

SOLTEKH

SYSTEM INTEGRATOR AND DEVELOPER
OF COMPREHENSIVE SOLUTIONS IN
INFORMATION TECHNOLOGY AND DIGITAL
TRANSFORMATION

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SOLTEKH LLC

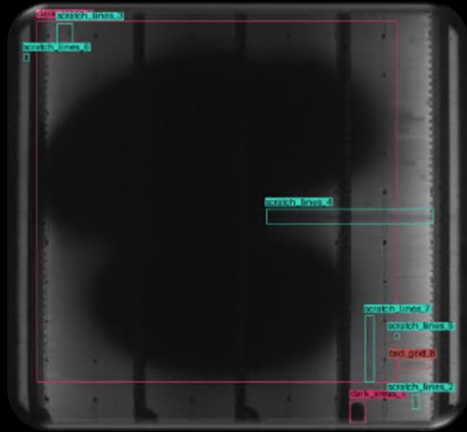
A SYSTEM INTEGRATOR OPERATING WITHIN THE SOLAR BUSINESS GROUP OF COMPANIES.

We develop, implement, and support digital solutions for the full cycle of renewable energy, from automated process control systems for production and generation facilities to specialized business applications, machine learning models, and new digital products.

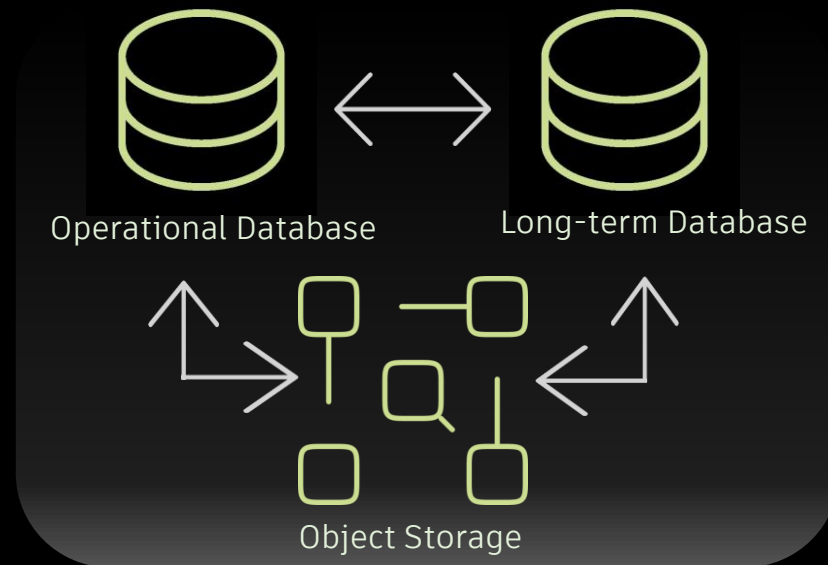
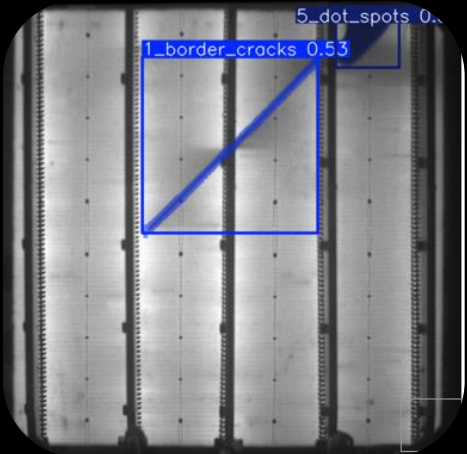
The company's project portfolio includes clients in Russia and friendly countries in the CIS and BRICS regions. More than 7 products of SOLTEKH LLC are included in the register of the Ministry of Digital Development, accreditation №AO-20221026-9480160016-3 dated 17.11.2022. We have a license for the development and implementation of cryptographic software.

Company size: over 70 employees.
A team of highly qualified specialists in machine learning and artificial intelligence, development of technologically complex software solutions, and related disciplines.

SOLTEKH SOFTWARE PORTFOLIO – PHOTOVOLTAIC MODULE DEFECT DIAGNOSTICS AND ANALYTICS SYSTEM



We adopted cutting-edge global machine vision solutions and enhanced them to achieve even higher quality standards. We configured the system to detect 9 types of photovoltaic module defects.: border cracks, central cross, scratch lines, round sucks, dot spots, dark areas, dark cell, scratch dots, bad grid.



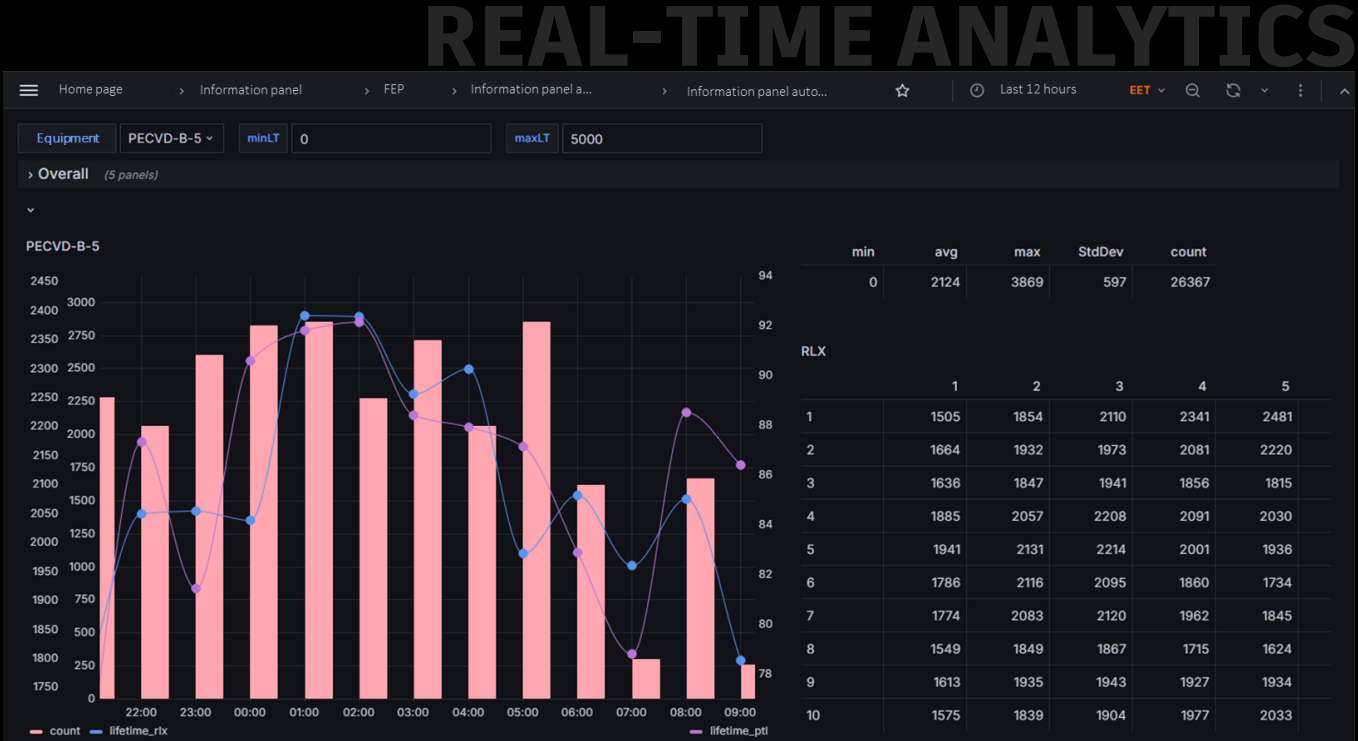
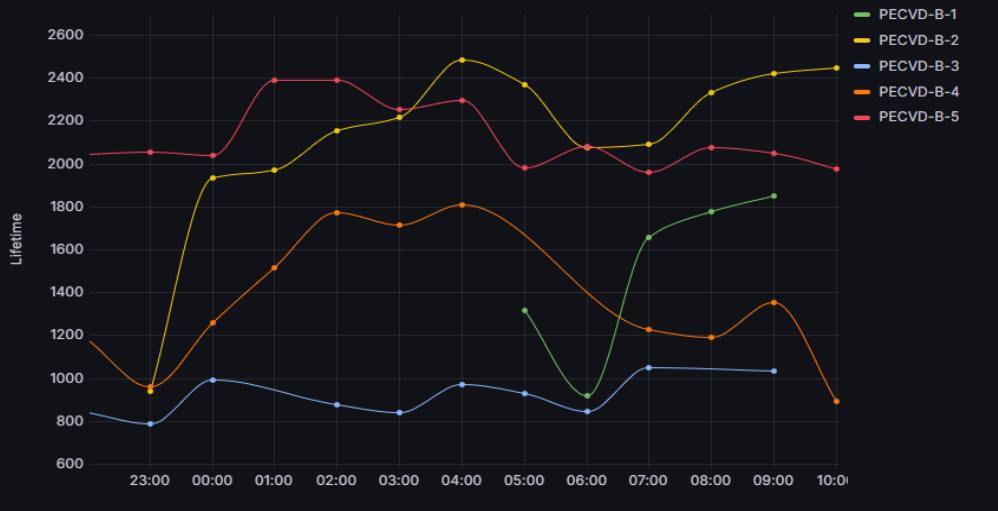
Reduction in defective product rate;
Decrease in production line downtime;
Improvement in product quality;
Prevention and rapid resolution of
emergency situations;
Optimization of man-hours for
operators, technologists, and analysts.

For what:

**The economic impact amounts to several million rubles per 100 MW
of production line capacity annually.**

SOLTEKH SOFTWARE PORTFOLIO – MES 4.0

Optimization of production processes and improvement of enterprise operational efficiency. The system enables automation of production resource management (equipment, materials), leading to enhanced product quality, reduced time-to-market, and lower production costs.



21.07.2025 Unit 1 Unit 2 Unit 3									
Plate Type: M10 Solar cell plate manufacturing – section of chemical processing and silicon wafer texturing									
1 ACID Tank temperature, °C 35,2 Bath cleaning cycle, pcs 250 178	2 DI-W	3 SDR-1 Tank temperature, °C 80 Bath cleaning cycle, pcs 250 89	4 SDR-2 Tank temperature, °C 80 Bath cleaning cycle, pcs 250 88	5 DI-W	6 OZONE Tank temperature, °C 35 Ozone parameter, ppm 28 Bath cleaning cycle, pcs 250 177	7 TEX 1 Tank temperature, °C 78 Bath cleaning cycle, pcs 430 32	8 TEX 2 Tank temperature, °C 78 Bath cleaning cycle, pcs 430 234	9 TEX 3 Tank temperature, °C 78 Bath cleaning cycle, pcs 430 232	10 DI-W
11 DI-W	12 OZONE Tank temperature, °C 35 Ozone parameter, ppm 28 Bath cleaning cycle, pcs 250 175	13 CP-1 Tank temperature, °C 22 Ozone parameter, ppm 25 Bath cleaning cycle, pcs 250 88	14 CP-2 Tank temperature, °C 22 Ozone parameter, ppm 25 Bath cleaning cycle, pcs 250 87	15 HF Bath cleaning cycle, pcs 250 174	16 DI-W Tank temperature, °C 30	17 AIR 1 Tank temperature, °C 38	18 AIR 2 Tank temperature, °C 64	19 AIR 3 Tank temperature, °C 77	20 AIR 4 Tank temperature, °C 77

SOLTEKH SOFTWARE PORTFOLIO –

Automated Process Control Systems (APCS)

Implementation of integrated solution suites engineered to enhance production efficiency, safety, and transparency through process optimization, resource conservation, cost reduction, reliability improvements, and seamless digital platform integration.

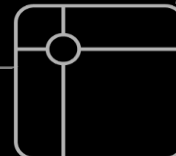
PRE-PROJECT STUDY AND ANALYSIS

DEFINING
REQUIREMENTS,
ASSESSING CURRENT
INFRASTRUCTURE, AND
DEVELOPING
TECHNICAL
SPECIFICATIONS



AUTOMATED PROCESS CONTROL SYSTEM (APCS) ARCHITECTURE DESIGN

DEVELOPMENT OF
FUNCTIONAL AND
STRUCTURAL DIAGRAMS,
COMPONENT SELECTION,
AND RELATED ACTIVITIES



EQUIPMENT PROCUREMENT, INSTALLATION PREPARATION, AND COMMISSIONING

EXECUTION OF
INSTALLATION WORKS,
SYSTEM CONFIGURATION,
AND INTEGRATION



LLC

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