SURVEY REPORT

2025 SOLAR EPC TECH ADOPTION OUTLOOK

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Solar Power World

Technology • Development • Installation

The Future of Solar Installation

As technology advances to support industries of all kinds, solar power stakeholders have many options among tools that can help them save time and resources across the installation landscape. Here at Solar Power World, we set out to learn more about these technology priorities and needs heading into 2025.

From December 19th, 2024, to January 17, 2025, Solar Power World partnered with mobile and cloud software designer SiteCapture to assess the current state of digital adoption in the solar installation industry. This survey report highlights challenges, key decision factors, and priorities for technology adoption.

Solar Power World is proud to share these survey results, offering solar installation professionals valuable insights into the industry's trajectory as the year unfolds.

Kelly Pickerel
Editor, Solar Power World

A Letter from SITECAPTURE

As the solar installation industry has boomed, it's become more critical than ever for solar EPCs to adopt digital solutions that enable them to scale efficiently. We launched this survey in partnership with Solar Power World to help EPCs stay on top of tech-adoption trends, and we're excited to share the results.

Solar EPC respondents noted common pain points, including inconsistent photo & data collection, disjointed office-to-field communication, and extra site visits - all of which severely impact project delays, operational costs, and customer satisfaction.

This report highlights a significant opportunity for solar EPCs to leverage technology to streamline operations throughout the solar installation lifecycle - specifically when it comes to standardized job site documentation and interoperability with other systems.

It's SiteCapture's mission to solve these avoidable pain points for the solar industry with our easy-to-use mobile app for field documentation, a comprehensive portal for project management and reporting, and integrations with key tools across the solar lifecycle.

Dive into the full survey results to discover how forward-thinking EPCs are driving success with digital transformation. Together, we can build smarter, more efficient field operations for a brighter future in solar.

— The SiteCapture Team

Executive Summary

2025 Solar EPC Tech Adoption Outlook

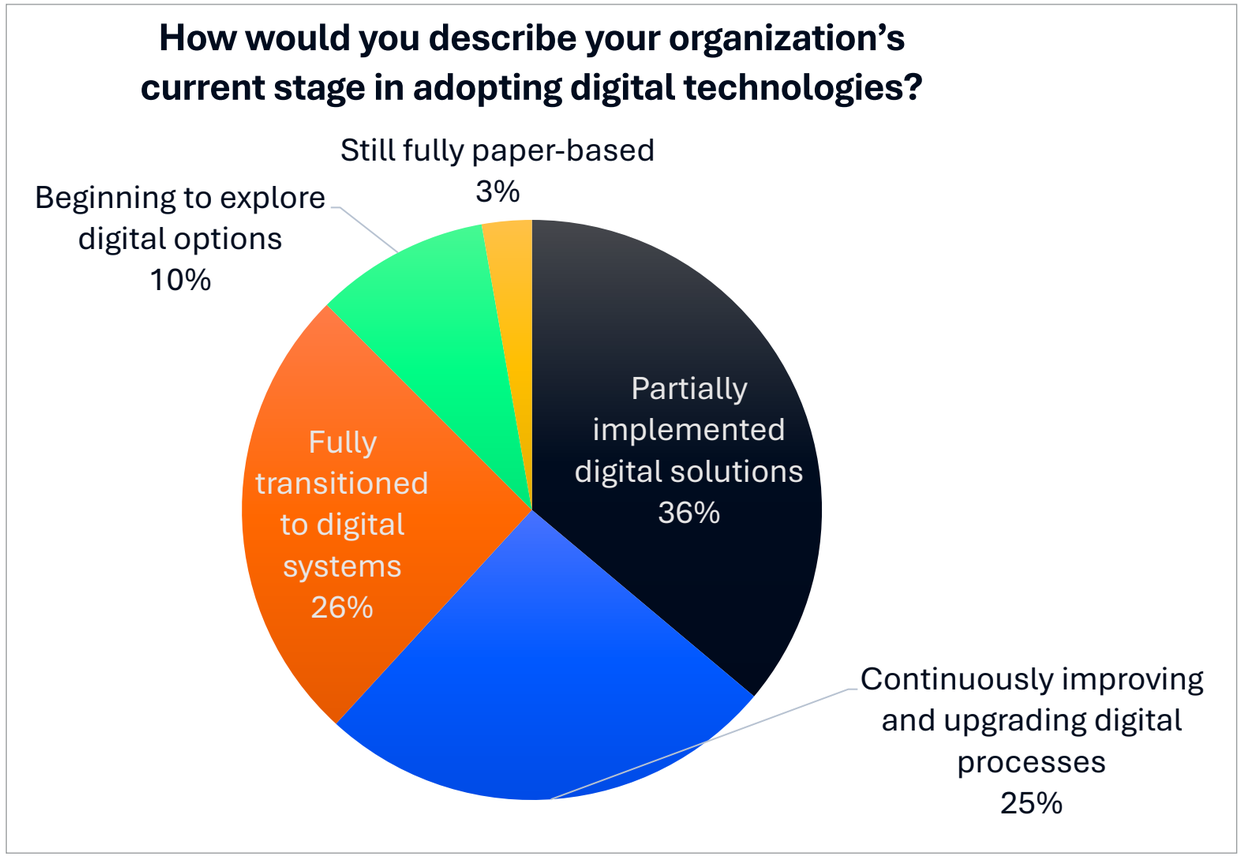
Results from a comprehensive online survey reveal insights from 144 professionals in the solar installation industry. The respondent pool predominantly comprises professionals from engineering, procurement, and construction (EPC) firms and installers, accounting for 62% of participants. The majority of these organizations manage between 1 to 10 solar installation projects monthly.

This industry-focused survey explored three critical areas:

1. **Digital technology implementation and challenges in operational processes**
2. **Job site documentation management and associated pain points**
3. **Technology investment priorities and feature requirements for future growth.**

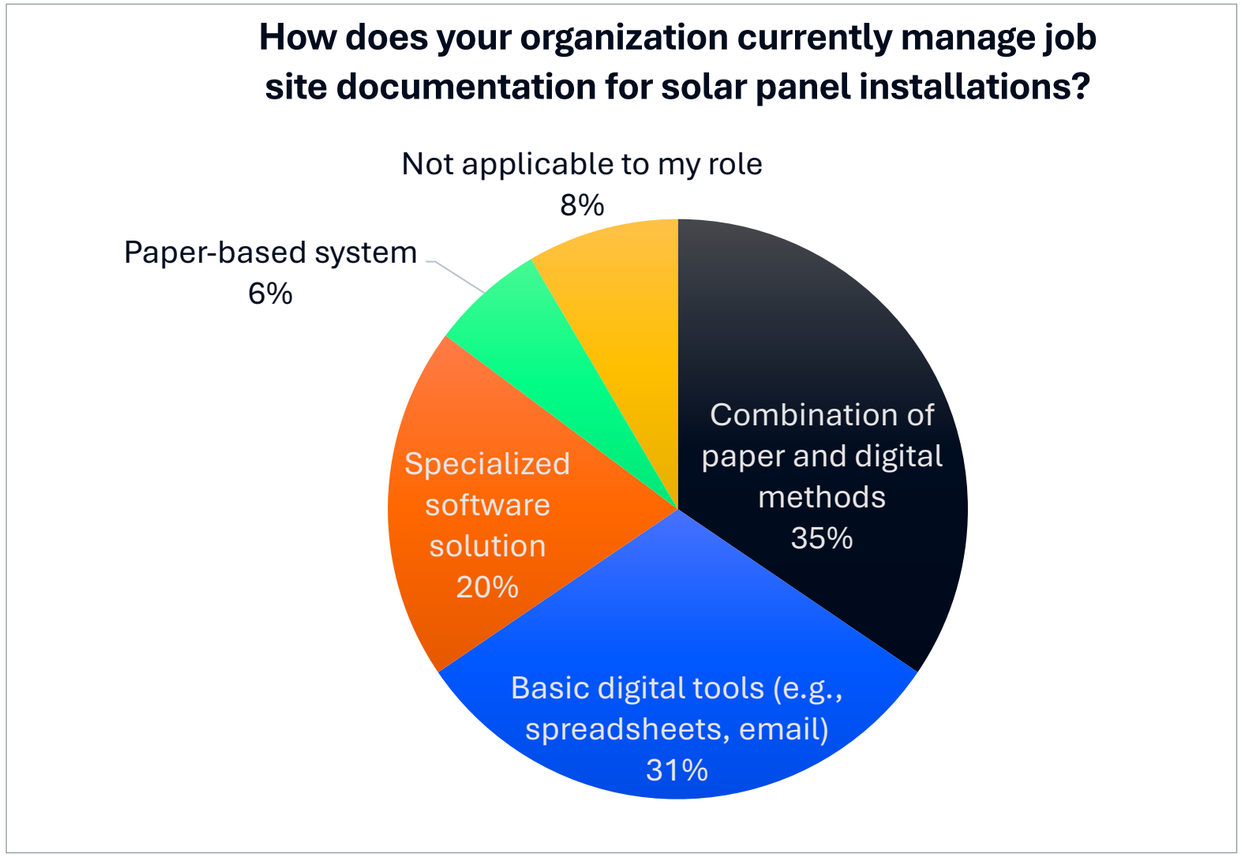
DIGITAL TECHNOLOGY IMPLEMENTATION UNDER WAY FOR SOLAR COMPANIES

Many in the solar industry have begun the journey to digital adoption, despite being at a variety of stages. Thirty-six percent of organizations have partially implemented digital solutions, while 25% report they are continuously improving and upgrading digital processes. Just 3% report being fully paper-based.



DIGITAL SOLUTIONS ARE MAKING INROADS IN JOB SITE DOCUMENTATION MANAGEMENT

While 35% of organizations use a combination of paper and digital methods for job site documentation, there is an opportunity for integrated digital solutions to streamline processes.



DATA COLLECTION RANKS HIGHLY AMONG SOLAR INSTALLATION DOCUMENTATION CHALLENGES

The biggest challenges in managing job site documentation are inconsistent data collection (37%) and poor communication between field and office teams (35%).

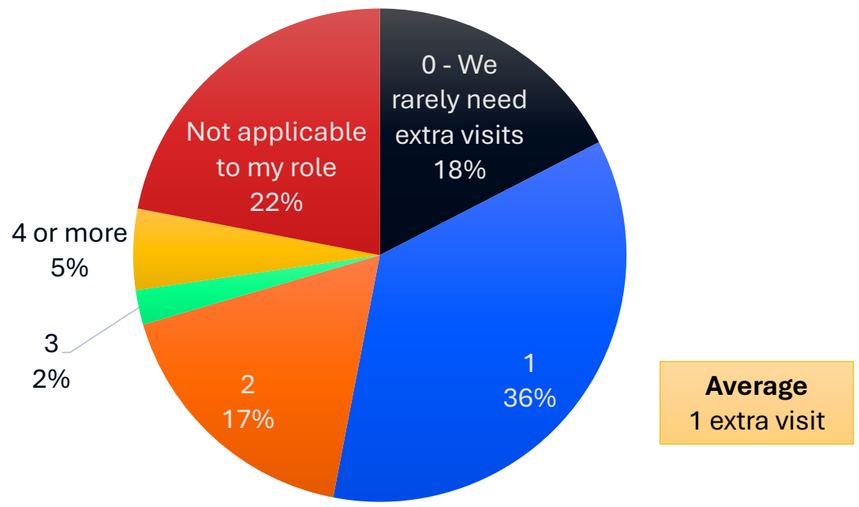
Communication is key, but a level of trust in your subcontractors so they can be autonomous is important."

– Solar & Storage EPC, Florida

OPERATIONAL INEFFICIENCIES AND AVOIDABLE SITE VISITS ARE COSTLY

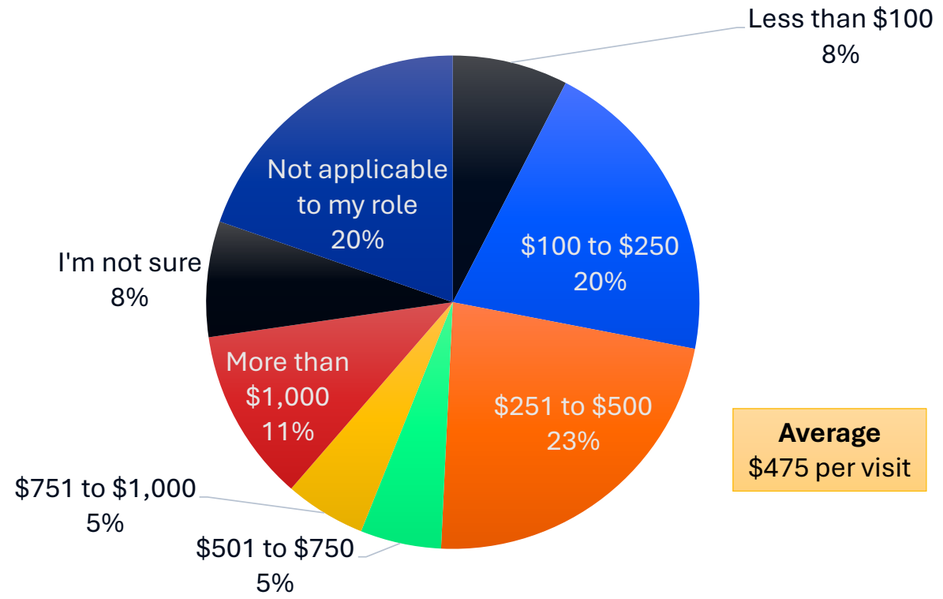
Thirty-six percent of organizations typically make one extra site visit per project, with an average of 1-2 visits for those requiring extra visits. The average estimated cost of an extra site visit is $475, with 23% reporting costs between $251 to $500.

In a typical solar panel installation project, how many extra site visits does your field team usually make to collect missing photos or data?



Average
1 extra visit

On average, what is the estimated cost of an extra site visit or truck roll for your team?

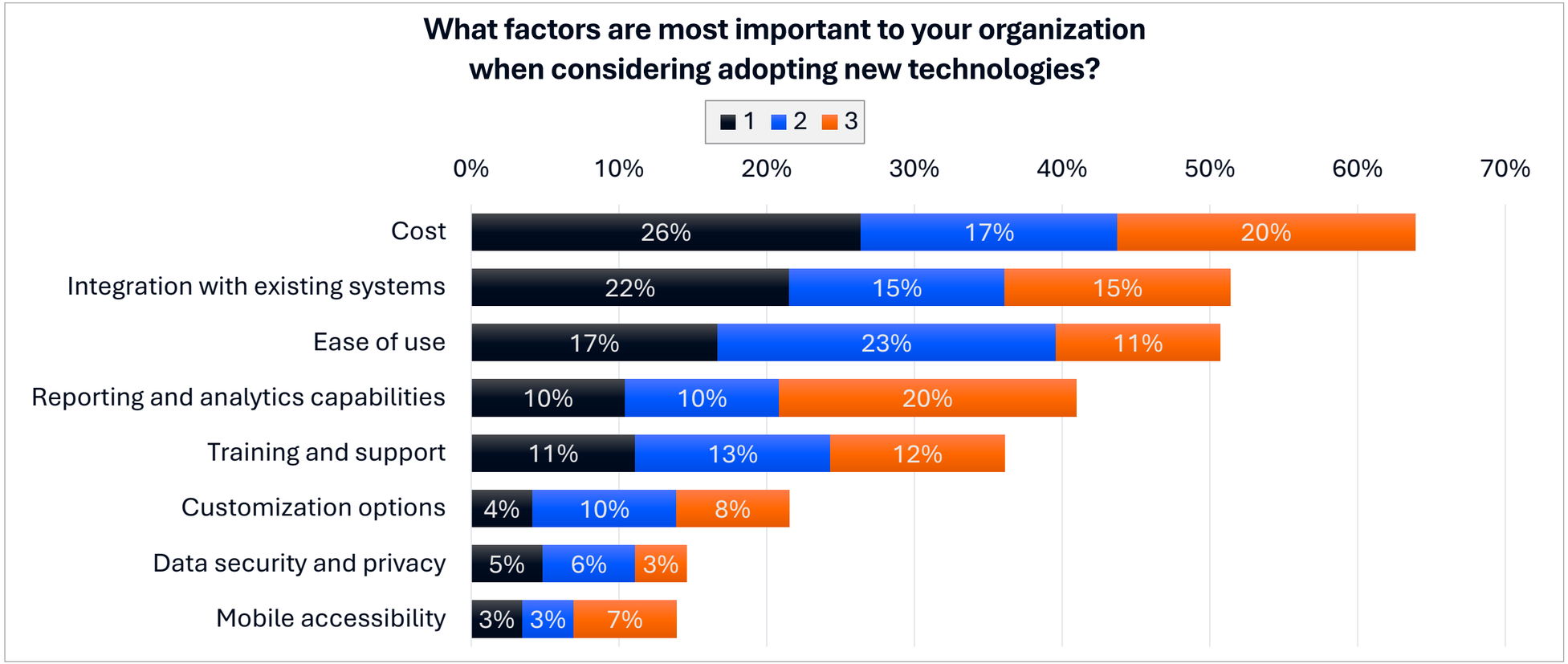


Average
$475 per visit

> **Be thorough at your initial solar site visit and measure the roof twice. Take detailed notes and make them available to the whole team to note details about vents, skylights, etc. Always get your permits approved before ordering equipment."**
>
> ***– Non-Profit Solar Association, New Hampshire***

COST & COMPATIBILITY DRIVE SOLAR TECHNOLOGY ADOPTION

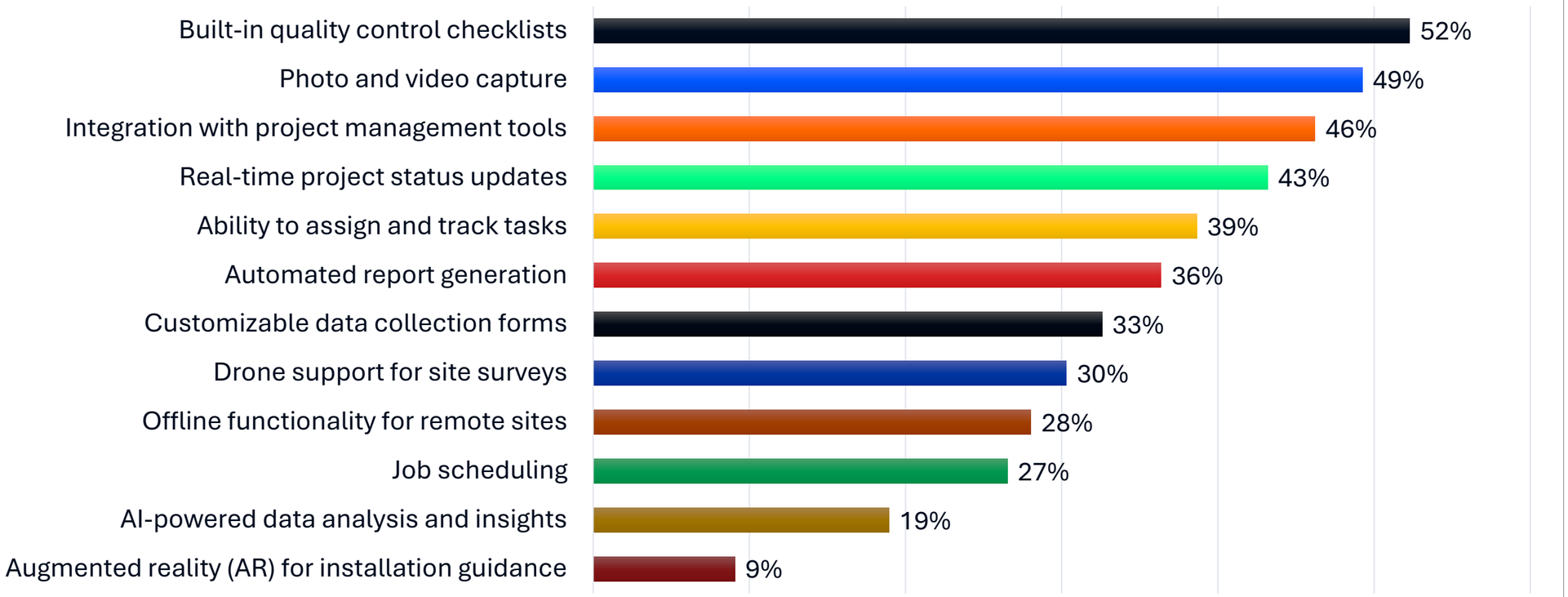
Cost is the top factor when considering new technologies, while seamless integration with existing systems emerges as the second most important, followed closely by ease of use.



QUALITY ASSURANCE & PHOTO/VIDEO CAPTURE TOOLS MOST VALUABLE FOR SOLAR FIELD PLATFORMS

The most valuable features in a solar field operations platform are built-in quality control checklists (52%) and photo and video capture (49%); integration with project management tools (46%) ranks third, indicating a strong desire for connected systems.

Which features would you find most valuable in a solar field operations platform?



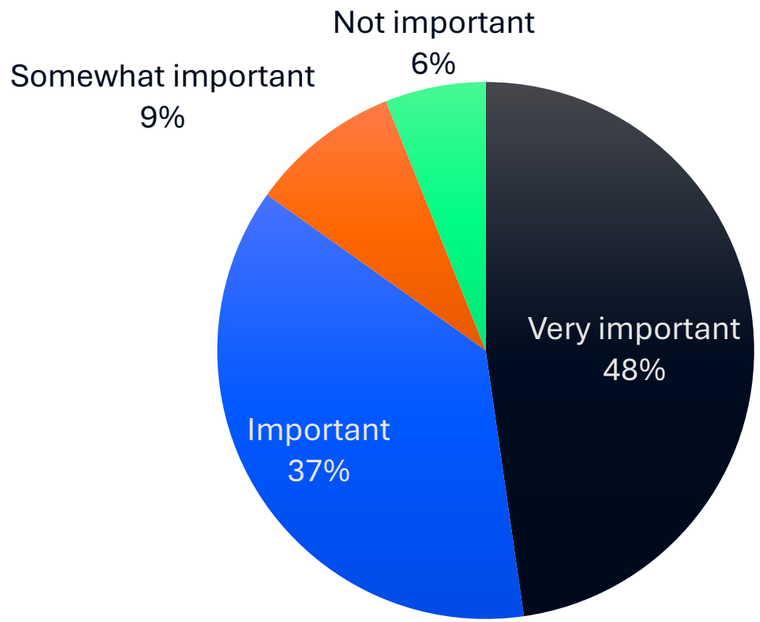
Find a good software that is easy to use both in the office and in the field."

– Residential, Commercial & Industrial Solar Installer; Illinois

SOFTWARE SYSTEM INTEGRATION CARRIES HIGH LEVEL OF IMPORTANCE

An overwhelming 85% of respondents consider integration with other software systems either very important or important, emphasizing the critical nature of interoperable solutions.

How important is it for a field operations platform to integrate with other software systems currently in use (e.g., CRM, ERP, design/ engineering tools, financing partners, project management tools)?



SALES GROWTH & OPERATIONAL EFFICIENCY LEAD 2025 INVESTMENT PRIORITIES

The most critical investments for achieving 2025 goals are enhancing sales, marketing, and customer acquisition strategies (48%); improving field-to-office communications (36%); hiring skilled professionals (34%); and implementing new software solutions (34%).

SUMMARY

What can EPCs do to stay ahead of the curve in 2025?

- Implement standardized digital photo and data collection tools to ensure all photos and data are captured on the first site visit.
- Explore native integrations with key stakeholders like Solar Financing partners to streamline milestone funding approvals.
- Invest in AI-powered automation to continue to streamline critical processes throughout the solar installation lifecycle.

CONTACT US

We're happy to hear from readers with questions, comments, concerns and story ideas.

EMAIL: kpickerel@wtwhmedia.com

Contact SiteCapture to learn more:

EMAIL: sales@sitecapture.com

WEBSITE: sitecapture.com/solar