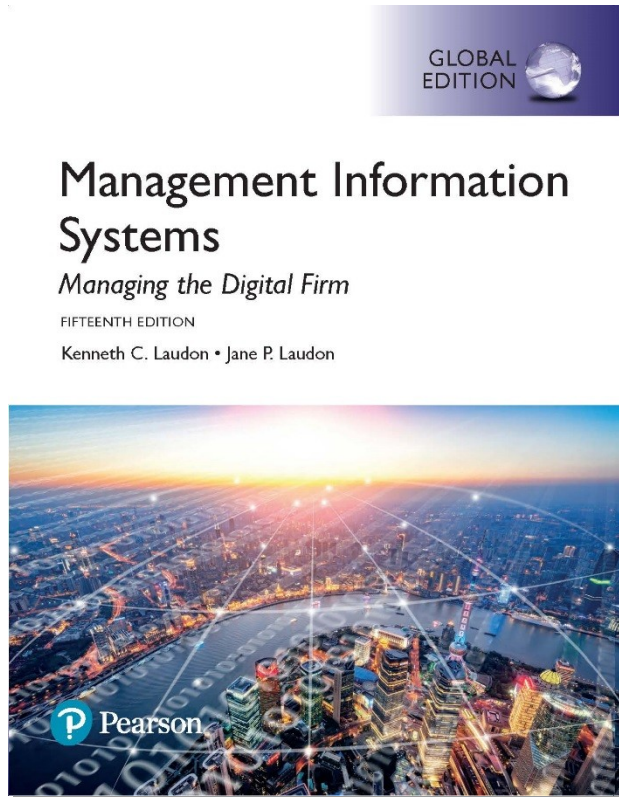


Management Information Systems: Managing the Digital Firm

Fifteenth edition



Chapter 15 Managing Global Systems

Learning Objectives

- **15-1** What major factors are driving the internationalization of business?
- **15-2** What are the alternative strategies for developing global businesses?
- **15-3** What are the challenges posed by global information systems and management solutions for these challenges?
- **15-4** What are the issues and technical alternatives to be considered when developing international information systems?

Video Cases

- Case 1: Daum Runs Oracle Apps on Linux
- Case 2: Lean Manufacturing and Global ERP: Humanetics and Global Shop

The Bel Group: Laughing All the Way to Success (1 of 2)

- Problem

- Potential expansion
- Untouched market potential globally

- Solutions

- Design global strategy and business model
- Redesign business processes
- Deploy Salesforce's Sales Cloud software

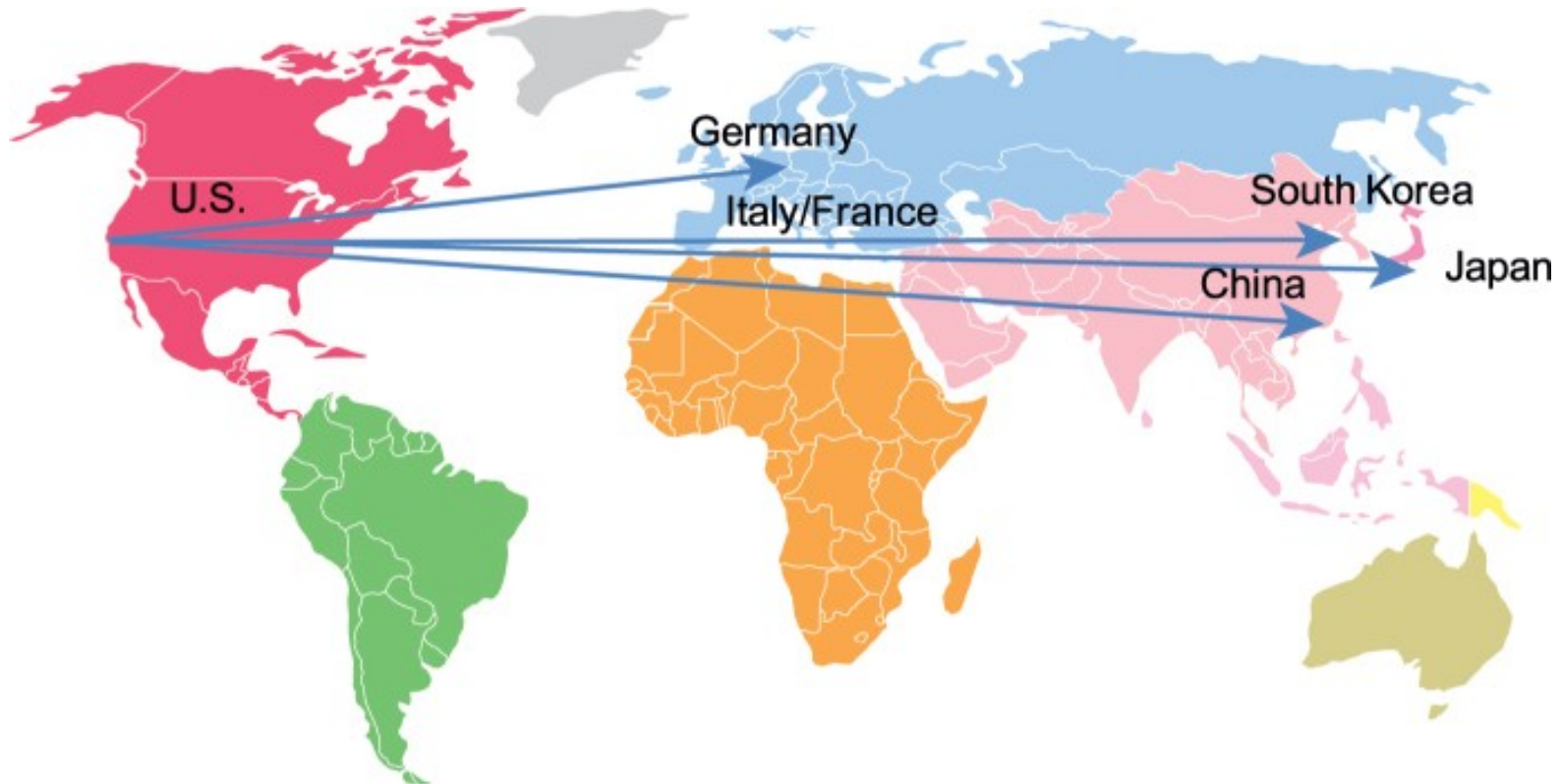
The Bel Group: Laughing All the Way to Success (2 of 2)

- Dunlop uses Salesforce's Sales Cloud to create a global CRM, to coordinate sales and marketing teams from different business locations around the globe
- Demonstrates IT's role in helping organizations pursue a global growth strategy
- Illustrates the ability of IT systems to support scalability

What Major Factors Are Driving the Internationalization of Business?

- Global economic system and global world order driven by advanced networks and information systems
- The growth of international trade has radically altered domestic economies around the globe
- For example, production of many high-end electronic products parceled out to multiple countries
 - For example: Apple iPhone's global supply chain

Figure 15.1: Apple iPhone's Global Supply Chain



Developing an International Information Systems Architecture

- Understand global environment
 - Business drivers for global competition
 - Inhibitors creating management challenges
- Develop corporate strategy for global competition
- Develop organizational structure and division of labor
- Consider management issues
 - Design of business procedures, reengineering, managing change
- Consider technology platform

Figure 15.2: International Information Systems Architecture



The Global Environment: Business Drivers and Challenges

- General cultural challenges
 - Cultural particularism
 - Social expectations
 - Political laws
- Specific challenges
 - Standards
 - Reliability
 - Speed
 - Personnel

Table 15.1 The Global Environment: Business Drivers and Challenges

GENERAL CULTURAL FACTORS	SPECIFIC BUSINESS FACTORS
Global communication and transportation technologies	Global markets
Development of global culture	Global production and operations
Emergence of global social norms	Global coordination
Political stability	Global workforce
Global knowledge base	Global economies of scale

Table 15.2 Challenges and Obstacles to Global Business Systems

GLOBAL	SPECIFIC
Cultural particularism: Regionalism, nationalism, language differences	Standards: Different Electronic Data Interchange (EDI), e-mail, telecommunications standards
Social expectations: Brand-name expectations, work hours	Reliability: Phone networks not uniformly reliable
Political laws: Transborder data and privacy laws, commercial regulations	Speed: Different data transfer speeds, many slower than United States
-	Personnel: Shortages of skilled consultants

State of the Art

- Most companies have inherited a patchwork international system using traditional batch-oriented reporting, manual data entry, legacy systems, and little online control.
- Significant difficulties in building appropriate international architectures
 - Planning a system appropriate to firm's global strategy
 - Structuring organization of systems and business units
 - Solving implementation issues
 - Choosing right technical platform

Global Strategies and Business Organization

- Three main kinds of organizational structure
 - Centralized: In the home country
 - Decentralized/dispersed: To local foreign units
 - Coordinated: All units participate as equals
- Four main global strategies
 - Domestic exporter
 - Multinational
 - Franchisers
 - Transnational

Table 15.3 Global Business Strategy and Structure

BUSINESS FUNCTION	DOMESTIC EXPORTER	MULTINATIONAL	FRANCHISER	TRANSNATIONAL
Production	Centralized	Dispersed	Coordinated	Coordinated
Finance/ accounting	Centralized	Centralized	Centralized	Coordinated
Sales/ marketing	Mixed	Dispersed	Coordinated	Coordinated
Human resources	Centralized	Centralized	Coordinated	Coordinated
Strategic management	Centralized	Centralized	Centralized	Coordinated

Global Systems to Fit the Strategy

- Configuration, management, and development of systems tend to follow global strategy chosen
- Four main types of systems configuration
 - Centralized: Systems development and operation occur totally at domestic home base
 - Duplicated: Development occurs at home base but operations are handed over to autonomous units in foreign locations
 - Decentralized: Each foreign unit designs own solutions and systems
 - Networked: Development and operations occur in coordinated fashion across all units

Figure 15.3: Global Strategy and Systems Configurations

SYSTEM CONFIGURATION	Strategy			
	Domestic Exporter	Multinational	Franchiser	Transnational
Centralized	X			
Duplicated			X	
Decentralized	x	X	x	
Networked		x		X

TABLE 15.4 MANAGEMENT CHALLENGES IN DEVELOPING GLOBAL SYSTEMS

Agreeing on common user requirements

Introducing changes in business processes

Coordinating applications development

Coordinating software releases

Encouraging local users to support global systems

Reorganizing the Business

- To develop a global company and information systems support structure:
 1. Organize value-adding activities along lines of comparative advantage
 - For example: Locate functions where they can best be performed, for least cost and maximum impact.
 2. Develop and operate systems units at each level of corporate activity—regional, national, and international
 3. Establish at world headquarters:
 - Single office responsible for development of international systems
 - Global CIO position

A Typical Scenario: Disorganization on a Global Scale

- Traditional multinational consumer-goods company based in United States and operating in Europe would like to expand into Asia
- World headquarters and strategic management in United States
- Separate regional, national production and marketing centers
- Foreign divisions have separate IT systems
- E-mail systems are incompatible
- Each production facility uses different ERP system, different hardware and database platforms, and so on

Global Systems Strategy (1 of 2)

- Share only core systems
 - Core systems support functionality critical to firm
- Partially coordinate systems that share some key elements
 - Do not have to be totally common across national boundaries
 - Local variation desirable
- Peripheral systems
 - Need to suit local requirements only

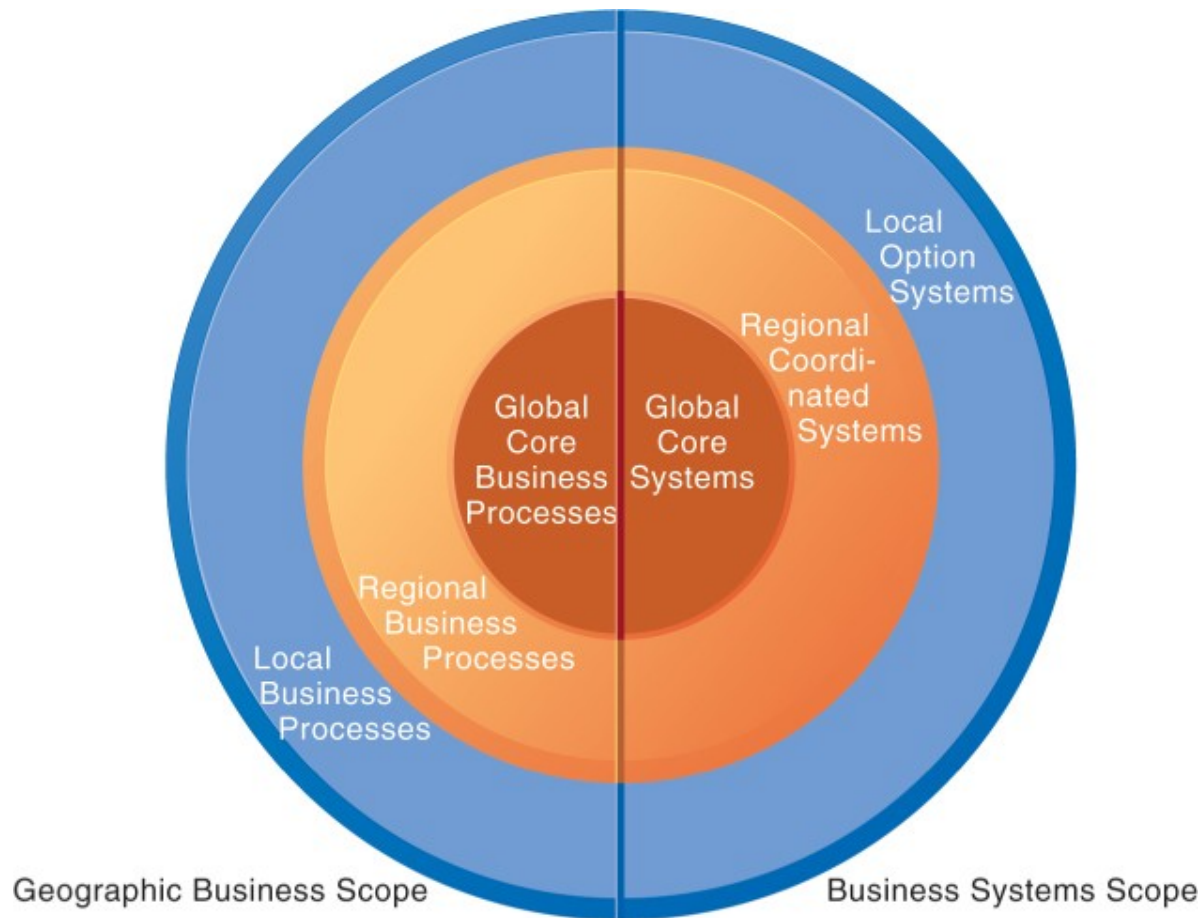
Global Systems Strategy (2 of 2)

- Define core business processes
- Identify core systems to coordinate centrally
- Choose an approach
 - Piecemeal and grand design approaches tend to fail
- Make benefits clear
 - Global flexibility
 - Gains in efficiency
 - Global markets and larger customer base unleash new economies of scale at production facilities
 - Optimizing corporate funds over much larger capital base

The Management Solution: Implementation (1 of 2)

- Agreeing on common user requirements
 - Short list of core business processes
 - Develop common language, understanding of common elements and unique local qualities
- Introducing changes in business processes
 - Success depends on legitimacy, authority, ability to involve users in change design process
- Coordinating applications development
 - Coordinate change through incremental steps
 - Reduce set of transnational systems to bare minimum

Figure 15.4: Local, Regional, and Global Systems



The Management Solution: Implementation (2 of 2)

- Coordinating software releases
 - Institute procedures to ensure all operating units update at same time
- Encouraging local users to support global systems
 - Cooptation: Bringing the opposition into design and implementation process without giving up control over direction and nature of the change
 - Permit each country unit to develop one transnational application
 - Develop new transnational centers of excellence

Issues and Technical Alternatives When Developing International Information Systems (1 of 2)

- Computing platforms and systems integration
 - How new core systems will fit in with existing suite of applications developed around globe by different divisions
 - Standardization: Data standards, interfaces, software, and so on
- Connectivity
 - Internet does not guarantee any level of service
 - Many firms use private networks and VPNs
 - Low penetration of PCs, outdated infrastructures in developing countries

TABLE 15.5 CHALLENGES OF INTERNATIONAL NETWORKS

Quality of service

Security

Costs and tariffs

Network management

Installation delays

Poor quality of international service

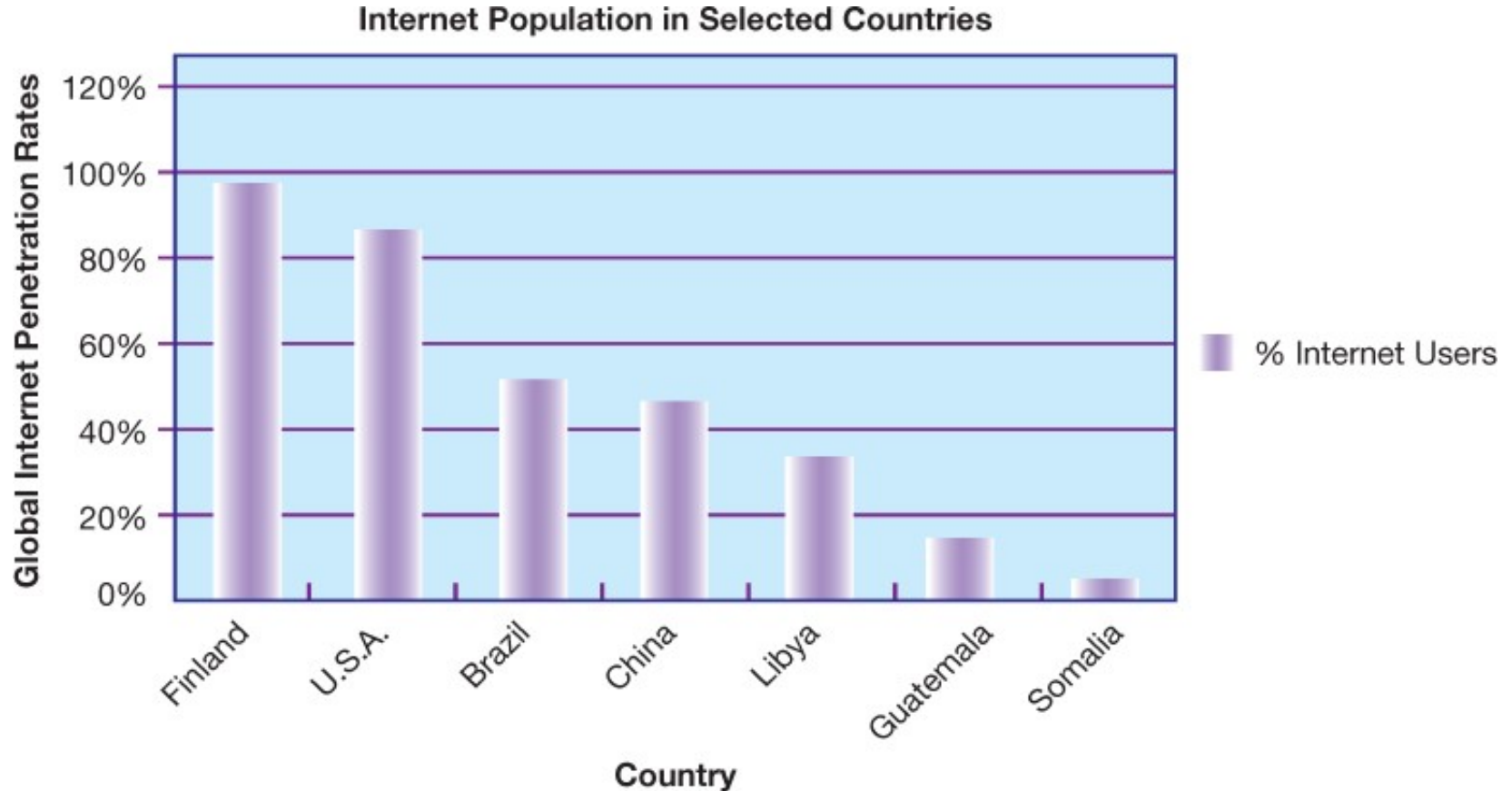
Regulatory constraints

Network capacity

Issues and Technical Alternatives When Developing International Information Systems (2 of 2)

- Software
 - Integrating new systems with old
 - Human interface design issues, languages
- Software localization
 - Converting software to operate in second language
- Most important software applications:
 - TPS and MIS
 - SCM, EDI, and enterprise systems
 - Collaboration tools, e-mail, videoconferencing

Figure 15.5: Internet Population in Selected Countries



Interactive Session: Organizations: Indian E-commerce: Obstacles to Opportunity

- Class discussion
 - Describe the technical, cultural, and organizational obstacles to e-commerce growth in India.
 - How do these factors hamper companies from doing business in India or setting up Indian e-commerce sites?
 - Will non-Indian companies like Amazon.com and eBay flourish in India? Explain.

Interactive Session: Management: Steelcase Designs Goes for Global Talent Management

- Class discussion

- Why are human resources and talent management so important at Steelcase?
- Identify the problem described in this case. What management, organization and technology factors contributed to this problem? What role did globalization play?
- Describe the capabilities of the SAP ERP HCM and SuccessFactors systems that were helpful to Steelcase. How did these systems improve global operations and decision making?