

EBOOK

LOW-CODE APPS FOR THE FIELD: A BUYERS' GUIDE

The definitive guide to choosing
field-focused mobile apps & forms



INTRODUCTION

Custom apps have become a central tool to reaching business goals—yet enterprises have to perfect a complex juggling act. To stay competitive, they need to develop custom apps rapidly but, at the same time, unburden IT departments and cut costs.

The platform you ultimately use should depend on your teams' needs. The accounting or communications team might be satisfied with a .NET app for desktop computers, but that doesn't mean your field teams will be. For field workers and field teams, mobile native apps created by a low-code application platform mean easy deployment and lower costs with field-orientated capabilities.

If you're looking for a field-focused solution that puts app-building into the hands of those closest to the workflows, this guide will help you get started. Drawn from our experience guiding hundreds of thousands of app deployments, we've evaluated LCAPs, their capabilities, and mobile form solutions through a field service lens.

There are multiple approaches to developing custom apps

NATIVE APPS BY SPECIALIZED DEVELOPERS

- Requires developers to create, test, and deploy apps
- Requires developers for new releases and monthly patches/updates
- Long initial deployment period
- Time to value: months

APP DEVELOPER PLATFORMS

- Requires highly skilled technical employees or developers
- Deploys multiple apps quickly
- Requires coding knowledge
- Time to value: weeks to months

LOW-CODE APPLICATION PLATFORMS (LCAP)

- Can be created, tested, and deployed by anyone
- Deploys multiple apps quickly
- Does not require coding knowledge
- Works and integrates within IT guidelines
- Time to value: hours to days

“By 2024, low-code application development will be responsible for more than 65% of application development activity.”

Gartner[®]



BUT WHAT ***IS***
LCAP?



LCAP DEFINED

The term low-code application platform (LCAP) was coined by Gartner—the world’s leading IT research firm—to address the rising demand for applications in a business world challenged by a shortage of skilled professional developers. While each LCAP solution has different purposes and targeted end-users, their modus operandi is identical: they allow non-technical business users, known as citizen developers, to build applications without coding knowledge.

LCAPs empower those closest to business processes to build low-code apps. The result are apps that increase productivity, reduce time to market, and improve business process automation.

Part of what makes LCAP solutions special is their ability to host a multitude of business processes. For example, inspection, preventative maintenance, and safety apps can all be developed and deployed from a single platform. From there, they can be further customized to suit individual teams or mass deployed across an entire organization.

Pro Tip

You can easily identify potential citizen developers in your organization. Look for people who champion technology solutions for their teams or departments but lack traditional coding experience.



MACRO TRENDS DRIVING LCAP

Pro Tip

Jumping on the newest thing for the sake of progressive optics can result in shaky deployments. Critically examine what factors propelled you to investigate an LCAP solution. Keep these motivators in mind at all stages to ensure the resulting deployment doesn't just look impressive but also actively improves processes.

People

The deck is stacked against field teams. They must hire and retain young, tech-literate technicians in a zero-unemployment ecosystem. Paired with an aging technician demographic, it's become harder to provide reliable service with high fluctuations in technician expertise. While guided, automated digital workflows mitigate this difference, there's one problem—the world is in the middle of a professional developer drought.

Technology

AI, IoT, and machine learning used to be science fiction but are now a growing component of field work. With the increase in field tech capabilities and sophisticated data capture, technicians now have access to on-site visibility to flag potential issues and action immediate follow-ups. The need to integrate data between these systems, cloud services, and technicians on site is more important than ever to stay agile.

Growth & scaling

There's been a transformation in field service organizations thanks to a recent surge in economic growth and available capital. Organizations are growing and scaling globally in tandem with an operational shift from cost centers to revenue centers. Today, customers buy guaranteed uptime as opposed to an asset. In order to sell uptime in a predictable, reliable, scalable way, organizations need a way for technicians to predictably and reliably complete preventative maintenance.

Customer expectations

High customer expectations have bled into the B2B environment and are now a serious differentiator. Technicians, who spend the most face time with customers and interact with assets, have been identified as vehicles for improved customer satisfaction. In order to provide world-class service, they need tools to complete work reliably on the first visit, collect transparent data, and produce internal stakeholder documents at the end of a service call.

Together, these macro trends point towards a rapidly changing landscape. LCAP allows companies to stay agile to market changes and embrace the forces that are reshaping the field service space.

ARE ALL LCAP SOLUTIONS BUILT EQUAL?*

All-in-one LCAP

- All-purpose tool for every aspect of business automation
- Wide set of use cases
- Long time to value
- “Build anything” approach requires more time, money, training, and expertise to produce tailored apps

THE CASE FOR FIELD-FOCUSED LCAP

Field-focused LCAP

- ✓ Designed for field users: mobile native apps with user-friendly design and offline capabilities
- ✓ Point-and-click integrations with field solutions and other LCAPs to form a suite of integrated products
- ✓ Optimized for data collection and decision support for field workers
- ✓ Guided field service workflows for technicians of any skill level to complete complex work
- ✓ Field service submission monitoring and analytics to inform decision-making

IMPACT OF LCAP ON FIELD SERVICE

It's important to provide tailored tools that match your teams' needs and maximize their impact on the business. You wouldn't give a technician a hammer to measure hydraulic pressure. (Also, if you equip your technicians only with hammers, you won't have technicians for much longer.)

And, like an all-purpose tool, most LCAPs provide general business process management and automation with little focus on—or expertise in—field operations. So, while all-in-one solutions grew in popularity because smaller best-of-breed solutions weren't robust enough to meet corporate IT requirements, this is no longer the case.

4 *low-code apps* ▶ **75%** *large enterprises*

According to the Gartner LCAP Magic Quadrant report, 75% of large enterprises will use at least four low-code development tools by 2024

This trend points not only to a matured LCAP market that can support specialization, but the frequent deployment of multiple focused LCAPs across one organization.

When considering an LCAP solution for field teams, it stands to reason that the best LCAP solution is often one that's built from the ground up with field service in mind. A field-focused LCAP is a use case specific solution that brings industry knowledge to the table while still offering the customization and easy drag-and-drop format of the swiss army knife LCAPs.

Pro Tip

If you have KPIs or issues that are unique to or common in field service teams, it's doubly important to use a field-focused solution. This ensures that the solution's professional services and support teams are equipped with industry knowledge.



FSM SOFTWARE AND LCAP

You're reading this guide because you're serious about improving your field work operations. So, it's not a stretch to state that you likely have a field service management (FSM) solution already in place. Great! But even the best FSM solutions have gaps. It might be remaining paper forms, the need for embedded rich media including photos or GPS/timestamps in completed work orders, missing workflow capabilities like real-time notifications, or improving compliance reporting. Whatever your use case, a field-focused LCAP's inherent flexibility allows you to customize an app to eliminate gaps in your current field tech stack and create tailored apps for unique work sites, equipment, or processes.

This same customizable flexibility also allows you to expand what FSMs can provide by altering and deploying updated/new apps in-line with market changes. In an increasingly competitive and complex landscape, staying agile and adaptable is critical.



Pro Tip

App-to-App communication allows LCAPs and FSMs to share data back and forth. Pre-populate data destinations and pull data directly from one app to populate the other.



LCAP IMPACTS ON YOUR TEAM

Pro Tip

Build a culture of continuous improvement in your organization. Feed relative data through all levels of the organization—from field workers to operations executives—to ensure that you gain fresh insights and continuously tweak and improve processes.

Field Workers

Adoption is a key barrier to successful deployments and field workers are often reluctant to change. Field teams need a solution that is user-friendly, adds value, and is easy to use without onboarding. LCAP solutions' inherent customization means apps are tailor-made for particular workflows. Apps can share data and workflows without requiring technicians to switch between them.

Field Managers

Those who oversee field operations know their business better than anyone. With a low-code platform, managers can build and deploy custom solutions that empower their field workers. Control, adjust, and tweak in real-time to improve operations. Achieve and continuously improve critical KPIs like adherence to SLAs, raised CSAT, and improved technician productivity.

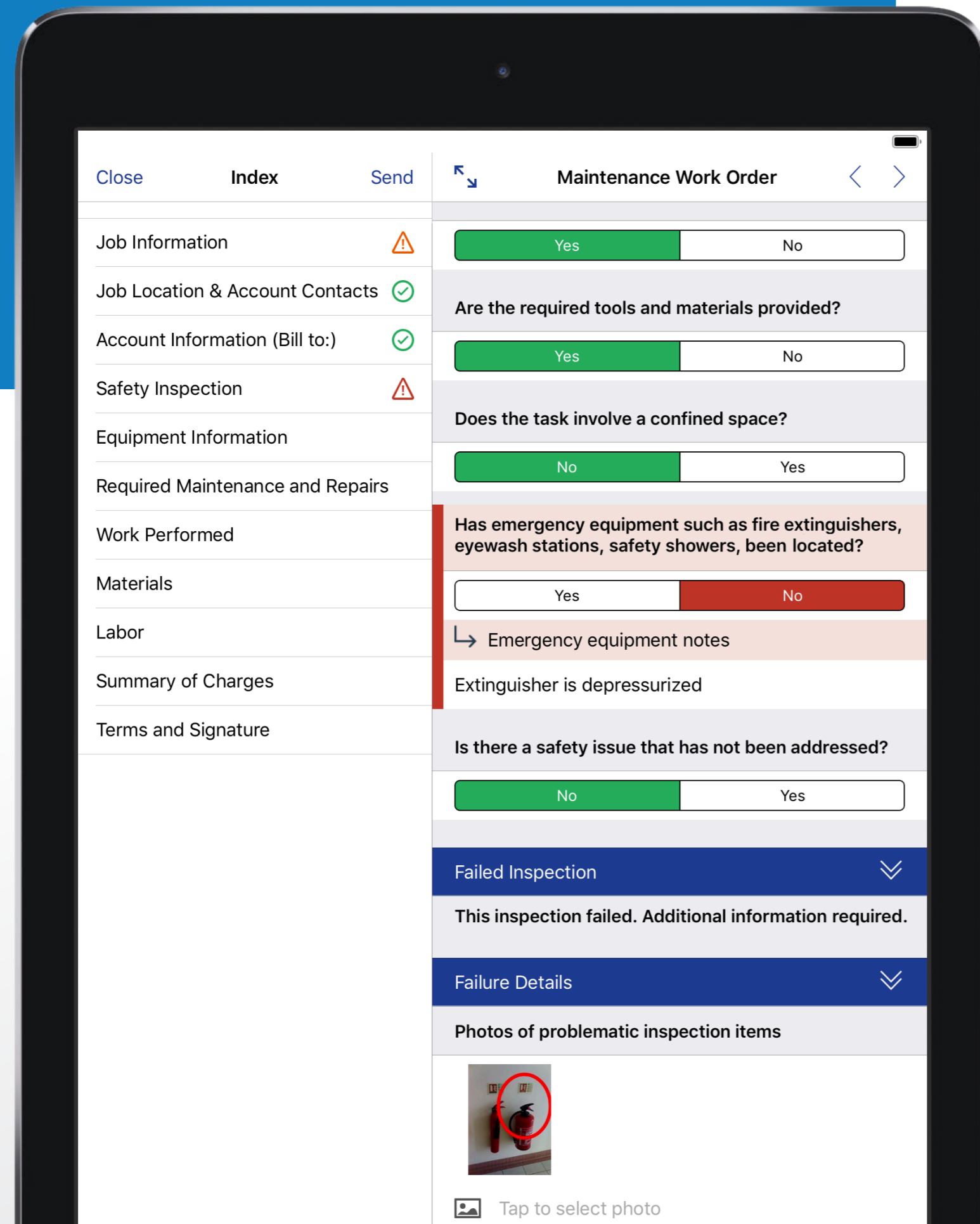
IT Directors

If your IT department deals with rogue tools, an overworked IT department, and app requests, then an LCAP might be the solution. Not only do LCAP solutions meet growing and evolving demands for apps, but they allow IT to transfer app-building into the hands of process owners within IT boundaries. Pre-designated integrations and deep API customization mean that connecting your tech stack is not only reliable, but scalable.

Operations executives

LCAPs are an excellent choice to streamline field data into a scalable system, thanks to their ability to scale and stay agile to market evolution. Track growth, identify areas to reduce costs and discover opportunities for revenue generation with built-in analytics.

CUSTOM MOBILE APP



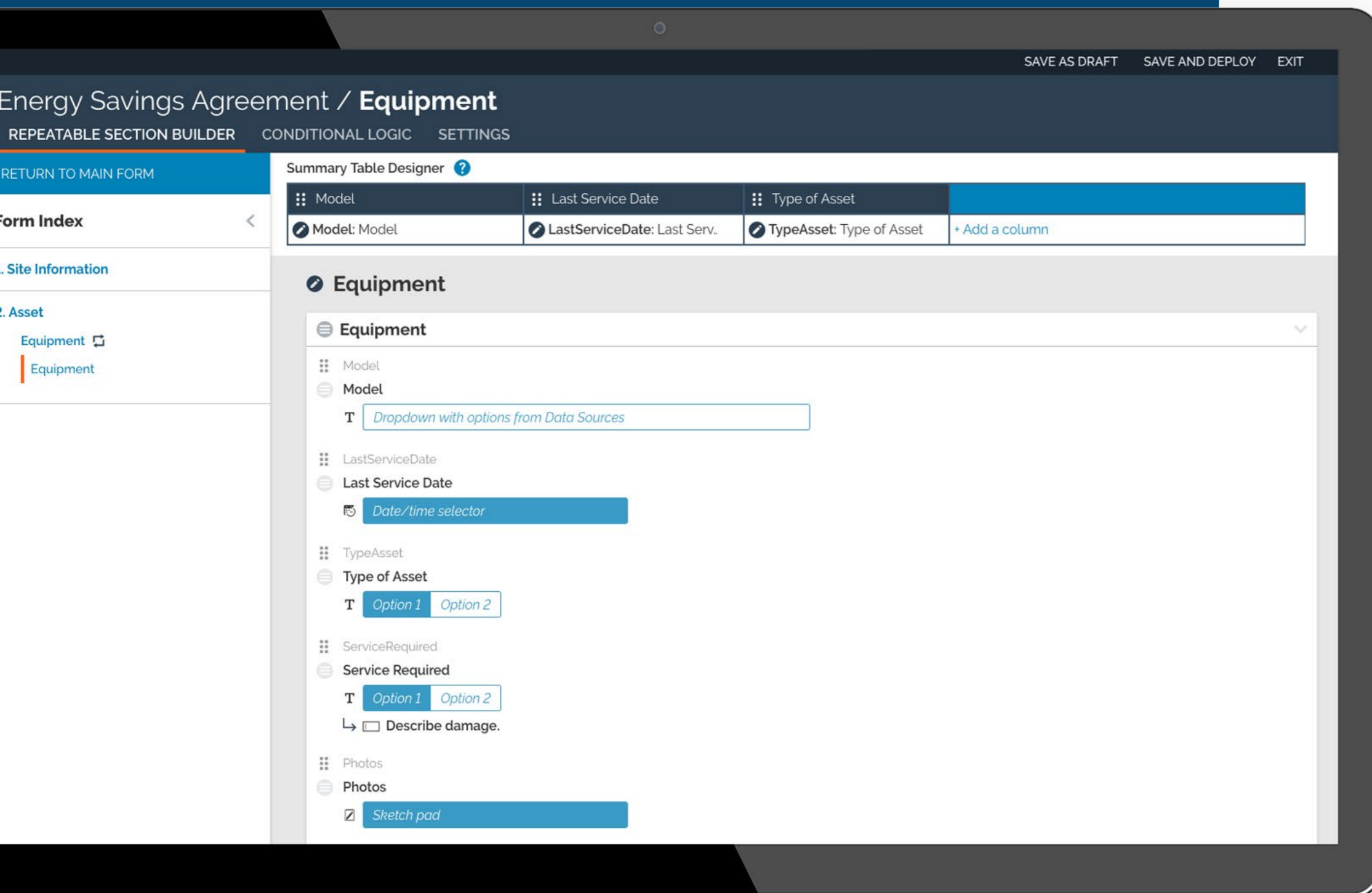
→ The tangible app that technicians use should be optimized for iOS, Android, and Windows mobile devices. Regardless of your organization’s deployed device, the app should use consistent design conventions to ensure intuitiveness on any platform. It should also feature key functionalities including full offline capabilities, app integration, and smart forms with “if/then, else/if” conditional logic.

Pro Tip

Do your techs collect or access large sets of data in the field? Consider a field app that supports gigantic data lists with easy contextual filtering that speeds up work delivery.

APP & FORM BUILDER

→ A drag-and-drop, visual app and form builder empowers citizen developers to rapidly craft, test, and deploy complex business processes. Unlike an all-in-one LCAP, field-focused LCAPs have secure data collection and common field service requirements built-in. Template-based section tools help save hours for form builders, while user-friendly navigation is simple enough for any team member to use.



Pro Tip

Repeatable sections are a form structure meant to collect a variable number of line items-parts needed, for example. All-in-one LCAPs won't have this structure pre-built.

INTEGRATIONS & WORKFLOWS



→ Field-focused LCAPs should integrate with FSM, back-office, or cloud systems, sending data through workflows where it's needed when it's needed. Some workflows require data to be sent between field workers or apps, to managers for approvals or escalations, to the office for contextual information and dispatch, or to the back-end systems for storage. No matter how complex your workflow, look for an LCAP that can contextually create or trigger multiple workflows from one form, depending on submitted answers. At the end of your workflow, easily create custom Word, XLS, XML, JSON, HTML, CSV, or PDF documents that can be automatically populated with data and branded to look like it came directly from your organization.

Pro Tip

Look for a solution that allows you to customize data destinations easily and move data into popular cloud systems with pre-configured integrations.

REPORTING & ANALYTICS

→ Field-focused LCAPs should offer several ways to leverage field data that suit your processes. Utilize basic data reports to track work completed or transfer field data into a pre-existing or fully integrated BI/analytics platform. Analyze collected field data to measure operational effectiveness and locate opportunities for revenue growth.



Pro Tip

Use analytics in the early stages of deployment to help track adoption and performance improvements. Ready-made reports help you identify which groups are performing the highest with new apps. Recruit them as change ambassadors in your organization.

USER & ACCESS MANAGEMENT

- Flexible user permission controls let back-office staff easily assign forms or tasks to specific users. Assign advanced permissions based on user characteristics, while connecting user logins with an existing corporate single sign-on (SSO) provider to easily manage and control large numbers of users. If security is a concern, look for a solution that has third-party audited SOC 2 Type 2 compliance.

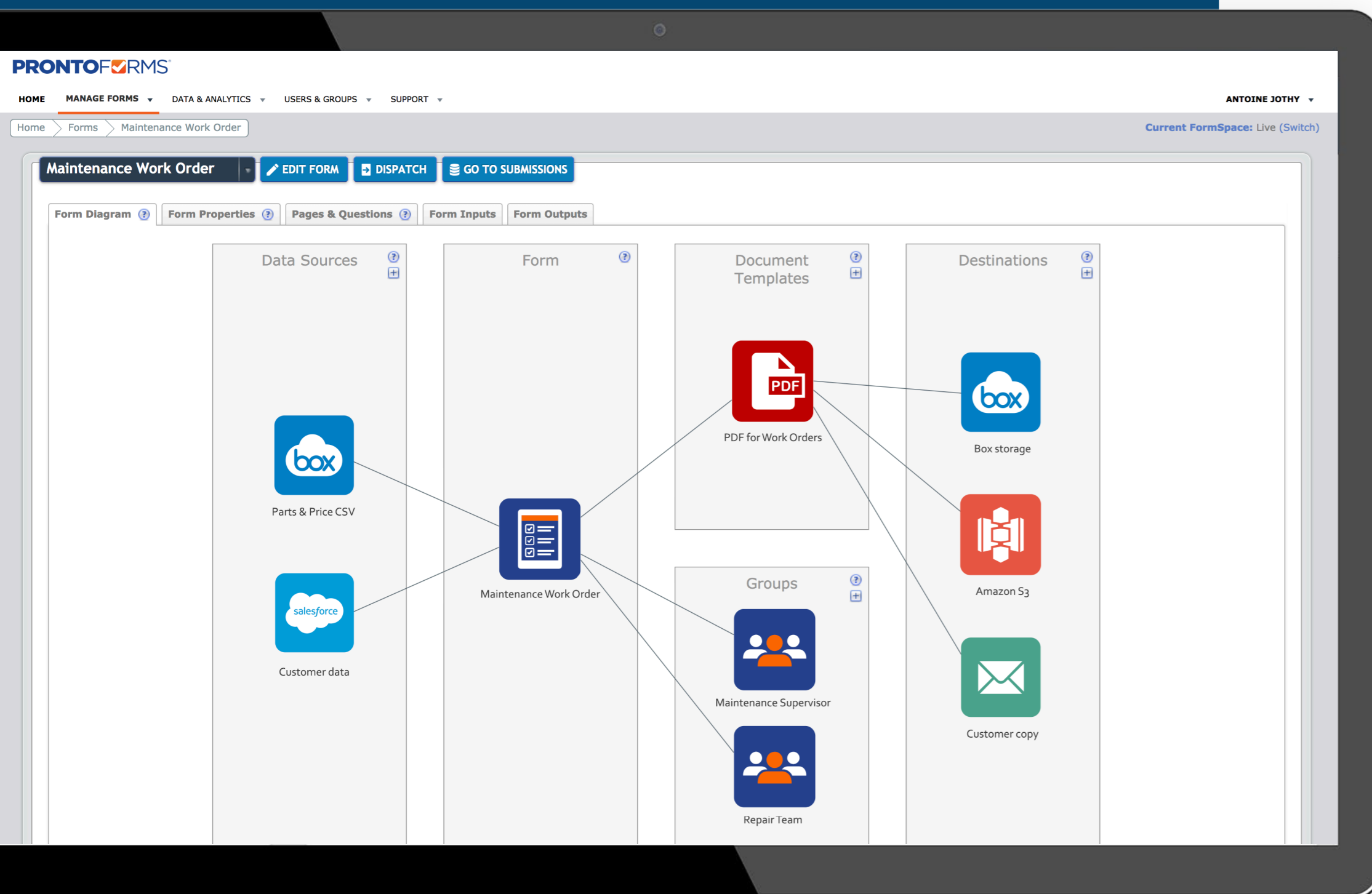


Pro Tip

IT is an important ally on your digital transformation journey and, without their backing, projects can stall or die on the vine. Invest in a solution that has the security and scaling credentials that IT needs to succeed.

PREDICTABLE DEPLOYMENTS

→ Just because a field-focused LCAP is easy to deploy doesn't mean you shouldn't have access to professionals. Whether you intend to DIY your apps or want assistance with professional service teams, look for a solution that offers predictable deployments. Timelines, subscriber costs, and professional service cost and capabilities should be clear and part of a proven methodology to ensure your deployment is smooth sailing.



Pro Tip

Is it your first app rodeo? Look for a field-focused LCAP solution provider that has earned their spurs deploying hundreds of thousands of apps.

HALLIBURTON

The challenge

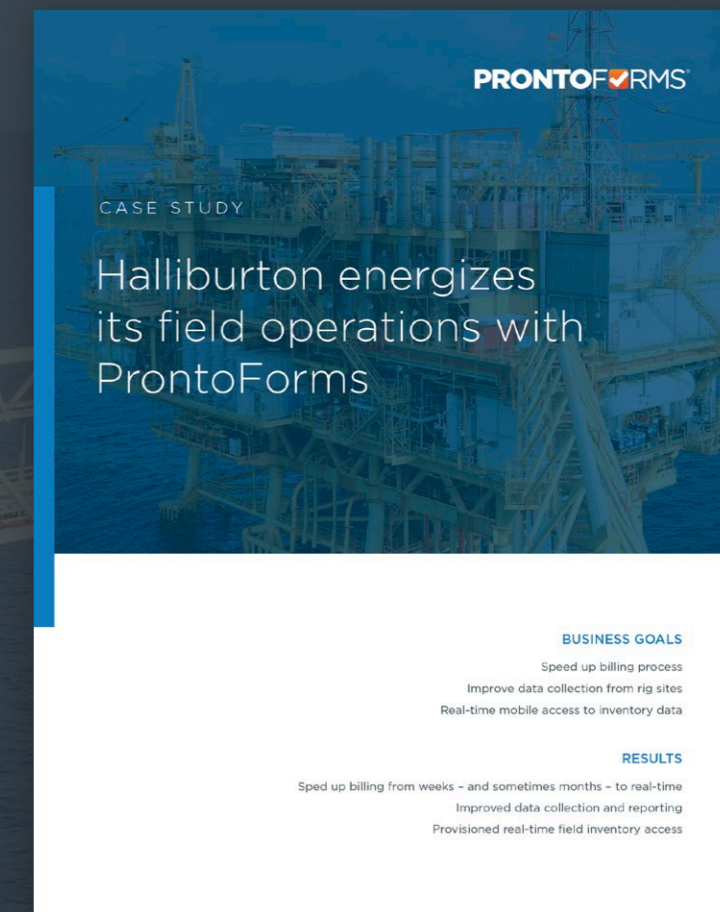
Halliburton is one of the world's largest providers of products and services to the energy industry. As a company constantly striving to optimize its processes, it wanted to increase efficiency for client billing, improve data collection from rig sites, and provide real-time access to inventory data.

The deployed solution

Halliburton's LCAP solution deployed two apps: one to replace its paper ticketing system and one for real-time inventory. This solution not only shortened the waiting period for tickets to arrive to real-time but also allowed field technicians to better capture field data with signatures and photo rich media. The resulting reports fueled corresponding audits, making them faster and more accurate. Both apps were rolled out to all of Halliburton's North American field users within six months.

A field-focused LCAP solution can help energy resource organizations...

- Boost EHS compliance
- Improve CSAT
- Prevent critical mistakes with in-app guidance
- Discover gaps for process improvements
- Improve asset uptime



[Read the full case study](#)



The challenge

Pacific Gas & Electric Company (PG&E) provides natural gas and electric service to approximately 16 million people in California. Before deploying, PG&E's inspections were completed on paper forms leading to scattered data and records. It wanted to consolidate its asset records and feed new data to the same location. Inspections also had to be escalated in real-time if issues were uncovered. All this, while being device-agnostic and working across Android and iOS devices.

The deployed solution

PG&E deployed an LCAP solution that could dispatch inspection apps to 1,200 field inspectors. What's more, inspectors entered collected data on their mobile forms, contributing to a record keeping system that they have instant access to.

The LCAP solution empowered PG&E to meet and exceed compliance and safety standards. They achieved \$1.5M in savings in the first year alone thanks to improved productivity. According to Darby Brennan, PG&E's Manager of Gas Technology Strategy & Planning, user satisfaction was "off the charts" after the LCAP deployment.

A field-focused LCAP solution can help utility organizations...

- Track growth opportunities and execution
- Scale with confidence
- Increase compliance
- Improve field worker retention
- Stay agile to market changes



[Read the full case study](#)

EMPOWER THE FIELD

ProntoForms is proud to represent field-focused solutions
in Gartner's Enterprise LCAP Magic Quadrant.

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