CSE 3231/5231 Software Engineering

Business Context

Narrated by:

Rajiv Ramnath

Learning Outcomes

- How does the industry structure determine what the enterprise's business strategy must be?

- Of all the different things it might do in order to improve its competitive position, how can an enterprise decide what specifically to do?

- How may an enterprise translate its strategy into actual plans and actions?
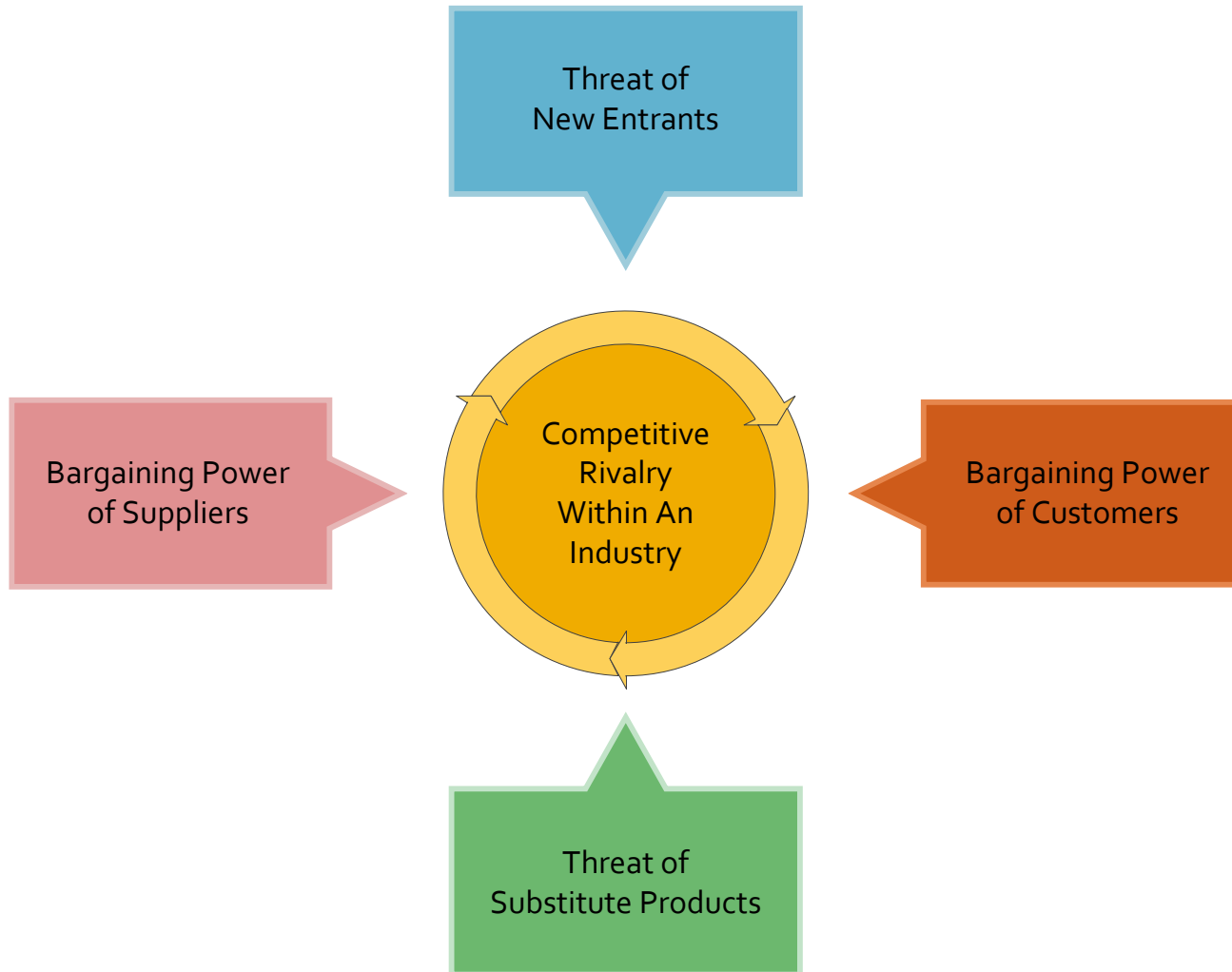
- Once an enterprise knows what it must do, how can Information Technology, or computing, help?

- How must IT work so things be done in the right way for the business?

Porter's Five Forces Model

HOW DOES INDUSTRY STRUCTURE DEFINE BUSINESS STRATEGY?

Porter's Five Forces

Porter's Five Forces

Threat of new entrants	Bargaining power of suppliers	Bargaining power of buyers	Threat of substitute products or services	Rivalry among existing competitors
- Barriers to entry - Economies of scale - Brand loyalty - Capital requirements - Cumulative experience - Government policies - Access to distribution channels - Switching costs	- Number of suppliers - Size of suppliers - Uniqueness of each supplier's product or service - Focal company's ability to substitute - Switching costs	- Number of customers - Size of each customer order - Differences between competitors - Price sensitivity - Buyer's ability to substitute - Buyer's information availability - Switching costs	- Number of substitute products available - Buyer propensity to substitute - Relative price performance of substitute - Perceived level of product differentiation - Switching costs	- Number of competitors - Diversity of competitors - Industry concentration - Industry growth - Quality differences - Brand loyalty - Barriers to exit - Switching costs

Example – Airline Industry (U.S.)

	Overall Outlook	Rationale
Threat of new entrants		
Bargaining power of suppliers		
Bargaining power of buyers		
Threat of new substitute products		
Competitive rivalry within an industry		

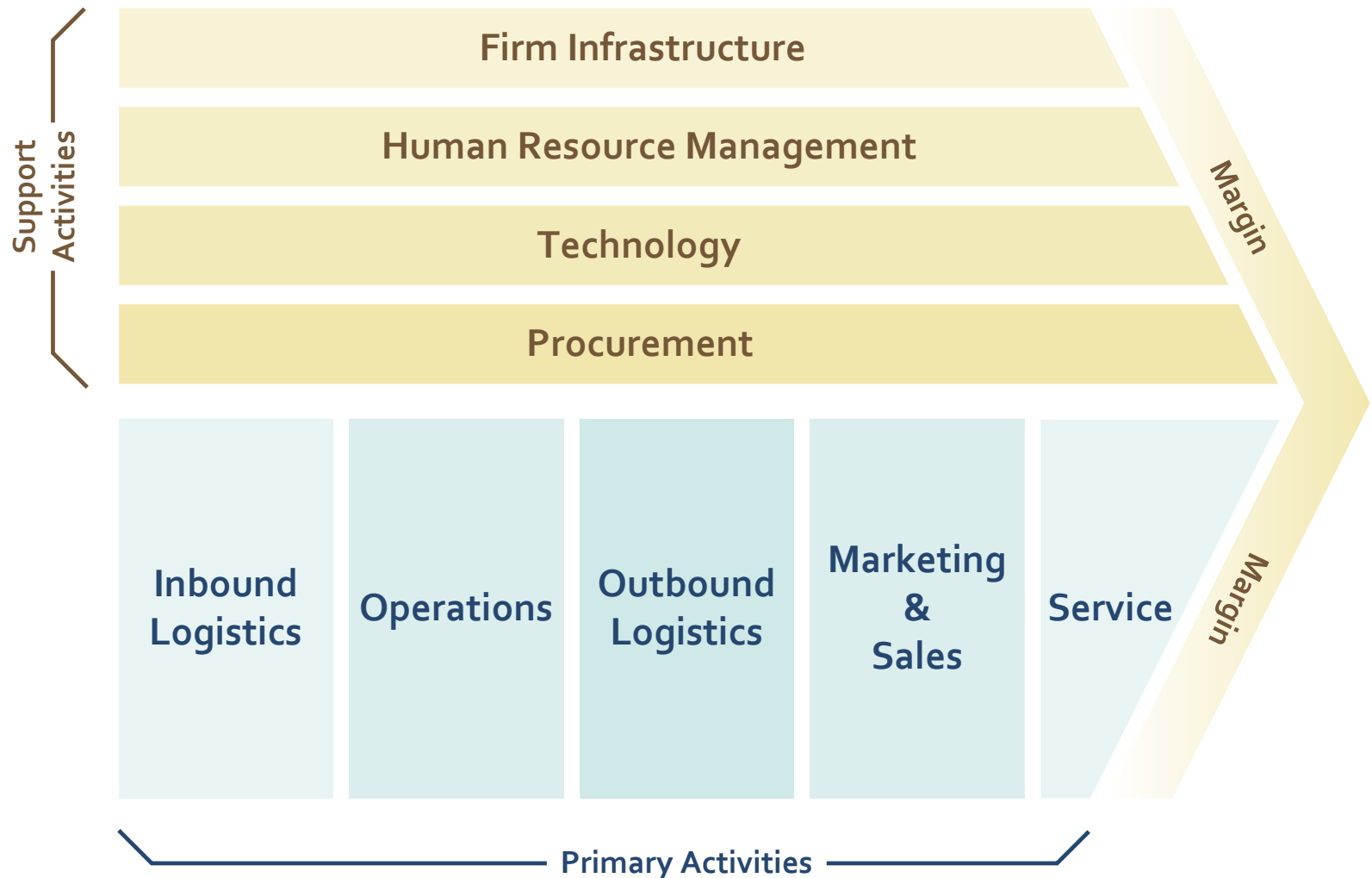The Value Chain

HOW DOES AN ENTERPRISE PICK WHAT TO IMPROVE?

Figuring out how a firm may compete

For this, we have to study their
value chain,
which is a representation of
the **internal operations** of the company.

What is the value chain?

Value Chain for a Computer Manufacturer

Support Activities

Purchase Components	Research & Development	Inventory Management
Purchase Raw Materials	Order Components	Order Entry
	Manufacture Products	Order Fulfillment

Human Resource Management

Technology

Procurement

Margin

Inbound Logistics | **Operations** | **Outbound Logistics** | **Marketing & Sales** | **Service**

Margin

Primary Activities
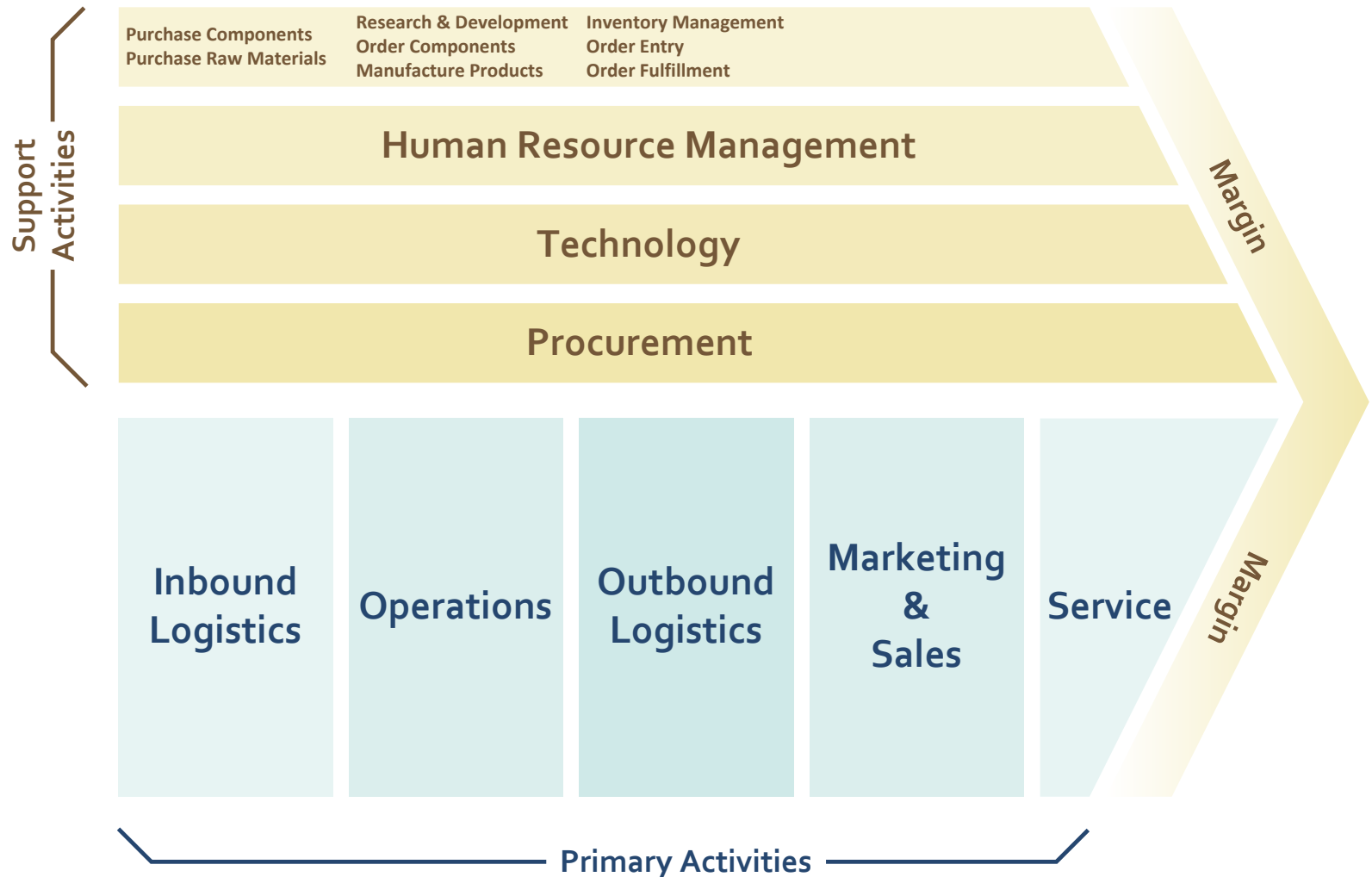
Class Exercise 4.1

Business Context

- You want to convert this classroom into a coffee and confectionary shop
- Modern, hi-tech, variety of items, affordable
- Customers: OSU students, teachers, staff

Group Exercises

1) Do Porter 5-forces analysis for the industry
   - Decide overall outlook for each force (H, M, L)
   - Identify two justifications each

2) Draw value chain, identify at least two activities each for *inbound logistics*, *operations*, and *outbound logistics*

Context of IT

COMPETITION, STRATEGY, AND ROLE OF IT

How Firms Compete

- Goal: Create a sustainable, defensible position within the market

- Generic Strategies:
  - Cost
    - Leadership is key
  - Differentiation
    - Sustainable differentiation is key
  - Focus
    - Cost or differentiation in a target segment
    - Targets competitor sub-optimization
  - Tailor value chain to strategy

- Note: Firms rarely risk damage to the industry structure

Competitive Advantage is Achieved by Optimizing the Value Chain

- The **value chain shapes** and reflects the **industry structure**
- The **value chain shapes** the **organizational structure** – optimize both
  - E.g. Apple: Close interaction between marketing and product design
- **Each activity** in the value chain **is a point of differentiation** – optimize these activities
  - Examine and optimize steps
  - Examine, optimize and *exploit* linkages
    - Linkages may be across firms as well
- **Scope affects the value chain** – optimize the scope
  - Customer Segment scope
  - Integration scope
  - Geographic scope
  - Industry scope

How Information Technology Provides Competitive Advantage - Information Intensity

- "Information intensity" is the degree to which information is needed or used in the industry segment under study – such as in the components of the value chain of enterprises in that industry.

- Each step in a value chain has a physical and an information component (raw materials vs. designs, manufacturing instructions etc.). IT can add value only to the extent of the information intensity.

- IT can:
  - Optimize the step
  - Automate the step
  - Etc.

Reference: Porter, M. E. and Millar, V. E., "How Information Gives You Competitive Advantage"

Class Exercise 4.2

Coffee and confectionary shop

1. Select a strategy to compete
   - ➢ Provide at least two justifications

2. Identify one IT project that is ***fully aligned*** with the identified strategy
   - ➢ Argue why it is aligned with strategy?
   - ➢ Hint: a cool idea may not align best!

References

- B.1. Porter, M. "How Competitive Forces Shape Strategy", electronic copy provided
- IS.8. Rattan-osu_strategy_it_presentation

What have we learned?

1 • How does the structure of the industry segment of an enterprise determine what the enterprise's business strategy must be?

2 • Of all the different things it might do in order to improve its competitive position, how can an enterprise decide what specifically to do?

3 • How may an enterprise translate its strategy into actual plans and actions?

4 • Once an enterprise knows what it must do, how can Information Technology, or computing, help?

5 • How must IT work so things be done in the right way for the business?