

See the future of EV charging

Dr Oytun Babacan Founder & CEO oytun@evotrack.co.uk April 2023



#### Product

Software development currently at MVP stage

£250k of grant funding secured including from Innovate UK, DfT, APCUK.

### Founding Team

Founder with PhD and 10+ years in energy system infrastructure planning, founding engineer with 12+ years in cloud integrated multi-platform software solutions

#### Competitive Advantage

Proprietary public EV infrastructure software solutions based on years of development.

Technology became finalist at the Shell.ai 2022 hackathon

### Team

Growing engineering team with the right expertise in energy, mobility, artificial intelligence and B2B software development.

#### Market Ambition

Expected revenue of over £100 million annually by 2028.

Shell Energy is our beachhead customer.

### Exit

Strong potential for trade sale in 3 - 5 years but instead aiming to be dominant market-lead in 5 - 8 years





### Building a public charging infrastructure is extremely capital and material intensive.

Currently, there are **no commercially available intelligent & predictive software products** that help businesses to make cost effective investment decisions for public charging points.





New networks face significant technical barriers to enter market and lack of know-how reduces their capability to secure capital. Small networks depend on consulting companies, which means high upfront costs but slow design delivery.



Large networks usually have inhouse teams but no way to independently confirm their design choices. **Our Solution** 



# **Cloud-based B2B software product** for public charging point operators and energy companies



A specialised software technology that guides planners how they should **<u>expand</u>** or **<u>manage</u>** their public charging networks.

# **Our Products**



#### **EVOSPOT**

#### Infrastructure planning based on long-term demand forecasting

- Identifies high return on investment locations for charging
- Supports future proof expansion of public EV infrastructure.

MVP demonstration: Optimal expansion plan of public EV infrastructure in NL

a. Existing infrastructure in an Amsterdam neighbourhood (2018)



b. Infrastructure expansion to serve project charging demand (later validated with real demand growth)



Data and locations anonymised for confidentiality.

#### **EVOCAST**

#### Operation and power provision based on short-term demand forecasting

- Enables dynamic pricing strategies to mitigate charging hotspots.
- Helps better fleet management and forecast energy demand fluctuations.

MVP demonstration: Open-source demonstration on Paris/France infrastructure





# Technology



## State-of-the-art technology

In-house algorithms using machine learning techniques

- Identifies patterns affecting charging demand considering key urban infrastructure and external elements.
- Generates automated ideal placement decisions for any city around the world.

The technology is being developed based on years of research and software at **Imperial College** London

Our technology became finalist at the **Shell.ai hackathon 2022** on public EV charging solutions.



# **Comprehensive integration**

Seamless integration with day-to-day operation of our clients.

- An advanced GUI for
- carrying out custom designs by expert engineers and designers
- exploring market options by nontechnical experts
- ► A unique API for
- allowing real-time operation in the design and operation phases
- compatible with third-party or client in-house software.



# Our technology is easily scalable and financially accessible.

• Our tech is designed to operate in any city around the world

Our solution has unrestricted operability across all global cities no matter the differences in their infrastructure. This is a challenging design choice that will give us a great competitive edge as well as a chance to make a global market impact.

• Subscription-based pricing with add-on services to unlock full market potential

Overcoming a key barrier to market entry for our clients, our subscription model with add-on services allows ANY size of charging networks to easily adapt to business needs. Our clients can use our solution as much as they need without having to commit large upfront costs.

# **Product Line**



Our core technology allows us to build multiple value-added products.



# **Product Line Details**

	Evospot	Evocast	Evodesign	
Description	Identifies how charging network should expand	Forecasts where & when charging network will be busy	Estimates how charging demand will fluctuate regionally	
Target Customer	Charging point operators	Charging point operators, EV fleet operators	Energy providers and energy system operators	
Technology Status	Prototyping	Prototyping	Under development	
Timeline	Beta launch out latest by mid-2023	MVP expected by late-2023	MVP expected by mid-2024	
Expected Revenue (ARR)	£15k-£250k per network depending on size	£35-£120 per charging point depending on charger type	£60k-£300k per network depending on complexity	

# **Competitive Landscape**



	Charge point access forecast	Charge point siting decisions	Power system consideration	Extreme event modelling	Machine learning capability	Globally scalable	User integration
LTRACK							
DNV·GL	×			$\mathbf{x}$	$\mathbf{x}$		$\mathbf{x}$
froryx•			×	$\mathbf{x}$			$\mathbf{x}$
Stable			$\mathbf{x}$				
volta	$\mathbf{x}$		$\checkmark$				
			$\checkmark$	$\mathbf{x}$		×	

# **Revenue Model**





#### Tailored subscription options

Pricing model where clients pay based on the length and amount of 'design' and 'simulation' interactions carried out on the Evotrack software infrastructure. This strategy captures a larger portion of the market.



#### Feature-based bundles

Not all of our customers would need same level of technical detail in our products. We will allow our customers to 'opt-out' from any features they do not need making our services cheaper and more accessible.



### Voluntary vendor 'lock-in'

All of our products are seamlessly integrated within our software ecosystem. While our customers would have the option to use any of them separately, we will offer discounts when they are used in parallel.

# **Revenue Projection**





# Product timeline



Phase I		Phase II	Phase III	Global reach
Evocast MVP	<b>Evocast</b> UK commercialisation	<b>Evocast</b> MVP	<b>Evocast</b> scale up in Europe	
Launching 6-month beta trial		Evosee	<b>Evodesign</b> MVP	
•	•	•	•	•
Q2 2023	Q4 2023	Q4 2023	Q2 2024	Q3 2025





**EUROPEAN UNION** European Regional Development Fund





# Our Team





PhD

#### Scientific Advisor

Senior research scientist and machine learning engineer with 20 years of experience in high-tech software product development in big Silicon Valley companies.



Mentors

#### Partnership Advisor

Senior investment manager, who is experienced in venture capital investment, spinouts and technology transfer in high tech companies.

Artun Sukan, PhD



#### Legal Advisor

Senior lawyer over 20 years international legal experience including corporate law, intellectual property and international trade.





David Elliott

Trees for Cities

CEO



Francis Toye

🚺 UNILINK









Director CEO & Founder The Unilink Group



Responsible Finance







Imperial College

London

# Leadership



#### Software Development



Emre Eran

**Omer Suve** 

**Technology Lead Senior Software Engineer** 

Emre has 12+ years of experience in designing and developing highly technical software solutions including for sustainable energy services. He is specialised in cloud architecture design, database operations and integrated software platforms. Emre looks over the whole system infrastructure of our technology and developing cloud-based software solutions.

#### Software Engineer

Omer is a talented computer scientist mainly looking at our back-end software development. He also supports our data governance tasks and machine learning tooling.

#### Research and Innovation

#### **Research Lead** Senior Research Scientist



solar PV and energy storage systems. He is an established research scientists who managed over £400k research funding in last past few years. Oytun founded Evotrack at Imperial College where he started developing our core technology and he leads the research and innovation at Evotrack.



PhD

**Research Scientist** 

Kian is our part-time team member, who was previously at the UC Berkeley and now doing his quantum computing studies at Imperial College London. He is working on our location-based station usage prediction technology.



#### Machine Learning Engineer

Abdul has a background in computer science and he supports our algorithm development in various projects. He also integrates our algorithms into our software infrastructure.

**Abdul Khatib** 

# Fundraising Ask



### Seed investment round



# **£850,000** equity investment

Funding required to reach Phase III and build out launch team and product for next 18 months

# • Use of funds



# Path to Exit





#### Potential acquirers include:

- Large charge point operators, e.g., Shell Recharge, BP Pulse, Tesla Supercharger.
- Global energy companies, e.g., Octopus Energy, EDF Energy, Enel X.
- Global consulting companies, e.g., Deloitte, Accenture, McKinsey.

#### Motivation for acquirers:

- Limiting access of Evotrack products to direct competitors in the market.
- Gaining new technical analysis capability while diversifying into rapidly-growing EV market segment
- Generating added value to their own technical products using Evotrack's solutions

### **F C R A C K**

See the future of EV charging

Imperial College London

An Imperial spin-out company

www.evotrack.co.uk