

The Unmanageable Complexity of Modern Solar Operations. **Mastered**

Introducing SolarNova: Autonomous Solar Plant Intelligence

The Data is There. The Clarity Isn't.



- **Data Overload, Insight Deficit:** SCADA, inverters, and sensors generate millions of data points, but siloed systems make it impossible to see the full picture.



- **Reactive Maintenance Cycles:** O&M teams are caught in a constant loop of reacting to failures, leading to costly downtime and reduced asset lifespan.



- **Hidden Performance Gaps:** Gradual degradation, soiling, and intermittent faults quietly erode yield, making it difficult to pinpoint and quantify losses.



- **Inefficient Field Operations:** Lack of real-time guidance and historical context for field engineers leads to longer repair times and repeat site visits.



From Reactive Chaos to Proactive Control

SolarNova empowers solar operations with real-time intelligence, predictive analytics, and actionable insights.

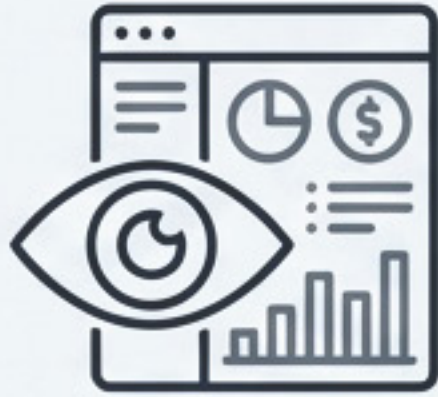
Our platform combines advanced AI, Digital Twin technology, and seamless data integration to transform your operational data into your most valuable asset.

Maximize Yield

Reduce O&M Costs

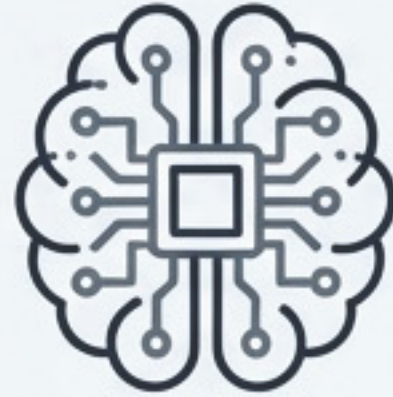
Extend Asset Life

A Unified Platform Built on Three Pillars of Value



Total Visibility & Control

Unify all your asset data into a single pane of glass. Monitor, model, and manage your entire portfolio from the macro to the micro level.



Proactive AI-Driven Intelligence

Shift from hindsight to foresight. Leverage AI to predict failures, detect anomalies, and forecast generation with unparalleled accuracy.



Streamlined & Automated Operations

Digitize your workflows from fault detection to resolution. Automate reporting and empower field teams with intelligent tools.

See Your Entire Portfolio's Health in a Single Glance

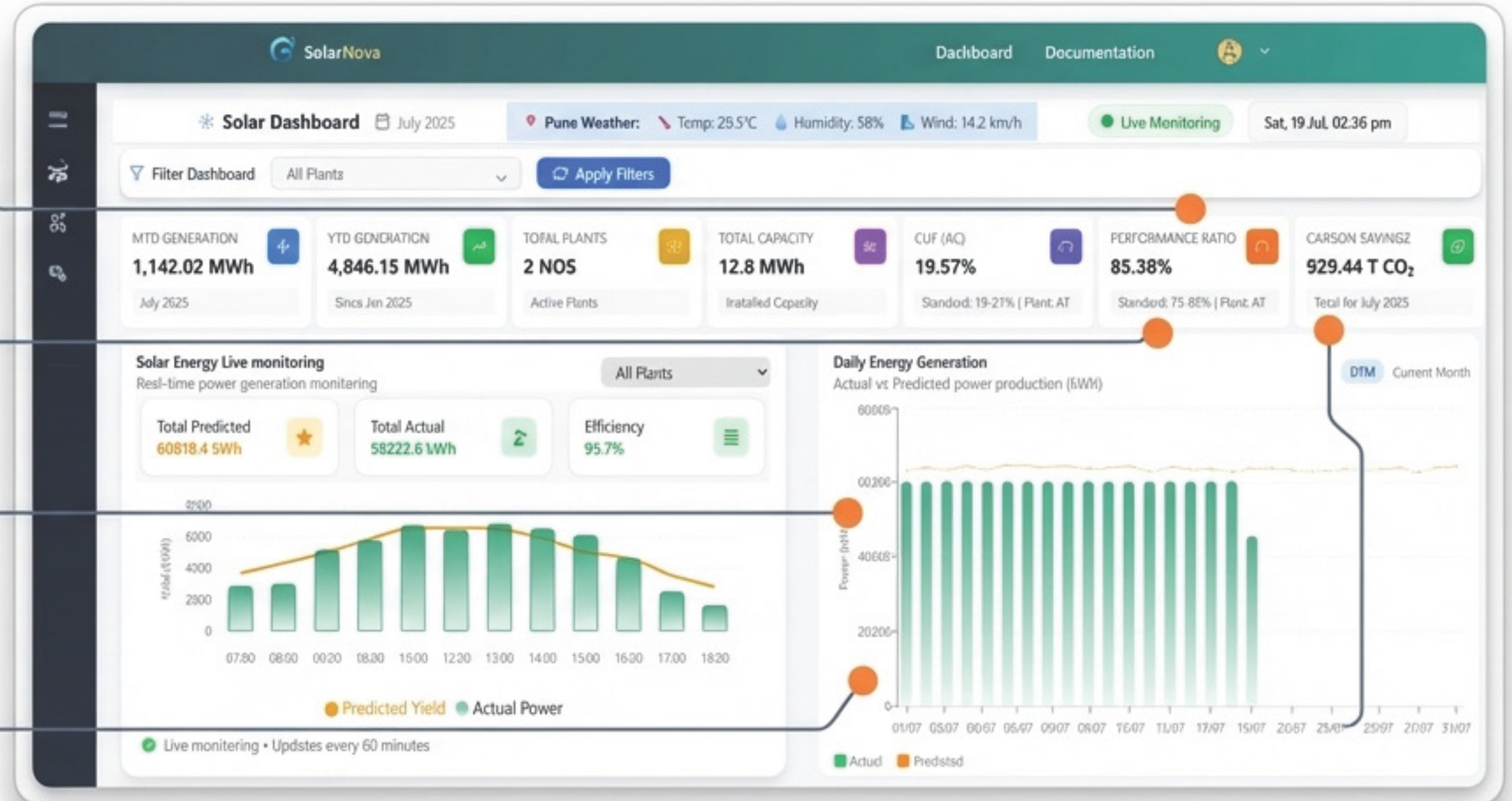
Pillar 1: Total Visibility & Control

Track real-time plant efficiency against benchmarks.

Quantify and report on environmental impact instantly.

Compare actual vs. predicted production to spot deviations immediately.

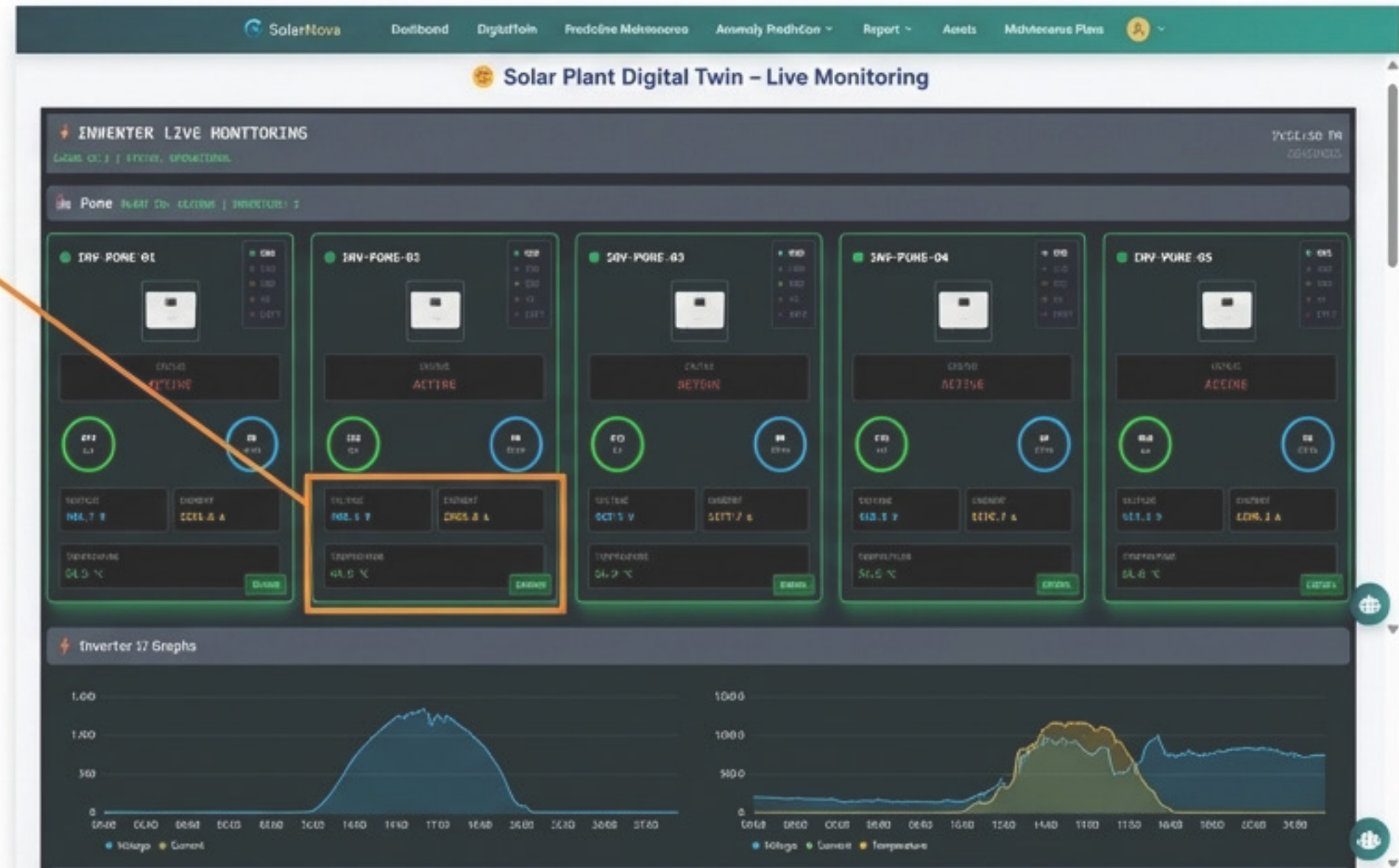
Monitor and manage multi-plant operations from one central hub.



Visualize Every Asset with an Interactive Digital Twin

Pillar 1: Total Visibility & Control

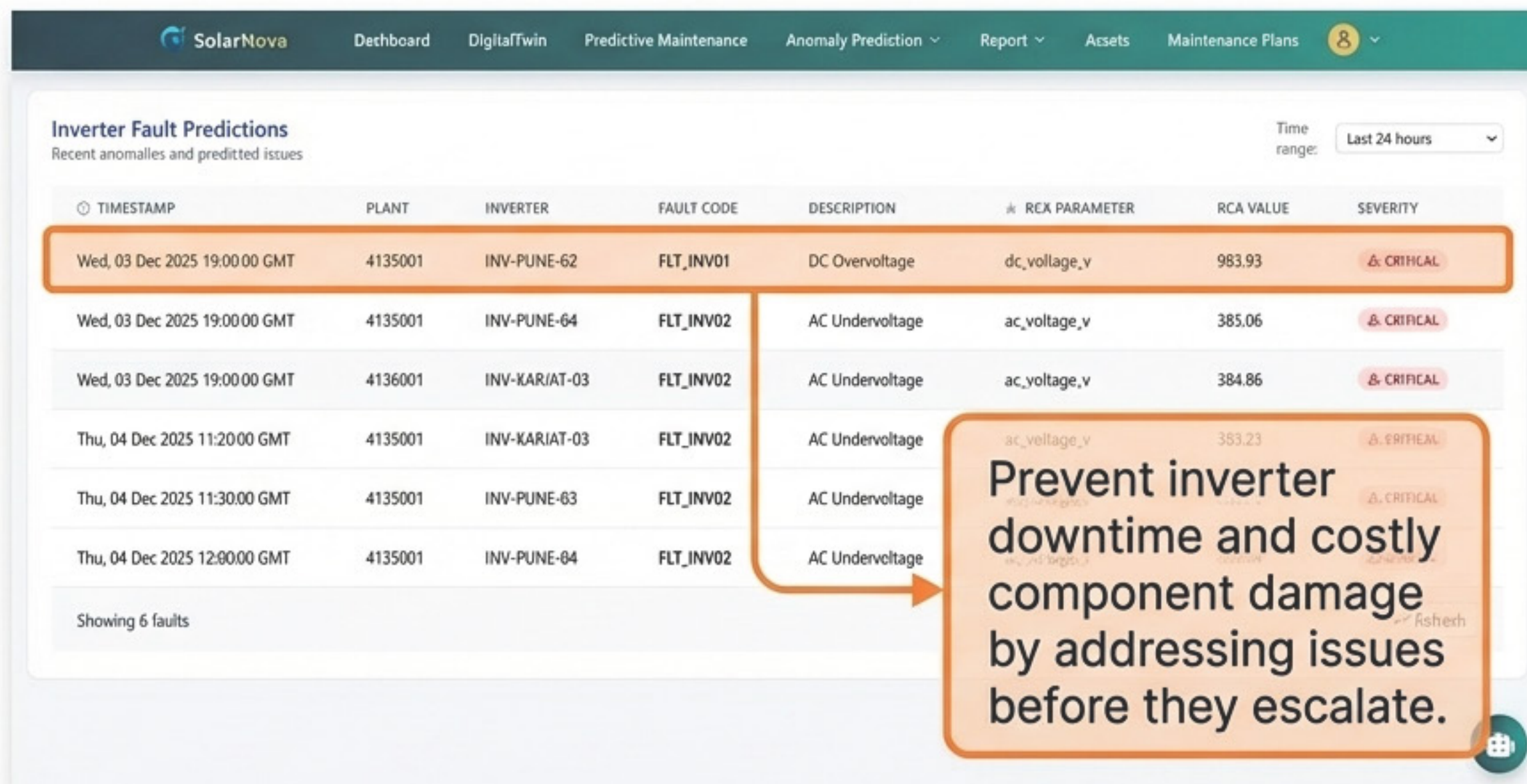
- Our Digital Twin provides a live, virtual model of your plant, integrating directly with SCADA systems.
- Monitor the real-time status, performance, and health of individual inverters, strings, and modules.
- Drill down into key metrics like Voltage, Current, and Temperature to diagnose issues remotely.



Shift from Reactive Repairs to Proactive Prevention

Pillar 2: Proactive AI-Driven Intelligence

- Our AI models, trained on solar-specific operational data, detect early fault patterns before they lead to catastrophic failure.
- Receive AI-driven alerts with detailed descriptions and root cause analysis parameters.



SolarNova | Dashboard | DigitalTwin | Predictive Maintenance | Anomaly Prediction | Report | Assets | Maintenance Plans | 8

Inverter Fault Predictions
Recent anomalies and predicted issues

Time range: Last 24 hours

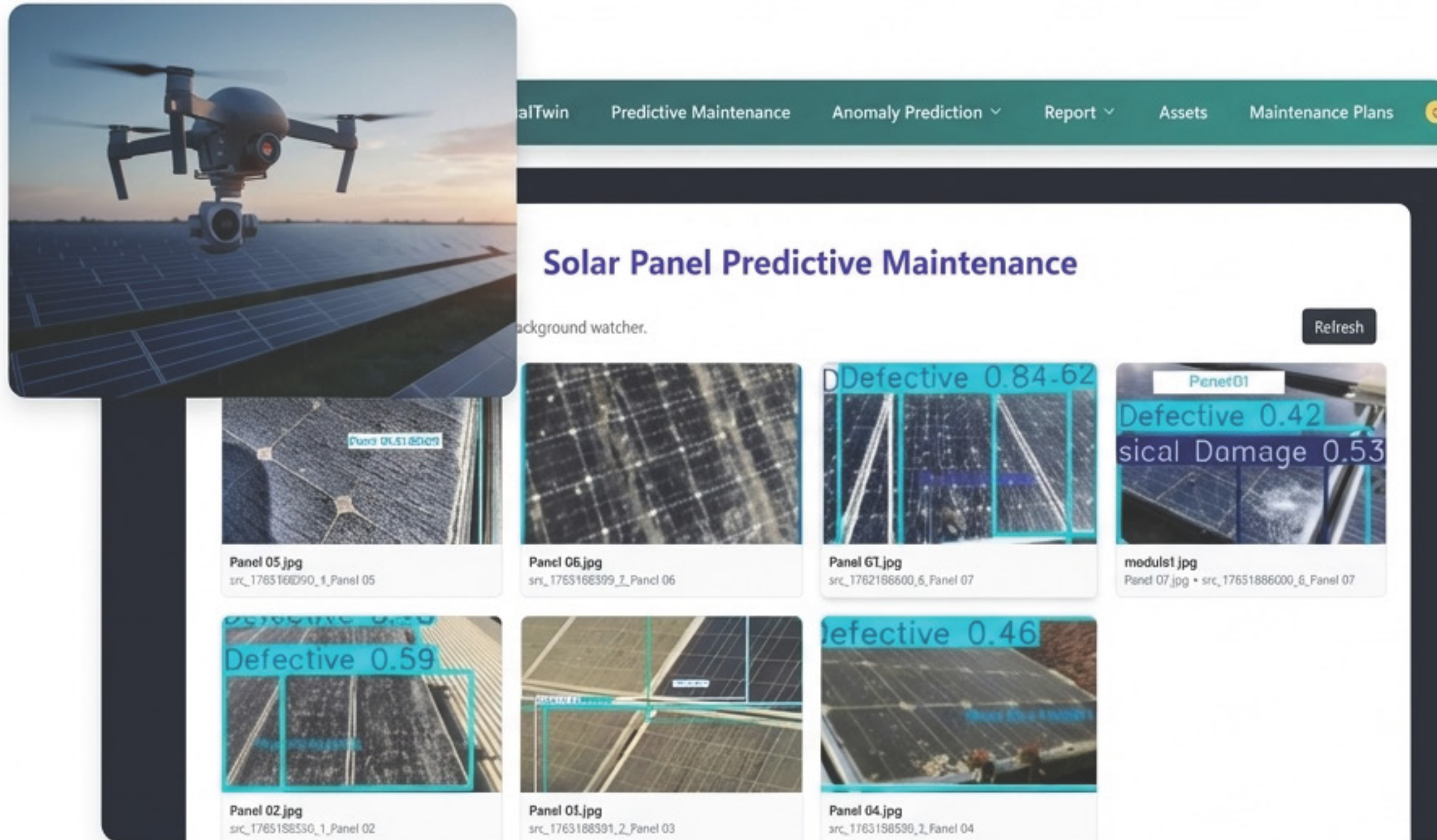
⌚ TIMESTAMP	PLANT	INVERTER	FAULT CODE	DESCRIPTION	* REX PARAMETER	RCA VALUE	SEVERITY
Wed, 03 Dec 2025 19:00:00 GMT	4135001	INV-PUNE-62	FLT_INV01	DC Overvoltage	dc_voltage_v	983.93	⚠ CRITICAL
Wed, 03 Dec 2025 19:00:00 GMT	4135001	INV-PUNE-64	FLT_INV02	AC Undervoltage	ac_voltage_v	385.06	⚠ CRITICAL
Wed, 03 Dec 2025 19:00:00 GMT	4136001	INV-KAR/AT-03	FLT_INV02	AC Undervoltage	ac_voltage_v	384.86	⚠ CRITICAL
Thu, 04 Dec 2025 11:20:00 GMT	4135001	INV-KARIAT-03	FLT_INV02	AC Undervoltage	ac_voltage_v	383.23	⚠ CRITICAL
Thu, 04 Dec 2025 11:30:00 GMT	4135001	INV-PUNE-63	FLT_INV02	AC Undervoltage	ac_voltage_v	383.23	⚠ CRITICAL
Thu, 04 Dec 2025 12:00:00 GMT	4135001	INV-PUNE-64	FLT_INV02	AC Undervoltage	ac_voltage_v	383.23	⚠ CRITICAL

Showing 6 faults

Prevent inverter downtime and costly component damage by addressing issues before they escalate.

Automate Panel Inspections with AI-Powered Thermal Analysis

Pillar 2: Proactive AI-Driven Intelligence



Seamlessly upload drone-captured thermal images to the platform.



Our integrated CV engine automatically detects and classifies anomalies like hotspots, insulation failures, physical damage, and panel soiling.



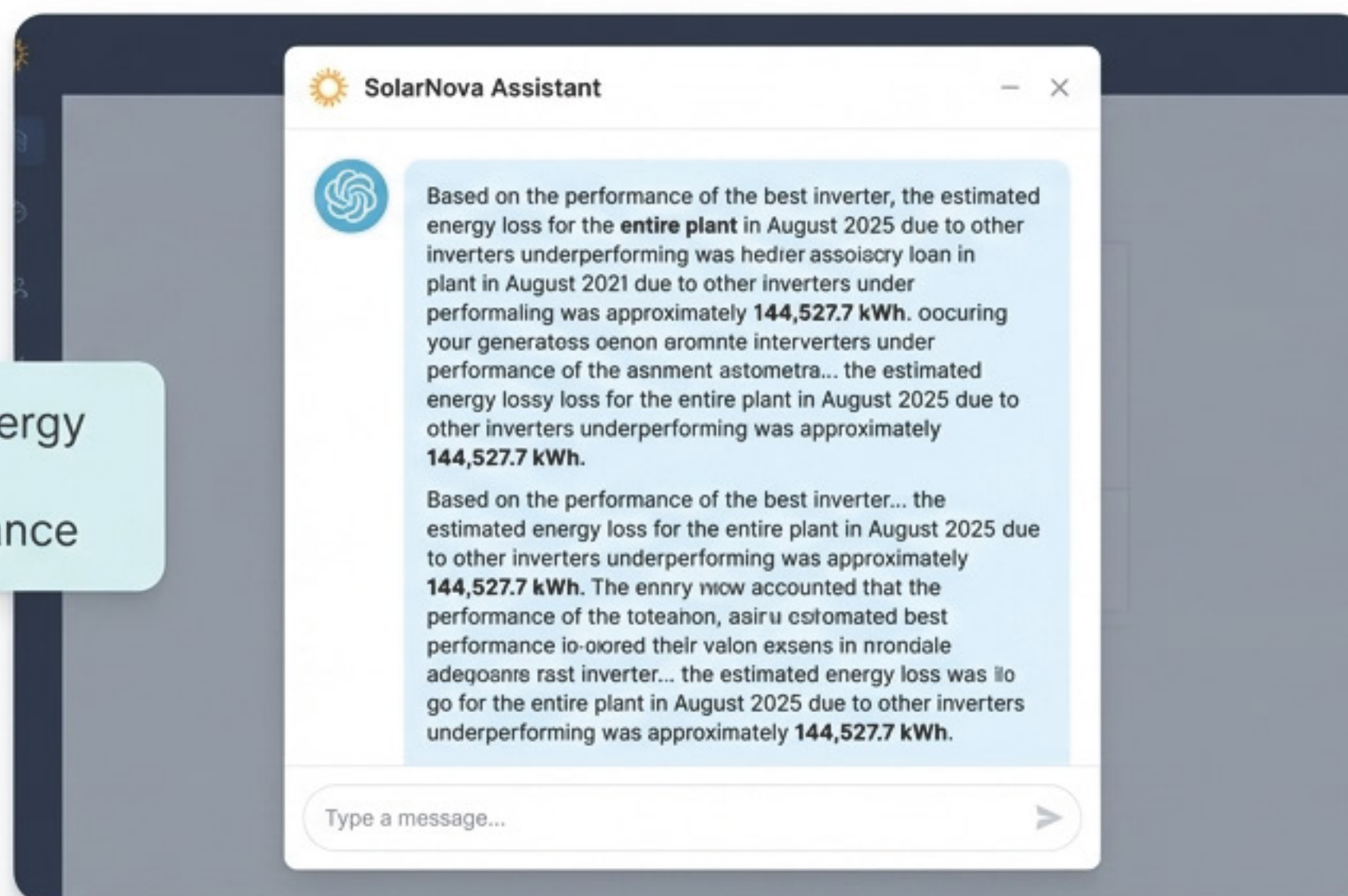
Each detected anomaly is flagged with a severity score (e.g., 'Defective 0.59', 'Physical Damage 0.53') for prioritized action.

Get Instant Answers to Your Most Complex Questions

Pillar 2: Proactive AI-Driven Intelligence

Ask a Question in Plain English

What was my generated energy loss in Aug month due to inverters under performance



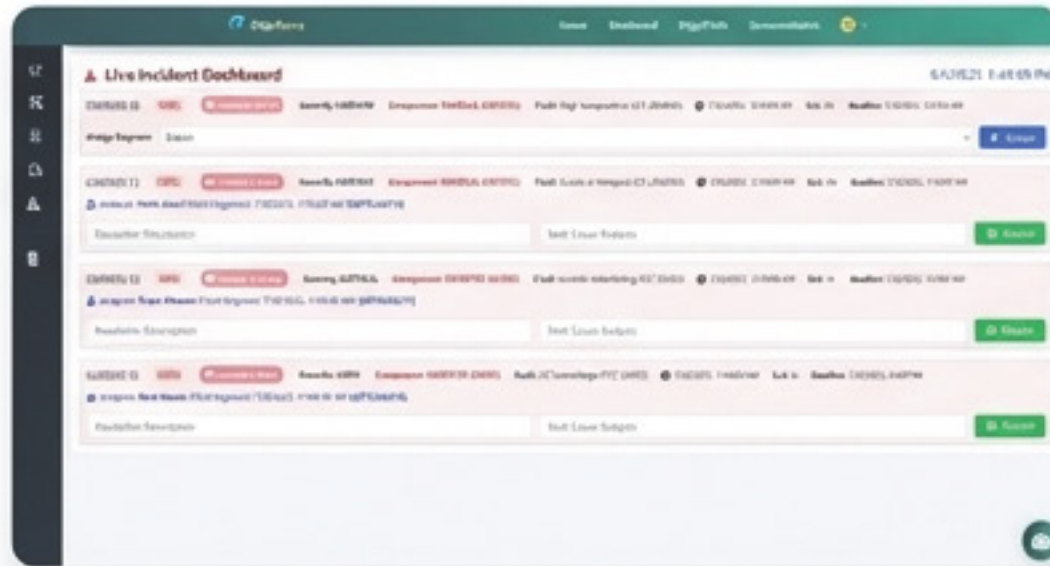
Get an AI-Generated Root Cause Analysis

“Based on the performance of the best inverter... the estimated energy loss for the entire plant in August 2025 due to other inverters underperforming was approximately **144,527.7 kWh.**”

This empowers asset managers to quantify losses and build business cases for improvements without manual data crunching.

Connect Insights Directly to Action with Integrated Work Orders

Pillar 3: Streamlined & Automated Operations



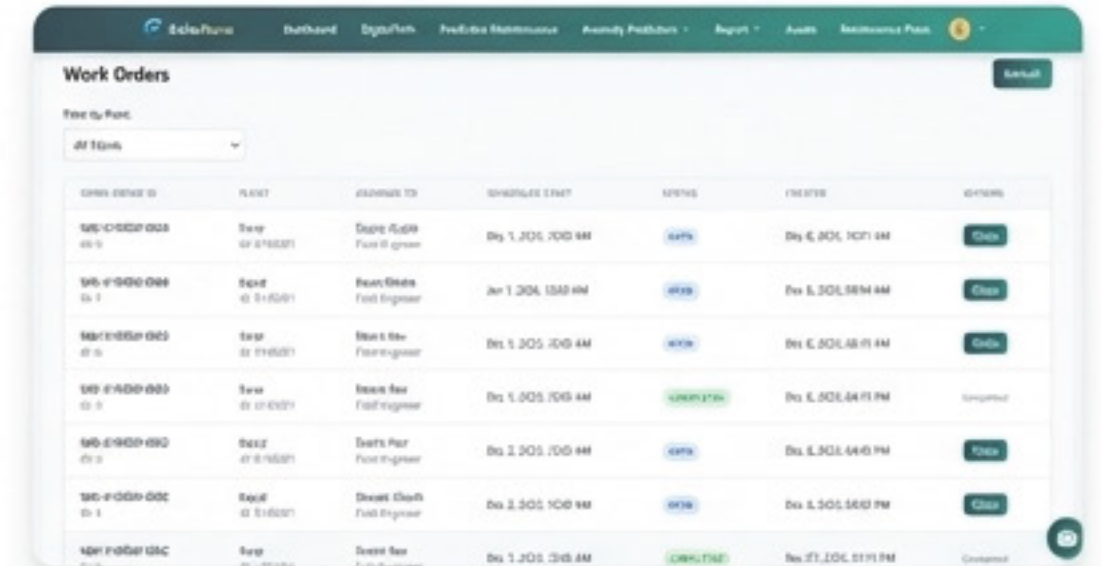
Step 1: Triage & Assign

The Live Incident Dashboard displays all open faults with severity, component, and SLA timers. Assign incidents to specific field engineers directly from the interface.



Step 2: Create & Track

Automatically or manually create detailed work orders linked to maintenance plans.

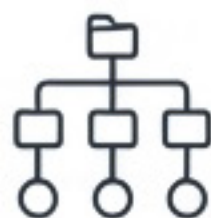


Step 3: Monitor to Resolution

Track the status of all work orders (Open, Completed) across all plants in a centralized view.

Build, Manage, and Schedule Your Entire Maintenance Program

Pillar 3: Streamlined & Automated Operations



Granular Asset Hierarchy

Use the Asset Tree & Editor to create a digital representation of every component in your plant, from the main plant down to individual modules.



Automated Scheduling

Create preventive maintenance plans (e.g., "Monthly Preventive Check") with custom frequencies and instructions.

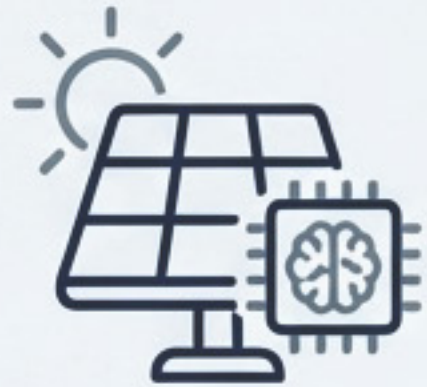


Intelligent Workflows

The system automatically sets due dates and can auto-generate work orders based on scheduled maintenance plans, ensuring compliance and reducing manual effort.

The screenshot displays the SolarNovs web application interface. The top navigation bar includes links for Dashboard, DigitalTwin, Predictive Maintenance, Anomaly Prediction, Report, Assets, and Maintenance Plans. The main content area is titled 'Maintenance Plans & Work Order'. A modal window titled 'Create New Maintenance Plan' is open, allowing users to create a new plan. The modal includes a 'Select Plant' dropdown set to 'Pune (PLANT-4135001)'. It has input fields for 'Asset ID *' (with a placeholder 'Enter existing asset_id (from asset table)') and 'Plan Name *' (with a placeholder 'e.g. Monthly String Inspection'). Below these are dropdowns for 'Maintenance Type' (set to 'PREVENTIVE') and 'Schedule Type' (set to 'CALENDAR'), followed by a 'Frequency (days)' spinner set to '30' and a 'Next Due Date' field with a date picker set to 'dd-mm-yyyy'. There is a large text area for 'Instructions' with a placeholder 'Enter maintenance instructions...'. At the bottom of the modal are 'Create Plan' and 'Cancel' buttons. The background shows a list of existing maintenance plans, including 'PLA-PUNE-01 Monthly Preventive Check' and 'INV-PUNE-01 Monthly Preventive Check', each with details about the asset, maintenance type, and schedule.

The GenIntel Advantage: Purpose-Built for Solar



Purpose-Built Automation

Our algorithms are trained on solar-specific operational data for the highest accuracy fault predictions.



Instant SCADA Integration

Our proprietary connector plugs directly into your existing SCADA systems to stream live telemetry effortlessly, without costly overhauls.



Scalable Architecture

A centralized platform designed for multi-plant operations, supporting your entire portfolio regardless of location or size.



Bank-Grade Security

Your operational data is stored in an encrypted format, ensuring the highest level of security and privacy.

The Experts Behind the Technology



GenIntel Technologies is a next-generation Enterprise **AI Automation** solutions provider delivering intelligent, scalable solutions for the renewable energy sector.

We specialize in:

Data Science

Generative AI

Machine Learning

IoT (Internet of Things)

Let's power the future of solar, together.

Start your journey with SolarNova today.

Get in Touch

Email: sales@genintel.in

Phone: +91-8766757606

Website: www.genintel.in

Contact us for a personalized demo and see how SolarNova can transform your operations.

