

MANUFACTURING EBOOK



Overcoming Manufacturing Challenges with Odoo ERP



Summit your business goals in 2023

Are you struggling to effectively manage and automate your manufacturing business processes?

You're not alone. Many manufacturers face the same challenges with coordinating production, inventory management, and financials—but there is a solution.

Odoo ERP offers the most free and flexible system for streamlining and optimizing all aspects of your operations, all while remaining one of the most comprehensive solutions available. From cloud-based deployment options to mobile access and advanced analytics, **Open Source Integrators (OSI) can configure Odoo's systems to provide your company with the tools you need to make data-driven decisions and boost efficiency.**





Addressing the crux of today's manufacturing challenges

Cutting costs and restrategizing

We're not going to sugarcoat it. Our current economic climate is less than ideal, and companies have two main options: Cutting costs and restrategizing.

With careful implementations that lead to higher efficiencies and less waste, ERP systems such as Odoo can certainly help in this effort, especially when it comes to cutting costs. OSI's approach to Odoo ERP implementation and integration—"Analyze, Optimize, Automate, Transition"—is often implemented to render exactly this, resulting in the lowered costs and reduced labor that companies need to relieve financial pressures.

On the other hand, restrategizing involves identifying and addressing unprofitable product lines, customer segments, or geographic areas, as well as identifying opportunities.

This approach allows a company to take advantage of a crisis rather than becoming a victim of it, and that's why our implementation methods are ideally tailored to help companies restrategize.

One way to restrategize is by growing market share by taking it from competitors. The key to this is focusing on customers rather than competitors. Outperforming competitors by delivering a better offer and being able to learn and adapt faster than them may be the only sustainable competitive advantage. So, in our opinion, we think that Manufacturers should focus on understanding and meeting the changing needs of their customers, rather than becoming too preoccupied with their competition. OSI can help with this by helping clients build better marketing and customer sales tools.

A person wearing a blue and black jacket, red pants, and a colorful knit hat is seen from behind, looking out over a vast, rugged mountain range under a clear sky. The mountains are grey and rocky, with some snow patches. The person is standing on a rocky ledge.

Finding vantage for production planning challenges

Odoo feeds opportunity in your supply chain

Manufacturers are facing increasing challenges with managing their supply chain, from unpredictable customer demand to supply shortages and delivery delays. In the past, manufacturers could rely on historical data to anticipate future needs and create accurate forecasts, but with constantly changing buying behaviors, it's become more difficult to predict customer demand.

Advanced data analytics can help manufacturers overcome these challenges by providing actionable insights from large amounts of data. This goes beyond traditional data intelligence to include predictive and prescriptive analytics, which can help manufacturers make better business decisions and optimize their production processes.

By using these insights, manufacturers can create custom reports and dashboards that allow them to identify new product opportunities, streamline production and make more informed decisions that lead to increased efficiency and profitability. With the help of advanced data analytics, manufacturers can stay ahead of the curve and navigate the ever-changing landscape of the manufacturing industry.

A well-configured Odoo system will provide transparency into supply chain management by providing a comprehensive and integrated view of all supply chain processes, from procurement to production to delivery, such as:

+ Inventory Management:

Odoo can help to optimize inventory levels by providing real-time visibility into stock levels and automatically triggering reorder points when stock falls below a certain level.

+ Procurement:

Odoo can automate the procurement process by creating purchase orders, tracking vendor deliveries, and managing supplier relationships.

+ Production Planning:

Odoo can help to plan and schedule production by providing visibility into available materials and resources and taking into account capacity constraints.

+ Logistics:

Odoo can help to manage logistics by tracking shipping and delivery schedules, managing transportation routes, and monitoring freight costs.

+ Demand Planning:

Odoo can help to forecast demand for products by analyzing historical sales data and taking into account external factors such as seasonal fluctuations. This can be highly enhanced with alternative MRP tools available for Odoo.

+ Quality Management:

Odoo can help to manage the quality of products by tracking defects, non-conformances and implementing corrective and preventive actions.

+ Collaboration:

Odoo can help to improve collaboration and communication between different departments and suppliers by providing a central repository for data and real-time visibility into the status of orders and deliveries.

Supply chain management is an important aspect of a production manager's responsibilities, and if there are significant issues with the supply chain that result in lost revenue, production delays, or other negative impacts on the business, it could lead to unpleasant consequences. A well set up and managed Odoo system is the Production Manager's best friend.



Hazard-proofing safety challenges

Using Odoo to address a pervading, ever-present issue

We think that an Odoo ERP system addresses something that every Production or Operations Manager is held accountable for, but rarely gets the attention it needs—safety.

Safety is not an isolated business concern; rather, it is integrated with every element of operations. For example, just look at the full breadth of your operations:

Proper production planning leads to certainty and predictability which allows operators to maintain focus on the plant floor; supply chain ensures that the plan is achievable and prevents unexpected substitutions or deviations from normal manufacturing processes; timesheet management ensures proper oversight of employee fatigue; inventory management limits employee hazards by minimizing employee / equipment interactions (ie forklift operations).

An ERP system serves as the nervous system that integrates these business operations. All of these elements contribute to safe operations, and OSI's implementation of an ERP system ensures that these impacts are delivered directly to the floor, where safety matters most.

Some specific ways that Odoo can contribute to your safety program:

+ Incident Tracking:

Odoo can help to track and manage safety incidents by providing a centralized database for incident reports and allowing users to track incident investigations, follow-up actions and close incidents.

+ Safety Compliance:

Odoo can help to ensure compliance with safety regulations by providing automated alerts for safety inspections, audits, and compliance deadlines.

+ Risk Management:

Odoo can help to identify and manage risks by providing real-time visibility into safety-related data, such as incident reports and inspection results, and allowing users to track and analyze safety trends.

+ Training Management:

Odoo can help to manage employee safety training by providing a centralized database for employee training records and allowing users to track training completion and expiration dates.

+ Equipment Maintenance:

Odoo can help to manage equipment maintenance by providing automated alerts for scheduled maintenance and tracking the completion of maintenance tasks to ensure equipment is safe to operate.

+ Safety Metrics:

Odoo can help to track and analyze safety metrics such as incident rates, near-misses, and other data to help identify areas for improvement and to assess the effectiveness of safety programs.

By providing an integrated view of safety-related information and processes, an ERP system can help to improve safety, reduce risks, and ensure compliance with safety regulations.



Belaying staffing challenges

Leveraging Odoo to optimize teams, training, and staff development

In today's manufacturing industry, competition for staff is fierce, and turnover rates are high. Finding and retaining qualified team members is a challenge that manufacturers are facing. To stay competitive and attract talent, many manufacturers are turning to modern technology to improve their operations.

One of the key ways that manufacturers are modernizing their technology is by implementing modern ERP systems. Odoo can help to attract workers by providing cloud deployment options and mobile capabilities that are attractive to the modern worker.

With a growing preference for remote work and user-friendliness among younger workers, these features can be critical in helping to attract and retain talent.

By modernizing with Odoo, manufacturers can improve the efficiency of their operations and create a more attractive working environment. Providing state-of-the-art tools and technologies for their staff can help manufacturers can differentiate themselves from their competition, and attract the best talent available in the market.

Of course, adopting such technologies can be a challenge in itself, and that's why it's important to ensure your staff get acquainted with them in a carefully planned manner. That said, here are some best practices for ERP training and staff development:

- + Involve employees in the selection process:** Involving employees in the selection of the ERP system can help ensure that their needs and preferences are taken into account. This can also increase buy-in and commitment to the new system.
- + Identify the training needs of different groups of employees:** Different groups of employees may have different training needs. For example, managers may need more in-depth training on how to use the system to make strategic decisions, while front-line employees may need more basic training on how to input and retrieve data.
- + Provide clear training materials:** Training materials should be easy to understand and should include step-by-step instructions and examples. They should also be tailored to the specific needs and roles of the employees being trained.
- + Offer both online and in-person training options:** Some employees may prefer to learn online, while others may prefer in-person training. Offering a mix of training options can help ensure that all employees have access to the training they need.
- + Provide ongoing support and training:** ERP systems are complex and can be difficult to learn. It is important to provide ongoing support and training to help employees continue to develop their skills and knowledge of the system.
- + Encourage employees to ask questions and provide feedback:** Encourage employees to ask questions and provide feedback during training and after the system is implemented. This can help identify any problems or areas that need improvement.
- + Use a variety of training methods:** Different training methods may be more effective for different employees. Consider using a mix of methods, such as hands-on exercises, lectures, and webinars, to engage different learning styles.
- + Measure the effectiveness of training:** Measure the effectiveness of training by collecting feedback from staff and evaluating their performance on tasks related to the ERP system. Use this feedback to continuously improve the training process.

By following these best practices, organizations can ensure that their employees are well-trained and able to effectively use the ERP system, which can lead to improved efficiency and productivity.



Market challenges that call for a sure grip

Meeting market needs with Odoo insights

The growth of the manufacturing industry in many countries has been bottlenecked or stagnant for some time, and is expected to remain so for the foreseeable future. In such a market scenario, manufacturers need to look for new ways to increase their market share by outcompeting their less agile rivals.

However, with the advent of the internet, buyers have easy access to information about products, making traditional sales and marketing approaches ineffective. Additionally, buyers have put up barriers to protect themselves from interruptive sales and marketing messages, making it difficult for manufacturers to reach them.

The modern buyer wants to be educated, not pitched or sold to. Manufacturers who provide helpful, relevant and educational information are able to earn their customers' attention and consideration. Those who leverage their internal expertise to educate their customers are earning trust, closing more sales and increasing their market share.

One of the biggest challenges manufacturers face in achieving this is the traditional focus on products rather than the needs and wants of their customers. To overcome this hurdle, manufacturers must shift their focus towards understanding their customers better and providing solutions that meet their needs.

Odoo can be used for market research in several ways:

+ Utilize Stored Data

One way is by using the data stored in Odoo to analyze customer behavior and preferences. This can help companies identify trends and patterns in their sales data, which can inform market research efforts.

+ Reporting and Analytics for Custom Insights

Another way is by using Odoo's reporting and analytics tools to create customized reports and dashboards that provide insights into specific aspects of the market, such as product demand or pricing trends.

Additionally, Odoo can be integrated with other market research tools, such as survey and data collection software, to gather and analyze feedback from customers and other stakeholders.

+ OSI's Approach: Digital Twin Strategies

OSI has pioneered an approach to help companies unlock growth and efficiencies, using "Digital Twin" strategies. One of the most daunting tasks in manufacturing is change management. Continuous improvement, lean manufacturing, and industrial strategies all attempt to address this challenge. However, automation and cost-cutting is not always the answer to efficiency.

Often, minor incremental improvements can be far more impactful than a major CAPEX spend. A digital twin maintains all of your business processes and transactions in one central repository. It represents your entire business in a graphical, process oriented format. OSI leverages digital twin technology to quickly identify low cost changes to maximize impact in the form of transactional automation, business process optimization, and new process rapid return on investment calculations. A digital twin can be used to quickly evaluate risk, cost, payback, and time savings associated with a proposed change. This eliminates changing for change's sake, and focuses your business' change management on data driven change.



Fostering a realistic approach to Odoo

Tactical challenges for manufacturers to consider when adopting Odoo

We didn't come here to feed you any bull, so here's the truth:

Indeed, Odoo is a popular open-source ERP solution that can be customized to meet the needs of manufacturers, but it has a few challenges.

OSI has mitigated these concerns in the software for a variety of very large implementations. Odoo software is constantly updated and developed, so it is always worth checking the latest version and functionalities to see if they have addressed some of these limitations.

That in mind, some of the considerations of Odoo for manufacturing include:

- + **In depth MES, PLM or other specific functionality:** While Odoo can be configured to meet the needs of manufacturers, it may not have all the native functionality that a specific industry needs, such as advanced production planning or detailed shop floor data collection. This can be addressed by customization– See the following.
- + **Customization temptations:** Odoo's open-source nature allows for more flexibility and freedom than any other ERP system. The risk by many (particularly newer users) is to resort to over-customization. There are Community MES and PLM add on modules available, but maintenance and support need to be carefully considered.
- + **Scalability engineering:** While Odoo can handle a certain level of complexity, it may need special configuration to handle the needs of larger manufacturers with multiple sites and high-volume production. PostgreSQL is quite robust, but may require additional hardware and infrastructure to maintain optimal performance as users and tasks are added. High volume data and transactions are possible, again with thoughtful engineering.
- + **Special configuration needed to handle multiple sites:** Advanced configuration is needed for Odoo to handle multi-site operations. This requirement needs specific knowledge by a trained Subject Matter Expert.
- + **Fused reporting with other information/integration with Data Warehouses/Data Lakes:** Odoo's reporting capabilities tend to be more stand alone, making it difficult to run detailed reports and analyze data from multiple sources.
- + **Built-in reporting and visualization options:** Odoo has some basic built-in reporting options. Many users often wish for reports that they have seen in other systems, and ask for new reports that may look like ones they have had access to previously.
- + **Flexible and open architecture and business orientation:** Odoo is the most flexible and open ERP on the market. It requires experience, local market knowledge and good judgment to get the best results. Following an experienced professional, who can order the sequence of activities successfully is key. Self implemented or poorly implemented systems (by inexperienced staff or consultants) are likely going to fail.

A photograph of a steep, rocky mountain peak under a clear blue sky. Several rock climbers are visible on the face of the mountain, some near the top and others lower down. The rock is light-colored and shows signs of weathering and cracks. A dark blue semi-transparent banner is overlaid on the bottom left of the image, containing the title text.

Maintaining an upward-facing mindset

Leveraging Odoo to optimize teams, training, and staff development

Manufacturers are often faced with a wide range of pressing issues that can make it difficult for them to focus on long-term goals. However, to ensure the continued growth and success of their business, it's important for manufacturers to think beyond the immediate problems they are facing.

One way to do this is by adopting technology that supports the Industrial Internet of Things (IIoT). This extended network of interconnected devices can help manufacturers anticipate and prepare for long-term challenges by providing real-time data and insights.

For example, by using sensors to monitor the condition of equipment and parts, manufacturers can identify potential issues before they occur and take preventative measures to avoid costly downtime.

This type of real-time preventative maintenance can help manufacturers reduce costs, improve equipment reliability and extend the life of their assets. By relying on IIoT technology, manufacturers can take a proactive approach to managing their operations, and position themselves for long-term success.

Odoo, as a comprehensive ERP solution, can integrate with the Industrial Internet of Things (IIoT) to provide manufacturers with real-time data and insights. Odoo can work with IIoT by integrating with sensors, devices, and other IIoT-enabled equipment to collect and analyze data. This data can be used to improve production processes, optimize inventory levels, and identify potential issues before they occur.

Some specific ways Odoo can work with IIoT include:

- + **Real-time monitoring:** Odoo can integrate with IIoT devices to provide real-time monitoring of equipment and processes, allowing manufacturers to identify potential issues and take preventative measures to avoid downtime.
- + **Predictive maintenance:** By integrating with IIoT devices, Odoo can analyze data to predict when equipment is likely to fail and schedule maintenance accordingly, reducing downtime and increasing equipment reliability.
- + **Inventory management:** By integrating with IIoT devices, Odoo can provide real-time visibility into inventory levels, allowing manufacturers to optimize their inventory and reduce costs.
- + **Quality control:** By integrating with IIoT devices, Odoo can help to improve quality control by providing real-time data on product quality and identifying any issues that need to be addressed.
- + **Remote monitoring:** Odoo can integrate with IIoT devices to provide remote monitoring of equipment and processes, allowing manufacturers to access real-time data from anywhere and make data-driven decisions.



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contact@opensourceintegrators.com



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