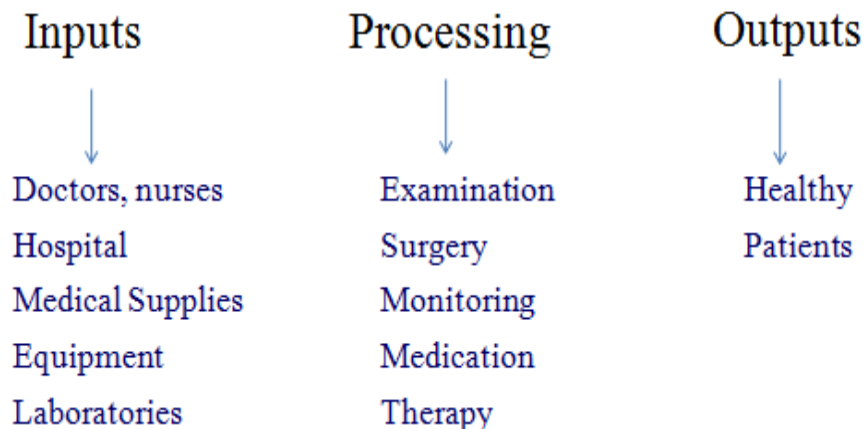


Operations are a transformation process. It transfers or converts various inputs, for example, into outputs – Goods or services. To ensure that the desired outputs are obtained, feedbacks are sent at various points in the transforming process. These feedbacks are evaluated to determine whether a control is needed.

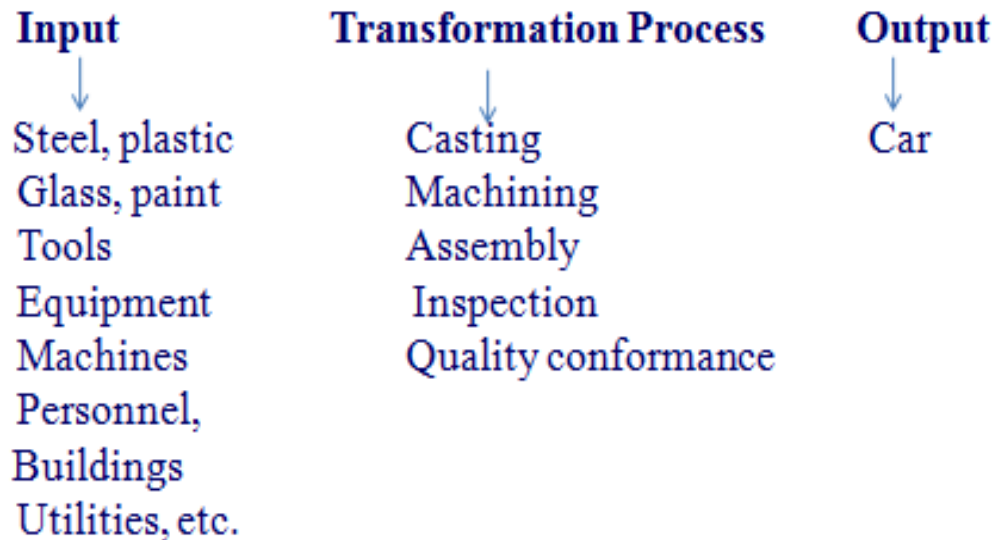
EXAMPLE OF OPERATIONS MANAGEMENT PROCESS

This is another example – hospital. This is an example of delivery of services. The output of this process is more psychological – healthy patients

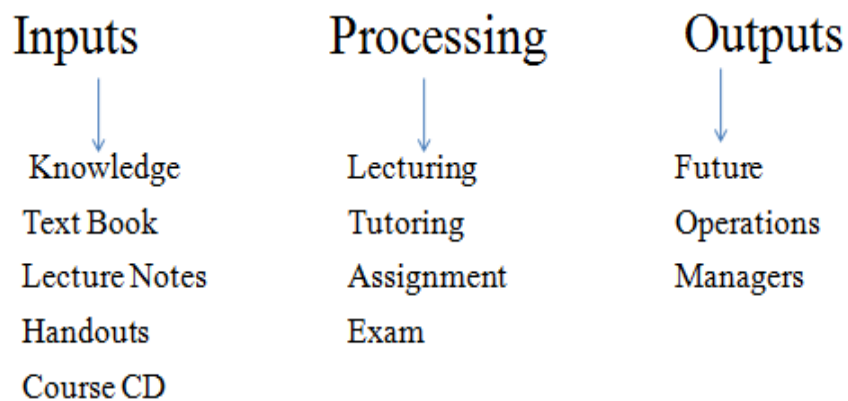
Example: Hospital

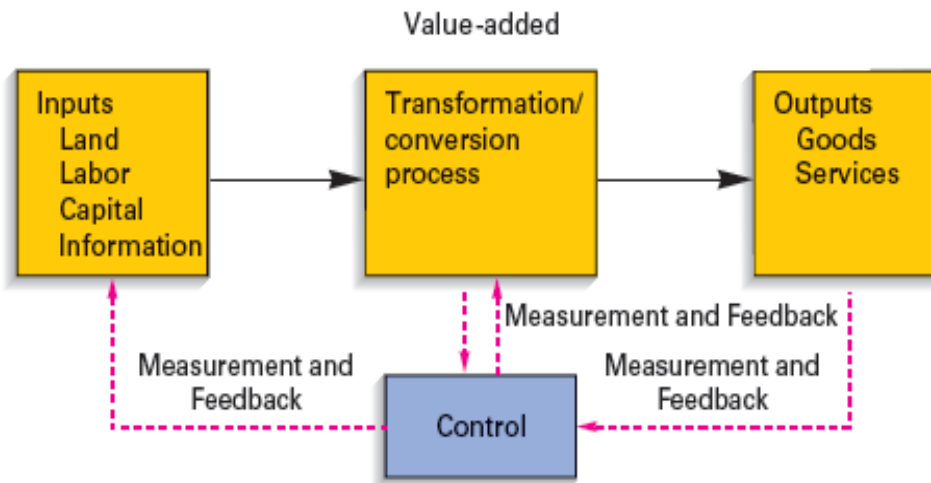


Automobile factory



Example: Education Institution





To add value

Increase product value at each stage

Value added is the net increase between output product value and input material value

Provide an efficient transformation

Efficiency – perform activities well at lowest possible cost

SCOPE OF OPERATIONS MANAGEMENT

Operations Management includes:

- Forecasting
- Capacity planning
- Scheduling
- Managing inventories
- Assuring quality
- Motivating employees
- Deciding where to locate facilities

Forecasting - It is used to determine how to allocate the budgets and resources for an upcoming period. Forecast the quantities of product/service requirement.

Capacity Planning - It is the process of determining the production capacity needed by an organization to meet changing demands for its products. It is the maximum amount of work that an organization is capable of completing in a given period.

Scheduling - The purpose of scheduling is to minimize the production time and costs. It aims to maximize the efficiency of the operation and reduce costs, by telling a production facility when to make, with which staff, and on which equipment.

Managing inventories - Successful inventory management involves creating a purchase plan that will ensure that items are available when they are needed (but that neither too much nor too little is purchased) and keeping track of existing inventory and its use.

Assuring Quality - Quality management is concerned with controlling activities with the aim of ensuring that products and services are fit for their purpose and meet the specifications.

Motivating Employees – Effectiveness of job design, rewards, employee participation, training.

Deciding where to locate facilities - Facility location is the process of identifying the best geographic location for a service or production facility.

Factors affecting facility location

- Proximity to source of supply: Reduce transportation costs.
- Proximity to customers: High population areas, near to distribution facility.
- Proximity to labor: Local wage rates, attitude toward unions, availability of skilledworkers.

Example: Airline Company



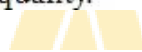
- **Forecasting: Weather,** landing conditions, seat demands for flights.
- **Capacity Planning** How many number of planes in each route?
- **Scheduling:** Scheduling of planes for flights and for routine maintenance, scheduling of pilots and flights attendants.
- **Managing Inventories:** Food plates, blankets, magazines
- **Quality:** Quality of the services, Safety.
- **Facility Location:** Tickets and check-in counters.

Let's use an airline company to illustrate these. The system consists of the airplanes, airport facilities, and maintenance facilities. Operations people do the following:

Forecasting such things as weather and landing conditions, seat demand for flights, and the growth in air travel.

Capacity planning,

Scheduling, assuring quality.



Example: Automobile Factory



- **Forecasting:** Demands for cars.
- **Capacity Planning:** Number of shifts, level of workforce.
- **Scheduling:** Scheduling of various types of cars, Scheduling of workforce.
- **Managing Inventory:** Raw materials, man-power, office supplies, various component, parts.
- **Quality:** Quality of products, services.
- **Facility location:** Near to rail yard, skilled work force, etc..

Another example is automobile factory.

Note that although manufacturing and service are different in terms of what is done, but, they are similar in terms of how it is done. From previous two examples, we can clearly see that.

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BASIS FOR COMPARISON	GOODS	SERVICES
Meaning	Goods are the material items that can be seen, touched or felt and are ready for sale to the customers.	Services are amenities, facilities, benefits or help provided by other people.
Nature	Tangible	Intangible
Transfer of ownership	Yes	No
Evaluation	Very simple and easy	Complicated
Return	Goods can be returned.	Services cannot be returned back once they are provided.
Variability	Identical	Diversified
Storage	Goods can be stored for use in future or multiple use.	Services cannot be stored.
Production and Consumption	There is a time lag between production and consumption of goods.	Production and Consumption of services occurs simultaneously.
Quality	In case of goods, the quality of can be measured and compared with other goods.	In case of services the quality cannot be measured.
Separable	Goods it can be separated from seller.	Services cannot be separated from the service provider.
Participation	In case of goods customer don't participate in production.	Customer participate in the production process of services
Core value	In case of goods the core value is it produce in a firm or factory.	In case of service the core value is it produce at the time of interaction between buyer and service provider.

CHALLENGES:

There are multiple challenges that operations managers face on a daily basis that highlights the following five: globalization, sustainability, ethical conduct, ineffective communication, and system design.

Globalization

Globalization as “a process of interaction and integration among the people, companies, and governments of different nations.” It is driven by a reduction in trade barriers, advancements in information technology, and transportation technology. Operation managers face competition from the company across the street, as well as, from across the country and across the world. Companies who compete with others abroad will have to improve quality while lowering prices to remain competitive. This falls on the operations manager as he or she is the one who “engages in the four functions of planning, organizing, leading, and controlling to ensure that the product or service remains competitive in the market.” The operations manager must tap into their creative skills, as innovation will be a key factor of success as will knowledge about international business and the myriad cultures of the businesses around the globe.

Sustainability

In her article, Business Definition of Operational Sustainability, Kay Miranda, journalist for the Houston Chronicle, defines business operational sustainability as a “method of evaluating whether a business can maintain existing practices without putting future resources at risk.” When discussing the concept of sustainability, it is often referred to as the Three Pillars of Sustainability, which are social, environmental, and economic. Operations managers must concern themselves with the outcomes of each of the pillars including how their work affects safety, welfare, communities, the environment and economic sustainability.

Effective operations managers must implement best practices with a concern for all three pillars of sustainability. They also need to initiate and verify corrective action when any outcome of one of the three pillars becomes jeopardized.

Ethical Conduct

Ethics is defined as a subset of business ethics that is “meant to ensure that the production function and/or activities are not damaging to either the consumer or the society.” In particular, organizations should consider the effects new technologies, defective services, animal testing and business deals have on people, safety, and the environment.

Unethical behavior has significantly contributed to the demise of successful corporations like Enron, Tyco, and many varied firms doing business on Wall Street. Being ethical across all business functions such as accounting, human resource management, marketing and sales, and production are clearly within the purview of the operations manager. Unethical behavior, regardless of its origin, becomes a stain on the company as a whole. The recently noted ethics breach at Wells Fargo is just one poignant example.

Effective Communication

Being consistent and effective when communicating can be difficult anyone in any position within an organization. The challenge for the operations manager is to be able to communicate effectively with all internal and external stakeholders. Whether they are talking to someone on the factory floor, or in the boardroom, they must be able to effectively communicate their message as well as process the messages being directed to them. Mastering oral, written, and non-verbal communication is integral to making day-to-day operations run smoothly. Effective and efficient communication is also necessary for building employee morale and deepening trust with management. Operations managers who take the time to be self-reflective, the initiative to be authentic, and the effort to work on their communication skills are bound to be both productive and successful. The development of these skills are frequently the most requested of upper level management of their new and mid-level managers and required to be successful in any company.

System Design

In Key Issues in Operations, the main theme is that organizations must develop systems capable of “producing quality goods and services in demanded quantities in acceptable time frames.” Designing the system, planning the system, and managing the system present a wide variety of challenges to even the well-informed operations managers.

As operations managers work in multidisciplinary environments, they must be aware of and effectively respond to the challenges presented by globalization, sustainability, ethical conduct, effective communication, and system design. Doing this calls for operations managers to excel in the business, technical, and interpersonal aspects of their work as they actively support the mission and vision of their organization.

TRENDS IN OPERATIONS MANAGEMENT

Business professionals in leadership roles need to be up on current trends in operations management, given the rapid change and development in technologies, supply chains and market conditions. Effective operations management is essential to any profitable company's bottom line, regardless of the industry and goods or services that the company offers.

- **A Focus on the Employee Experience**

The employee experience is at the root of many current trends in operations management. Staff members who feel content, respected and invested in their work usually align with their company's culture and tend to be motivated and productive employees. Skilled operations managers maximize productivity by helping enhance the employee experience.

Attracting and retaining top talent – challenging given the rising gig economy – is usually a function of employee experience too. Low retention means high cost in hiring, onboarding and training. Thus, focusing on improving the employee experience can help operations managers benefit their organization's bottom line.

- **Flexible, Blended Workplace Environments**

Trends in office design and remote versus office-based work all have benefits. Open offices can benefit productivity and employee morale through promoting teamwork, a collaborative environment and positive company culture. Yet, some employees can focus better and be more productive in private spaces with less distraction and stimulation. Higher productivity is often the result for remote staff, with the company benefiting from lower office-space overhead, too. Remote work may also open the door to a broad talent pool of professionals who may not

commit to office-bound positions. But, if not managed, collaboration can suffer from the decentralized workplace.

Operations and human resources management are increasingly moving toward the “blended” workplace, incorporating beneficial aspects of all these trends. In this flexible form of office and operations design, employees have options for open, collaborative environments, private office space and the opportunity to work remotely when appropriate and beneficial.

- **Mobile Communications and Collaboration**

As collaboration propels innovation, productivity and the development of a positive company culture, promoting effective teamwork is an essential driver for many operations management initiatives and processes. Effective internal communications underpin productive collaboration. Remote and office-based employees need to message, videoconference, co-work and collaborate on projects and shared files frequently. It follows that integrating mobile, instant internal communications systems constitutes an increasingly important aspect of operations management. These systems can create a semblance of the traditional collaborative office within the modern blended workplace.

- **Scaling Production According to Demand**

With rapid-fire product and technology development, economic volatility and continuously evolving consumer trends, operations management must be extremely responsive to demand. This engagement involves scaling production to meet inventory needs of forecasted demand.

The central imperative of operations management is to have the appropriate inventory to meet demand while not overproducing and wasting resources. It involves myriad factors of interdepartmental operations and collaborations, from consumer data analytics and market forecasting to product development, logistics and supply chain management. Operations management is the thread that connects these subsets for appropriately scaled production according to shifting market demand.

- **Building the Customer Relationship**

Building strong customer relationships and fostering brand loyalty is an indispensable part of developing long-range, sustained business growth and profit. Customer feedback and analytics

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logically inform demand forecasting, marketing strategy, user interface design and product development, thus driving operations across all departments. Modern operations management works to ensure and oversee this interdepartmental, integrated flow of customer information and responsive strategy.

As operations management is a through-line between multiple departments, the above trends could be generalized to many aspects of overall business administration. Business management professionals with an education in operations management can play an important role in improving productivity and profit.

