



Faradai AI-powered Energy & Sustainability Intelligence Platform

On its way to leadership in digital energy transformation



CX-Create

Jeremy Cox, Founder CX-Create
Sponsored by Oracle for Startups program

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About this report

Based on interviews with Sahin Çağlayan, CEO and co-founder, this brief report introduces [Reengen](#), trading as [Faradai](#) outside Turkey, one of a growing number of highly innovative companies supported by the [Oracle for Startups](#) program.

The company, founded in 2017, has already made a massive impact in reducing and managing the carbon footprints of large organizations with the Faradai AI-powered Energy & Sustainability Intelligence Platform. To date use of the platform has saved 1.2 gigatons of CO2.

The theme for this month is around startups in the energy and utility sector and how they are innovating, changing the competitive landscape, and contributing to sustainability.

CX-Create is an independent IT industry analyst and advisory firm, and this report is sponsored by the Oracle for Startups program team.

The business context for the Faradai platform

Key drivers

Climate change can no longer be ignored

As we emerge from the ravages of the Covid-19 pandemic and economies fire up once more, 'natural' disasters fueled by global warming have provided stark evidence of the self-inflicted damage to our environment through our over-reliance on fossil fuels. According to NASA, 2020 tied as the hottest year on record. In 2021, few regions of the world have escaped from some form of catastrophic climatic impact as increasing levels of CO2 are discharged into our atmosphere.

In June 2021, Canada experienced a 'heat dome' as high-pressure fronts trapped hot air, causing further rises in temperatures that reached 49.6 degrees centigrade/121 degrees Fahrenheit at its hottest. Germany and Belgium suffered devastating floods in mid-July, and two months of rainfall fell in two days. In the city of Zhengzhou, China, a year's worth fell in three days. California suffered widespread wildfires destroying 4,700 square kilometers/1,800 square miles of vegetation.

Yet despite these disasters, there is cause for hope. Under the auspices of the United Nations, governments and businesses are coming together at COP26 in Glasgow to (it is hoped) agree on substantive actions to support the UN goal of keeping global temperatures under the 1.5 centigrade/2.66 Fahrenheit threshold.

At a more granular level, major corporations, cities, communities, and households now recognize the threats caused by the consumption of fossil fuels and are slowly changing their behaviors to mitigate the risks.

Faradai answers the climate change call, and its timing couldn't be better

Faradai (Reengen) has attracted significant customers across many industries using its platform to transform their energy consumption and reduce their carbon footprints through sustainability intelligence.

Key observations

- Faradai answers the climate change call, and its timing couldn't be better
- Faradai's vision is to lead the digital energy transformation industry
- The Faradai AI-powered Energy & Sustainability Intelligence Platform provides real-time analytics to optimize energy consumption
- Oracle Cloud Infrastructure and the Oracle for Startups program prove their value to Faradai

Faradai (Reengen), the story so far

The beginning

The company was born out of an idea that germinated while Sahin Çağlayan (CEO) and fellow co-founders Burak Sefer (COO), and Utku Simitli (VP Products and Services), were still at college studying digital energy transformation. They tested out their ideas with early sponsors after graduation, including BSH, IBM, and Siemens. This gave them the confidence to pursue their ideas further.

The co-founders moved to Silicon Valley to deepen their understanding of what it would take to be successful technology entrepreneurs. They enrolled on the Singularity Group Leadership Transformation program, with the aim of ‘finalizing our ideas, shaped by academia, corporate work experience, and Silicon Valley. With the desire to be a high impact startup taking advantage of IoT and AI’.

‘Our vision is to lead the digital energy transformation industry’

Sahin Çağlayan, co-founder and CEO Faradai.

Reengen was launched in 2017, targeting Fortune 500 companies. A Seattle-based investor, Capria Ventures, focused on startups with the potential for high growth and a positive impact on the environment, provided the initial funding. By 2019, Reengen was active in global markets trading as Faradai outside its homeland, Turkey, supporting retail, banking, energy, and telecoms customers.

Solution overview

The Faradai AI-powered Energy & Sustainability Intelligence Platform provides real-time analytics to optimize energy consumption

Faradai is a pioneer of the B-IoT (Building IoT) movement and changing the entire conventional energy ecosystem from the ground up by combining IoT, data science, and smart grid engineering expertise.

Faradai AI-powered Energy & Sustainability Intelligence Platform

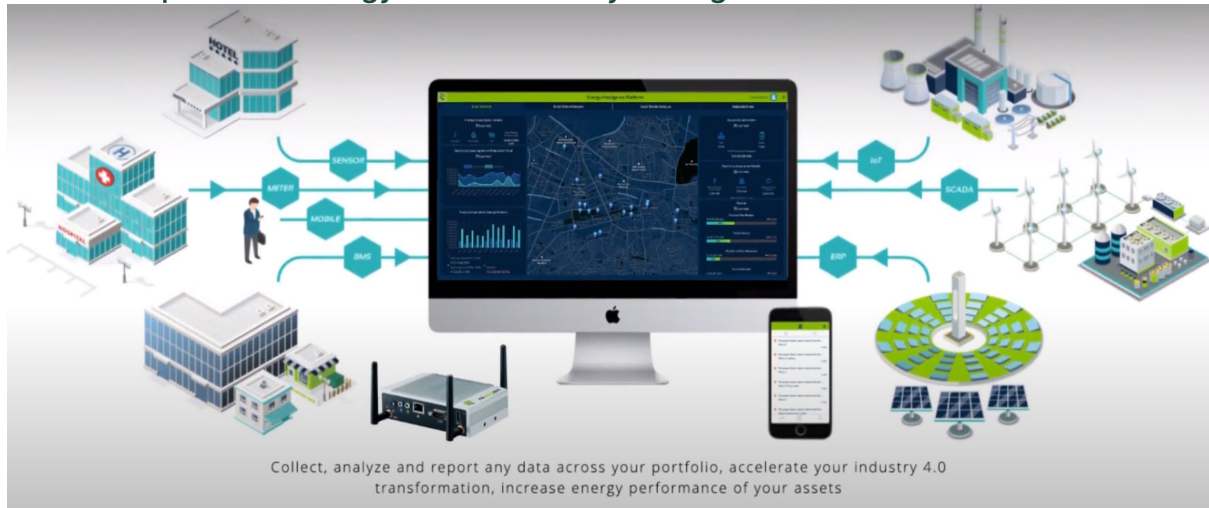


Figure 1 diagram of the Faradai platform

The platform infrastructure highlights

The Faradai solution is based on a PaaS data analytics platform to help large companies and organizations transform their energy consumption through sustainability intelligence. It provides end-to-end monitoring of energy consumption through nine modular applications outlined below. Faradai has used its considerable data science expertise to develop advanced algorithms to support energy optimization.

Global reach and security

Hosted on the Oracle Cloud Infrastructure (OCI), the platform is highly scalable, enabling organizations to create a unified view of energy generation and consumption from buildings, renewables, and grid assets. Third-party applications and data can also be integrated and ingested via APIs and data ETL tools.

Oracle has data centers in all world regions and will be adding fourteen more by the end of 2022. This enables organizations to meet or exceed any regional, local, or industry regulatory requirements and provides class-leading cybersecurity levels. From the sensor to the gateway, the entire IoT value chain is protected for data privacy and cybersecurity.

Real-time analytics

The Edge Analytics with IoT Gateway allows critical analysis in real-time with zero latency. The platform automatically sends alerts to technicians to resolve any issues swiftly. Faradai predictive intelligence uses ML algorithms optimized for energy management. Faradai also provides monitoring of edge devices to ensure that they are functioning correctly and provide reliable data.

Modular applications deliver a reliable and holistic view of energy management

The Faradai platform provides a modular set of applications to track the real-time condition of an organization's energy assets. The nine modules include:

- **Energy monitoring and performance analysis** of all energy data points in a single platform.
- **Portfolio management** to manage all facilities and their data points across the entire organization, including KPIs and identifying trends and under-performing assets for corrective action.

- **Alarm and notification management** to be alerted of any issues via SMS, email, and dashboard notifications.
- **Utility bill management** to quantify the costs of energy consumption and ensure correct billing. This also provides an analysis of time-of-use tariff rates and tariff rate comparisons.
- **Measurement and verification** to calculate the ROI of efficiency projects and transparent saving reports align with the International Performance Measurement and Verification Protocol (IPMVP).
- **Predictive maintenance** is supported based on the actual condition of an asset, **such as** temperature, vibration, or other abnormalities.
- **Customized reporting** enables facility managers to identify abnormalities or track energy performance against targets.
- **Solar plant monitoring and management** to monitor electricity production and compare power production with consumption.
- **Critical power infrastructure monitoring** to monitor and detect problems with power quality, installation, or maintenance. SSL encryption of communications between the UPS and generator prevents hacking or unauthorized access.

Faradai also provides managed services, including implementation, customer support, customization services, virtual energy management support from its engineers and data scientists, hosting, and training. A virtual team of Energy Managers, all experts in energy management, provide advice to clients to extract the most value from the platform.

Current position

Successes to date

Despite its relatively small size (fifty employees), the company already supports several leading companies, including major retailers - IKEA, GAP, H&M, Marks & Spencer, Zara, various hotel chains, and other well-known companies such as BNP Paribas, Shell, and Vodafone. It now operates in twelve countries, with the Faradai headquarters in London, UK, and the parent company Reengen in Istanbul.

The company supports a wide range of industry and public sector clients that consume substantial levels of energy. The cross-section of customers can be found in banking, hospitals, hotels, manufacturing, municipalities, office buildings, retail, shopping malls, supermarkets, telecoms, and utilities. In addition to a growing roster of well-known global companies, Faradai/Reengen manages the energy consumption and optimization in over 6,400 commercial buildings in Turkey, Spain, United Arab Emirates, and as far afield as Azerbaijan and Ecuador.

Faradai is highly regarded in its field and has won several awards, including Sustainable Business Awards, Most Innovative Companies award, and Future Unicorn Award

Current go-to-market model

Faradai sells directly and in partnership with systems integrators and facilities management companies.

In addition to several partners in Turkey, Faradai has Cisco and Oracle as global partners and a growing number of national partners such as IONSE energy facilities in Spain, Nashwan, and El-Ajou Group in Saudi Arabia, Nextergy in Ecuador. Its partner program continues to evolve and grow, and the Faradai platform can be white-labeled by local facilities management providers.

Faradai is supported by an advisory board drawn from academia and industry

Capria Ventures is an early investor in the company, and Senior Partner Daniel Kranzler serves as an advisory board member. Several leading energy academics from the ITU Energy Institute and Oxford University are also board advisors, maintaining the co-founder's tradition of learning from a wide range of experts.

Future direction

What to expect

Faradai continues to enhance its platform. We can expect further investment, particularly in support for massive energy consumers such as manufacturing and process industries where the need for CO2 reduction and energy optimization is the greatest. Plans are in place to open offices in Qatar to open up the Middle East and the Far East via Dubai and Singapore in 2022. Office openings are also planned for Spain, Germany, Russia, the US, Latin America, and Australia.

Oracle Cloud Infrastructure and the Oracle for Startups program prove their value to Faradai

Apart from the performance and security advantages of the Oracle Cloud Infrastructure, Oracle has been instrumental in opening doors to its large enterprise customers throughout the world. Faradai has also benefitted from further exposure by speaking at Oracle conferences in the Middle East. As Çağlayan said, 'we get great leverage in industrial B2B sales and have had a very positive reception from the Oracle sales teams and now work even closer with them. I'd definitely recommend the Oracle for Startups program to other startups focused on large enterprise customers. We've got tremendous value from sales, marketing, and Oracle technologies.'

CX-Create's viewpoint

Faradai to the rescue!

There has never been a more pressing need for the technologies and expertise that Faradai can provide. Its technology is proven, having already saved over 1.2 gigatons of CO2 emissions. The strategic partnership with Oracle will undoubtedly help the company reach large enterprises with substantial energy requirements and want to create a more sustainable future. New accounting standards are already emerging to report on sustainability. This will also drive the adoption of the Faradai platform, especially when governments legislate for sustainability to be included in annual company returns. COP26 may prove to be the catalyst.

Summary details

Table 1: Fact sheet

Solution name	Faradai AI-powered Energy & Sustainability Intelligence Platform	Solution category	Energy management and optimization-as-a-service
Key industries	Any industry or organization that consumes significant amounts of energy, primarily automotive, aerospace, banking, hospitals, hotels, manufacturing, municipalities, office buildings, retail, shopping malls, supermarkets, telecoms, and utilities.	Geographies	Global potentially. Currently, Europe, the Middle East, Latin America, US, Asia and Australia
Deployment model	PaaS	Licensing basis	PaaS subscription plus managed services
Size of organizations served	Fortune 500, large enterprises	Go-to-market model	Direct and with facilities management companies
Number of employees	55	Key partnerships	Cisco and Oracle and a range of local systems integrators and facilities management companies
URL	https://faradai.ai/	HQ	Istanbul, Turkey, and London, UK

Appendix

About CX-Create

Jeremy Cox founded CX-Create Limited in January 2021, a former principal analyst at Omdia (formerly Ovum) focused on customer engagement strategies and platforms.

He is recognized by major CX vendors, clients, and former colleagues as a leading thinker in customer experience and engagement. Formative experiences in the 1990s at IBM convinced him of the critical importance of understanding the business world from the outside in. These insights were put to practical use in his former roles as a principal CRM consultant at KPMG Consulting and as an independent consultant supporting public and private sector organizations.

Our mission

CX-Create's mission is to help enterprises and the vendors and startups that serve them remain relevant. The company's primary focus is to track and understand the constantly evolving customer experience world and share those insights with clients. Continuous innovation is also an essential component of persistent customer relevance, directly and indirectly, which is why we are enthusiastic about startups and the Oracle for Startups program.

Further reading

- [Complete Intelligence – an AI-powered intelligence platform for strategic investment and procurement decisions](#)
- [The All-in-One Waste Management Platform from Evreka](#)
- [Faradai AI-powered Energy & Sustainability Intelligence Platform](#)
- [GRØN SKY – a Green Cloud to massively reduce the carbon footprint](#)
- [Oracle for Startups program fuels continuous innovation the open way](#)
- [Four communications industry trailblazers accelerate the monetization of 5G and Edge](#)

CONTACT US

Jeremy.cox@cxcreate.io

[CX-Create Limited](#)

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