



Lesson 3

**Organizational Strategy, Information
Systems, and Competitive
Advantage**

Study Questions

- Q1: How does organizational strategy determine information systems structure?
- Q2: What five forces determine industry structure?
- Q3: What is competitive strategy?
- Q4: What is a value chain?
- Q5: How do value chains determine business processes and information systems?
- Q6: How do information systems provide competitive advantage?

Q1: How Does Organizational Strategy Determine Information Systems Structure?

Organizations examine structure of their industry and determine a competitive strategy.

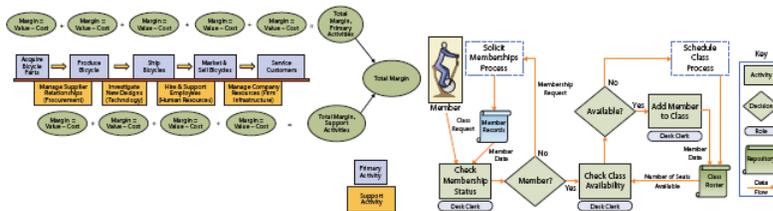
Competitive strategy determines value chains determine business processes.

Structure of business processes determine design of supporting information systems.



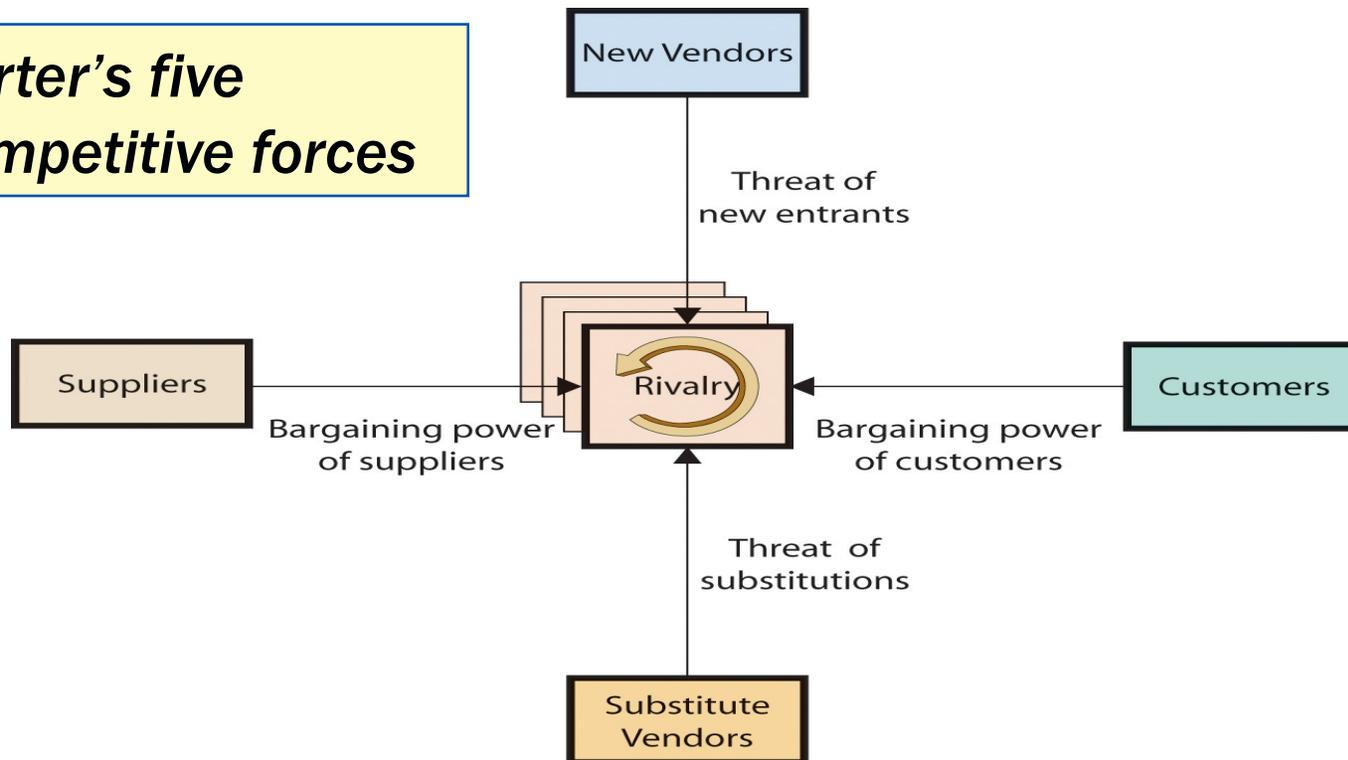
- Bargaining power of customers
- Threat of substitutions
- Bargaining power of suppliers
- Threat of new entrants
- Rivalry

Lowest cost across the industry	Better product/service across the industry
Lowest cost within an industry segment	Better product/service within an industry segment



Q2: What Five Forces Determine Industry Structure?

Porter's five competitive forces



Five Forces and FlexTime

Type (Strength Factors)	Competitive Force (Strength Factors)	FlexTime Threat (Factors Assessment)	FlexTime's Strength Assessment
Competitive (Switching costs, customer loyalty)	Substitutes (Lower price and perceived benefits the same)	Home workouts (Low switching costs, cheap, but not the same experience at all) Athletic clubs (Expensive, high switching costs, substitute not as familiar)	Home workouts threat: medium Athletic club threat: weak
	New Entrants (Barriers to entry, capital requirements, noncapital resources)	New copycats (Medium switching costs, customers loyal to FlexTime, capital requirements medium, customer database is barrier to entry)	New copycat threat: weak
	Rivalry (Price, quality, innovation, marketing)	Rivals (Medium switching costs, customers loyal to FlexTime, customers influenced by price/quality/innovation/marketing)	Rivals threat: strong

Five Forces and FlexTime (cont'd)

Type (Strength Factors)	Competitive Force (Strength Factors)	FlexTime Threat (Factors Assessment)	FlexTime's Strength Assessment
Supply chain bargaining power (Availability of substitutes, relative size)	Supplier	Landlord (Few suitable buildings with parking, FlexTime switching costs high, multiyear contract) Equipment & supply vendors (Many substitutes, low switching costs, brand not important)	Landlord bargaining power threat: strong Equipment & supply vendors bargaining power threat: weak
	Customer	Club members (Relative size: bargaining power of a single customer is weak)	Club member bargaining power: weak

Q3: What Is Competitive Strategy?

	Cost	Differentiation
Industry-wide	Lowest cost across the industry	Better product/service across the industry
Focus	Lowest cost within an industry segment	Better product/service within an industry segment

Porter's Four Competitive Strategies

What Is Competitive Strategy? (cont'd)

To be effective, an organization's:

- **Goals, objectives, culture, and activities must be consistent with its strategy**
- **Information systems must facilitate its competitive strategy**



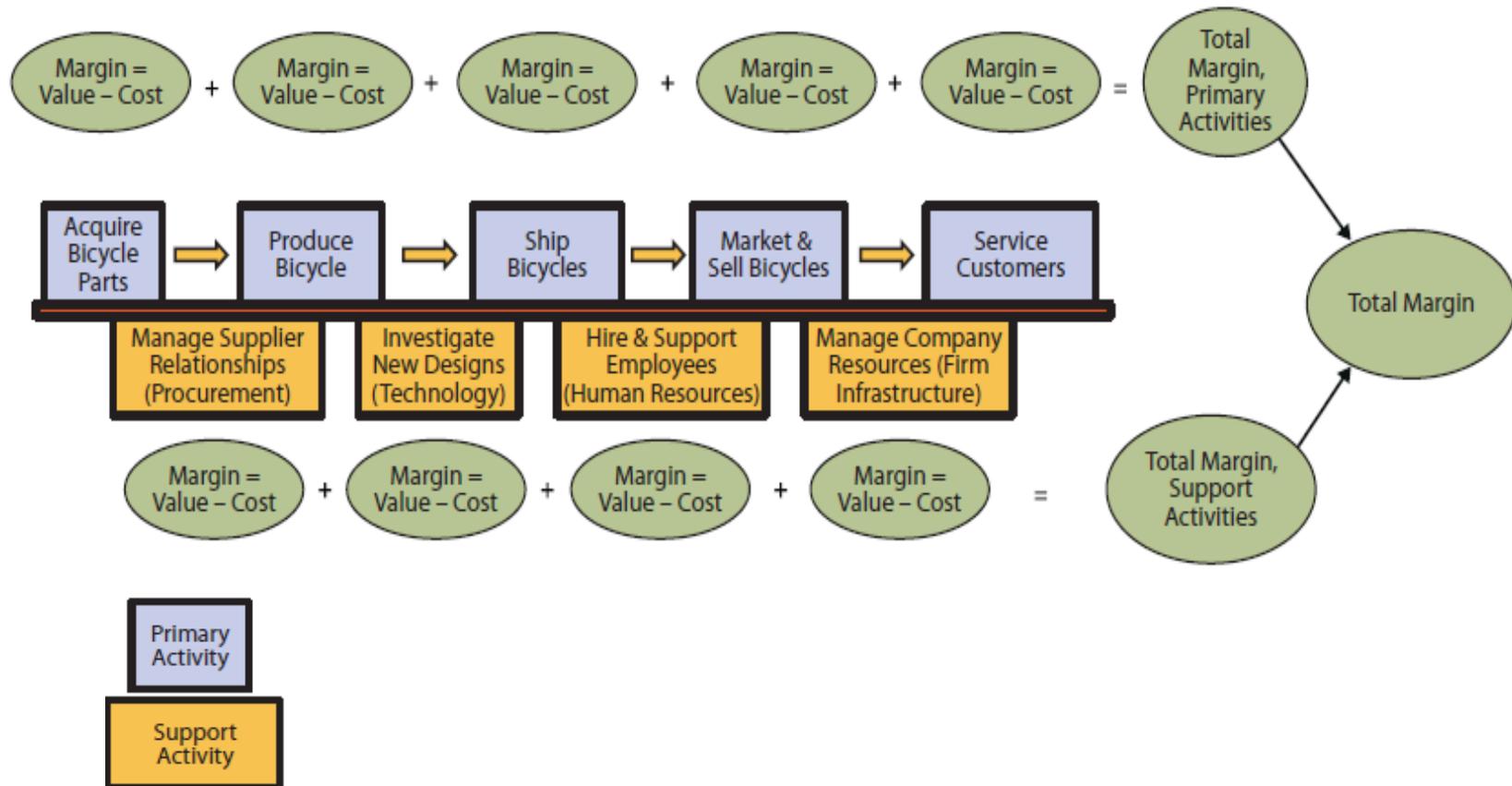
Q4: How Does Competitive Strategy Determine Value Chain Structure?

Competitive strategy implemented by creating value



- **Value**—amount of money a customer is willing to pay for a resource, product, or service
- **Margin**—difference between value an activity generates and cost of activity
- **Value chain**—a network of value-creating primary and support activities

Bicycle Maker's Value Chain



Summary of Value Chain Primary Activities

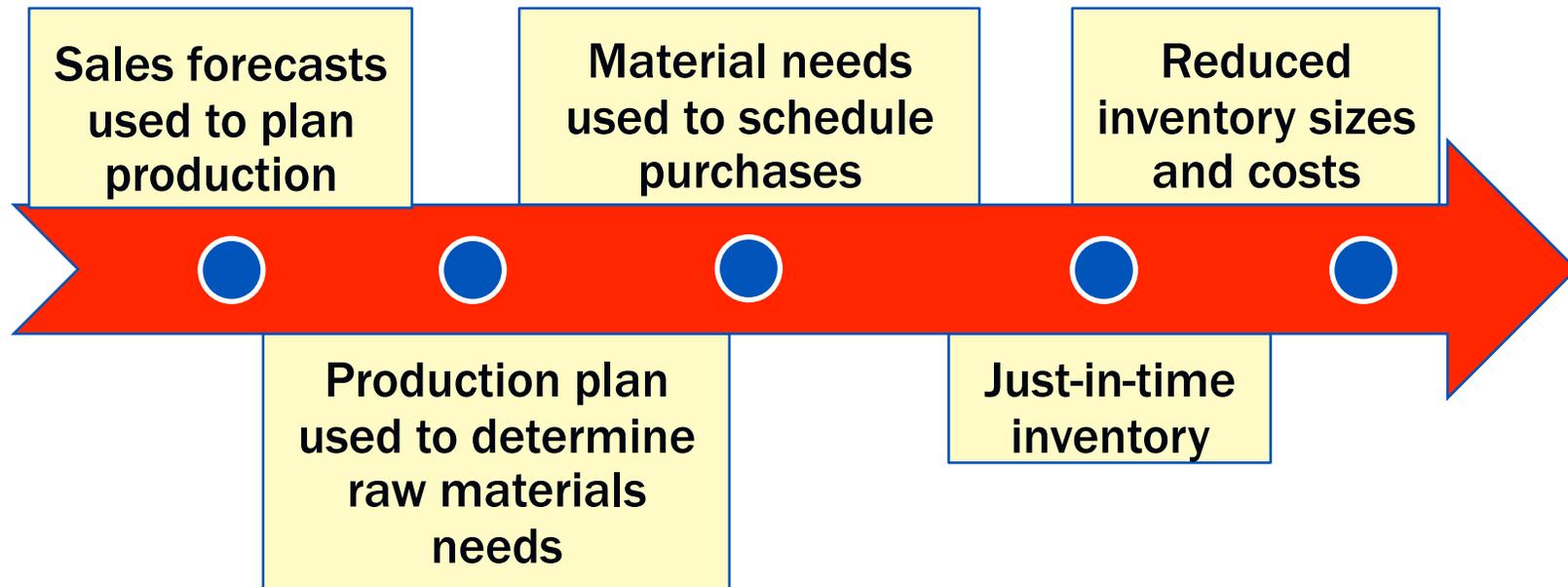
Primary Activity	Description
Inbound Logistics	Receiving, storing, and disseminating inputs to the product
Operations/Manufacturing	Transforming inputs into the final product
Outbound Logistics	Collecting, storing, and physically distributing the product to buyers
Sales and Marketing	Inducing buyers to purchase the product and providing a means for them to do so
Customer Service	Assisting customer's use of the product and thus maintaining and enhancing the product's value

Support Activities in the Value Chain

Support Activity	Description
Technology	R & D, New Techniques, Methods, Procedures
Procurement	Raw Materials
Human Resources	Training, Recruiting, Compensation
Firm Infrastructure	General Management, Finance, Accounting, Legal, Government Affairs

Value Chain Linkages

- Interactions across value activities readily supported by information systems
- Manufacturing systems use linkages to reduce costs



Business Process Design

**Porter's
Value
Chain is
used to:**

- Create integrated, cross-departmental business systems
- Create new, more efficient processes rather than automating existing ones
- Focus on:
 - Creating integrated activities across entire value chain
 - Eliminating redundant processes, and creating new, more efficient processes

Q5: How Do Value Chains Determine Business Processes and Information Systems?

Support activities contribute *indirectly* to production, sales, and customer service,
and

Produce margin that is often difficult to calculate (intangible costs and benefits)

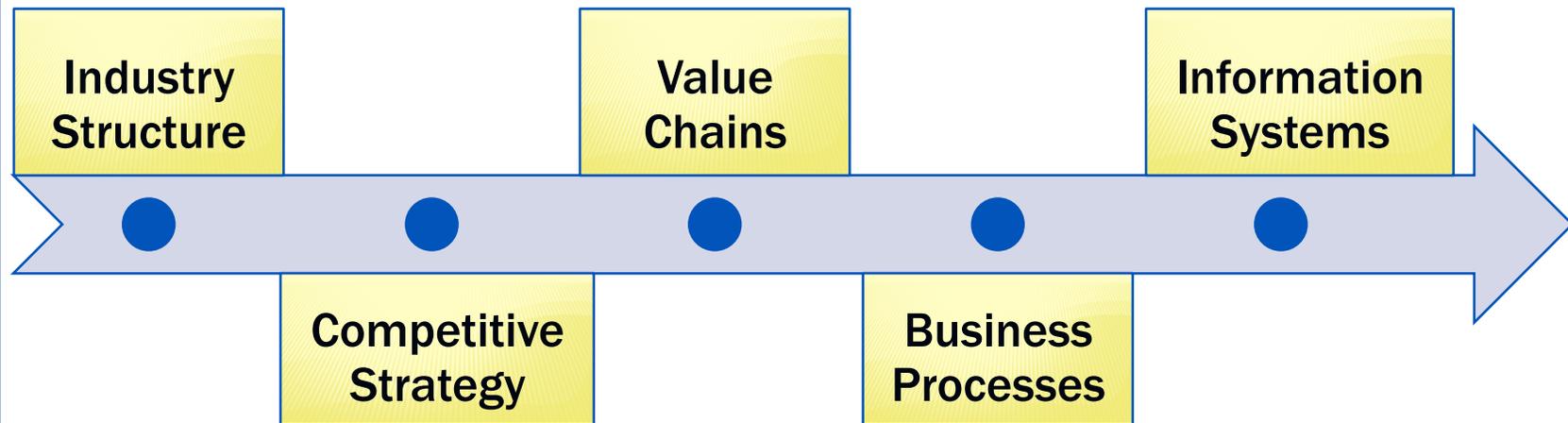
Value Chain for Bicycle Rental Company

	Value Chain Activity				
Low-Cost Rental to Students	Message that implements competitive strategy	"You wanna bike?"	"Bikes are over there. Help yourself."	"Fill out this form, and bring it to me over here when you're done."	"Show me the bike." "OK, you owe \$23.50. Pay up."
	Supporting business process	None.	Physical controls and procedures to prevent bike theft.	Printed forms and a shoe box to store them in.	Shoe box with rental form. Minimal credit card and cash receipt system.

Value Chain for Bicycle Rental Company (cont'd)

	Value Chain Activity	Greet Customer	Determine Needs	Rent Bike	Return Bike & Pay
High-Service Rental to Business Executives at Conference Resort	Message that implements competitive strategy	"Hello, Ms. Henry. Wonderful to see you again. Would you like to rent the WonderBike 4.5 that you rented last time?"	"You know, I think the WonderBike Supreme would be a better choice for you. It has ..."	"Let me just scan the bike's number into our system, and then I'll adjust the seat for you."	"How was your ride?" "Here, let me help you. I'll just scan the bike's tag again and have your paperwork in just a second." "Would you like a beverage?" "Would you like me to put this on your hotel bill, or would you prefer to pay now?"
	Supporting business process	Customer tracking and past sales activity system.	Employee training and information system to match customer and bikes, biased to "up-sell" customer.	Automated inventory system to check bike out of inventory.	Automated inventory system to place bike back in inventory. Prepare payment documents. Integrate with resort's billing system.

Experiencing MIS InClass Exercise 3



Use your knowledge of an organization's market, together with observations of the structure and content of its web storefront, to infer the organization's competitive strategy and possibly make inferences about its value chains and business processes

Q6: How Do Information Systems Provide Competitive Advantages?

Product Implementations

1. Create a new product or service
2. Enhance products or services
3. Differentiate products or services

System Implementations

4. Lock in customers and buyers
5. Lock in suppliers
6. Raise barriers to market entry
7. Establish alliances
8. Reduce costs

Competitive Advantage via Products

Creating new products or services

- Enhancing existing products or services
- Differentiating
 - By cost
 - By quality

Two Roles for Information Systems Regarding Products

a. Information System as Part of a Car Rental Product



b. Information System That Supports a Car Rental Product

Daily Service Schedule — November 17, 2010

StationID	StationName	ServiceDate	ServiceTime	VehicleID	Make	Model	Mileage	ServiceDescription
22	Lubrication	11/17/2010	12:00 AM	158890	Ford	Explorer	2244	Std. Lube
		11/17/2010	11:00 AM	12448	Toyota	Tacoma	7558	Std. Lube
26	Alignment	11/17/2010	9:00 AM	12448	Toyota	Tacoma	7558	Front end alignment inspect
28	Transmission	11/17/2010	11:00 AM	158890	Ford	Explorer	2244	Transmission oil change

Competitive Advantage via Business Processes

Lock in customers

- By creating high switching costs

Lock in suppliers

- Make it easy to connect to and work with your organization

Create entry barriers

Establish alliances

Create better business processes

How Does a Good System Create a Competitive Advantage?



Enhancing existing products



Differentiating products



Locking in customers



Raising barriers to market entry



Increasing profit margins by decreasing costs and decreasing errors



This work is protected by United States copyright laws and is provided solely for the use of instructors in teaching their courses and assessing student learning. Dissemination or sale of any part of this work (including on the World Wide Web) will destroy the integrity of the work and is not permitted. The work and materials from it should never be made available to students except by instructors using the accompanying text in their classes. All recipients of this work are expected to abide by these restrictions and to honor the intended pedagogical purposes and the needs of other instructors who rely on these materials.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. Printed in the United States of America.

Copyright © 2010 Pearson Education, Inc.
Publishing as Prentice Hall