



MANUFACTURING

EPICOR

The Hidden Costs of Legacy ERP Systems in Manufacturing





Overview of ERP Systems: Briefly explain what ERP systems are and their importance in manufacturing.

Purpose of the eBook: Highlight the goal of uncovering the hidden costs associated with legacy ERP systems.

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“According to Gartner, maintaining legacy ERP systems can consume a significant portion of IT budgets, often between 60% and 80%.”

Gartner's Predictions for ERP Report

“IDC's research indicates that companies using legacy ERP systems face higher operational costs due to inefficiencies and the need for extensive customisations.”

IDC - Modernising and Transforming Legacy Applications



Overview of ERP Systems: Enterprise Resource Planning (ERP) systems are integrated software platforms used by organisations to manage and automate core business processes. In manufacturing, ERP systems streamline operations, improve efficiency, and provide real-time data for decision-making.

Purpose of the eBook: This eBook aims to uncover the often-overlooked costs associated with maintaining and using legacy ERP systems in manufacturing. By understanding these hidden costs, companies can make informed decisions about upgrading to modern ERP solutions.

Understanding Legacy ERP Systems

DEFINITION AND HISTORY

Definition

Legacy ERP systems are older enterprise resource planning software platforms that were once considered cutting-edge but have since been surpassed by newer, more advanced technologies. These systems were typically implemented decades ago and have been maintained through patches and updates to keep them functional.

History

The concept of ERP systems dates to the 1960s when manufacturers began using Material Requirements Planning (MRP) systems to manage production processes. By the 1990s, ERP systems had evolved to integrate various business functions, including finance, human resources, and supply chain management. Early ERP systems were widely adopted by large enterprises. However, as technology advanced, these systems became outdated and were replaced by more modern solutions.

COMMON FEATURES AND LIMITATIONS

Common Features

Legacy ERP systems typically include basic modules for core business functions such as finance, inventory management, production planning, and human resources.

These systems were designed to centralise data and streamline operations across different departments within an organisation.

Limitations

- **Lack of Flexibility:** Legacy ERP systems are often rigid and difficult to customise. They may not easily adapt to changing business needs or integrate with new technologies.
- **Outdated Technology:** These systems are built on outdated technology stacks, making them less efficient and more prone to performance issues.
- **High Maintenance Costs:** Maintaining and supporting legacy ERP systems can be expensive due to the need for specialised knowledge and frequent updates.
- **Limited Scalability:** Legacy systems may struggle to handle increased data volumes and user loads as a company grows.
- **Poor User Experience:** The user interfaces of legacy ERP systems are often outdated and not user-friendly, leading to lower user adoption and productivity.



THE EVOLUTION OF ERP SYSTEMS

First Generation ERP

The first generation of ERP systems emerged in the 1990s, focusing on integrating various business functions into a single platform. These systems were primarily on-premises solutions, requiring significant hardware and IT infrastructure investments.

Second Generation ERP

The second generation of ERP systems, which emerged in the 2000s, introduced more advanced features and capabilities. These systems began to incorporate internet-based technologies, allowing for better connectivity and data sharing across different locations.

Third Generation ERP

The third generation of ERP systems, which we see today, are cloud-based solutions that offer enhanced flexibility, scalability, and integration capabilities. These systems leverage modern technologies such as artificial intelligence (AI), machine learning (ML), and the Internet of Things (IoT) to provide real-time insights and support advanced business processes.

THE ROLE OF ERP SYSTEMS IN MANUFACTURING

Streamlining Operations

ERP systems play a crucial role in streamlining manufacturing operations by integrating various business processes, such as production planning, inventory management, and quality control. This integration ensures that all departments have access to the same data, reducing errors and improving efficiency.

Improving Decision-Making

By providing real-time data and analytics, ERP systems enable manufacturers to make informed decisions quickly. This helps in optimising production schedules, managing inventory levels, and responding to market changes effectively.

Enhancing Collaboration

ERP systems facilitate better collaboration across different departments by providing a unified platform for communication and data sharing. This ensures that all teams are aligned and working towards common goals, leading to improved overall performance.

THE BUSINESS IMPACTS OF LEGACY ERP SOLUTIONS

Legacy systems pose many challenges, some are obvious, but many of these associated impacts are indirect business issues caused by the reliance on outdated and aging technologies. Understanding these is crucial for companies when they are devising long term strategy for their critical enterprise solutions. Over the next few chapters, we will take a look at a variety of hidden costs caused by legacy ERP applications which can affect all areas of the business.





Financial Costs

MAINTENANCE AND SUPPORT

High Maintenance Costs

Maintaining legacy ERP systems can be a significant financial burden. These systems often require specialised knowledge for troubleshooting and repairs, which can lead to expensive support contracts with vendors or third-party providers. Additionally, as the technology becomes outdated, finding skilled personnel to maintain these systems can become increasingly difficult and costly.

Vendor Dependency

Legacy ERP systems often tie companies to specific vendors for support and updates. This dependency can result in higher costs, as vendors may charge premium rates for maintaining outdated systems. Additionally, companies may face challenges if the vendor discontinues support for the legacy system.

UPGRADE AND INTEGRATION COSTS

Integration Challenges

Integrating new technologies with legacy ERP systems can be complex and costly. Custom development work is often required to ensure compatibility, leading to increased costs and extended project timelines. Additionally, legacy systems may lack the necessary APIs and integration capabilities to connect with modern applications and technologies.

Frequent Upgrades

Legacy ERP systems often require frequent upgrades to remain functional and secure. These upgrades can be costly and time-consuming, requiring significant resources and planning. Additionally, each upgrade may introduce new compatibility issues and require further customisations.

HIDDEN COSTS OF DOWNTIME

System Downtime

Legacy ERP systems are more prone to performance issues and system crashes, leading to unplanned downtime. Downtime can disrupt business operations, resulting in lost productivity, delayed orders, and dissatisfied customers. The financial impact of downtime can be significant, especially for manufacturing companies that rely on continuous production processes.

Disaster Recovery

Legacy ERP systems may lack robust disaster recovery capabilities, increasing the risk of data loss and extended downtime in the event of a system failure. Implementing and maintaining disaster recovery solutions for legacy systems can be costly and complex.

OPPORTUNITY COSTS

Missed Opportunities

The limitations of legacy ERP systems can prevent companies from taking advantage of new business opportunities and market trends. For example, legacy systems may lack the capabilities to support e-commerce, advanced analytics, or IoT integration, limiting a company's ability to innovate and stay competitive.

Employee Productivity

The inefficiencies of legacy ERP systems can impact employee productivity. Manual processes, outdated interfaces, and slow performance can lead to frustration and reduced efficiency. The opportunity cost of lost productivity can be significant, especially for companies with large workforces.

COMPLIANCE AND REGULATORY COSTS

Regulatory Compliance

Legacy ERP systems may struggle to keep up with changing regulatory requirements, leading to compliance risks and potential penalties. Ensuring compliance with industry standards and regulations can require costly customisations and frequent updates.

Audit and Reporting

Legacy ERP systems may lack advanced reporting and audit capabilities, making it difficult to generate accurate and timely compliance reports. Companies may need to invest in additional tools or manual processes to meet audit requirements, leading to increased costs.





Operational Inefficiencies

MANUAL PROCESSES

Increased Manual Work

Legacy ERP systems often lack automation capabilities, resulting in increased manual work for employees. Tasks such as data entry, inventory tracking, and order processing may require significant manual intervention, leading to higher error rates and reduced productivity. This manual work can be time-consuming and prone to human errors, which can have costly repercussions.

Error Rates

Manual processes are more susceptible to errors, which can lead to inaccurate data, production delays, and increased operational costs. Errors in inventory management, for example, can result in stockouts or overstock situations, disrupting the production process and affecting customer satisfaction.

Time-Consuming Tasks

Employees may spend a considerable amount of time performing repetitive tasks that could be automated with modern ERP systems. This not only reduces productivity but also prevents employees from focusing on more strategic and value-added activities.

DECISION-MAKING DELAYS

Outdated Data Processing

Legacy ERP systems may not provide real-time data, forcing managers to rely on outdated information for decision-making. This can negatively impact strategic planning and operational efficiency, as decisions are based on out of date, incomplete or inaccurate data.

Slow Reporting

Generating reports from legacy ERP systems can be a slow and cumbersome process. The lack of advanced reporting capabilities and real-time data access can delay critical business decisions, affecting the company's ability to respond quickly to market changes and shifting customer demands.

Limited Visibility

Legacy ERP systems may not offer comprehensive visibility into all aspects of the business. This can hinder managers' ability to monitor key performance indicators (KPIs) and identify areas for improvement. Limited visibility can also make it difficult to track production progress, manage inventory levels, and optimise resource allocation.

INEFFICIENT WORKFLOWS

Fragmented Processes

Legacy ERP systems may not fully integrate all business processes, leading to fragmented workflows and data silos. This can result in inefficiencies, as employees may need to manually transfer data between different systems or departments, increasing the risk of errors and delays.

Lack of Standardisation

Without standardised processes, different departments may develop their own ways of handling tasks, leading to inconsistencies and inefficiencies. This lack of standardisation can make it difficult to implement best practices and optimise operations across the organisation.

Bottlenecks: Inefficient workflows can create bottlenecks in the production process, slowing down operations and reducing overall productivity. Identifying and addressing these bottlenecks can be challenging with legacy ERP systems, as they may lack the necessary tools and capabilities to analyse and optimise workflows.



COMMUNICATION BARRIERS

Poor Collaboration

Legacy ERP systems may not support effective communication and collaboration between departments. This can lead to misunderstandings, misaligned goals, and delays in decision-making. Poor collaboration can also hinder the company's ability to respond quickly to customer inquiries and resolve issues.

Data Silos

Data silos occur when information is stored in separate systems or departments, making it difficult to access and share across the organisation. Legacy ERP systems often contribute to data silos, as they may not integrate with other business applications or provide centralised data access. This can result in duplicated efforts, inconsistent data, and reduced efficiency.

Limited Access

Legacy ERP systems may not offer remote or mobile access, limiting employees' ability to access critical information and collaborate effectively. This can be particularly challenging for companies with multiple locations or remote workers, as it hinders their ability to stay connected and informed.

IMPACT ON CUSTOMER SATISFACTION

Delayed Orders

Inefficient processes and decision-making delays can result in delayed orders and longer lead times. This can negatively impact customer satisfaction and lead to lost sales and impacts future revenue. Customers expect timely and accurate order fulfilment, and any delays can damage the company's reputation and customer relationships.

Inaccurate Information

Errors in data entry and reporting can lead to inaccurate information being communicated to customers. This can result in incorrect order details, billing errors, and other issues that frustrate customers and erode trust in the company.

Inconsistent Service

Legacy ERP systems may not support consistent service levels across different channels and touchpoints. This can lead to varying customer experiences, making it difficult to maintain high standards of service across the business and meet demanding customer expectations.



Scalability Issues

Growth Limitations

Legacy ERP systems can hinder business growth. As companies expand, these systems may struggle to handle increased data volumes and user loads, leading to performance issues and system crashes. This can result in downtime, lost productivity, and frustrated employees.

Adaptability

Adapting to new market demands and technological advancements can be difficult with legacy ERP systems. These systems are often inflexible and cannot easily accommodate new business processes or integrate with modern technologies. This lack of adaptability can prevent companies from responding quickly to market changes and taking advantage of new growth opportunities.

Impact on Innovation

BARRIERS TO INNOVATION

Technological Limitations

Legacy ERP systems are built on outdated technology stacks, which can limit their ability to support new and emerging technologies. This can hinder a company's ability to innovate and adopt advanced manufacturing techniques, such as additive manufacturing, robotics, and automation. The lack of integration capabilities with modern technologies can prevent companies from leveraging the full potential of Industry 4.0.

Inflexibility

Legacy ERP systems are often rigid and difficult to customise. This inflexibility can make it challenging for

companies to adapt to changing market demands and implement new business processes. The inability to quickly respond to market changes can result in missed opportunities and reduced competitiveness.

Limited Data Analytics

Advanced data analytics and business intelligence are crucial for driving innovation and making informed decisions. Legacy ERP systems may lack the capabilities to perform advanced analytics, such as predictive modelling, machine learning, and real-time data analysis. This can limit a company's ability to gain insights from their data and make data-driven decisions that drive innovation.

Integration Challenges

Integrating legacy ERP systems with modern technologies and applications can be complex and costly. This can create barriers to innovation, as companies may struggle to implement new solutions that require seamless integration with their existing ERP system. The lack of integration can result in data silos and fragmented processes, hindering the flow of information and collaboration across the organisation.

IMPACT ON EMPLOYEE MORALE

Frustration with Outdated Technology

Employees working with outdated ERP systems may experience frustration and dissatisfaction due to the inefficiencies and limitations of the system. This can lead to decreased morale and motivation, as employees may feel that they are unable to perform their tasks effectively and efficiently.

Difficulty Attracting Talent

Modern job seekers, especially those in the technology and manufacturing sectors, expect to work with up-to-date and innovative tools. Companies relying on legacy ERP systems may struggle to attract top talent, as potential employees may be deterred by the prospect of working with outdated technology. This can impact the company's ability to build a skilled and highly motivated workforce.

Increased Turnover

The limitations of legacy ERP systems can prevent companies from taking advantage of new business opportunities and market trends. For example, legacy systems may lack the capabilities to support e-commerce, advanced analytics, or IoT integration, limiting a company's ability to innovate and stay competitive.

Employee Productivity

High employee turnover can be a consequence of low morale and job dissatisfaction. Employees who are frustrated with inefficient systems may seek opportunities elsewhere, leading to increased recruitment and training costs for the company. High turnover can also disrupt operations and negatively impact productivity.

Training Challenges

Training new employees on legacy ERP systems can be time-consuming and challenging. The outdated interfaces and complex processes may require extensive training, which can divert resources away from other important initiatives. Additionally, the lack of user-friendly features can make it difficult for employees to quickly become proficient with the system.



STIFLING INNOVATION CULTURE

Resistance to Change

Legacy ERP systems can create a culture of resistance to change within the organisation. Employees and managers may be reluctant to adopt new technologies and processes due to the perceived complexity and risks associated with transitioning from the legacy system. This resistance can stifle innovation and prevent the company from embracing new opportunities.

Lack of Agility

Innovation requires agility and the ability to quickly adapt to new ideas and market trends. Legacy ERP systems can hinder a company's agility by imposing rigid processes and limiting the ability to experiment with new approaches. This lack of agility can prevent the company from staying ahead of competitors and responding to customer needs effectively.

Innovation Fatigue

Continuous efforts to work around the limitations of legacy ERP systems can lead to innovation fatigue among employees. The constant struggle to implement new ideas within the constraints of the outdated system can drain enthusiasm and creativity, making it difficult to sustain a culture of innovation.

MISSED OPPORTUNITIES

Delayed Product Development

The inefficiencies and limitations of legacy ERP systems can delay product development and time-to-market. This can result in missed opportunities to capitalise on new market trends and customer demands. Companies may struggle to keep up with competitors who are able to innovate and launch new products more quickly.

Inability to Leverage Emerging Technologies

Emerging technologies, such as the Internet of Things (IoT), artificial intelligence (AI), and machine learning, offer significant opportunities for innovation in manufacturing. Legacy ERP systems may lack the capabilities to integrate with these technologies, preventing companies from leveraging their full potential. This can result in missed opportunities to improve operational efficiency, enhance product quality, and drive innovation.

Reduced Competitiveness

Companies that rely on legacy ERP systems may find it difficult to compete with more technologically advanced competitors. The inability to innovate and adopt new technologies can result in reduced competitiveness, as customers may prefer companies that offer more advanced and efficient solutions.



Transitioning to a Modern ERP System

Modern ERP solutions offer a wide range of benefits that can transform your business operations, from enhanced integration and automation to real-time data access and advanced analytics. This chapter will explore the key advantages of modern ERP systems, including their scalability, flexibility, and cloud-based access, which enable businesses to adapt to changing market conditions and customer demands.

Additionally, we'll delve into how these systems improve collaboration, customer service, regulatory compliance, cost efficiency, security, and support for innovation. By understanding these benefits, you'll be better equipped to make informed decisions about upgrading your ERP system and driving your business forward.

BENEFITS OF MODERN ERP

Enhanced Integration and Automation

Modern ERP systems offer seamless integration with other business applications and technologies. This allows for automated workflows, reducing the need for manual data entry and minimising errors. Automation streamlines processes such as inventory management, order processing, and financial reporting, leading to increased efficiency and productivity.

Real-Time Data and Analytics

Modern ERP systems provide real-time data access and advanced analytics capabilities. This enables manufacturers to make informed decisions quickly, based on up-to-date information. Real-time insights into production, inventory, and sales help in optimising operations, reducing waste, and improving overall performance.

Scalability and Flexibility

Modern ERP solutions are designed to grow with your business. They offer scalable options that can handle increased data volumes and user loads as your company expands. Additionally, these systems are flexible and can be easily customised to meet the specific needs of your business, allowing you to adapt to changing market conditions and customer demands.

Cloud-Based Access

Many modern ERP systems are cloud-based, providing several advantages:

- **Accessibility:** Employees can access the system from anywhere, at any time, using any device with an internet connection.
- **Cost Savings:** Cloud-based ERP systems reduce the need for expensive on-premises hardware and IT infrastructure.
- **Security:** Cloud providers offer robust security measures, including data encryption, regular backups, and disaster recovery plans.

Improved Collaboration

Modern ERP systems facilitate better collaboration across departments by providing a unified platform for communication and data sharing. This ensures that all teams have access to the same information, reducing silos and improving coordination. Enhanced collaboration leads to more efficient workflows and better overall performance.

Enhanced Customer Service

With real-time access to customer data and order history, modern ERP systems enable manufacturers to provide better customer service. Sales and support teams can quickly respond to customer inquiries, track orders, and resolve issues, leading to higher customer satisfaction and loyalty.

Regulatory Compliance

Modern ERP systems help manufacturers stay compliant with industry regulations and standards. They offer features such as audit trails, document management, and reporting tools that simplify compliance with regulatory requirements. This reduces the risk of non-compliance and potential penalties.

Cost Efficiency

While the initial investment in a modern ERP system can be significant, the long-term cost savings are substantial. Modern ERP systems reduce operational costs by streamlining processes, improving efficiency, and minimising errors. Additionally, cloud-based solutions eliminate the need for costly on-premises infrastructure and ongoing maintenance.

Enhanced Security

Advanced security features to protect sensitive business data. These include user authentication, role-based access control, data encryption, and regular security updates. Enhanced security measures help safeguard against data breaches and cyber threats.

Support for Innovation

The current generation of ERP systems support innovation by integrating with emerging technologies such as the Internet of Things (IoT), artificial intelligence (AI), and machine learning. These integrations enable manufacturers to implement smart manufacturing practices, predictive maintenance, and advanced analytics, driving innovation and competitiveness.

Summary of Key Points

Throughout this eBook, we have explored the various hidden costs associated with maintaining and using legacy ERP systems in manufacturing companies. These costs can have a significant impact on a company's financial health, operational efficiency, and ability to innovate. Here are the key points we covered:

- **Financial Costs:** Legacy ERP systems can incur high maintenance and support costs, frequent upgrade and integration expenses, hidden costs of downtime, opportunity costs, and compliance and regulatory costs. These financial burdens can strain a company's budget and divert resources away from strategic initiatives.
- **Operational Inefficiencies:** Legacy ERP systems often lead to increased manual work, decision-making delays, inefficient workflows, communication barriers, and a negative impact on customer satisfaction. These inefficiencies can reduce productivity, increase error rates, and hinder the company's ability to respond quickly to market changes.
- **Scalability Issues:** As companies grow, legacy ERP systems may struggle to handle increased data volumes and user loads. This can result in performance issues, system crashes, and difficulties in adapting to new market demands and technological advancements.
- **Impact on Innovation:** Outdated ERP systems can stifle innovation by limiting the company's ability to adopt new technologies, perform advanced data analytics, and integrate with modern applications. This can result in missed opportunities, reduced competitiveness, and a negative impact on employee morale.
- **Transitioning to Modern ERP Systems:** Modern ERP systems offer numerous benefits, including enhanced integration and automation, real-time data and analytics, scalability and flexibility, cloud-based access, improved collaboration, enhanced customer service, regulatory compliance, cost efficiency, enhanced security, and support for innovation. However, transitioning to a modern ERP system can also present challenges, such as high initial costs, data migration complexities, system downtime, user adoption and training, customisation and integration issues, change management, risk of cost overruns, vendor lock-in, compatibility challenges, and long implementation timelines.

As we have seen, the **hidden costs of using legacy ERP systems** can be substantial and far-reaching. It is crucial for manufacturing companies to evaluate their current ERP systems and consider the potential benefits of upgrading to a modern solution. By transitioning to a **modern ERP system**, companies can **improve operational efficiency, reduce costs, enhance innovation, and stay competitive in an ever-evolving market.**



Sensible Steps to Take:

1. Evaluate Your Current ERP System

Conduct a thorough assessment of your existing ERP system to identify its limitations, inefficiencies, and hidden costs. Consider how these factors are impacting your business and whether they justify the investment in a modern ERP solution.

2. Research Modern ERP Solutions

Explore the various modern ERP systems available in the market and evaluate their features, capabilities, and suitability for your business needs. Look for solutions that offer scalability, flexibility, integration capabilities, and advanced analytics.

3. Engage Stakeholders

Involve key stakeholders from different departments in the decision-making process. Their input can provide valuable insights into the specific needs and challenges of various areas of the business.

4. Develop a Transition Plan

Create a detailed plan for transitioning to a modern ERP system, including timelines, resource allocation, and risk management strategies. Consider implementing the new system in phases to minimise disruption to business operations.

5. Invest in Training and Change Management

Provide comprehensive training programs to ensure that employees are comfortable and proficient with the new ERP system. Develop a change management strategy to address potential resistance and ensure a smooth transition.

6. Monitor and Optimise

Continuously monitor the performance of the new ERP system and collect feedback from users. Regularly review key performance indicators (KPIs) to ensure that the system is delivering the expected benefits and identify opportunities for further optimisation.

By taking these steps, manufacturing companies can successfully transition to a modern ERP system and unlock the full potential of their business. The investment in a modern ERP solution can lead to significant long-term benefits, including improved efficiency, reduced costs, enhanced innovation, and increased competitiveness.



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