Confidential

M•LE

Get over it

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Member Event,
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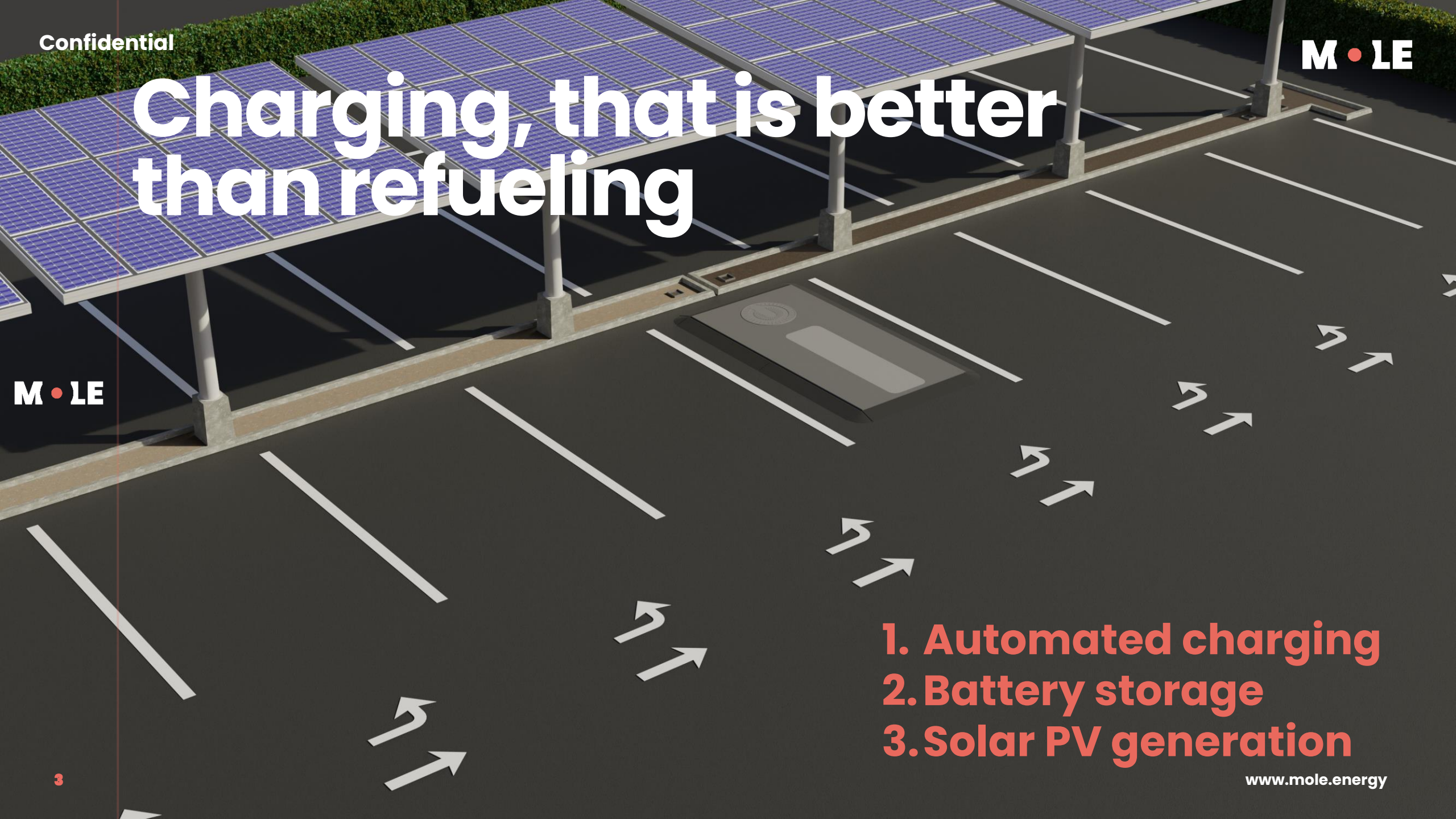
MOLE Video

Charging, that is better than refueling



1. Automated charging
2. Battery storage
3. Solar PV generation

Parking bay topper with multiple power inputs

Single Unit.

Single Unit with integrated battery.

+

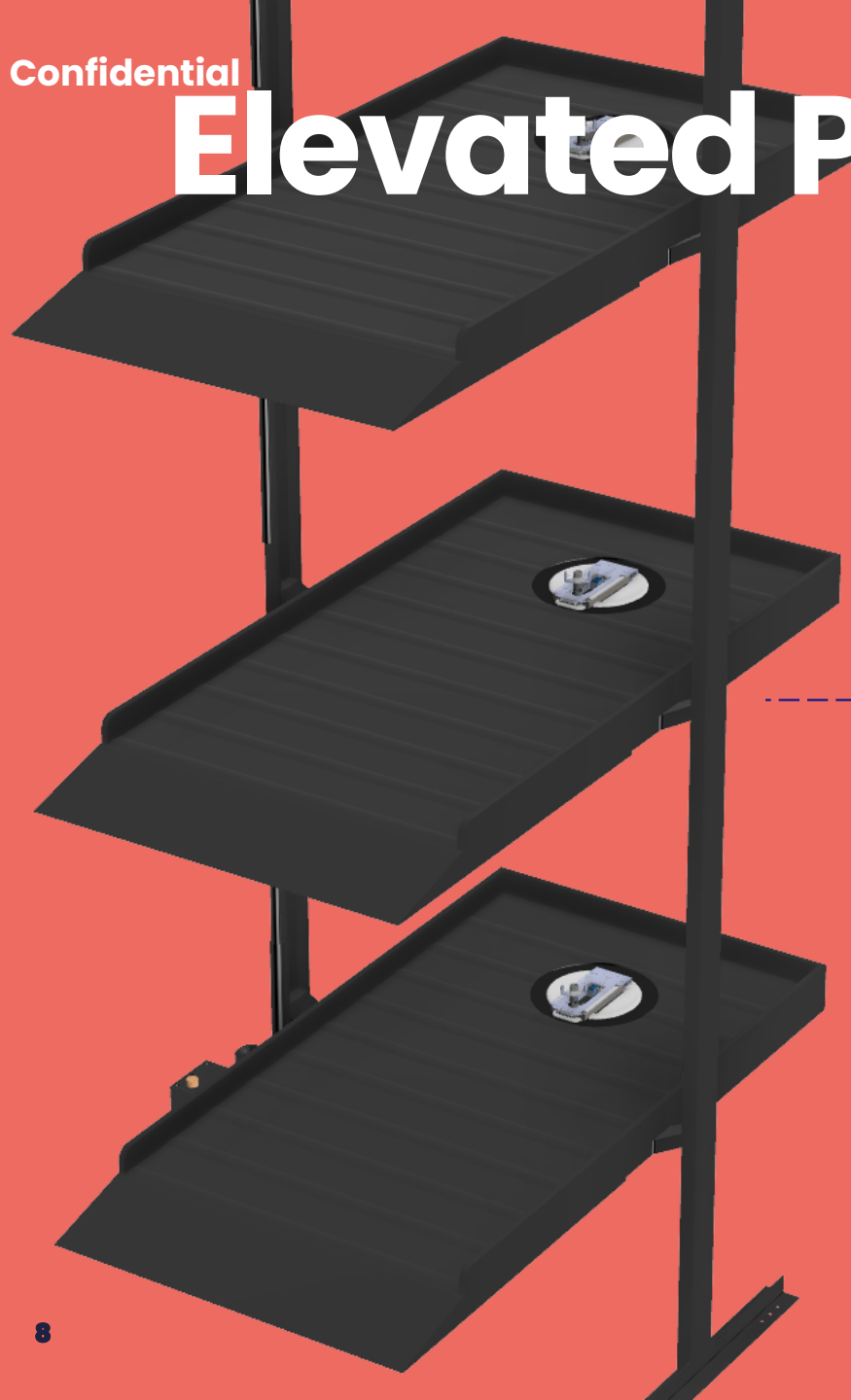
- Solar PV Canopy
- Streetlamp
- Grid supply
- Internal battery

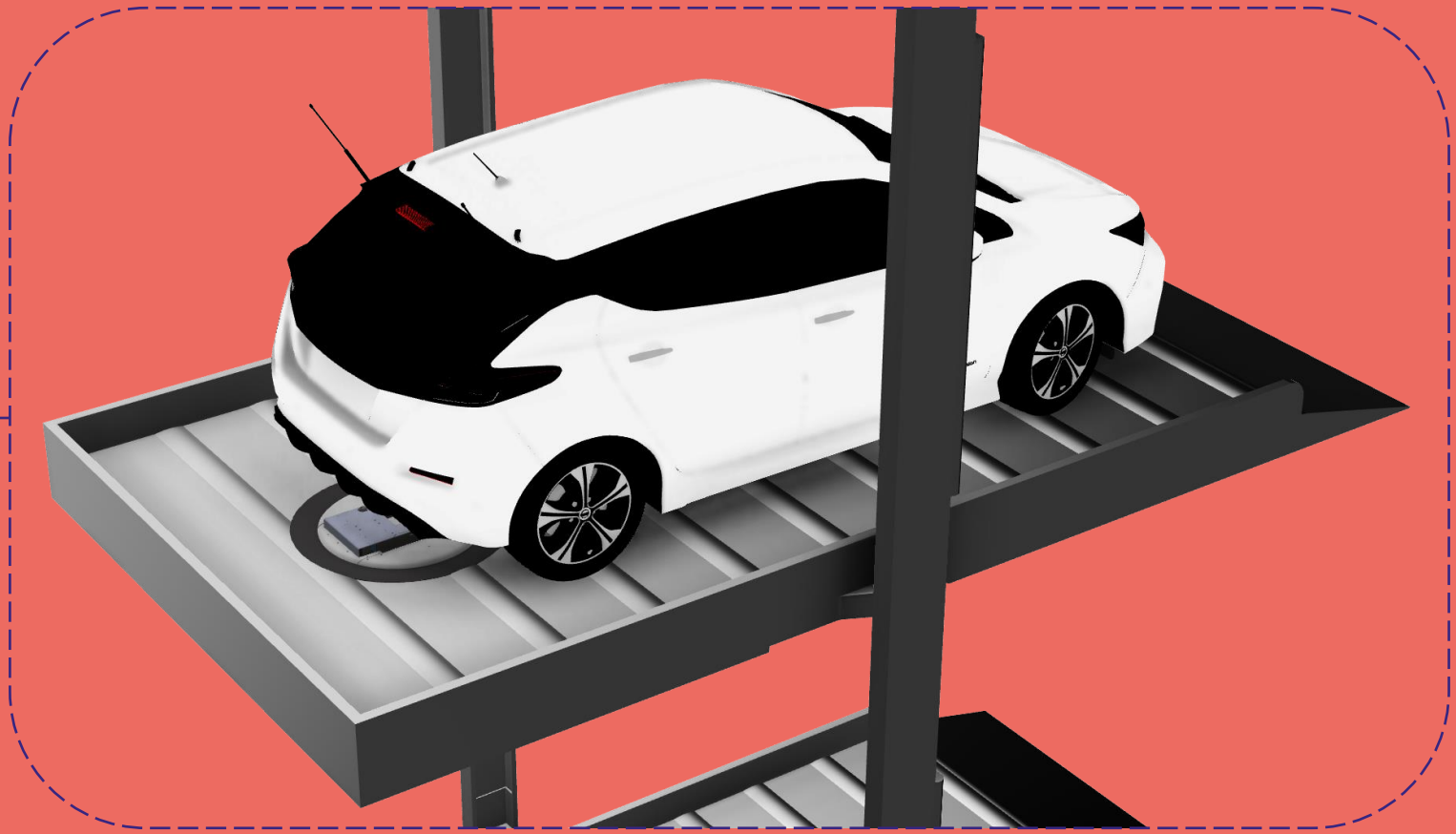
1. Universally deployable
2. Modular
3. Material re-use


1. In garage
2. In a parking lot
3. In public spaces

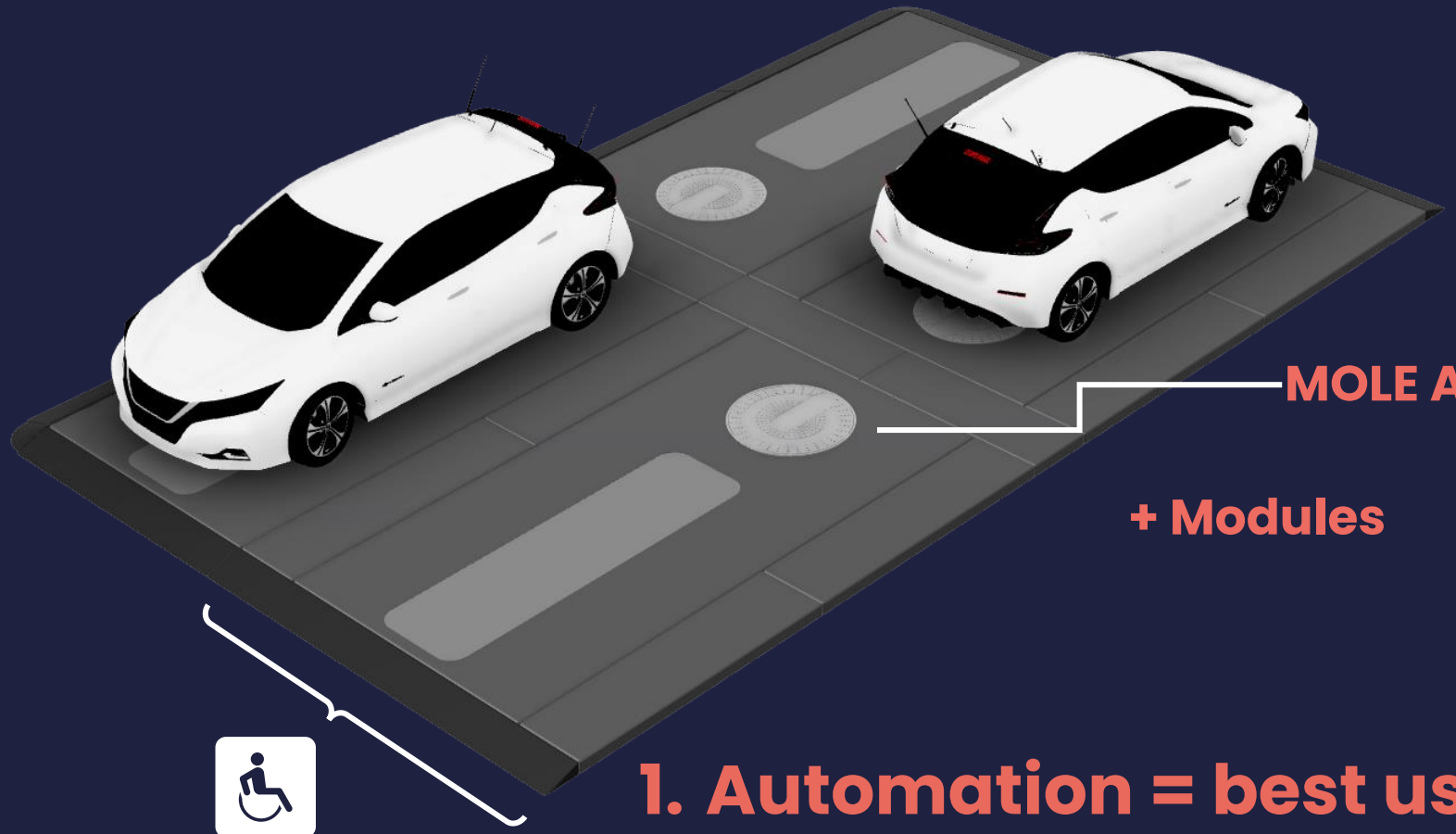
1. Easy to install
2. Easy to maintain
3. Easy to upgrade & scale

Elevated Parking





The MOLE end-to-end solution



1. Automation = best user experience
2. Batteries = best electricity price
3. Solar PV = green credentials

Just park, let MOLE charge

The MOLE is a robotic ground unit fixed inside a parking bay. Any vehicle with the MOLE underbody inlet can park over the ground unit and charge its battery via the underbody adapter.

MOLE is an early mover in automated charging systems. Our IP portfolio is growing and includes granted patents.

Emerging standards for automated charging (ACD-U) indicate a large market.

MOLE is a conductive system: more efficient, scalable and cost competitive than wireless/inductive systems.

MOLE is market ready for commercial vehicles, and consumer versions are under development.

BUILT FOR COMPATIBILITY

TYPE 1 · TYPE 2 · CHADEMO · CCS1 · CCS2 · NACS · MCS · ACDU

MOLE can be connected to any standard EVSE or supplied with an integrated AC EVSE and can interface with any charging back-end and front-end.

MOLE Ground Unit

MOLE Underbody Inlet

Any vehicle fitted with the MOLE underbody inlet can charge with the MOLE Ground Unit.

LCVs · HGVs · GSEs & AGVs · BUSES · AUTONOMOUS SHUTTLES · SPECIAL FLEETS · CARS

Simple vehicle Installation

Post registration modification through authorized dealers, garages or by customers' fleet ops/engineering teams (DIFM/DIY).

In the future factory or dealer fitted installation with OEM support is planned.

Light, inexpensive and fast to install on the vehicle (~2 hrs)

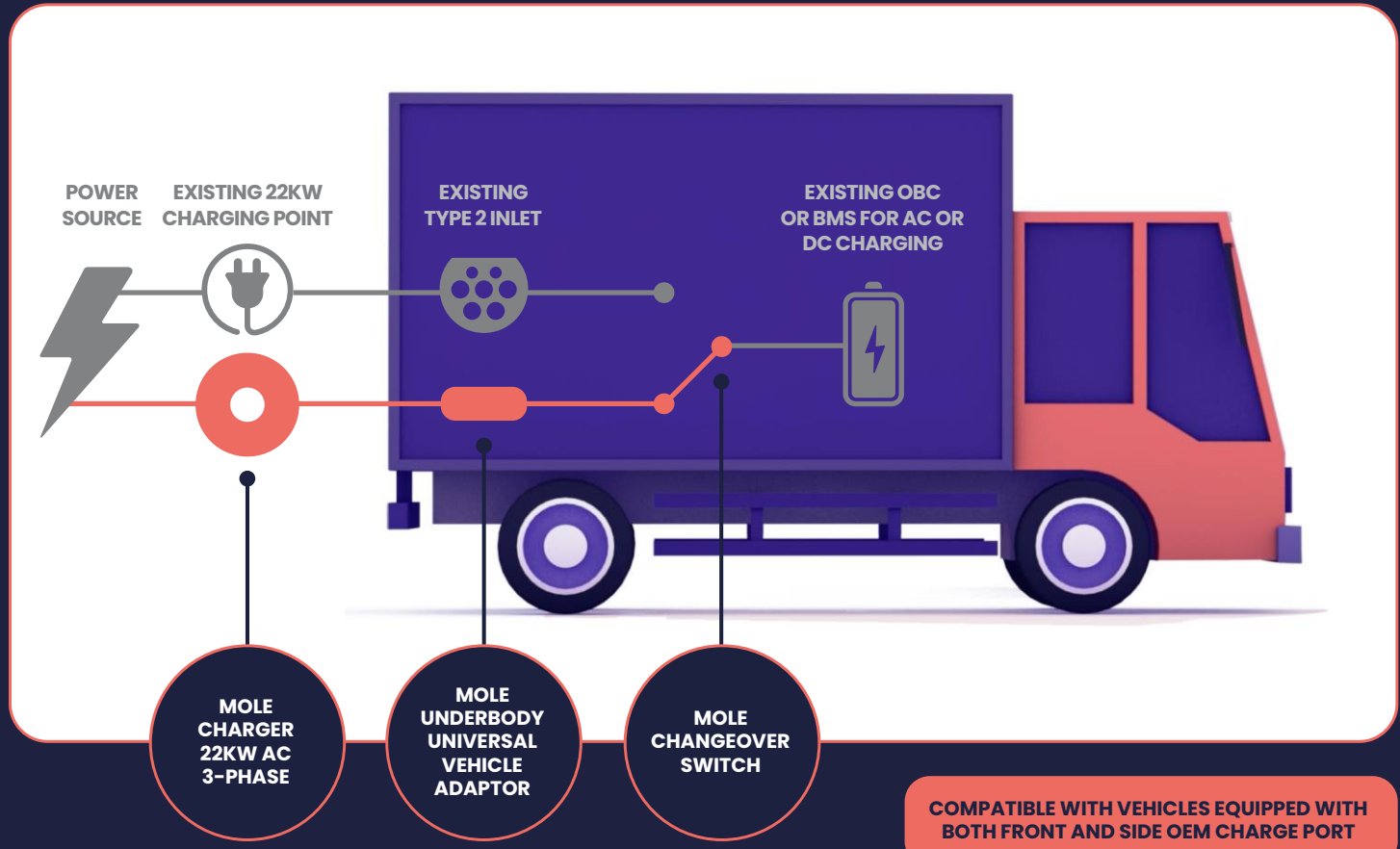
An underbody power input is added (with regulation) to existing OEM supplied circuit which is unaltered.

Existing side or front charging remains usable.

The MOLE installation is easily reversible and easy to remove.

Insurances unaffected and available.

Value added integration with full OEM involvement is planned to support additional services and user benefits.



COMPATIBLE WITH VEHICLES EQUIPPED WITH BOTH FRONT AND SIDE OEM CHARGE PORT

Watch how MOLE is installed

TRANSFORM YOUR FLEET DEPOT WITH MOLE

SAVE
space and add more charging bays

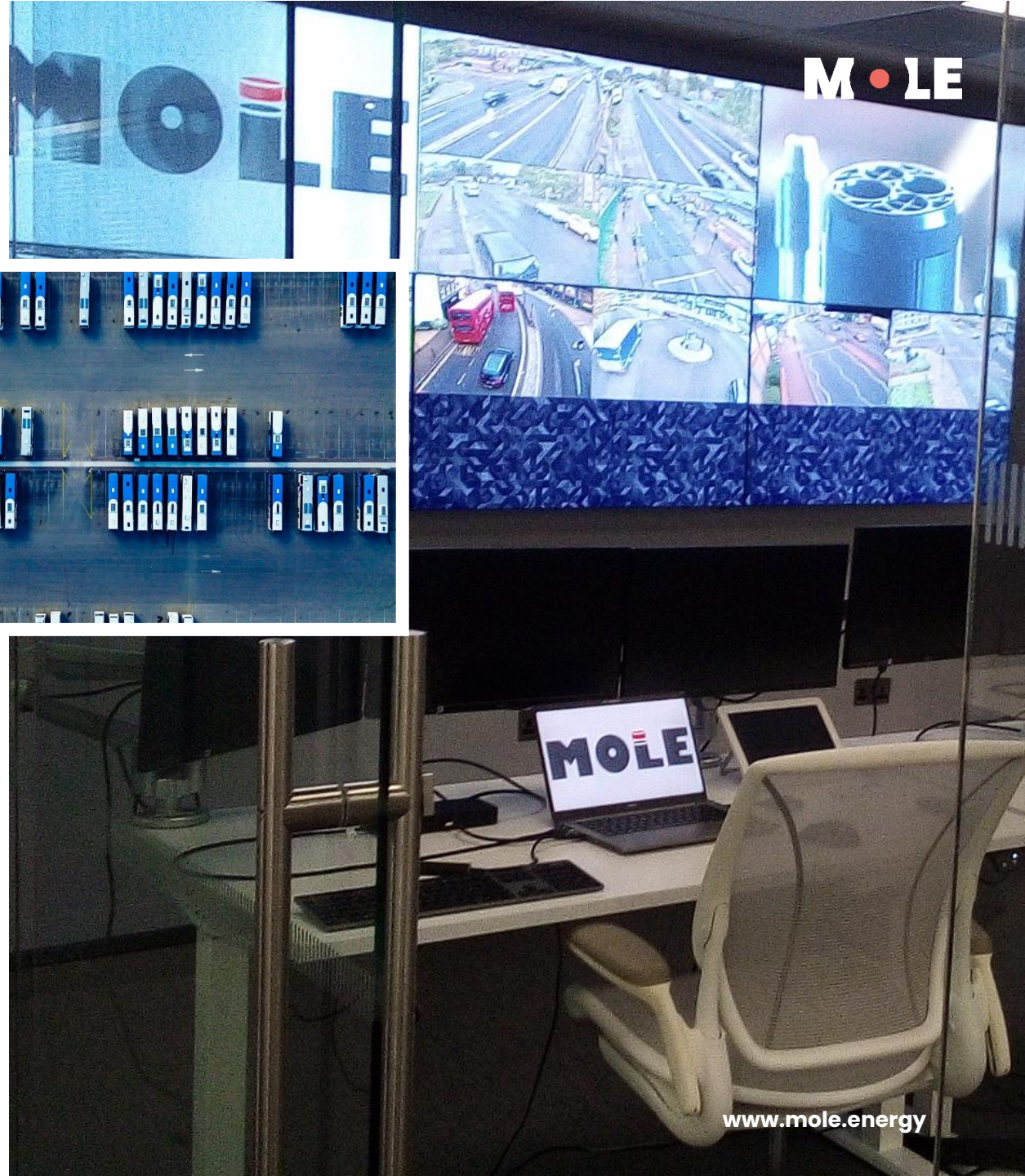
REDUCE
total cost of ownership

EASY
to install, use, upgrade and decommission

SIMPLIFY
operations for staff and drivers

IMPROVE
workplace safety and operator buy-in

As EVs deploy, user needs are emerging



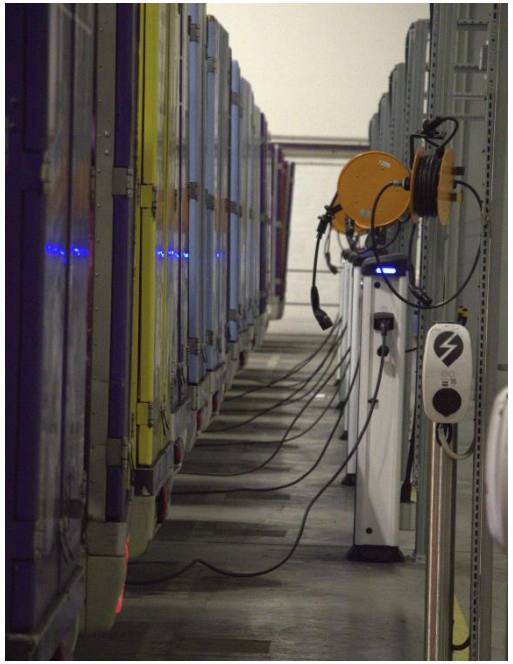
Fleet depots loose 20% to 30% of capacity to make space for charging.

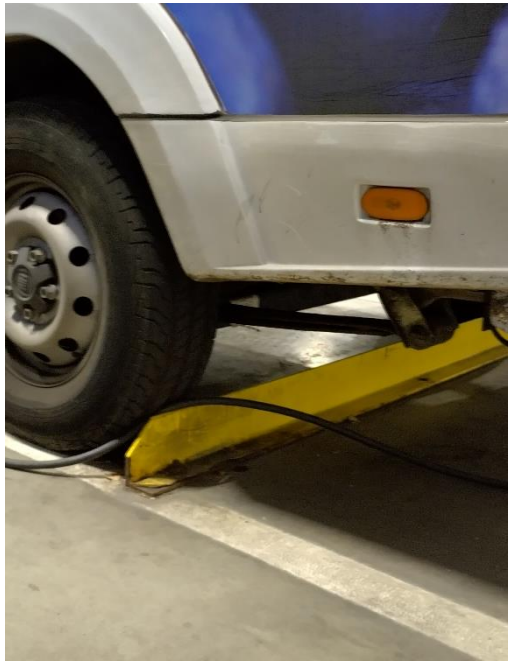
Smooth charging operations is crucial for operational efficiency.

Automation can achieve full control and optimization of charging infrastructure.

Fast and flawless execution of trading decisions, smart charging operations and route dispatch optimization.

Costs and limitations of manual operations





Manual charging increases logistics drag.

Fleet managers rely on drivers or depot operators to connect and disconnect vehicles, including moving them around.

This costs a lot in time, disruption and operational risk (outages, breakages, accidents and delays).

Fast and flawless execution in this environment is hard to achieve when the number of vehicles under management increase.

BENEFITS FOR CHARGE POINT OPERATORS

ATTRACT
customers with the best user experience

PROVIDE
disabled users a fully hands-free service

EASY
to install, upgrade and decommission

SAVE
space and add more charging bays

LESS
costs, breakages, and vandalism

CURRENT BEST PRACTICE.

Operators allocating a large cost towards extra space and call out assistance services (e.g. fuelSerivce callout), **but the experience for disabled users remains unchanged.**

DISABLED CHARGING BAY WIDTH
(2X REGULAR BAY)

REGULAR BAY

DISABLED CHARGING BAY WIDTH
(1.5X REGULAR BAY)

SPACE SAVING:
50% OF
REGULAR BAY

Don’t leave you EV just to charge it

When you want to leave, just go

MOLE:

~2 SECONDS TO DISENGAGE & DRIVE AWAY WITHOUT LEAVING THE VEHICLE

MANUAL CHARGING:

~1 TO 3 MINUTES TO UNTETHER EXTERNALLY

OUR JOURNEY

Funding

Commercial

Industry Standards

Granted Patents

H2 2018
MARKET RESEARCH

2019
FEASIBILITY STUDIES
Department for Transport
CHARIN

2020
PRODUCT DEVELOPMENT
Innovate UK
enterprise M3
bsi.
SAE

2021
PROTOTYPING AND LAB TESTING
Innovate UK

2022
FIELD TRIALS
ocado
Ford
ISO

2023
PAID TRIALS
NISSAN
AISIN

‘A great product’
enterprise

‘Solves our problems and we would like to try MOLE’
dpd IRELAND

‘MOLE aligns with our priorities for our fleet’
ocado

‘MOLE is ahead of the curve’
wenea

‘Really interesting implementation and development plans’
Ford

‘MOLE is years ahead of any ACD(U) we have seen on the market’
NISSAN

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PLEASE GET IN TOUCH IF YOU WOULD LIKE TO KNOW MORE OR WORK WITH US.

THANK YOU!

UK

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