ENEL FOR START-UPS

As part of its innovation strategy, Enel is scouting for high-potential start-ups with which to develop new business models and innovative solutions. Enel is reaching out as an industrial partner for start-ups, providing its knowledge, expertise, laboratories and people to give the fledgling companies a chance to develop their solutions with the Group, who will also act as a final customer once the technologies are fully realised.

Enel created a global network of Innovation Hubs to connect the Group's different divisions to the best international start-ups and to become a relevant player in the innovation ecosystem, including through partnerships with venture capital funds, accelerators and incubators.

Every Innovation Hub has a dedicated manager on the field, who acts as a liaison between the start-ups and the Group and between the Group and local partners. Targeted scouting activities are based on the business technological priorities of Enel's divisions, which subsequently meet the start-ups to explore collaboration opportunities.

Enel's support will consist of:
- Offering the possibility to carry out pilot projects to test technologies in real-world environments;
- Providing access to laboratories, plants and test sites;
- Providing technological support to optimise solutions;
- Opening access to the Group's network of customers, suppliers and partners;
- Offering the possibility of becoming an Enel supplier.

ENEL'S INNOVATION HUBS

Israel
Enel's Innovation Hub in Tel Aviv was launched in 2016 and has managed until now several boot camps in which Enel's managers got in touch with Israeli start-ups and many events focused on innovation ecosystem.

Silicon Valley (US)
In March 2017 Enel inaugurated its Innovation Hub in the Silicon Valley, a ground-breaking initiative joining the Enel Group and UC Berkeley in a start-up scouting, acceleration and research collaboration. The Hub has been launched in partnership with the University of California Center for Information Technology Research in the Interest of Society (CITRIS) and the Banatao Institute. The Hub's headquarters are located at the CITRIS Foundry Accelerator on campus at UC Berkeley. Enel is the first corporation to establish a unique partnership with CITRIS that leverages both start-up innovation through the CITRIS Foundry Accelerator, and world-class academic research at UC Berkeley.

Brazil
Enel Innovation Hub in Rio de Janeiro recently launched an international open call aimed at selecting start-ups from all over the world, which will have the possibility to collaborate with Enel in the development of their solution and to take part to an acceleration program at the Enel Innovation Hub in the Silicon Valley,

Chile
Enel launched an Innovation Hub in Santiago which is now partnering with Start-up Chile, the leading start-up program in South America, to scout for new opportunities and select the best start-ups for collaboration with Enel's business lines.

Russia
Enel recently launched its Russian Innovation Hub in Moscow within the Skolkovo technology ecosystem, which is aimed at identifying and developing partnerships with Russian start-ups, SMEs and other companies on a wide range of projects in different fields such as energy efficiency solutions, smart grids, renewables, Internet of Things (IoT) and big data analytics.

Spain
Enel and its subsidiary Endesa have recently launched their Innovation Hub in Madrid. The hub is housed in *The Cube,* a highly innovative space set up by and for entrepreneurs, where startuppers will be provided with infrastructures and know-how aimed at finding solutions all along the energy value chain, from reducing greenhouse gas emissions to automation of power supply, also including new business models and new solutions according to the Group's strategic priorities, with a focus on Internet of Things (IoT).

OTHER INITIATIVES WITH START-UPS

The Enel Group is a global partner of and strategic advisor to Energy Excelerator, a leading American incubator for clean energy start-ups based in Hawaii. As a global partner, Enel will be part of Energy Excelerator's strategic advisory board, to provide member start-ups with the support needed to develop innovative clean energy solutions. The Energy Excelerator's unique approach complements Enel's incubator strategy and further expands the company's start-up reach.

The Enel Group partnered with Swiss-based group Seedstars to establish a competition aimed at identifying innovative start-ups in the field of electricity access in Africa.

Enel is also involved in a range of other start-up acceleration programmes, such as Energy Start in Latin America and INCENSe in Europe.

Some of the start-ups with which Enel cooperates are:

I-Em: has developed a range of products dedicated to renewable energy facilities, such as a system for the remote monitoring of renewable energy plants, sophisticated forecasting software for solar and wind power and an energy efficiency solution targeted at the industrial sector. I-Em also works closely with Enel, providing output forecasting and monitoring services for several dozen of its renewable energy plants. Also under way is a project that, building on I-Em's data analysis skills, is seeking to develop a predictive maintenance solution for renewable plants.

Bidgely: the developer of disaggregation software that remotely identifies the consumption of individual home appliances, providing a consumption breakdown via a mobile app. The solution increases customer

engagement, while also providing information that enables them to behave in a more energy efficient manner. Enel currently has an agreement in place to test Bidgely's solution in a pilot that will involve Enel's residential customers in South Africa, at the end of which, should the results of the test be positive, there will discussion of a commercial agreement.

Archon Technology: the company, which is based in Italy with offices in the USA, develops drone hardware and software solutions. The Archon drone can autonomously reach its charging station when battery is running low before then returning to its activities once charged. Archon's software also enables the simultaneous in flight management of different drones, as well as analysis of the images captured by the drones' camera.

Nozomi Networks: develops a cybersecurity software for industrial installations, which automatically builds an internal model of industrial networks and physical processes and uses behavioural analytics and continuous monitoring to detect changes to baseline states. The result is real-time insight into Industrial Control Systems networks, devices and process statuses, as well as rapid identification and remedying of cyber attacks and process anomalies. Enel has collaborated with Nozomi for a number of years and was the first corporation to test the company's solution. Enel also provided Nozomi with a reference during its fundraising period, resulting in 7.5 million dollars of investment from two US Venture Capital Funds. Currently Enel has an agreement in place to develop new Nozomi software features, which will also be made available commercially to third parties.

Demand Energy: has developed a solution that maximises the economic returns of behind-the-meter storage systems, alone or in combination with distributed generation. The company provides a turnkey solution (hardware, software and services) that ties together modelling, design and simulation with installation and operational monitoring, control, and financial optimisation, to deploy storage-plus-DG systems at speed and scale. The software platform was designed as a scalable end-to-end solution that delivers differentiated value across the entire project life cycle, and is able to support utility-side, behind-the-meter and micro-grid projects. Enel acquired 100% of the company this year.

TeleSense: develops and delivers real-time environmental monitoring solutions for industrial applications that are designed to help manage the risks posed by today's changing environmental conditions. Its product wirelessly collects data, analyses it in the cloud and display it in ways that allow you to recognise critical issues and take immediate action. TeleSense uses industrial Internet of Things technology to monitor a range of critical parameters 24/7, all year round. Whether assets are at rest or in motion, TeleSense provides real-time alerts when monitored parameters are out of the user's customised range. This eliminates human error, improves operational efficiency, and reduces risks, costs, liabilities, and regulatory burdens. The collaboration has the aim of developing a portable sensor able to collect safety related data, such as environmental and biomedical parameters, gases, etc.

Sparkcognition: This company's solution, SparkPredict, enables truly predictive capabilities that can deliver significant cost savings and operational efficiency improvements to machine operators. SparkPredict learns from sensor data, identifies impending failures long before they occur and alerts operators to sub-optimal operation before it can cause any harm. The collaboration in place with Enel has the aim of reducing combustion instabilities in gas turbines, as well as cutting maintenance costs.