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EXECUTIVE SUMMARY

Modernization vs. Digital Transformation: Debunking Myths and Choosing the Right Digital Strategy

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KEY TAKEAWAYS

- Digital transformation is fundamentally different than modernization.
- Manufacturers in all industries are looking to provide increased packaging flexibility through end-of-line automation solutions.
- Eight lessons learned from successful digital transformations.

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Modernization vs. Digital Transformation: Debunking Myths and Choosing the Right Digital Strategy

OVERVIEW

Modernization and digital transformation are buzzwords often used interchangeably by companies and vendors. But in reality, they are very different concepts. Modernization means getting the most out of current equipment to improve productivity and lower costs. Modernization may be led by a technical group at a plant level. In contrast, digital transformation is externally focused to transform the customer experience and drive growth. It is cross-functional and organization-wide, and often requires culture change.

One area where digital transformations can make a significant difference is in end-of-line automation solutions, which can increase manufacturers' flexibility and decrease technical and business risk.

Important lessons can be learned from manufacturers that have engaged in successful digital transformations. Among these lessons are that the factory must lead the initiative; avoid overdoing the planning by focusing on action and learning; and it is essential to get beyond the pilot.

CONTEXT

The speakers discussed differences between modernization and digital transformation, described flexibility advantages of end-of-line automation solutions, and shared lessons learned from successful digital transformations.

Figure 1: Modernization 101

KEY TAKEAWAYS

Digital transformation is fundamentally different than modernization.

Modernization typically involves upgrading existing systems and processes to optimize performance and improve efficiency. This may involve implementing new equipment, upgrading software, or adopting new techniques to streamline production. The goal is to enhance the company's existing capabilities and make it more competitive. Examples of modernization include moving from storing data onsite to a cloud-based system—with benefits of lower costs, improved visibility, and enhanced security—and upgrading from a legacy tool to a new tool.

Modernization is often internally focused, is expected by customers, is rarely worth a mention outside of a company, and is often driven by a technical team. Modernization may be initiated by engineers at a plant, who pitch the idea to plant leadership as a way to improve efficiency.

Digital transformation goes beyond modernization. The idea is to use technology to continuously optimize all aspects of the business to *drive growth, empower employees, and connect better with customers*.

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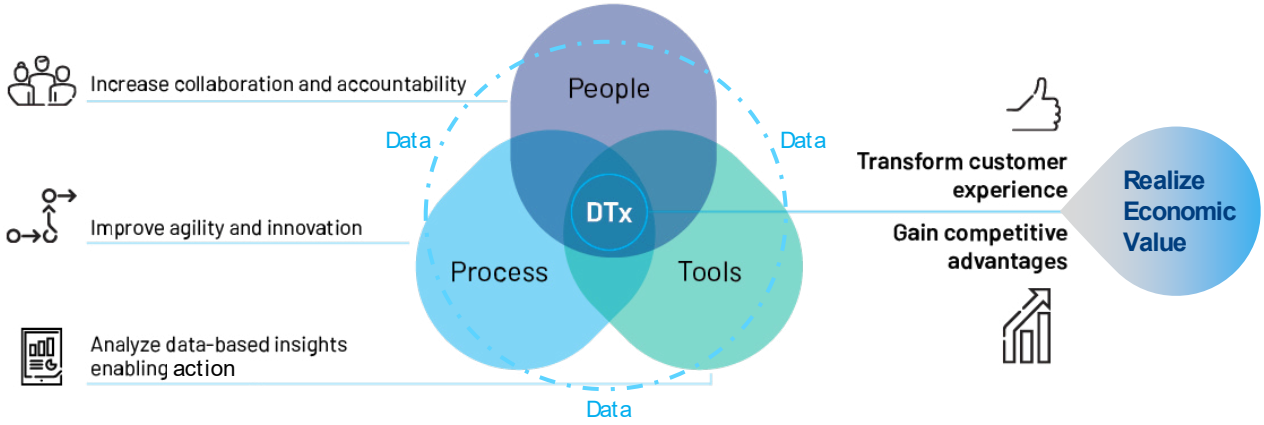
Figure 2: Digital Transformation 101



In contrast to modernization, digital transformation is externally focused, is cross functional—often involving sales and marketing—and is worth talking about to customers and the market. Digital transformation goes beyond just tools and technology; it also includes processes, people, and data. Also, the audience for digital transformation is different than for modernization. While modernization may involve engineering and/or IT, digital transformation can involve HR, marketing, leadership, and more.

> Digital transformation is focused externally and on the customer. The idea is to transform the customer experience, thereby enabling you to gain competitive advantages and you can realize economic value.
>
> *Ian Fountain, Rockwell Automation*

One other difference: modernization is often driven from the bottom up while digital transformation is driven from the top down. When top leadership promotes digital transformation, they generally try to do one of the following:

- **Expand their core business.** An example is how Rolls Royce expended from just selling jet engines to offering them as a service and selling "power by the hour."
- **Move into an adjacent business.** An example is Uber's movement into the adjacent business of food delivery via Uber Eats.
- **Transform how they interact with customers.** Heaven Hill Distillery provides an example through its strategy to shift from only selling full pallets to distributors to selling partial pallets and mixed pallets. This was accomplished through flexibility in its manufacturing process.

Manufacturers in all industries are looking to provide increased packaging flexibility through end-of-line automation solutions.

Manufacturers are embracing digital transformation in industries such as warehouse and distribution, household and chemicals, pharma and healthcare, food and beverage, personal care, and more. In all industries, manufacturers want increased flexibility.

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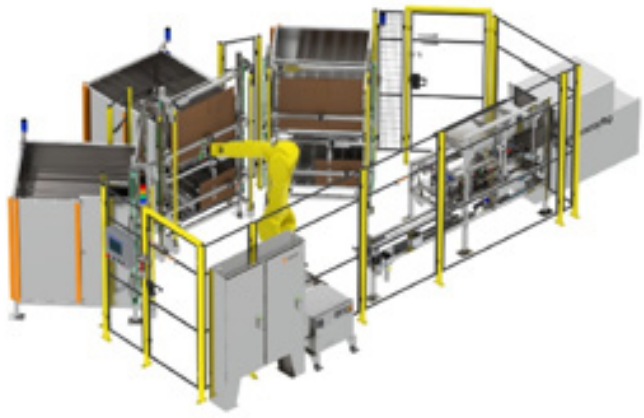
Pearson Packaging Systems offers end-of-line automation packaging solutions to companies in all of these industries that want to take their factories to the next level. Types of end-of-line or secondary packaging solutions include:

- **Erector portfolio.** Pearson offers case erectors that are high-speed and reliable, but only run one box size. But manufacturers want greater flexibility to be able to quickly change case sizes or insert case sizes randomly. To meet this need, Pearson now offers a random robotic case erector that allows putting many different case sizes into play at the same time on the same line.

Figure 3: Pearson Random Robotic Case Erector



- **Palletize portfolio.** Increasingly, customers don't necessarily want to buy one pallet with all of the same items; they want partial pallets or "rainbow" pallets with multiple SKUs on the same pallet. Also, these days not everything comes in cases; increasingly, products are coming in durable bags. To meet this need, Pearson has added to its palletizer portfolio of standard palletizers and configurable palletizers a multi-SKU depalletizer, using PlusOne Robotics vision, for mixed and rainbow pallets.
- **Technical risk reduction.** Pearson is now using digital twin technology to perform animation, simulation, and emulation. This provides improved communication and collaboration as well as the ability to program and test before equipment is built, which results in faster development time and lower development costs. Use of digital twin technology increases certainty and reduces risk.

> This has helped us advance in a couple of areas. It allows us to do a lot of engineering work and a lot of theory of operation or design work ahead of having to cut steel.
>
> *Brian Patrick, Pearson Packaging Systems*

- **Machine-as-a-service.** Similar to the Rolls Royce model described above, Pearson is offering machine-as-a-service. This provides increased production flexibility without requiring a manufacturer to make a capital expenditure. In this model, Pearson retains ownership of the equipment and is responsible for maintaining and optimizing it. Manufacturers receive an immediate ROI and have increased flexibility to adjust to changing production requirements, and Pearson engages in proactive OEM asset monitoring for maximum uptime.

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Eight lessons learned from successful digital transformations.

Kalypso, Rockwell Automation's consulting and system integration arm, specializes in executing digital transformation programs. Steve Riordan shared eight **lessons learned** from Kalypso's work.

1. **The factory must lead the initiative.** Digital transformation has to be a collaboration between leaders at the factory and those in the corporate functions. But the leaders at the factory can't be passive; they must lead.
2. **Avoid overdoing the plan; embrace learning.** Ideally, an organization doing transformation has a vision, a direction, prioritization of use cases, and a good business case and roadmap. Then, the key is to start executing against digital transformation use cases.

> We're big advocates for doing, not planning . . . we like to get into actually delivering the value of those versus overly planning.
>
> *Steve Riordan, Kalypso*

3. **Not one, not many, but the proper technology.** A digital transformation typically consists of a number of use cases, each of which may have more than one technology. New technology must interface with the existing backbone and be of value to achieve defined objectives.
4. **Collaboration across divisions is key.** The key is collaboration that is cross-functional and cross-organizational so that everyone is working together. Open communication of pilot programs throughout divisions allows for sharing of valuable experience and knowledge.
5. **Get beyond the pilot and assume variation.** An over-extended pilot stage delays full delivery of value. The idea is to try to get out of pilot purgatory by demonstrating success with a minimum viable product against a few use cases and then quickly figure out how to scale. Use all of the learnings from the pilot, but don't get stuck in the pilot.
6. **Integrate data governance.** Data governance and standards need to be key considerations at the core of a smart factory. This requires being really thoughtful about how data is structured and governed so that the organization's data is a valuable resource to support the digital transformation.
7. **Create smart factory experiences.** Once value is proven using new technology, create widespread demonstrations of success to build momentum.
8. **Communicate progress and celebrate success.** Recognize success early and clearly communicate decisions to replicate POVs.

> These eight things really increase your odds for digital transformation success by focusing on each one of them.
>
> *Steve Riordan, Kalypso*

ADDITIONAL INFORMATION

- **Rockwell Automation.** Rockwell Automation, with $7.8 billion in revenue, has served customers for 119 years and does business in more than 100 countries. The company is taking manufacturing to a whole new level by making customers more resilient, agile, and sustainable. Rockwell Automation's business is almost evenly divided among: 1) discrete, including industries like automotive and semiconductor; 2) hybrid, which is life sciences and consumer packaged goods; and 3) process, which involves industries like energy and oil and gas. To learn more, visit www.rockwellautomation.com.

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- **Kalypso.** Kalypso is the consulting and systems integration arm of Rockwell Automation. To learn more, visit www.kalypso.com.
- **Pearson Packaging Systems.** This company in Spokane, Washington, has been in business for 68 years, with 35 years of experience in robotic integration. The company has 22,000 assets deploying, including both robotic and standard equipment offerings. To learn more, visit www.pearsonpkg.com.

BIOGRAPHIES

Ian Fountain

Director of Digital Transformation, Rockwell Automation

Ian Fountain has spent over 20 years in the industry, working for companies such as National Instruments and Rockwell Automation. Ian is currently the director of digital transformation at Rockwell Automation, where he leads a team of transformational business executives to inspire customers to think bigger and drive the tough work of digital transformation.

Throughout his career, Ian has demonstrated a passion for growth, both personally and professionally, and is always seeking creative solutions to challenges. He has expertise in market strategy, business development, digital transformation, and embedded systems.

Justin Garski

OEM Segment Manager, Packaging and Converting, Rockwell

For over 20 years, Justin Garski has been connected with robotics, independent cart, and automation. Spending time in field service, engineering, and then sales, he has continued to gain knowledge and industry experience in a wide variety of applications. His knack for whiteboarding new concepts and solutions makes any applications discussion an interesting engagement.

Brian Patrick

VP of Engineering, Pearson Packaging Systems

Brian Patrick is vice president, engineering, for Pearson Packaging Systems, a provider of comprehensive automation solutions and a Gold-level OEM member in the Rockwell Automation PartnerNetwork. From individual equipment to integrated systems, Pearson Packaging Systems has deployed more than 22,000 machines worldwide.

Steve Riordan

Principal & Global Practice Leader, Consulting and Supply Chain, Kalypso

Steve Riordan serves as the firm's global consulting & supply chain practice leader and leads several of the largest and most complex client programs for the practice.

At Kalypso, Steve leads a team focused on serving senior product development and supply chain executives to help them digitally transform their capabilities in strategy, product development, planning, sourcing, manufacturing and distribution & logistics to shorten time to market, to drive revenue growth from new products, to streamline operations and to improve rates of compliance.

As a consultant, Steve has served industry sectors such as: grocery, specialty retail - softlines, specialty retail - hardlines, mass merchant, big box category killers, drug, internet retail and other e-commerce companies, department store, military retail, consumer electronics, vertically integrated and branded retail/wholesale, apparel and footwear manufacturers, food and beverage manufacturers, other discrete manufacturers and vendors to retail, wholesale distribution and private equity firms.