



COLLAB

Keeping Teams in the Know

A leading utility-scale solar operator uses COLLAB, the real-time jobsite coordination feature on the SenseHawk Solar Digitization Platform, to digitize and enhance response times for their operations and maintenance teams with a field mobility app.

Solar Digitization Platform or SDP

VISUALIZE, MANAGE, TRACK, COLLABORATE & REMEDIATE with a single asset-centric platform that mirrors the reality of your project.

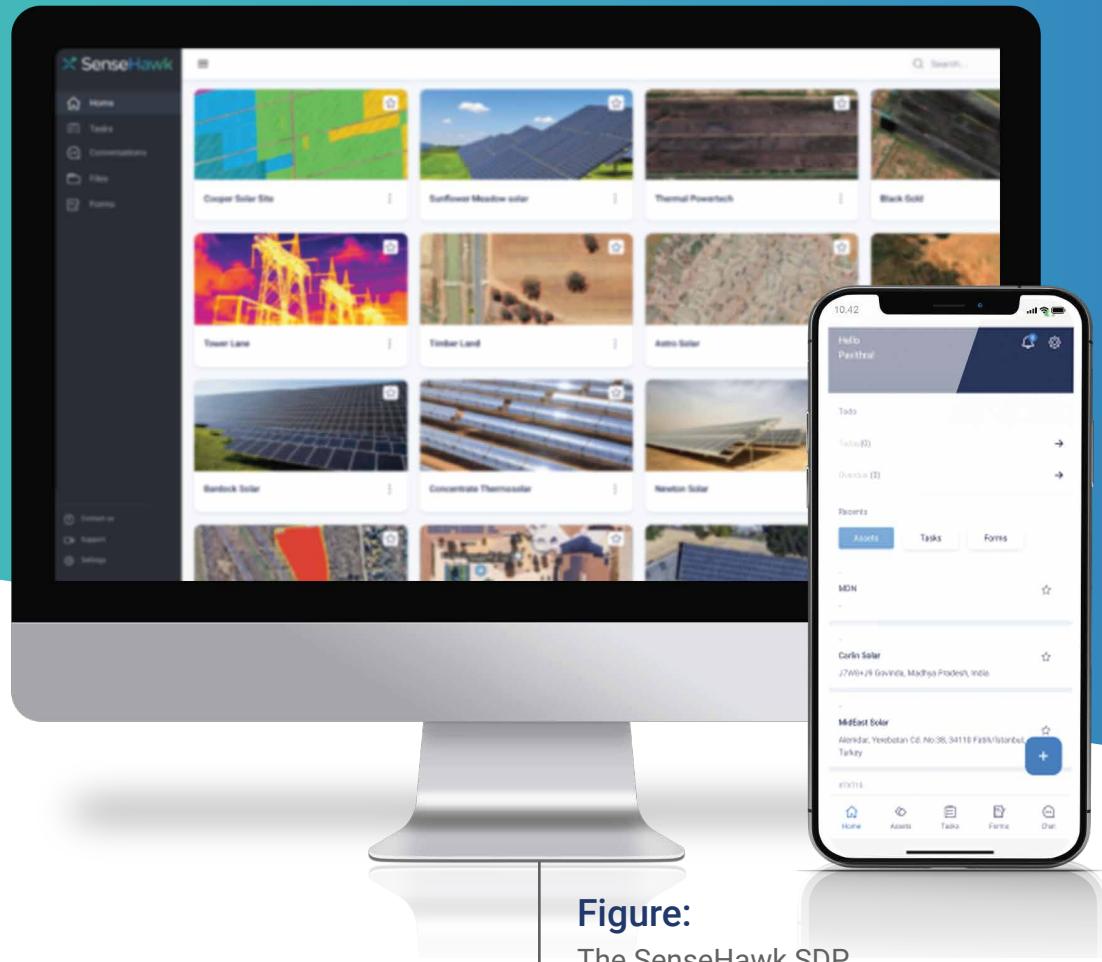


Figure:
The SenseHawk SDP,
accessible on web
and mobile

SenseHawk SDP Features

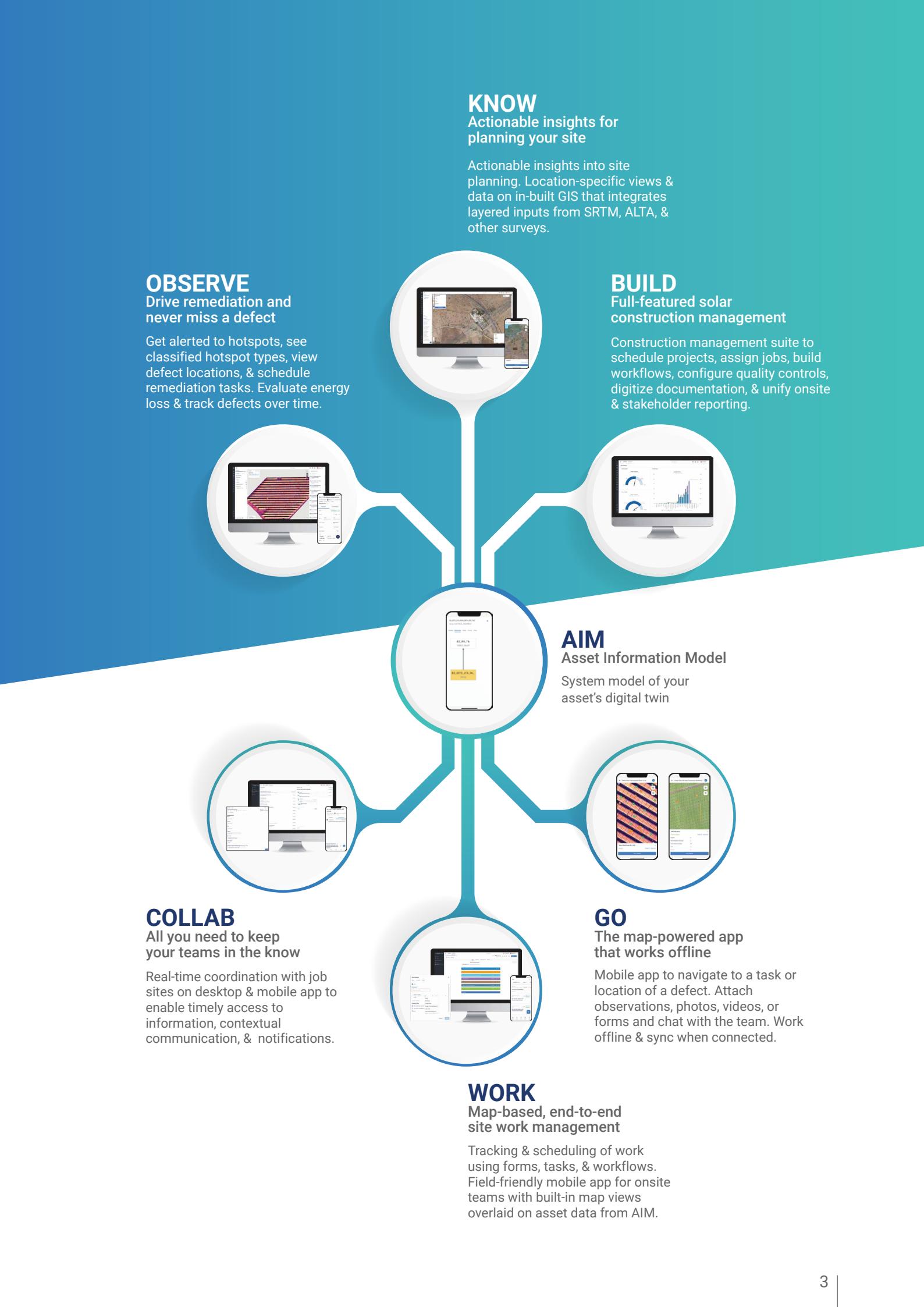
Custom-built for Solar, the SenseHawk SDP offers powerful features for every stage of your asset lifecycle. Built around an intelligent system model, the SenseHawk SDP keeps you in the KNOW, helps you BUILD, moves WORK forward, lets your teams COLLAB, and allows you to OBSERVE and remediate asset issues.

100+
GIGAWATTS

600+
SITES

20+
COUNTRIES

100+
CUSTOMERS



User Interface for the SDP COLLAB feature



ASSET DASHBOARD

Quick view of site reports and progress updates using a customizable dashboard.



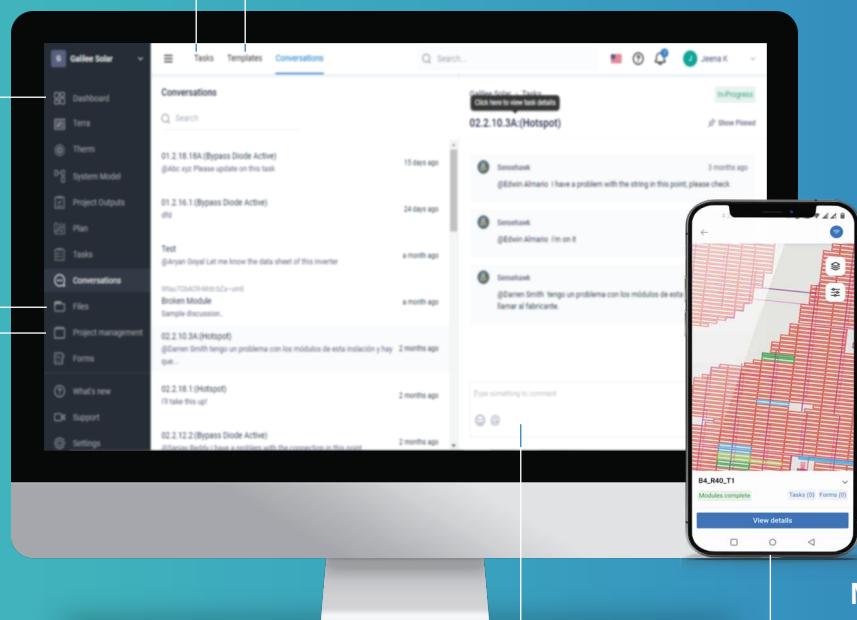
TASKS

View assigned tasks, checklists, forms, and templates; get the additional information required to close the job; access updates or attachments.



TEMPLATES

Simplify process oversight with structured data captured in templated digital forms.



FILES

Get secure access to required plans, drawings, or files without having to waste time searching.



PROJECT MANAGEMENT

Manage schedules and progress updates for multiple stakeholders and interdependencies to keep project construction on track.



CONVERSATIONS

Use in-line chat for contextual messaging intrinsically linked to each task and checklist.

Case Study

The COLLAB feature of the SenseHawk SDP supports real-time coordination at job sites with desktop and mobile apps for timely access to information, contextual communication, reporting, and notifications. Read on for a specific use case, where a leading utility-scale solar operator uses COLLAB to rapidly digitize processes at multiple solar sites to enhance operations.

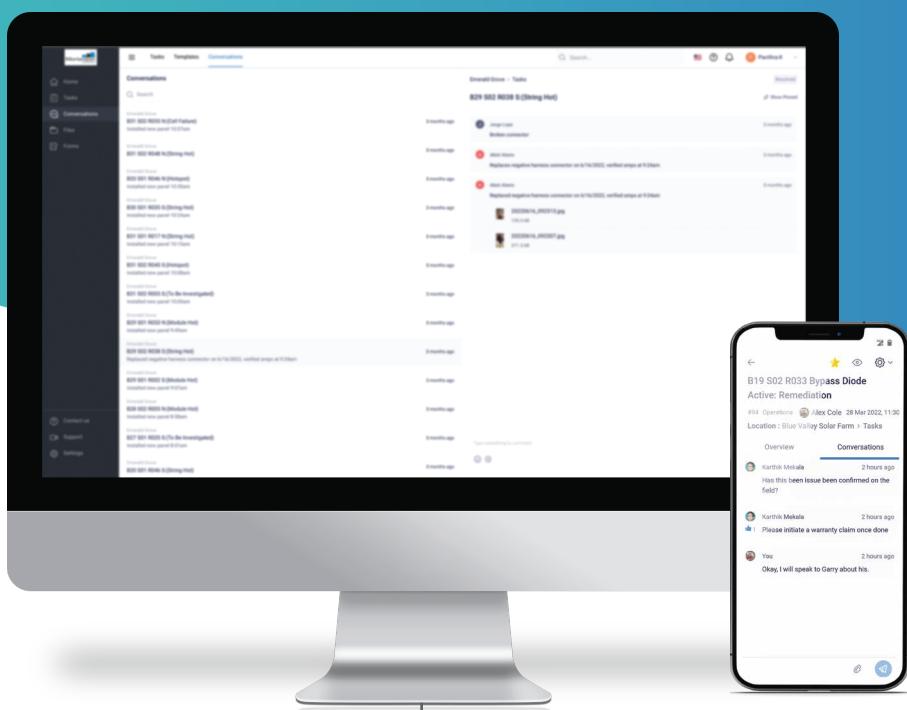


Figure:

Real-time collaboration using contextual or in-line chat linked to the task or checklist

- ✖ A utility-scale solar energy operator wants to digitize its solar assets in the United States to enhance operational efficiency. Manual creation of solar panel records and verification of design versus as-built will be time-consuming and can be prone to error.
- ✖ SenseHawk proposes using the COLLAB feature of its SDP. Component data across the sites is digitally captured and mapped onto digital models of the powerplants on the SDP using SCAN, the integrated mobile and barcode scanner feature.
- ✖ Operations crews can now use GO, the fieldworker friendly, map-based mobile interface, to easily navigate sites, achieve quicker event response times, and increase O&M efficiency.

At a Glance

The Operator's Requirement

A prominent owner, developer, and operator of utility-scale solar wants to digitize 4 GW of solar site operations in the United States. Manually creating records of solar panels by location and verifying that module installations are as per design will be time-consuming and can be prone to errors.

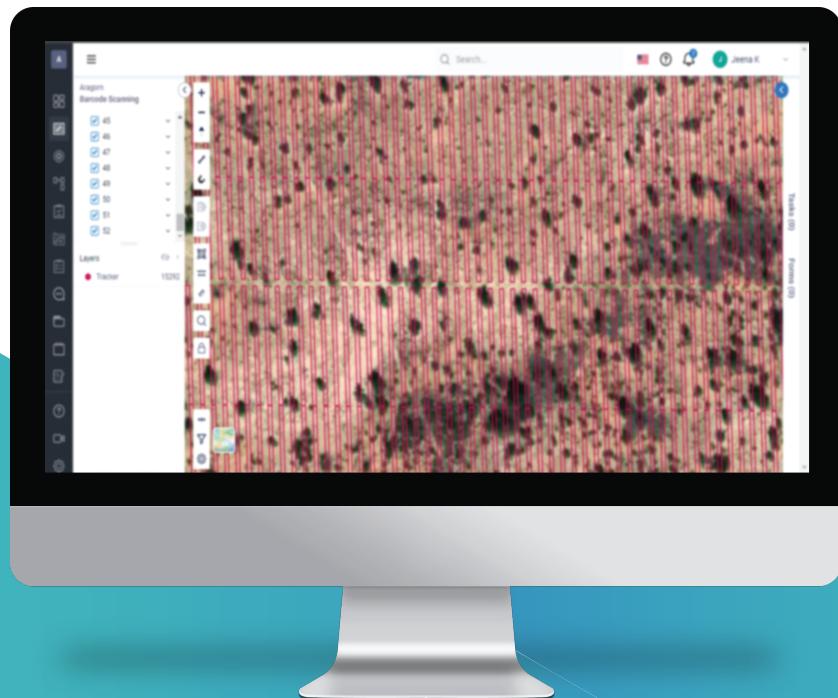


Figure:
Digitizing asset data
(physical, logical, and
hierarchical) to create a
digital model on the SDP

The operator has historically tracked barcodes only at the lot level, i.e., which batch of modules is installed and linked to which inverter. In the event of manufacturing defects, or product recalls for specific lots, field teams will have to examine up to 10,000 modules per inverter block to identify specific modules for replacement or repair.

Since solar photovoltaic (PV) powerplants typically have up to 3 million panels installed for each GW of capacity, the ability to identify and access the right panels in a timely manner is critical for operations and maintenance. Access to this information can assist construction teams in better managing commissioning punch lists and O&M teams in lowering operational costs.

SenseHawk's Proposal

SenseHawk proposes using the SCAN mobile app for inventory mapping. Integrated with the SDP, it helps automate the process of component serial number capture onsite. The serial numbers are geo-referenced to the digital twin of the component on the digital site model created using the Asset Information Model (AIM). Now all the digitized data can be accessed through desktop and mobile apps using the COLLAB feature of the SDP for real-time coordination at jobsites and contextual communication.

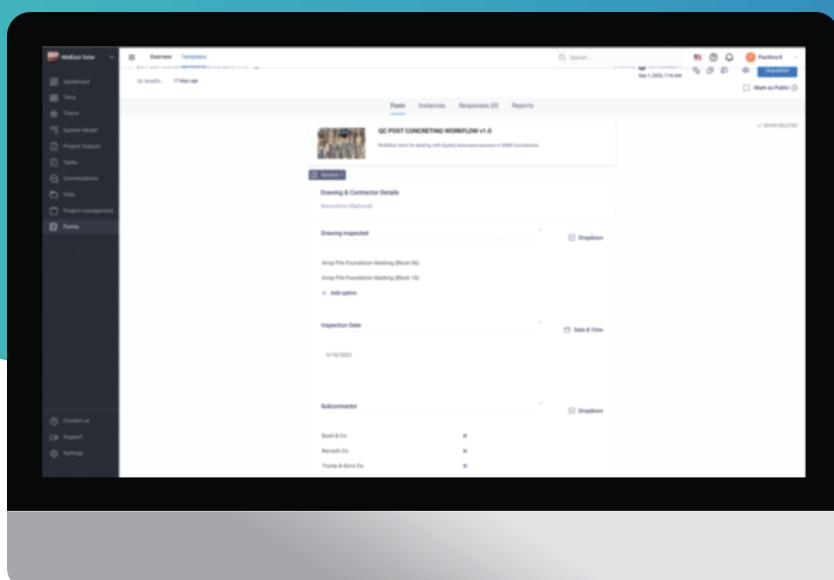


Figure:

Interactive,
feature-rich digital
forms to enable
efficient workflows

Geo-referencing individual modules to their exact position within a tracker to the digital site model on the SDP makes it easy to verify that module installations are as per design. The digital model contains other details of each component, including OEM and watt-peak capacity.

Office teams can now use the SDP to create tasks associated with any digital component on the site map. On-site crews can view assigned tasks on the field mobility app, GO, and use the map view to navigate directly to the task location. They can access additional information and documents, collaborate using text, voice, or video, get expert help if required, update defect and remediation status, and add observations to the task and documents.

The Result

With all asset data digitized, the operator can now easily streamline management processes and tracking. The digital site models on the SDP, created with the AIM, incorporate all physical site data with their logical and hierarchical connections onsite. The data mapped to the digital components can be further enriched with tasks, forms, checklists, workflows, and much more.

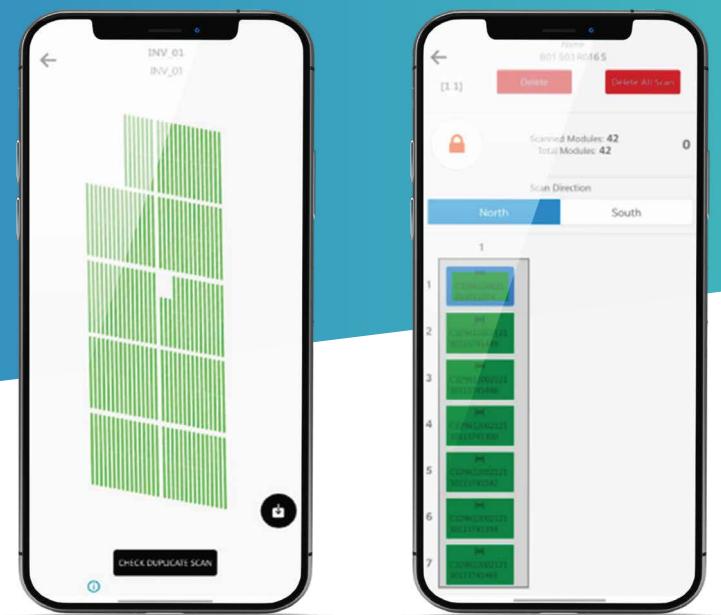


Figure:

Easy digital capture of serial numbers for installed modules using the Scan app to build a digital twin on the SDP

Without having to search or enter lengthy discussions, field crews can use the mobile app to directly navigate to issues, access available data and resources, get expert inputs, and tap into the collective knowledge of the teams to tackle the job at hand.

With all component data digitized, updating replacement component data and tracking inventory and warranty information become simpler. The fieldworker app, GO, eases office-site communication and collaboration to increase O&M efficiency, and save time, manpower, and cost.

The SenseHawk SCAN App

SCAN combines barcode scanning and GIS data to capture component serial numbers and map them onto the digitized powerplant layout on the SDP. Using SCAN, a crew of two can record the serial numbers of up to 15,000 installed modules per day to swiftly create an as-built record.

COLLAB To Empower Teams

With its expanding pipeline of projects, this solar operator wants technologies and processes that support efficiency in operation and management. Digitizing the current 4 GW of solar operations will pave the way for further expansion.

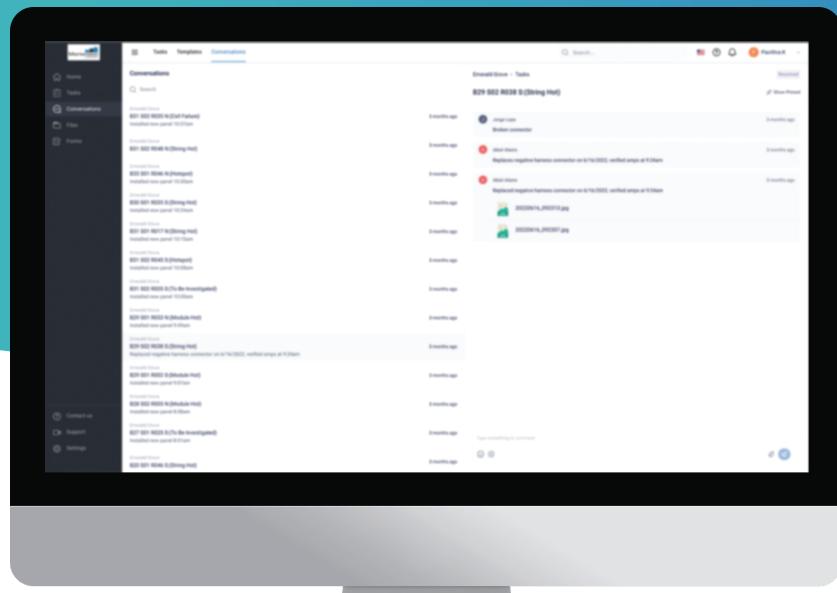


Figure:

Information flows to all teams—from project managers to field workers.

Using SenseHawk's desk and mobile apps helps the operator's on-site teams get just-in-time information, seek authorizations, and access the project schedule and documents they need to get the job done. The COLLAB feature has configurable real-time push updates, making it simple to keep teams in the know. The map-powered mobile app, GO, helps onsite teams view their tasks, navigate to the location, attach observations, photos, videos, or forms, and chat with the team. The app works offline as well and syncs when connectivity is restored.

The combination of issue-tracking and analytics enabled by the COLLAB feature of the SenseHawk SDP will significantly improve asset operations for the operator in terms of tracking, remediation, warranty claims, and long-term monitoring.

About COLLAB

COLLAB ensures information flows for the entire team—from project managers to field workers. Teams can access the latest versions of designs and files, use contextual messaging that is intrinsically linked to each task or checklist, and automate reporting.

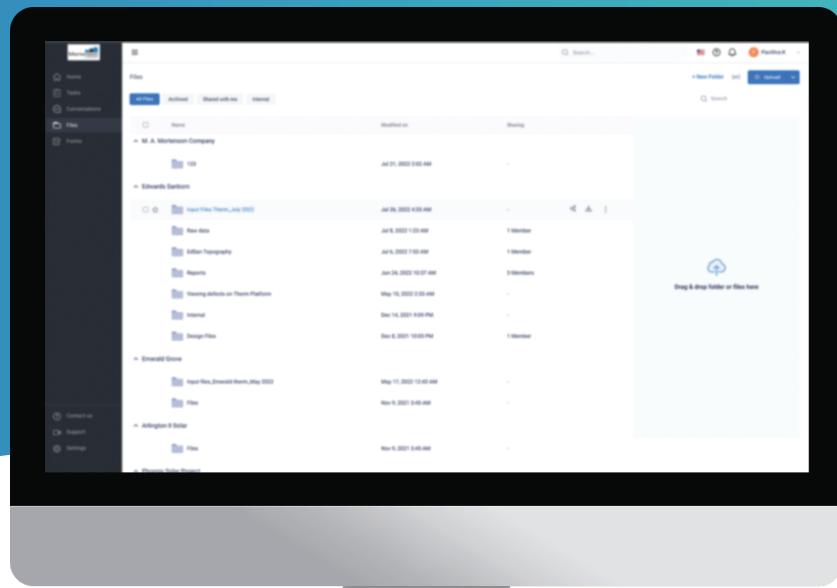


Figure:

Secure access to relevant files and documents for in-time information

COLLAB simplifies process oversight with structured data captured in templated digital forms and configurable workflows. Progress tracking for tasks is simplified in the customizable dashboard view. Using COLLAB, office teams can better manage risk by capturing data at the source, tracking workplace safety, and consistently creating proof of record.

Project schedules and progress can be easily shared with all stakeholders to ensure everyone is on the same page without multiple meetings or complex Q&A to extract relevant information.



About SenseHawk

SenseHawk is an early-stage California-based developer of software-based management tools for the solar energy generation industry with operations in the United States, the UAE, and India. SenseHawk's Solar Digitization Platform SaaS helps with process optimization, automation, and asset information management. The SDP enables yield improvement, defect identification, progress monitoring, productivity enhancement, cost reduction, collaboration, and data management throughout the solar lifecycle. From development and construction, through operations and maintenance, SenseHawk software has been deployed on 600+ solar sites worldwide.



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 www.sensehawk.com