Chapter 1

Information Systems in Global Business Today

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LEARNING OBJECTIVES

• Understanding the effects of information systems on business and their relationship to globalization.

• Explain why information systems are so essential in business today.

• Define an information system and describe its management, organization, and technology components.
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Osei Kwame Prempeh: One Year Rememberanc...

Journeying over many seas and through many countries we came dear Nana Kwame to this pitiful leave-taking the last gestures by your graveside the futility of words over your quiet remains.

Welcome

Funeral planning is something most of us will have to do at one point in our lives, but how do you do it? Are you getting good value for your money? What do you really need? What do you have to do? Send us your funeral information for publication. It's FREE!!

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The Editor of The Spectator, Mr. Merari Alomele, is dead.

WHAT A SHOCK

Alor, as he was affectionately called, was the author of the popular ‘Sikaman Palava’ column – which won him
The Role of Information Systems in Business Today

- **How information systems are transforming business**
  - Increase in wireless technology use, Web sites
  - Shifts in media and advertising
  - New challenges in security and accounting laws

- **Globalization opportunities**
  - Internet has drastically reduced costs of operating on global scale
  - Presents both challenges and opportunities
Information Technology Capital Investment

Considering the context of a developing country like Ghana, is the internet a strategic choice for every firm or otherwise, should every firm do business online?
Auntie Muni (Best Waakye Joint in Ghana)

Public Figure · Labone, Accra

Wall

Auntie Muni (Best Waakye... · Everyone (Most Recent)

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Write something...

Auntie Muni (Best Waakye Joint in Ghana) shared Kobbi Blaq's album: THE WAAKYE EXPERIENCE YOU MISSED.

THE WAAKYE EXPERIENCE YOU MISSED

By: Kobbi Blaq
Photos: 120

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Auntie Muni (Best Waakye Joint in Ghana)

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Cobby Richboy Maestro don't venture

December 17, 2011 at 12:15pm · Like
The Role of Information Systems in Business Today

• In the emerging, fully digital firm
  – Significant business relationships are digitally enabled and mediated
  – Core business processes are accomplished through digital networks
  – Key corporate assets are managed digitally

• Digital firms offer greater flexibility in organization and management
  – Time shifting, space shifting
FIRMS ARE INCREASINGLY BECOMING DIGITAL

... and this digitalization seems to be powered by information systems
What is an information system?
An **information system** (IS) is an arrangement of people, data, processes, and information technology that interact to collect, process, store, and provide as output the information needed to support an organization.

**From the business perspective, an information system** provides a solution to problem, a challenge, an opportunity for an organization and its consists of a combination management, organization and technology
Using information systems effectively requires an understanding of the organization, management, and information technology shaping the systems. An information system creates value for the firm as an organizational and management solution to challenges posed by the environment.

**Figure 1-5**
Perspectives on Information Systems

• **Information system:**
  – Set of interrelated components
  – Collect, process, store, and distribute information
  – Support decision making, coordination, and control

• **Information vs. data**
  – Data are streams of raw facts
  – Information is data shaped into meaningful form
Raw data from a supermarket checkout counter can be processed and organized to produce meaningful information, such as the total unit sales of dish detergent or the total sales revenue from dish detergent for a specific store or sales territory.

Figure 1-3
Activities in an Information System

INPUT → PROCESS → OUTPUT

FEEDBACK
Perspectives on Information Systems

• **Information system**: Three activities produce information organizations need
  – **Input**: Captures raw data from organization or external environment
  – **Processing**: Converts raw data into meaningful form
  – **Output**: Transfers processed information to people or activities that use it
• **Feedback:**
  – Output returned to appropriate members of organization to help evaluate or correct input stage

• **Computer/Computer program vs. information system**
  – Computers and software are technical foundation and tools, similar to the material and tools used to build a house
An information system contains information about an organization and its surrounding environment. Three basic activities—input, processing, and output—produce the information organizations need. Feedback is output returned to appropriate people or activities in the organization to evaluate and refine the input. Environmental actors, such as customers, suppliers, competitors, stockholders, and regulatory agencies, interact with the organization and its information systems.
Using information systems effectively requires an understanding of the organization, management, and information technology shaping the systems. An information system creates value for the firm as an organizational and management solution to challenges posed by the environment.

Figure 1-5
• Business perspective on information systems:
  – Information system is instrument for creating value
  – Investments in information technology will result in superior returns:
    • Productivity increases
    • Revenue increases
    • Superior long-term strategic positioning
So what is the DIGITAL FIRM?
A firm which uses information systems to become networked and decentralized and to digitalize their business processes and foster innovation and creativity.
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• **Growing interdependence between ability to use information technology and ability to implement corporate strategies and achieve corporate goals**

• **Business firms invest heavily in information systems to achieve six strategic business objectives:**
  
  – Operational excellence
  – New products, services, and business models
  – Customer and supplier intimacy
  – Improved decision making
  – Competitive advantage
  – Survival
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• Operational excellence:
  – Improvement of efficiency to attain higher profitability
  – Information systems, technology an important tool in achieving greater efficiency and productivity
  – Nike ID, BMW USA – linking the website with suppliers
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• **New products, services, and business models:**
  - Business model: describes how company produces, delivers, and sells product or service to create wealth
  - Information systems and technology a major enabling tool for new products, services, business models
    • NIKE ID
The Role of Information Systems in Business Today

• **Customer and supplier intimacy:**
  - Serving customers well leads to customers returning, which raises revenues and profits
    • Example: High-end hotels that use computers to track customer preferences and use to monitor and customize environment
  - Intimacy with suppliers allows them to provide vital inputs, which lowers costs
    • Example: NIKE ID, BMW USA
Improved decision making

Without accurate information:

- Managers must use forecasts, best guesses, luck
- Leads to:
  - Overproduction, underproduction of goods and services
  - Misallocation of resources
  - Poor response times
- Poor outcomes raise costs, lose customers

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• Operational excellence:
  – Improvement of efficiency to attain higher profitability

• New products, services, and business models:
  – Enabled by technology

• Customer and supplier intimacy:
  – Serving customers raises revenues and profits
  – Better communication with suppliers lowers costs

• Improved decision making
  – More accurate data leads to better decisions
From a business perspective, information systems are part of a series of value-adding activities for acquiring, transforming, and distributing information that managers can use to improve decision making, enhance organizational performance, and, ultimately, increase firm profitability.

**Figure 1-7**

*Perspectives on Information Systems*

*The Business Information Value Chain*
• **Complementary assets:**
  – Assets required to derive value from a primary investment
  – Firms supporting technology investments with investment in complementary assets receive superior returns
  – E.g.: invest in technology **and** the people to make it work properly
• **Complementary assets include:**
  – Organizational investments, e.g.
    • Appropriate business model
    • Efficient business processes
  – Managerial investments, e.g.
    • Incentives for management innovation
    • Teamwork and collaborative work environments
  – Social (National) investments, e.g.
    • The Internet and telecommunications infrastructure
    • Technology standards
A New Perspective of Information Systems
The study of information systems deals with issues and insights contributed from technical and behavioral disciplines.

Figure 1-9
Contemporary Approaches to Information Systems

• **Technical approach**
  - Emphasizes mathematically based models
  - Computer science, management science, operations research

• **Behavioral approach**
  - Behavioral issues (strategic business integration, implementation, etc.)
  - Psychology, economics, sociology
Management Information Systems

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Contemporary Approaches to Information Systems

• **Management Information Systems**
  - Combines computer science, management science, operations research and practical orientation with behavioral issues

• **Four main actors**
  - Suppliers of hardware and software
  - Business firms
  - Managers and employees
  - Firm’s environment (legal, social, cultural context)
• **Approach of this course**
  • Optimal organizational performance achieved by jointly optimizing both social and technical systems used in production
  • Helps avoid purely technological approach
In a sociotechnical perspective, the performance of a system is optimized when both the technology and the organization mutually adjust to one another until a satisfactory fit is obtained.

Figure 1-10
Website
www.vivauniversity.wordpress.com

Recommended Text
• Thank You for Listening

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