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# EV Charging Site Selection and Network Operations with Palantir and Wejo

## Introducing the New OS for EV Infrastructure

# Platform Overview

## Introducing an OS for EV charging networks →



The **EV Infrastructure Operating System** unleashes the power of EV infrastructure <u>for any business or organization looking to take part in the mobility revolution.</u>

It integrates an organization's data through Palantir Foundry for operational decision-making, with the option to add Wejo — a robust connected vehicle data asset.

It can help scale and build profitable, efficient, and sustainable EV networks, and ensure equitable and universal access to EV charging.

## Taking on the challenge of global electrification →

→ At COP26, leading automakers and more than two dozen countries agreed that all new cars sold by 2040 should be zero-emission.

A mobility revolution is underway and electric vehicles (EVs) are leading the charge. With transportation emissions accounting for an estimated <u>29% of carbon emissions in 2019</u>, widespread adoption of EVs is a priority for policymakers and industry leaders today. New legislation around the world is accelerating the transition to electric vehicles, with billions in infrastructure grants and tax incentives on the line.

However, universal access to EV charging remains the biggest impediment to widespread EV adoption. To empower companies to take on the challenge, Palantir has unveiled the **EV Infrastructure Operating System**, an application that breaks down the barriers that stand before the wider adoption of EVs, and which looks to ensure that future investments in EV infrastructure are <u>efficient and sustainable.</u>

An integrated solution for new charger site selection and charger network management, <u>the application can be deployed by federal and state agencies, automakers, charging network operators, retailers, utilities, energy companies, and other organizations looking to define the future of mobility.</u>

The platform enables users to layer additional data relevant to their business or organization, ensuring that any organization's context for site selection and charger operations is accounted for.

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# A fusion of robust data, powerful analytics, and operational workflows

The EV Infrastructure OS integrates an organization's proprietary data, augmented with the option to select connected vehicle data from Wejo, to enable mobility players to intelligently build and maintain EV charger networks.

The application enables companies to answer critical questions for network builders and operators, such as those shown on the right.

## Intelligent Site Selection →

→ Where should new charging stations be deployed to maximize EV charging access?

→ What is the utilization of existing charging infrastructure deployed today?

→ What is the forecasted EV charging demand for potential charging locations today and in the future?

→ What charging speed and on-site battery storage makes the most financial sense based on forecasted EV charging demand?

→ Where can ultrafast chargers be built to take advantage of spare capacity on the existing grid, to reduce the overall capital cost of high-speed charging?

## Maintenance & Reliability →

→ How can operational charger uptime be maximized to serve as many customers as possible?

→ Which chargers are experiencing reliability outages right now?

→ How should maintenance efforts be prioritized to resolve and prevent reliability events?

→ Which environmental factors tend to cause outages across the network?

# Use Cases

## Site Selection →

Scale intelligently

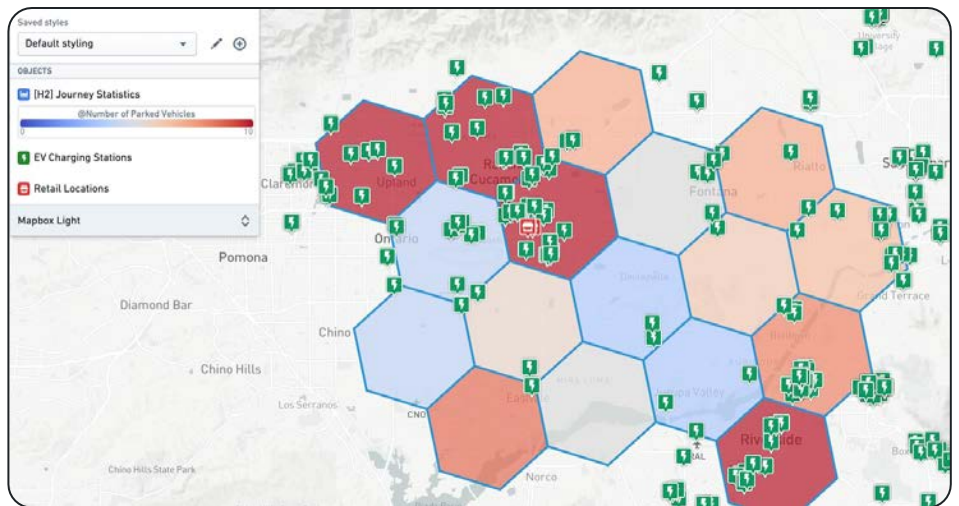Understand demand

Integrate 3rd party data

Determine charger type

Using the tool, users can select a micromarket hex to reveal further information on EV and traditional driving behavior in an area to make better decisions about where to build charging stations.

The interface allows users to see local demand curves alongside EV assets and their utilization curves. This type of information can be used to build out a forecasted kWh demand for EV charging within each micromarket.

The EV Infrastructure Operating System's built-in site selection tools give operators the ability to intelligently plan and build new charge stations. The site selection workflow can help customers locate sites for chargers in areas where EV charging demand is greatest. It enables users to optimize their site selection for charger utilization, and can also help determine the size, type, and kWh capacity per charger.

For customers opting to leverage Wejo — a vast data asset with billions of near-real-time connected vehicle data points including aggregated vehicle journey paths, vehicle powertrain and fuel types, as well as movement patterns of conventional and electric vehicles — the OS gives users a full picture of demand and customer potential.

Then, it helps form a picture of the kind of infrastructure needed at new charging stations according to these factors:

The application is designed with an open architecture, and beyond its out-of-the-box capabilities, can serve as a foundation for future development to uncover new workflows to generate additional value.

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The platform easily integrates with other 3rd party data. For example, a retailer can prioritize stores that have high or low average basket values, whereas utility companies can use it to understand how forecasted EV charging demand would impact their wider grid networks. Automakers can use the tool to build and monitor EV charging infrastructure in key markets following new vehicle roll-outs.

By integrating economic data with charging infrastructure data, users can also create a picture of economic activity around charging stations. A holistic view of what kind of demand can be expected — both today and in the future — is critical for optimal long-term investment decisions and can deliver compounding value.

Use Case 2

## Network Operations →

Secure investments

Maximize revenue

Manage network operations

Identify and prevent failures

Beyond site selection, the EV Infrastructure Operating System is geared towards securing the investment of mobility players in EV infrastructure. Post charging site installation, the app's network operations tools help maximize revenue and increase network reliability.



Users can manage large networks of chargers at scale with operational tools built right from chargers' IOT sensor data. They can monitor and improve the performance of individual chargers by tracking uptime via OCPP sensor data and reveal the historical performance of each owned or publicly available charging station, its daily utilization, and electricity costs where data is available.

This object view can be customized to show hour-of-day or day-of-week utilization curves. The application can also help users detect and prevent problems before they happen.

Network operations teams can build alerts to identify faulty behavior using low-code/no-code environments, enabling timely investigation of charger faults by integrating sensor data with ERP systems and maintenance databases.
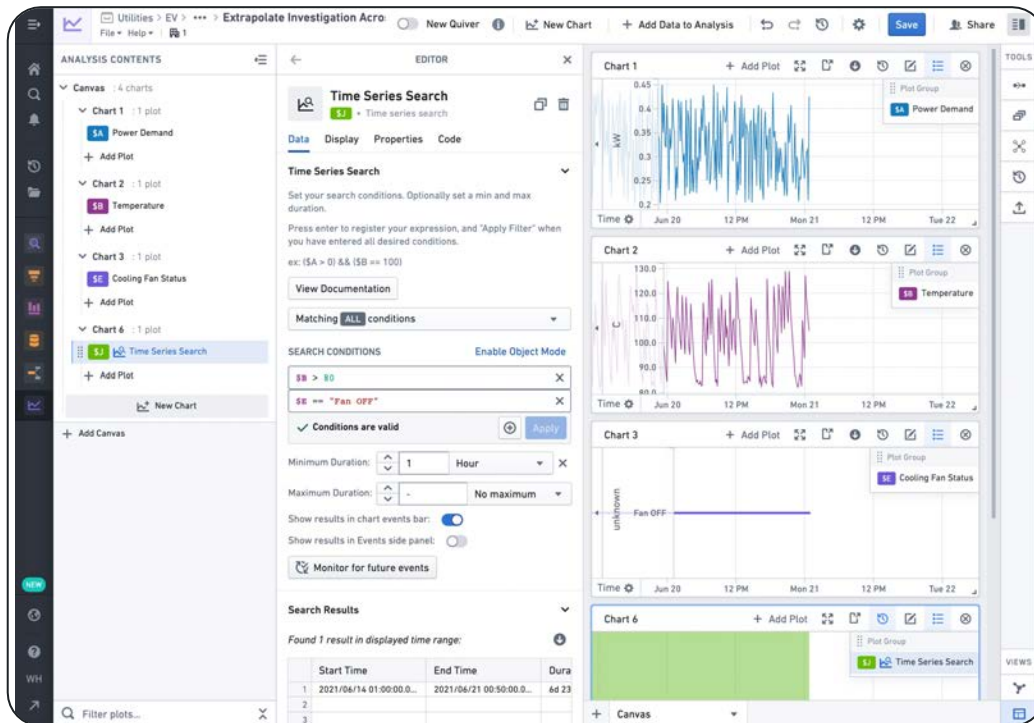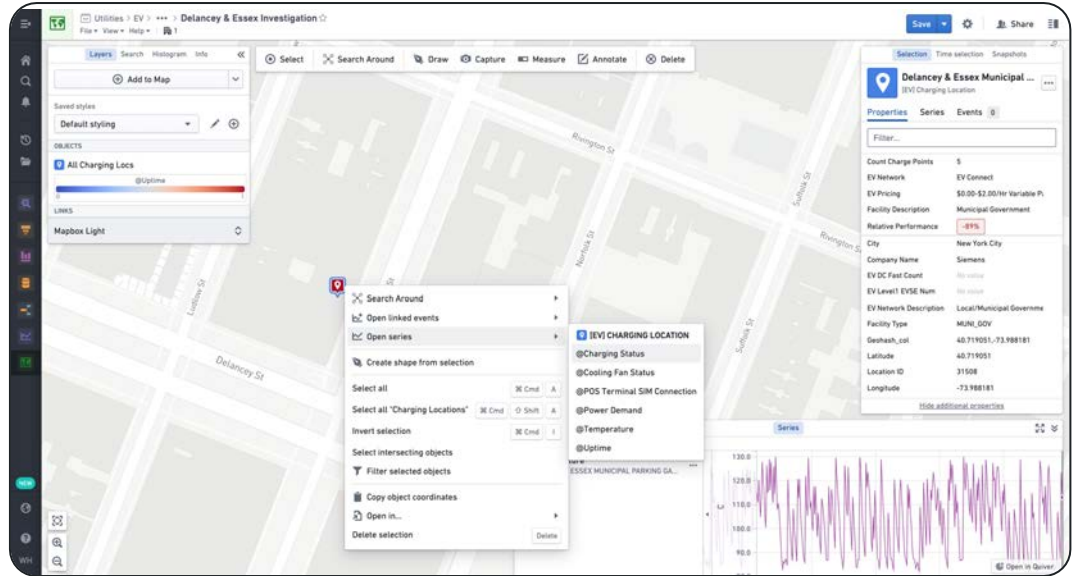


On top of that, the solution enables improved root-cause analysis via automatic fault categorization.

For example, the application can identify faulty chargers by flagging when vehicles visited a charger but were not matched with corresponding charging transactions.

All these features lead to faster problem resolution, reducing downtimes and maximizing revenue per charger.
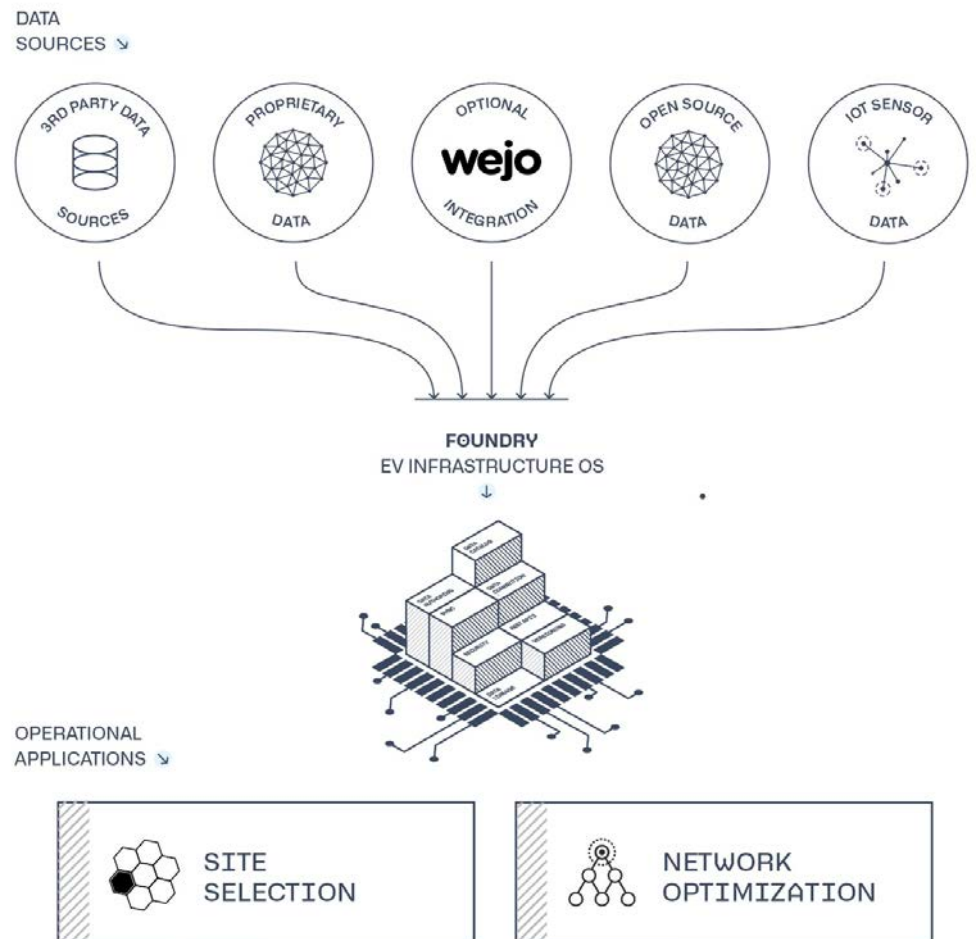
## A secure and universal platform →

The EV Infrastructure OS presents a secure and adaptable platform for mobility players including, but not limited to:

→ Government authorities at the local and national level

→ Utilities

→ Energy companies

→ Automakers

→ Charge point operators

→ Retailers from grocery and gas stations to food and beverage retailers

→ Commercial real estate companies with access to parking space

→ And more..

EVs are a critical component of meeting ambitious climate goals, but building fast, reliable, and accessible EV charging networks remains one of the greatest barriers to adoption. A cross-industry, public-private effort is needed to ensure the success of this transition to electric. The EV Infrastructure OS is built to serve any kind of company and organization looking to have a stake in the future of mobility.

The application goes even further, by building a bridge between charge point operators, software makers, site owners, utilities, and city authorities — establishing a foundation for shared collaboration and network growth.

Most importantly, the EV Infrastructure OS and Wejo's connected vehicle data asset abide by Palantir and Wejo's first class data security practices, ensuring control over owned data, proper data handling, and data anonymization.



DATA SOURCES

3RD PARTY DATA SOURCES · PROPRIETARY DATA · OPTIONAL wejo INTEGRATION · OPEN SOURCE DATA · IOT SENSOR DATA

FOUNDRY
EV INFRASTRUCTURE OS

OPERATIONAL APPLICATIONS

SITE SELECTION

NETWORK OPTIMIZATION

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## Building equitable & sustainable networks →

"The EV Infrastructure OS can help ingest data to make equitable decisions on where public stations are needed most."

The EV Infrastructure OS offers first-of-its-kind capabilities to manage and scale EV networks. It is designed to be a flexible solution for new and old mobility players looking to participate in the critical endeavor that is the electrification of infrastructure today.

Ensuring equitable access to EV charging across geographies and demographics is increasingly becoming a priority for local and regional authorities, with large federal grants targeting infrastructure in rural, lower income, and underserved areas. The EV Infrastructure OS can help ingest data to make equitable decisions on where public stations are needed most.

The pressures of global climate change, skyrocketing consumer demand for EV vehicles, and the need for public-private collaboration in building sustainable charging networks means that an integrated solution for mobility players is critical.

The EV Infrastructure Optimization App is ready to take on the job.



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## Shape the future of EV charging.

Learn more about the EV Infrastructure OS

Get Started →

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