



We Are Equipped and Ready to Lead the Battery Swapping Revolution

Sinah Truffat

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We Believe that Clean, Accessible and Affordable Energy Is not Only the Future, but a Basic Right for Everyone, Everywhere.

Our Mission

is to lead the battery-swapping revolution by providing game-changing portable energy solutions for future mobility.

Micromobility is just the beginning...

Our Vision

is to democratize clean and portable energy, while building a universal network of one-stop energy service stations.



Where We Come From

We have deep knowledge of the battery market and charging

In 2017, we **developed** and **commercialized** the **GreenPack** battery, which is **used** and trusted by many players in the market **across Europe**.



Customers who rely on the GreenPack battery:





Our team is backed
by **40+ employees**

software development
hardware development
production // construction
leadership // expansion
office management/HR
service // procurement
marketing

The Problem

Boom in e-micromobility, but the **infrastructure is highly inadequate**

Unresolved Problems in Rising e-Micromobility:

- Lack of charging infrastructure/Lack of range
- Inadequate safety standards and measures
- High operational costs
- Capex-intensive battery and infrastructure ownership
- Vehicle downtime due to charging needs
- Inefficient battery logistics/handling



The Solution

The **first multi-modular battery-swapping station** in Europe

▶ Full Battery in Seconds

Battery swap via plug & go

▶ Network Over Warehouse

Available 24 hours a day, 7 days a week, decentralized

▶ Cost-Saving

Longer life-cycles and reduction of OPEX and CAPEX

▶ Safety

Continuous monitoring and management of batteries, IP44, certified by German Institute for Applied Fire Safety Research

▶ Open System

Different batteries can be integrated in a short time

▶ Digital Signage

Station branding in your CI and marketing displays



Our Battery Swapping Solution Meets the Critical Needs of Customers

AFFORDABILITY

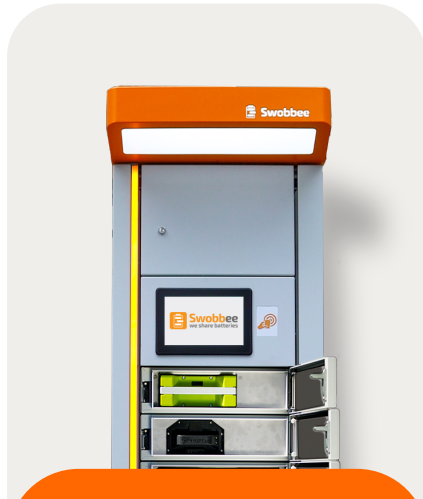


Reduced Costs



Lower operational costs for charging, battery subscription removes battery cost from vehicle purchasing price

SAFETY

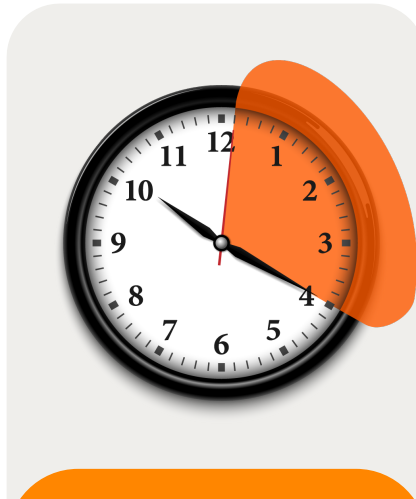


Proven Safe



Swobbee stations are IP44 tested and equipped with a fire hazard management system, certified by German Institute for Applied Fire Safety Research

UPTIME

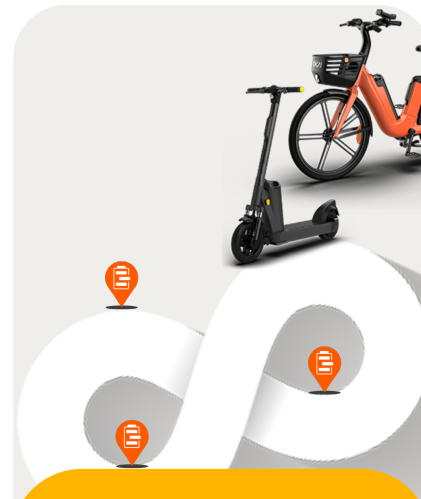


Time Saving



Battery swapping with Swobbee takes seconds and removes the long waiting times of traditional charging

RANGE



Limitless Range



Battery swapping with Swobbee removes range anxiety by providing fully charged batteries wherever they are needed

LOCATIONS



Fast City Access



Swobbee gives access to hundreds of indoor and outdoor locations in city centres including free location scouting, set-up of stations and maintenance

Our Rental Batteries

We offer a **one-stop solution**, providing **batteries** and **battery swapping infrastructure**

Integrated batteries for rental

Swobbee compatible and for rental



GreenPack



Kumpan



Torrot



Segway/Nineb.



OKAI A



OKAI B



AES eBike 2.0

Available battery types

Only for rental



AES PowerPack



AkkuVision
f. Yamaha



AkkuVision
f. Bosch PowerPack



AkkuVision
f. Bosch Intube

Additional batteries upon request.

Our Cloud Software Platform Provides a Seamless Customer Journey and Excellent Service

Through an **end-to-end battery management** and charging solution with API integration into your user app

Station-management:

- + 24/7 monitoring
- + Remote maintenance and service
- + Outsourcing and Utilization reports

Battery-management:

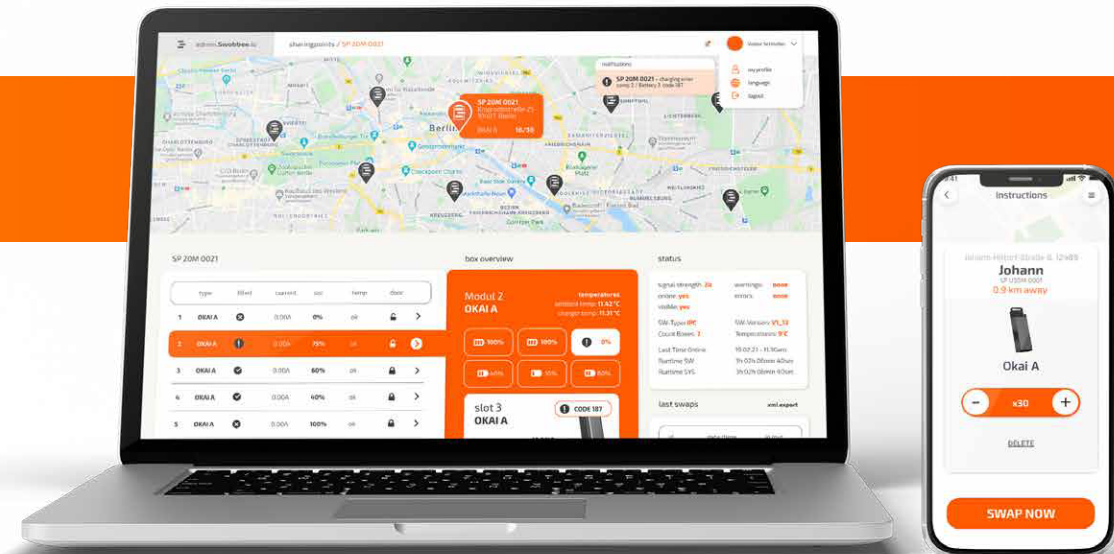
- + Battery monitoring
- + Battery communication
- + Temperature and Current Monitoring
- + State of Charge & State of Health

Battery database:

- + Digital twin of each battery
- + Battery asset management
- + Battery lifecycle management
- + Asset valuation in real time

Operator Dashboard + App

- + Customer access
- + Analysis and management solution
- + Live operational tracking



We Have Two Business Models With Maximum Flexibility

Charging-as-a-Service

Swobbee as operator offers a central charging solution for customer batteries

Customers
Sharing providers

Business model
Pay per swap



Exclusive stations



Battery-as-a-Service

Swobbee as operator is currently the sole owner of the station network and the battery pool.

Customers
sharing providers,
last-mile delivery and b2c

Business model
Monthly subscription

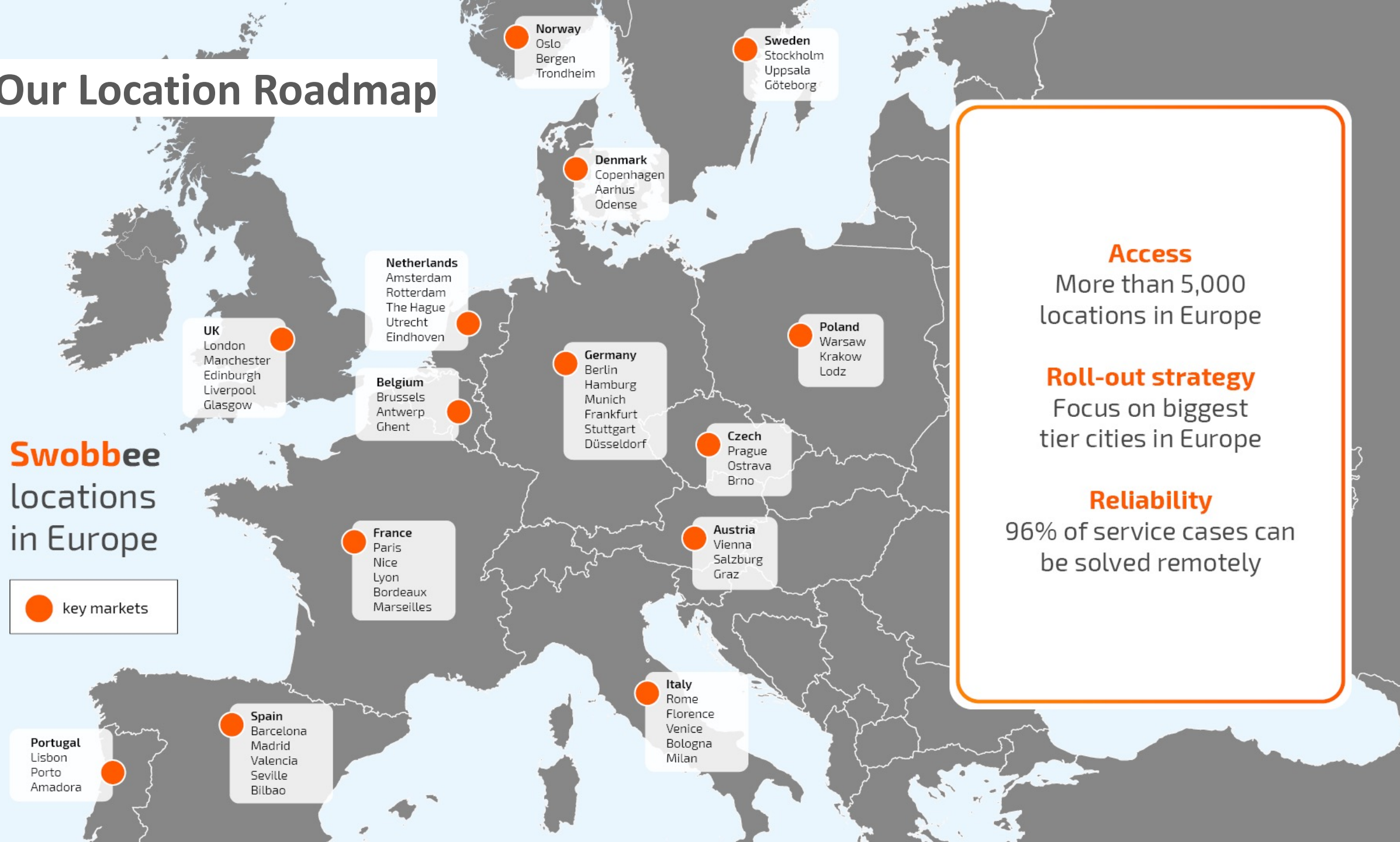


Station network

Our Location Roadmap

Swobbee locations in Europe

● key markets



Access

More than 5,000 locations in Europe

Roll-out strategy

Focus on biggest tier cities in Europe

Reliability

96% of service cases can be solved remotely

Our Partners Support Us At Each Stage of the Infrastructure Set-up

Location Partners



Light Electric Vehicle OEMS



Battery Manufacturers



Key Customers



Thank You For Listening!

The Swobbee Team





Sinah Truffat

International Expansion Manager
+31 621 965622
s.truffat@swobbee.com



Marco Pasqualotto

Head of Expansion
+49 163 155 7010
m.pasqualotto@swobbee.com

mail to: expansion@swobbee.com

Battery Swapping Cabinet Specifications

Specification	Details	Measurements	W x H x D 630 x 2300 x 850 in mm
Input	1 or 3 phase up to 11kW		
Charging Voltage	Battery-type specific; 30-60V DC		
Nominal Voltage	Battery-type specific; up to 60V		
Battery Compartment	8-30		
Charging Time	3-5 hours up to 10A; Q1/Q2 2022: up to 20A		
Protection System	<ul style="list-style-type: none"> - Short circuit protection - Anti-theft lock door 	<ul style="list-style-type: none"> - Smoke & high temperature alarms (SMS; email) - Intelligent charging & temperature monitoring with automatic stop 	
Operating Environment	Working temperature: - 20°C /+ 40°C (planned: - 40°C /+ 55°C) Storage temperature: - 20°C /+ 65°C Monitoring with automatic stop		
Features	<ul style="list-style-type: none"> - Battery surveillance /monitoring - Digital twin - Battery temperature management - IP 44 - Self-service exchange & remote support exchange - Climatization (optional) 	<ul style="list-style-type: none"> - Battery asset management - Adaptive (fast) charging - Battery instant physical examination function - Display control screen - Charger identification function and charging control function & overcharge protection 	





Micro Hub
Holzmarktstraße, Berlin



Konstablerwache, Frankfurt /M.



St. Maria Kirche, Stuttgart



Stadtwerke Bochum