremberg (Germany)

Our customer is a local German public transport company. Electric buses are key to reducing air and noise pollution in cities, and thus improving the quality of life.

PRESS RELEASE

STM Montreal (Canada)

Our customer in Montreal, Canada installed Off-board high-power charging in the city center of Montreal, which were the first 450 kW chargers installed in North America.

PRESS RELEASE

California (USA)

Logistics and truck rental company continues to electrify their fleet and opens up their sixth heavy-duty electric vehicle charging station with battery storage system in Southern, California.

PRESS RELEASE

LEARN MORE

Example of a PlugtoGrid™ solution

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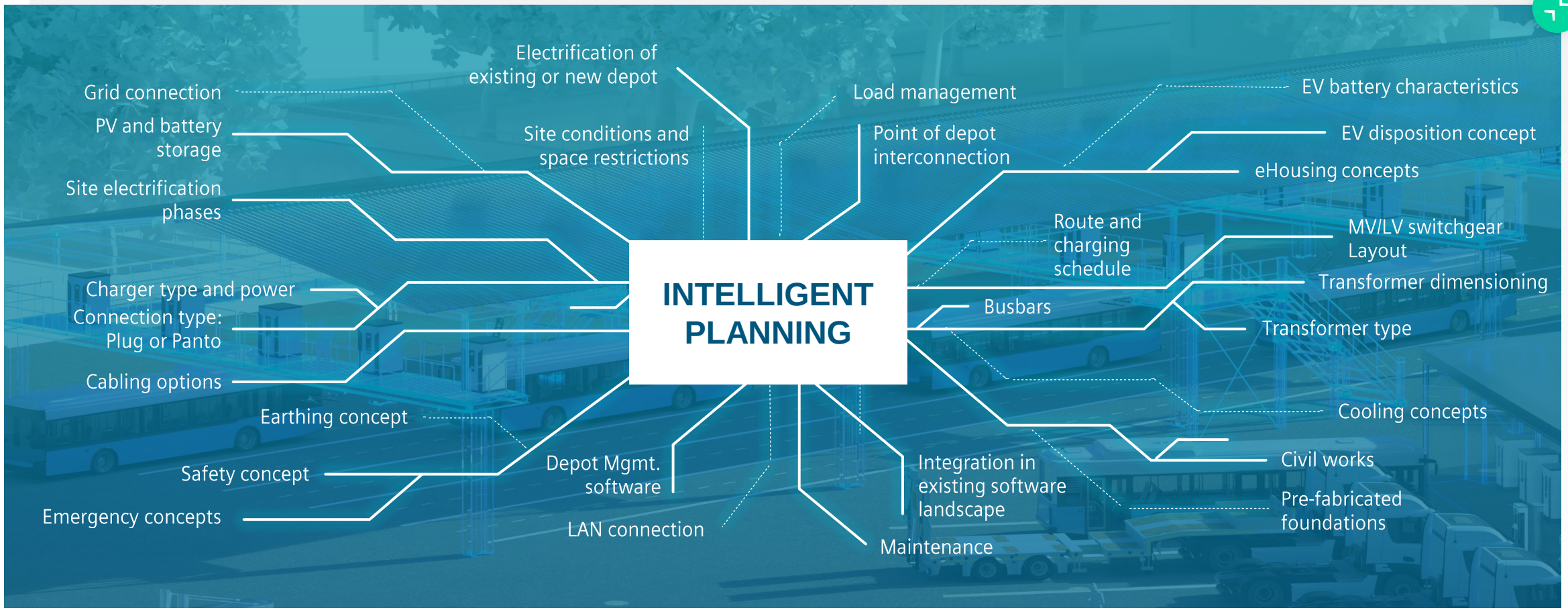
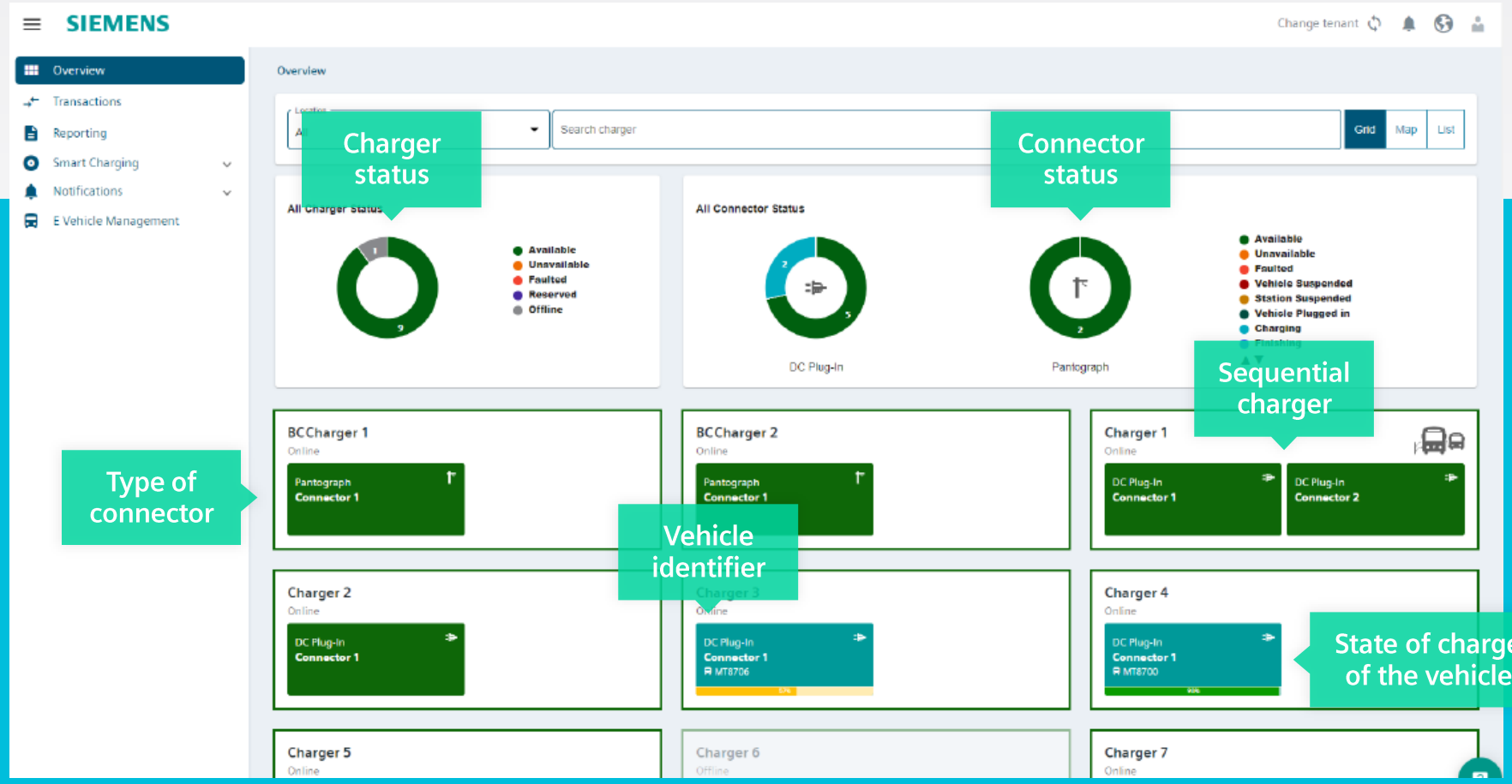
Build a reliable foundation with effective upfront planning



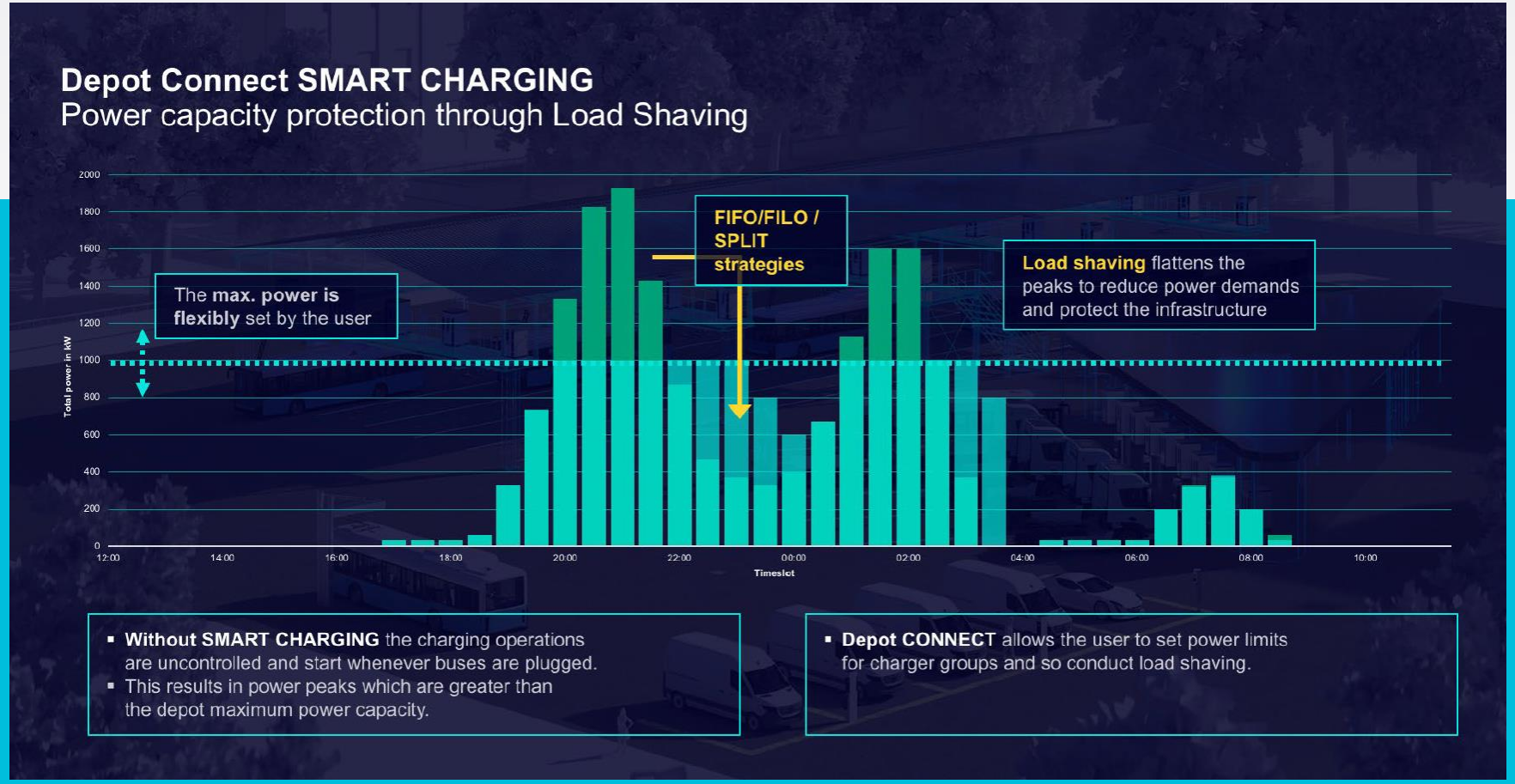
OVERVIEW

Central location to monitor status of the chargers



OVERVIEW

Efficient management of charging operations



GERMANY

Nuremberg

Electric buses are key to reducing air and noise pollution in cities, and thus improving the quality of life. Just having one eBus traveling approximately 200 km per day can save about 60 tons of CO_2 per year. Siemens supports sustainable urban transport with eBus charging infrastructure in Nuremberg.

Scope of solution

- Charging technology for 39 parking spaces at innovative eBus depot of VAG
- Parallel charging of 20 buses with up to 150 kilowatts with our Sicharge UC portfolio
- Medium-voltage connection for supply with 100 percent green electricity
- Digital solutions to optimize charging activities, charging operations and energy consumption. The eDepot will be equipped with integrated dispatching system for charging operations
- eBus port is planned to be ready for commercial operation starting mid 2021

CANADA

STM Montreal

Société de transport de Montréal (STM) is a pioneer in the space of transit electrification and was one of the first transit agencies to implement electric buses on one of their routes.
Installation and commissioning for this pilot project began in 2017 and to this day is still fully operational. STM plans to gradually electrify their entire bus fleet to contribute to cleaner air quality for the City of Montreal.

PRESS RELEASE

Scope of solution

- High-power charging in the city center of Montreal with Canada's first 450 kW charger
- Installation of the chargers into an existing building
- 2 x 450 kW opportunity charger with top-down pantograph

CHARGED WITH PASSION

Your journey to successful electrification

Bus fleets

Electrified bus fleets need a mixture of overnight charging in the depots and on-street opportunity charging at stations distributed in the city.

Municipal fleets

Consisting of a combination of heavy and light-duty vehicles, a municipal fleet has varying needs in the very same depot – meaning AC and DC charging simultaneously.

Commercial fleets

Usually dealing with last-mile delivery, the light vehicles of a commercial fleet need both opportunity charging and overnight charging – the latter done in depots.

Construction and mining fleets

All mining and construction vehicles are electrifying to improve workers health and safety, lower costs and GHG emissions, requiring flexible high-powered charging for harsh environments.