

# ERP & PLM Overview

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# What is PLM and ERP?

## **Product Lifecycle Management (PLM)**

is defined as a philosophy, process and discipline, supported by software, for managing products through the stages of their life cycle, from concept through retirement.

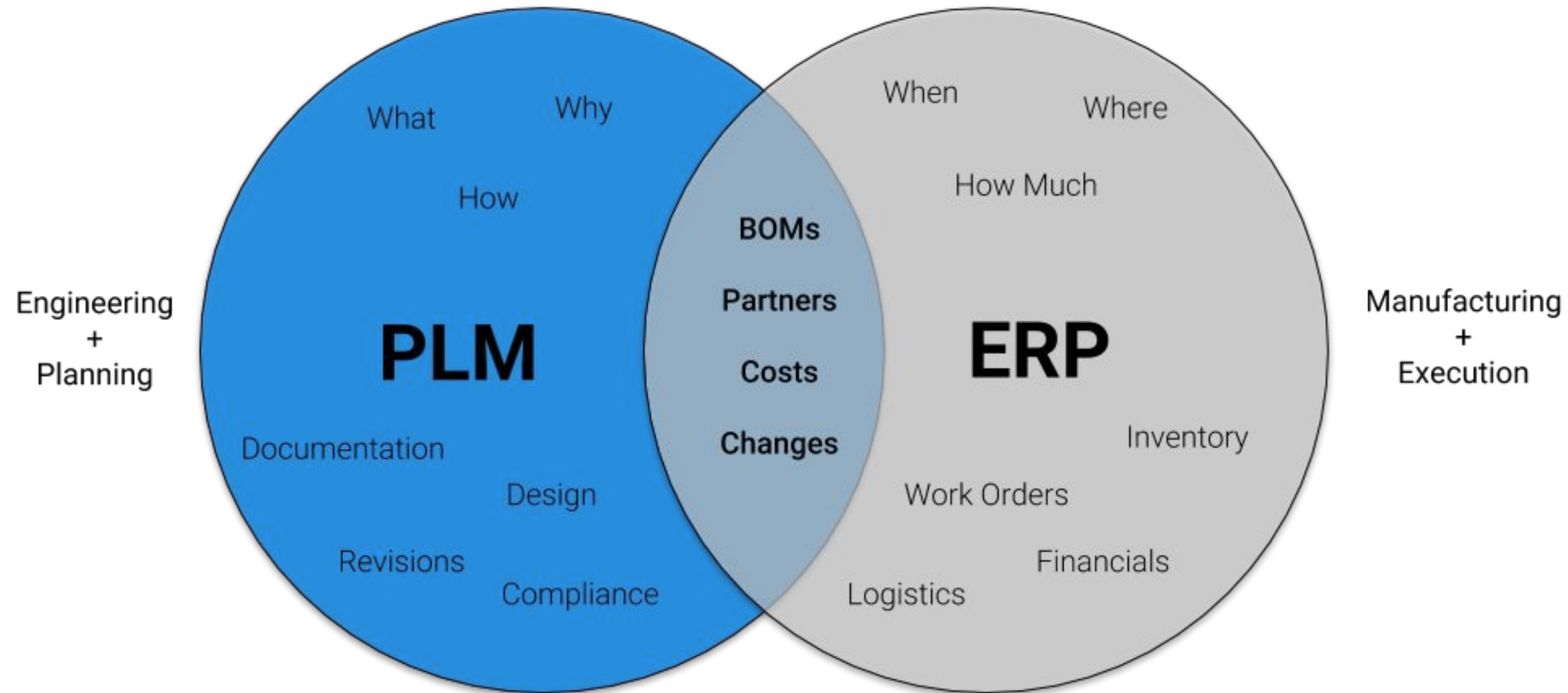
## **Enterprise Resource Planning (ERP)**

is defined as an integrated suite of business applications intended to centralize and streamline business processes.





# Where Do PLM and ERP Overlap?





## What Does PLM Do?

**Simply put, Product Lifecycle Management (PLM)**

software integrates and aligns:

people, systems, processes, and data, to act as a

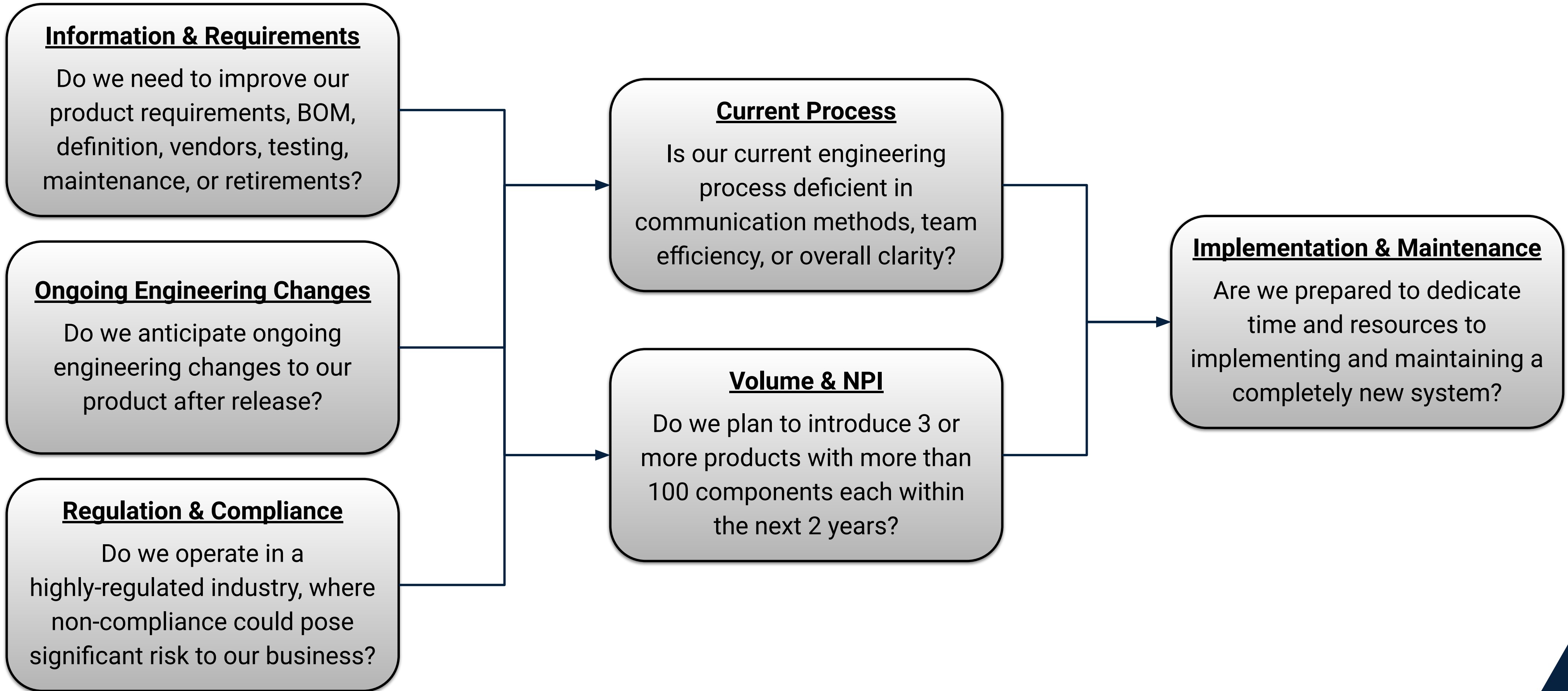
*single source of truth for the company's product*

# PLM Core Features

Feature	Functionality
<b>Multi-Level Bill Of Materials (BOM) Management</b>	Enables creation, redlining, importing, and exporting of components, drawings, documentation and approved manufacturer and vendor information
<b>Item Management</b>	Helps teams define and control parts and associated engineering documentation, Approved Manufacturers, revisions, and where-used
<b>Task Assignment</b>	Allows users to assign specific tasks to one another in support of Product Development activities and projects
<b>Engineering Change Management</b>	Create, route, and track Engineering Change Orders based on specified criteria including product lines and teams
<b>Social Tagging &amp; Notifications</b>	Notifies specific team members of mentions and activities awaiting their input
<b>Document Management</b>	Controlled access to documents including engineering drawings, ECOs, quality alerts, etc... Ultimately associating said documents to Item Records
<b>Engineering-Focused Business Intelligence &amp; Analytics</b>	Provides personalized insights into engineering tasks, assignments, projects, etc... and allows users to create custom dashboards based on their business needs



# Is Your Company a Good Fit For PLM?



# PLM CASE STUDY

## Case Considerations

- Biolite's engineering team is composed of more than 15 members, focusing on different product lines
- Existing products may be refined based on experiences in the field and customer needs
- The company's team is consistently growing and evolving to meet the needs of the market and the business



BioLite designs, manufactures, and sells innovative consumer energy products for off-grid communities around the world. They currently offer more than 50 end-products, ranging widely in complexity. The team is composed of more than 90 individuals in the disciplines of engineering, sales & marketing, supply chain, and management. Biolite plans to continue rolling out new consumer products and improving existing product offerings.





# PLM CASE STUDY

Case Outcome: PLM ✓

Biolite chose to implement PLM software for the following two primary reasons:

1. Their team size has reached a point where communicating amongst the engineering team via traditional (non-PLM) tools has become a loss of productivity.
2. They are continually introducing new products and improving their existing products.



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# PLM CASE STUDY

## BioLite's Experience:

Biolite selected [Arena PLM](#), a popular, cloud-based solution for small to midsize companies. That said, *Biolite has raised concerns with Arena for the following reasons:*

- Cost / Overhead
- Lack of Optimization & Resources for Product Development
- Having a China-based Supply chain

For these reasons, they are and are considering switching to a different system.



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## What does ERP do?

**ERP software collects, manages, and stores data** from multiple business functions in order to enable visibility into mission-critical resources such as:

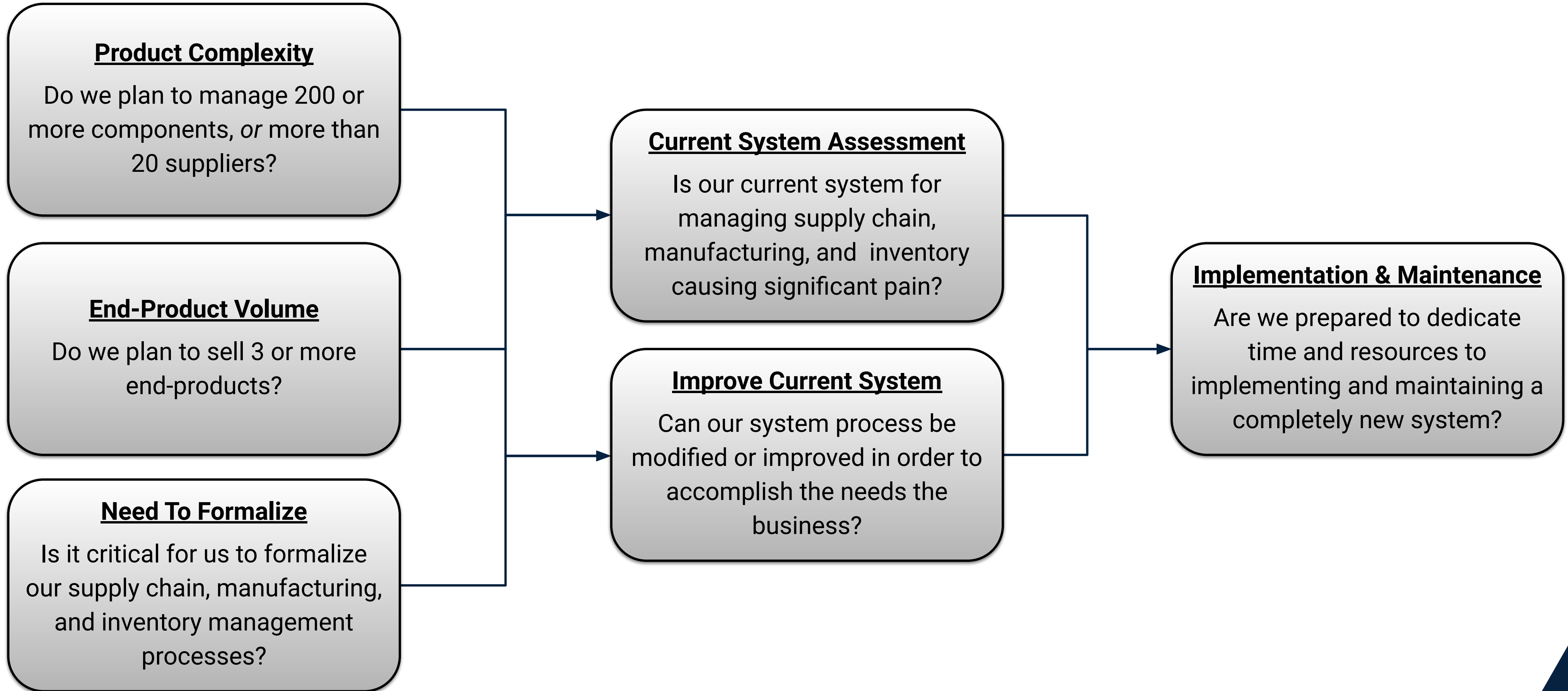
- cash,
- inventory,
- production capacity,
- order status (both production and purchase orders).

# ERP Core Features

Feature	Functionality
<b>Material Requirements Planning (MRP)</b>	Generates demand requirements from top-level assemblies down to the component levels through BOM structure. In Advanced Planning Systems, this information is determined by company-level forecasts.
<b>Finance &amp; Accounting</b>	Accounts receivable, accounts payable, general ledger, financial reporting, and often payroll
<b>Inventory Management</b>	On hand, on order, planned receipts, inventory transactions, and pending inventory shortages (based on MRP)
<b>Production Scheduling</b>	Used by manufacturing companies to create production orders and calculate dates with gross/net component requirements based on a sales forecasts
<b>Product Logic &amp; Hierarchy</b>	Maintains records of items, their hierarchy in BOMs, and supply chain / engineering ownership
<b>Purchase Order Management</b>	Because item records, vendor relationships, accounting, and material requirements live in the ERP, purchase orders can be launched, managed, and paid through the system
<b>Marketing &amp; Customer Relationship Management (CRM)</b>	All customer and vendor records are kept in the system, with different use-cases. The CRM enables seamless marketing management, automation, and intelligence.
<b>Business Intelligence</b>	Build custom dashboards for management and employee visibility of top-level KPIs
<b>Lot Numbers &amp; Serialization</b>	For companies requiring lot numbers and / or serialization, ERPs enable tracking of manufacturing specific inventory items



# Is Your Company a Good Fit For ERP?





# ERP CASE STUDY

## Case Considerations

- The team plans to manufacture their product internally
- Streamlining the processes associated with inventory tracking, production planning, and purchase order automation are top priority for the company
- Need a way to understand gross and net component requirements based on a sales forecast for the year
- Multi-warehouse inventory management is critical to their success



UES engineers and manufactures electric motor conversion kits for UPS trucks and school buses. Their flattened BOM is over 1,500 items long with 7 levels of indenture. The team is composed of 5 experienced engineers, including an experienced engineering leader.



# ERP CASE STUDY

## Case Outcome: ERP ✓

UES chose to implement [Odoo ERP](#), a modular, cloud-based ERP solution focused on small to midsize companies. The Odoo features that sold the UES team were:

- Multi-level BOM Import
- Material Requirements Planning (MRP)
- Multi-Warehouse Inventory Tracking
- Manufacturing Routings
- Production & Purchase Order Management

The team considered many other popular solutions, including: [NetSuite](#), [MRP Easy](#), [Fishbowl](#), and [Mini MRP](#), but found that Odoo's functionality in practice was the best fit for their business. It's also significantly less expensive than competitors.



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