

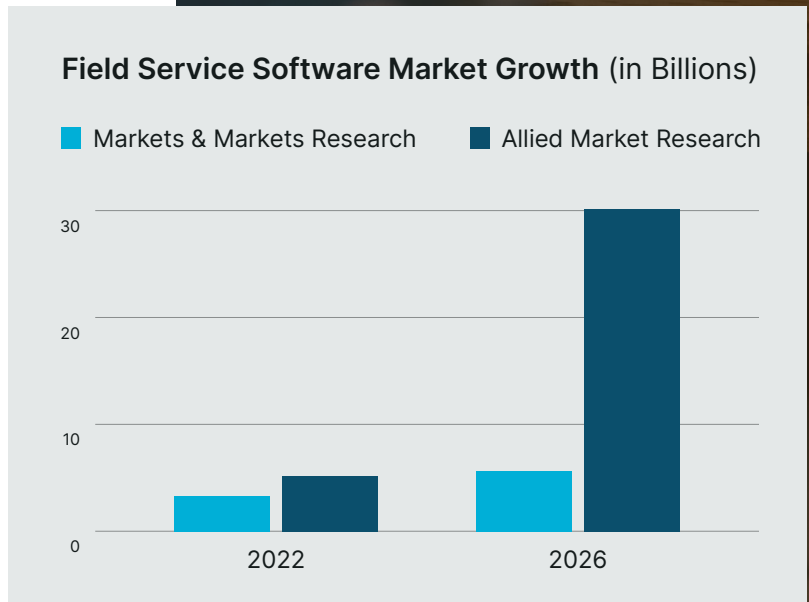


The Future of Field
Service Technology

The market for field-service management (FSM) software has surged in the last decade. Its sensational growth in the 2020s, accelerated by an unprecedented confluence of global events, economic trends, and innovation, is expected to continue for the foreseeable future.

Industry projections for the coming years vary, but they all predict double-digit annual percentages of growth and continuing technological transformation. [One report](#) estimates that the FSM market will grow from \$3.2 billion to \$5.7 billion between 2021 and 2026. [Another report](#) says the market will reach \$29.9 billion by 2031.

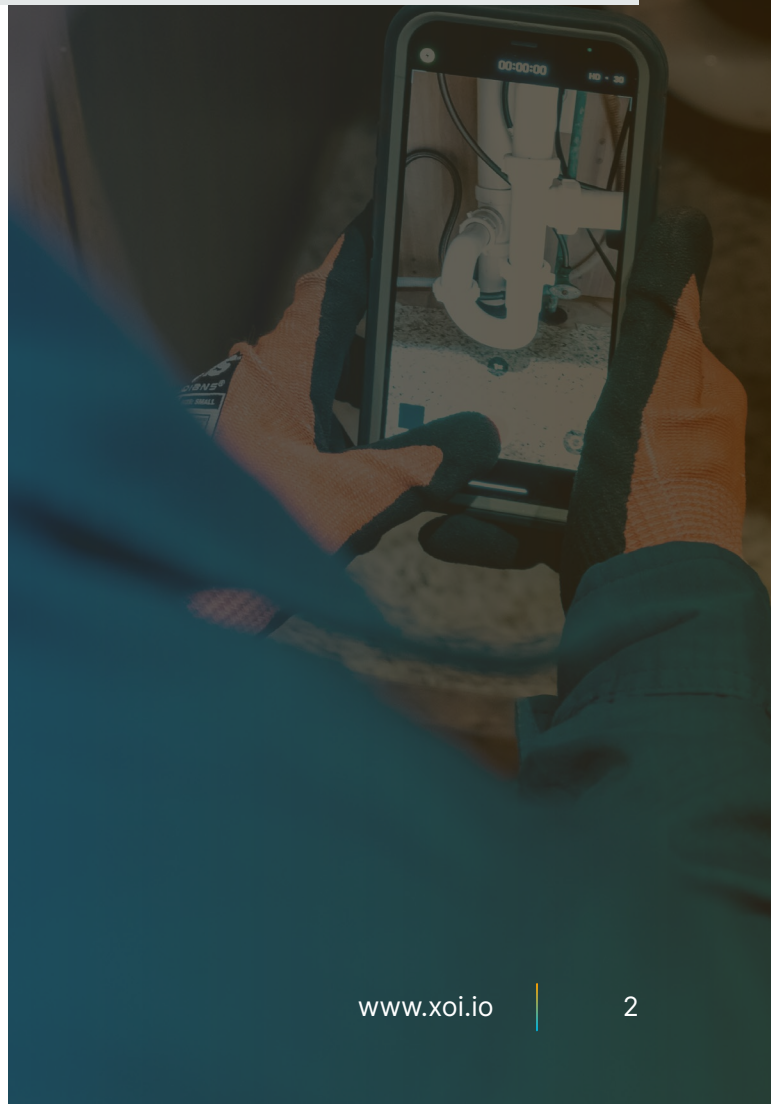
While this is all great news for investors, entrepreneurs, engineers, and marketing teams, the story on the ground is different.



What tech application really looks like

As the market for FSM and enterprise resource planning (ERP) software has matured, the landscape has settled into a handful of very large companies and a constellation of smaller platforms all promising to help service contractors operate more efficiently and profitably.

Unfortunately, this seemingly endless (and growing) supply of “solutions” doesn’t solve the industry’s needs. Contractors often face the choice between clumsy all-in-one software or narrowly specialized platforms that don’t address real situations that service professionals see on the job. Bulky all-in-one options might do everything, but they rarely excel at anything.



Specialized software, on the other hand, sounds great. But too many contractors end up with an expensive, ponderous selection of best-in-class platforms that don't work together. Field service technicians spend up to two and a half hours every day searching their tablets or smartphones for solutions to situations they encounter in the field.

Whether its manufacturer's specs, a product manual, a video tutorial, or regulatory data, the information they're looking for is out there. Unfortunately, it's widely dispersed and comes in a bewildering variety of formats, many of which aren't compatible with each other or with technicians' primary FSMs.

Accessing and engaging with this critical information requires time, patience, and multiple applications. Many field technicians use as many as nine different apps in a single day just to complete straightforward jobs. Along with time and stress, these ongoing ad hoc searches increase the risk of error resulting from:

- Inconsistent, incomplete, out of date or inaccurate data from third-party sources.
- Manual data entry.
- Fatigue or confusion.

Worse, there's no lasting value to the time techs spend tracking down information this way. If they find useful data on one app, it stays there. Another tech from the same company who encounters a similar situation will likely have to follow the same tortured process in order to reach a successful resolution. The solution doesn't become a part of the company's shared store of knowledge and the stress and time-sink associated with managing job information is perpetuated.

Additionally, because of the individual nature of searches and learning styles, it's likely that every technician's results will be different. That introduces a lack of consistency and predictability that interferes with workflows on their side and can significantly reduce customer satisfaction and loyalty.

In an increasingly competitive industry facing a chronic labor shortage and the radical disruption of supply chains, neither option works anymore. The industry is searching for solutions that truly empower technicians, the people who are the heartbeat of field service.



Technicians spend 2.5 hours a day searching for answers on the job



Senior techs spend over 7 hours a week supporting green techs in the field

* source: XOi proprietary data

Technician-first experience

Despite the flood of technology solutions available for them, technicians in field service industries are too often left out of the technology equation. Most technology products are targeted at owners and their leadership teams, not the techs in the field who use those products every day.

A tech's job is hard. They need simple, intuitive technology to solve the real-world problems they encounter on the job, regardless of their skill set or level of experience. Tech-focused solutions mean a better job experience and translate into higher productivity. They also support making techs job-ready faster, so contractors can gain competitive advantage in the cycle of recruiting, training and retaining talent.

Tech-first solutions allow professionals in the field to:

- Capture photos and videos before, during and after every job. This provides transparency for customers and managers and helps build a shareable, permanent institutional knowledge base.
- Apply customized automated workflows to every jobsite.
- Access contextual microlearning such as easily digestible tips, videos and documents.
- Avoid tedious manual data entry and typos by utilizing Optical Character Recognition (OCR) to pull equipment information, including make, manufacturer, model number and serial number, directly from a dataplate photo.
- Automatically save all completed work, allowing techs and managers to search for a specific job by work order number, customer name, address, and any additional custom tags.

Innovative platforms that emphasize technician experience/perspective help contractors address the chronic skilled trades labor shortage and continuing supply chain disruption so their companies can increase profitability and grow.

Solutions that empower techs and earn their attention help business owners establish a competitive advantage. With tech-first solutions, contractors can connect and integrate best-in-class technology and build a rich ecosystem of premier functionality that goes beyond all-in-one solutions.



Emerging alternatives

Today's FSM and ERP market looks like it does because the technology sector doesn't understand the real-world experience of the people who use their products.

That's changing, as the labor crisis, demographic trends and supply chain disruption continue to challenge field service providers despite the many solutions marketed at the industry. A new generation of technology is emerging that promises to enable and empower technicians where they work – in the field.

The most highly publicized of these new solutions claim to upgrade field service by providing a single app for every job. While this technology delivers on some of its promise, most of the emerging solutions in this area fail in a fundamental way.

They are designed with the experience of technicians in mind, which is a huge improvement over previous generations of FSM. But they are not built to empower or enable techs on the job, and they don't support the long-term success of contractors. Instead, technicians using the technology – and ultimately the companies they work for – are simply a commodity to these providers.

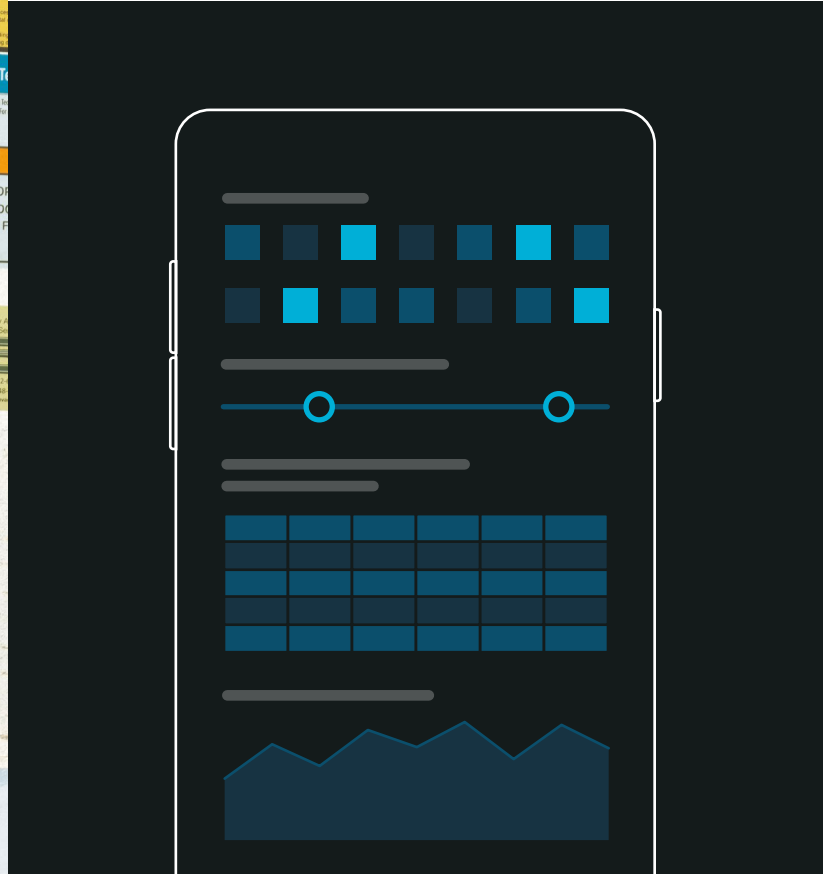
In this model, the relative inexperience for end users is subsidized by distributors, who pay for access to them. The limited data available through these apps serves sales for them, but it's insufficient to truly meet the demands of contractors and their teams.

The true modern technology solution does more than just connect techs with an order form for parts and equipment – much more. It's an ecosystem of industry intelligence.

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Advanced data collection and analytics

Contractors need solutions that connect technicians with the equipment they service and allow teams to collaborate across the field service ecosystem. They are seeking innovative technology that sparks an entire system of intelligence.

Advanced artificial intelligence, machine learning and data collection power solutions that are transforming the possibilities of the industry. Unprecedented data and analytics improve workflows and productivity and deliver actionable insights that contractors can apply for future growth and success.

Today's top solutions equip technicians and teams with tools, resources, and capabilities to deliver a level of service that exceeds customer expectations and surpasses the competition.

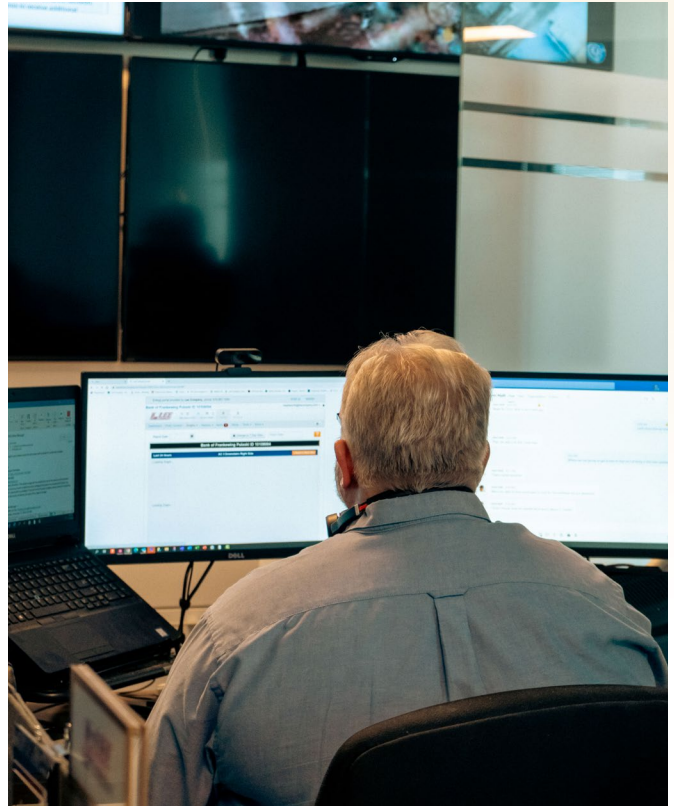
- Insights to help techs identify end of life replacement opportunities. An average field service organization has 16% of its units approaching end of life. When techs have knowledge about units nearing the end of life, they or the sales team can proactively contact customers regarding the purchase and install of a new unit.
- Generate preventative maintenance sales by easily observing service trends to identify equipment that requires more frequent maintenance.
- Proactively identify trends in component mentions and service themes and effectively observe the components technicians are working on most frequently as well as the skill requirements for the types of jobs techs most commonly encounter.

Knowledge management

The loss of institutional knowledge related to an aging workforce amplifies the negative impact of the skilled labor shortage. Some techs spend more than two hours a day searching for the information they need to do their jobs.

With [retirement rates cascading](#), many contractors fear that significant declines in quality, service and productivity are on the horizon.

Sharing earned knowledge from generation to generation ensures continuity and productivity. Younger workers benefit from the lessons senior employees have already learned, helping them avoid costly errors. Informal mentor relationships also support and reinforce formal training, enhancing the value of investment in ongoing education opportunities.



Over the course of a 30- or 40-year career, skilled workers accrue a vast amount of useful information and knowledge. There are, of course, the essential technical skills required for the job. But there are many other forms of knowledge and expertise that aren't as easy to measure:

- Soft skills necessary for successful interaction with customers and colleagues.
- Institutional knowledge about the industry and local service area.
- Diagnostic abilities that depend on intimate familiarity with a range of products and brands.

Tech-enablement solutions empower field techs with tools driven by data, analytics and artificial intelligence, allowing contractors to successfully adapt to the chronic challenges of the employment market.

- OCR technology allows field service techs to instantly capture equipment and service data that can be accessed by other members of their team or on future jobs.
- A powerful, easily accessible industry knowledge base featuring manuals, diagrams, and wireframes from major manufacturers that can be supplemented by a company's collected knowledge from every job and jobsite, including content, photos, and videos.
- Searchable historical job information that can be referenced and reviewed from the field.
- Universal knowledge sharing connects the full field service ecosystem.
- Virtual mentoring resources offer a seamless virtual solution for on-the-job training, troubleshooting, and support.

Building trust with technology

The connection between technicians and the equipment they work on is the central relationship of the field service industry. It drives everything we do, but it remains a mystery for many customers – and mystery can breed skepticism.

When contractors and their teams can add transparency and data to customer transactions, they are building trust that will support long-term growth through customer retention. The accessible data powering today's tech-enablement solutions can also empower customers with knowledge about their equipment.

Success stories

A locally owned and operated HVAC company in Minnesota struggled to consistently add additional tasks and accessories to produce high ticket calls. While the techs were meeting their minimum goals, they couldn't fully communicate value to customers until they adopted tech-enabled technology with powerful video capabilities so they could transparently share impactful data.

The software helps technicians educate customers by communicating what's going on with their system, while providing visuals of recommendations and required repairs. Using a tech-enablement solution has led to easier follow-ups with customers, resulting in a 17% increase in average tickets in maintenance and a 25% increase in service.



Increased
average
maintenance
ticket from
\$347 to \$415

Increased
average service
ticket from
\$551 to \$730

Increase
transparency
and trust with
their customers



A leading provider of heating and cooling services in Texas was hampered by manual processes. Technicians were wasting time manually inputting data — their process required double entry of all data plates, photos, and videos. Both office staff and field techs were wasting productive time making sure everything was entered correctly. Customers received physical copies of job summaries with little detail. Essentially, the customer had to remember what the tech had told them, leading to the loss of potential sales.

The company integrated a tech-enablement platform with its existing FSM, eliminating the need for technicians to jump from app to app. In addition to data capture that addresses the challenge of manual processes, the detailed workflow and knowledge base capabilities have been used to develop a training curriculum that will allow them to train new hires quickly and efficiently.

Increased closing
sales for new
customers

Increased
preventative
maintenance sales

Increased
overall ROI

Through the aid of data-focused technology, an internationally reputed HVAC OEM was able automatically, and systematically track services performed on over 78,000 pieces of their equipment. Through automatically indexed and analyzed dataplate photos, the OEM tracked process improvements and standardized workflows, saving them millions of dollars in just four months.

- \$6.3 million in savings as of June 2022
- On track to save \$10 million by July 2023

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