

INNOVATION

EcoStruxure™ technology
enables one powerful
command center for IT Center

Zhiguli Valley Technopark, Tolyatti, Russia

An EcoXpert™ partnership delivers a state-of-the-art,
smart building for one of Russia's top data centers.

#WhatsYourBoldIdea

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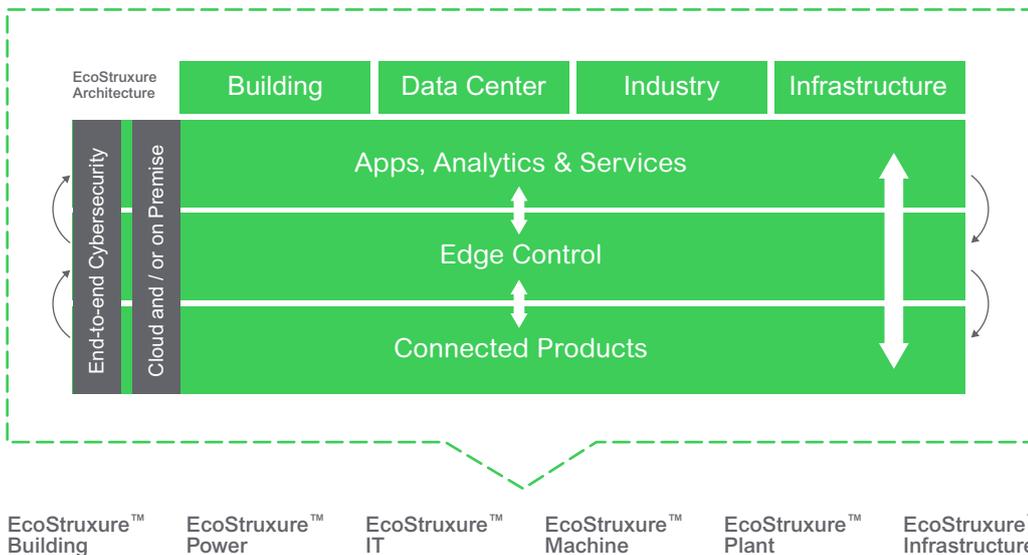
Schneider
Electric

EcoStruxure™

Innovation At Every Level

IoT-enabled system architecture and platform that drives operational and energy efficiency

EcoStruxure™ by Schneider Electric is our open, interoperable, IoT-enabled system architecture and platform. EcoStruxure delivers enhanced value around safety, reliability, efficiency, sustainability, and connectivity for our customers. We leverage technologies in IoT, mobility, sensing, cloud, analytics, and cybersecurity to deliver Innovation at Every Level. This includes Connected Products, Edge Control, and Apps, Analytics & Services, Analytics & Services. EcoStruxure has been deployed in 450,000+ installations, with the support of 9,000 system integrators, connecting over 1 billion devices.



Connected Products

The Internet of Things starts with the best things. Our IoT-enabled best-in-class connected products include breakers, drives, UPSs, relays, sensors, and more. Devices with embedded intelligence drive better decision-making throughout operations.

Edge Control

Mission-critical scenarios can be unpredictable, so control of devices at the edge of the IoT network is a must. This essential capability provides real-time solutions that enable local control at the edge, protecting safety and uptime.

Apps, Analytics & Services

Interoperability is imperative to supporting the diverse hardware and systems in building, data center, industry, and grid environments. EcoStruxure enables a breadth of agnostic Applications, Analytics & Services for seamless enterprise integration.

Find out more about EcoStruxure™

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Managing a data center’s environment, security, and power is vital to operations. The smallest disruption can cause the loss of critical data services, and the smallest inefficiencies can multiply energy and operational costs.

That is why managers in a new state-of-the-art data center in Zhiguli Valley Technopark located in Tolyatti, Russia, decided to work with LANIT-Integration, a certified EcoXpert partner of Schneider Electric.

“The client wanted a comprehensive solution that would integrate all the various automated systems in a major data center,” said Sergey Suvorov, one of the lead account managers on the project for Schneider Electric. “They also wanted to take full advantage of today’s technologies to achieve the greatest reliability and energy efficiency. Our partner, LANIT-Integration, made it happen.”

LANIT won the bid for the project in 2014, competing against three other firms, and set to work with help from the Schneider Electric team. Vyacheslav Gudkov, chief project engineer for LANIT, is pleased to partner with Schneider Electric on critical projects, “Being an EcoXpert partner enables us to leverage the full scope of technology from Schneider Electric, but it also provides immediate support so that we can deliver what we promise to our customers. It’s an invaluable benefit to us.” Today, the data center is operational, with 324 IT racks running around the clock and more planned. Behind the scenes, the comprehensive smart building solution—designed, installed, and maintained by LANIT—is making the entire facility run seamlessly.



Goal

Design a reliable, high-performing smart building to support this state-of-the-art data center in a major Russian science park.

Story

LANIT, a Schneider Electric BMS-certified EcoXpert partner headquartered in Moscow, Russia, designed and installed a complete system that ties all operations into one powerful command center built on EcoStruxure technology.

Solution

A comprehensive and fully integrated solution that monitors and controls every aspect of building operations, including air and temperature, video surveillance, alarms, and power to provide real-time visibility, and on-demand reporting.

Results

The data center now runs hundreds of IT racks with more coming online, at an estimated energy savings of approximately \$54K USD (₽3 million RUB) per year.



 324

IT racks currently supported, with room to grow

A comprehensive, state-of-the-art solution

The IT center for Zhiguli Valley Technopark is impressive for both its integration and its comprehensive nature. The smart building incorporates the following systems and capabilities:

- **EcoStruxure Building Operation*** is building management software that controls air conditioning, ventilation, refrigeration, power supply and lighting utilities, including the control and monitoring of 20 plenum dampers and 8 air handling units that allow air with a specified temperature to flow into the corridors to ensure the operation of modular natural free cooling (MNFC) air conditioners in the equipment rooms on the 2nd floor.
- **EcoStruxure Data Center Expert**** monitors the temperature and humidity in the equipment rooms, as well as server and entrance rooms. Environmental data is continuously collected from 10 regular and 190 wireless temperature and humidity sensors and sent to the monitoring system for real-time visibility.
- **EcoStruxure Data Center Operation** catalogs and tracks all IT equipment, and helps control, plan and optimize resources of the data center.
- **EcoStruxure Power** manages a total power consumption of 3,565.0 kW, via 4 electrical distribution panels to receive and distribute the electrical power.
- **Pelco Video Surveillance System** captures video from 128 security cameras located inside and outside the data center building. Video footage streams to the monitors in the control room and security room.
- **Andover Continuum Access Control and Security Alarm** controls access of people to the site and rooms in the technical support center. The security alarm system monitors the premises, and issues alerts of any attempted access to IT cabinets in the equipment rooms.
- **ESMI Fire Detection System** gathers data from the smoke detectors and aspirating smoke detection system, and controls fire dampers in the ventilation system and gaseous fire suppression system.
- **AST MNFS Air Conditioning System** controls 44 MNFC units connected to the ventilation system. Chilled water is supplied from 4 Uniflair chillers in the chiller plant.
- **AST SmartShelter Module System** delivers complete protection from fire, water, thermal effects and intrusion.

“While we’re proud to be part of such an important and impressive project, the credit goes to our partner, LANIT, who delivered a truly world-class system for the customer.”

– Sergey Suvorov
Schneider Electric



Impressive early results

The Zhiguli Valley data center is new, but already reaping rewards for the owners. Each sub-system is integrated into a single solution and graphical user interface, providing unprecedented visibility and control. The project documentation has received certification for TIER III Uptime Institute (Tier Design & Tier Facility).

Best of all, these capabilities are achieved at a significant energy savings, estimated to be \$54K USD (₽3 million RUB) per year, or up to 50% compared to a more conventionally managed building. Zhiguli Valley's management team is embracing all that this solution is delivering, "The Schneider Electric solution has exceeded our goals in terms of operational and energy efficiency and the ongoing support we get from LANIT has made the entire project a success," said Denis Zhidkov, Director of SAI "CIC SR" (Samara Region State Autonomous Institution «Centre for Innovation Development & Cluster Initiative»).

Building for the future

Built on Schneider Electric's IoT-enabled EcoStruxure technology, the Zhiguli Valley IT Center is positioned to grow in the future. The current installation is only phase one of the project and more equipment is planned, with the potential to add hundreds of racks. One thing is certain; it will be the expertise and collaboration of the LANIT EcoXpert partnership that ensures the success of future phases.

"While we're proud to be part of such an important and impressive project, the credit goes to our EcoXpert partner, LANIT, who delivered a truly world-class system for the customer," said Schneider Electric's Sergey Suvorov.

↓ 50%

Estimated energy savings



EcoStruxure™ Architecture

Learn More



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Discover the EcoXpert™ Partner Program



Discover EcoStruxure™ Building



Discover EcoStruxure™ Power



Goralska Residences Hotel:
Light & Room Control EcoXpert, Soliled, enables this 4-Star suite hotel to take the guest experience to a new level through integrated building automation, KNX and homeLYnk solutions from Schneider Electric.



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*previously StruxureWare Building Operation
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