tacton

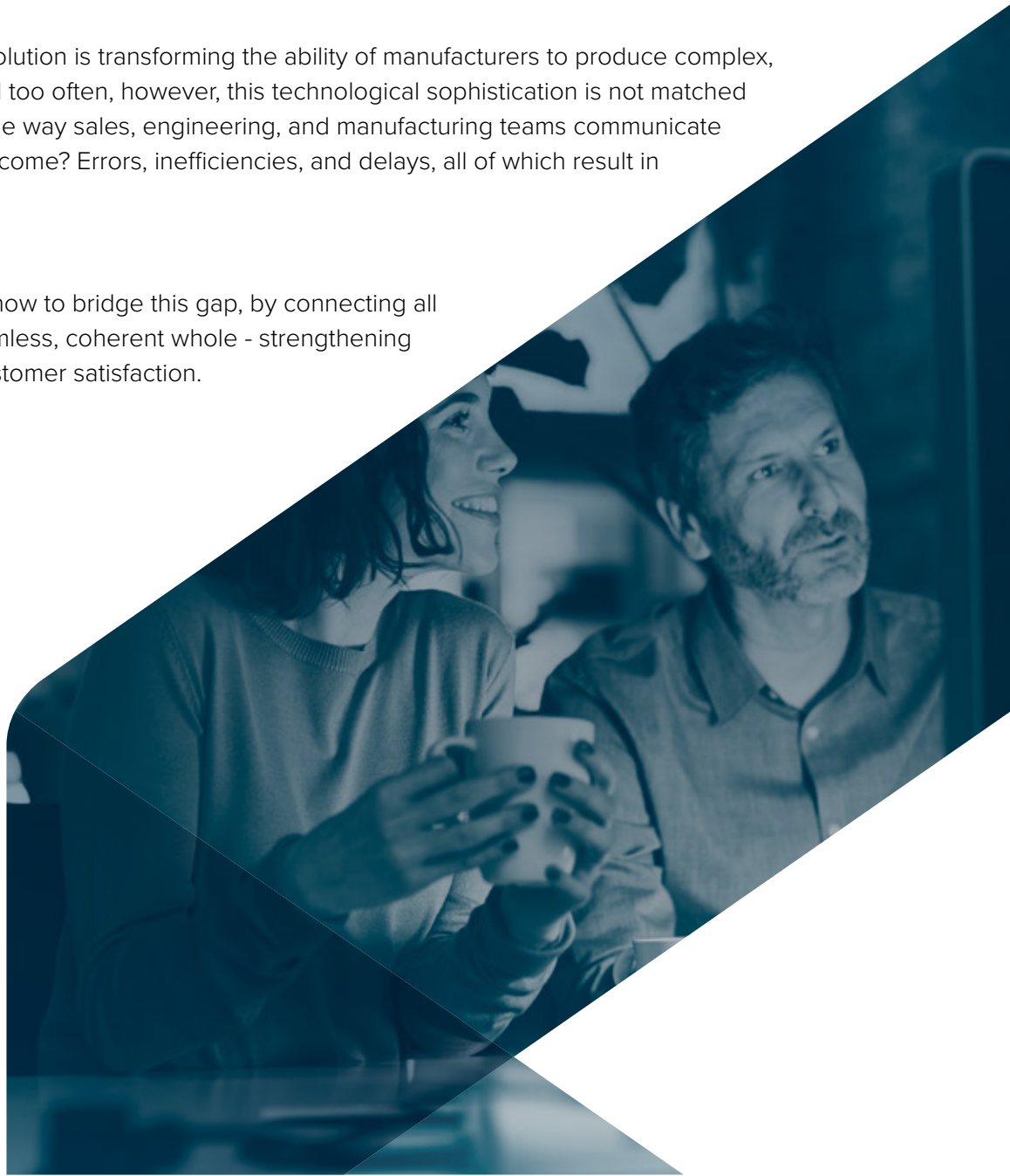
WHITE PAPER

Beyond Quote-to-Cash

How putting the customer at the heart of manufacturing can transform your bottom line

The fourth industrial revolution is transforming the ability of manufacturers to produce complex, customized products. All too often, however, this technological sophistication is not matched by similar advances in the way sales, engineering, and manufacturing teams communicate with each other. The outcome? Errors, inefficiencies, and delays, all of which result in lost revenue.

We're going to explore how to bridge this gap, by connecting all processes into one seamless, coherent whole - strengthening sales and increasing customer satisfaction.



Introduction

The last few years have seen rapid changes in manufacturing, with digitalization transforming every aspect of business, from back office to factory floor.

According to the Association of Equipment Manufacturers (AEM), IoT, additive manufacturing (3D printing), automation, and advanced visualization are all going to have a major impact.

These innovations all form part of Industry 4.0 - the 4th industrial revolution. As in the previous industrial revolutions (mechanization, mass production, and automation), Industry 4.0 comes as a direct result of one major technological leap - in this case, digitalization.

The choice is simple - and stark. Manufacturers that wholeheartedly embrace these technologies will thrive - those that do not (or do so half-heartedly) will be left behind. Any advances in engineering, production, or logistics must be matched by similar leaps forward in the business front end of sales and marketing. Without a meaningful connection between customer and product, technical wizardry on the factory floor will amount to nothing.

INDUSTRY 4.0: A KPMG DEFINITION

"Industry 4.0 is a collective term used around the world to describe the convergence of IoT-driven technologies, augmented decision making and advanced automation. These next-generation technologies are fundamentally transforming the traditional value chain by opening new revenue streams and driving a step change in business performance."}

THE FOUR CORNERSTONES OF INDUSTRY 4.0

Time to market: Technologies such as advanced modeling and 3D printing reduce the time it takes manufacturers to bring innovations to market.

Product customization: Customization is now expected as standard, rather than as an extra, regardless of volume - business success will depend upon manufacturers meeting this expectation.

Market agility: Digital innovations will let manufacturers react more rapidly to changes in demand, supply chain or logistics.

Data-driven iterative product improvement: Data generated by IoT will help manufacturers fine tune their product design to meet real-world customer needs.

Connecting sales with product and factory

Traditional manufacturing sales teams have relied on two key elements - personal relationships and detailed product knowledge.

Historically, sales-customer relationships have taken time to build, with trust being built upon the sales team's understanding of their customer's business. Recently, however, the ability to quickly produce highly variable and customized products has become of greater importance. Centralized procurement teams have become ever more value-focused, driving competitive pricing pressures. Portfolio based sales (as opposed to product or product-line) have also become more common. As product variability has grown, so has the need for manufacturers to stand out from the crowd.

A recent survey by Kronos Inc. and IndustryWeek found that more than half of respondents are receiving more build-to-order and configure-to-order requests, with 40% seeing more engineer-to-order requests. If this trend continues, manufacturers will need to focus more on these three areas, moving away from traditional inventory configuration orders. The demands of customization, time to delivery, and pricing competition are fundamentally altering the sales relationship status quo.

New technologies have changed the way manufacturers innovate, design, and build products - if these changes are to be reflected in the bottom line, businesses must learn how to connect customer with product and factory.

WHAT IS SMART MANUFACTURING?

At the heart of smart manufacturing lies CPQ - Configure, Price, Quote - a tool which helps sales teams create quotes based on different product, service, or financing configurations. Traditional CPQ tools are great at dealing with streamlined product catalogs, integrating CRM and ERP systems to create a linear quote-to-cash workflow.

However, increasing demand for customized and built-to-order products is having a profound effect, changing the requirements for CPQ. No longer can CPQ exist independent of other processes - instead it must be the tool that brings all processes together, integrating customer with product and factory, increasing efficiency and driving revenue.

Bringing together Sales & Manufacturing

Industry 4.0 has changed manufacturing - has demand changed as a result?

In a word, yes. Industry 4.0's technological advances have naturally led to an increase in customer expectations - to meet this, business must better align sales with factory floor.

TOP SEVEN TOOLS TO CONNECT CUSTOMERS WITH PRODUCT AND FACTORY

1. **True Constraint Configuration Engine:** Traditional CPQ solutions use rules-based configuration, resulting in systems that grow more cumbersome and clumsy as products become more numerous, complex or customized. The demands of Industry 4.0 require a more elegant solution. AI-driven true-constraints based configuration allows much greater flexibility, actively resolving catalog conflicts, reducing errors, and leading to greater order accuracy and velocity.

2. **Configuration Modeling:** As products become more complex, part and component relationships can quickly become unmanageable. A configurator model solves this by defining large relationship sets to efficiently show all dependencies, reducing total time to market and easily handling large volumes of custom product changes.

3. **Needs-Based Guided Selling** helps meet customer requirements with the minimum of time and confusion. Manufacturers are able to guide the customers to the perfect product with a series of dynamic questions that evolve depending on previous answers. They can even use data from IoT devices to use previous product use as the basis for a new quote.

4. **Visual Configuration** lets customers view realistic images of configurable products, reducing errors and enhancing engagement. Customers can work with sales to configure new products in real time, increasing confidence with a 'what-you-see-is-what-you-get' user experience.

5. **Rich CAD Interface** allows customers to work closely with sales to design sophisticated, customized orders. Constraints-based guardrails ensure that sales teams don't have to wait for validation from engineering and that drawings are produced automatically, in real time.

6. **Design Automation** automatically produces complete 2D drawings and 3D models of custom products and parts needed for both quotes and production. By automating routine CAD tasks and repetitive work on custom solutions, manufacturers can design more with less work – and leave more time for innovation.

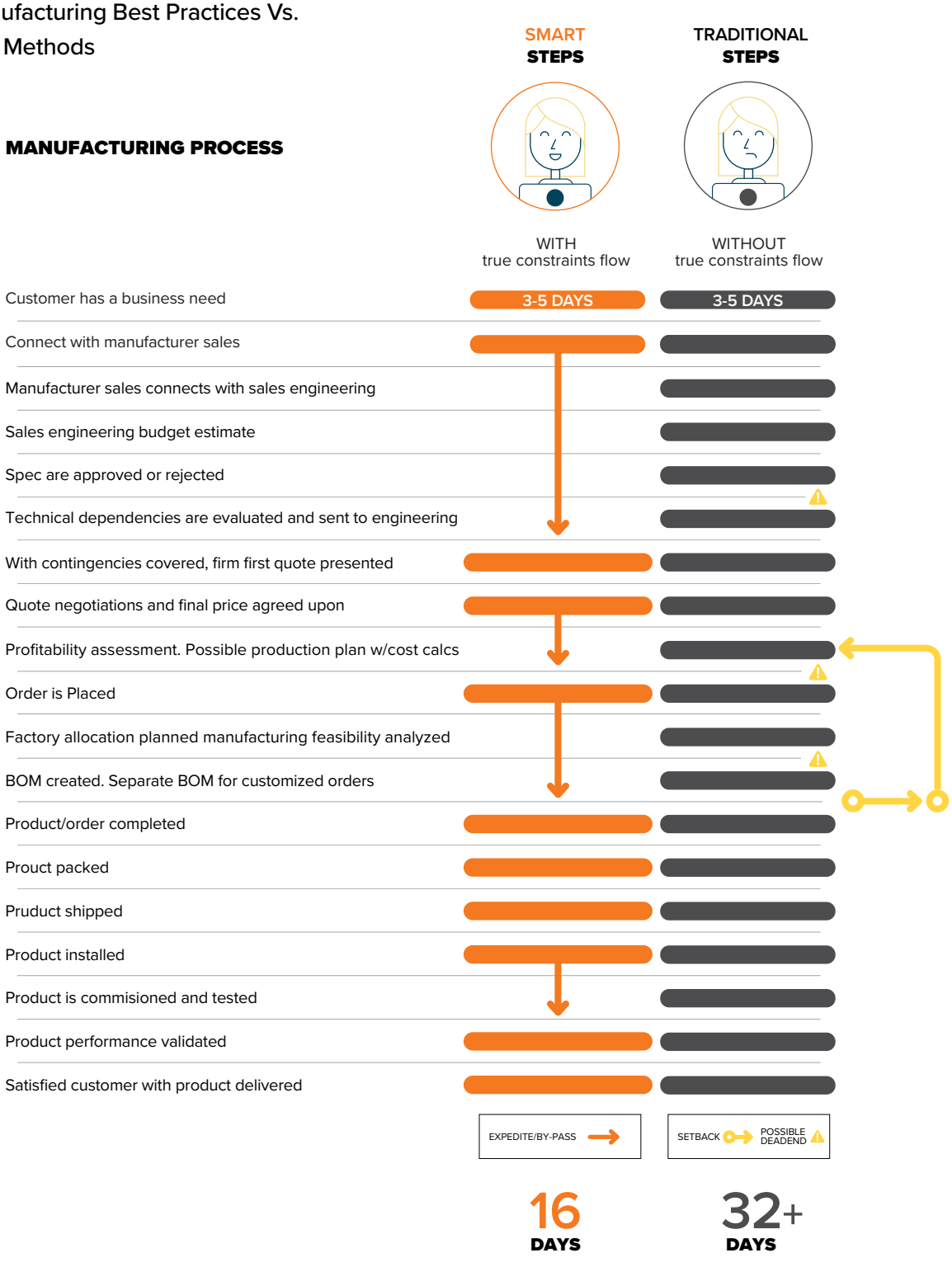
7. **Product Lifecycle Management (PLM) Integration** ensures that unique design requirements are tracked in a centralized product record, helping to optimize supply chain and systems engineering management.

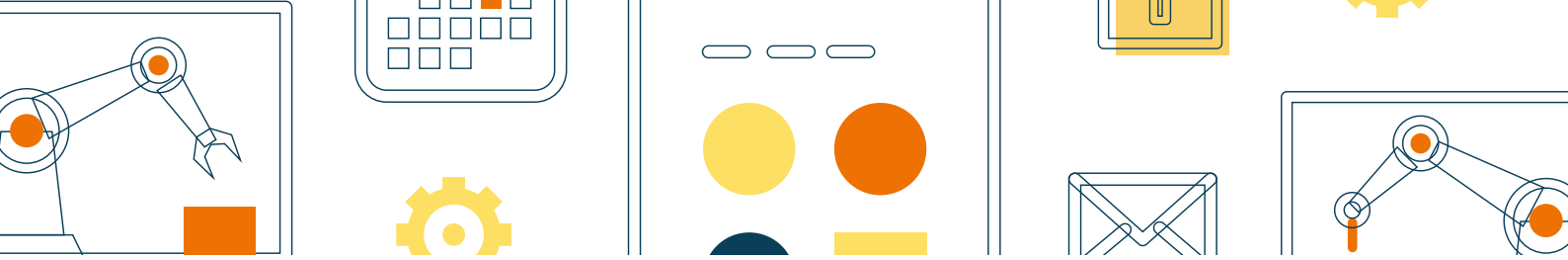
The Anatomy of a Custom Order

In today's highly customized manufacturing environment, getting swiftly from quote to delivery is crucial to avoid customer dissatisfaction.

THE PATH TO FULFILLMENT

Smart Manufacturing Best Practices Vs. Traditional Methods





Capitalize on Industry 4.0 with Tacton CPQ

Today's manufacturing customers have greater expectations than ever. Tacton's solution is unique in delivering a world-class customer experience — regardless of product and catalog complexity — across the entire customer lifecycle.

By putting the customer at the heart of the process, Tacton connects them with product and factory, fundamentally enhancing their buying experience and leading to better sales, improved efficiency and, ultimately, customer satisfaction and loyalty.

By combining powerful constraint-based CPQ with needs-based guided selling, rich 3D visualization, full CAD integration, and design automation, Tacton is helping manufacturers drive revenue and margins and build great relationships with their customers.

Tacton integrates with leading CRM platforms (Salesforce, SAP, Microsoft Dynamics), ERP platforms (SAP, Oracle, Microsoft Dynamics) and PLM platforms (Siemens, Enovia, PTC Windchill) to connect customer with product and factory in a seamless, repeatable, and scalable process.

swisslog

Swisslog designs, develops and delivers automation solutions for warehouses and distribution centers. It is a global organization with customers in more than 50 countries.

The challenge

- Swisslog were producing highly complex specifications for crane orders manually, using MS Excel and Mathcad, calculating such factors as the correct size for horizontal and vertical motors while ensuring the stability and structural capabilities of the cranes. Individual customer orders might include up to a dozen unique configurations.
- Customer requirement revisions were frequent, forcing Swisslog to re-start all calculations from scratch.
- Human involvement in each stage of configuration increased the risk of error and slowed order velocity.

The solution

- With Tacton's true-constraint based product configuration, Swisslog can now produce quotes without any involvement from the product experts at the Swedish manufacturing site.
- For requirement revisions, Swisslog simply inputs the specific changes of the configuration and Tacton's CPQ automatically recalculates, saving significant time and effort.
- When sales configuration is complete, approximately 80% of all orders can go straight to production.

"These are heavy calculations. We know we are pushing the boundaries of configuration, but fortunately for us, Tacton can handle it."

Martin Björklund, Sales Enablement, Swisslog

SIEMENS

Siemens AG is a global powerhouse in electronics and engineering, operating in the fields of industry, energy, infrastructure and healthcare. The company is the world's largest provider of environmental technologies.

The challenge

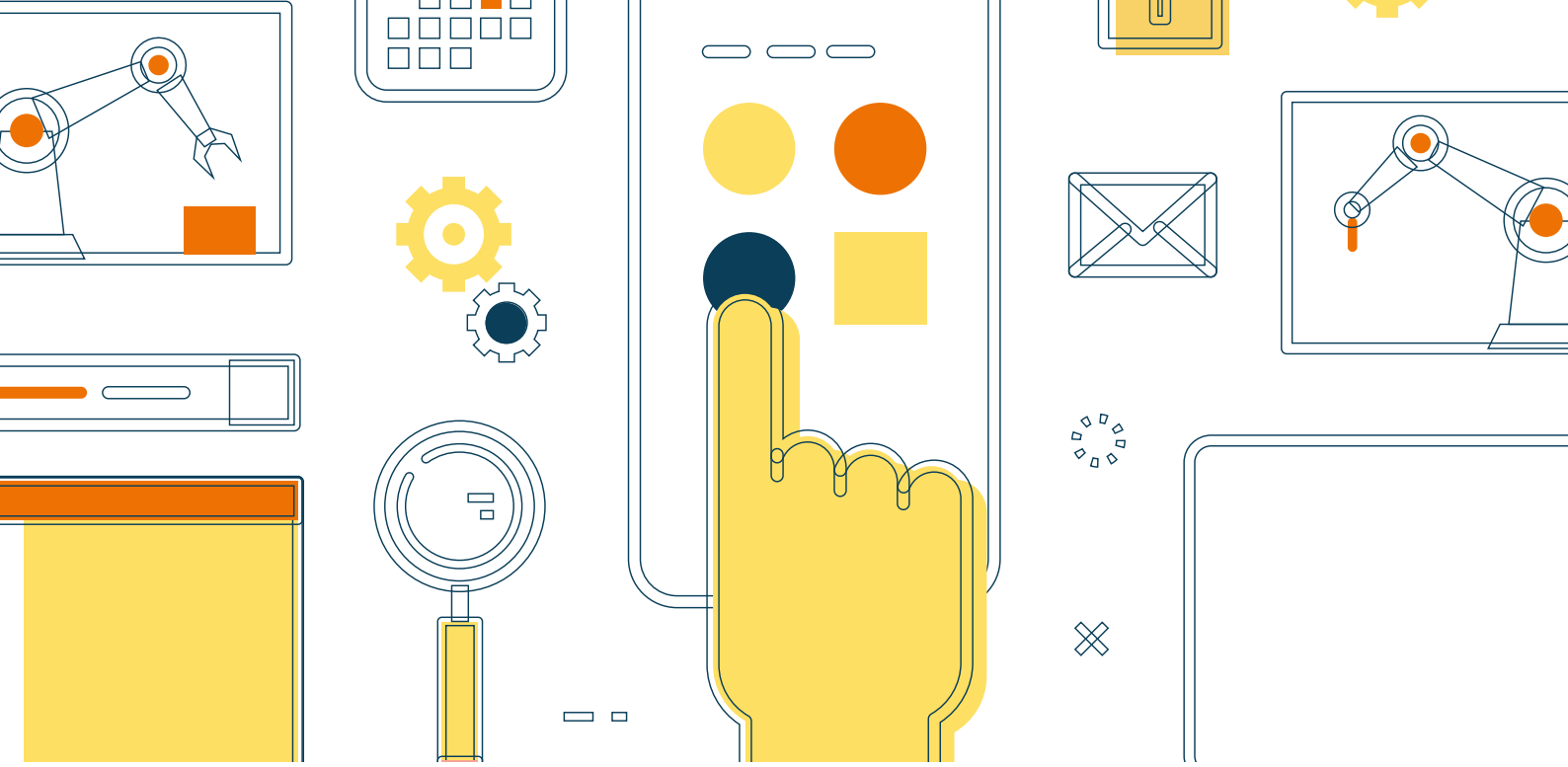
- High product complexity in its gas-powered turbine product line (the air intake assembly alone has 120 variants).
- Full customer proposals were up to 500 pages long and took eight weeks to produce.
- Specialized engineering assistance was required on almost every proposal.

The Solution

- With Tacton CPQ, Siemens can now create pre-made assemblies, including standardizing much of the core turbine engine.
- Tacton has allowed Siemens to reduce thousands of business rules down to a few hundred constraints, making system maintenance far less resource intensive.
- Siemens sales reps can now produce full, accurate quotes in a matter of minutes instead of months. Product specialists are required on only the most complex cases.

"The beauty of the Tacton Configurator is that it will guide the sales rep through the sale and get the configuration of the product and quotation correct each time. It now takes us only five minutes to generate a complete budget offer including pricing."

Jan Nilsson, Senior Engineer CRM Process & IT Development, Siemens



Conclusion

As Industry 4.0 evolves, successful manufacturers will need to think about more than technological production innovations and instead embrace holistic solutions, that cover every step from quote to fulfilment.

Viewing the traditional quote-to-cash lifecycle separately from production is no longer an option.

According to research by CapGemini, 43% of all manufacturers currently have an operational smart factory initiative, and another 33% are in the process of defining one, with North America and Western Europe leading the way in Industry 4.0 technology adoption. To fully capitalize on these initiatives and connect them to top-line business objectives, manufacturers need to leverage AI-driven CPQ and design automation and close the loop between customers, products, and the factory floor and think beyond quote-to-cash.

ABOUT TACTON

Tacton's manufacturing software solutions connect customer with product and factory for smarter business. By putting customers at the heart of the process, we focus on their needs, enabling better sales and more efficient operations. Drawing upon 20 years of AI research, our constraints based configurator goes beyond CPQ, transforming the way you do business - letting your customers build relationships with their clients, not just products. With global manufacturing expertise, we work with partners such as ABB, Bosch, Caterpillar Propulsion, Daimler, MAN, Mitsubishi, Siemens, Toshiba and Yaskawa. Tacton is headquartered in Stockholm, Sweden, with additional regional headquarters in Chicago, USA, Karlsruhe, Germany, Warsaw, Poland and Tokyo, Japan.

Learn more at www.tacton.com

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