From collected to connected

5 ways to unlock your IoT potential to revolutionize your field service
The best things are often hidden

A Tudor-era treasure worth tens-of-thousands of dollars discovered while planting a garden.

A first-edition Superman comic hidden away in the walls of an old house.

A $28M unsigned Renaissance painting hanging in a home for years.

It’s amazing to think of the treasures hidden in our everyday lives, just waiting to be discovered. Too often, the most valuable possessions we have are overlooked because we are chasing the ‘shiny, new thing’ that will bring us more beauty, comfort, and status until the ‘aha’ moment when we discover the riches right in front of our face.

That moment, when it all connects, changes everything.

“The real voyage of discovery consists not in seeking new landscapes, but in having new eyes.”

Marcel Proust
It’s time to look at IoT with a fresh set of eyes

Business is no different when it comes to buried treasure. While leaders and teams hyperfocus on the latest trends, business models, and technology, they may overlook the hidden opportunities for growth, change, and efficiency waiting to be tapped in their organizations. And while embracing the new is integral to business resilience and transformation, it can lead to a mindset of constantly looking outward instead of inward for “the next big thing.” Meanwhile, the organization’s ‘aha’ moment is tucked away, just waiting to be unearthed.

The Internet of Things (IoT) is a powerful example of this paradox. While there’s no disputing how IoT has changed the way businesses operate, how we live our daily lives (“Alexa, what’s the weather?”), and even the way our cities and governments function, its greatest riches—data—are often left languishing and unused. Those millions and counting of IoT devices are collecting huge amounts of data every day, that is then stored and, in many cases, left forgotten and unused. For example, the McKinsey Institute shared, “Most of the IoT data collected today are not used at all, and data that are used are not fully exploited. For instance, less than 1 percent of the data being generated by the 30,000 sensors on an offshore oil rig is currently used to make decisions.” That’s a wealth of actionable data being left on the table— and an opportunity waiting to happen.

For businesses looking to revolutionize their field service, the key to unlocking the full potential of IoT is to look beyond just what it allows us to do and imagine what activating all its collected data can make possible. The IoT data that’s collected and stored after-the-fact isn’t just archival. It’s raw potential waiting to be harnessed, a catalyst for enhancing and transforming our business.

Field service is an example of a business process that, while being revolutionized by IoT in many ways already, has even more treasure to be discovered in all its untapped asset data. So how can field service leaders take all of the IoT data generated, collected and stored, and make it actionable? Read on to learn more.

The number of Internet of Things (IoT) devices worldwide is forecast to almost triple from **8.74 billion in 2020** to more than **25.4 billion IoT devices in 2030**.°
Discovery consists of seeing what everybody has seen and thinking what nobody has thought.

Albert Szent-Georgi

A wealth of opportunity, waiting to be discovered

IoT has already brought a wealth of riches to businesses since its inception. By harnessing IoT to connect their critical infrastructure remotely, companies have fundamentally changed how they do business. By harnessing IoT, some businesses have even adapted a servitization model, shifting from selling physical goods to selling services and outcomes to their clients, transferring the responsibility for maintenance of critical infrastructure back to the business.

With these new business models and opportunities come new challenges (and opportunities). All of the valuable data collected, consumed, and stored from IoT adoption needs to go somewhere—and that ‘somewhere’ is usually disconnected systems and data silos. Instead of connecting all that collected data to use for making experiences better, working more efficiently, and surfacing powerful insights, it’s stashed away in various systems (or worse, forgotten). Teams are stuck managing these disjointed silos, trying to make sense of complicated processes and, for those who know the powerful data IoT collects but have no idea where to find it in their organization, live in a world of frustration knowing what’s possible if only they had the full picture.

Unearth IoT data potential

How can field service leaders connect and use all that IoT data? In this ebook, we’ll explore five ways to collect and connect your IoT data to revolutionize your business:

- Resolve problems faster by taking immediate action
- Connect teams and customers across departments (and the world)
- Increase asset availability and uptime
- Keep technicians safe and productive
- Create an audit trail to win and keep business

Exponential growth, huge buried potential

While B2B companies and industrial applications are capitalizing on the exponential growth of IoT, vast pools of underutilized IoT data are left to grow stale in organizational silos. A few key stats:

Some 44 trillion GBs of data will be emitted from those devices.³

An estimated 4.4 billion people are connected globally by IoT.³

The global IoT market is expected to reach $4.3 trillion overall by 2024.³
If knowing is half the battle, action is the second half of the battle.

Jim Kwik

Resolving issues in minutes, not hours

Making renewable energy even more efficient

Using ServiceNow® Connected Operations, a wind farm can merge the data they receive from wind turbines with digital workflows in near real-time. When an issue arises, operators can quickly identify it, determine a solution, and notify the right teams in just minutes—while simultaneously notifying any customers who may have been impacted. Connecting to ServiceNow® Field Service Management means the most suitable technician is automatically dispatched with the information they need to quickly diagnose and repair the problem.

Results

• Enhanced efficiency through remote monitoring from a single workspace
• Reduced customer impact through faster resolution times
• Seamless collaboration across departments toward a shared goal

Connect the “IoT data dots” to find true value

Take immediate action on data to resolve problems faster

There’s no question that IoT has revolutionized old ways of managing field service. But, to stay competitive, companies need to adapt and innovate. It’s not enough to just collect IoT data. And capturing data in a single source, like a SCADA system or a data lake, does not connect that data to your business. It’s still siloed from your company’s operations, separated from those who need it in the field, and managed by multiple operators across multiple dashboards and systems.

Sometimes, getting useful data from disparate sources requires writing queries just to gather the data you need. This is hardly ideal when dealing with tight service level agreements (SLAs) in the midst of resolving a critical issue.

The good news? There is a better way.

You can now connect your IoT data to the rest of your operations and services with digital workflows, all through a single platform. When an issue occurs, your operations leaders can take immediate action from a single workspace.

With predictive maintenance and health monitoring, powered by IoT data, you can keep equipment in top working order and decrease unplanned downtime.

Field service work orders can be automatically created where the right technicians, equipped with the knowledge and tools they need, are assigned and dispatched in minutes, not hours.

By connecting the data dots, you can see the bigger picture—giving you the power to resolve issues rapidly, ensure SLAs are never at risk, and see that the job is done right the first time. With IoT-connected field service, you can address issues before your customers even notice a problem.
Seeing through a “single pane of glass”

Unifying teams and service data with a single source of truth

Another hidden value of connecting IoT data to power your field service operations lies in the seamless nature with which you can collaborate across teams and departments to achieve a shared goal. This is particularly useful in field service environments, where operations leaders need to have visibility over repairs and maintenance in the field, and technicians in the field need access to the right tools and knowledge for the job.

When you connect your operations across departments, all stakeholders have access and visibility to the same device data. And when you all have access to the same data, you’re all using the same playbook. Issues are resolved faster not just because work orders are created automatically, but because the platform can identify the best technician nearest to where the issue has occurred and dispatch them to resolve it. The technician, in turn, has access to relevant device data, knowledge articles, and asset history. They arrive prepared, already knowing what needs to be done to carry out the fix. The field service technician can also update everyone in real time, meaning everyone can stay on the same page throughout the process.

The result is faster, first-time resolutions, greater asset uptime for your business and customers, and enhanced customer experiences.

We’re leveraging the ServiceNow platform to revisit our IoT platform and service models. This is a game changer for us.

Jason Anderson, IT Director, TAPCO

Striking gold at TAPCO

Connecting existing IoT data to streamline field operations and improve customer service

TAPCO is an industry leader in the traffic safety space—and an insightful, early adopter of IoT. With 20,000 solar-powered warning systems and 250 Wrong-Way Driver Alerts installed in the U.S. and Canada, TAPCO was collecting a mountain of device data, just waiting to be activated.

To discover the true value hidden in TAPCO’s device data, the company partnered with ServiceNow to pilot Connected Operations—aiming to enhance their use of ServiceNow Customer Service Management and ServiceNow Field Service Management.

Results

• Streamlined field operations and support processes
• Greatly improved customer service experience
• Reduced total cost of ownership

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Think of it as calling on a psychic friend to protect your treasure trove

Increase asset availability and uptime with just-in-time maintenance

Keeping equipment and devices in top working order is critical to field service success, not just for efficiency and cost reduction, but also for keeping and winning new contracts. But with assets spread across multiple locations operating in disconnected systems, it can be hard to know what’s working today, but about to break tomorrow. And while quarterly maintenance can help prevent breakdowns, sending out a technician when equipment and devices don’t need service wastes time and adds to inefficiency costs.

Predict and secure the future with predictive maintenance

Luckily, while humans can’t be psychic, connected IoT data can provide a crystal ball for device and equipment health. Analyzing historical IoT data, discovering trends, then connecting it to a connected workflow can allow for powerful functionality. For example, this collected and connected approach allows for right-sized maintenance, personalized to each asset, so you’re only servicing equipment when needed. It also allows you to track usage and other predictive maintenance factors, like temperature and environmental conditions, for just-in-time maintenance. So instead of rushing out to fix a failing device, your smart system can alert your teams immediately to ailing assets before they break. This saves time and money and increases customer satisfaction scores.

Beyond the crystal ball

The benefits of predictive maintenance don’t stop at fixing devices before failure or reducing truck rolls

With connected IoT data, you can:

- Get near real-time updates on the health and performance of your critical infrastructure
- Develop no-code rules that include business context to identify issues earlier
- Quickly generate work orders for your field technicians with relevant incident details
- Streamline field service by automatically scheduling tasks to the right technician with the right equipment at the right time
- Enable technicians in the field with IoT data, asset history, and related knowledge articles on mobile

The best way to predict the future is to create it.

Peter Drucker
Say “goodbye” to scavenger hunts

Streamline audit trails in a single system to prove and win

Proving SLAs were met is not only key to maintaining customer relationships and avoiding service penalties. It’s also critical for revenue expansion as businesses move to outcome-based service models.

Scavenger hunts are fun for parties, not so much in field service audits. Tracking down service information, wading through spreadsheets, logs, and files to prove SLAs were met can take a substantial amount of time. It also increases the chance for human error, leading to potential loss of existing contracts and new business.

With connected IoT data, field service teams can stop the scavenger hunt and produce audit trails in fractions of the time (and with less human error). With ServiceNow® Connected Operations and Field Service Management you can:

- Easily prove SLAs were met with unified service, maintenance, and equipment health records
- Deliver just-in-time maintenance with continuous device health monitoring in real time, automated alerts and ticket creation
- Provide thorough device and asset maintenance records to prove compliance requirements were met
- Bid on new contracts that were formerly beyond your scope of business with confidence
- Deliver on outcome-based contracts to win new business and gain a competitive edge

Increased compliance has been a real boon for us. When we’re asked to produce a report, it’s now a couple of clicks. It used to take our executive chef and his team 2–3 days to manually prepare for a food safety audit.

Brett Aspel, Change & Implementation Manager, Ardent Leisure

Dreamworld keeps it cool and connected

Using IoT to improve compliance and safety

To ensure health and safety compliance, food and beverage cold storage temperatures must be monitored and logged. The challenge arises when companies, like Australian theme park Dreamworld, need to transport cold storage items across a large area. Today, Dreamworld uses ServiceNow Connected Operations across the theme park to save time and money. Rather than perform manual checks, Dreamworld can use historical data—collected by IoT and now available on-demand—to automatically detect maintenance, health, and safety issues. As a result, the potential costs and risk of food spoilage and safety compliance violations have been greatly reduced.

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Increase service efficiency and safety with Connected Operations and Field Service Management

Connected IoT data in an actionable system empowers field service technicians with:

- Unified problem details, asset information, and real-time IoT data—all accessible on mobile devices in the field.
- Improved visibility, eliminating the need to make multiple trips to first diagnose the issue and then return to complete the repair.
- Remote issue diagnosis, enabling the technician to know exactly which parts are required.
- A safer environment by unifying mandatory checklists and monitoring their environments in real time with mobile device geolocation.
- Automatic assignment of the tickets they’re best equipped to solve, increasing their first-time fix rates and reducing truck rolls.

Protect your crew while getting work done

Keep your technicians safe and productive while increasing first-time resolutions

Increasing the efficiency of field service operations is a critical goal for organizations to save money and boost competitiveness—but not at the expense of keeping workers safe.

With IoT-connected devices, fewer on-site service visits are needed since device data can be funneled into one central location, and the health and safety of infrastructure can be monitored from a desk in near real-time instead of sending technicians out into the field to collect data. This one change not only reduces the number of truck rolls, but it also reduces the risk of potential accidents because field technicians need to make fewer trips to potentially remote locations.

“It is important to note that field services is a people business and the safety and security of employees and customers has to come first.”

Technology and Service Industry Association (TSIA)
Bridge the data gap to connect your field service operations

How can your field service teams discover the benefit of untapped IoT data? Thankfully, you don’t need a map, a shovel or a team of Indiana Jones clones to make it happen. All that’s needed is the right platform, to unearth those IoT data silos and connect them to activate business potential.

ServiceNow Connected Operations helps companies revolutionize their operations and services by connecting IoT data with digital workflows. Users can easily onboard and manage their critical infrastructure and connect it to other parts of the business via workflows to start taking action. ServiceNow Connected Operations connects seamlessly to ServiceNow Field Service Management to create work orders and schedule them automatically to the best technicians for the job. Field service technicians can access digital twin data, task details, customer and asset information, and knowledge articles conveniently via mobile to provide safe, efficient service.

Get yourself connected

Transformation doesn’t happen in just one department. Bust through silos by choosing a cloud-based platform that allows flexible connection of data, information, and automation across the entire customer experience. Connect all parts of your business with the Now Platform® and use IoT data to drive action across field service, customer service, IT, risk, and more.

“Having a seamless, end-to-end workflow...is a huge efficiency gain for us and our customers. Now, we’re making decisions based on real data, instead of gut feelings.

Jason Anderson, IT Director, TAPCO
Transform your field service by connecting IoT devices in a single system of action.

Learn more about ServiceNow Connected Operations at servicenow.com/connectedops

Learn more about ServiceNow Field Service Management at servicenow.com/fieldservice

About ServiceNow

ServiceNow provides the smarter way to workflow. Our cloud-based platform and solutions deliver digital workflows that create great experiences and unlock productivity to approximately 6,900 enterprise customers worldwide, including almost 80% of the Fortune 500. Visit us at servicenow.com.

SOURCES
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3 Deloitte