

**Strategic Information  
Systems**

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1280 Villa Street, Mountain View, California 94041-1194

**INPUT<sup>®</sup>**

(415) 961-3300

Telex 171407

Fax (415) 961-3966



# Strategic Information Systems

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Norman G. Litell  
Principal Consultant  
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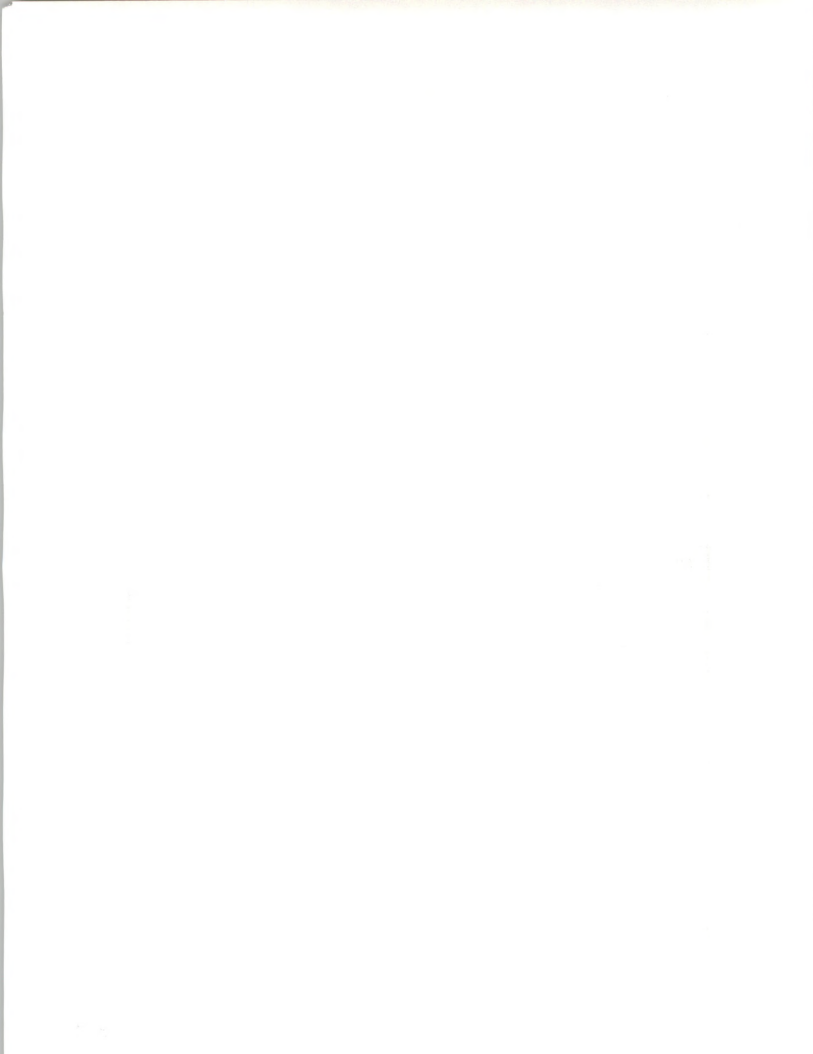


## Presentation Outline

- Corporate strategy and competitive advantage
- Identifying SIS opportunities
- Types of competitive strategy
- Interorganizational systems
- Case examples
- User/implementation issues

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## SIS Definition

"Systems which make use of  
information technology to achieve  
strategic objectives"

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## Traditional Hierarchy of Planning and Control

- Strategic planning
- Management control
- Operational control

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## Traditional Objectives of Information Systems

- Automating basic processes  
(transaction-oriented processing)
- Satisfying information needs  
(query and analysis)

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## Opportunities for Traditional Information Systems

	Strategy	Management	Operations
Automation	xxxxxxx		
Information			

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## Forces Driving Competition

- Threat of new entrants
- Intensity of rivalry among direct competitors
- Pressure of substitute products
- Bargaining power of buyers
- Bargaining power of suppliers

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## Competitive Advantage

"A relation between rivals competing for the business of customers (buyers)"

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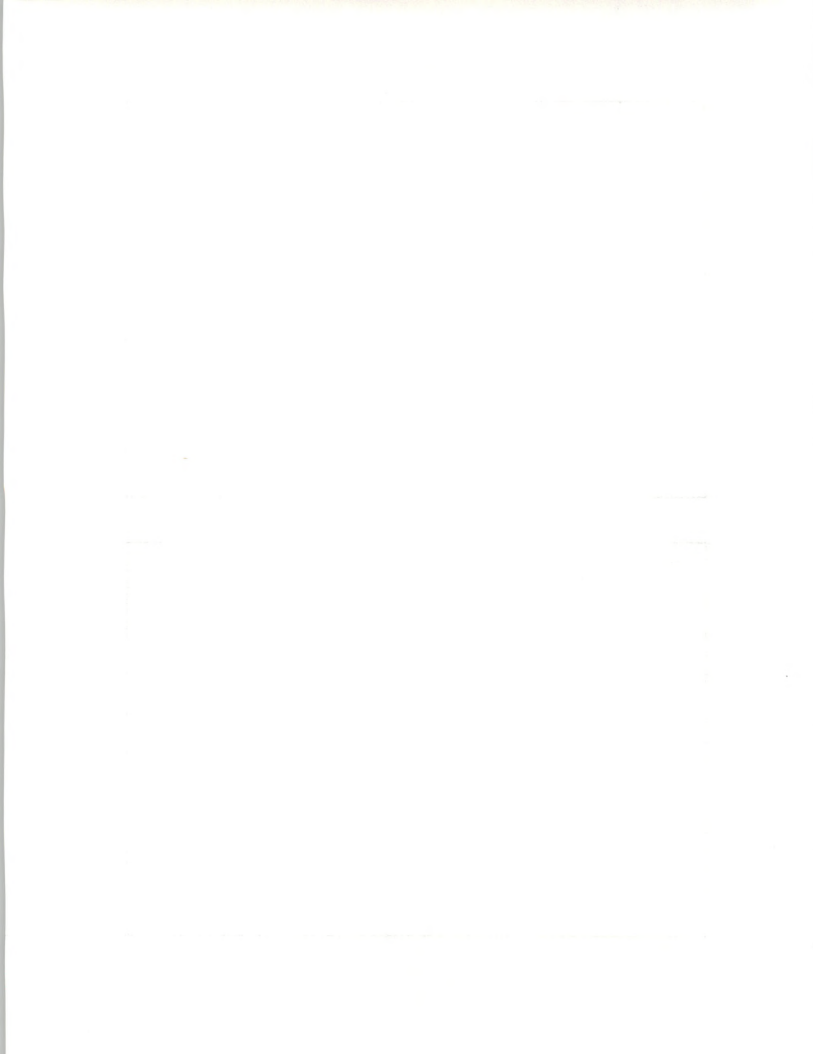


## Principal Types of Competitive Advantage

- Pricing—*"low-cost producer"*
- Features—*"differentiated product"*

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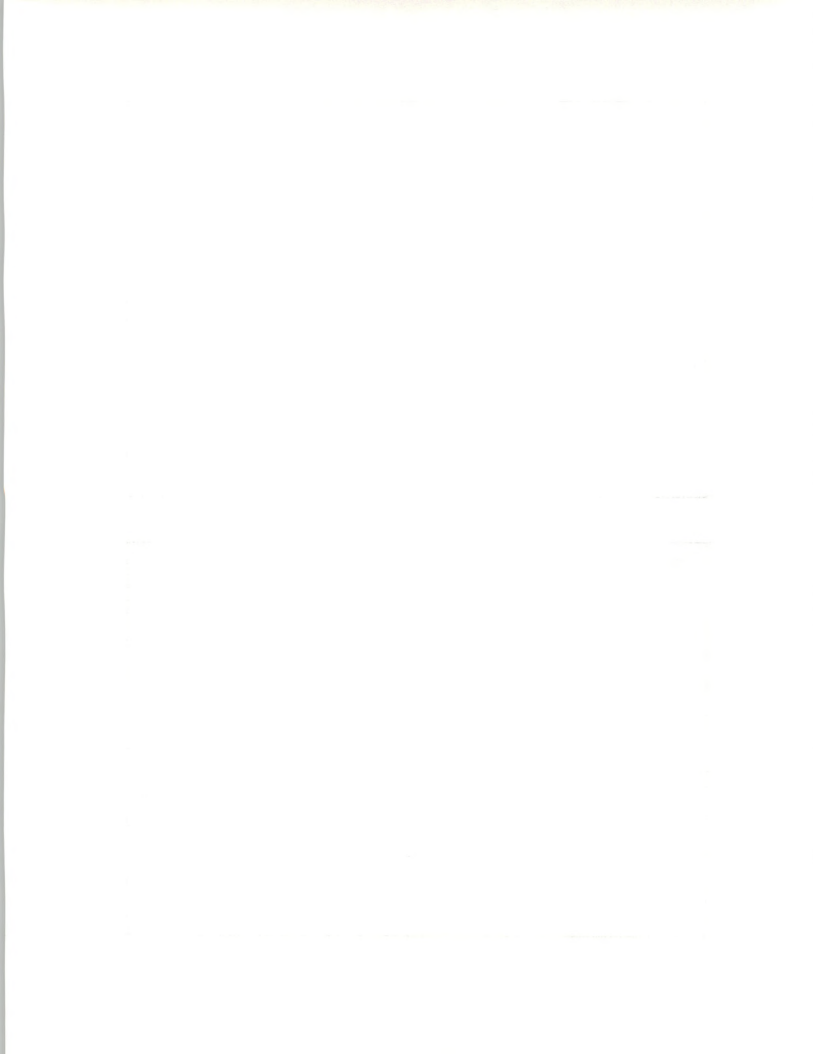


## Scope of Competition

- Broad—(multiple industry segments)
- Narrow—(few/specialized/small segments)

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## Generic Strategies

TYPE OF ADVANTAGE	SCOPE	
	Broad	Narrow
Low Cost Producer		
Differentiated Product		

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## Strategic Thrusts

"The major directions in which a company can move in search of competitive advantage"

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## Types of Strategic Thrusts

- Differentiation
- Cost
- Innovation
- Growth
- Alliance

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## Properties of Strategic Thrusts

- Polarity of application
- Combined occurrence
- Variety of levels
- Dialectical evolution

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## Strategic Targets

- Enterprise
- Suppliers
- Distribution channels
- Customers
- Rivals

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## Strategic Targets

- Users of SIS
- Competitive arena

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## Strategic Options Matrix

THRUSTS	TARGETS (USER/COMPETITOR)				
	Enterpr	Supplier	Channel	Customer	Rival
Differentiation		/	/	/	/
Cost		/	/	/	/
Innovation		/	/	/	/
Growth		/	/	/	/
Alliance		/	/	/	/

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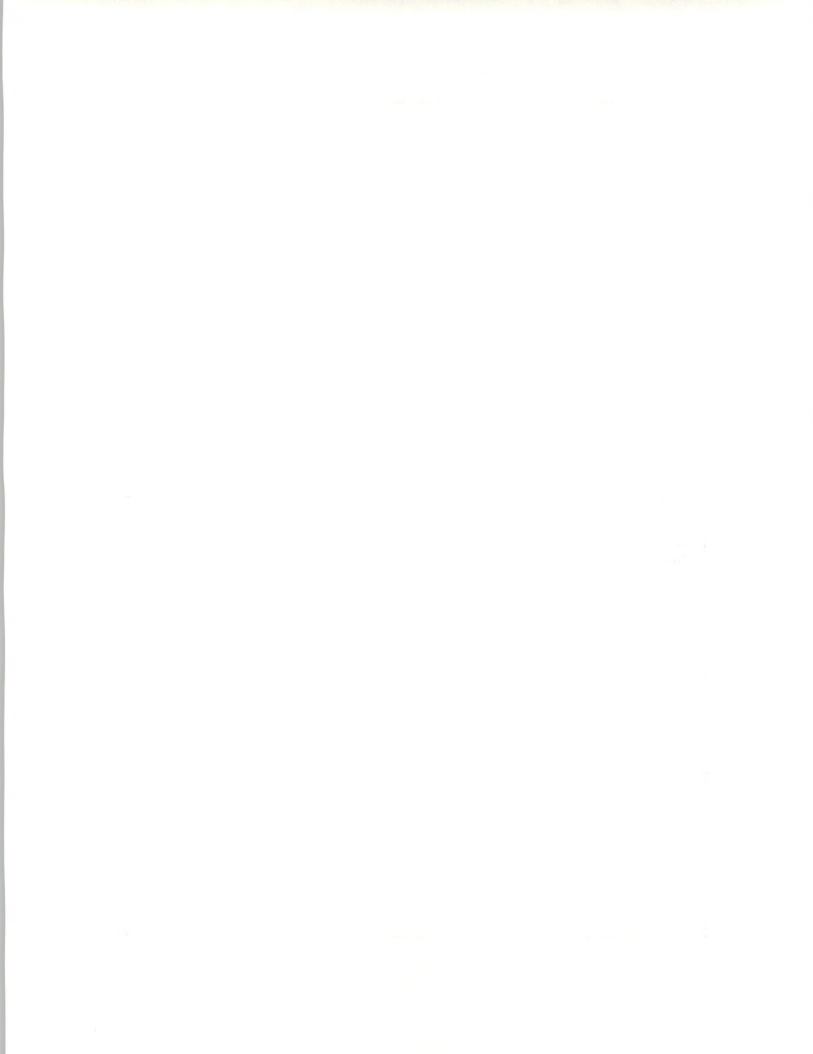


## Sources of Ideas

- Casual conversations with top management
- Formal planning sessions
- R & D Programs
- "Brainstorming"

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## Types of Competitive Strategy

- Proprietary advantage
- One step ahead
- Discontinuity
- Implementation

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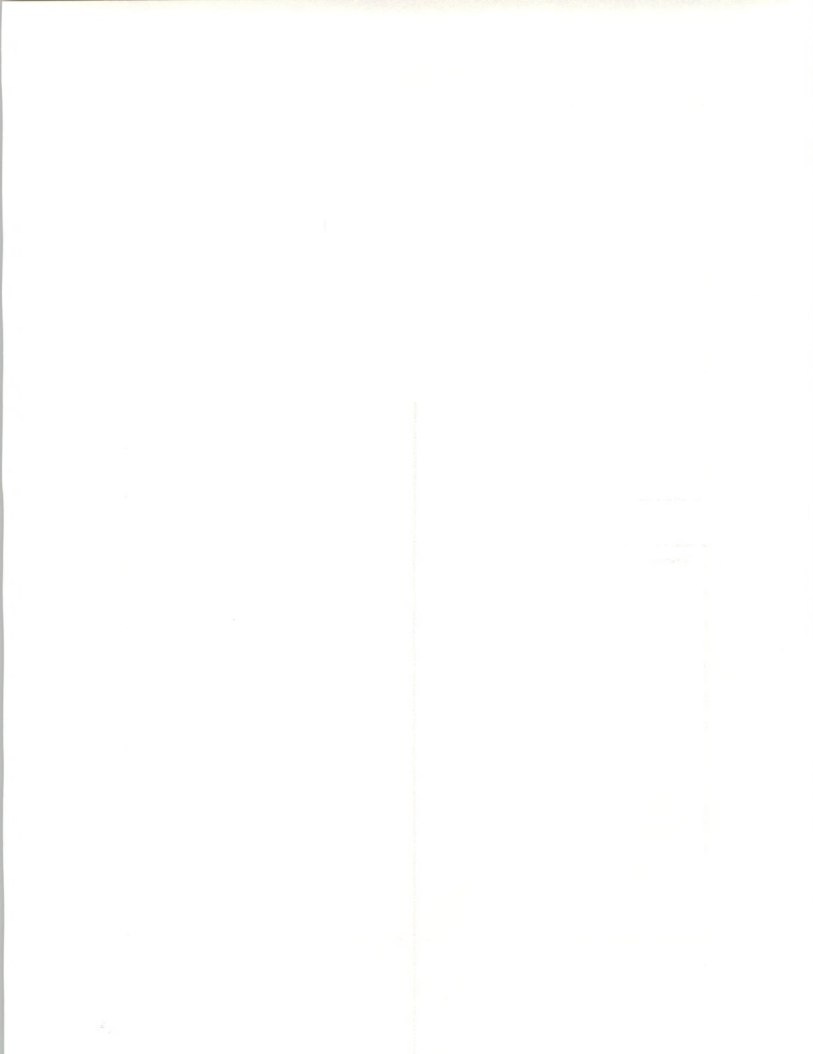


## Proprietary Advantage

- Barriers required to protect advantage
  - Legal
  - Financial
  - Lead time
  - Access to resources
- Major risk: inability to maintain barriers

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## One Step Ahead

- Fundamental requirements
  - "Deep pockets"
  - Supportive culture
  - Focus
  - Sense of market

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## One Step Ahead

- Basic approaches
  - Use more information in operations
  - Add information value to product
- Risks
  - Imitative competitors
  - Loss of internal focus
  - Confusion of customers

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## Discontinuity

- Fundamental requirements
  - Technology "know-how"/management
  - Low initial switching barriers
  - Creation of high switching barriers
- Risks
  - Misreading market
  - Implementation costs vs. imitation costs

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## Implementation

- Basic requirement: Core management skills
- Application to other tasks than SIS
- Risks
  - Misjudging ability to change organization
  - Sustaining culture

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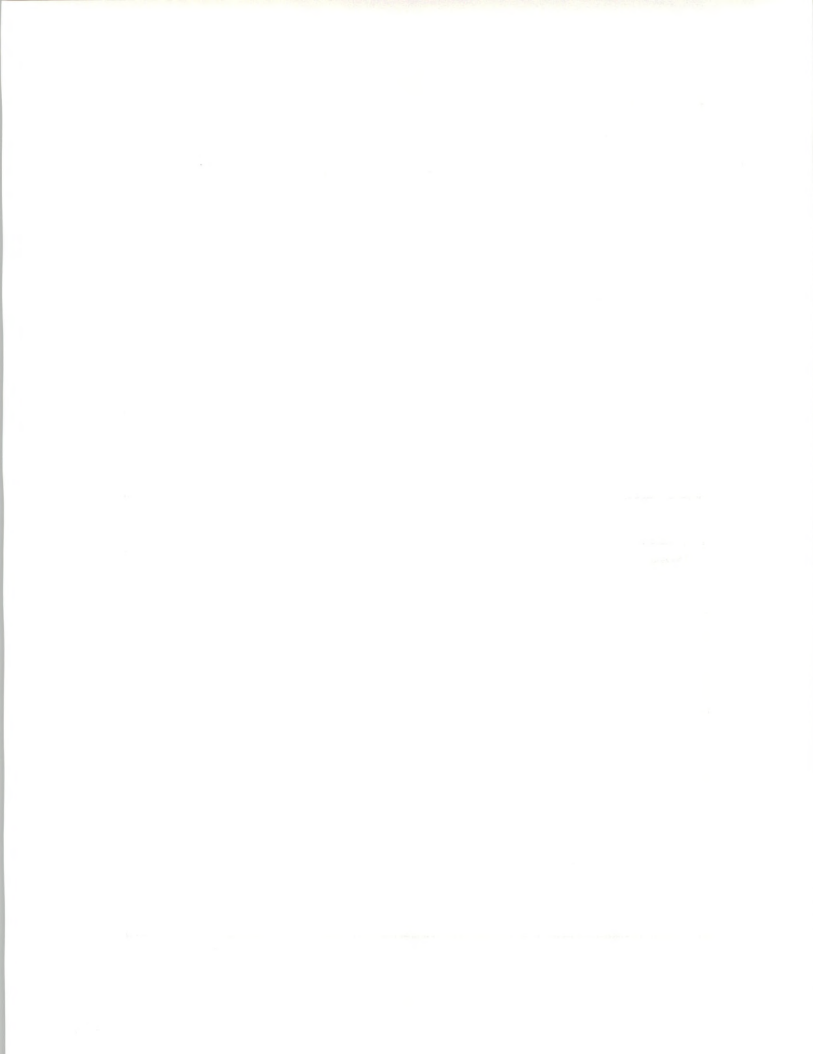


## Interorganizational Systems

- Not just direct systems integration
- Range of approaches on both sides
  - Adapting to trade partner (data/transaction standards, procedures)
  - Using systems supplied by partner
  - Systems based on external standards (EDI)

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## Interorganizational Systems

- Lock out competitors
- Lock in or expand current market share
- Expand market to include affiliate's customers
- Value chain links
- Overlapping customer bases
- High switching costs/inertia

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## Successful Strategic Systems

- American Airlines
- American Hospital Supply
- McKesson (Economost)
- Merrill Lynch (CMA)

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## American Airlines (Sabre)

- 2 Stages of innovation
  - On-line reservations system
  - Extension to travel agents
- Market dominance
- Legal challenges
- Spinoffs

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## American Hospital Supply

- Advantages to AHS
- Advantages to customers
- Acquisition of HCA
- Acquisition of AHS by Baxter

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# McKesson

- Strategic thrust
- Advantages to McKesson
- Advantages to customers
- Spinoffs

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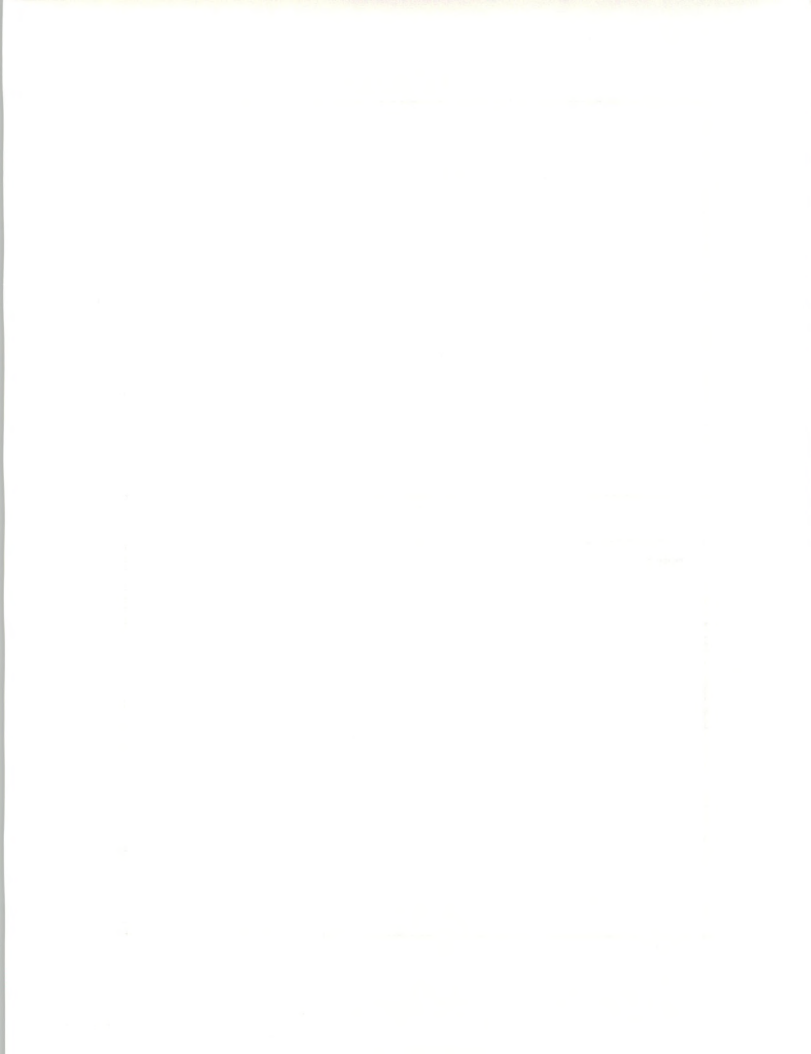
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## Merrill Lynch

- Totally new product concept
- Business links/alliances
- Technology links
- Competition
- Evolution

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## Generic Strategic Failures

- Home banking
- Videotex services

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## Strategic System Failures

- Canyon General Hospital
- Gemco
- Merrill Lynch/IBM (IMNET)
- Sharetech
- Shelternet

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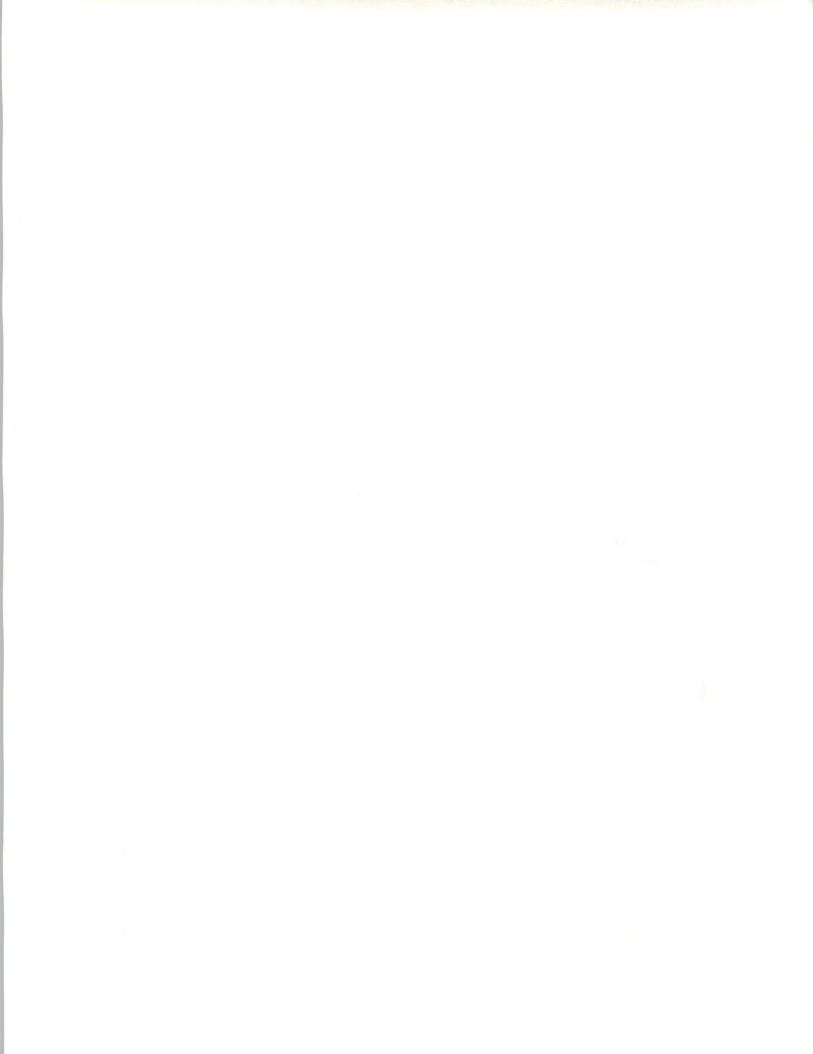


## Strategic System Problems

- General acceptance of concept
- Problem is with implementation
  - Overlooked opportunities
  - Inhibiting factors

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## Reasons for Overlooking Opportunities

- Sr. mgmt unaware of potential uses of IT
- Poor communication between IS and other managers
- Resistance to change
- Difficulty of measuring potential benefits
- Risk-adverse corporate culture
- Short-term planning horizons

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## Inhibiting Factors

- Lack of planning
- Difficulties gauging payback
- Lack of support
  - From top management
  - Within organization
- Budget limitations
- Power and politics

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## Key Success Factors

- Commitment by CEO
- IS participation in top level corp mgmt
- Line management responsibility for system
- Knowledge of the marketplace
- Effective IS organization

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## Reasons for Failure

- Poor planning
- Technology focus before business focus
- Poor/incomplete understanding of the marketplace
- Lack of business management leadership/commitment

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## Impact of Technology

- Two basic rules
  - Simple technology = effective systems
  - Exotic technology = failure
- Leading-edge technology
  - Soon becomes standard
  - Is quickly adopted by other industries

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## SIS Trends

- Competitive dynamics
- Globalization
- Nonprofit sectors
- Legal risk
- Academic focus

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