Digital Transformation
ACADEMY



How mastery of digital transformation creates new revenue streams

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What you'll learn:

- "Gray work" is what happens when manufacturers use a variety of ways to create and manage information, document processes, share best practices and analyze performance.
- While eliminating paper and digitizing processes is a fundamental step in digital transformation, a strategy needs to be in place to avoid creating more silos.

Digital transformations in manufacturing are often focused on improving processes, avoiding downtime, and ensuring staff are their most productive while on a shift. These goals are still important, but one area that is less frequently discussed is the imperative of digital transformation when it comes to protecting the safety of workers and people who live near the plant—specifically, a nuclear reactor.

Of course, every plant has established protocols and regularly conducts emergency test drills. They are also required to hire highly trained third parties to conduct compliance inspections, equipment audits, and ISO

certifications. Those third-party consulting organizations must not have any leaks in their processes, as the ripple effects could be disastrous.

See also: Epidemic of corporate caution gridlocks digital transformation

One consulting organization that redefined digital transformation and created a new add-on service based on its experience in ISO certifications is NDC Certification Bureau Ltd. Along with ISO inspections and certifications, the company offers training, auditing and compliance services. As you can imagine, managing and tracking client records across all those areas can easily create "gray work."

Gray work puts compliance and safety at risk

Gray work is what happens when manufacturers use a variety of ways to create and manage information, document processes, share best practices and analyze performance. Their recordkeeping systems consist of paper forms, digital tools, ERPs, or their own manufacturing platforms.

See also: More than half of manufacturers piloting digital transformation, Rockwell Automation reports

These tools and sources of information create data silos. When it comes time to pull compliance records, create a quarterly business report, or try to get a big picture view of operations in real time, it takes hours for employees to cobble the information together from all those different silos. A recent productivity survey found that employees in manufacturing were spending 11 hours a week or more on gray work.

You may think digital transformation solves this issue. And it can—if it's done right. While eliminating paper and digitizing processes is a fundamental step in digital transformation, a strategy needs to be in place to avoid creating more silos.

If this sounds familiar, you're not alone. In a 2025 survey, nearly 71% of manufacturers reported the use of multiple project management software solutions prohibits them from easily sharing project-related information, and 75% say it prevents them from easily seeing all their data in one place.

NDC: Streamlining reams of customer compliance information

Before undertaking a digital transformation, NDC has been managing customer data, audits and compliance logs on legacy systems, spreadsheets and cloud storage and file sharing software. While these tools are easy to stand up and simple to use, over time they lead to inefficiencies.

For example, on large jobsites, site managers are responsible for thousands of critical safety assets. All those assets need to be tracked and logged in a register making it clear when each element needs to be inspected, tested, maintained, and serviced.

See also: Why Industry 4.0 can't succeed without operational efficiency

Clients expect the answers to those questions to be available at the click of a button. There' s rarely the luxury of time to wait for a compliance auditor to go through paperwork to find the answers.

NDC recognized the need to streamline its processes and centralize information, so it is readily available. At a basic level, this was required to maintain their business. They knew growth would be impossible without first addressing the fragmented data issue.

Once they centralized client information on a work management platform, NDC realized the benefits of having a standardized application for ISO and other compliance certifications.

For example, they were able to quickly create an app for asset tracking through QR codes. The app builds on their data, industry standards and consulting expertise by also providing easy access to safety and compliance documentation.

Commercializing expertise leads to Balfour Beatty transformation

Commercializing their expertise into an app enabled NDC to work on larger, complex projects. It opened an opportunity with Balfour Beatty, a top international infrastructure group leading the construction of the Hinkley Point C nuclear reactor in the U.K.

See also: Tips manufacturers should follow to meet the imperative of modernization

A complex, multi-year project with crews working around the clock, Hinkley is a massive project with a vast underground site. Workers used to begin their shifts signing in using paper forms. Operators used paper checklists to inspect vehicles and kept handwritten asset logs.

When operators brought these forms into the office, the papers were deteriorating. There was also the high risk of mix-ups and human errors, making it difficult to ensure critical safety checks were happening on the job site.

NDC showed Balfour Beatty its asset tag solution and tailored it for the Hinkley project. Those paper forms were replaced with custom digital records that were easy to fill out on site and streamlined the reporting process. One benefit is their ability to get ahead of potential machine and vehicle breakdowns.

For example, once breakdowns are reported, it often meant two to three weeks of downtime waiting for repairs. For a massive project of this scope, that could easily mean downtime costs of about 20,000 pounds ($27,100) per day.

See also: Manufacturers cite widespread labor shortages, use of automation and AI to help

With the asset tag solution, the crew knew about the defective tracks on a machine in time to quickly resolve the issue. A night shift operator spotted it and by the time the morning crew came in, the necessary repairs were underway.

This cost savings led to NDC rolling out the asset solution across more aspects of the Balfour Beatty jobsite including fire assets, chemicals, cabins, and emergency first aid kits. There are significant operational and efficiency gains of centralizing project information from all these asset tags onto a work management platform.

For NDC, they have reduced audit time by 60% and uncovered new business opportunities without creating work that is counter-productive. They also have the foundation for repeatable services offerings that can be easily tweaked for other client needs.

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