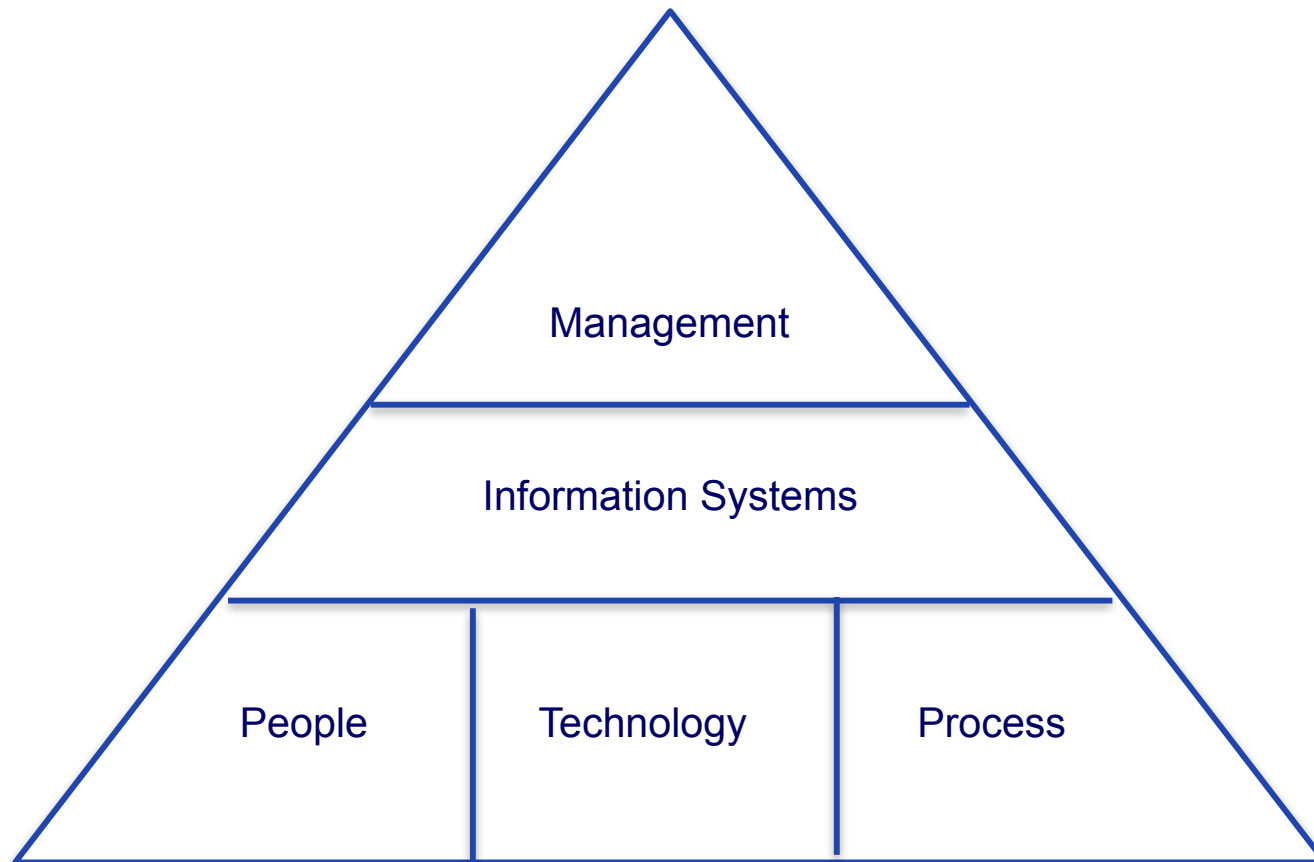


Chap 1 Why Business need IT



Dr. Yeffry Handoko Putra, S.T, M.T, CISA

System Hierarchy





Why Business should care to IS?



- ❖ **IS must be managed as critical resource**
- ❖ **IS enable change in the way people work together**
- ❖ **IS are part of almost every aspect of business**
- ❖ **IS enable or inhibit business opportunities and new strategies**
- ❖ **IS can be used to combat business challenges from competitors**

Basis Assumptions

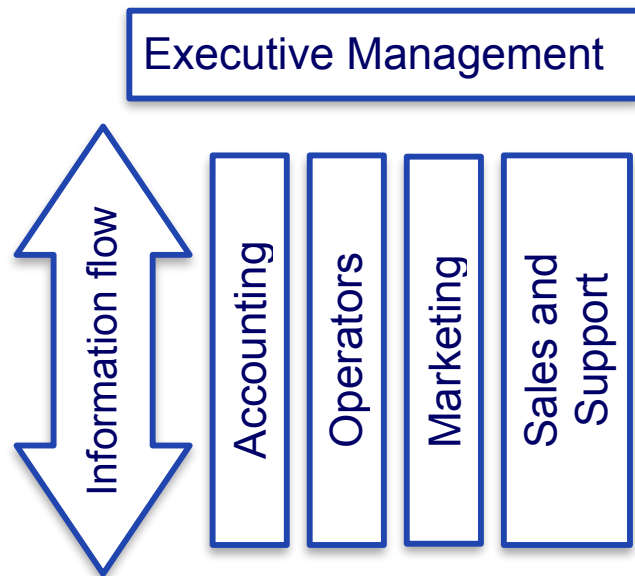
Assumptions about Management

Planning	Manager think through their goals and action in advance. Their action are usually based on some method, plan, or logic, rather than a bunch of gut feeling
Organizing	Manager coordinate the human and material resources of the organization. The effectiveness of an organization depend on its ability to direct its resources to attain its goals
Leading	Manager direct and influence subordinates, getting other to perform essential tasks. By establishing the proper atmosphere, they help their subordinates do their best
Controlling	Managers attempt to assure that the organization is moving toward goal. If part of their organization is on the wrong track, managers try to find out why and set things right

Source: James A.F. Stoner, Management, 2nd ed, Prentice Hall 1982

Assumptions of Business

Function View



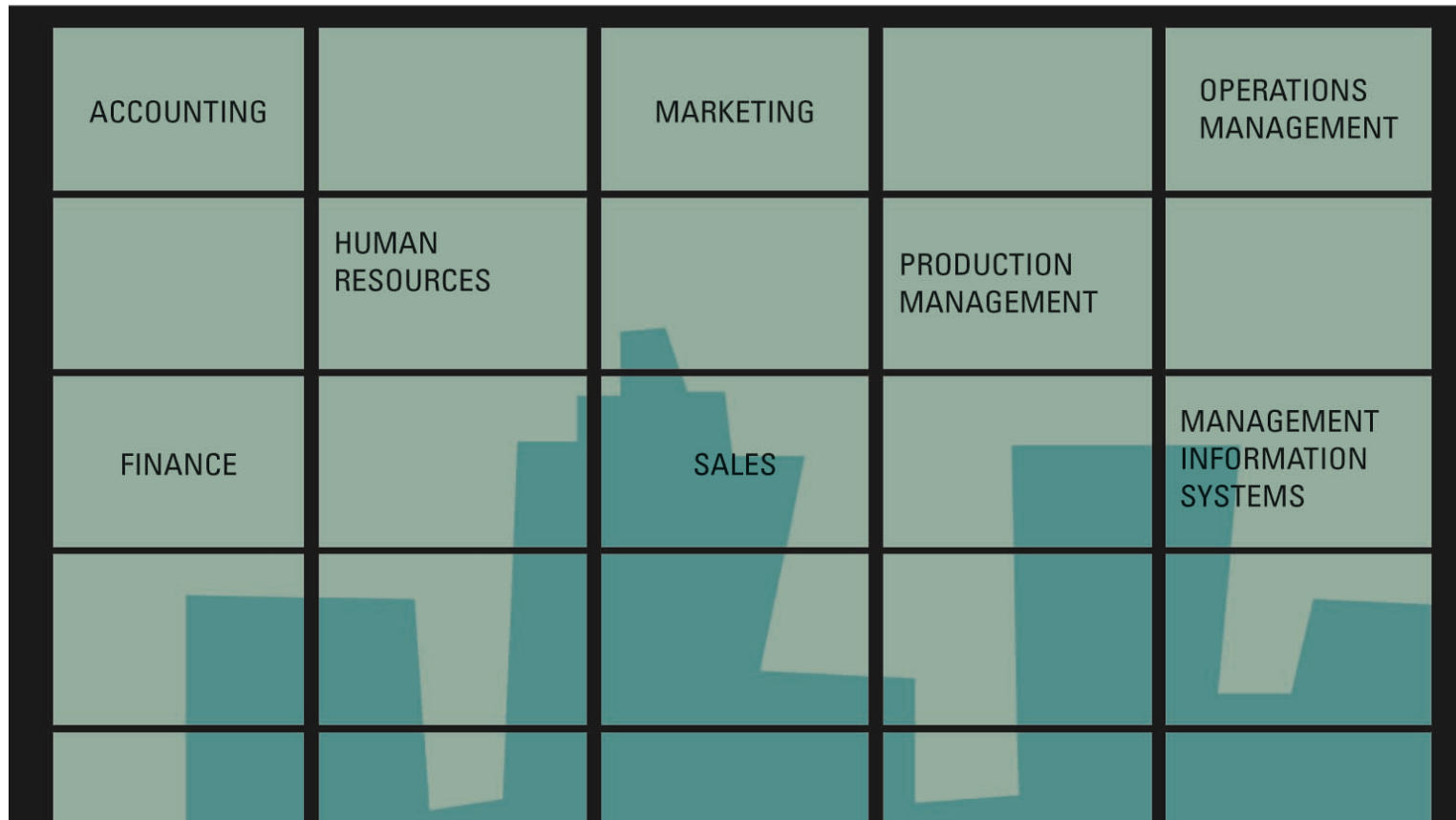
Process View



Source: M. Porter, Competitive Advantage: Creating and sustaining superior performance (New York: The Free Press, 1985, 1998)

Information Technology's Impact on Business Operations

COMMON DEPARTMENTS IN AN ORGANIZATION



SYSTEMS FROM A FUNCTIONAL PERSPECTIVE

Functional Area	Business Process
Manufacturing and production	Assembling the product Checking for quality Producing bills of materials
Sales and marketing	Identifying customers Making customers aware of the product Selling the product
Finance and accounting	Paying creditors Creating financial statements Managing cash accounts
Human resources	Hiring employees Evaluating employees' job performance Enrolling employees in benefits plans

Assumptions of Information System

	Data	Information	Knowledge
Definition	Simple observation of the state of the world	Data endowed with relevance and purpose	Information from the human mind (includes reflection, synthesis, context)
Characteristics	<ul style="list-style-type: none"> - Easily structured - Easily captured on machines - Often quantified - Easily transferred - Mere facts 	<ul style="list-style-type: none"> - Requires unit of analysis - Data that have been processed - Human mediation necessary 	<ul style="list-style-type: none"> - Hard to structure - Difficult to capture on machines - Often tacit - hard to transfer

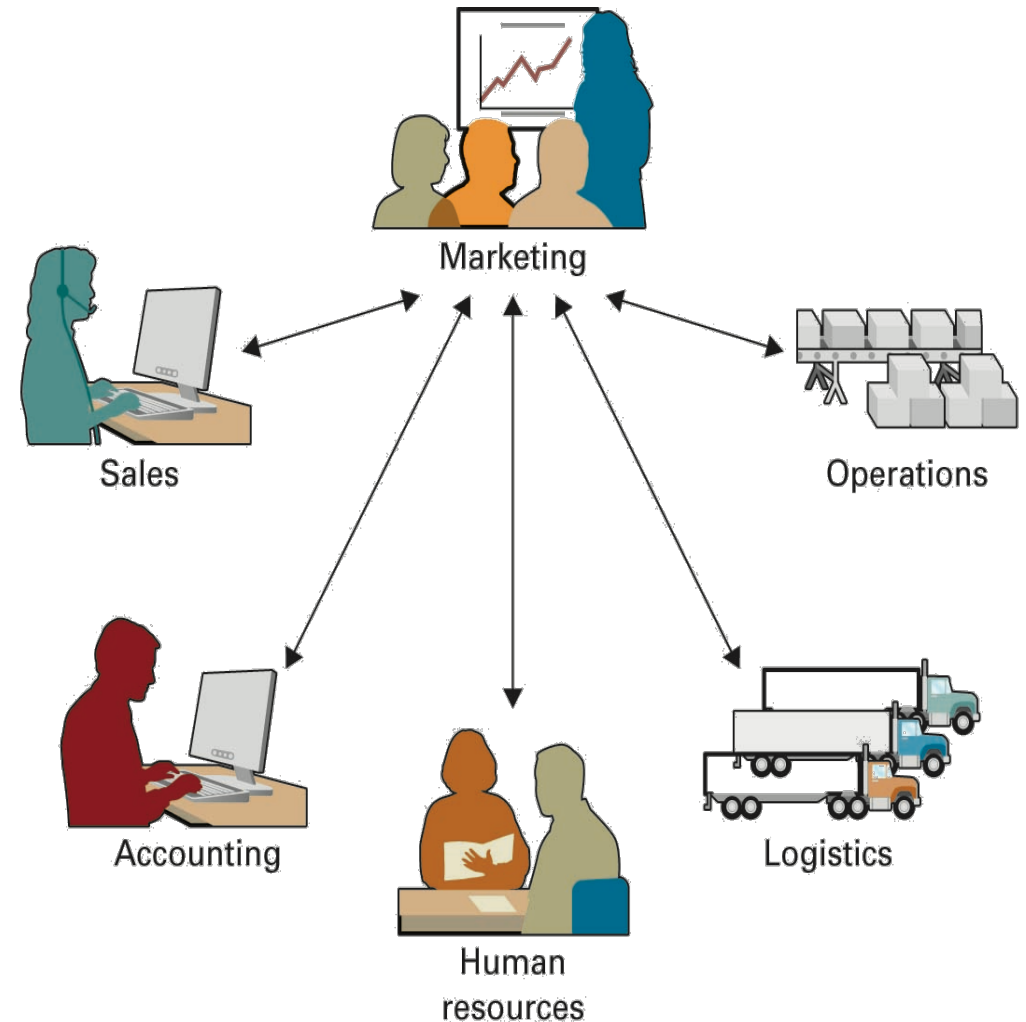
Source: Thomas Davenport, Information Ecology (New York: Oxford University Press, 1997)

Information Characteristic across hierarchical level

	Top Management	Middle Management	Supervisory and lower-level Management
Time Horizon	Long years	Medium : weeks, months, years	Short: day to day
Level of Detail	Highly aggregated Less accurate More predictive	Summarized Integrated Often financial	Very detailed Very accurate Often nonfinancial
Orientation	Primarily external	Primarily internal with limited external	Internal
Decision	Extremely judgmental Uses creativity and analytical skills	Relatively judgmental	Heavy reliance on rules

Information Technology's Impact on Business Operations

- ❖ Organizations typically operate by functional areas or functional silos
- ❖ Functional areas are interdependent



Information Technology's Impact on Business Operations

Information Technology Project Goals

Reduce Costs/Improve Productivity 81 %

Improve Customer Satisfaction/Loyalty 71 %

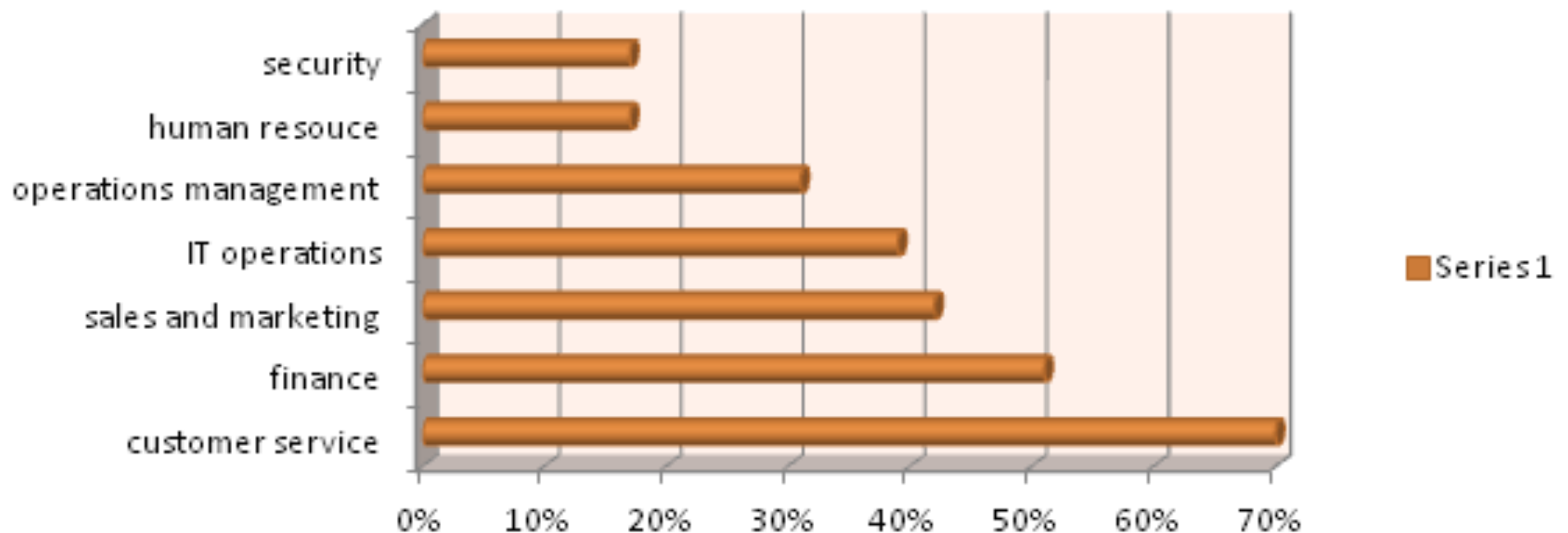
Create Competitive Advantage 66 %

Generate Growth 54 %

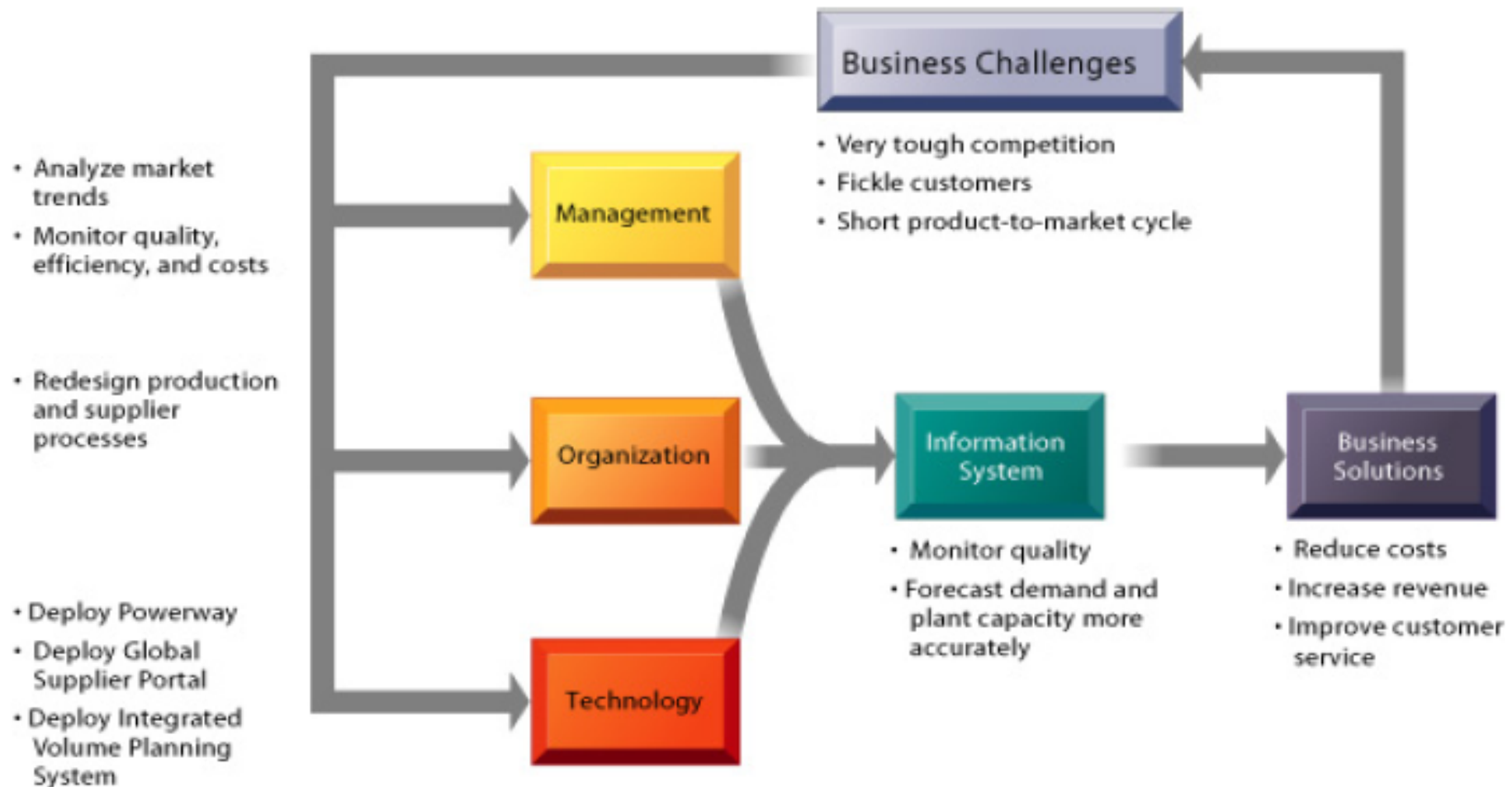
Streamline Supply Chain 37 %

Global Expansion 16%

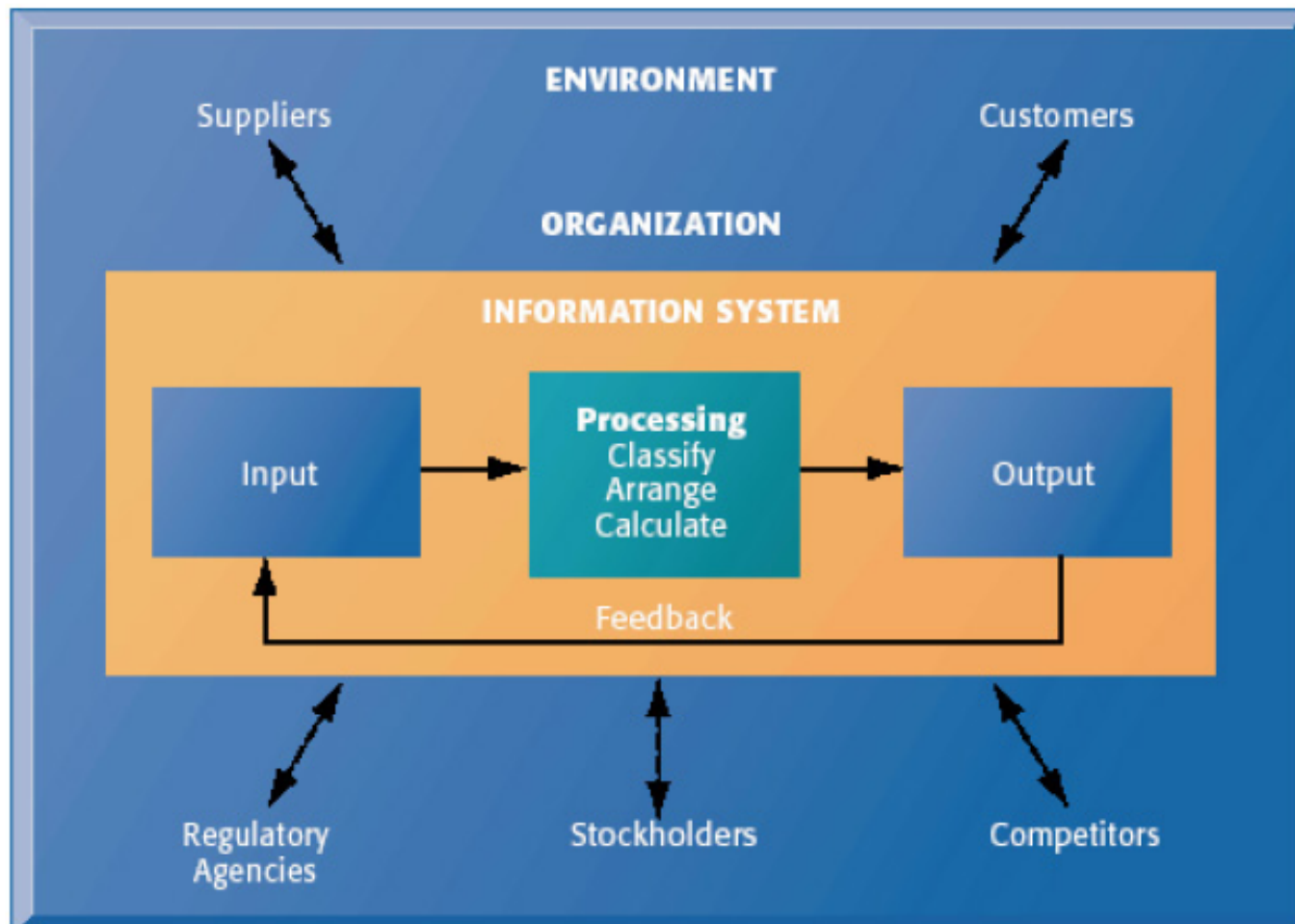
Business Functions Receiving The Greatest Benefits from Information Technology



Management of Information System (Imagine when each component not in good relation)



FUNCTION OF INFORMATION SYSTEM

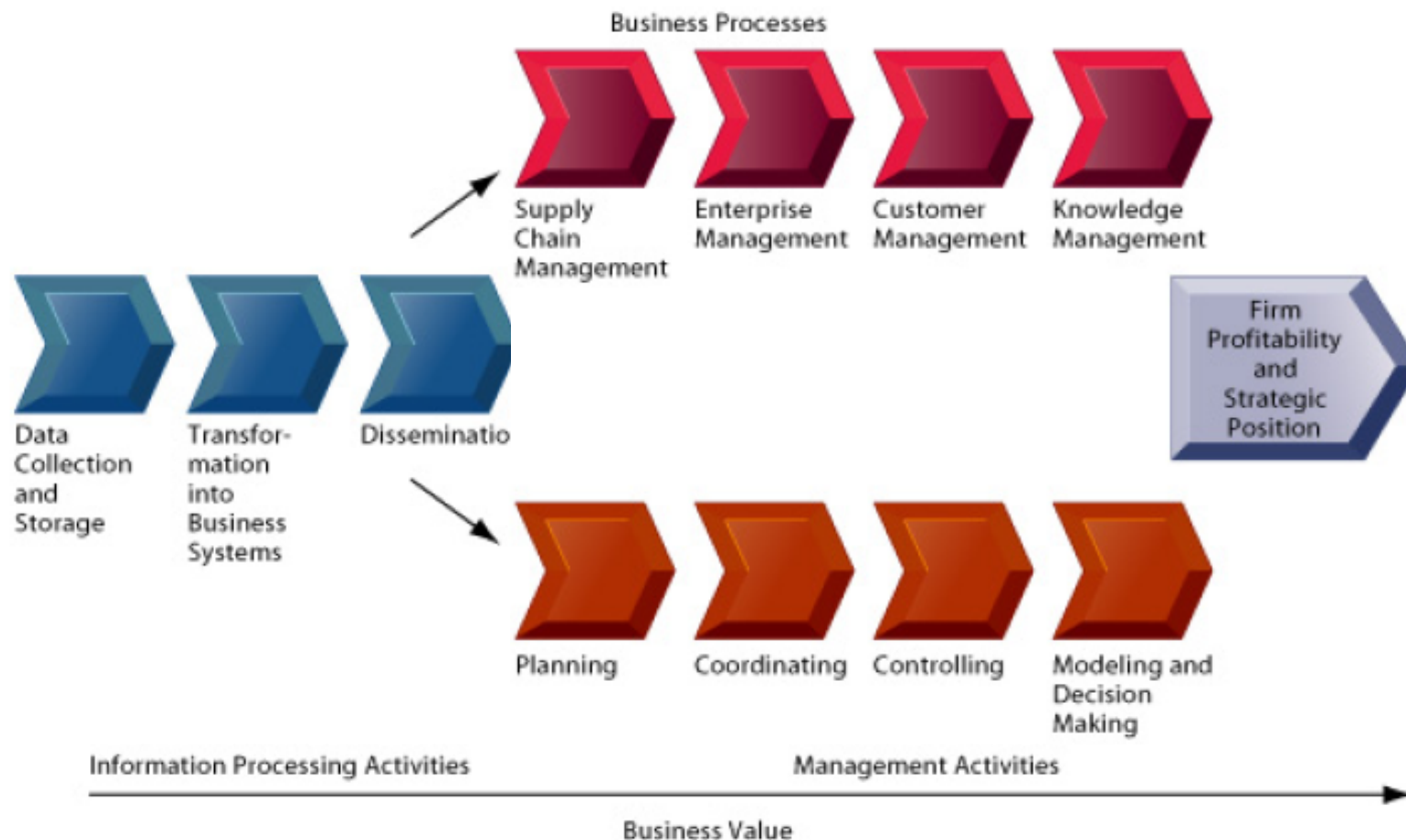


Information System Quality Characteristic

- ❖ **Complete Data**
- ❖ **Accurate Data**
- ❖ **Precise Data**
- ❖ **Understandable Output**
- ❖ **Timely Output**
- ❖ **Relevant Output**
- ❖ **Meaningful Output**
- ❖ **User friendly Operation**
- ❖ **Error Resistant Operation**
- ❖ **Authorize Use**
- ❖ **Protected System and Operation**

Ref: Gordon B. Davis

Business Perspective on Information Systems





Scope of Information System



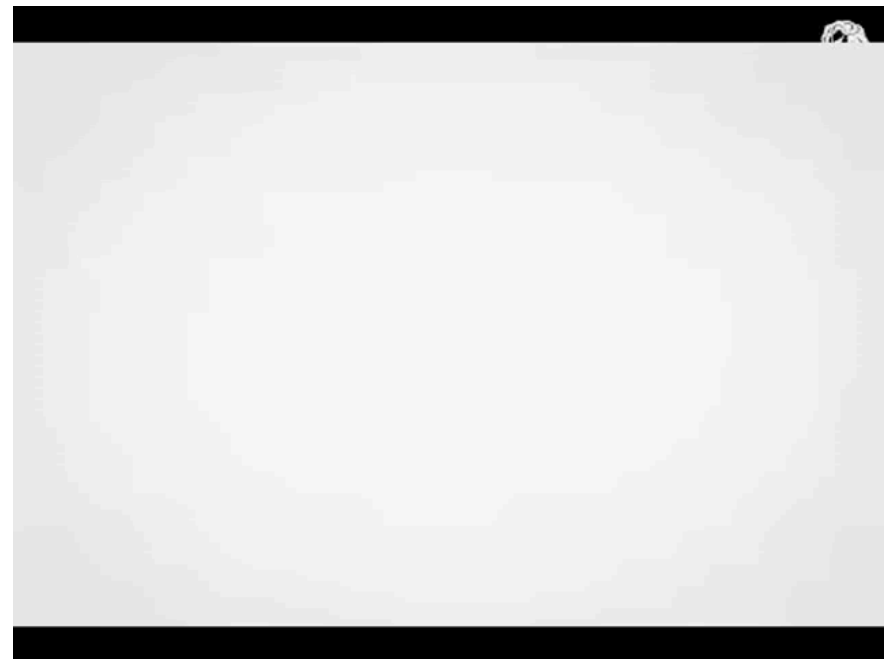
- ❖ **Data** : raw facts that describe the characteristic of an event
- ❖ **Information** : data converted into a meaningful and useful context
- ❖ **Business Intelligent**. E.g. Customer Relationship Management
- ❖ **Knowledge** . E.g. Knowledge Management System

IT Proposed Virtual Business

Virtual Shop by TESCO.COM



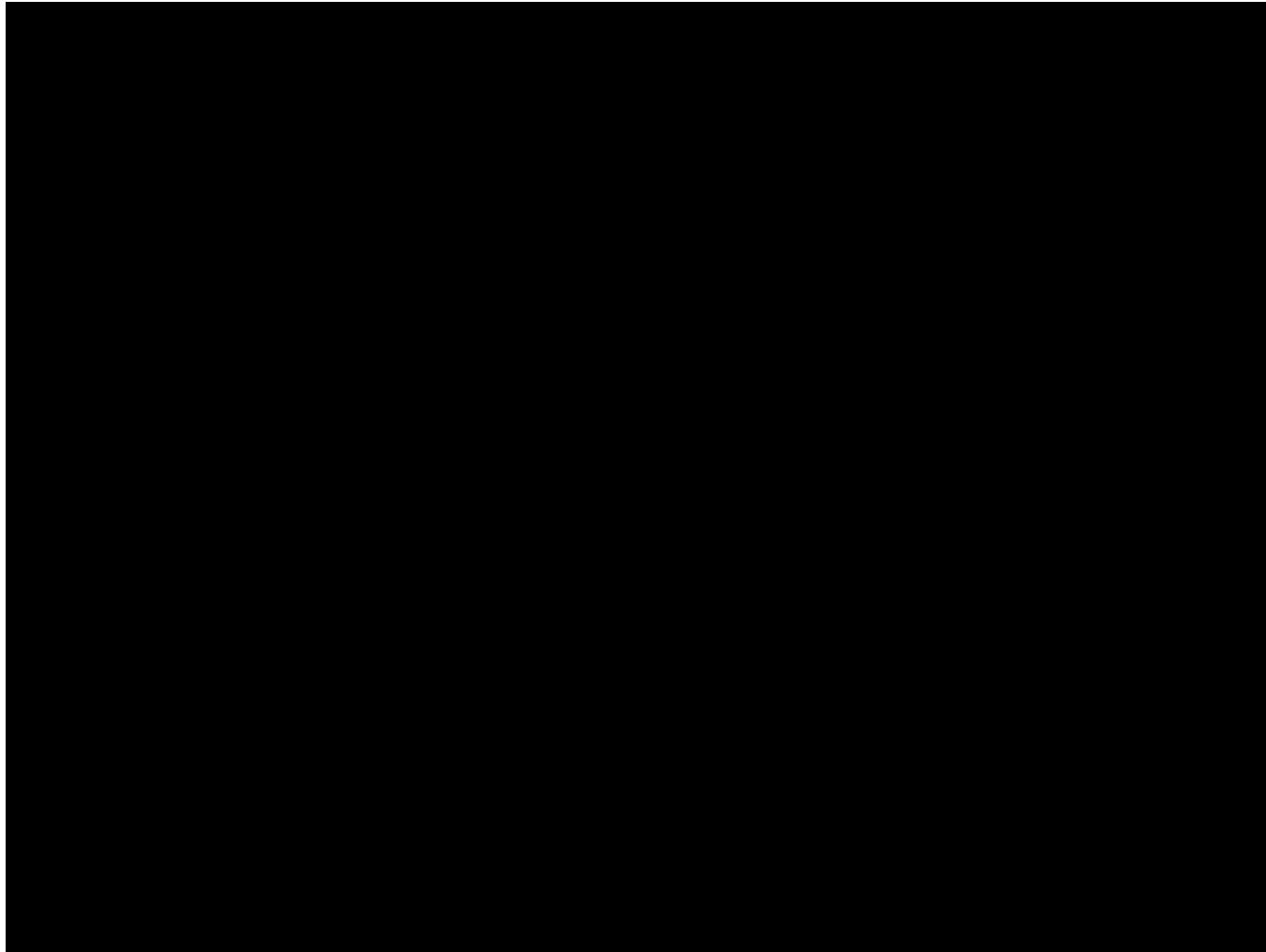
Gatwick, Airport, UK.
November 2011



TESCO Homeplus,
Virtual Subway Shop
South Korea, 2010



Virtual Shop : Social Behavior





Are they any question?

Overview IS and ISM

Dr.Ir. Yeffry Handoko Putra

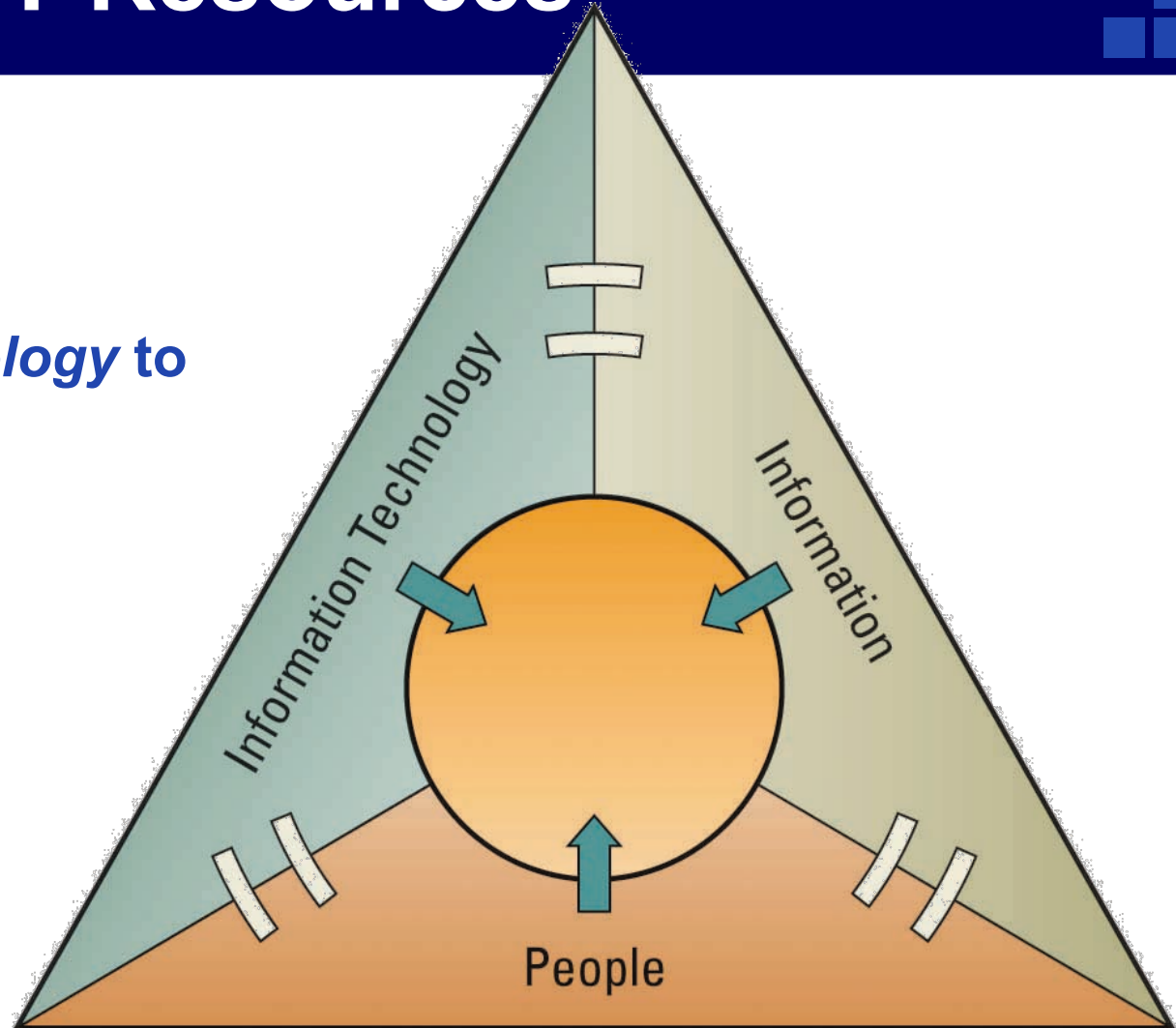
Ref. [shim] chap 1& 2

UNIVERSITAS KOMPUTER INDONESIA



IT Resources

- ❖ *People use*
- ❖ *Information technology to work with*
- ❖ *Information*





ROLES AND RESPONSIBILITIES IN IT




- ❖ **Chief Information Officer (CIO)** – oversees all uses of IT and ensures the strategic alignment of IT with business goals and objectives
- ❖ **Broad CIO functions include:**
 - **Manager** – ensuring the delivery of all IT projects, on time and within budget
 - **Leader** – ensuring the strategic vision of IT is in line with the strategic vision of the organization
 - **Communicator** – building and maintaining strong executive relationships



ROLES AND RESPONSIBILITIES IN IT




- ❖ ***Chief Technology Officer (CTO)*** – responsible for ensuring the throughput, speed, accuracy, availability, and reliability of IT
 - ❖ ***Chief Security Officer (CSO)*** – responsible for ensuring the security of IT systems
 - ❖ ***Chief Privacy Officer (CPO)*** – responsible for ensuring the ethical and legal use of information
 - ❖ ***Chief Knowledge Office (CKO)*** - responsible for collecting, maintaining, and distributing the organization's knowledge
- 



ROLES AND RESPONSIBILITIES IN IT



- (CInformationO) Ensure strategic alignment
 - (CTechnologyO) Proper equipment/software
 - (CSecurityO) Protect from viruses & hackers
 - (CPrivacyO) restrict access to private info
 - (CKnowledgeO) databases and AI systems
- 

ROLES AND RESPONSIBILITIES IN IT

❖ What concerns CIOs the most

CIO's Concerns	Percentage
Enhancing customer satisfaction	94%
Security	92
Technology evaluation	89
Budgeting	87
Staffing	83
ROI analysis	66
Building new applications	64
Outsourcing hosting	45

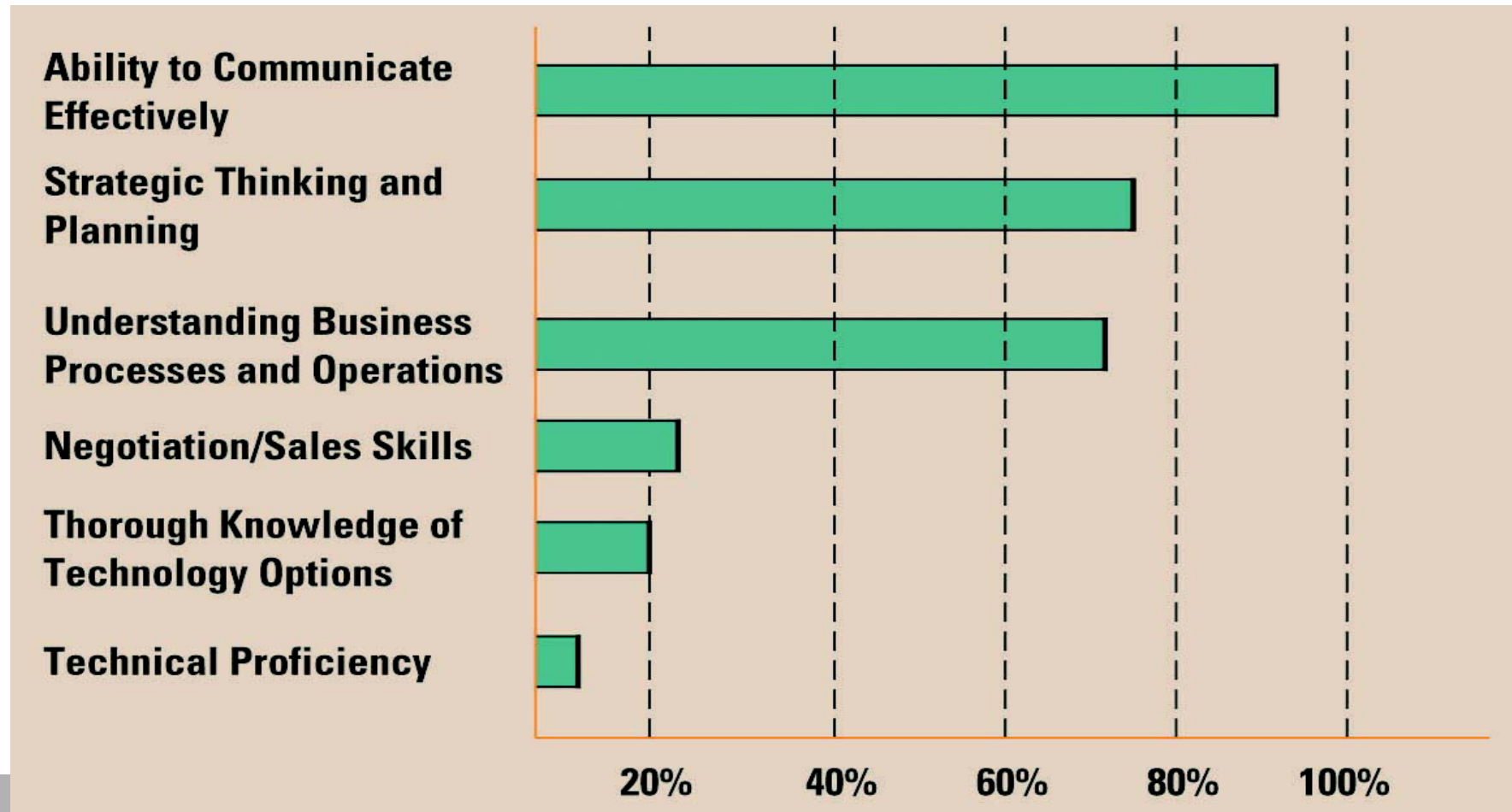
ROLES AND RESPONSIBILITIES IN IT

❖ Average CIO compensation by industry

Industry	Average CIO Compensation
Wholesale/Retail/Distribution	\$243,304
Finance	\$210,547
Insurance	\$197,697
Manufacturing	\$190,250
Medical/Dental/Health Care	\$171,032
Government	\$118,359
Education	\$93,750

ROLES AND RESPONSIBILITIES IN IT


❖ Skills pivotal for success in executive IT roles





Why we need MIS majors



- ❖ **Business personnel possess expertise in functional areas such as marketing, accounting, and sales**
 - ❖ **IT personnel have the technological expertise**
 - ❖ **This typically causes a communications gap between the business personnel and IT personnel**
 - ❖ **MIS Majors bridge the gap.**
- 



Improving Communications



- ❖ **Business personnel must seek to increase their understanding of IT –Why?**
- ❖ **IT personnel must seek to increase their understanding of the business – Why?**
- ❖ **It is the responsibility of the CIO to ensure effective communication between business personnel and IT personnel**