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*GUIDE*

# **Getting digital with your field quality inspections**



Given the barriers many face on a daily basis, implementing an effective quality management program – one that ensures the job is done right and significantly reduces the cost of redundant work efforts – remains an uphill battle. Quality management can be especially hard for small to medium-sized companies that lack the sophistication and resources to tackle the challenges of the inspection process. However, committing to quality inspections without efficient solutions to grapple with this complexity often leads to a harmful short-sightedness – framing the quality inspection process as a burden and a place to make shortcuts, rather than one of the most decisive parts of any job or project.

## **The role of technology**

Technology is dramatically changing the field inspection landscape across industries. With the current slate of widely available and affordable digital tools at their disposal, quality inspectors aren't forced to make the compromises that often lead to expensive mistakes or inefficiencies.

In this guide, we'll look at why it's critical for companies to begin digitizing their field quality inspection efforts. We'll discover that the right digital platforms can fill all the information gaps that negatively impact efficiency, compliance, margins, and profit.

So before falling behind the digital curve or making one compromise too many, let's start with the differences between two key facets of the inspection process, Quality Assurance (QA) and Quality Control (QC), and how they relate to a company's overall quality management.

### **QA vs. QC**

“Quality assurance” and “quality control” are two aspects of an overall quality management system. The terms are often used interchangeably because both have the same goal of delivering quality work that meets agreed-upon specifications. Nonetheless, QA and QC represent different sets of tasks executed at different times.

QA is a process-driven, proactive method of avoiding potential issues before a workflow, project, or project phase begins. As a management tool, solid QA programs outline the procedures and activities required across teams to prevent quality issues before they occur. This includes how to best meet agreed-upon quality standards by securing the right materials, equipment, and skilled labor, as well as managing time frames and budgets. QA is all about prevention and giving confidence to internal and external stakeholders that the work will consistently be done efficiently, on time, and according to SOPs.

On the other hand, QC is more reactive, focusing on what happens after the work of a task, phase, or project is complete. This involves all the operational techniques and inspections activities that test the quality requirements of finished work to see if the agreed-upon standards have been met. Any problems unearthed by QC will need to be remediated before moving on to the next task, phase, or project.

## The power of complementary QA and QC programs

Regardless of size, site, or job, any company that relies on field inspections should be invested in QA to prepare the successive stages of a project and to prevent poor quality work from arising in the first place. But given the complexity, fast pace, and constant change of what happens in the field, some companies lack the means to disseminate critical QA information quickly and reliably about task execution and quality standards.

Without current SOPs in those hands best prepared to get the job done well and on spec – either before work begins, or as requirements change midstream – both field teams and management face a glaring information gap. And filling this gap demands a consistent and well-timed QC program to ensure that quality requirements are being fulfilled.

So, while QA and QC are different, they are still part of the same overall quality management system. Think of it as a zero-sum game: the more and better QA you do, the less chance that problems will be found during QC, and vice versa – neglecting QA will result in increased quality issues reported during QC and that require more time, money, and attention.

Given this interrelationship, neither QA nor QC should take precedence over the other. Instead, quality management needs both sides working together, informing one another on the best course of action, and aligned into a uniform and consistent system.

## The integral role of inspections

Quality inspections and the information they produce are central to driving success for both the QA and QC arms of a solid quality management system.

From a QC standpoint, consistent and well-performed quality inspections identify issues early and enable remediation before extensive downstream problems incur extensive inefficiencies, costs, and delays.

And while QC spot-checks ensure that nothing gets away, the procedurally driven QA process management ensures that the issues noticed in QC are incorporated into SOPs to ensure that those QC issues don't recur.

But not every problem can be eliminated. By its very nature, work in the field is rife with challenges that make producing a consistently successful quality inspection program difficult, including:

- *Uniqueness.* While many tasks, workflows, or projects have similar elements, there are always at least slight differences due to site location and other factors that may require worker adjustment.

- *Labor.* Field work is often labor-intensive, so any macro or micro changes in the labor force will directly impact a project. This includes factors like local union conditions, maintaining and upgrading worker skill levels, and the general transience of labor.
- *Partnerships.* Work in many industries relies extensively on integrating the efforts of several subcontractors and interests of stakeholders, all operating with potentially conflicting values, goals, and practices.
- *Extraneous factors.* These include any number of often uncontrollable factors – as basic as variations in weather and as complex as gaps in complicated supply chains.
- *Cultural lag.* Finally, all of this could be transpiring in an industry, company, or demographic that is slow to embrace change.

Given the impact and complexity of this swarm of issues, it is unsurprising that companies – despite knowing their critical importance to their entire operations – have difficulty implementing inspection programs and building a quality management system that enables them to compete as successfully.

## **The face of quality inspections today**

Facing a rising tide of challenges, too often companies feel forced into adopting a more informal or “loose” approach when managing their field quality inspection programs in an effort to save time or resources.

Unfortunately, instead of establishing repeatable processes that follow stricter step-by-step protocols, this usually means relying on clunky combinations of paper and spreadsheets, with all their incumbent downsides to promoting successful QC and QA, including:

- **Incomplete or inaccurate inspection data:** *Paper forms skew basic data collection, while transcription errors and lost paperwork cause missed remediation opportunities, downstream delays, work redundancies, and additional costs.*
- **Disconnected teams:** *Paper does not circulate information quickly or efficiently. Transferring field data back to the office and manually entering and consolidating it into a shareable document like a spreadsheet slows down the dissemination of critical updates – exactly what your field teams need to ensure quality requirements are being met.*
- **Lack of project-level visibility:** *When dispersed across paper forms and spreadsheets, the data you need to assure and control quality stays hidden. Teams and stakeholders are disconnected from the project and each other.*

- **Sacrificed productivity:** *Scanning sheets, uploading documents, compiling PDFs for circulation, and searching for information across disparate sources... paper-driven inspections create more work, draining resources and shaving off already-thin margins.*
- **Inability to fully leverage value:** *Paper-and-spreadsheet programs can't accommodate other data that adds context to remediation efforts and on-going QA, where it is difficult or impossible to add any supplementary information like detailed photos, maps, and audio or video files.*

## Going digital

Not all is lost, however. There currently exists affordable, powerful, and user-friendly digital platforms specifically designed to effectively manage field inspection programs, regardless of size or sector – and in a way that promotes better QA and QC company-wide for the biggest business impact.

Deployable directly out-of-the-box across teams and processes, these tools allow for quick, seamless communication that connects the right information to the right people at the right time, so that users can build a rigorous, data-driven quality inspection program.

Going digital offers some truly great advantages, and the following three are major performance pillars to evaluate when looking at inspection management platforms.

## Digitize inspection processes

Effective platforms empower your field teams with easy-to-use, customizable digital checklists that define accurate procedures. Deployable on all mobile devices in real-time, digital checklists ensure the consistent and rigorous inspection processes that are necessary for overall quality program success. These records employ richer quality issue reporting content through the use of digital media including images, videos, and audio recordings. More effective solutions also add location intelligence to the mix through automatic geotagging of inspection activities and records.

And when every stakeholder involved in project quality – quality teams, project managers, remediation scheduling teams – can access a single digital repository of uniform, reliable, and context-rich data in real time, the dreaded information gap and costly time delays are eliminated.

A successful digital platform provides a single pane of glass for all stakeholders by consolidating a wide range of quality specifications and SOPs with inspection data, issues, and resolution. And because a geographic information system (GIS) is a powerful and reliable tool in the inspection toolbox, platforms that also leverage the power of existing GIS systems with automatic geotagging capabilities further uplevels logistical and resource planning value.

## Provide intelligent automation for inspection teams

To produce valuable QA and QC impact, a solid digital inspection management platform allows for automation to be built directly into the inspection process and connect teams in real-time.

For example, a QA manager can set up a workflow to automatically notify the remediation team in real-time of an issue with a newly installed telecom tower, uncovered by the field inspector. Early notification enables immediate remediation instead of advancing the installation in a way that will fail final project approval and cost extra resources. Upon resolution, a similar automated notification to the inspection team will prompt an expedited follow-up inspection in order streamline the approval process for work to resume.

Platforms enabling team automation and workflows empower you to create and assign quality inspection tasks, report issues, and track their resolution, marked by high-level progress visibility. More advanced platforms will furnish out-of-the-box tools for light configuration of automated workflows to get users started quickly and easily without the need for constant IT intervention. Even so, your solution should still have the ability to enable application-based control that is managed by IT where needed.

Platforms promoting intelligent team automation keep QA and QC in constant communication with each other, letting you streamline tasks and avoid missing milestones and deadlines, while still reducing errors and redundancies down the line – all told, ensuring end-to-end quality inspections, regardless of scope, for a more unified and improved quality management system.

## Deliver data-driven reporting and analytics

Finally, going digital with your quality inspection programs gives you unfettered access to consolidated quality data and reporting organization wide. Not only will you be driving greater efficiencies addressing issues uncovered by QC, but you will also be empowered to drive constant improvement with your QA programs by aggregating data and insights.

Data is useless unless it's the right data in the right hands. When evaluating a digital platform, not only does it need to guarantee electronic delivery of performance dashboards and reports to appropriate teams, but it also needs to enable data to be easily shareable across teams, and across GIS, enterprise management, and business intelligence tools.

*In its massive 2019 global data management survey, Experian research found that 95% of organizations see negative impacts from poor data quality, including wasted resources and additional costs; 50% believe that human error is the biggest contributor to the lack of data accuracy; and that, on average, organizations think around one-third of their data is inaccurate.*

## Choosing a quality inspection platform

Given the potential impact of digitization on field quality inspections, how do you decide which platform solution provider best serves your needs?

Let's examine some of the qualities you should be looking for when evaluating a platform. It will be these attributes that will facilitate a seamless adoption and integration at the individual and enterprise level to maximize the benefits of the technology.

*High engagement and adoption.* When a digital solution has out-of-the-box functionality for a wide variety of tasks, it immediately creates value and engages more people by making everyone's job easier. When it is also user-friendly and easily accessible on devices people already have in their pockets, it expands issue reporting and leads to a richer quality inspection management system.

*Customizable.* From the interface to the data structures underlying it, an inspection platform should be customizable to your operational needs. You need the freedom to easily create all manner of checklists, procedures, and workflows, all in real time, to suit the specific demands of individual tasks and workflows – all without requiring expensive and time-consuming programming assistance.

*Shareable data.* A platform needs to be able to share data with other digital tools, so make sure it meshes seamlessly with your existing software, especially critical ones for project management, business intelligence, and GIS. If done right, integration weaves your various digital tools into a fluid but cohesive system that supplies you with all the data you need to make the best possible decisions.

*Affordability.* Affordability is always top of mind and every purchase needs to prove a high ROI. A subscription pricing model is appealing because it adds value without blowing budgets – but don't forget to read the fine print, as some providers may have fees for ongoing service and support.

*Constant, real-time accessibility:* Ad hoc data analysis and auditability is a critical part of quality inspections, so your data should be accessible, anywhere, at all times. In addition, informed decision-making rests on what is happening in the field, so all field activities should be made immediately visible and their data available across teams in near real-time.

*Security and privacy.* Because data breaches can result not just in a tarnished reputation but also costly lawsuits, most service providers have the requisite security controls to protect data privacy – ultimately, their reputation is just as much on the line. Still, only partner with vendors who follow the best and latest security protocols, comply with regulatory standards, and hold a range of security certifications that are available to be inspected on demand.

*Scalability.* Companies are often caught in a vicious spend cycle that prevents them from scaling up. A platform should unleash scalable values across tasks, sites, and projects by having a range of features like instant web-based access, simple one-click mobile app deployment to teams wherever they are located, and extended quality issue reporting to external stakeholders, amongst others.

*Cloud computing.* This is when the software is running on a computer that you access via the Internet rather than managing the physical hardware. Cloud computing lets you expand storage and computing capacity without buying new hardware, providing the flexibility you'll need as your program grows. It also means you don't have to rely on IT to do database backups and security audits, but instead outsource the most tedious, lowest-value IT functions.

*Software-as-a-service (SaaS).* In this scenario, you're not only handing over the hardware/operating system/networking infrastructure, you're also outsourcing the application itself. Your IT department will not need to do upgrades or troubleshooting. Instead, your duties are limited to administering the parts of the application that matter to you – for example, assigning permissions.

## **Transitioning into the digital age... and beyond**

A well-designed field inspection management platform will modernize your quality inspections. With automated inspection processes for intelligent team workflows, end to-end inspection program visibility, and performance dashboards that unite inspectors, managers, and other key stakeholders around real-time insights, you can finally have all of the information you need across any number of tasks and regions available on a single pane of glass, whether it's a laptop screen, a tablet, or a phone.

Streamlining your inspection operations this way will help consistently meet quality requirements, improve the productivity of your field teams, and reduce costly mistakes so you can stay on schedule and on budget. A strong quality management is the backbone of a strong company, improving the bottom line and establishing the high-profile reputation needed to differentiate your company in a sea of competitors.

A digital inspection platform is not just another tool at your disposal that sits alongside others. To finally liberate your company from the confines of paper and spreadsheets, you need to see a digital inspection platform for what it truly is – the means to initiate transformation across your entire quality inspections system with proactive decision-making that will produce continuous organization-wide improvements.

*“Poor quality work is much more than just the cost of rectifying the work. It has far-reaching consequences that could destroy the company and leave employees without jobs.” - Paul Netscher, management consultant*



## About Fulcrum

Fulcrum's mission is to improve the way field teams work by automating inspection processes to ensure safer, higher quality, and compliant outcomes. We are committed to empowering field teams every day with our next-gen Field Inspection Management platform that improves team performance and safety, keeps projects on track, and eliminates regulatory compliance headaches. For more information visit [fulcrumapp.com](https://fulcrumapp.com).

## LEARN MORE

Please [visit us](#) to find out more about the Fulcrum field inspection management platform and how it can help you improve performance, reduce rework, and prove the effectiveness of your field inspection quality program.