

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
SLOAN SCHOOL OF MANAGEMENT

15.565 Integrating eSystems:

Technology, Strategy, and Organizational Factors

15.578 Global Information Systems:

Communications & Connectivity Among Information Systems

Spring 2002

Lecture 2

***INFORMATION TECHNOLOGY STRATEGY:
INTERLINKED VALUE CHAINS***



COMPETITIVE STRATEGIES AND NEW PROCESSES – FRAMEWORKS

- **ISSUES:**

- Corporate strategy
- Information technology

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graph LR; A[Corporate strategy] --> B[Competitive Advantage]; C[Information technology] --> B;
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Competitive Advantage

- **APPROACHES:**

- Five - forces model
- Value chain model
- Transform processes
- Long-term impacts

```
graph LR; A[Five - forces model] --> B[Interlinked Value Chains]; C[Value chain model] --> B;
```

Interlinked Value Chains

TECHNOLOGY IMPACTS STRATEGY BY:

1. SUPPORTING COST AND DIFFERENTIATION STRATEGIES

2. SPAWNING ENTIRELY NEW BUSINESSES

- a) new business economically feasible
- b) created by new demand
- c) create new business within old
- d) information by-products

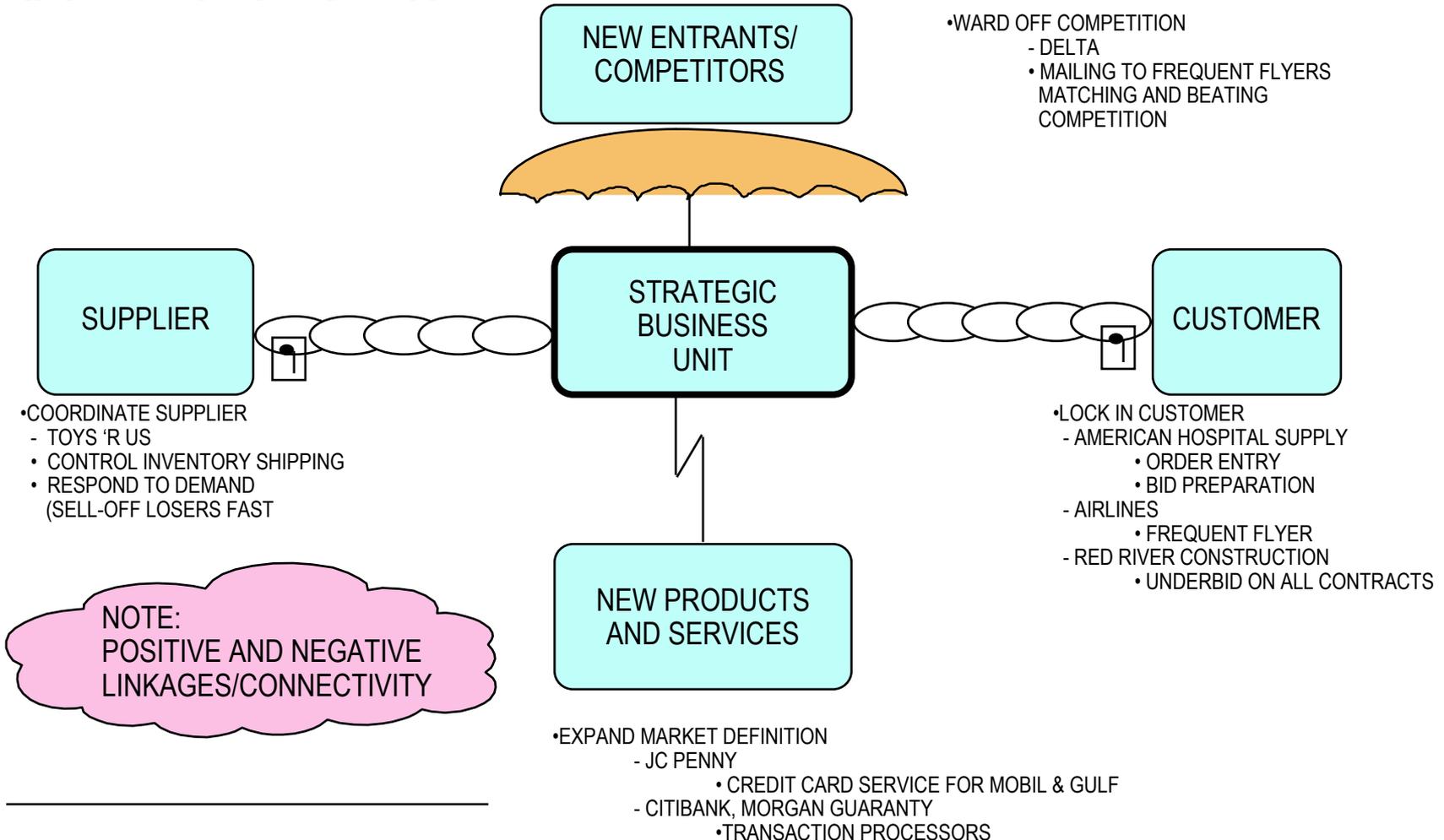
3. ALTERING INDUSTRY STRUCTURE

IMPACT OF COMPETITIVE FORCES (“5 Forces”)

- BASIC MODEL: SEE PORTER, COMPETITIVE STRATEGY

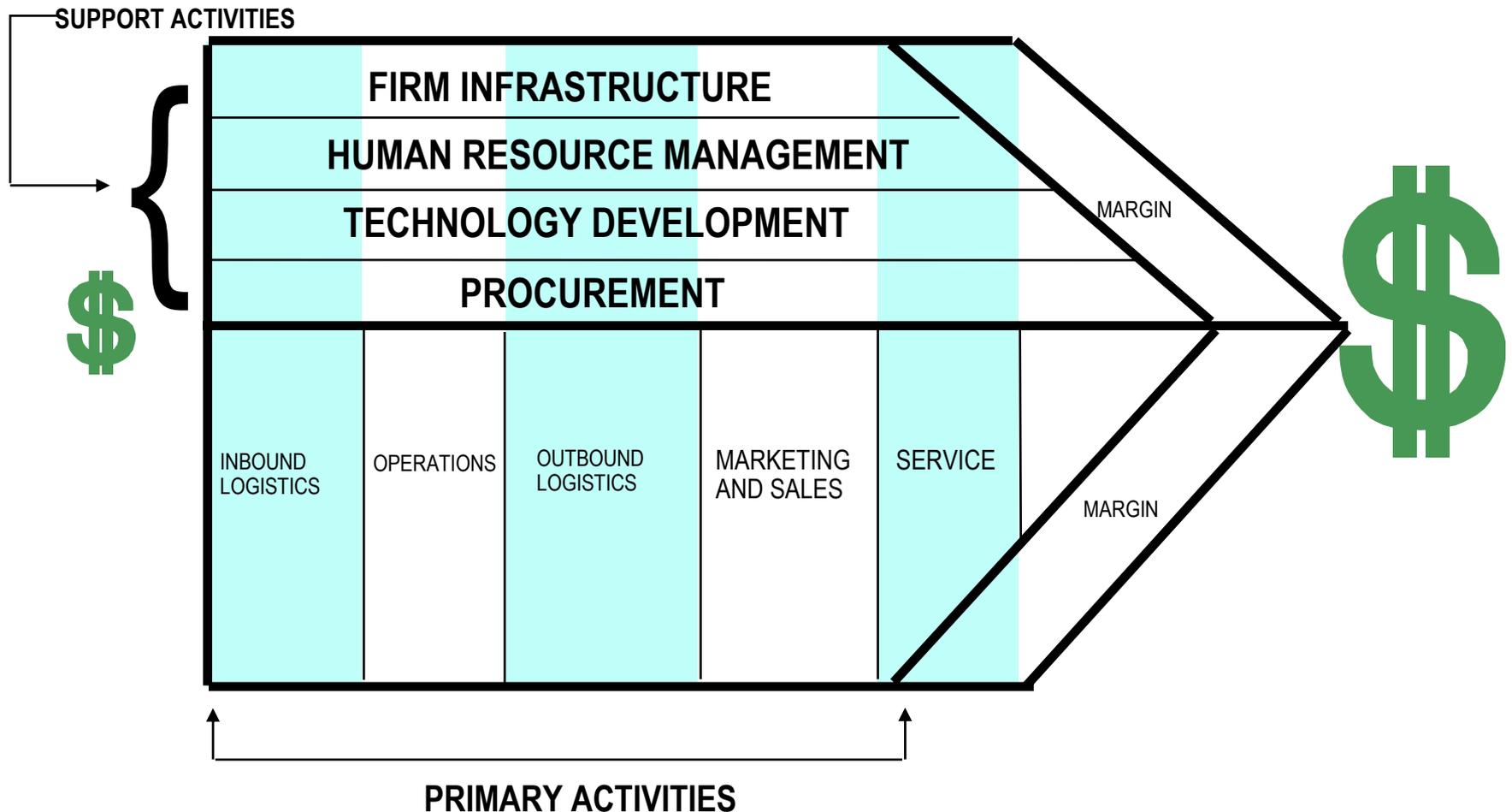
MODIFIED 5-FORCES MODEL

I. INTER-ORGANIZATIONAL



2. INTRA-ORGANIZATIONAL

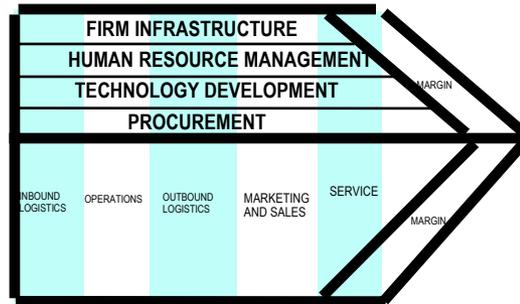
VALUE CHAIN MODEL



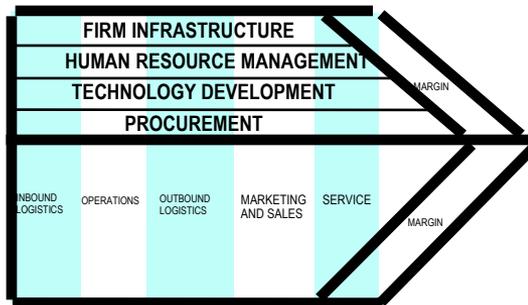
Opportunities:

- lower cost
- add value
- within individual value chain
- through improved linkages

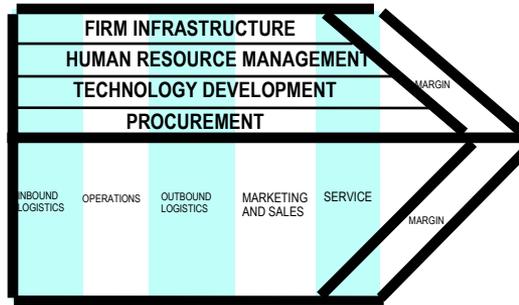
INTERLINKED VALUE CHAINS



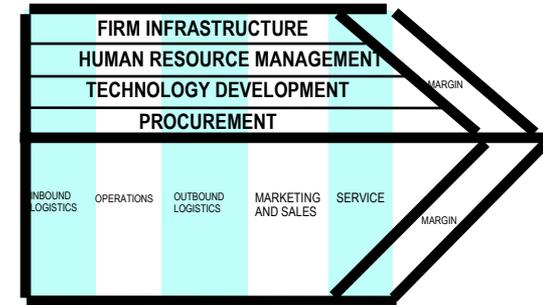
POTENTIAL NEW ENTRANT



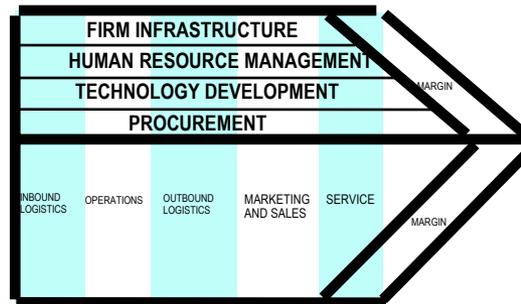
SUPPLIER



YOU (A)

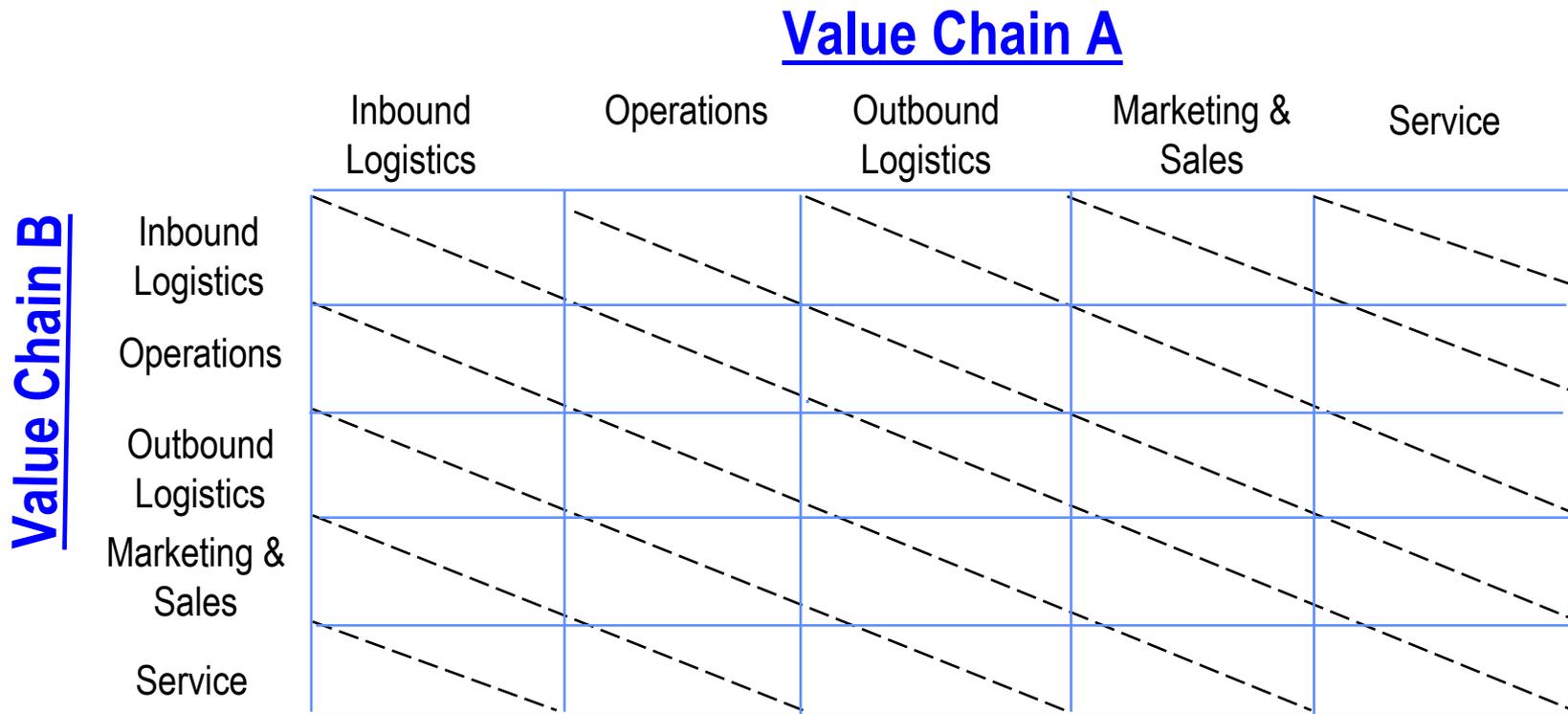


CUSTOMER (B)

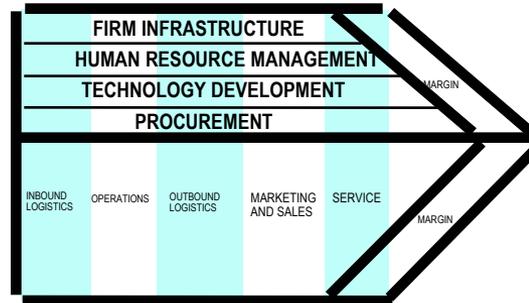


OPPORTUNITY FOR NEW PRODUCTS AND SERVICES

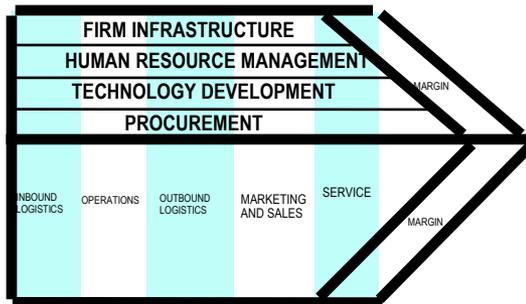
INTERDEPENDENCE OF ACTIVITIES BETWEEN VALUE CHAINS



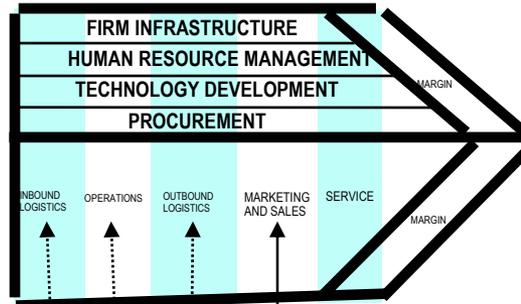
EXAMPLE 1



POTENTIAL NEW ENTRANT

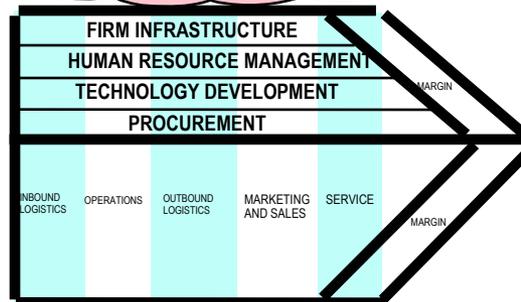


SUPPLIER



CUSTOMER

AMERICAN HOSPITAL
SUPPLY (BAXTER)



OPPORTUNITY FOR NEW PRODUCTS AND SERVICES

AMERICAN HOSPITAL SUPPLY (AHS)

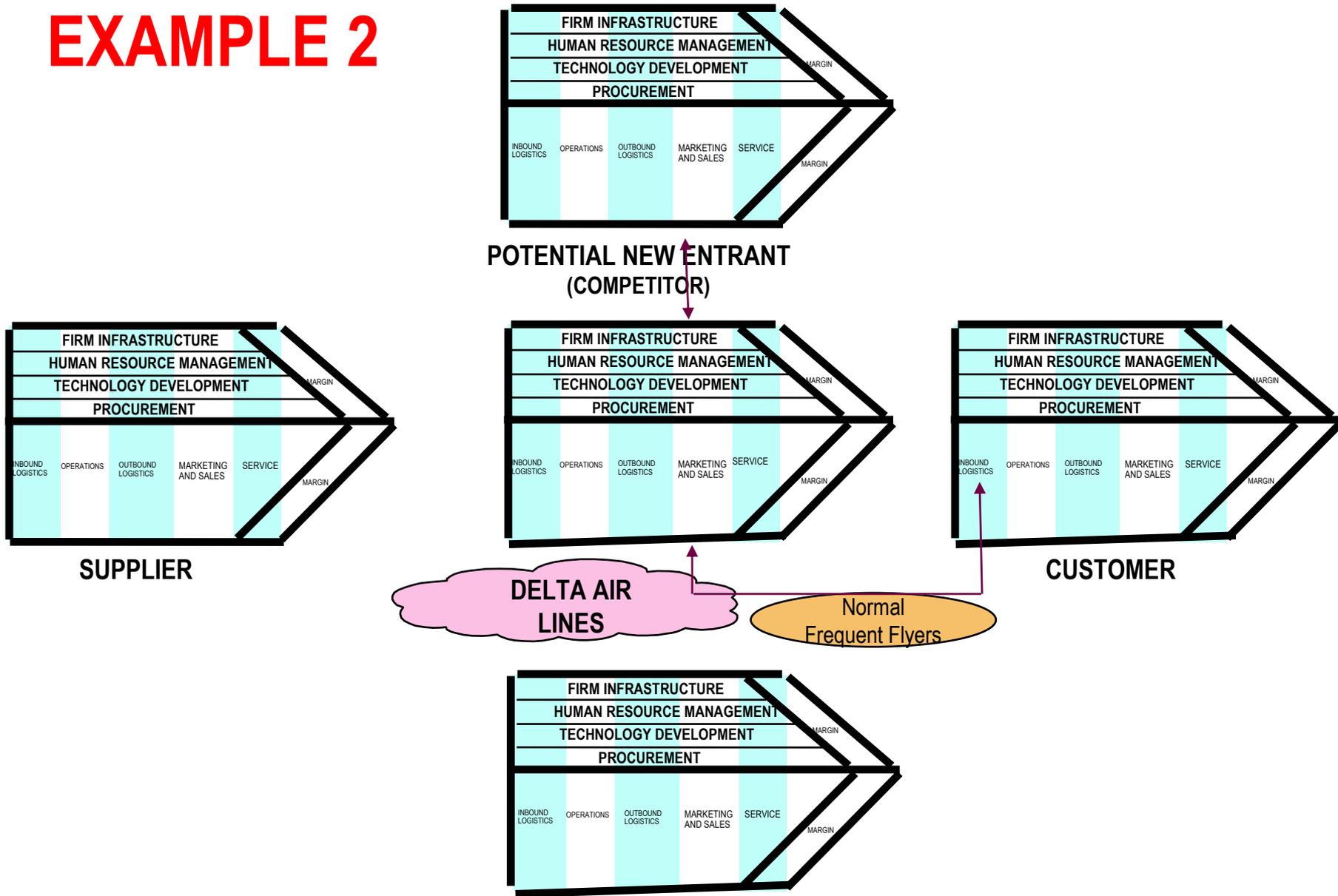
- **SIMPLE STORY**

- Provided hospitals with direct data-entry capability

- **IMPLICATIONS**

- Raised barrier to entry
- Locked in customer
- Lowered clerical and inventory costs (customer and AHS)
- Volume discounts
- Better inventory control ➡ less stock-outs
- Better production coordination ➡ reduce costs and improve service
- Reduced data entry errors ➡ reduce costs and improve service
- New activities:
 - Business consultants to hospitals
 - Marketing information data

EXAMPLE 2

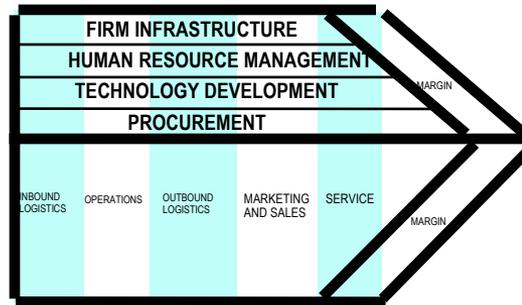


OPPORTUNITY FOR NEW PRODUCTS AND SERVICES

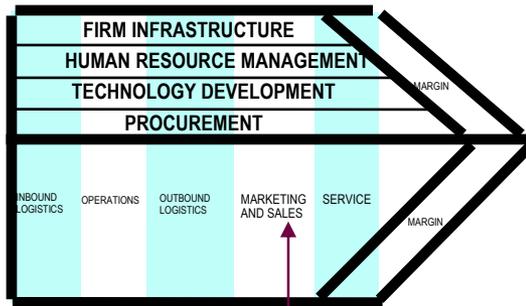
AIRLINE RESERVATION SYSTEMS AND FREQUENT FLYER PROGRAMS

- **SIMPLE STORY:**
 - Added incentive to fly on that airline
- **HISTORICAL ASIDE**
 - "Big brother" concern
- **AIRLINE RESERVATION SYSTEM INITIAL BENEFITS:**
 - "Lock you in" and generate revenue
 - Preferential screen display
- **OTHER IMPACTS**
 - Much better data for Yield management → increase profits
 - Special deals → edge over competition
 - Against new competition → protect revenues
 - Generate new revenues
- **INTERESTING ISSUE: Who is the "customer"?**

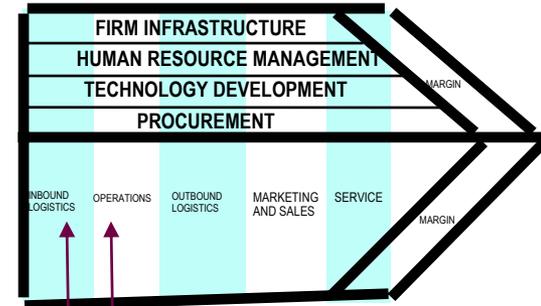
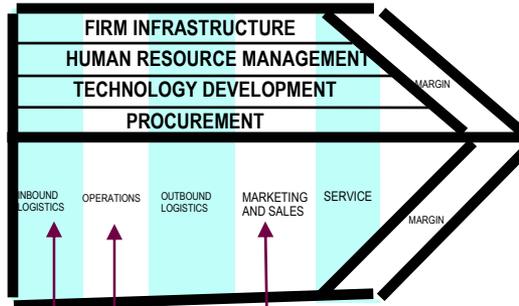
MANY OTHER EXAMPLES



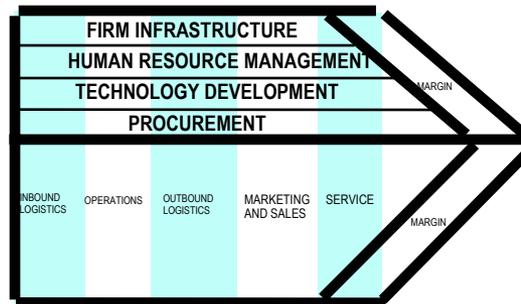
POTENTIAL NEW ENTRANT



SUPPLIER



CUSTOMER



OPPORTUNITY FOR NEW PRODUCTS AND SERVICES

SUMMARY

- **NEED TO EXPLORE NEW COMPETITIVE STRATEGIES AND PROCESSES**
- **APPROACHES:**
 - Competitive forces (5-forces) →
 - Value chain analysis →
- Changes what work gets done and by whom
- **LONG-TERM IMPACTS ON COMPANY AND INDUSTRY**
 - Support cost and differentiation strategies
 - Alters industry structure
 - Spawn entirely new businesses
- **NOTE INTERDEPENDENCE OF STRATEGY, TECHNOLOGY, AND ORGANIZATION**

