



Operations Management

Ramanujan College of Management

Approved By AICTE, affiliated to MDU, Rohtak

Palwal (NCR Delhi, Haryana)

RAMANUJAN



What is Operations?

- Originated from a Latin word
 - Opus meaning “Work” on a large scale
- Operations is the type of activities that go on in the organization, regardless of whether the end product is a good or a service.
- It usually refers to the domain in an industry, responsible for actually producing goods and services.



What is Operations?

- In more broader terms, Operations is not just concerned with what goes on at the point of production, but is also directly concerned with supplying the materials, the location and layout of facilities, the programming of operations and the motivation of employees.
- Every organization has an Operations function, whether or not it is called 'operations'



Operations Function in Organization

- Operations can be understood as following functions in an organization:
 - Operations as Basic Function
 - Operations as Transformation Function
 - Operations as Core Function



अप्पो दीपो भव।

RAMANUJAN



Operations as Basic Function in an Organization

अप्पो दीपो भव।

RAMANUJAN



Operations as Basic Function

- Every business is managed through three major functions:

Marketing: Generates Demand, Sale

Operations: Produce Goods or Services

Finance: Manage Funds, Collect & Pays

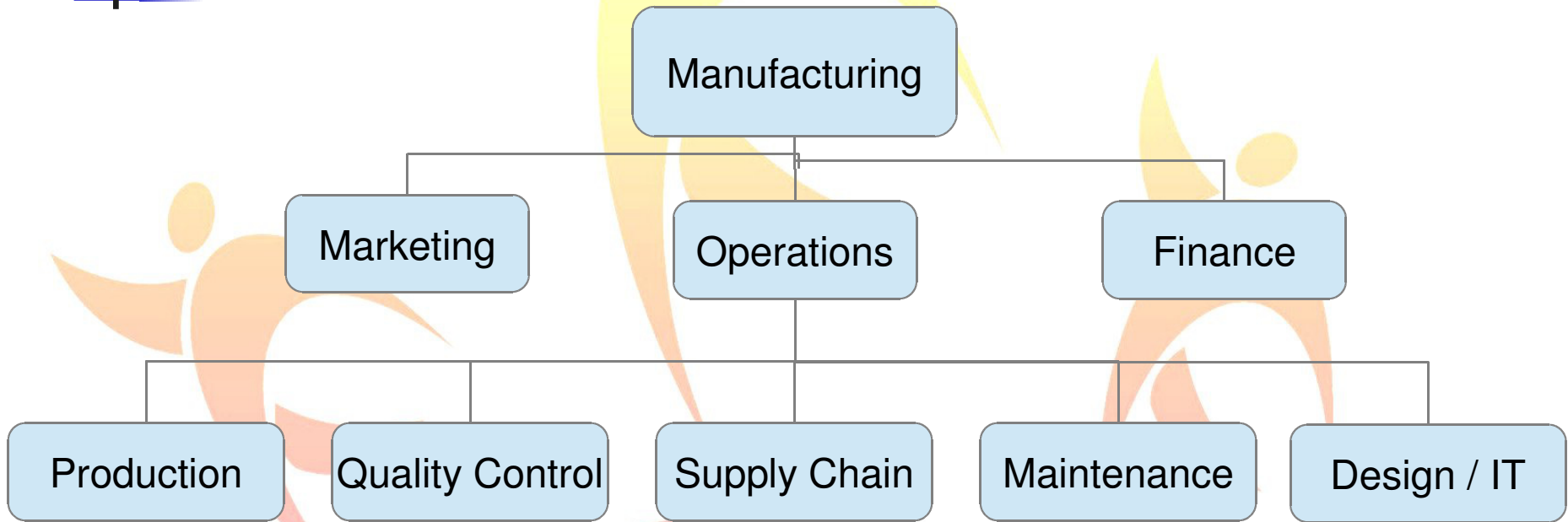
- All other functions fit somewhere under one or more of above. For example, finance could include accounting, investing, real estate, insurance or banking.



Operations as Basic Function

- In a typical industrial setting, Operations function may include departments like materials, supply chain, purchase, maintenance, production, quality etc.
- Wherein for an airline business these may likely to be passenger check-ins, logistics etc.
- While in healthcare industry these may be customer care, insurance, pharma etc.

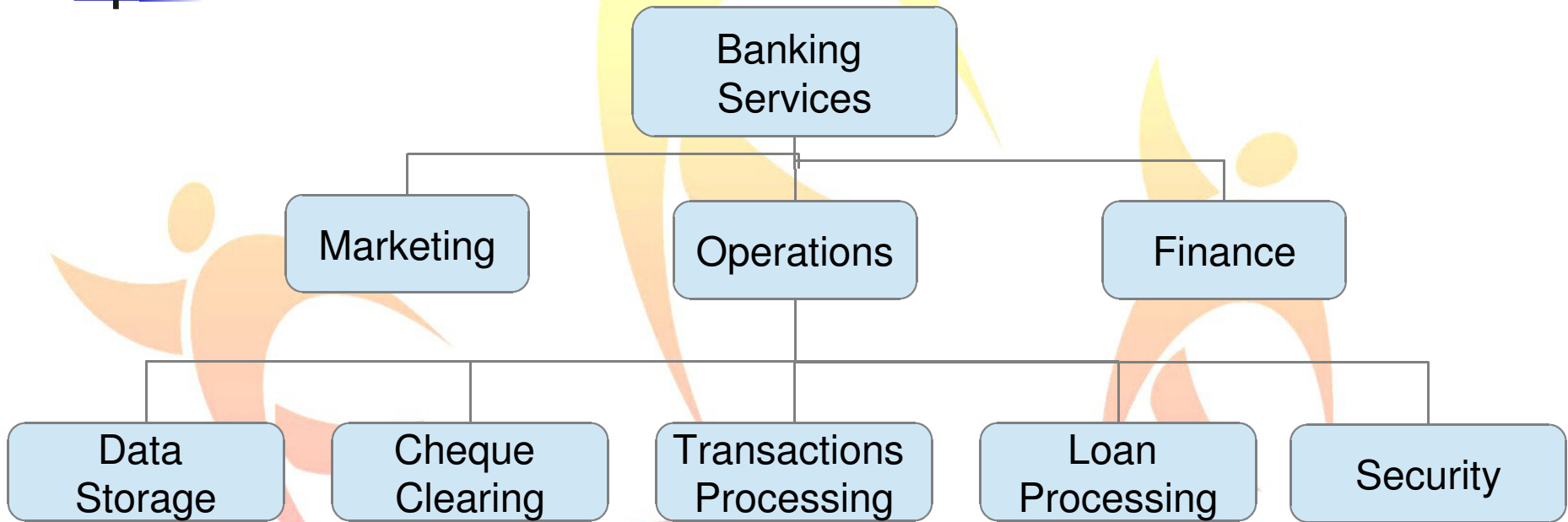
Operations as Basic Function – Manufacturing



अप्पो दीपो भव।

RAMANUJAN

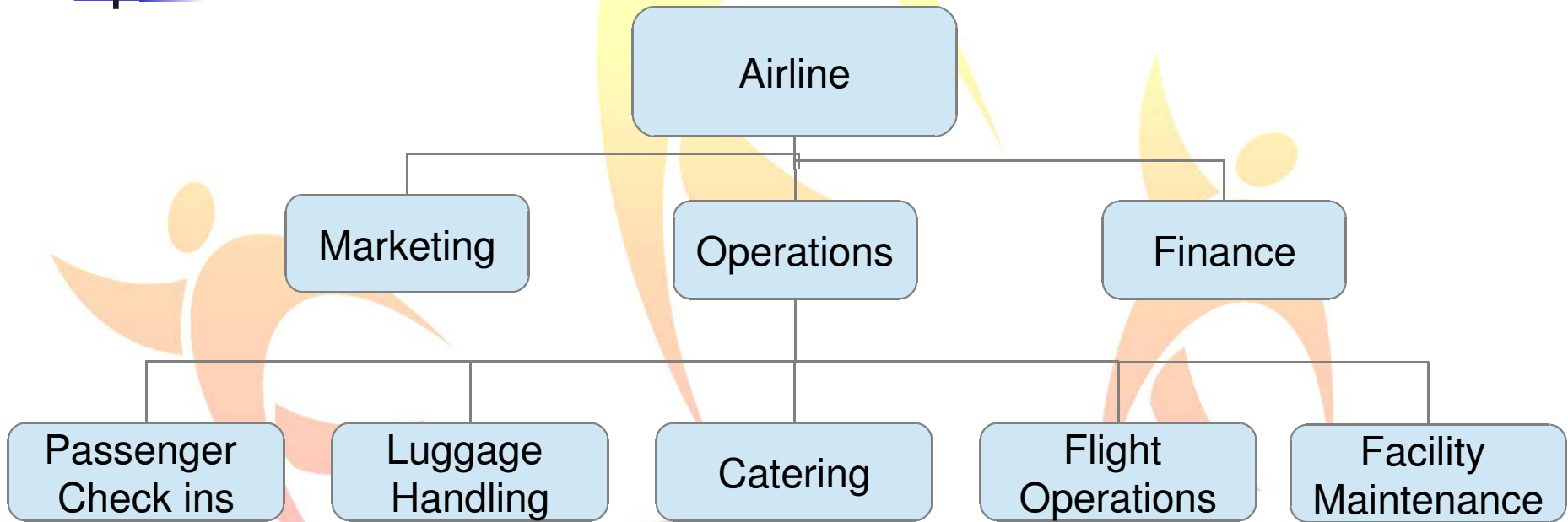
Operations as Basic Function – Service (Banking)



अप्पो दीपो भव।

RAMANUJAN

Operations as Basic Function – Service (Airline)



अप्पो दीपो भव।

RAMANUJAN



Operations as Basic Function

- Hence Operations is one of 3 basic functions in an organization.
- Its applications / sub-domains depends upon nature of the business and may vary from organization to organization.
- Production, Design / IT, Maintenance, Quality, Supply Chain are common sub domains in an manufacturing setup.



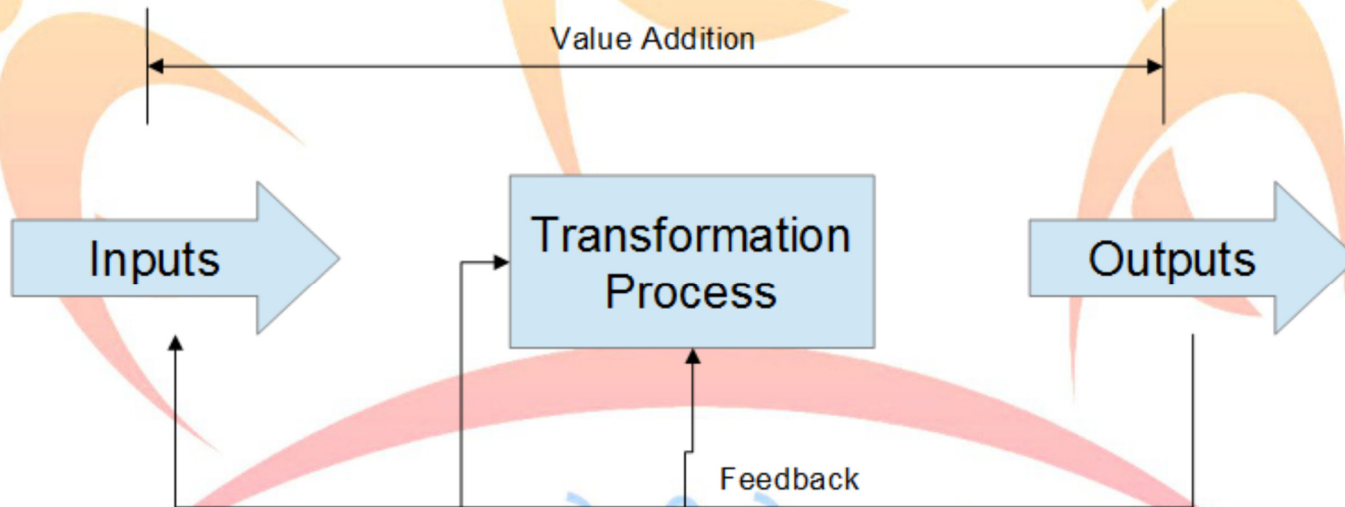
Operations as Transformation Function in an Organization

अप्पो दीपो भव।

RAMANUJAN

Operations as Transformation Function

Three components of an industrial setup:
Inputs, Transformation Processes and Outputs



अप्पो दीपो भवा।

RAMANUJAN

Operations as Transformation Function

Inputs

Transformed Resources:

Materials:

The physical inputs to the process

Information

That is being processed or used in the process

Customers:

The people who are transformed in some way.

Transforming Resources:

Human Resources:

People involved directly or supporting it

Facilities:

Land, buildings, machines, capital, technology and equipment.

Transformation

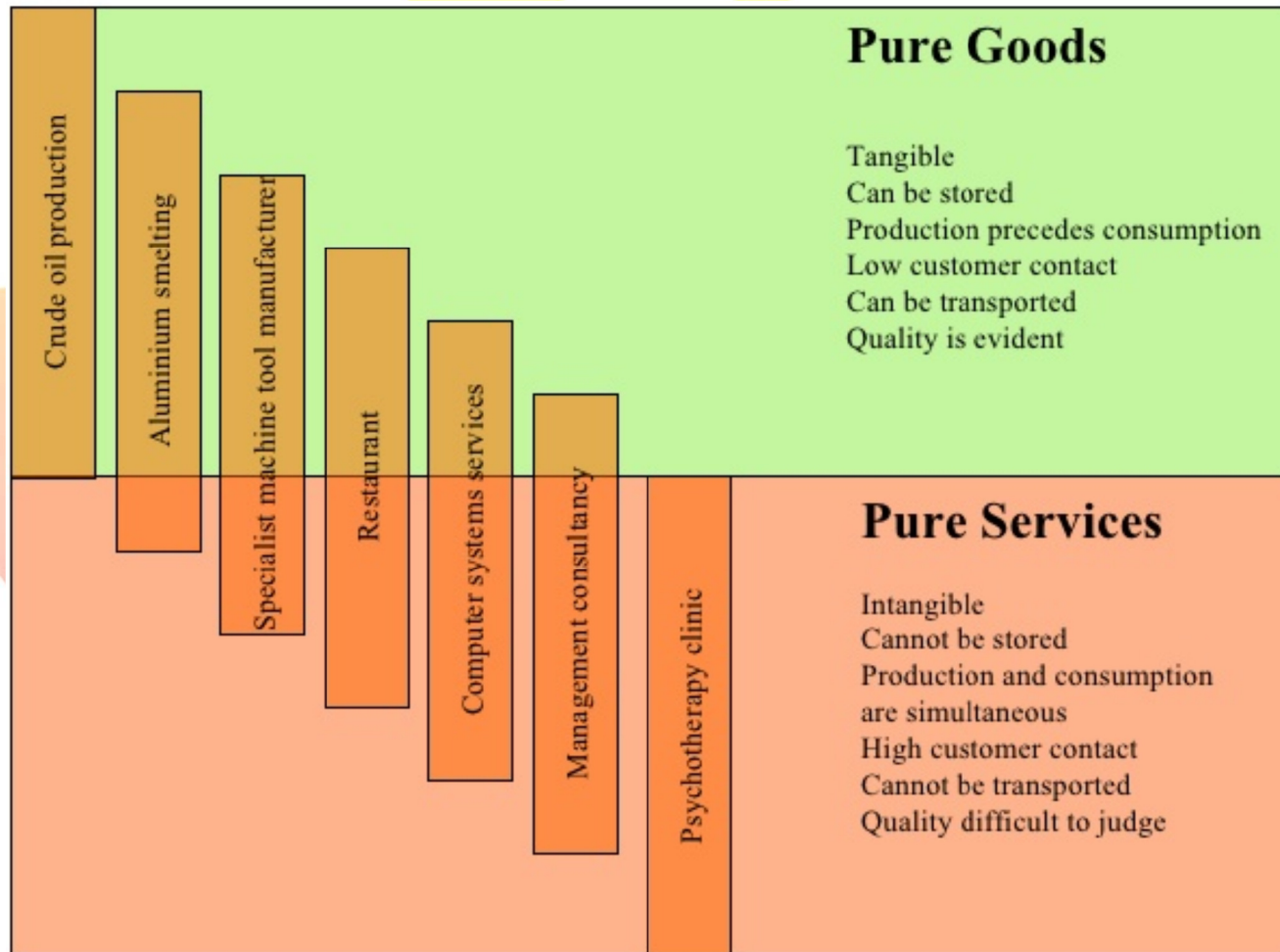
This Includes Changes in the

- Physical characteristics of materials or customers
- Location of materials, information or customers
- Ownership of materials or Information
- Purpose or form of information physiological or psychological state of customers.
- Storage of materials, information or customers

Outputs

- Goods
- Service
- Undesirable Waste in some case

Operations as Transformation Function - Outputs, a mix of Goods & Service



Operations as Transformation Function



Hence Operations can also be defined as all the activities concerned with the transformation of materials, information or customers. [Galloway in his book "Principles of Operations Management"]

अप्पो दीपो भव।

RAMANUJAN

Operations as Transformation Function- What is Value Addition?

- Value addition is the difference between the cost of inputs and the value or price of outputs.
- Hence Operations as transformation process is value addition.
- The essence of operations function is to add value during the transformation process.

अप्पो दीपो भव।

RAMANUJAN

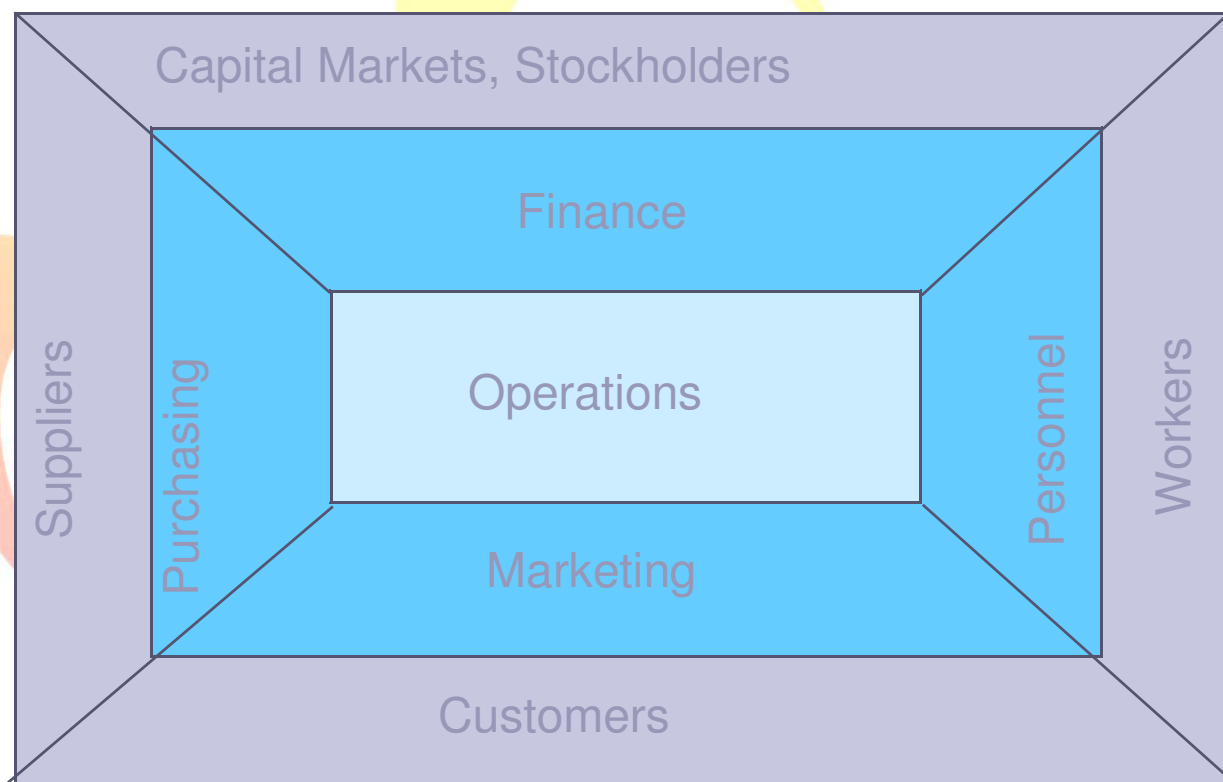


Operations as Core Function in an Organization

अप्पो दीपो भव।

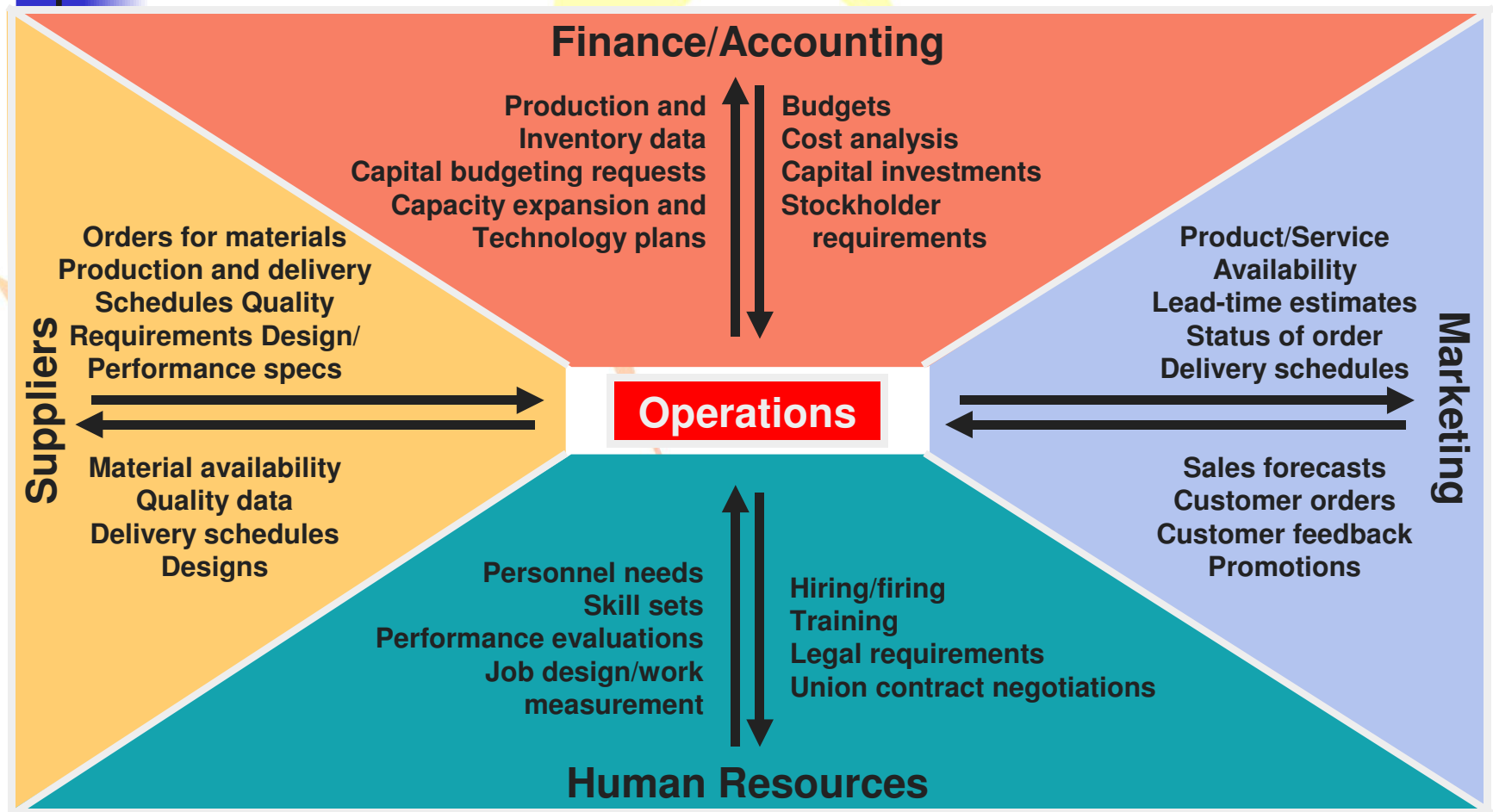
RAMANUJAN

Operations as Core Function



RAMANUJAN

Operations as Core Function





Operations as Core Function

- Hence Operations is Core of any business unit having interface with
 - Marketing
 - Finance
 - Suppliers
 - Customers
 - Workers
 - Other Stakeholders
 - Other Domains



What is Operations Management?

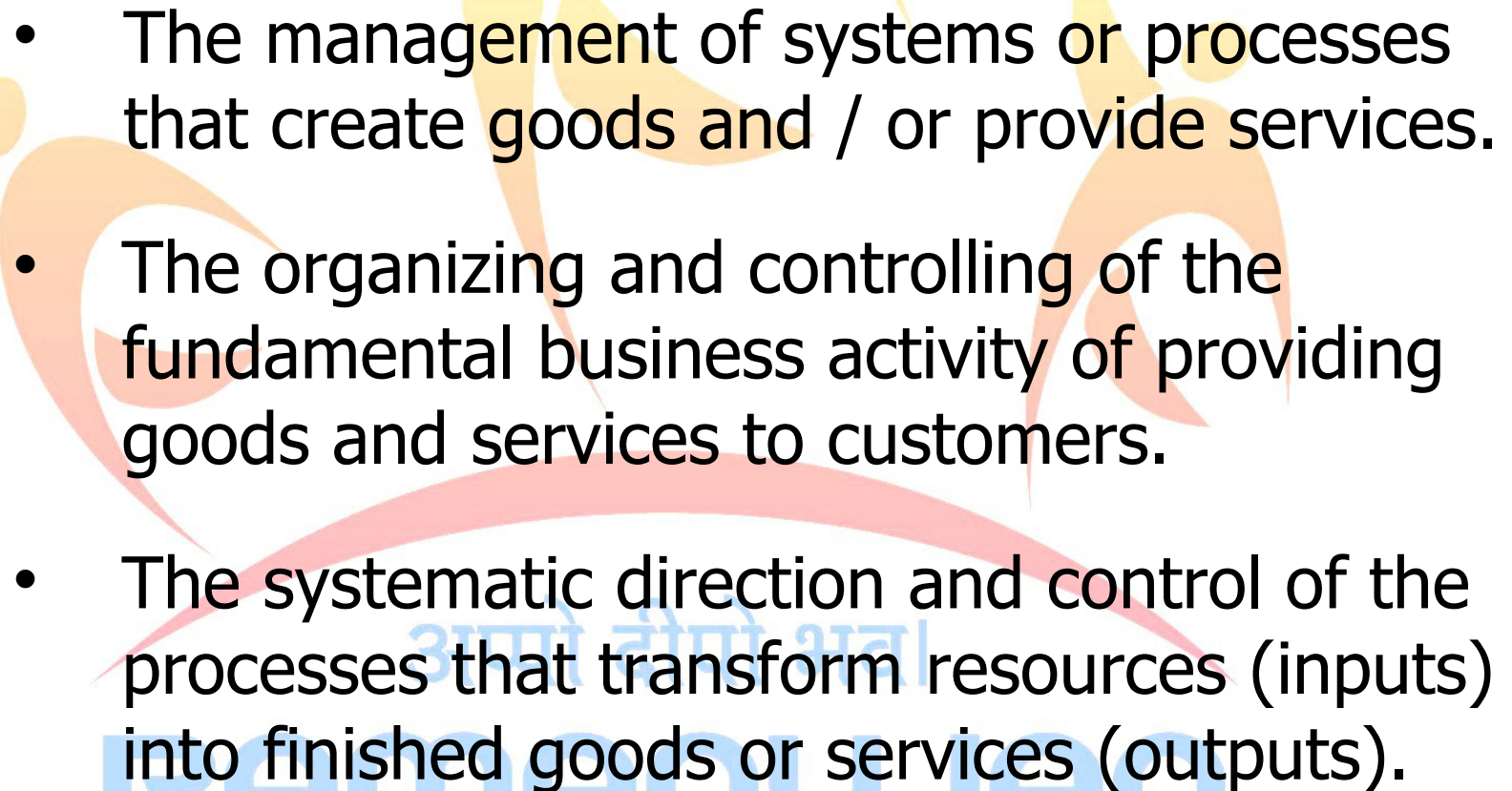
अप्पो दीपो भव।

RAMANUJAN

What is Operations Management?



Various definitions are as below:

- The management of systems or processes that create goods and / or provide services.
 - The organizing and controlling of the fundamental business activity of providing goods and services to customers.
 - The systematic direction and control of the processes that transform resources (inputs) into finished goods or services (outputs).
- 

What is Operations Management?



- It is the science and art of ensuring that goods and services are created and delivered successfully to customers.
- The on-going activities of designing, reviewing and using the operating system, to achieve service outputs as determined by the organization for customers.
- Operations management is about how organizations produce goods and services.

To summarize, Operation Management is



What is Operations Management?



- Management of:
 - People
 - Process
 - Systems
- ...for delivery of a useful product or service

and also

अप्पो दीपो भव।

RAMANUJAN



What is Operations Management?

- Recognition / realization of improvement opportunities in the areas of:
 - Increasing customer value
 - Reducing operational cost
 - Increasing return on assets
 - Sustainability



अप्पो दीपो भव।

RAMANUJAN





Why Operations Management is Important for an Organization?

अप्पो दीपो भव।

RAMANUJAN



Why Operation Management is Important?

- Operations is one of the three major functions (marketing, finance and operations) of an organization.
- Operations affects the companies' ability to compete. Offers a major opportunity for an organization to improve its productivity and profitability.
- Operations is a costly part of an organization.



Why Operation Management is Important?

- Nearly half of the employed people over the world have jobs in operations.
- The Operations function is responsible for a major portion of the assets of most organizations.
- The concepts, tools and techniques of Operations Management are widely used in managing other functions.



Why Operation Management is Important?

- In Operations, it must be ensured that the transformation process is performed efficiently and that the output is of greater value than the sum of the input. Operations management is concerned with the design and implementation of system and process for getting work done.

अप्पो दीपो भव।

RAMANUJAN

Why Operation Management is Important?

Effects of Increasing Contribution

	Current	Marketing Option Increase 50% Sales	Finance Option Reduce Finance Cost 50%	Operation Management Option Reduce Production Cost 20%
Sales	1,00,000	1,50,000	1,00,000	1,00,000
Input Cost	80,000	1,20,000	80,000	64,000
Gross Margin	20,000	30,000	20,000	36,000
Finance Cost	6,000	6,000	3,000	6,000
Net Margin	14,000	24,000	17,000	30,000
Taxes @ 25%	3,500	6,000	4,250	7,500
Margin after Tax	10,500	18,000	12,750	22,500

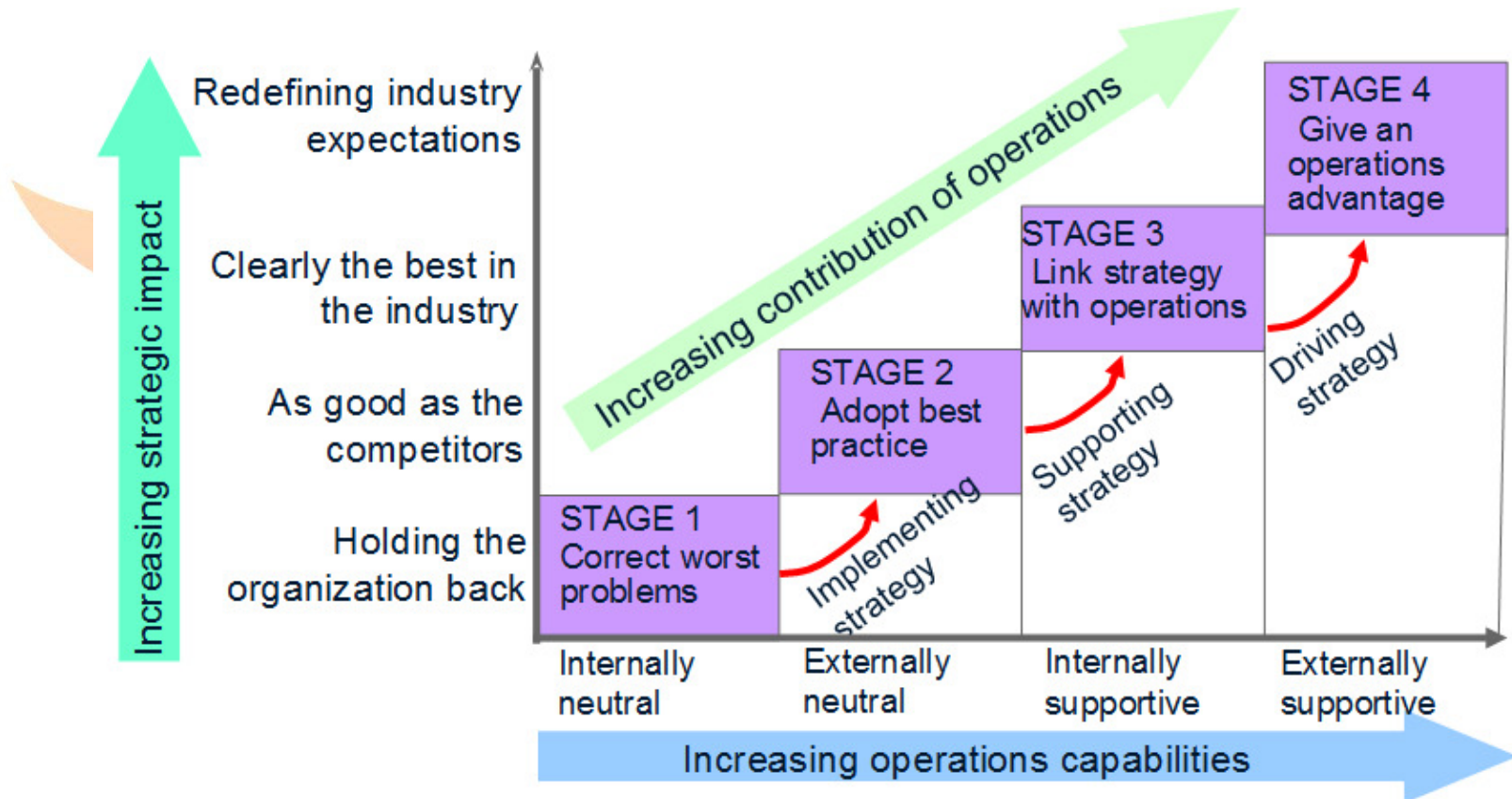
Why Operation Management is Important?

Effects of Increasing Contribution

- On a sale of 1,00,000, 3 options related to 3 basic functions are explored 1) Increase Sales by 50% 2) Reduce Finance Cost by 50% 3) Reduce Operations cost by 20%.
- Margin after Tax was found to be maximum in option 3 i.e. reduce Operations cost by 20%.
- Hence managing Operations function is of utmost importance to an organization and gives high dividends.

Why Operation Management is Important?

Effects of Increasing Capabilities



Why Operation Management is Important?

Effects of Increasing Capabilities

- As evident in figure, increasing operations capabilities through proper Operations Management tools, it not only gives an competitive advantage but redefines industry standards as well.

अप्पो दीपो भव।

RAMANUJAN



What skills do Managers need for Operations Management?

अप्पो दीपो भव।

RAMANUJAN

What skills do Managers need for Managing Operations?



Successful managers should have knowledge of:

- Advanced operations technology and technical knowledge relevant to his/her industry.
- Interpersonal skills and knowledge of other functional areas.
- The ability to communicate effectively, motivate other people, manage projects, and work on multidisciplinary teams.

What skills do Managers need for Managing Operations?



- Mulch-disciplinary working, for example:
 - Supply chains, management of all aspects of providing goods to a consumer from extraction of raw materials to end-of-life disposal.
 - The interface with marketing – determining what customers' value prior to product / service development.

What skills do Managers need for Managing Operations?



- The interface with Finance - capital equipment and inventories comprise a sizable portion of many firms' assets in addition to normal operating costs
- Service operations – coping with inherent service characteristics such as simultaneous delivery/consumption, performance measurements, etc.

अप्पा दीपो भव।

RAMANUJAN

What skills do Managers need for Managing Operations?



- Operations strategy – consistent and aligned with other strategies and legal requirements.
- Process design and improvements – managing the innovation process.

अप्पो दीपो भव।

RAMANUJAN

What skills do Managers need for Managing Operations?

New Concepts and Trends in Operation Management

Should have knowledge of new trends & Concepts:

- **Mass Customization**
 - The rapid, low cost production of goods and services that fulfill constantly changing and increasingly unique customer desires.
- **Supply Chain Management**
 - SCM requires the application of a systems approach to managing the flow of information, materials and services from raw material suppliers through factories and warehouses to the end user (customer)
- **Outsourcing**
 - Outsourcing Buying goods or services rather than producing goods or performing services within the organization

What skills do Managers need for Managing Operations?

New Concepts and Trends in Operation Management

- **Lean manufacturing**
 - Systems that use minimal amounts of resources - less space, less inventory, fewer workers, fewer levels of management- to produce a high volume of high-quality goods with some variety
- **Agility**
 - The ability of an organization to respond quickly to demands or opportunities.
- **Electronic Commerce**
 - The use of computer networks, primarily the internet, to buy and sell products, services, and information.

अप्पो दीपो भव।

RAMANUJAN



PGDM Operations Management

**Structure, Outcome &
Benefits to Organization &
Individuals**

अप्पो दीपो भव।

RAMANUJAN



Program Structure

- The core program consists of 17 courses related to general management & leadership skills, out of which 5 are offered in the second year.
- The elective program consists of 6 courses, offered during 3rd & 4th semesters.
- Specialization courses are divided into 2 main categories
 - Manufacturing or Production Operations
 - Service, Technology Operations.

Program Structure & Learning Outcome

Taught Course	Learning Outcome
<ul style="list-style-type: none">• Management Accounting• Economics for Managers• Finance Management	Operations – Finance Interface
<ul style="list-style-type: none">• Computer Applications in Management• Management Information System (MIS)	Use of IT in Operations, Data storage & processing for decision making
<ul style="list-style-type: none">• Organizational Behavior• Human Resources Management	Human Resources Development, IR relations, Team Building
<ul style="list-style-type: none">• Business Communication Skills	Communicate effectively
<ul style="list-style-type: none">• Operations Research• Strategic Management	Data Processing, research & decision making, Report writing

Program Structure & Learning Outcome

Taught Course	Learning Outcome
• Operations Management	
• Business Risk Management • Innovation & Entrepreneurship	Leadership, Team building, innovation & risk taking
• Economic & Social Environment	Environment studies & evaluation
Marketing Management	Operations – Marketing Interface
Domain Specific specialization i.e. • Production Management • Quality Management • Maintenance Management • Service Management • IT Management • Project Management	Domain specific knowledge, knowing about new technologies in the field.

Program Outcome & Benefits to Organization

- At program completion, Professionals / Technocrats should be able to:
 - Use a systematic approach towards management & problem solving.
 - Use the techniques, skills and modern tools in management to practice effectively in industry.
 - Identify, formulate, solve and evaluate management problems.
 - Apply skills to plan and manage people, systems and resources.



Program Outcome & Benefits to Organization

- Undertake action research independently and develop clear report writing skills.
- Function and communicate effectively in multi-disciplinary teams.
- Ensure effective management of execution & efficient operations within requirements of regulatory & Governance framework.

अप्पो दीपो भव।

RAMANUJAN



About Ramanujan College

- Established in year 2007 at Delhi Mathura Road, district Palwal of Haryana (NCR Delhi)
- Offers PG level programs in management field i.e. MBA & PGDM.
- College is approved by AICTE & affiliated to MDU, Rohtak.

अप्पो दीपो भव।

RAMANUJAN