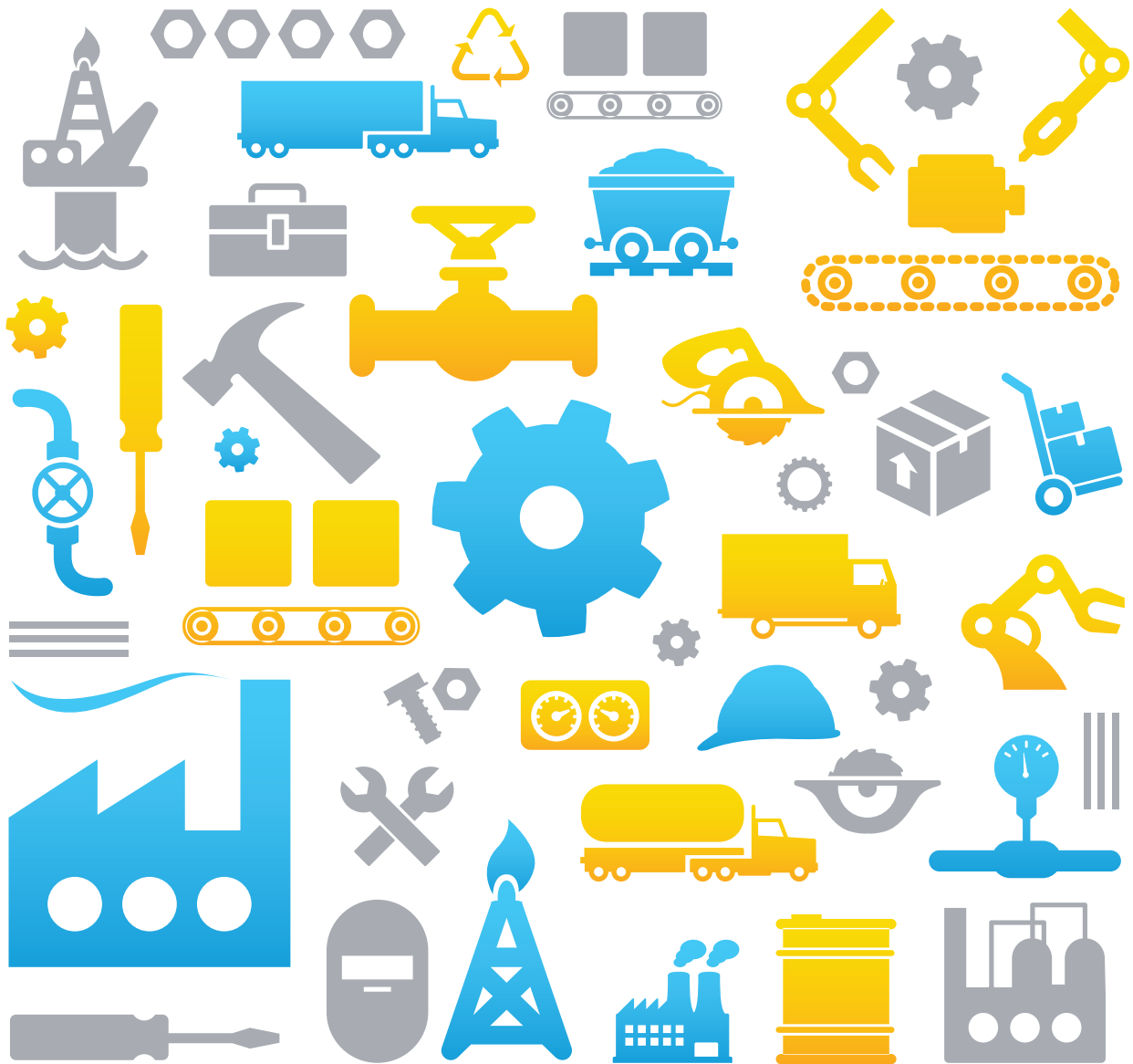# Designing a new ERP

What manufacturers need from new ERP solutions to prepare for emerging challenges

Highlights

New customer expectations
Disruptive technologies
Emerging standards

New incentives for modern ERP

Few manufacturers work the way they did in the 1990s. But a surprising number don't realize that they still depend on ERP systems designed in that era. Outdated ERP software doesn't only reduce the efficiency of your business—it prevents you from dealing with the competitive pressures you face now. Your ERP system needs to play a new role in your business, so that you can adjust to a new business environment.

The new equation: B2B + B2C = B2B2C

Customers inevitably drive change in any industry. Today, customers demand instant results because that's what they've come to expect. As a result, the formerly clear distinction between a B2B and B2C business model has compressed into a B2B2C process, where customer whims turn into manufacturing demands seemingly overnight. End-users' accelerating demands for speed and flexibility flow rapidly through the entire value chain.

Newly disruptive technologies

As new competitors arise and current competitors adopt new technologies, you have no choice but to innovate at every level to avoid falling behind. Several disruptive technologies are changing the course of almost every industry:

- **Manufacturing technologies—**This category encompasses technologies that improve the manufacturing process itself, including robotics, machine to machine (M2M) sensor connectivity, digital manufacturing and "lights out" factories, additive manufacturing/3D printing, and process automation. These technologies hold the potential for fundamentally changing the nature of manufacturing, altering long-held expectations about speed, scale, and resource requirements.

- **Connectivity and storage—**Cloud and SaaS services, server virtualization, third-party data warehousing, and other web-enabled technologies bring formerly expensive and inaccessible capabilities to a wider range of companies.

- **Mobile—**Universal wireless data connections and a profusion of cheap, lightweight mobile devices in every conceivable form factor create an expanding array of new ways to monitor and manage a business.

To get maximum value from disruptive technologies, you need ERP systems with the capacity to account for the ways disruptive technologies change requirements and potential outcomes.

New technological urgency

The capabilities gap between older ERP designs and current demands already pose problems that manufacturers simply can't ignore. As one analyst put it, "Outdated ERP can leave you dangerously out of touch. The more change your organization is subject to—growth and expansion, acquisitions, new product lines, etc.—the less you really know. A lack of available business information can become a significant problem, no matter how many spreadsheets and workarounds have been developed."[1]

In a recent report, Gartner predicted that the emerging generation of ERP systems will include capabilities that could prove essential to companies that want to remain competitive, including:

- **Federated implementation—**The massive, rigid ERP implementations that were common in the past are already being replaced by flexible combinations of point solutions and best-of-breed software, integrated in an agile network for maximum adaptability. According to Gartner's report: "By 2016, the devolution of monolithic ERP will result in at least 30% of ERP implementations being deployed in a federated manner."

- **Social business technology—**It's never been a secret that business is a collaborative activity, but that would be hard to guess from traditional ERP design. When human interaction and the expertise of your end-users becomes an integral part of your ERP data, you gain business benefits that you never would have expected. As Gartner put it: "By 2016, over 70% of companies will utilize ERP applications embedded with social networking technology."

- **Post-PC environment—**The simultaneous rise of the cloud with the exploding influence of mobile technologies make the sinking market for PC-type devices all too predictable. In the words of Gartner's experts: "By 2016, at least 50% of organizations will deploy their ERP applications to users via a post-PC environment."[2]

[1] Anwen Robinson, "Time to Migrate? The importance of Modern ERP for successful business." Business Computing World, June 6, 2012

[2] Gartner Predicts 2013: Reinventing the Roles of ERP and Application Suites, Denise Ganly, Nigel Rayner, Christian Hestermann, Nigel Montgomery, and Alexander Drobik, April 17, 2013.

New possibilities

The possibilities disruptive technologies create are more powerful than the technologies themselves. To take advantage of those new possibilities, manufacturers today need capabilities they may not have considered before, including:

- **Social business capabilities—**These aren't technologies, strictly speaking, but they're valuable results of other expanding technologies that are exerting powerful effects on society as a whole, and on businesses at every phase of the value chain. Manufacturers stand to gain immensely from improved collaboration and richer connections between people, systems, machines, and other resources.

- **User experience—**The concepts that distinguish user experience (UX) from a user interface (UI) reflect the importance of human behavior and responses in the operation of any technology. At the intersection of information architecture and industrial design, the science of user experience amplifies the amount people can accomplish by using a well-designed technology product. Historically, ERP products featured intolerably poor user experiences. There's simply no doubt that that a well-designed user experience vastly increases the value any company will derive from its ERP investment. Today, there's just no excuse for buying an ERP solution that doesn't offer a first rate user experience.

- **Advanced real-time analytics—**Older ERP systems take a rear-view-mirror approach to reporting and analytics, allowing you to extract information about transactions that have already happened. Of course that's useful, but an up-to-date ERP solution should give you real time analytics, so that you can understand what to do next.

- **Flexible architecture—**A modern ERP solution should offer you the flexibility to integrate and configure the capabilities that you want and need today and tomorrow. That can only happen when your ERP system is built on an architecture that works the way the Internet works, with flexible connections and open standards, so that you can build your system your way. The design should also emphasize configurability over customization, which allows you to fit the system to your needs and upgrade without breaking your customizations.

A modern ERP system should help improve your business in ways that older, monolithic ERP systems simply couldn't, including:

- **Customer focused innovation—**When you can develop, make, and market new products faster than your competition, you'll have a lasting advantage. But that's only possible when your operational systems accommodate rapid change and quick development rather than militating toward standardization at all costs.

- **Business process improvement—**Traditional ERP systems help you optimize standard processes; but if the processes are inefficient in themselves, ongoing improvement is impossible.

- **Supply chain collaboration—**You can only optimize your internal supply chain to a certain degree, before the constraints of the external supply chain come into play. Your ERP solution should integrate smoothly with supply chain planning and design tools to ensure that outside forces don't negate your plans.

New demands for change

A surprising proportion of ERP implementations in operation today were purchased by managers with worries about the Y2K bug in the late 1990s. They were often selected for "safety," based on fear-driven, backward-looking criteria. Buyers found it easiest to purchase products already in use at large organizations in almost any field, and built with familiar technologies. As a result, many currently installed ERP systems most effectively address the issues of the 1980s. For manufacturers, that meant the ability to optimize a high-volume repetitive manufacturing process. But today, few manufacturers can succeed by focusing on that kind of business—product cycles are much too short, and customers demand much more specialized service.

To succeed in the present and future environment, manufacturers need an ERP system with a much different focus and direction. Deloitte described the new capabilities an ERP system needs to deliver in a recent report:

"The traditional industrial-grade engine of ERP made sense in the days of rigid, automated, highly standardized business processes....The new event-driven world still uses processes, but they have become flexible, agile, and configurable based on the event that just occurred—within the core or at the edge. The old engines could not process billions of events at near real-time speeds and allow this maneuverability. Thus the reinvented engine—a necessary condition for real-time processing of disparate data at competitive price points."[3]

[3]Tech Trends 2013: Elements of Post-Digital: Reinventing the ERP Engine, Deloitte, June 2013

A new technology alliance

Your ERP investment should add value to your organization for more than a decade. During that time, your ERP vendor should be more than a source of software support: Your ERP vendor should be a strategic partner who helps you address the issues you face in actual practice, not just in theory. Ideally, your ERP vendor should be:

- **Committed to business software—**Many top-name ERP solutions are sold by companies that generate most of their revenue from some other technology product, such as a database, an operating system, an office suite, or a hardware platform. While those ERP solutions deliver reliable results to many customers, those vendors' primary purpose is to protect their principal franchise—the database or other technology that pays their bills. They labor under powerful incentives to keep you locked into their proprietary ecosystem. (If you were in their situation, you'd do the same.) But you need an ERP solution that gives you the widest range of choices about platform, deployment, and integration with other solutions. Infor® is not beholden to any other technology—our only purpose is to develop and deliver solutions that meet your exact needs.

- **Committed to innovation and usability—**The most successful firms are the ones that attract the most talented people. By saddling top-level talent with clumsy, antiquated technology, you're saying that your employees' time is a low-value resource that's worth wasting. Put another way, it says that you place low value on your employees' efforts, a message that almost always hinders productivity. Cutting-edge ERP vendors know that an efficient user experience and focused capabilities can be a driver for improved all-around efficiency.

- **Global and stable—**Your relationship with your ERP vendor doesn't end with implementation. You'll want ongoing innovation from a vendor that's committed to the future of your manufacturing capabilities, one that can offer upgrades over time that keep you current with the new demands you encounter as your market evolves.

There's no going back to simpler times in manufacturing. With the rapid rates of change in technology, business, and culture, you need forward-looking ERP solutions that don't shackle your business to the past, but prepare you for the future. You get all that, and more, from Infor.

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