

ENTERPRISE RESOURCE PLANNING IN POWER INDUSTRY

Author-1

Priyasha Singh

Student, B.Com Honours, Department of Commerce,
Manipal University Jaipur, Jaipur.

Email Id- priyasha.200903003@mun.manipal.edu

Author-2

Dr. Somya Choubey

Assistant Professor, Department of Commerce,
Manipal University Jaipur, Jaipur.

Email Id- somya.choubey@jaipur.manipal.edu

***Corresponding Author**

ESTABLISHMENT OF THE COMPANY

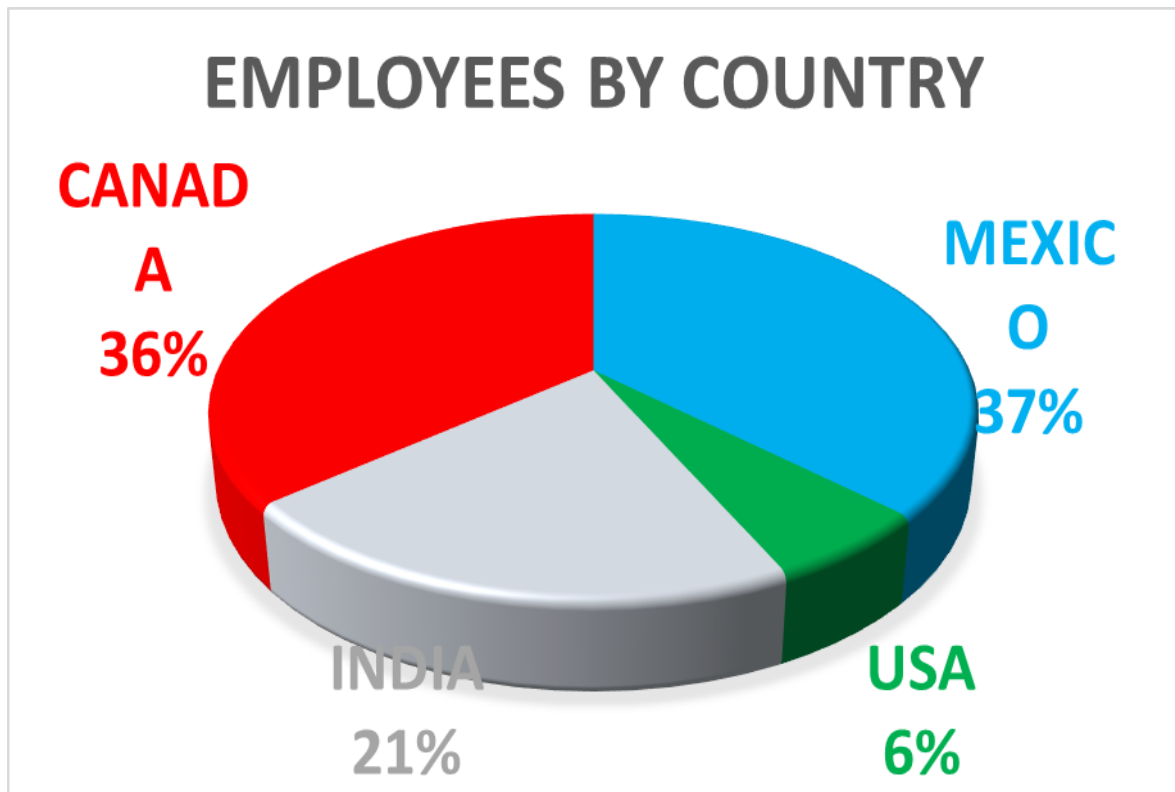
Since its founding in 1917, Hammond Power Solutions (HPS) has been a market leader in the design and production of premium custom electrical dry-type transformers and associated designed magnetic devices. The business also produces a sizable amount of generic goods that adhere to standards set by the entire sector.



Hammond Power
Solutions Inc.

ASIA

To launch Hammond Power Solutions Pvt. Ltd. in Hyderabad, India, HPS acquired PETE Transformers. They manufacture and market dry-type and oil-filled transformers from their Asian base.



COMPANY PROFILE

Hammond Power Solutions (HPS) operates out of numerous sites spread across India, Canada, the US, and Mexico, with its corporate office in Ontario, Canada. The widest selection of standard and unique transformers is now available from HPS thanks to the company's increased manufacturing and product lines.

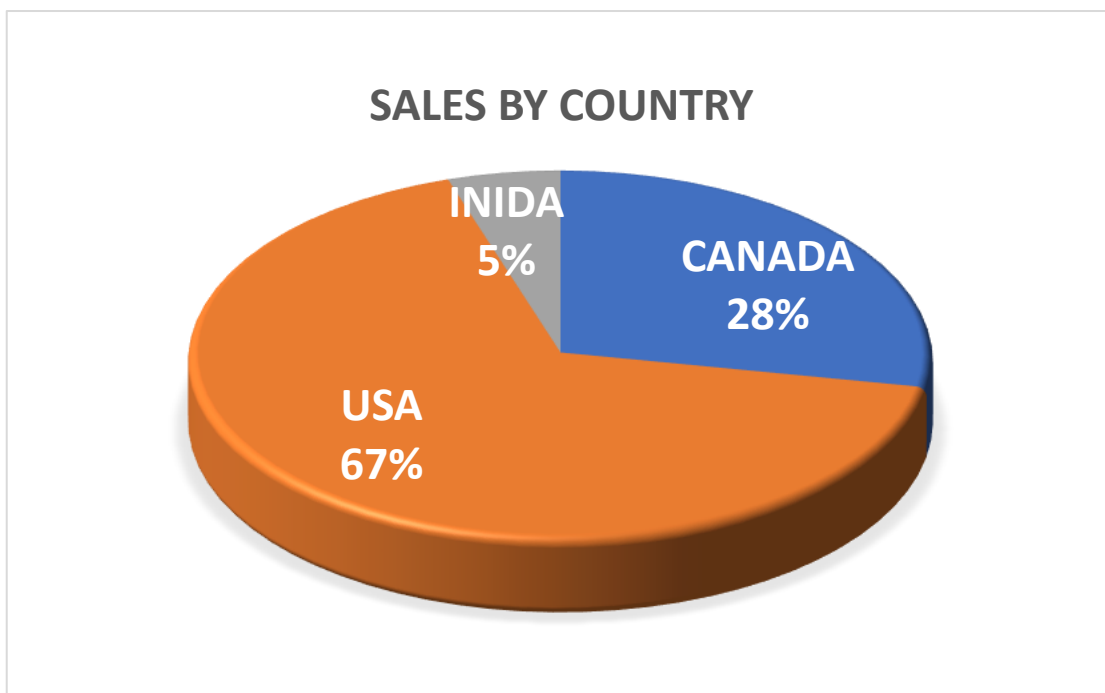
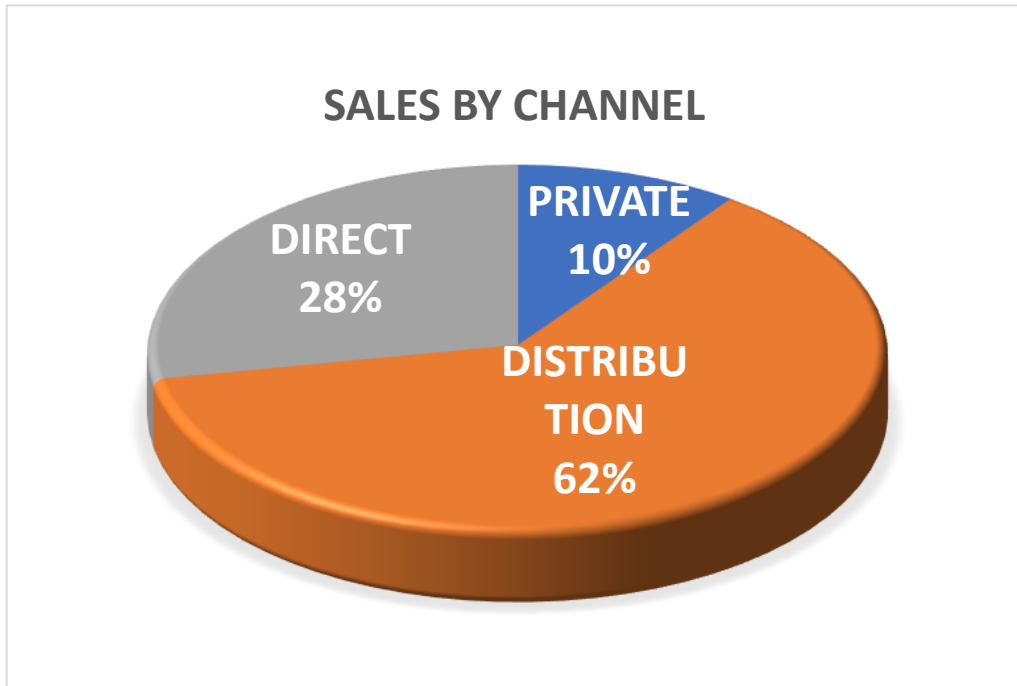
With over 30 years of experience, our company's success has been attributed to our ongoing focus on product innovation, reliable quality, and affordable prices.

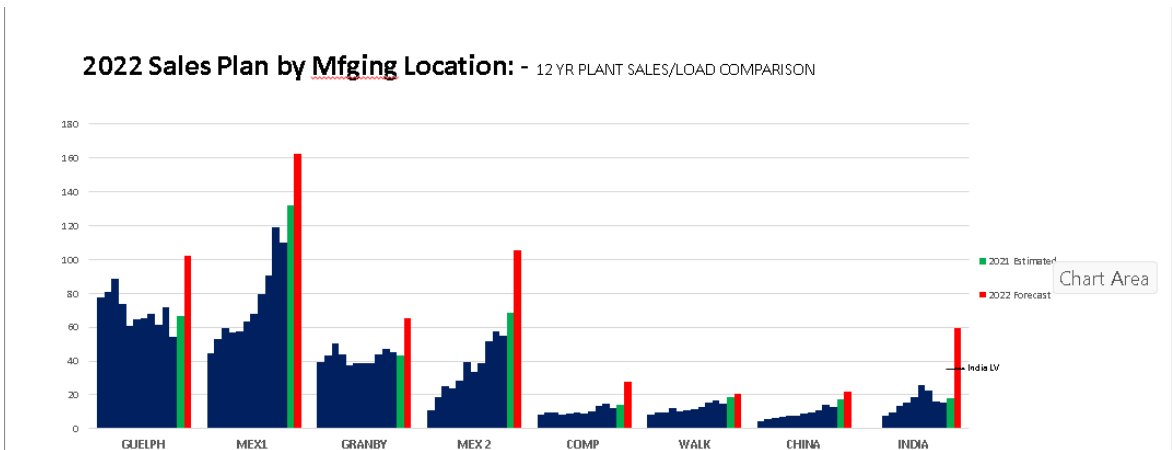
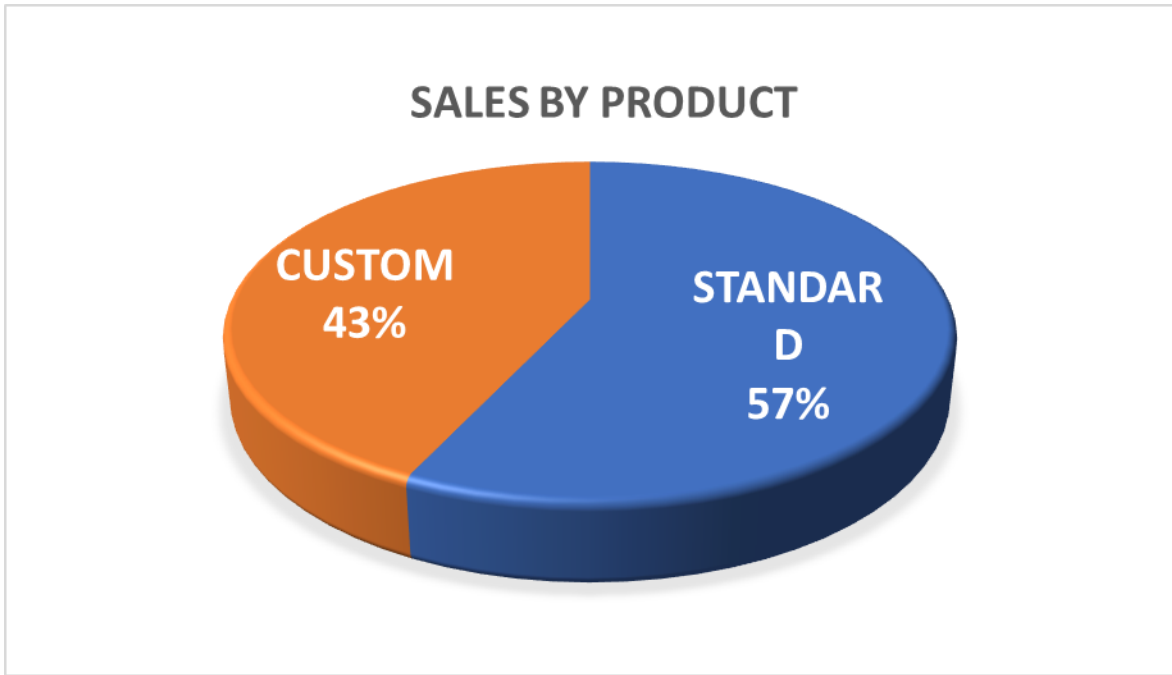
By acquiring Pan-Electro Technic Enterprises Private Ltd, HPS increased its market share in Asia, grew its product line, and improved its manufacturing capabilities for dry-type and oil-filled technology.

POSITION IN INDUSTRY

They are one of the top producers of dry-type transformers in North America, and their presence in Europe and Asia is expanding. Electrical equipment and systems around the world use the wide variety of standard and custom transformers that HPS engineers and produces. They back reputable industries like waste and water treatment, mining, steel, solar, oil and gas, and mining. Due to its expertise in technological design, product range, and manufacture, HPS dominates the market in these areas.

SALES BY PRODUCT / CHANNEL & GEOGRAPHICALLY





	TOTAL SALES BY PLANT								N. A. TOTAL	N. A. PRIOR YR CHANGE	CORP TOTAL	CORP TOTAL PRIOR YR CHANGE
	GUELPH	MEX1	GRANBY	MEX 2	COMP	WALK	CHINA	INDIA				
2021	66.5	132.0	43.2	68.5	14.4	18.5	17.7	18.0	360.8	19%	378.8	19%
2022 Forecast	102.8	162.2	65.4	105.2	28.0	20.8	21.9	59.7	506.3	40%	566.1	49%
2021 Growth vs 2020	23%	20%	-4%	25%	17%	25%	40%	18%				
2022 Growth over 2021	54%	23%	51%	54%	94%	12%	24%	231%				

TYPES OF PRODUCTS

- **POWER TRANSFORMERS:** HPS power transformers use cutting-edge design and manufacturing techniques to offer affordable and environmentally friendly designs for practically any application.
- **FURNACE TRANSFORMERS:** HPS furnace transformers
- **CONVERTER TRANSFORMERS:** Converter transformers are utilised in steel and cement manufacturing facilities, among other sectors.
- **REGULATING TRANSFORMERS:** To produce a constant output voltage from a variable input voltage, these transformers have dependable on-load tap changers.
- **MULTI – PULSE TRANSFORMERS:** These transformers have been specially created to handle the inherent harmonics, voltage distortion, and other peculiarities that come with drive systems.
- **DISTRIBUTION TRANSFORMERS:** Commercial and industrial structures as well as distribution substations are typical locations for HPS distribution transformers. They are frequently employed for voltage conversion starting at 35 kV and lower.
- **PAD MOUNTED TRANSFORMERS:** HPS pad mounted transformers offer a full system with HV fusing protection and switching capabilities, making them appropriate for use in public settings.
- **UNITISED SUBSTATIONS:** created to offer a whole substation in a single enclosure. To suit system needs, HPS can integrate HV and LV equipment on both sides of the transformer.

MISSION STATEMENT AND AIM OF COMPANY

To see people being more truthful and open with one another, gathering information to help them make better decisions, being more willing to adapt and look for better ways of doing things, and treating others the way we would like to be treated. These are the ways that HPS will demonstrate our guiding principles.

DEPARTMENTS AND FUNCTIONS OF EACH DEPARTMENT

PRODUCTION: For the power transformer industry, a production planning and inventory control system has been developed. It is expected that the power transformer company has a department dedicated to the task and sufficient funding to spend on a computerised system. Additionally, a priority planning strategy for the transformer business has been devised. Software has been created with this objective in mind. Beginning with a rough master production scheme, required of materials at the different phases of production can be established for the particular order being performed utilising the programme. The software created can accept new production schedules and perform MRP from scratch. The activities' schedule was created using the timing specifications of a real transformer industry.

QUALITY ASSURANCE: For the power transformer industry, a production planning and inventory control system has been developed. It is expected that the power transformer company has a department dedicated to the task and sufficient funding to spend on a computerised system. Additionally, a priority planning strategy for the transformer business has been devised. Software has been created with this objective in mind. Beginning with a rough master production scheme, required of materials at the different phases of production can be established for the particular order being performed utilising the programme. The software created can accept new production schedules and perform MRP from scratch. The activities' schedule was created using the timing specifications of a real transformer industry.

HUMAN RESOURCES: Human resource department is one of the most prominent and important department in any of the organisation to fulfil the HR needs and management requirements of the business.

PURCHASE DEPARTMENT: A company's purchasing department is one of the major departments in any business to meet the purchase requirements of any business. It works as the bridge between the supply chain department and sales department in the business.

SUPPLY CHAIN: The supply chain management of the company is the process to manage the receipt and delivery of the goods and services in the systematic and efficient manner across the organisation to achieve the business efficacy. Supply chain management is crucial since it can aid in achieving a number of corporate goals.

SALES: The sales department in any company is the backbone of the sales force in the business. It assures the effective and efficient application of the sales functioning in the business with a view to strengthen the overall working, profitability and working capital management of the company.

MARKETING: In order to assure the effective and powerful implementation of the sales force in any company the marketing department plays a significant role. It assures that the bases for robust sales in the business is created in order to achieve the targeted goals of the business organisation and increase the turnover of the business in a systematic and effective manner for the betterment and growth of the business organisation. The marketing department is to be structured in such a way that it should work as the coordinating channel between the sales and supply chain departments of the business.

DESIGN: The process of developing a product must include designing for manufacturing and assembly (DFM or DFMA). DFM strategies make production easier and less expensive while preserving product quality.

ORGANIZATIONAL ANALYSIS

MAJOR CHALLENGES:

Continuing supply constraints impacting our ability to grow faster in the first half of 2022
Unknown impact of a possible 6th pandemic wave on the global and North American economies

Material cost deflation/increases and growing price competition in the market

MAJOR OPPORTUNITES:

Continuing to add new distributor branches and expanding our market share through the US distributor channel

Strong tailwinds in the energy and mining sectors

Expanding our power quality share of the North American distributor channel

Growing our induction heating business at Mesta

Expanding into the Mexican market

Improve India sales margins, opportunities in renewables market, but more focus on industrial growth

KEY 2022 PROJECTS:

Building a Sales team and infrastructure along with the appropriate plans to expand into the Mexican and LATAM and India markets

Expanding production of NA LV transformers in India

Recruit a new CCO and plan the process of hiring a new CEO in 2023

Develop and implement a training and development program for present and future leaders

Implement a corporate wide sustainability program

Develop and start the preliminary roll out of a Hammond Business System

Expanding India capacity & capability to 132KV

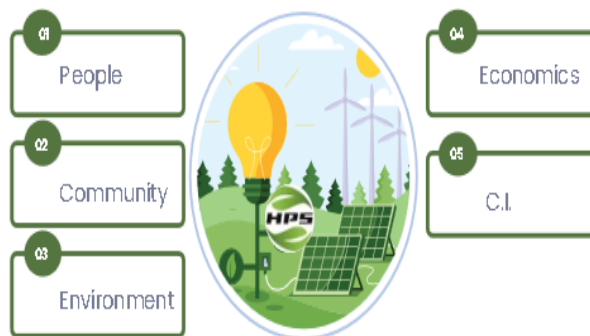
POLICY/PROGRAMMES:

Sustainability – Strategic Initiatives



GOAL: Implement the company wide Sustainability Program including Community, Environment, Economics and Continuous Improvement as outlined in the 5-year plan

- Project Team selected to further define priorities and investments and create action plan by Q1
 - **People: People & Community**
 - **Supply Chain: Materials/Vendors**
 - **Marketing: Product Life Cycle**
 - **Finance: Economics Reporting**
 - **Operations: Environment Impact**
- Report on net costs or benefits achieved to be completed by Q1



People & Culture – Key Strategic Initiatives



GOAL: Address senior leadership and critical role succession in 2021 through to 2023 ensuring knowledge transfer and culture preservations

GOAL: Develop and implement a plan to invest in internal learning and development: HPS University

GOAL: Renew the full leadership team and workforce by 2026 to address the 25%+ of the workforce that will be retiring by 2026

GOAL: Create plan and programs for execution of People and Community pillars for Sustainability Initiative

- Employee Wellbeing:
- Diversity, Equity & Inclusion:
- Employee Engagement:
- Community:

2022 Key Deliverables

SUPERIOR SERVICE

MEET MARKET DRIVEN LEAD TIME / SOT

- Align plant capacities to deliver sales plans as per rolling forecasts
- Accurate scheduling of resources and materials , ERP expertise
- Improve plant capabilities and flexibility to meet variable demand

PRODUCT RELIABILITY – Quality #1

- Continued improvement in Quality levels per plan
- Enhanced Processes, Training & Skills Testing
- Enhanced Product Appearance

COMPETITIVE COST

- Meet Expense Budgets per Plan. Meet Cost Reduction targets – procurement, engineering, mfging, quality
- Improved Efficiency
- Implement Best Practices, Best Technologies
- Well trained & Engaged work force in a safe environment

FINANCE DEPARTMENT FUNCTIONING

ENTERPRISE RESOURCE PLANNING:



PROCESS PREPARATION

ERP in the firms must conduct a thorough analysis of business processes prior to deployment. Modernization possibilities for processes can be found through this examination. It also makes it possible to evaluate how well current procedures mesh with those offered by the ERP system.

CONFIGURATION

When configuring an ERP system, the customer's preferences and the system's intended functionality must be balanced. ERP systems frequently include a large number of modifiable parameters that alter system behaviour.

CUSTOMIZATION

ERP systems are designed to be installed "as is" and are theoretically based on industry best practises. Although ERP suppliers do provide customers with configuration choices that enable businesses to include their own business rules, there are frequently functional gaps even after the setup is finished. ERP users have a variety of alternatives, each with advantages and disadvantages, for bridging functional gaps. Technical options include rewriting a portion of the functionality that was already supplied, creating a custom bolt-on or add-on module for the ERP system, or integrating with an external system. The first of these solutions is the most invasive and expensive to maintain, while the other two involve varied degrees of system customisation. As an alternative, non-technical approaches exist, such as altering organisational policies and/or business practises to better fit the given ERP features.

DATA MIGRATION

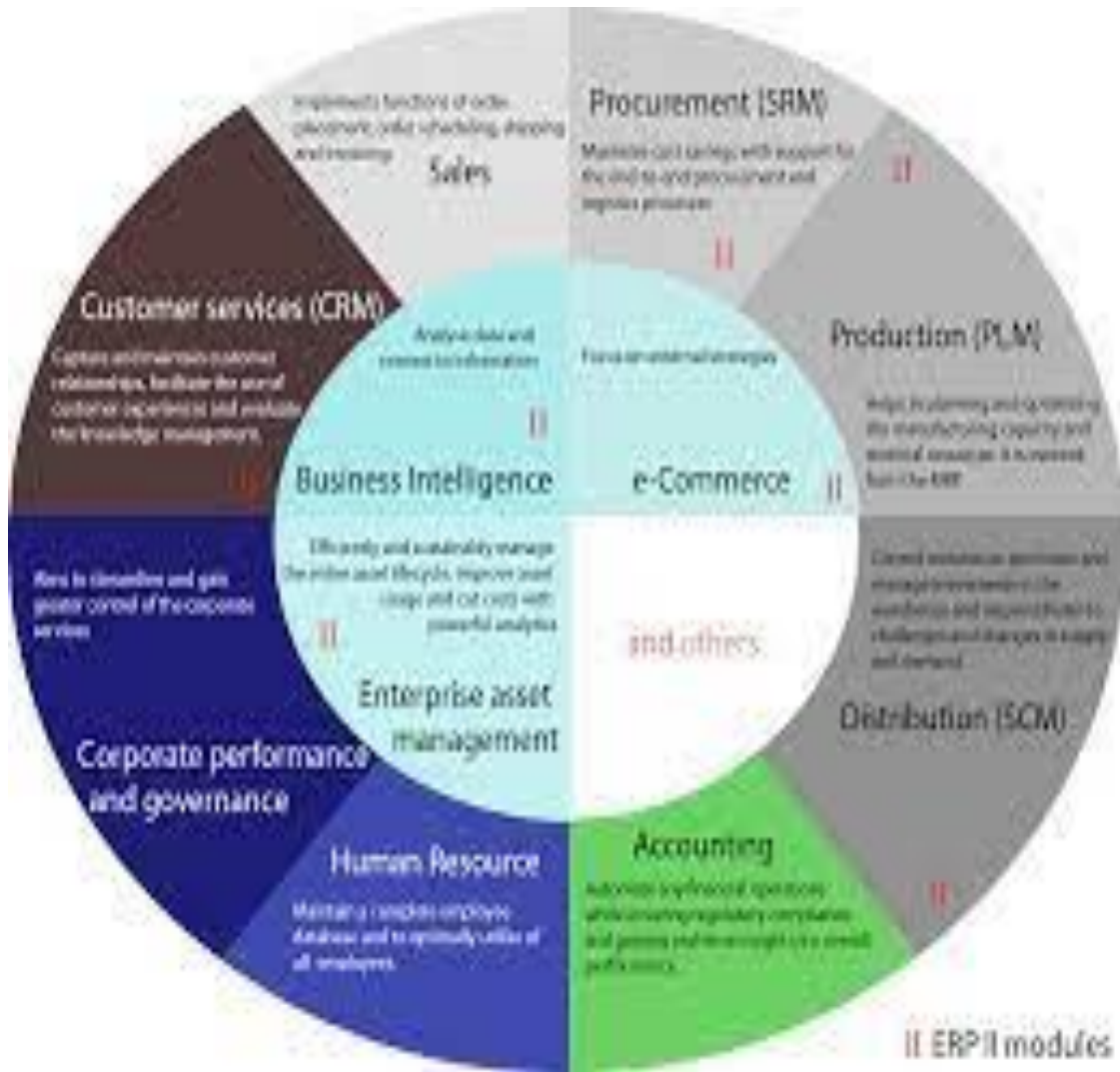
Moving, transferring, and reorganising data from an existing system to the ERP system is known as data migration.

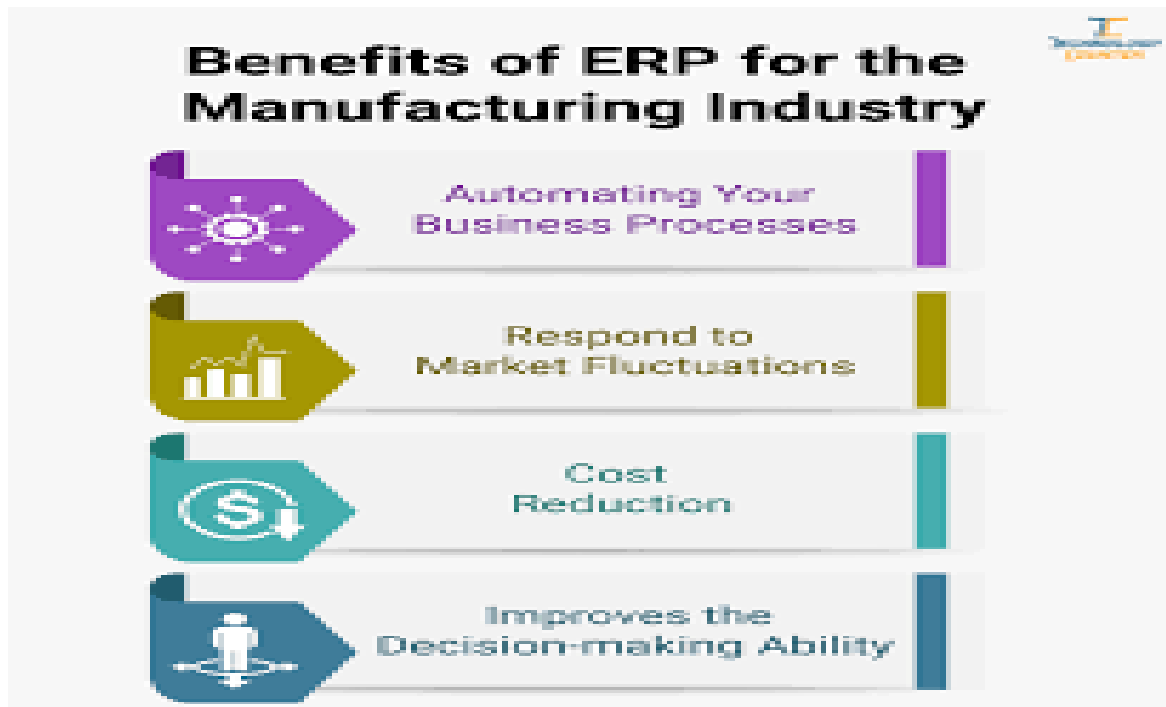
SELECTION OF ERP

The next step after finishing the BPR is to analyse and choose a workable package for implementation. Finding the best ERP solution is regarded as the most important stage.

Evaluation and choice comprise:

OPTIMIZATION OF BUSINESS DEPARTMENTS:





MICROSOFT DYNAMICS AX TECHNICAL TRAINING OVERVIEW

The topics covered in Microsoft Dynamics Technical Training are quick and simple methods for managing your company's operations. It is multi-site business ERP software. The goal of this training is to organise the data in a regulatory manner by focusing on operations, management, and public sector organisations.

OBJECTIVES OF THE TRAINING

- Understand the workflow Management
- Manage SSRS Reports
- Implement And best Practices on Microsoft Dynamics
- Using The Run Base Framework
- Good Programming Language
- Understand the basic Structure Organization

SUMMER TRAINEE ROLES:

Opened financial statements, input transactions & reconciled accounts Proofread & corrected different types of documentation Spent time in each department, gaining fundamental knowledge of their responsibilities & objective

EXAMPLE:**SETTING UP LEDGER POSTING ACCOUNT**

To set up a ledger posting, select Project management and accounting > Setup > Posting.

Choose the sort of cost price account or sales price account that you want to create in the Ledger posting setup form's Select group under the Cost accounts or Revenue accounts tab.

Next, select Add.

Indicate whether the line you are generating relates to a single project, a group of projects, or all projects in the first Valid for field.

Select Table if the line relates to a certain project.

Select Group if the line pertains to a project group.

Select All if the line applies to all projects.

Choose the project ID or project group ID that this line relates to if you chose Table or Group in step 3's Project relation field.

Optional: If you chose Table or Group in step 3, choose the funding source that will be charged for the cost transactions denoted by this line in the Funding source field.

Indicate whether the line you are constructing pertains to a single category, a category group, or all categories in the second Valid for field.

Select Table if the line relates to a certain project.

Select Group if the line pertains to a project group.

Select All if the line applies to all projects.

Choose the category ID or category group ID that this line applies to, if you chose Table or Group in Step 6's Project Relation box.

Optional: Choose the appropriate sales tax group for the transactions that are posted to the main account you've chosen in the Sales tax group box. You can track sales amounts by sales tax rate using this option, and you can then notify the tax authorities of the taxable transactions.

Choose the account in the Main account area to which transactions for the project, category, and sales tax group you chose are posted.

CONCLUSION:

ERP software with a high implementation standard is a proven benefit for any business. Every corporation should adopt current business technologies to get a competitive edge. The following suggestions are provided for an organization's ERP system implementation. The

Enterprise resource Planning is being one of the most efficient way of managing and controlling the resources of any business organisation. It not only manages the resources but also provide an effective structured plan for the purpose of making a plan and system for the management and administration of all kinds of resources of the business organisation. Hence the application of ERP system in the business is the source of achieving the efficiency and optimisation of the resources in the business.

REFERENCES:

- <https://www.microsoft.com/en-us/dynamics/erp.aspx>
- <http://go.sap.com/product/enterprise-management/erp.html>
- <http://www.sage.com/us/erp>
- <https://www.coursehero.com/file/169714094/Assignment-1docx/>
- <https://asia.hammondpowersolutions.com/>
- http://www.dcrustm.ac.in/wp-content/uploads/2018/07/MBA_-18.06.2018-FINAL.pdf