# Introduction to Systems and Operations Management

Lecture 1

Week commencing 30 January, 2012

# What is this module about?

- Role of systems and operations management and its integration into efficient and effective running of business.
- Process analysis; improvement and quality management
- The soft systems approach of SSM to systems development will be used to analyse and define business requirements.
- People and management issues will be reviewed with emphasis on communication, teamwork and effective leadership.

# Module Learning Outcomes

1. Assess the role of systems and operations management in an organisation and its integration within the business;
2. Examine the main issues involved in quality management and business excellence;
3. Analyse the people and management issues in organisations;
4. Evaluate the role of Soft Systems Methodology (SSM) in analysing and defining business requirements.

# Assessment – Atokowa case study

- Starting on page 8 of your module guide
- Atokowa case study
- You will analyse the problems they have had with their systems and operations management

# Assessment – 3000 word assignment (pg 7-8)

1. Apply appropriate models to the organisation to critically analyse how systems and operations are currently managed. 25%
2. Apply the techniques of soft systems methodology to analyse the current issues in the organisation. Through this analysis summarise the main business requirements of the organisation. 25%
3. Explain how the organisation can improve quality management; business improvement and excellence in their systems and operations. 25%
4. Identify the relevant people and management issues that may arise in implementing your quality management; business improvement and excellence recommendations (in 3). 15%
5. Report Style and Academic Rigour Your report should be written in good business English and be well structured and presented . 10%

# Introduction to Systems and Operations Management

Week 1

Week commencing 30 January, 2012

# Introduction: Learning Outcomes

1. Define Operations Management and Systems Management;
2. Understand how Operations and Systems work together;
3. Apply the input-process-output model from an operations and systems perspective;
4. Know the 4 V's typology of operations: volume; variety; variation of demand and visibility.

# Definitions of Systems and Operations

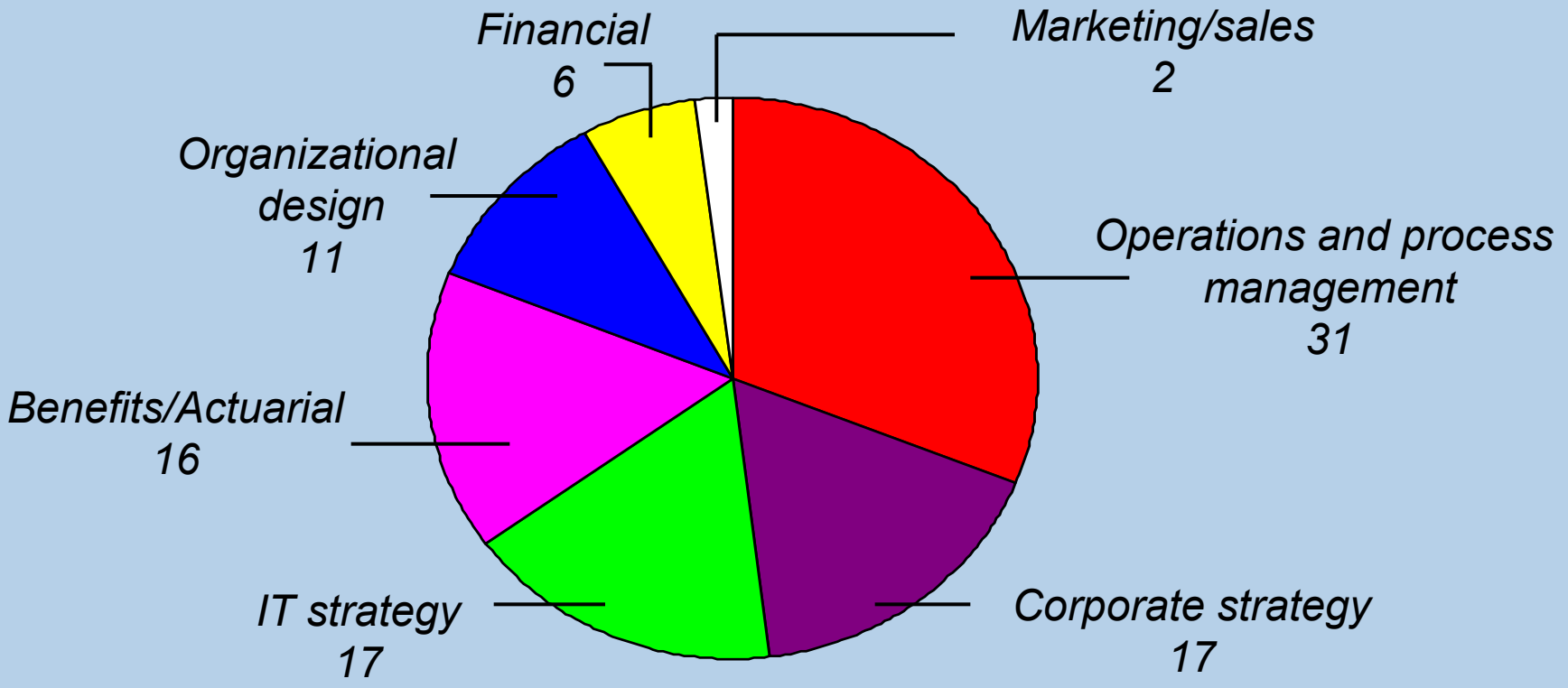
- "Operations management is the activity of managing the resources which are devoted to the production and delivery of products and services." (Slack et al, 2011)
- Information Systems is a "set of interrelated components that collect (or retrieve), process, store, and distribute information to support decision making and control in an organization." (Laudon and Laudon, 2010)

# Why is Operations Management so important?

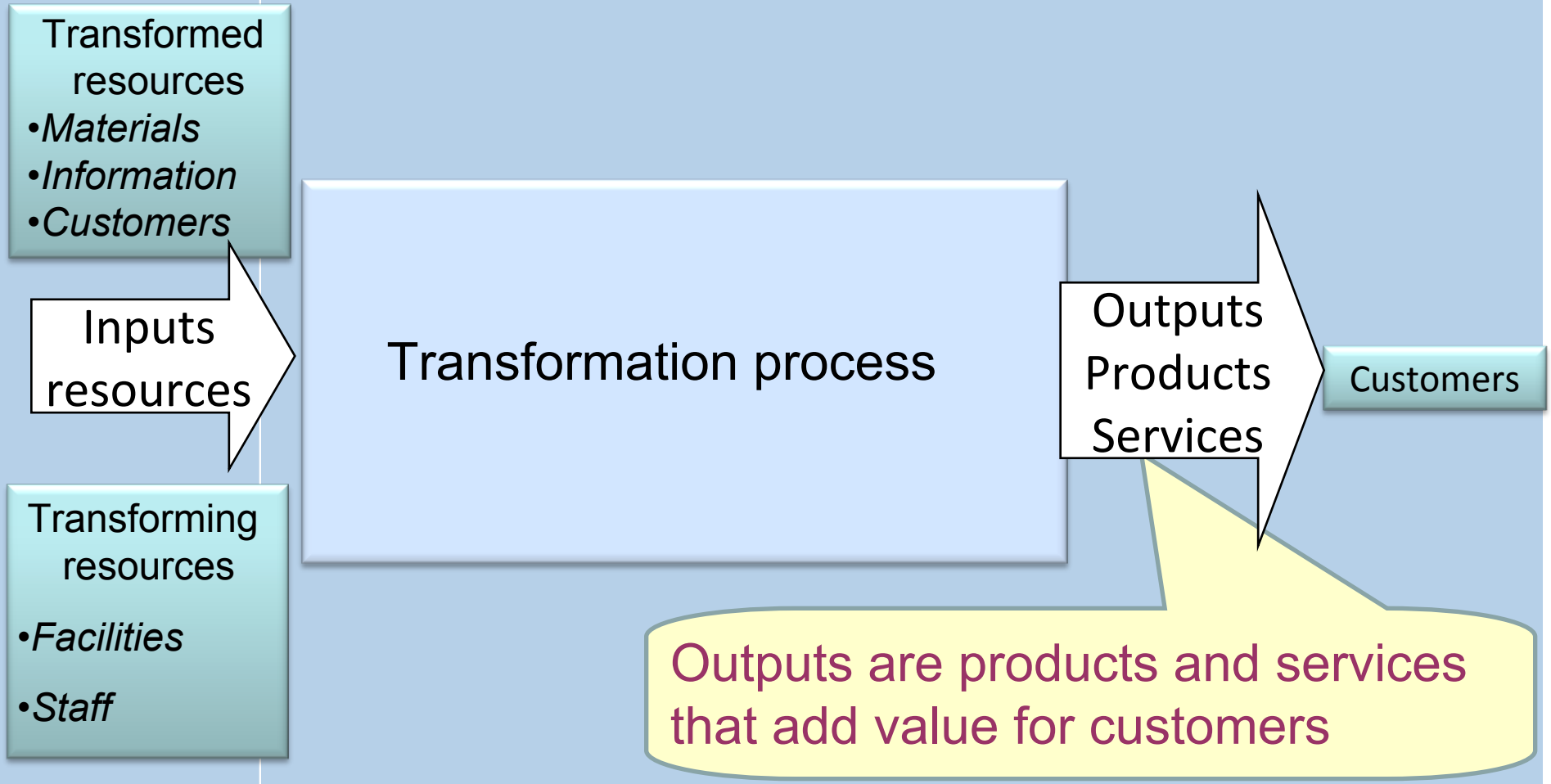
Introduction

**Definitions**

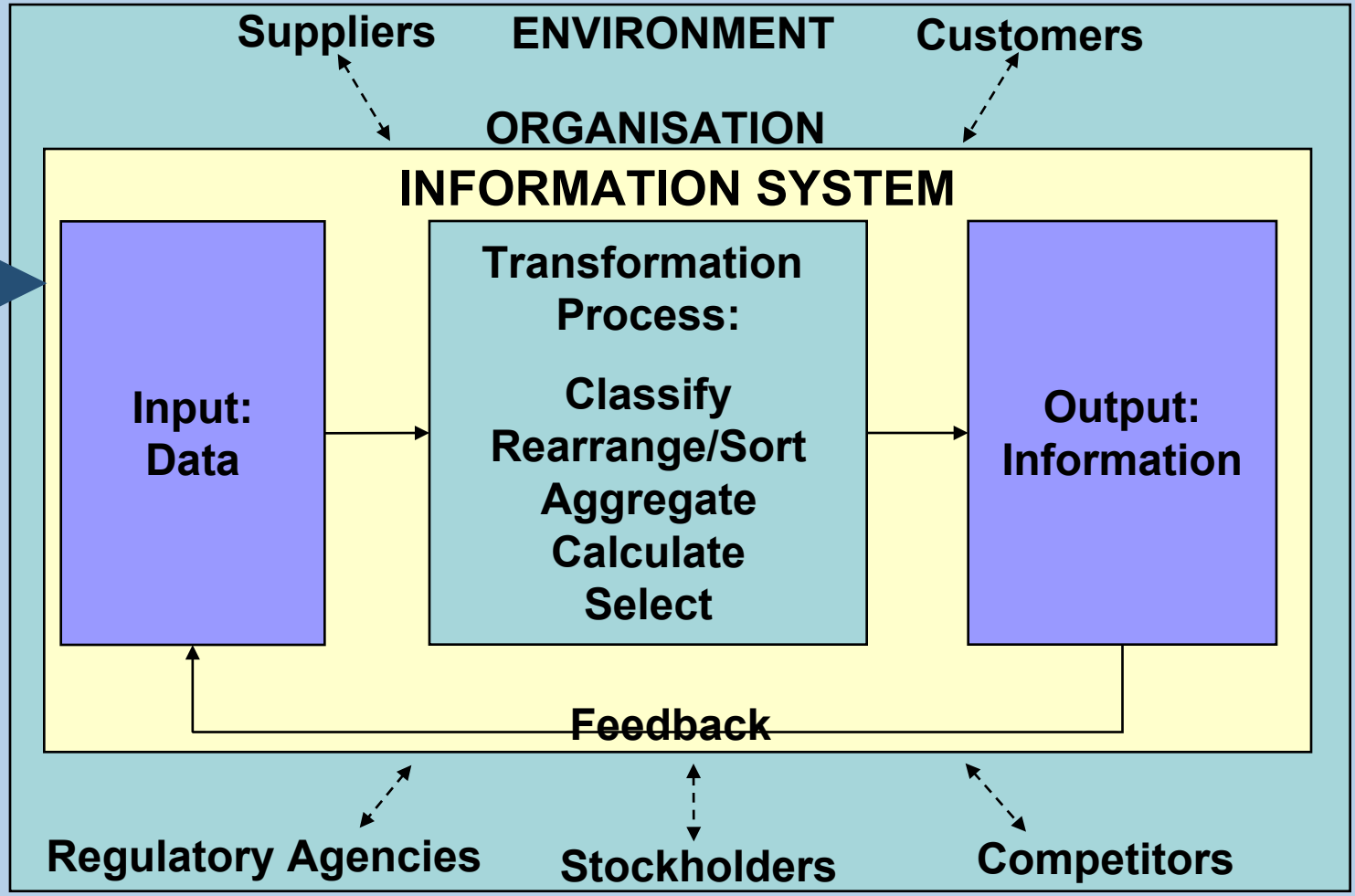
*The consultancy services market – % of world revenues of 40 largest consultancy firms*



# Transformation Process in Operations



# Input-Processing-Output Model




Laudon and Laudon (2007) Figure 1.2, page 12 and Bocij et al (2006)

# Example: Prêt a Manger

Inputs resources

**Transformed resources**

Ingredients
Packaging
Customers

**Transforming Resources**

Equipment
Fittings
Staff


Outputs

Fresh foods

Satisfied customers

# Example: Prêt a Manger info system

Inputs

## Data

Each customer transaction that is processed – i.e. the till
Delivery arrival of new stock (ingredients etc.)
Temperature levels

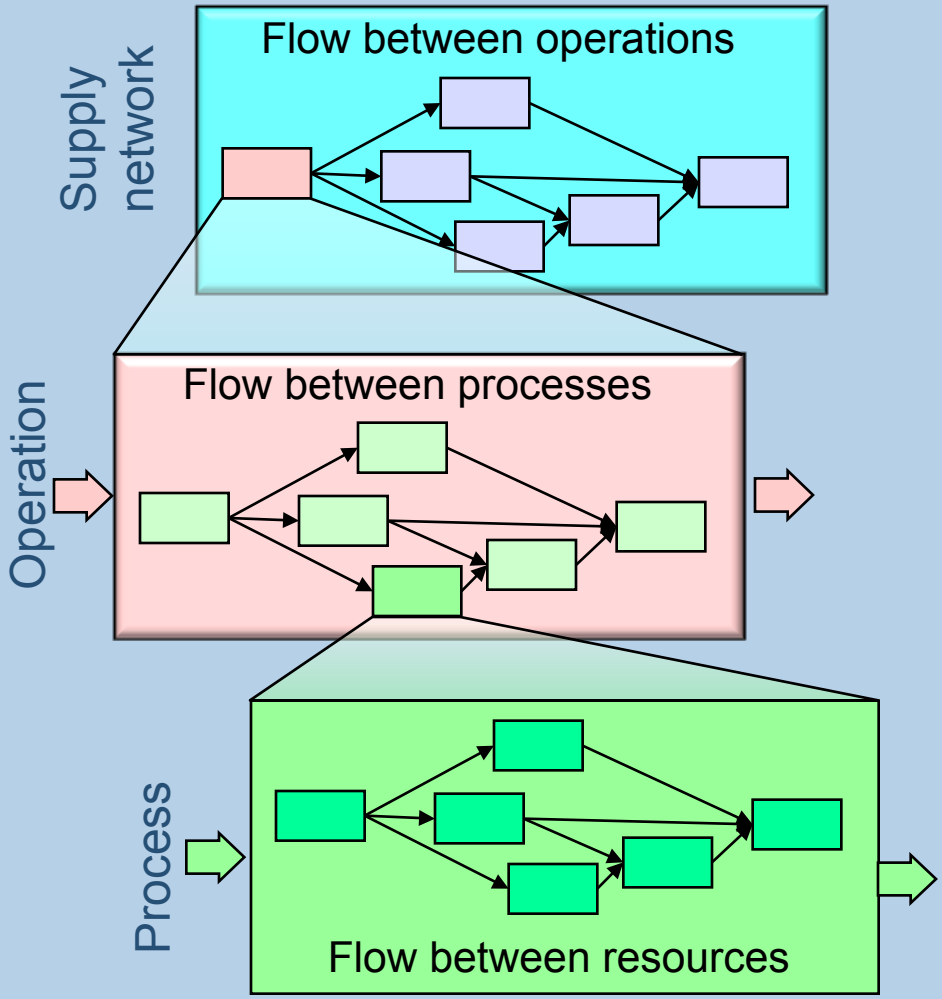
## Process


Outputs

## Information

Stock level information
Sales reports
Peak times reports

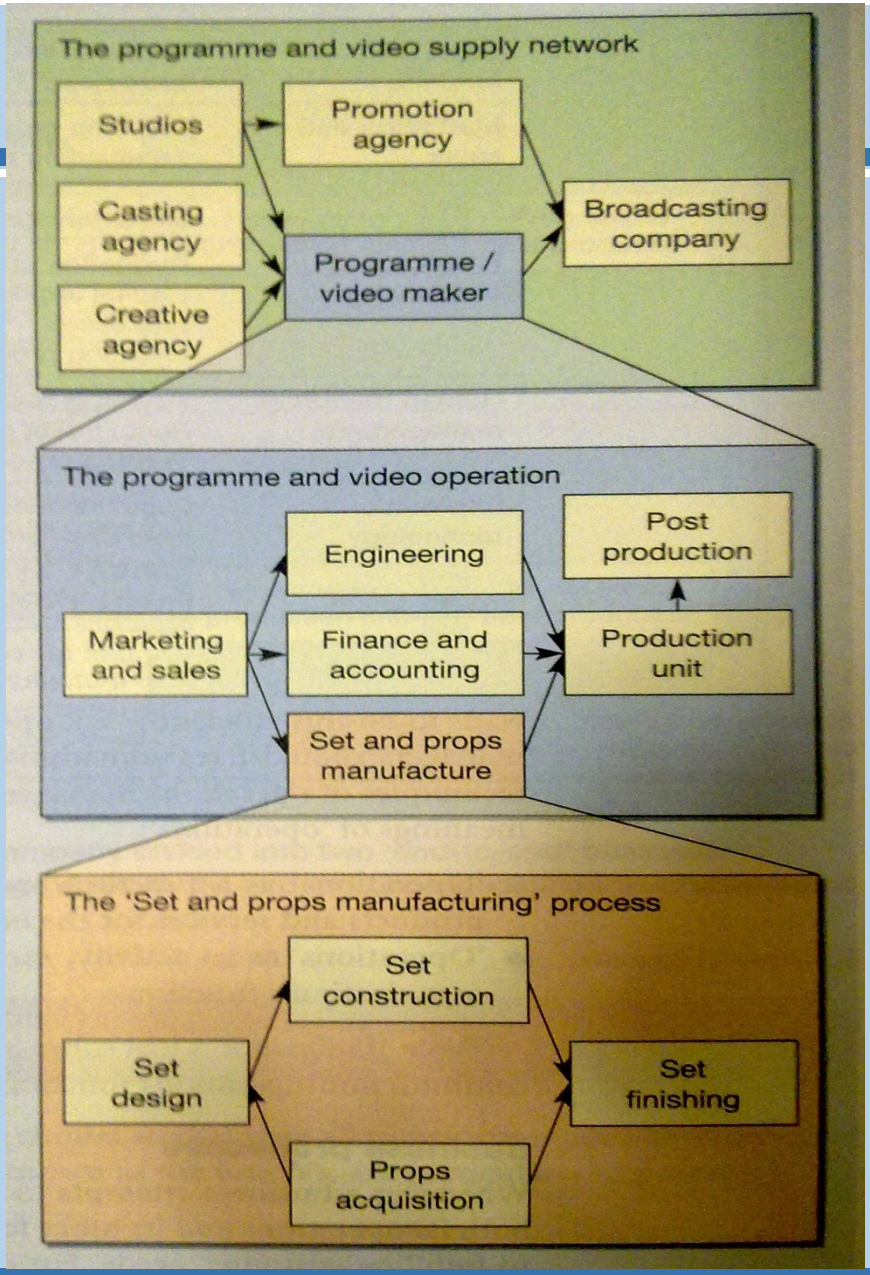
# Three levels of analysis




Operations management is concerned with the flow of transformed resources between operations, processes, where

*External operations interact with internal processes to form the external supply network*

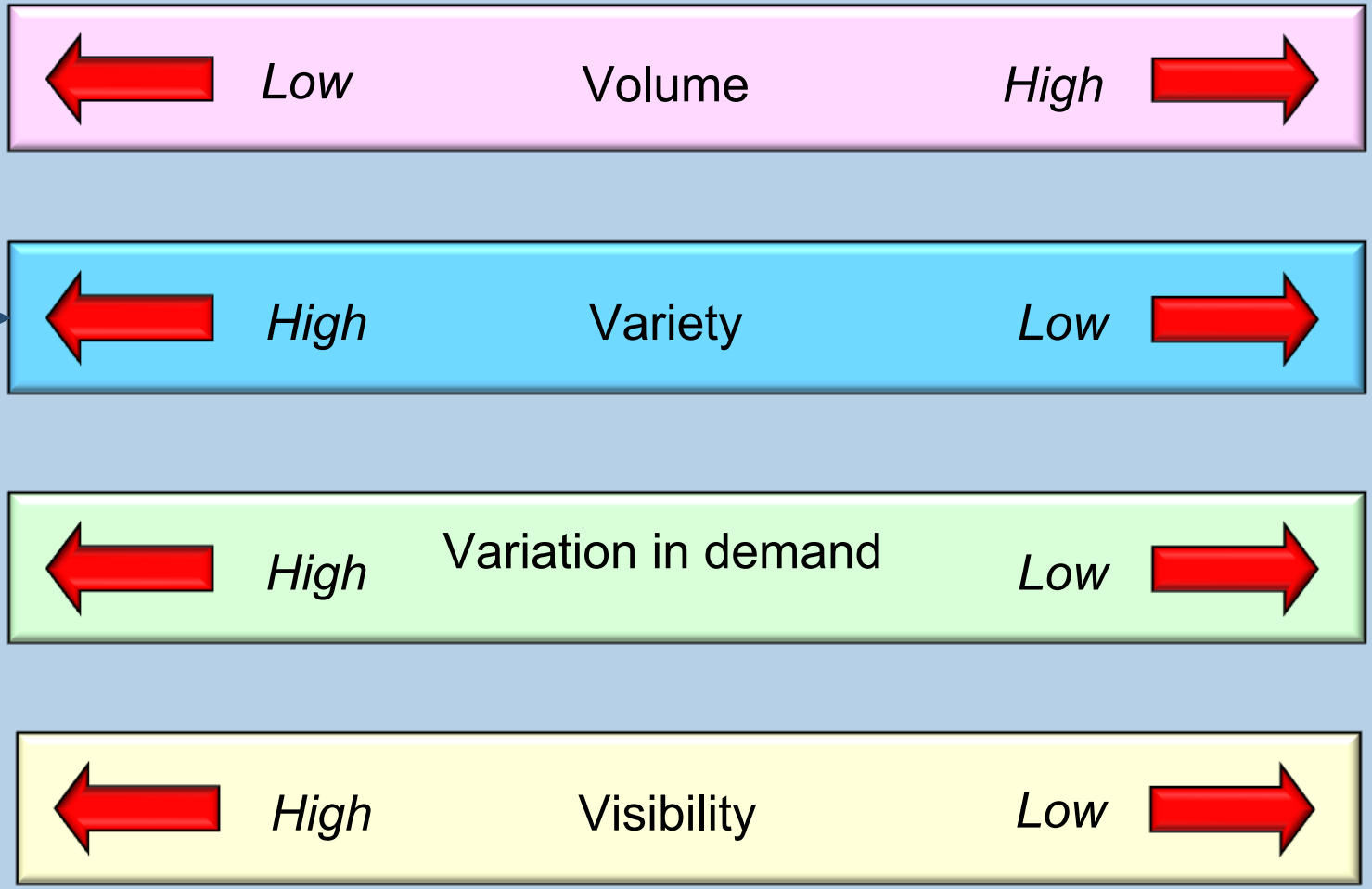
*Processes form an internal 'supply network' and become each others customers and suppliers*



# A typology of operations and processes



## The 4 Vs



# Implications of the operations typology

- Low repetition
- Each staff member performs more of each task
- Less systemization
- High unit costs

Low ← Volume → High

- High repeatability
- Specialization
- Capital intensive
- Low unit costs

- Flexible
- Complex
- Match customer needs
- High unit costs

High ← Variety → Low

- Well defined
- Routine
- Standardized
- Regular
- Low unit costs

# Implications of the operations typology

- Changing capacity
- Anticipation
- Flexibility
- In touch with demand
- High unit costs

High ← Variation in demand → Low

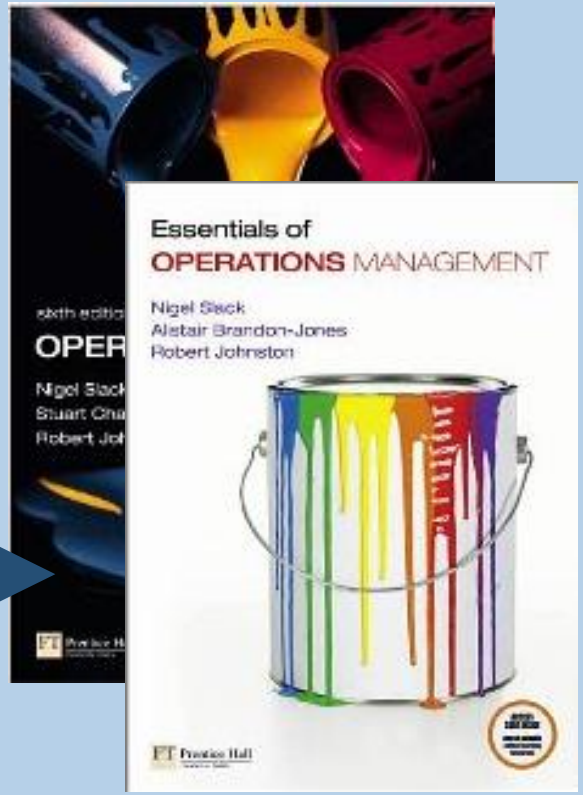
- Stable
- Routine
- Predictable
- High utilization
- Low unit costs

- Short waiting tolerance
- Satisfaction by customer perception
- Customer contact skills needed
- Received variety is high
- High unit costs

High ← Visibility → Low

- Time lag between production and consumption
- Standardization
- Low contact skills
- High staff utilization
- Centralization
- Low unit costs

# Self-managed learning




- Complete the workshop task
- Read Chapter 1 – Operations Management