

## MOBILE ENERGY FOR PARKING LOTS

Our customers save money and time with off-grid sustainable robotized charging solutions.  
One cable to plug to the grid → all the cars charged efficiently.

# THE TRILLION DOLLAR QUESTION: HOW ELECTRIC CARS WILL CHARGE?

Electric cars are the first major step for a more sustainable mobility in cities. And the good news is : they are reaching their adoption tipping point.

**400K**

Cars in France

**2,5M**

Cars in UE

**8,5M**

Cars worldwide

Includes 100% Electric Vehicles (BEV) and Hybrids (PHEV).

Source : October 2021, BloombergNEF, Marklines, EAFO

The real need today is to charge those cars. Charging stations are multiplying, but governments and companies are struggling to reach their goals and meet users' expectations.



# / TODAY'S CHARGING SOLUTIONS ARE INCONVENIENT AND UNOPTIMIZED.

## FOR USERS

Parking space **monopolized** by a car per day

Forced to move the vehicle when charge is over

Low compatibility, on top of too much badges, subscriptions, breakdowns...

## FOR PARKING MANAGERS

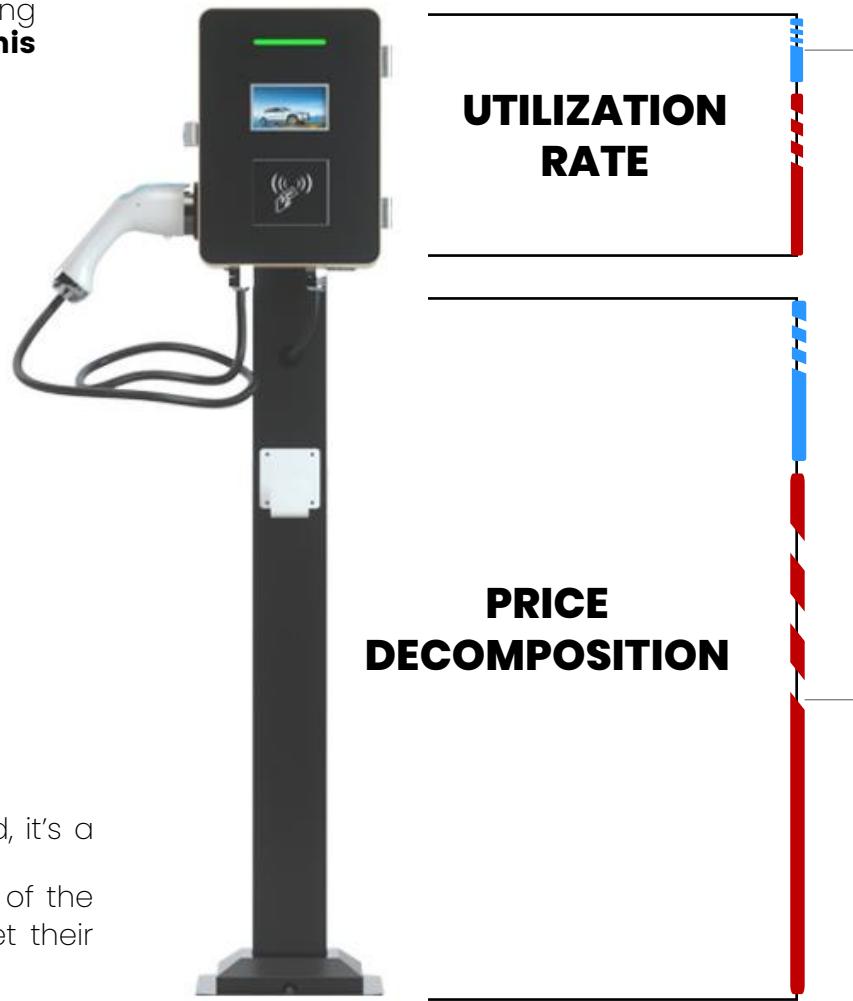
Parking capacity decreases as parking spaces become “electric only”

Extensive work and intense power required leading to non viable projects

Very long delays and lack of evolutivity of the solutions, blocking any planning or strategy.

# / THE DUAL PROBLEM OF OPTIMIZATION \_

In most of the urban use cases, cars are parked for several hours and are only looking for a daily dose of energy (30-40km). **This leads to a massive lack of optimization:**



Static charging point will be monopolized, it's a fact.

But what if we could **share** the big part of the investment to cars that have time to get their energy back ?

## 10%

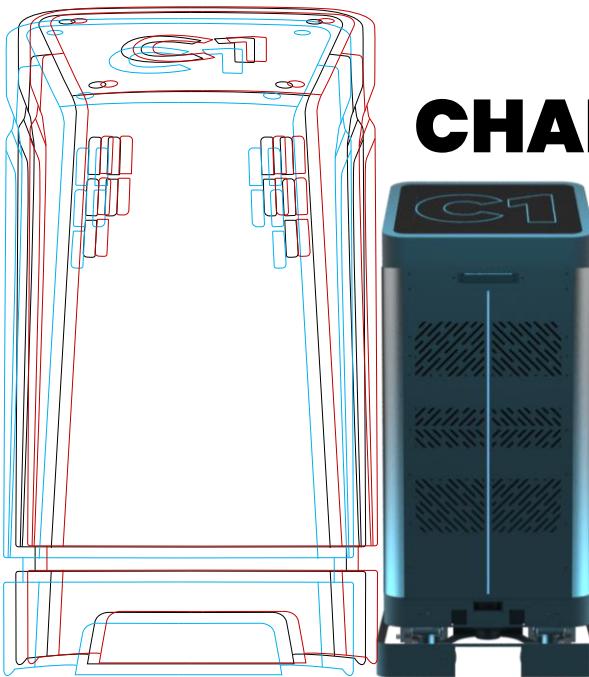
- 10% to 25% of utilization rate for company parking lots, public parking lots and every long-stay parking lots (hotels, airports...)
- Cars fully charged in a few hours
- Rest of the time: monopolizing the space and the charging point.

## 75%

- 50 to 75% of the costs are linked to the work and civil engineering needed to connect the charging point to the grid
- Power is the real deal
- The more charging points are installed, the more those infrastructure costs are important

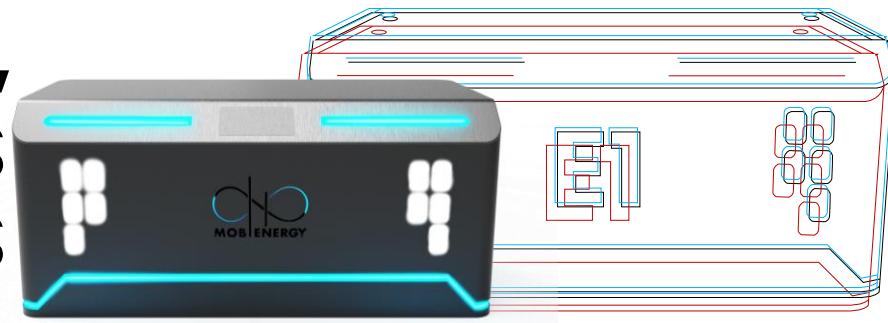
/ TO SOLVE THOSE ISSUES, **INFRASTRUCTURE HAS TO BE SMARTER AND SHARED.**

TO UNLOCK THAT,  
**WE HAD TO MOVE THE ENERGY WHERE IT WAS NEEDED, WHEN IT WAS NEEDED.**



**CHARLES**, MOVES THE ENERGY

**EVY**,  
DISPATCHES ELECTRONS





# / OUR TECHNOLOGY IS BASED ON THREE PILLARS

## STORAGE AND OFF-GRID POWER ELECTRONICS

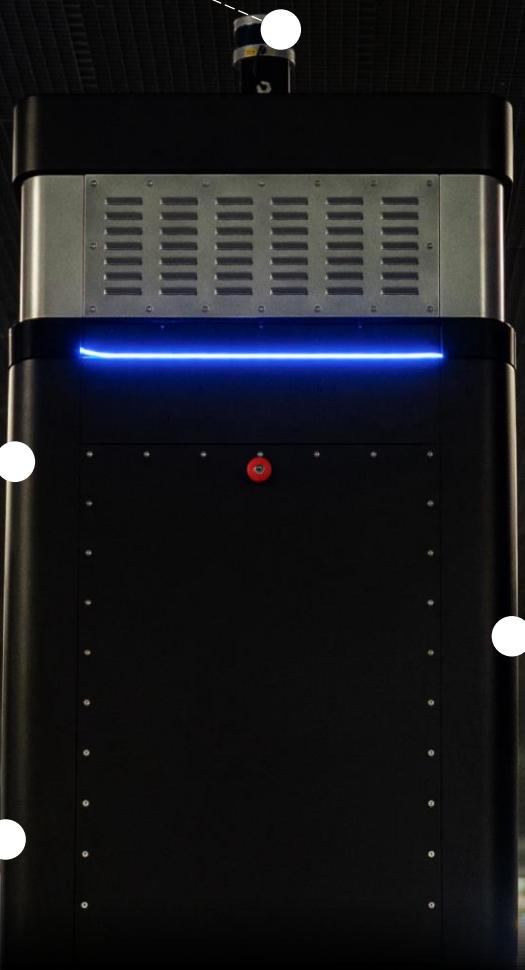
UNLOCKS : EASE-TO-DEPLOY AND  
COST REDUCTION

## SCHEDULING AND AI

UNLOCKS : HIGHER PROFITS &  
BETTER USER SATISFACTION

## SECOND LIFE BATTERIES

UNLOCKS : HIGHER MARGINS AND  
SUSTAINABILITY



**/ OUR APPROACH MAKES US THE PERFECT  
ONE-STOP-SHOP TO 100% OF OUR TARGETS.**



## PREDICT.

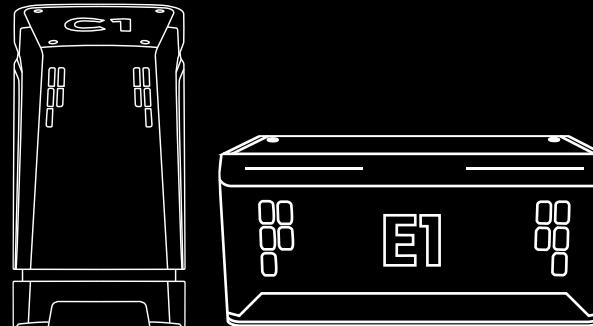
WE HELP CUSTOMERS FIND THE BEST  
SOLUTIONS ACCORDING TO THE  
USAGE DATA FOUND ON-SITE AND  
WITH FLOW SIMULATION TECHNIQUES



**ANALYTICS**

## CHARGE.

WE MANUFACTURE, DEPLOY AND MAINTAIN BEST-IN-CLASS  
CHARGING SOLUTIONS: PRIORITIZING CARS, LOWERING  
CONNECTION COSTS, COMPATIBLE WITH ALL CARS AND VERY  
EASY TO INSTALL

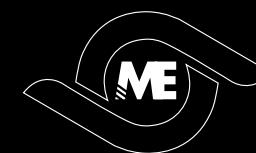


**CHARLES**

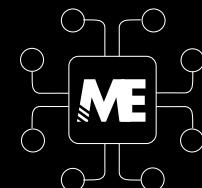
**EVY**

## MANAGE.

WE PROVIDE THE APPLICATIONS THAT  
ALLOW EASY ACCESS TO THE SERVICE AND  
EFFICIENT SERVICE MANAGEMENT



**SIGHT**



**CHARGE**

## UPGRADE.

OUR APPROACH IS BASED ON THE FACT THAT  
E-MOBILITY EVOLVES FAST AND NEEDS AGILE  
SOLUTIONS. WE BRING THIS AGILITY TO OUR  
CLIENTS AND WE IMPROVE PREDICTIONS  
BASED ON THEIR DATA.

# CHARLES

## FIRST CHARGING ROBOT DEPLOYED IN EUROPE

With Charles, our customers reinvent the parking experience. With a simple charging base to connect to the grid (one cable), gives a daily dose of energy to an entire fleet, wherever they are parked. And offer new services to your users, enabled by the artificial intelligence of the charging robot.

### **UNIVERSAL CHARGE**

Charles charges all existing 100% electric models, plug-in hybrids and even two-wheelers.

### **PRIORITIZATION IN REAL TIME**

Charles can stop an order that can be processed later and work on a more urgent car. He also provides alternatives for impossible orders.

### **100KM IN 20 MINUTES**

Thanks to Charles' fast charging (50kW DC, CCS Combo).

### **20 CARS ON 12 HOURS**

Each car has recovered about 40 kilometers of autonomy, corresponding to a daily use of cars.



(LYON, FRANCE – LPA, CORDELIERS)



## EVY

# THE CUBE OF POWER FOR COMPLEX PARKING LOTS

When Charles can not be deployed for technical reasons or for higher power / energy demands, EVY can rapidly unlock smarter fixed charging points. Up to 20 parking spaces electrified with a single connection to the grid. Charge 6 cars simultaneously as if you were charging only one.

### **FASTER AND EASIER DEPLOYMENT**

EVY can be plugged to 20 parking spaces. 6 of them can be activated at the same time, charging 6 cars simultaneously.

### **300KM IN 1 HOUR, AT 50kW DC CHARGING**

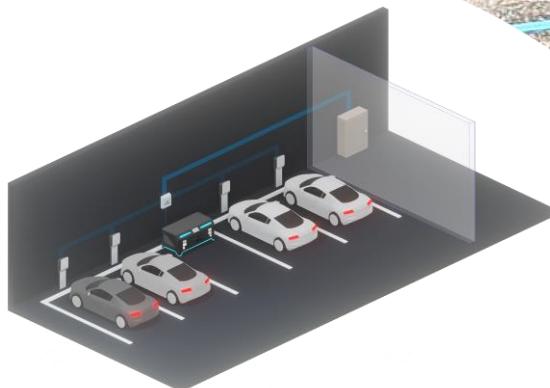
EVY can offer fast charging for two places closest to the cube, to meet urgent needs at a lower cost. Other charging points are limited to 7,4kW

### **MORE ENERGY OPTIMIZATION WITH MORE STORAGE**

With its second life batteries, protect your grid, avoid additional costs, benefit from off-peak time savings and reduce your carbon footprint.

### **OUTDOOR AND COMPLEX PARKING LOTS**

EVY can be deployed in complex parking lots, where Charles can not. Other applications are possible: EVEnt sites, on-the-road charging...



# / DATA IS KEY : OUR DIGITAL TOOLS \_



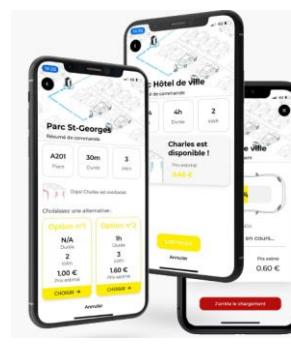
## PREDICT



### ME ANALYTICS ©

- Model and simulate parking lots based on customers' data
- Decision making tool to find the right solution
- Reused after deployment to predict next electrification phases

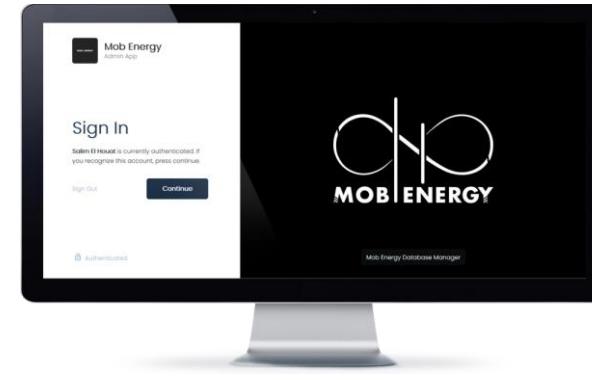
## GIVE ACCES



### ME CHARGE ©

- Allows users to access Mob-Energy's charging services : Charles, EVY
- Many features for smart charging
- Allows to pay if service is monetized
- Available on AppStore and Google Play

## CONTROL



### ME SIGHT ©

- For service management
- Compatible with Charles, EVY and also traditional charging points
- Provides in real-time infos and analytics
- Allows to monetize easily the services

## R&D ASSET

Improving solutions' performances by testing AI in ME Analytics models  
Helps testing new charging solutions ideas  
Continuously enriching datasets to drive R&D strategy



## BUSINESS ASSET

ME Analytics : starts business and helps us to target the right customers  
ME Charge and ME Sight : give customers alert on when to upgrade (upsale)  
ME Analytics models evolve based on reality's data : better predictions.

# / OUR BUSINESS MODEL

We improve the models and help the client to upgrade its services

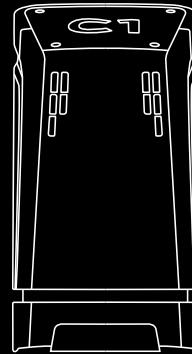


## ANALYTICS

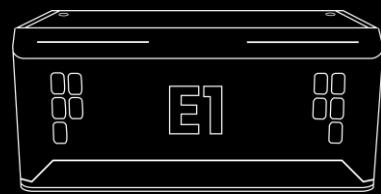
We learn from the field, orienting our R&D towards the best solutions

**10%**

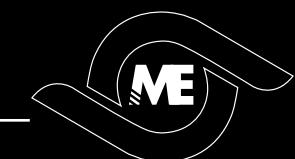
Of revenues



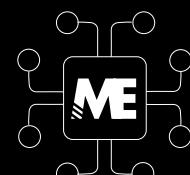
For complete parking transformation



For complex parking lots



## SIGHT



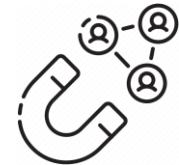
## CHARGE

**70%**

Of revenues

**20%**

Of revenues



**COMMERCIAL ADVANTAGE**  
GREAT STARTING POINT FOR  
INITIAL ORDER OR UPSALE

## ENGINEERING AND STUDIES



ME Analytics: parking lot modeling and simulations. Complete study format or in "subcontracting" mode, with an initial modeling of the parking lot and simulations on request. The parking model is re-used and enriched with real time data to improve predictions and help clients manage their electrification.

## PRODUCTION, DEPLOYMENTS, AND OPERATING SERVICES



**Hardware** - Complete package: robot, charging base, dispensers and modules installed, configured and ready to use. Does not include transport, electrical connection and technical facilities (3G/4G, spots numbering...).  
**Services** - Maintenance & Supervision. Supervision provided remotely by our teams of supervisors, including remote diagnosis, remote operation to assist autonomous navigation, telephone assistance in case of problems.

## SUBSCRIPTION TO ME SIGHT AND ITS KEY FEATURES



Our customers can have access to ME Sight with a fixed month fee per charging point connected, that can be :

- A plug-in module (charles)
- A static module (EVY)
- All types of charging points.

Key features : monitoring activity, setting key parameters, monetizing the services and accessing analytics.



**FINANCIAL UNLOCKER**  
LEASING ALLOWS EASE OF  
MIND AND FASTER  
DECISIONS, IN A COMPLETE  
PACKAGE PAID MONTHLY



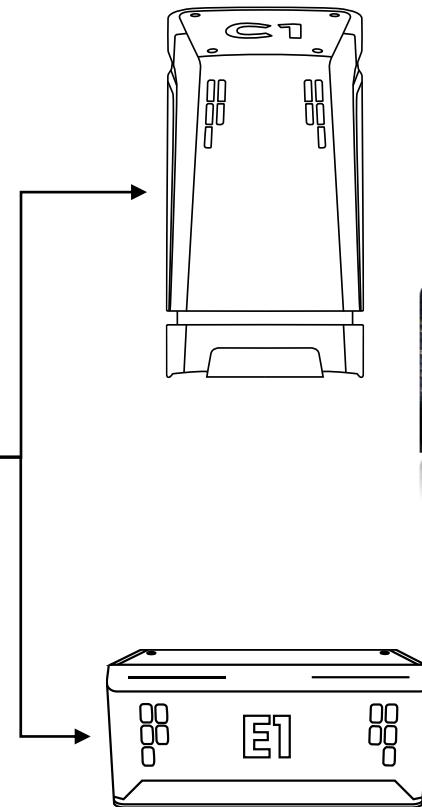
**READY TODAY**  
OUR SERVICES SECURE  
OUR SOLUTIONS  
TECHNICALITIES ON-SITE  
AND LET THE  
TECHNOLOGY GROW

# / USE CASES - MOB-ENERGY



## PERFORMANCE ESTIMATION WITH ME ANALYTICS

Based on modeling and simulations, allows to estimate the performance of Charles and EVY.



## CHARLES, THE MOBILE CHARGING ROBOT

Recommended in the following cases:

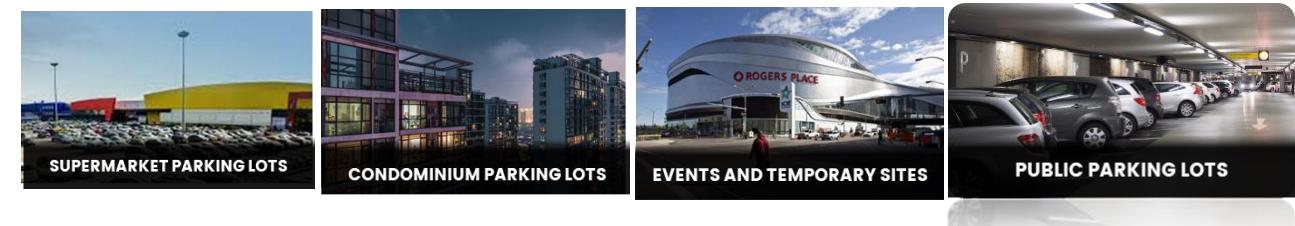
- Covered parking (underground, silos) with 3G/4G
- Majority of 100% electric (fast charge) with 5-10kWh of energy need
- Saturated parking and complex fleet management



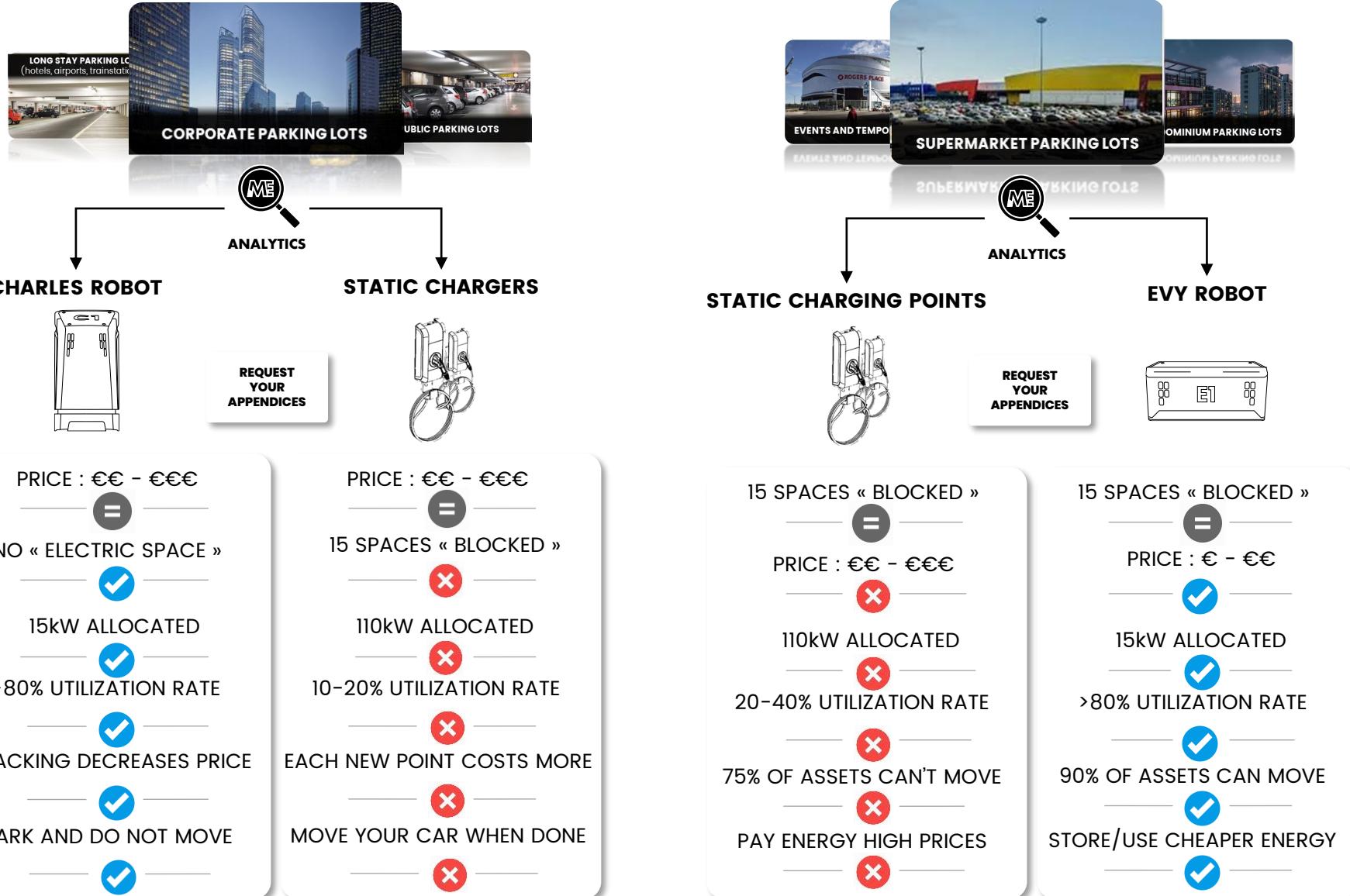
## EVY, THE CUBE OF POWER

Recommended in the following cases:

- Charles not deployable (outdoor parking)
- Shorter and uncertain parking time
- Average daily requirement per vehicle greater than 10kWh



# / ROI & BENEFITS FOR OUR CLIENTS



# / EXAMPLES OF WHY THEY CHOOSE US

## P+R PARKING LOT MANAGER



"Cars are staying all day long, for a few kWh of energy need, in our parking lots. One charging point charges one car a day. I see no economical future in this."

## TERTIARY LESSOR, B2B LANDLORDS



"Our buildings hosts major companies sharing a common parking lot, with different needs. Some have a few EVs, other plan to move in 2 years... The problem is way too complex and too big to patchwork something."

## PUBLIC URBAN PARKING LOT MANAGER



"Based on all the charging points we have in operation, we can see that 1 charging point charges 1 to 2 cars a day in average. And each point costs us from 4,000 € to 10,000 €. There is no business model with those rates."

## COMPANIES



"We are electrifying our fleets and we started installing charging points. But they are monopolized and we face electrical limitations leading to an exponential increase of costs the more we want to deploy"

## CHARGING POINTS DISTRIBUTORS

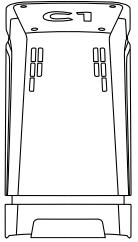


"Some of our customers (companies) have what we call « complex parking lots ». they call us to get the power they need, but we do not have easy solutions for them."

# CHARLES

# COMPETITORS AND USP

Our solutions are highly differentiated from traditional static stations, and competitors are multiplying on innovative solutions or approaches, proving that our model is strong.



## WHY IS CHARLES BETTER ?

IT EXISTS, FIRST IN UE AND IT IS RECOGNIZED

IT IS PLUG'N'PLAY AND VERSATILE WITH PATENTED PLUG-IN MODULE

IT IS MORE ROBUST (AUTONOMOUS NAVIGATION AND MOTORIZATION)



### VOLKSWAGEN (GERMANY)

Robotic arm

Storage and charging pod different from moving robot



### ENVISION (CHINA)

Robotic arm  
Complete charging robot (like Charles)



### SAMSUNG (KOREA)

Plug in module  
Complete charging robot (like Charles)



### SATOR TECH (CHINA)

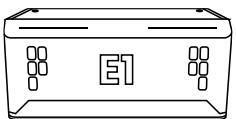
Robotic arm  
Storage and charging pod.



### SIEMENS (GERMANY)

Stationary roboticized charging solution

# EVY



## WHY IS EVY BETTER ?

IT IS MODULAR (KWH) AND WORKS FOR AC AND DC

STORAGE ALLOWS TO BOOST POWER

IT USES 2<sup>ND</sup> LIFE BATTERIES



### FREEWIRE (USA)

Storage  
DC Charging only  
2 places charged



### ALFEN (NL)

Storage  
Multiple AC Charging  
Large equipment



### VOLKSWAGEN (GERMANY)

Storage  
DC Charging only  
2 places charged



### CHARGEPOLY (FRANCE)

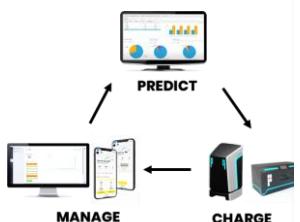
No storage  
DC Charging dispatched  
Multiple places charged



### CHARGEEX (GERMANY)

No Storage  
AC charging only  
Multiple places charged

# SOLUTIONS



## WHY OUR SOLUTIONS COMBINED ARE UNIQUE ?

ME ANALYTICS IS A UNIQUE TOOL, HIGHLY EFFECTIVE

WE KNOW HOW TO LEVERAGE DATA TO KEEP UPSELLING

WE CAN ASSURE ALL FUNCTIONS WHILE ALLOWING PARTNERSHIPS

**:hager**

Focused on manufacturing hardware and developing softwares

**No simulation tools. No innovative hardware solutions.**

**=beev**

Focused on helping customers in finding and deploying existing solutions.

**No proprietary solutions.  
Dependent on other technologies.  
No simulation tools.**

**EVBOX**

Focused on selling, deploying and managing existing solutions.

**No hardware control and thus lack of software agility. No simulation tools.**

**:freshmile**

Focused on giving access and supervising charging sessions (CPO).

**No hardware control. Depends of deployments speed, external maintenance and no entry barriers.**

# / WHAT WE ACHIEVED SINCE 2018

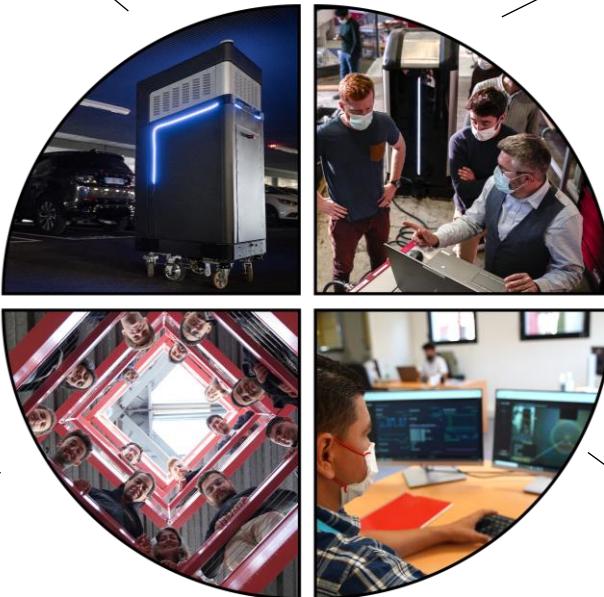
## WE BUILT, DEPLOYED AND SUCCESSFULLY MASTERED OUR TECHNOLOGY

Fourth version of Charles in development  
7 complete Charles' system produced

First PoC in 2019

**+1GWh transferred**, +2000 hours of charging services  
2 pilots on-going and 6 pilots in deployment  
3 patents pending, 1 already delivered, 4 more submitted in Q1 2022

Rigorous intel management (NDA, storage)  
Trademarks for all the products  
Soleaux envelopes deposited since 2017



## HIGHLY SKILLED & ENGAGED TALENTS ATTRACTED AND RETAINED

25 talented employees  
3 senior profiles in admin, sales and R&D management functions  
1 Part-time CHR (ex. 3500-employees' company CHR)  
2 PhDs in robotics and parking simulations  
Combined experiences: **Softbank, Alstom Transport, Navya, Renault Group, Groupe Seb, Schneider Electric...**

## REOWNED AND HAPPY CUSTOMERS TRUST US AND REPEAT BUSINESS

12 major customers

**More than 1,5M € of deals signed**

Several deals include multiple acquisitions  
One customer repeated business on both products (Charles and ME Analytics)  
Listed as official ADVENIR suppliers and Charles legally approved by DGEC (Minister of Energy)  
Leasing partnership signed with LOCAM (1M €)

## WE ARE CONSIDERED AS A PROMISING, RIGOROUS AND PERFORMING INDUSTRIAL INNOVATOR

+15 national and international awards

ME Analytics : Best sales assistance tool, Paris Dauphine (2020)  
TOP40 best innovation worldwide, Movin'On (2020)  
"Best Hope" of the EDF Pulse contest (2020)  
Winner of the 2020 French Technology Academy  
Best solution of the EVS32 (2019)  
Technical and Scientific Excellence labelled by CARA  
Winner of the 8<sup>th</sup> "Concours I-Nov" (500K €)



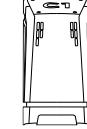
## OUR CUSTOMERS



**KEY ACCOUNTS ARE SIGNING. THE NEED FOR OUR SOLUTIONS IS HUGE.**



7 ME Analytics studies



10 charging robots Charles



1 charging robot Evy

Current potential with existing customers : >20M € until 2025.

Current pipe with warm prospects : 1M €

**4 U.S.  
150B €**

Starting in 2025  
[Click here for source](#)

**1 FRANCE  
5B €**

Already addressed.  
Size estimation : 600 000 charging  
point in 2021 (excluding domestic  
points), with CAGR of 10% (minimizing).  
[Click here for source](#)

**3 APAC  
200B €**

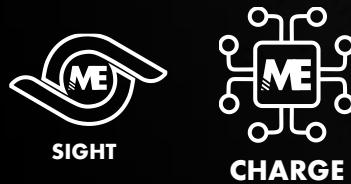
Starting in 2024  
[Click here for source](#)  
(extrapolated from the 2028  
estimated market size and  
average annual growth rate  
of 25%).

## **OUR MARKET AND EXPANSION STRATEGY**

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With our digital solutions, we can be the one-and-only entry point to electrify all our customers sites (domino effect)

N.B.: All our market sizings are done within a 2040 framework.

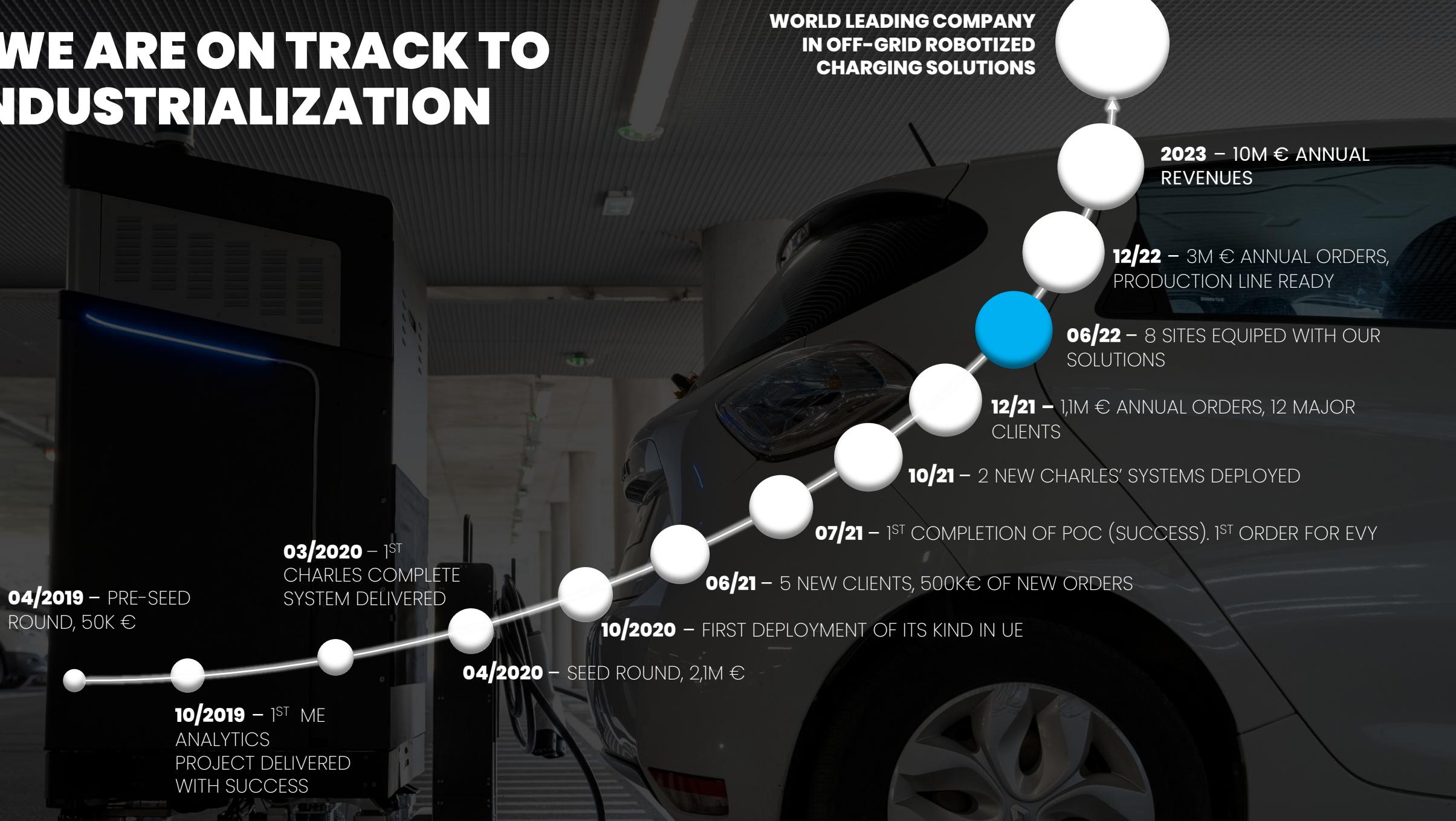


**2 UE  
150B €**

Starting in 2023  
[Click here for source](#)

# / WE ARE ON TRACK TO INDUSTRIALIZATION

WORLD LEADING COMPANY  
IN OFF-GRID ROBOTIZED  
CHARGING SOLUTIONS



# AIMING TO SCALE

Customers are signing and we proved we could deliver. Now we want to go full speed and scale the model.



## PRODUCTION SCALING STRATEGY

**TODAY : 2 UNITS / MONTHS**

### CURRENT MODEL :

- COO and two assembly technicians
- First assembly line (150m<sup>2</sup>) and laboratory operational.
- Based in La Doua (Villeurbanne).
- Everything assembled in-house, PCBA outsourced.
- Maximise utilization of off-the-shelf components.
- Mutualize Charles and Evy sub-systems and components.

**NEXT GOAL : 100 UNITS / MONTHS (2024)**

### SCALING LEVERS :

- Industrialization of Charles and Evy with identified specialists
- Complete outsourcing of semi-finished products (partners already identified)
- Final assembly and quality control in-house
- Battery X : standardization and industrialization of a common battery pack compatible with different 2<sup>nd</sup> life batteries brand
- Industrial partners for potential full outsourcing for distant areas (Asia, USA)



## DEPLOYMENT SCALING STRATEGY

**TODAY : WE MANAGE 90% OF IT**

### CURRENT MODEL :

- One head of deployments (ex head of deployments of autonomous shuttle company).
- 1 to 2 weeks of one engineer on site to make full deployment of Charles (installation, mapping and configuration on site).
- Electrician partners in charge of infrastructure connection.
- Evy can be deployed in 1 day.

**NEXT GOAL : CHARLES IN 2 DAYS & EVY EXTERNALIZED**

### SCALING LEVERS :

- Acceleration of deployments with automatized mapping tools
- Parallelize mapping phase during prior-to-deployment visits
- Technical partners trained to deploy Evy in full autonomy



## SUPERVISION SCALING STRATEGY

**TODAY : 1 TECHNICIAN FOR 3 ROBOTS**

### CURRENT MODEL :

- Head of supervision in charge of 3 supervisors.
- Current autonomous navigation allows full distant remote supervision
- Evy only needs charging and battery passive monitoring, with HERMES proprietary software.

**NEXT GOAL : 1 TECHNICIAN FOR 20 ROBOTS (2024)**

### SCALING LEVERS :

- Improve autonomous navigation, debugging tools, OTA upgrade systems and supervision tools
- Technical partners and parking managers' tele-operations teams (parking monitoring) formed to supervise charging robots in their own parking and eventually other private parking lots

# OUR GOALS FOR 2026

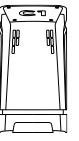


## PRODUCT DELIVERIES



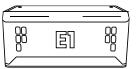
+700

Parking modeled



+800

Charles deployed



+1000

Evy deployed

## CHARGING EXPANSION



**28 000 points**

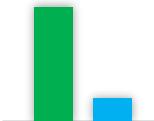
Equivalence in traditional charging points.  
Those points are based on the number of plug-in modules (mobile for Charles or static for Evy).

## OUR REVENUES



>100M €

Of annual revenues



9M €

ARR with ME Sight and services

## OUR POSITIVE IMPACTS



**380 000 sessions**

Charging sessions every months



**4 GWhs**

Energy transferred in cars every month



**110 MWhs**

Total storage capacity of 2nd life batteries



**A GROWING TEAM (25) SHARING EXCELLENCE, RESULTS AND TEAMWORK VALUES. CRAFTING CHARGING SYSTEMS SINCE 2016.**



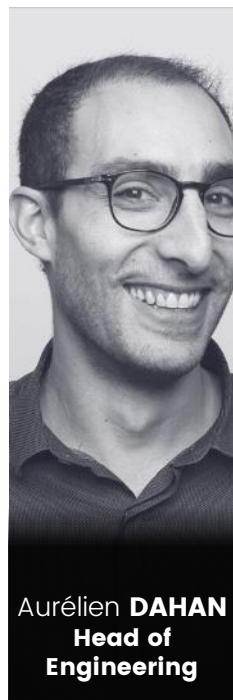
Salim **EL HOUAT**  
Co-founder  
**CEO**



Illyass **HADDOUT**  
Co-founder  
**CTO**



Maxime **ROY**  
Co-founder  
**COO**



Aurélien **DAHAN**  
Head of  
**Engineering**



Habib **BENOTHMAN**  
Robotics Engineer



Ibtissem  
**CHOURA**  
Simulation  
Expert



Jennifer **BEVIERE**  
Office Manager



Simon **DUCROZ**  
Head of  
**Supervision**



Trésor **BAPRE**  
Head of  
**Sales**

**THEY  
TALK  
ABOUT  
US.**

**franceinfo:**



**B SMART** **L'USINENOUVELLE**

**LA TRIBUNE**

**Capital**

**Le Parisien**

**LE PROGRÈS** **france.3**

**bref**  
**ECO**

**BFM**  
**BUSINESS**

**Europe 1**

**L'USINEDIGITALE**

**Maddyness**



## / OUR BOARD AND INVESTORS

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Ensemble  
s'investir pour un  
meilleur avenir



# OUR SERIES A

We showed frugality, agility, adaptability and results. Our customers are multiplying and are confirming the value of our solutions. And our robots have proven excellent results with constant improvements.

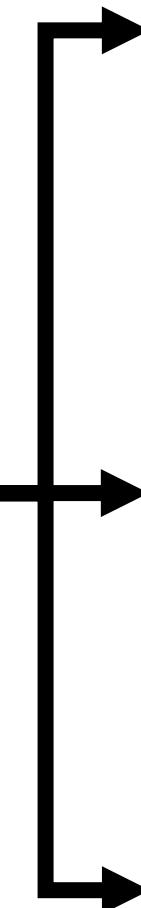
We are now looking to obtain the capacities to deliver and expand.

This Series A aim at making Mob-Energy the **world's leader** in off-grid robotized charging solutions.

**6M €**

Amount of equity targeted

**We want everyone to be able to use an electric vehicle by making the daily task of charging as easy as parking one's car, suitable for parking lots in terms of technicalities and finances and more sustainable by extending the lifecycle automotive batteries.**



## INDUSTRIALIZATION

Build the industrial assembly line and scale the operation's capacities (deployment & supervision)



Production and operations team



Production assets



Certifications & industrial engineering

## MARKET CONQUEST

Multiply our customers portfolio and start distribution partnerships.



Sales team



Marketing expenses

## TECHNOLOGY REINFORCEMENT & INNOVATIONS

Improve solutions' performances, make technical adaptations for international deployments and build technological advances and protection.



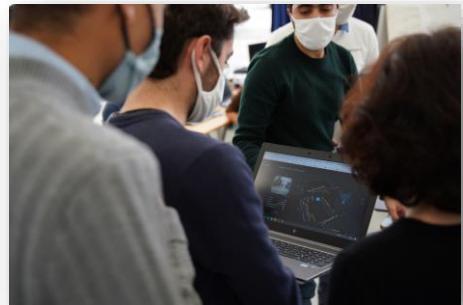
Engineers and Doctors



Laboratory



Research and development support and IP



**/ LOOKING FORWARD TO  
DISCUSSING WITH YOU.**

**Salim EL HOUAT – CEO**

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READY TO TAKE PART IN THE  
**ELECTRIC REVOLUTION?**



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