

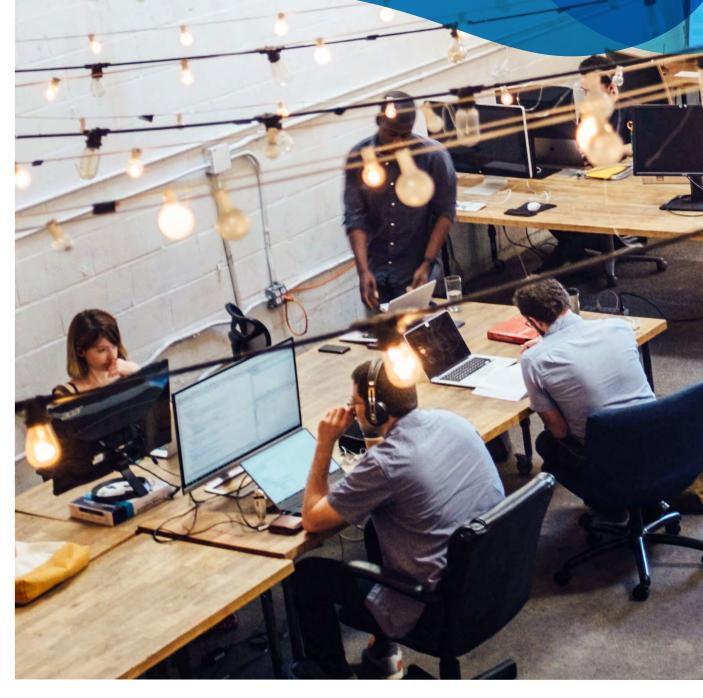
Manufacturers are accustomed to change. But not at today's levels. Industry 4.0 and e-commerce have turned everything about manufacturing on its head. Lead-times are growing ridiculously short. Buyers want instant access to detailed product information, with the ability to easily search for and compare items on their shopping lists. Knowledgeable salespeople are no longer enough to keep customers satisfied, and the days of being happy with "I'll send you a quote tomorrow" are long gone—customers expect price and delivery now. And if that weren't enough, everyone wants personalized experiences, with secure but simple ways to log on from virtually anywhere and see their orders, shipments, discount levels, and all the other information needed to do their jobs effectively.





Don't Blame Bezos

Manufacturers might be tempted to fault Amazon and other online retailers for all this digitalization of the shopping experience. After all, they're the ones who set the B2C bar, a bar that—like those company's revenues—grows a bit higher with each passing year. And yet, those who make, buy, and sell electronics and other manufactured products for a living have been more than happy to follow the yellow brick road of e-commerce. Is it any surprise that they, like all consumers, now expect to see Amazon-like features and functionality in their B2B transactions? By learning more about these use cases and what they have in common, the study has helped Liferay and its customers better understand how all types of businesses can gain the most value from digital services.







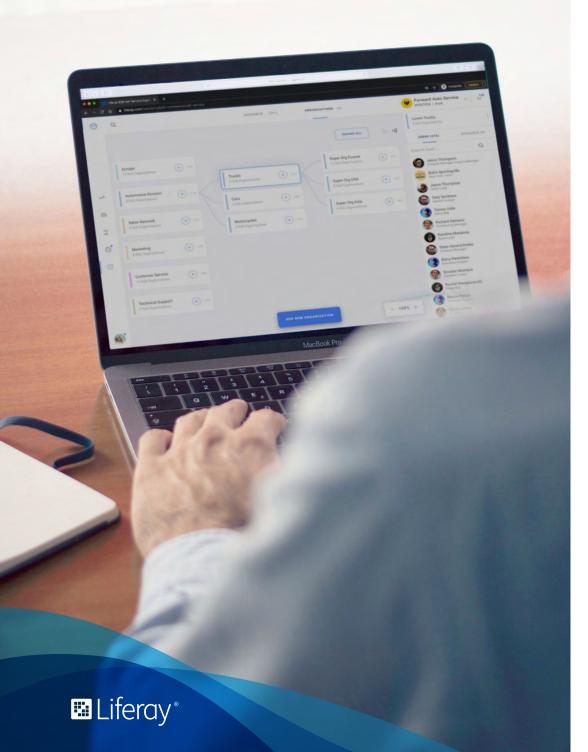
Customer experience futurist Blake Morgan, a senior contributor to Forbes magazine, recently stated that B2C customers "get tailored recommendations from Netflix, great contact center support from Discover and innovative tech solutions from Apple. But when they go to work and interact with B2B companies, it's a different story. More than product or price, companies now compete on experience."

Like it or not, she's talking about manufacturers, and her message is a simple one—today's industrial buyers are looking for more than the traditional standards of price, delivery, and quality. They're also looking for an efficient and even pleasant way to shop for products, whether it's integrated circuit boards, tractor components, or safety supplies.

In a recent article, Morgan noted that B2B companies have an average customer experience score of less than 50%, far lower than the 65% to 85% for B2C companies. The good news? Both groups of customers are willing to pay for better buying experiences. That's according to Bill Dunn, president of Liferay partner Dunn Solutions, who added that price and even product features often come in second to the actual buying experience. "Customers expect to have questions answered 24/7, along with access to manuals, certifications, MSDS, and videos."

The heads of many electronics and industrial manufacturing companies might be thinking, "Hold on—we have EDI. We have ERP and PLM software. We have email, fax, and telephone. Our salespeople carry laptops and smartphones. We even installed that new chat feature on our website last year. Do we really need to invest in 'the customer buying experience' just to take product orders? More importantly, is this our path forward to staying competitive?"





The answer is twofold. Regarding online ordering, it's a resounding yes. Commercial and business consumers alike want what they want, they want it ASAP, and online ordering is the easiest way to accomplish this. That helps to explain why Forrester predicts that B2B e-commerce levels in the United States will reach \$1.8 trillion by 2023, and account for 17% of all B2B sales. They also posted a study that claimed 59% of buyers would rather do research online if it means they can avoid interacting with a human sales representative who pushes their own agenda and doesn't listen.

But as you might have guessed by now, the B2B buying experience goes far beyond order placement and whether customers like their salesperson. Customer experience futurist Morgan stated on her corporate blog (another feature of many B2B portals), "What will make you stand out isn't your product, but rather the services you offer around that product." To a manufacturer, this means providing online access to product information. It means technical and application advice, material specifications, and when appropriate, information about the manufacturing and engineering processes.

Roadmap to Transformation

In many ways, the manner in which manufacturers offer their products for sale is growing just as important as the equipment and production lines used to make them. Consider the 2019 U.S. B2B Ecommerce Market Report. It stated that sales transactions processed through e-commerce sites, log-in portals, and online marketplaces grew 11% to reach \$1.08 trillion, driven entirely by manufacturers, wholesalers, distributors, and retailers that sell to business customers in the United States.

One of these is Royal Brass and Hose, a Knoxville-based distributor of hydraulic and pneumatic components. Following a major overhaul of its legacy e-commerce platform, the company not only improved its search engine and content management capabilities, but also streamlined the sales, invoicing, and sales tax processing functions. According to the company's e-commerce manager, this led to "broader use of self-service digital commerce and less reliance on traditional channels of EDI, telephone and in-person orders."







The startup firm Material Bank of Boca Raton saw similar results after implementing a "marketplace technology ecosystem" able to manage hundreds of suppliers, thousands of customers, and data points by the tens of millions. A key indicator of its success was a statement by chairman and CEO Adam Sandow, who said the company was planning to increase its 80,000-square-foot Memphis distribution center to one "five times that size" in 2020.

These results aren't unexpected. After launching its Better MRO website in 2017, tooling and equipment supplier MSC Industrial reportedly reached 100,000 visitors each month, and generated e-commerce sales of \$520.8 million, roughly 60% of its total sales. Water treatment and desalinization manufacturer Magna

Imperio Systems said it has implemented an augmented reality tool for potential customers that helped shorten the average sales cycle by three months or more. And clothing manufacturer Global Schoolwear solved multiple order management and manufacturing problems by rolling out a new "headless" e-commerce platform.

"To succeed in this quickly evolving and increasingly digital marketplace, companies need to transform their supply chains."
That's the advice from accounting firm PwC, which added that customers now do their research and buy products across multiple channels and increasingly demand product personalization. "They expect not only transparency around order status and delivery, but near-instant order fulfillment," the company noted in a recent whitepaper.

Smarter Factories, Smarter Shopping

It's the manufacturers who most eagerly embrace these concepts that will have the best chance of getting a slice of that multi-trillion dollar pie. Some recognized this early on, and began looking for ways to improve customer shopping experiences. They charged their IT departments with the development of homegrown e-commerce systems, or found ways to bolt-on 3rd party shopping carts and basic search functionality to their ERP software. Others hired external consultants to come onsite and construct elaborate yet inflexible, hard-wired customer portals, mimicking the capabilities of consumer e-commerce sites.

The result was often a Frankenstein's monster of sorts, portals that required routine IT intervention with every operating system update, security patch, or request for extended functionality. Worse, they held users and customers back, providing a lukewarm "okay, if we must use it" experience at best. Granted, such legacy systems served their purpose and were better than having nothing at all. And yet, the reluctance to jettison the oft-massive investments made in those sites and systems might now be holding their owners back.





This last part is especially ironic, given the manufacturing industry's push towards digitalization. Industry 4.0 and the Internet of Things (IoT) are having a profound effect on the way shops of all sizes make things. Machine tools and production equipment are growing increasingly data driven, as are the supply chains in which they participate. And both are growing more interconnected with the sales, marketing, engineering, and financial teams. As a result, real-time, online visibility to manufacturing and warehouse operations, though not yet widespread, will soon be expected.

Skeptical? Consider this example, one that many in the manufacturing industry can relate to: when computer numerical control (CNC) machine tools first entered the market, many of those who'd invested in screw machines and other mechanized machinery were reluctant to adopt what, at the time, seemed to be newfangled and unnecessary. And yet, the ones who embraced the new technology grew more competitive and profitable, and within a decade or two, owned the marketplace.

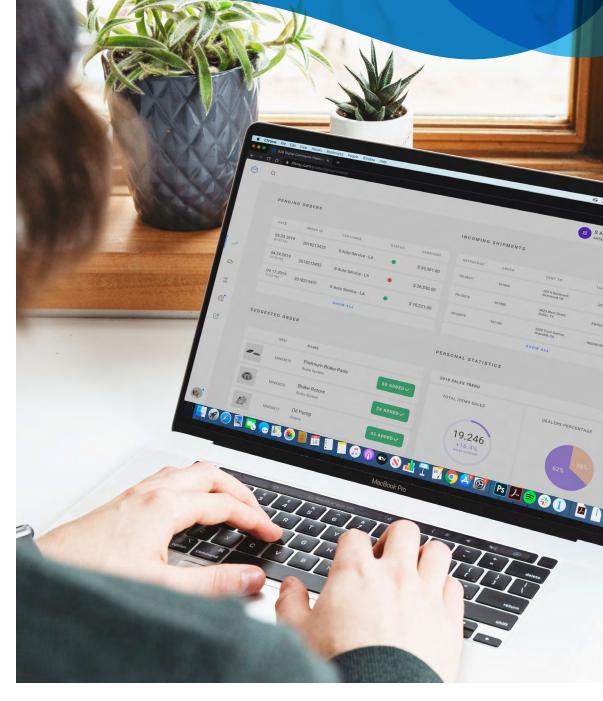
Similar tales can be told about robots and automation, 3D printing, and advanced engineering software systems. Today's Industry 4.0 and digitalization represent the next evolution in manufacturing, just as online portals and B2B e-commerce represent the equivalent for sales transactions. It's the manufacturers who embrace technology in all its forms today who will be best poised to thrive tomorrow.

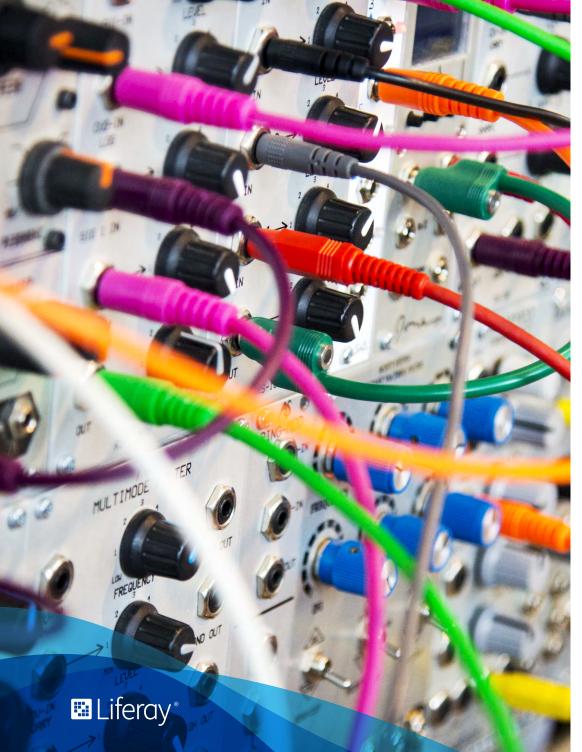


Welcome to the Portal

So how does one start? As with any major continuous improvement initiative, input from key stakeholders from all departments is a must. Without it, any software rollout will likely become an IT project rather than a corporate one, leading to less than enthusiastic ownership of the finished product.

That's not meant to imply that IT presence isn't necessary—it is, for all the reasons one might suspect. As with an ERP or CMS (content management system) implementation, a comprehensive B2B solution integrates with various software systems and touches multiple areas throughout the company. Knowledgeable technical resources must be available for the initial configuration, as well as ongoing support and fine-tuning afterward.





A knowledgeable technology partner is also needed. Liferay Inc., for example, is a software company that employs more than 600 technology experts, all devoted to helping manufacturers develop the digital commerce capabilities discussed here, using a platform that:

- Has easy-to-use content management and product documentation capabilities
- Streamlines the purchasing process with efficient search and navigation features
- Reduces the need for customization, in turn reducing implementation and support costs
- Provides the information needed to more effectively target customer needs
- Automates the maintenance of pricing, terms, and discounting models

There's more, but simply put, Liferay's B2B e-commerce platform brings manufacturers the tools needed to compete in today's electronic marketplace, giving them a digital storefront that's every bit as modern as their factory floor.

Liferay product manager Corbin Murakami oversees the vision and strategy for Liferay Commerce. Despite the many benefits of the platform described here, he warned that developing one is not a trivial undertaking and that those on the C-level may require some convincing. "In order to survive the industry's changing nature, manufacturers must begin to invest in improved customer experiences," he said. It's up to those who own these digital commerce initiatives to make the case to executives that the investment will serve as an insurance policy against the rising tide of disruption that threatens to sweep away businesses of all kinds. Those able to successfully harness this medium and better serve their customers stand to benefit handsomely. Liferay, of course, is here to help.





Moving Forward

To find out more about how Liferay can revolutionize your digital commerce strategy, visit liferay.com/commerce

To see how Liferay will work in your organization visit: liferay.com/request-a-demo.



Liferay makes software that helps companies create digital experiences on web, mobile and connected devices. Our platform is open source, which makes it more reliable, innovative and secure. We try to leave a positive mark on the world through business and technology. Hundreds of organizations in financial services, healthcare, government, insurance, retail, manufacturing and multiple other industries use Liferay. Visit us at liferay.com.

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