Demystifying Digital Transformation

by Stuart Harris, Emerson

Digital transformation doesn't have to be complex. The right approach can ensure technology investments deliver the results that matter with confidence, ease and speed.

Digital transformation can have a profound impact on business performance, but knowing which technology investments will truly move the needle isn't always easy for companies. In fact, when it comes to implementing digital transformation projects, manufacturers and producers across industries are feeling a lot of uncertainty and anxiety – and it's not entirely unfounded.

Consider that less than 30% of digital transformation efforts are succeeding, according to research by McKinsey. What's more, only 16% of respondents said their organizations' digital transformation initiatives have successfully improved performance while equipping them to sustain changes in the long term.

This isn't how digital transformation is supposed to work. Part of the issue is that many companies lack a focused plan for their digital transformation initiatives. Our research shows that while 90% of companies recognize the need for a clearly defined roadmap, only 20% have one in place. And without a plan to translate vision into reality, digital transformation efforts can stagnate, if not outright fail. Research by Gartner indicates that through 2021, digital transformation initiatives, on average, are expected to take large traditional enterprises twice as long and cost twice as much as anticipated. Again, this isn't how digital transformation should be, and we must not accept this as inevitable.

Compounding the problem, new Industrial Internet of Things (IIoT) solutions seem to hit the market every day with bigger, bolder claims being made by an increasing number of vendors – but with little support for those claims in the form of real customer examples with quantified results. For manufacturers

and producers looking to find practical solutions, it's just more noise and more uncertainty.

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So how can companies cut through the hype, select the technologies that will tangibly improve operational performance, and deploy them effectively? It's all about adopting the right approach to digital transformation – one that's rooted in practicality and linked to a company's desired business outcomes. This enables a company to confidently implement proven solutions, easily integrate those solutions into its existing infrastructure and quickly get real results and return on investment. Think: **confidence, ease and speed.**

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The Case for Digital Transformation

Before understanding how to move forward with your digital transformation initiatives, it's important to understand why you should move forward. At its most basic level, digital transformation can be defined as applying technology to solve problems – but it's so much more than that.

True digital transformation happens when real change is effected within an organization. It's a change that's sparked by rethinking and optimizing processes and by

empowering personnel with the knowledge and tools to do their jobs more effectively. When this happens, a company can achieve measurable performance improvements in areas such as production optimization, reliability, safety, and sustainability. These areas are critical to operations, and real performance improvement in these areas can help a company maintain its competitive edge and drive long-term health and profitability.

Look no further than the companies excelling in these key performance indicators (KPIs). When compared to their average-achieving peers, Top Quartile performers:

- Experience two additional weeks of production annually due to better plant reliability
- Incur half the maintenance costs
- Have three times fewer safety incidents
- Use about a third less energy

In other words, the majority of companies have ample room to improve, and the rewards for doing so can be significant. For example, a typical refinery can experience as much as $50-100 million in collective, bottom-line annual savings by moving from average to Top Quartile performance in these KPIs. Digital transformation represents an incredible opportunity to create those savings and propel operational performance to new levels.

A Practical Approach to Digital Transformation

Now that you know what you want from your digital transformation initiatives, you need a plan to make it happen – and that's where adopting a practical approach comes in. There are four basic tenets of this approach that can help you confidently determine what technology investments to make, easily implement targeted solutions, and quickly get results from those solutions.

1. Start with a goal in mind

Our experience, working with hundreds of companies on their digital transformation journeys, gives us a clear understanding of the keys to success – as well as the common pitfalls. Start by identifying your most pressing operational challenges; those areas that are well recognized as opportunities for improvement and where there will likely be a quick return on investment. By contrast, do not start with a list of IIoT technologies to apply, in the hope that your operations teams will find something useful to do with them. Focus on the many familiar but nagging operational issues that rob operational performance. These issues can be broad, such as too much unplanned downtime, or as specific as pressure relief valve problems. Determine your specific problem areas and then apply proven, scalable and secure IIoT solutions that will directly address those issues. Start with known solutions to known problems as a sure way to show results from your digital

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transformation initiatives. This ensures the solutions you implement are directly linked to the outcomes you want to achieve.

2. Get the most from your data

Before you can take the actions that drive improvement, you need the right data, and you need to make sense of it. Most companies already generate lots of data, but there are usually important gaps as well. Easy-to-install, cost-effective sensors can supplement existing measurement technologies to capture data that will serve as the basis for new insights. You'll want to apply the appropriate level of operational analytics – intuitive, user-friendly software with embedded domain expertise that can quickly analyze data and provide actionable recommendations. Avoid generic analytics tools and instead deploy solutions that are designed to directly address your challenges. For example, prepackaged solutions that leverage foundational diagnostics to provide insights into asset health might be what you're needing. More complex operational issues call for comprehensive software platforms that combine collaboration tools with artificial intelligence and machine learning to determine root causes.

3. Empower your people

For all the talk about technology, digital transformation is ultimately about people. IIoT technologies can dramatically change work practices for the better, but if these

Advanced operational analytics can help identify the root causes of problems once considered too challenging for real-time analysis.

practices aren't embraced and adopted by your personnel, success is unlikely to happen. The key here is empowering each worker to do their jobs more effectively. This is accomplished with technologies and services that help personnel shift from routine activities like data collection to more value-added activities based on collaboration and business-critical decision-making. Digital transformation empowers personnel across the organization to optimize performance.

4. Multiply your successes

Applying proven solutions to specific problems can result in immediate benefits, and it's an effective way to start your digital transformation journey, but once you've demonstrated success and seen ROI for a given project, think bigger. Greater gains come from scaling a proven success across your facility or across the whole enterprise. For example, you could take a continuous monitoring solution for a set of pumps and easily apply it to all the important pumps that are in a typical refinery. And for even bigger benefits, you could then replicate your initiative to other sites. For instance, if your digital transformation project is helping you realize a $50,000 annual benefit on a single heat exchanger, you could rapidly turn that into a $50 million annual benefit by applying that same solution to 1,000 heat exchangers across your enterprise. This approach allows you to start small and ensure your investments are truly improving your operations – and then rapidly expand your digital transformation efforts in a focused, targeted direction.

The Right Partner Can Help

Digital transformation doesn't happen overnight, and there's no solution that will instantly make you a Top Quartile performer. Rather, it's a journey, requiring an ongoing commitment to improving your operations by empowering people to make more effective decisions that will benefit your business. However, that doesn't mean you can't quickly realize results from your digital transformation initiatives. By tying your technology investments to your desired business outcomes and then deploying the solutions that unlock insights and provide actionable information, you can get tangible, meaningful results at each step along your digital transformation journey.

Having the right partner for this journey can mean the difference between success and failure. A trusted partner can guide you, helping you select the solutions that meet your specific needs and then implement them in ways that deliver fast, sustainable results so that you get rapid ROI. And a trusted partner can meet you at any stage of your journey – whether that's helping develop a comprehensive, strategic roadmap that creates a clear vision or executing a single point solution that brings your vision to life.

Emerson is that partner. In addition to developing innovative technologies, we bring a mix of deep industry knowledge and domain expertise that forms the foundation of our

A trusted partner can help you confidently implement proven solutions, easily deploy those solutions, and quickly get real results.

solutions and is embedded in many of them. During my more than 30 years at Emerson, I've seen the benefits we've helped operations, across industries, achieve – and we remain committed to their advancement. That's why we continue to expand our Plantweb™ digital ecosystem – a scalable and secure portfolio of technologies, software and services that enable digital transformation. As part of that effort, we're building the industry's most comprehensive portfolio of operational analytics, developing new technologies that enable more effective remote-working experiences, and offering services that provide access to experts who can supplement your workforce's knowledge. Working together, we can help you navigate your digital transformation journey with **confidence, ease and speed.**

To learn more about how Emerson's Plantweb digital ecosystem helps drive measurable performance improvement, visit Plantweb.com to request a consultation.

About the author: As group president of Digital Transformation for Emerson, Stuart Harris leads a business responsible for leveraging Emerson's technologies and expertise to help drive business performance for key industries. His more than 30 years of international experience in automation and asset management within the process industries includes leading strategic planning, global marketing, digital strategy and industry programs for Emerson's Automation Solutions business. Harris holds 10 U.S. patents for software, information integration and visualization.