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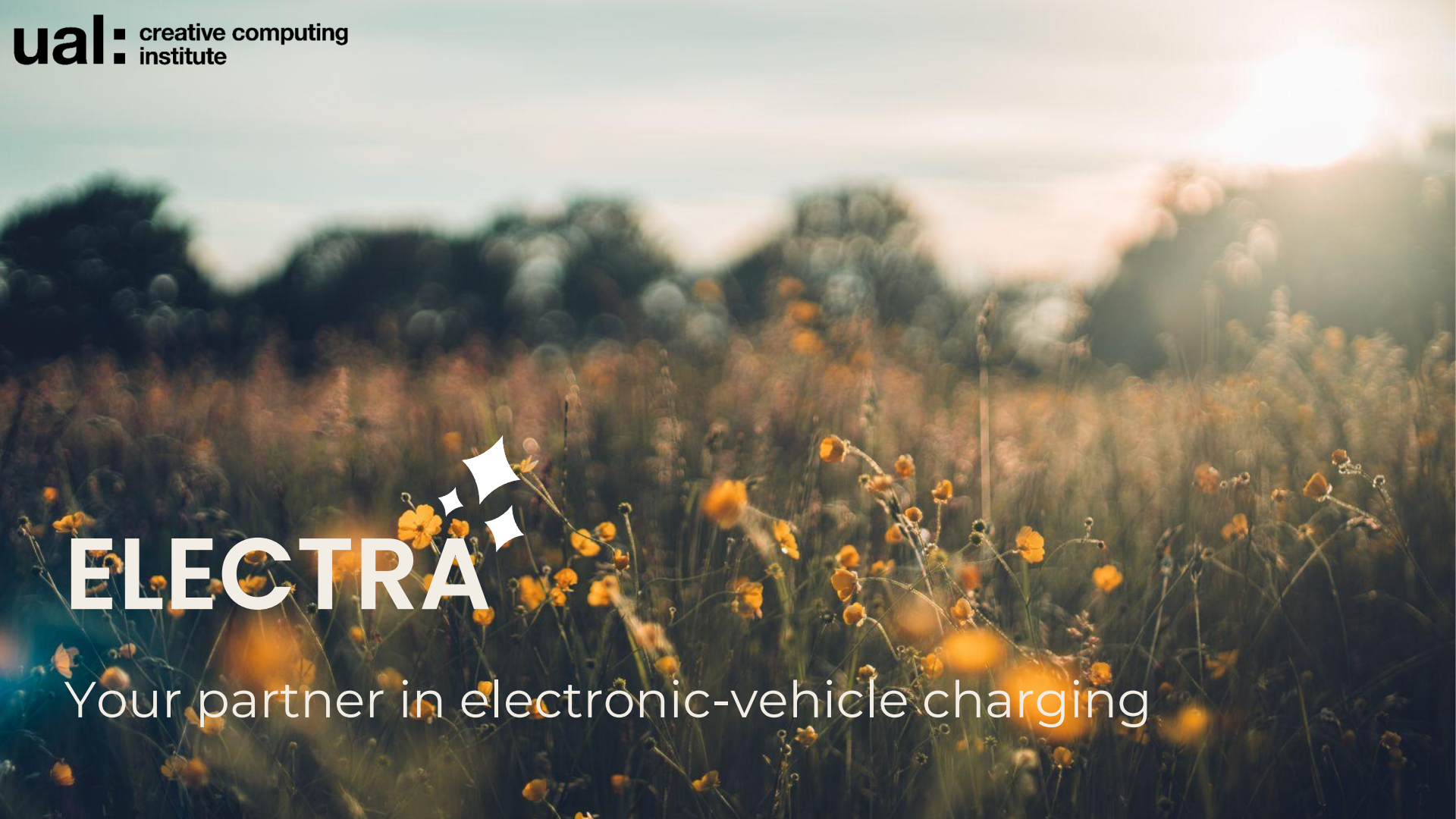

ELECTRA

Your partner in electronic-vehicle charging

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Our charging systems are inefficient.
And it's impacting our planet.

Conventional EV charging in the UK relies on a grid that sources fossil fuel-based, solar, wind, etc. energy. This means we are ultimately charging out electronic vehicles with fossil fuels.

Negative impact on environment:

- Higher Carbon Footprint: Charging EVs with electricity derived from fossil fuels increases overall carbon emissions, undermining the environmental benefits of EVs.
- Energy Source: Conventional UK grid relies on fossil fuels for around 33% of electricity (as per UK Energy Trends March 2024)

Negative impact on EV owners:

- Battery Health: Deterioration caused by overcharging reduces battery lifespan
- Wasted time: Inefficient charging systems lead to prolonged charging times

But there is a viable alternative:

Shifting to smart charging with dynamic programming uses less current, keeps the system at a reduced load, and adjusts charging plans with real-time data.

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Shifting to smart charging:

Reduces Energy losses

By charging at lower currents (optimal speed), balancing loads between stations and making real-time adjustments as vehicles come in

Reduced Carbon emissions linked to energy losses

Minimizes losses by reducing charging power and calculating losses using real-time data

Increase battery longevity

By preventing overcharging

Decrease wait times

Ensures vehicles are ready and charged by the time the user needs to drive off

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Growing momentum for EVs and Smart Charging

There is an opportunity to leverage the capital, legislative drivers and momentum created by the need to reduce fossil fuel dependency to finance, and create, a positive change for our environment.

Market Growth:

EV market is expected to grow from 3 million units in 2020 to 26 million units by 2030.

Consumer Demand:

30% of UK consumers consider switching to EVs within five years.

Regulations:

UK's ban on new petrol and diesel cars by 2030, Zero Emission Vehicle (ZEV) mandate, Clean Air Zones (CAZ).

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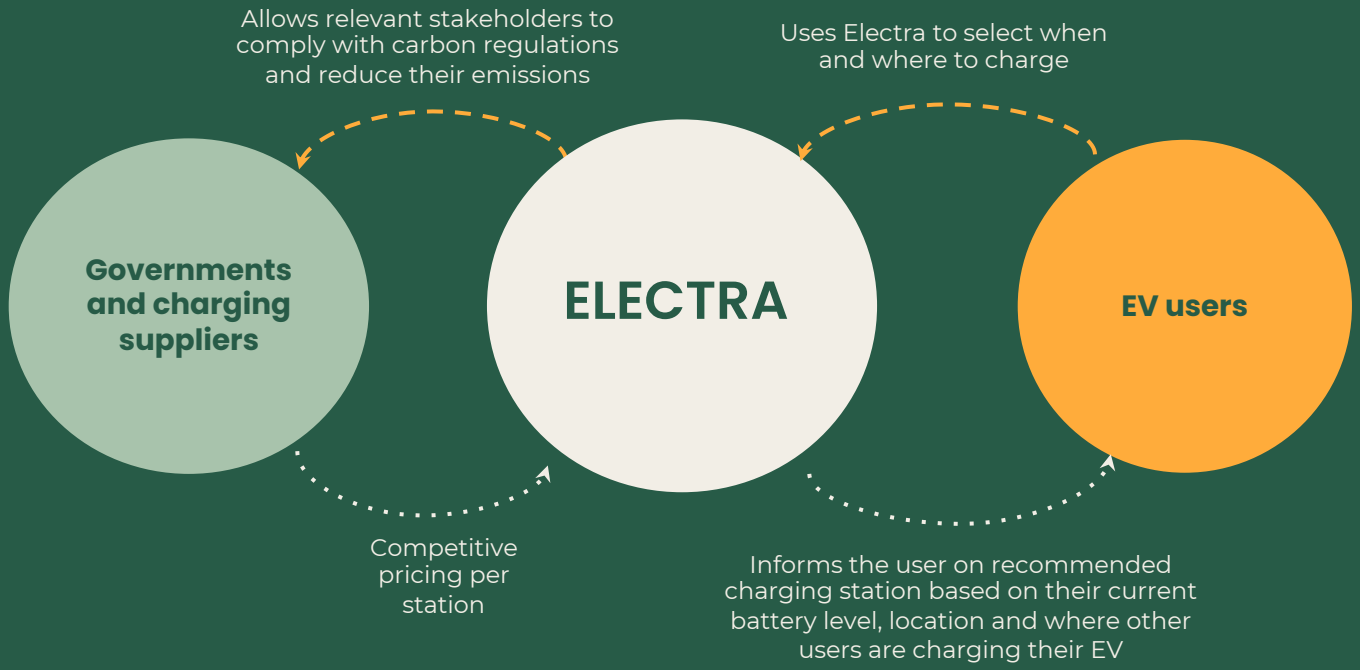
We partner with governments and EV charging suppliers



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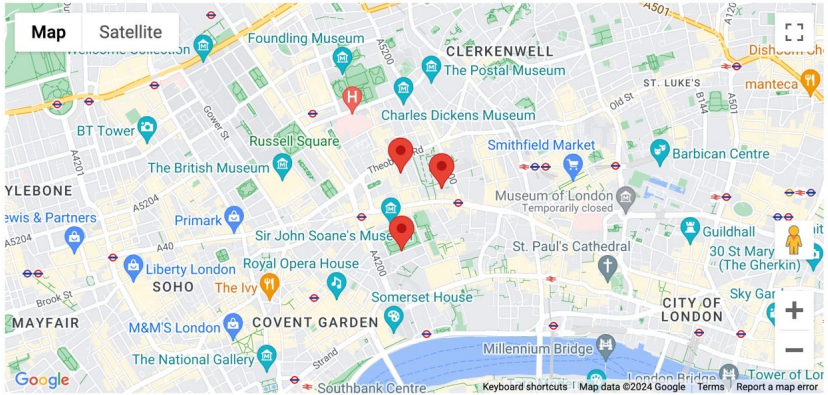
Demo of the user interface:

EV Charging Stations



Car Details Form

Battery Capacity (kWh)

Enter battery capacity

Car Model Name

Select a car model

Max Duration (hours)

Enter max duration

Submit

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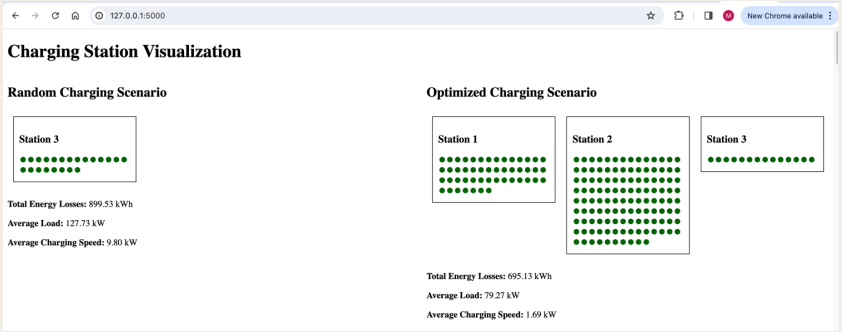
Demo of the back end available to station owners or governments:



Charging Plan

Optimized Charging Plan

Vehicle Type	Station ID	Current Battery Level	Max Duration	Energy Requirement	Charging Rate	Actual Charging Duration (hours)	Final Battery Level	Station Current Load	Energy Losses
Volkswagen ID.3 (Pro)	1	15	8.0	4631.299999999999	8.4	8.0	80	8.4	56.44800000000001
Volkswagen ID.3 (Pro S)	1	7	8.0	4635.9400000000005	0.5	8.0	13.89655172413793	8.9	0.2
Volkswagen ID.4 (Pure Life)	1	38	5.0	4140.24	0.5	5.0	42.80769230769231	9.4	0.125
Volkswagen ID.4 (Pro Life)	1	26	5.0	6139.98	0.5	5.0	29.246753246753247	9.9	0.125
Volkswagen ID.4 (Pro Performance Life)	1	46	2.0	6124.580000000001	0.5	2.0	47.2987012987012 96	10.4	0.05
Volkswagen ID.4 (Pro Performance Style)	1	33	1.0	6134.59	0.5	1.0	33.64935064935065	10.9	0.025
Volkswagen ID.4 (Pro Style)	1	46	8.0	6124.580000000001	7.0	8.0	80	17.9	39.2
Volkswagen ID.4 (Pro Performance 4MOTION)	1	8	2.0	6153.84	0.5	2.0	9.2987012987013	18.4	0.05
Volkswagen ID.4 (Pure Performance Life)	1	44	5.0	4137.12	1.03	5.0	53.90384615384615	19.43	0.53045
Volkswagen ID.4 (Pure Style)	1	6	4.0	4156.88	7.33	4.0	62.384615384615 39	26.759999999999998	21.491560000000003
Volkswagen ID.4 (GTX)	1	16	2.0	6147.68	0.5	2.0	17.2987012987013	27.259999999999998	0.05
Volkswagen ID.5 (Pro Performance Style)	1	42	7.0	6127.66	0.5	7.0	46.54545454545455	27.759999999999998	0.17500000000000002

[Watch Demo Video]

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Shifting to smart charging can be priced:

Governments + EV station owners

Basic Package:
For small deployments (1-10 stations)
Initial setup: $10,000 - $20,000
Monthly subscription: $500 - $1,000 per month

Standard Package:
For medium deployments (10-50 stations)
Initial setup: $20,000 - $50,000
Monthly subscription: $1,000 - $2,500 per month

Enterprise Package:
For large deployments (50+ stations)
Initial setup: $50,000 - $100,000+
Monthly subscription: $2,500+ per month

Custom Package:
Highly tailored solutions for large-scale or unique requirements
Pricing is based on specific needs and scale

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Financial Model:

Projections Year 5

Revenue: $2,402,102

Operational profit: $1,732,391

Active packages: 52

Assumptions

Total Market: over 40k stations

Capturable Market Share: 3%

Year 1 will sell 5 basic, 3 standard and 2 enterprise packages.

Operational costs increase 25%, 20%, 15% and 10% in years 1-4.

CapEx of $50,000 annually for upgrades and maintenance.

View commercial model spreadsheet

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Let's Chat About How Electra Can Power Your Future

What sets Electra apart?

Dynamic Programming for Optimal Charging:

- **Competition:** Many competitors use static or semi-static charging schedules which do not optimize for real-time conditions.
- **Electra:** Utilizes dynamic programming algorithms that adjust in real-time to optimize charging speed, minimize energy losses, and extend battery life.

Real-Time Data Integration:

- **Competition:** Often rely on pre-set charging parameters or periodic updates.
- **Electra:** Integrates real-time data from various sources (grid status, battery health, vehicle usage patterns) to dynamically adjust charging protocols.

Load Balancing Across Multiple Stations:

- **Competition:** Many competitors handle charging at an individual station level without considering the broader network.
- **Electra:** Employs load balancing technology that distributes the load across multiple stations to prevent overloads and maximize efficiency.

Team

Manuela Cleves

Chief Executive Officer (CEO)

Industrial Engineer and Data Scientist with over 7 years of experience in impact investing and program design, management and evaluation.

Passionate about social and environmental impact.

Richa Sharma

Product Manager

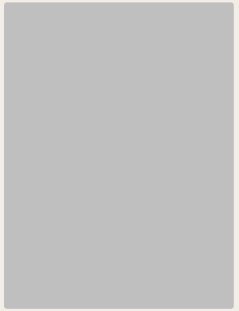
Business Administrator and software engineer with an MSc in Computer Science. She has over three years of industry experience. Apart from working at ELECTRA, she is also an active open-source contributor in Open Climate Fix.

Yunjie Huang

Chief Technology Officer (CTO)

Computer Scientist with an MSc in Data Science & AI. Previously worked as a software engineer at Deloitte.

Passionate about nature photography and creative problem solving for environmental impact.



Ishaan

R&D Lead

Electronic Engineer with a strong foundation in hardware and software innovation within the tech space.

Enjoys hiking and researching on innovation in the tech space.