RheinBrücke
IT Consulting

Manufacturing a prosperous future with the right technology yet?

A route to better business fuelled by innovation and efficiency like never before, leveraging ERP solutions

A RheinBrücke White Paper

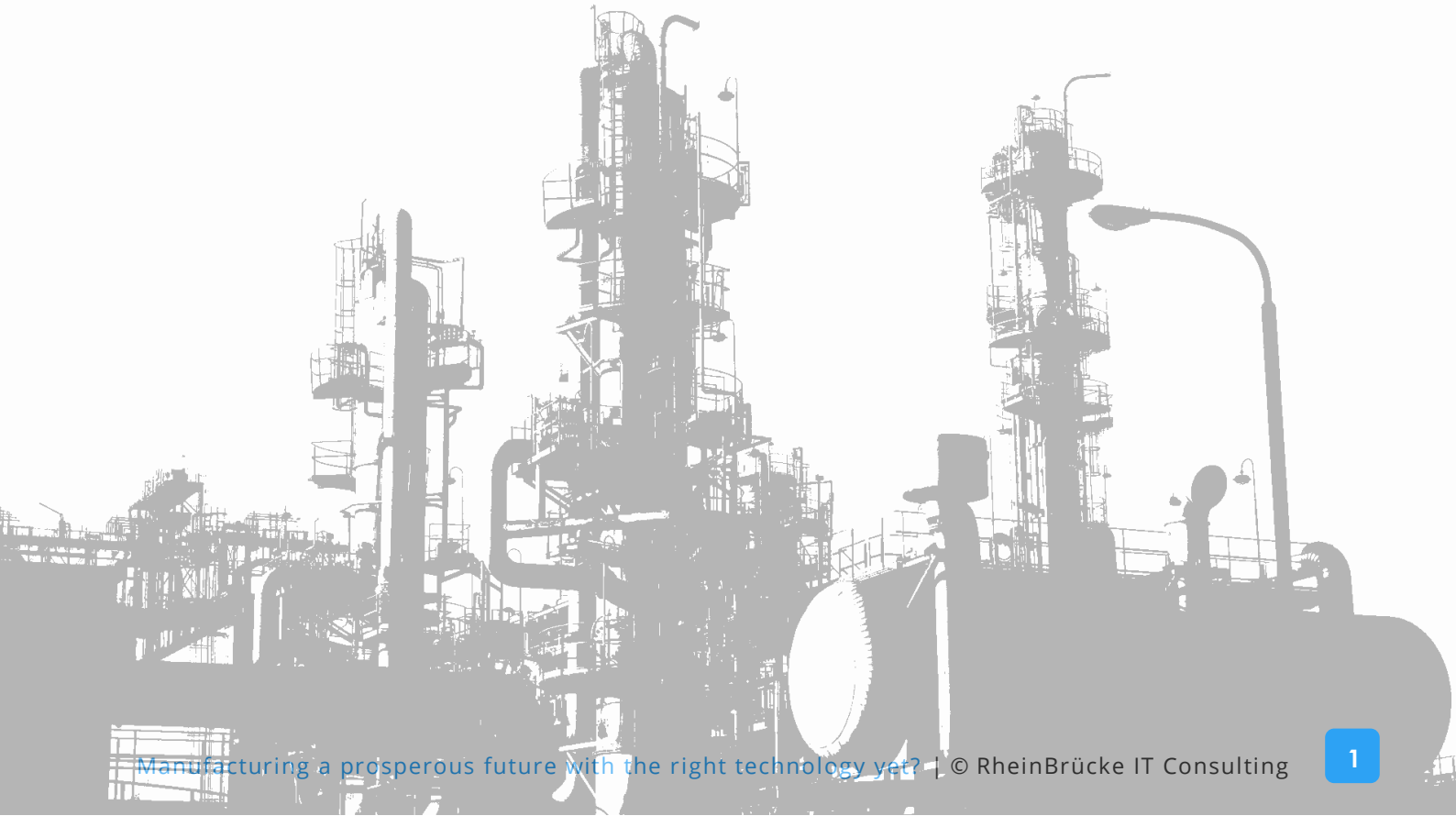
Content

Executive Summary

In order to thrive in competitive markets, solution architects ought to proactively work with their respective CXOs and other business leaders to venture technologies that have the capability to change business models for good. Today's technologies continue to be human centric, flexible, transparent and contextual that serve as a catalyst to enable innovation and efficiency like never before. When these technologies are introduced to the business models, manual and other time-consuming processes are eliminated helping stakeholders to focus on their business.

Technologies like ERP, BI and IoT are revolutionizing businesses by providing the stakeholders with the 'Metrics that matter' which is extremely crucial for their decision making processes.

No other sector has been more impacted by these technological revolutions than manufacturing. With 2017 upon us, forecasts show that the year and beyond will definitely be an exciting time in manufacturing. Solutions which seemed futuristic years ago have already been implemented in top manufacturing companies.



Technologies that are revolutionizing Manufacturing

Internet of Things(IoT)

IoT technologies for manufacturing can enhance visibility in granular levels. Manufacturers can use IoT solutions to track assets in their factories, consolidate their control rooms and increase their analytics functionality through predictive maintenance. Manufacturers can now get the optimum functionality not only batch wise but also unit wise leading to the dawn of smart manufacturing.

IoT forecasts

IoT investment by manufacturers in 2020 will be $70 billion. That's up from $29 billion in 2015.

By 2019, 75% of Large Manufacturers Will Update Their Operations and Operating Models with IoT and Analytics-Based Situational Awareness to Mitigate Risk and Speed Time to Market

Business Intelligence

Having a BI system in place can increase the efficiency of the bottom line by extracting crucial information at a rapid speed enhancing of all parts of the manufacturing process. Many manufacturers are already reaping the benefits of BI software. They noticed many process improvements on the plant floor, the whole of supply chain and beyond.

Manufacturers can create customized dashboards that are intuitive which can in turn help them in advanced analytics like what-if and predictive analysis. Manufacturers can gain so much from transforming all the plant data into business intelligence. Softwares like OPM (Operational Performance Management) and MI (Manufacturing Intelligence) helps them to apply these actionable metrics to all the manufacturing processes like production, supply chain, plant-floor ops and etc.

Business Intelligence forecasts

By the beginning of 2017, 65% of Manufacturers Will Have Metrics in Place to Evaluate and Drive Pervasive Changes in the Workplace with Their New Technology Investments.

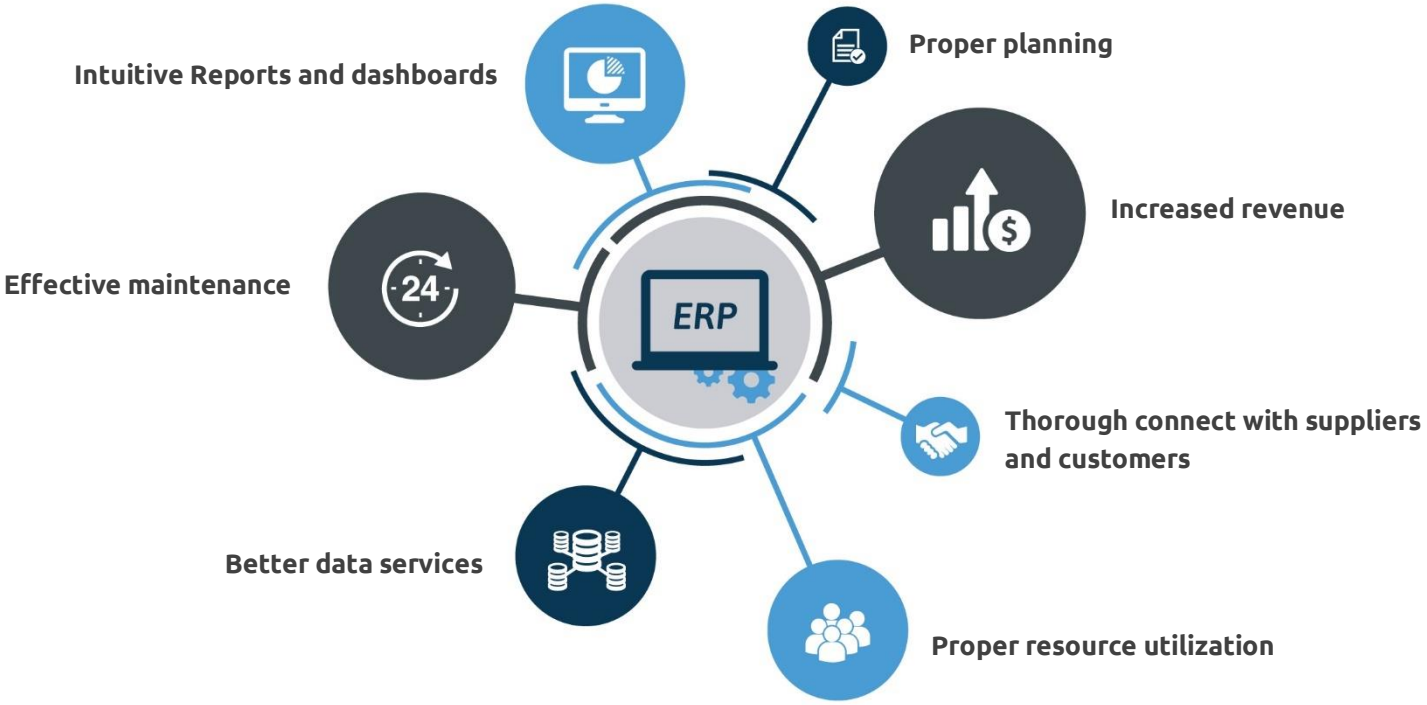
By the End of 2017, 50% of Manufacturers Will Exploit the Synergy of Cloud, Mobility, and Advanced Analytics like BI to Facilitate Innovative, Integrated Ways of Working on the Shop Floor.

ERP – The master stroke

With an ERP system, manufacturers can integrate all their processes and data sources including IoT and BI to leverage advance features which enables them to improve all the facets of their operations.

Some smart thinking manufacturers have already begun to receive real-time data and analytics from the IoT devices on the plant floor and supply chain. ERPs can play a crucial role in helping stakeholders to leverage real-time data at every step of the manufacturing cycle by managing the data, integrating it and making sense of it.

Plant floors can have sensor-embedded articles which can communicate real-time data about parameters like utilization of machine, temperature, maintenance and etc. so that the stakeholders can get the optimum performance by changing their settings. ERPs can help manufacturers by providing them access to a wide range of data on how their customers use their products which can enable them to fine-tune their products or services to better suit the individual needs of their customers and markets. Real-time analytics about inventory and third party data can help the manufacturers by providing them data about competitive pricing which will give them the opportunity to make better use of trade promotions to incentivize distributors and boost sales.



ERP forecasts

By 2019, 75% of Manufacturing Value Chains Will Undergo an Operating Model Transformation with Digitally Connected Processes That Improve Responsiveness and Productivity by 15%

By 2018, 60% of Large Manufacturers Will Bring in New Revenue from Information-Based Products and Services, While Embedded Intelligence Will Drive the Highest Profitability Levels

By the End of 2020, 50% of Manufacturers Will Derive Business Value from the Integration of Supply Chain, Plant Operations, and Product and Service Life-Cycle Management

ERP benefits to Departments

Cost

Before ERP Implementation

- Tendency to underestimate the product cost
- Unable to estimate the time required for the production process by customer
- No data about competitive pricing

ERP Benefits

- Maximize profits with a real-time visibility of the manufacturing operations
- Create accurate estimates using historical quote information and margins by customer
- Target VS Actual estimations on sales and revenue

After ERP Implementation

- **Make accurate estimations based on real-time data**
- **Make every order by customer profitable**

Production

Before ERP Implementation

- Unable to determine if all the machines are put to proper use
- Unable to gauge machine breakdowns

ERP Benefits

- Automating production schedules with right capacity
- Accurate inventory information
- Better maintenance through proper inventory and machine management

After ERP Implementation

- **Empowering business users with access to real-time input process information and production statuses**
- **Proper production control through real-time data at the touch of a button giving manufacturers maximum resource and equipment utilization**

Purchasing

Before ERP Implementation

- Unable to determine the right time to place orders
- Unable to compare the price of raw materials given by various suppliers

ERP Benefits

- Eliminate the manual tracking of inventory
- Managing complex orders and avoiding last minute orders
- Arrive at the right purchasing forecast
- Gain visibility into current and future production work orders in one comprehensive view

After ERP Implementation

- **Adopting lean manufacturing practices by only having the inventory required for the smooth running of manufacturing processes and buy more when demand calls for it from the most profitable supplier.**

Scheduling

Before ERP Implementation

- Late work orders
- Wrong machine booking and inventory forecasts

ERP Benefits

- More accurate scheduling and delivery of orders
- Minimize scheduling charges with the right forecasts

After ERP Implementation

- **Maximize production with minimum downtime**
- **Better prioritization of work orders**

Sales and CRM

Before ERP Implementation

- Tracking of customer orders is difficult
- Difficult to communicate the order status

ERP Benefits

- Reduce double entry of data and eliminate manual tracking of prospects and customers
- Respond more accurately to customer requests with a single view of all orders and delivery time

After ERP Implementation

- **Develop real-time reports and dashboards for accurate sales pipeline meetings**

Logistics

Before ERP Implementation

- Unable to determine which order is ready to ship
- Unable to arrive at the optimum logistics to fright the goods

ERP Benefits

- Create mobile notifications like picklist and etc.
- Shipping status can be given in real-time

After ERP Implementation

- **Anticipate work order completion with visibility of real-time work order statuses to ensure on-time delivery for customers**

Finance

Before ERP Implementation

Complex to manage financial data from various data sources

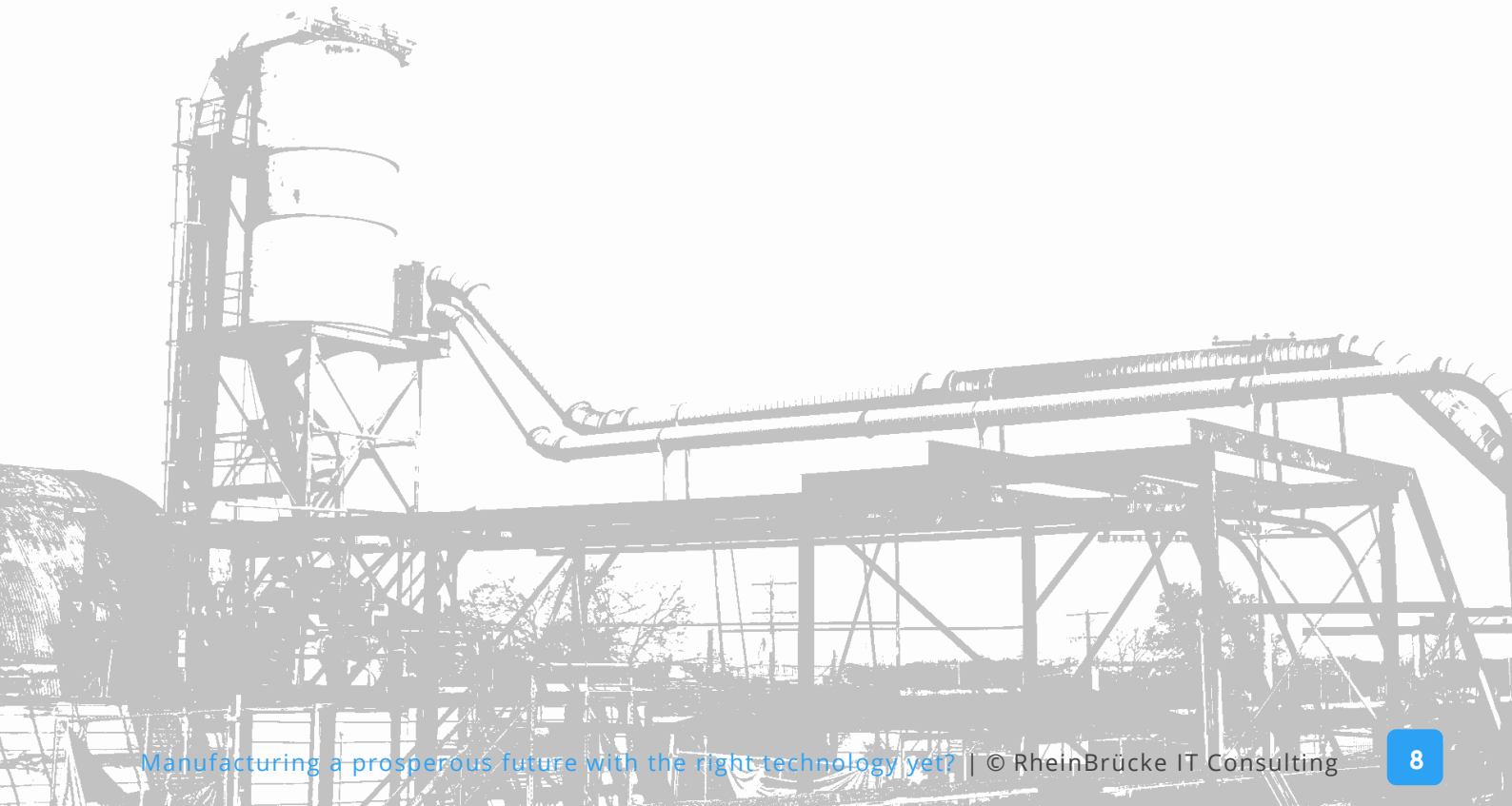
ERP Benefits

Quality of financial forecasts can be enhanced with real-time financial and operational data

More accurate sales information with visibility from quote to cash

After ERP Implementation

With real-time data from the floor to finances, greater profitability becomes more attainable through accurate financial data

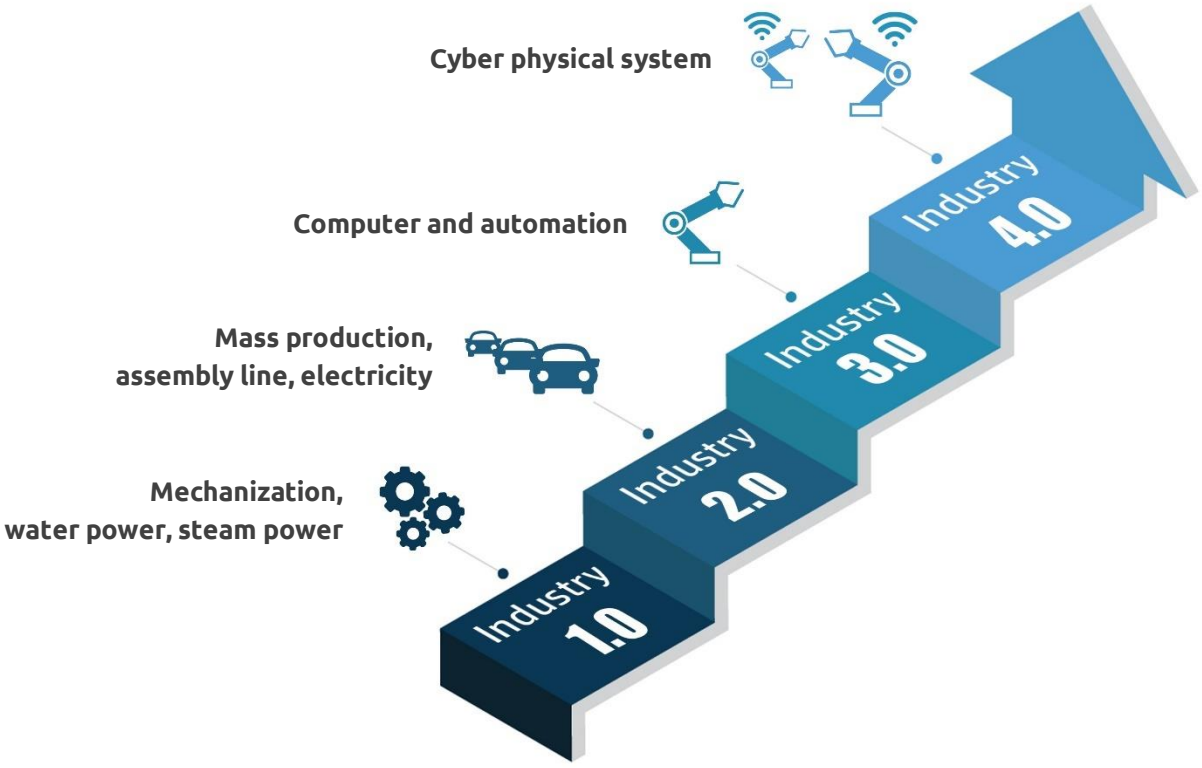


Make your ERP Industrie 4.0 compatible for better returns

Industrie 4.0 is more than just a catchphrase. Industrie 4.0 is currently creating ripples in the manufacturing sector.

In simplistic terms, **McKinsey** defines Industrie 4.0 as

"The next phase in the digitization of the manufacturing sector, driven by four disruptions: the astonishing rise in data volumes, computational power, and connectivity, especially new low-power wide-area networks; the emergence of analytics and business-intelligence capabilities; new forms of human-machine interaction such as touch interfaces and augmented-reality systems; and improvements in transferring digital instructions to the physical world, such as advanced robotics and 3-D printing. The four trends are not the reason for the "4.0," however. Rather, this is the fourth major upheaval in modern manufacturing, following the lean revolution of the 1970s, the outsourcing phenomenon of the 1990s, and the automation that took off in the 2000s"



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Make your ERP Industrie 4.0 compatible for better returns

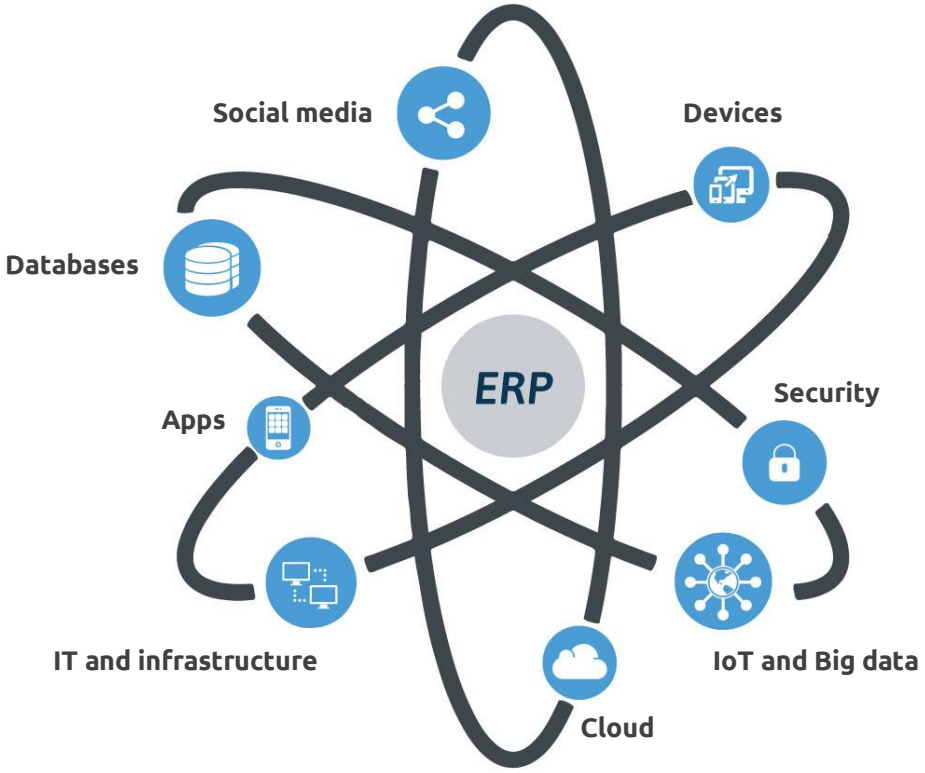
With these disruptions, ERP will become a more compelling nucleus to integrate these technologies. ERP systems will have to become the backbone to the sensors, smart machines, logistics systems, production facilities and etc. to communicate with each other and exchange rules as the product advances the production line. The Industrie 4.0 compatible ERP system fully integrates with manufacturing execution systems (MES). As a result, it will be possible to track and document the transformation of raw materials to finished goods.

By 2019, 50% of Manufacturers Will Have Modernized Their Logistics Network to Leverage 3D Printing, Robotics, and Cognitive Computing to Support Innovative Postponement Strategies.

Aim at Digital Transformation

Technological advances such as human to machine interactions, machine to machine interactions, artificial intelligence, additive manufacturing, IoT and etc. are unleashing innovation that is changing the way manufacturing works. Digital-manufacturing technologies has the capability to transform every manufacturing process like manufacturing value chain, R&D, factory operations, supply chain, marketing, sales and etc. Digital connectivity among designers, managers, workers, consumers, and physical industrial assets will unlock enormous value and change the manufacturing landscape forever.

It is extremely crucial for manufacturing companies to get access to the unprecedented data locked in their ERP systems. This is important for the stakeholders to make use of the information for driving real-time global alignment for an entire organization.



By 2018, Only 30% of Manufacturers Investing in Digital Transformation Will Be Able to Maximize the Outcome; the Rest Are Held Back by Outdated Business Models and Technology

By 2019, 35% of Large Global Manufacturers with Smart Manufacturing Initiatives Will Integrate IT and OT Systems to Achieve Advantages in Efficiency and Response Time

Keep your customer at the heart of development

Manufacturers must understand the requirements of their customers and innovate based on those requirements which will shape manufacturing value chains. ERPs can help manufacturers to adopt capabilities like mass customization, timely delivery of products and provide differentiated products to business.

How does an ERP system help Manufacturers to serve their customers better combatting competitive advantage?

- ERP helps to decrease customer pricing by improving productivity
- ERP Increases accuracy of your own inventory as well as your customers'
- ERP optimizes quality by better managing product consistency
- ERP increases speed to market
- ERP provides faster price quotes and faster delivery
- ERP effectively manages multiple production sites and multiple manufacturing modes.

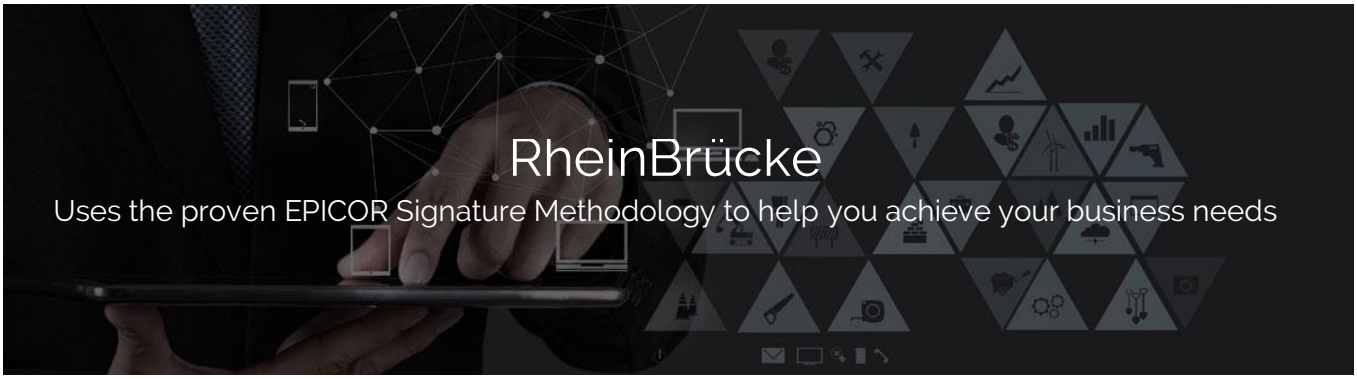
By the End of 2017, Those Manufacturers That Have Leveraged Customer-Centricity Investments Will Gain Market Share Growth in the Range of 2–3 Percentage Points.

By 2018, 60% of top 100 Global Manufacturers Will Be Using a Product Innovation Platform Approach to Drive Enterprise Quality Throughout the Product and Service Life Cycles.

Ready for investing in ERP to transform your Manufacturing Ops?

If you're ready for the strategic next step, then here is an option that you can evaluate

Epicor ERP



Innovative technologies from Epicor ERP and RheinBrücke's service paves the way for today's Manufacturers to streamline business processes and break down barriers to growth, while remaining agile for rapid response to customer demands and evolving markets.

To know more about EpicPay visit - https://www.rheincs.com/solutions/erp-enterprise-solutions-and-services/epicor

EpicPay

EpicPay is the ideal solution for organizations using EPICOR 10 and above with functionalities that enable you to handle payroll processing with ease.

To know more about EpicPay visit - http://en.rheincs.com/epicpay-smart-payroll-solution

Epicor HCM

Epicor HCM is designed by HR industry professionals. Epicor HCM provides the businesses with the tools they need to track data systematically rather than manually thus giving businesses more time to pursue their strategic objectives.

To know more about Epicor HCM visit – http://en.rheincs.com/epicor-hcm-human-capital-management

CCT (Copy Company Tool)

Built on top of Epicor ERP, the RheinBrücke CCT moves company configuration settings from one company to another, without manual intervention. It accelerates the configuration copying process, reduces errors, and improves compliance by generating accurate reports.

The Epicor–CCT (Copy Company Tool) completes the entire task of configuration migration in an automated (hence error free) environment within few minutes. This unique tool is currently the only such solution available for the Epicor ERP platform.

To know more about Epicor HCM visit – https://rheincs.com/rheinbrucke-cct-copy-company-tool

About RheinBrücke IT Consulting

RheinBrücke focuses on offering consulting technology and outsourcing solutions and services that enable clients to stay competitive and achieve quick growth and profitability. With operational headquarters in Cologne, Germany, the company has a strong focus on the SME Market, with a deep understanding of what it takes for SMEs to succeed. RheinBrücke helps clients adapt to a changing marketplace by ensuring their IT ecosystems are relevant, efficient and perfectly tuned.

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