# Case Study for Information Management
# 資訊管理個案

## Enhancing Decision Making: CompStat (Chap. 12)

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TLMXB4C (M1824)
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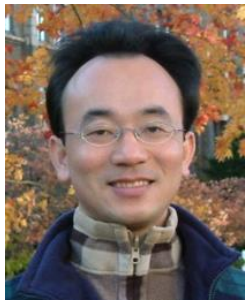


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2014-12-16

# 課程大綱 (Syllabus)

週次 (Week) 日期 (Date) 內容 (Subject/Topics)

1 103/09/16 Introduction to Case Study for Information Management

2 103/09/23 Information Systems in Global Business: UPS (Chap. 1)

3 103/09/30 Global E-Business and Collaboration: NTUC Income (Chap. 2)

4 103/10/07 Information Systems, Organization, and Strategy: iPad and Apple (Chap. 3)

5 103/10/14 IT Infrastructure and Emerging Technologies: Salesforce.com (Chap. 5)

6 103/10/21 Foundations of Business Intelligence: Lego (Chap. 6)

# 課程大綱 (Syllabus)

週次 (Week)　日期 (Date)　內容 (Subject/Topics)

7　103/10/28　Telecommunications, the Internet, and Wireless Technology: Google, Apple, and Microsoft (Chap. 7)

8　103/11/04　Securing Information System: Facebook (Chap. 8)

9　103/11/11　Midterm Report (期中報告)

10　103/11/18　期中考試週

11　103/11/25　Enterprise Application: Border States Industries Inc. (BSE) (Chap. 9)

12　103/12/02　E-commerce: Amazon vs. Walmart (Chap. 10)

# 課程大綱 (Syllabus)

週次　日期　　內容（Subject/Topics）

13 103/12/09 Knowledge Management: Tata Consulting Services (Chap. 11)

14 103/12/16 Enhancing Decision Making: CompStat (Chap. 12)

15 103/12/23 Building Information Systems: Electronic Medical Records (Chap. 13)

16 103/12/30 Managing Projects: JetBlue and WestJet (Chap. 14)

17 104/01/06 Final Report (期末報告)

18 104/01/13 期末考試週

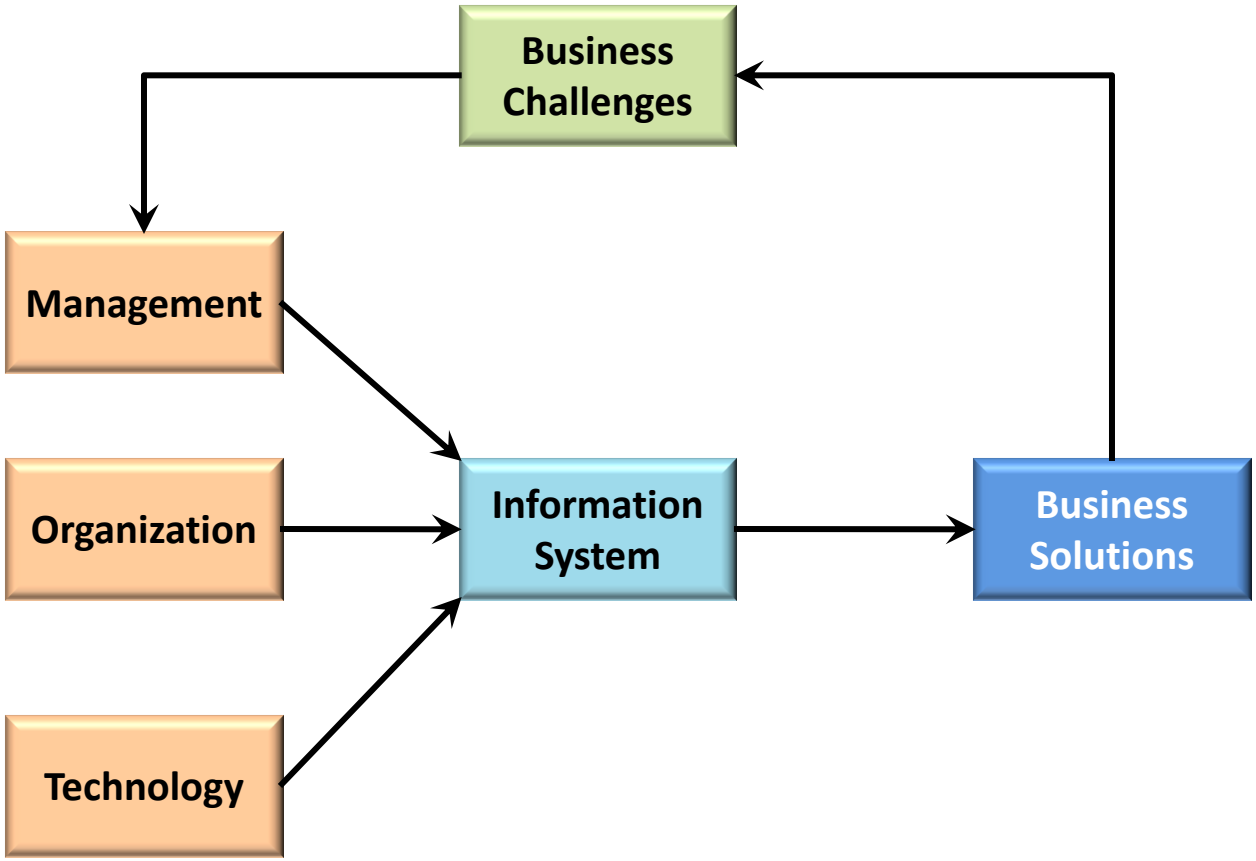
# Chap. 12
# Enhancing Decision Making: CompStat

# Case Study: CompStat

## Does CompStat Reduce Crime? (Chap. 12)

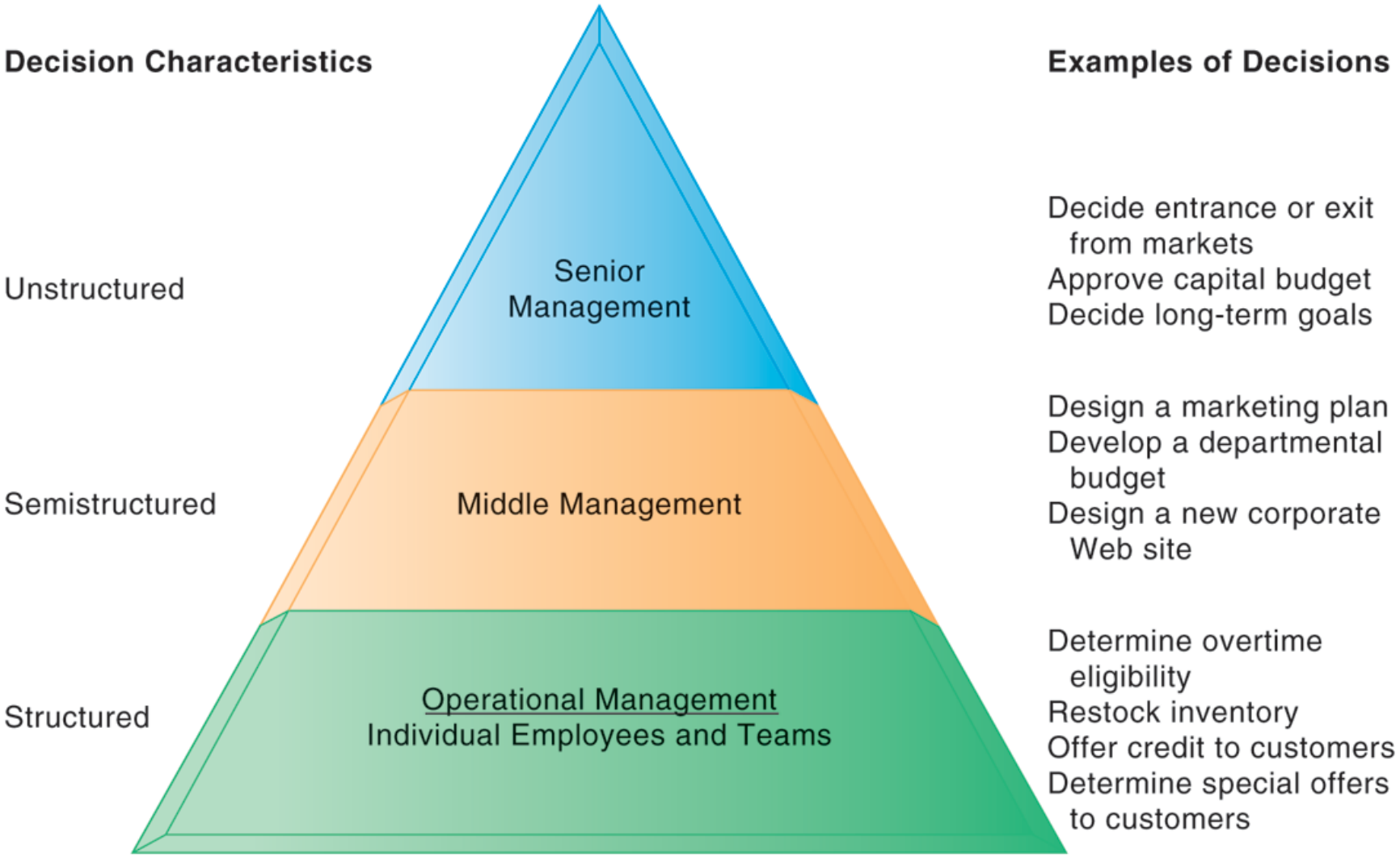
1. What management, organization, and technology factors make CompStat effective?
2. Can police departments effectively combat crime without the CompStat system?
   Is community policing incompatible with CompStat? Explain your answer.
3. Why would officers misreport certain data to CompStat?
   What should be done about the misreporting of data? How can it be detected?

# Overview of Fundamental MIS Concepts




Source: Kenneth C. Laudon & Jane P. Laudon (2012), Management Information Systems: Managing the Digital Firm, Twelfth Edition, Pearson.

# INFORMATION REQUIREMENTS OF KEY DECISION-MAKING GROUPS IN A FIRM

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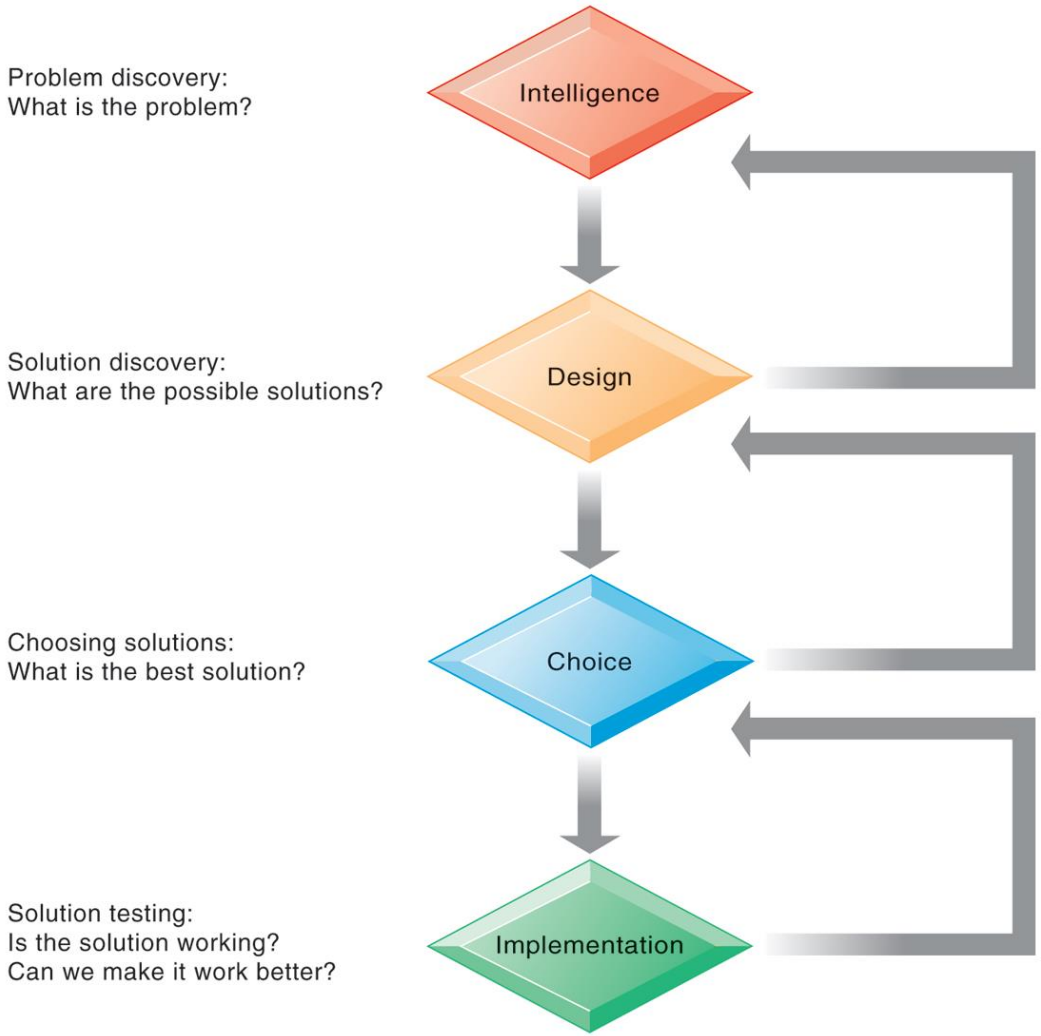
# 4 STAGES IN DECISION MAKING




Source: Kenneth C. Laudon & Jane P. Laudon (2012), Management Information Systems: Managing the Digital Firm, Twelfth Edition, Pearson.

# Classical model of management: 5 functions

1. Planning
2. Organizing
3. Coordinating
4. Deciding
5. Controlling

Source: Kenneth C. Laudon & Jane P. Laudon (2012), Management Information Systems: Managing the Digital Firm, Twelfth Edition, Pearson.

# Mintzberg's 10 managerial roles

- Interpersonal roles
  1. Figurehead
  2. Leader
  3. Liaison
- Informational roles
  4. Nerve center
  5. Disseminator
  6. Spokesperson
- Decisional roles
  7. Entrepreneur
  8. Disturbance handler
  9. Resource allocator
  10. Negotiator

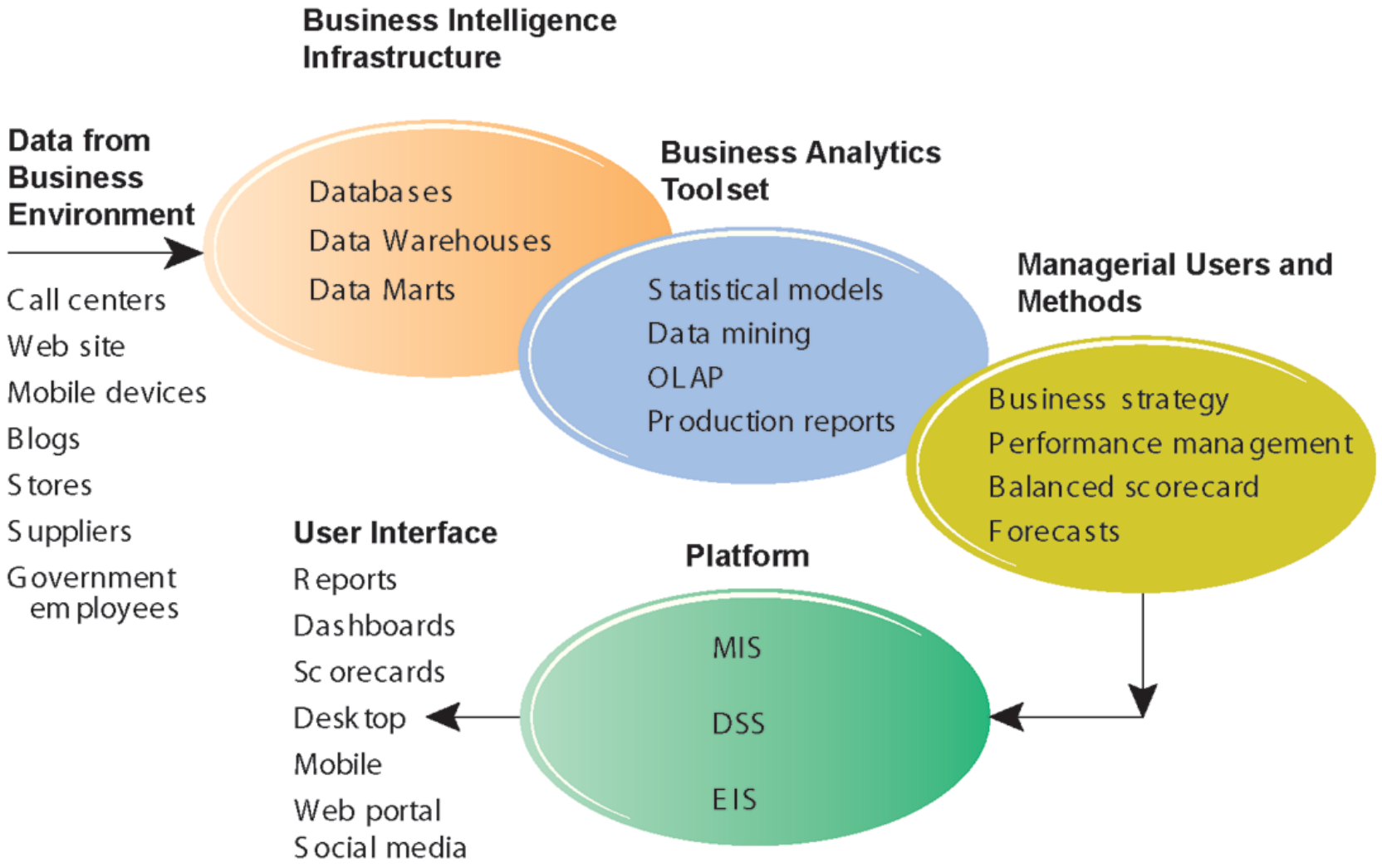
Source: Kenneth C. Laudon & Jane P. Laudon (2012), Management Information Systems: Managing the Digital Firm, Twelfth Edition, Pearson.

# Business Intelligence (BI) in Enterprise

- Business Intelligence
  - Infrastructure for collecting, storing, analyzing data produced by business
  - Databases, data warehouses, data marts
- Business Analytics
  - Tools and techniques for analyzing data
  - OLAP, statistics, models, data mining
- Business Intelligence Vendors
  - Create business intelligence and analytics purchased by firms

Source: Kenneth C. Laudon & Jane P. Laudon (2012), Management Information Systems: Managing the Digital Firm, Twelfth Edition, Pearson.

# BUSINESS INTELLIGENCE AND ANALYTICS FOR DECISION SUPPORT




Source: Kenneth C. Laudon & Jane P. Laudon (2012), Management Information Systems: Managing the Digital Firm, Twelfth Edition, Pearson.

# Business intelligence and analytics capabilities

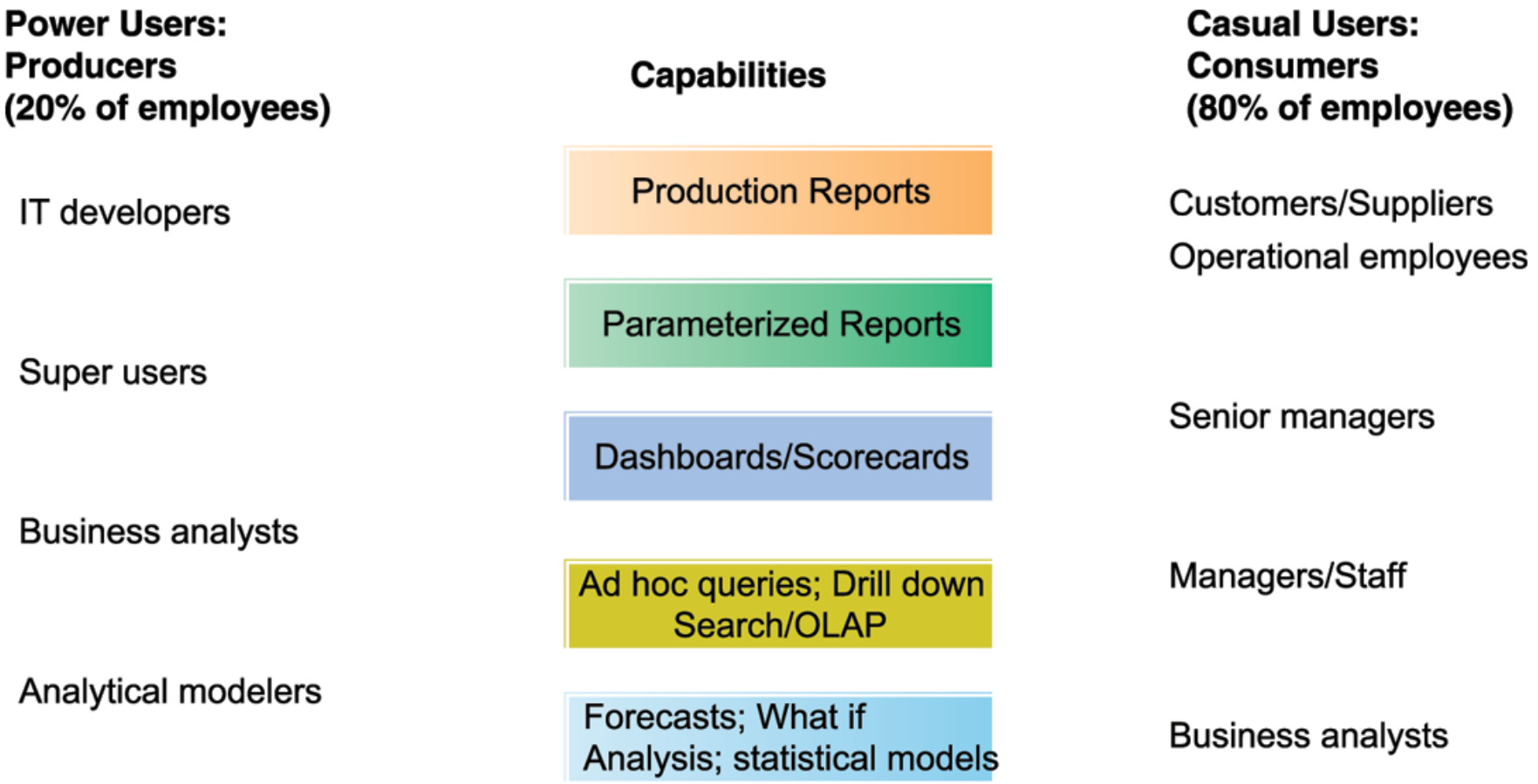
- Goal is to deliver accurate real-time information to decision-makers
- Main functionalities of BI systems
  1. Production reports
  2. Parameterized reports
  3. Dashboards/scorecards
  4. Ad hoc query/search/report creation
  5. Drill down
  6. Forecasts, scenarios, models

Source: Kenneth C. Laudon & Jane P. Laudon (2012), Management Information Systems: Managing the Digital Firm, Twelfth Edition, Pearson.

# Business Intelligence Users

- 80% are casual users relying on production reports
- Senior executives
  - Use monitoring functionalities
- Middle managers and analysts
  - Ad-hoc analysis
- Operational employees
  - Prepackaged reports
  - E.g. sales forecasts, customer satisfaction, loyalty and attrition, supply chain backlog, employee productivity

# Business Intelligence Users




Source: Kenneth C. Laudon & Jane P. Laudon (2012), Management Information Systems: Managing the Digital Firm, Twelfth Edition, Pearson.

# Examples of BI applications

- Predictive analytics
  - Use patterns in data to predict future behavior
  - E.g. Credit card companies use predictive analytics to determine customers at risk for leaving
- Data visualization
  - Help users see patterns and relationships that would be difficult to see in text lists
- Geographic information systems (GIS)
  - Ties location-related data to maps

Source: Kenneth C. Laudon & Jane P. Laudon (2012), Management Information Systems: Managing the Digital Firm, Twelfth Edition, Pearson.

# Management strategies for developing BI and BA capabilities

- Two main strategies
  1. One-stop integrated solution
     - Hardware firms sell software that run optimally on their hardware
     - Makes firm dependent on single vendor – switching costs
  2. Multiple best-of-breed solution
     - Greater flexibility and independence
     - Potential difficulties in integration
     - Must deal with multiple vendors

# Decision Support Systems

- Use mathematical or analytical models
- Allow varied types of analysis
  - "What-if" analysis
  - Sensitivity analysis
  - Backward sensitivity analysis
  - Multidimensional analysis / OLAP
    - E. g. pivot tables

# SENSITIVITY ANALYSIS

| | | | | | | |
|---|---|---|---|---|---|---|
| Total fixed costs | 19000 | | | | | |
| Variable cost per unit | 3 | | | | | |
| Average sales price | 17 | | | | | |
| Contribution margin | 14 | | | | | |
| Break-even point | 1357 | | | | | |
| | | Variable Cost per Unit | | | | |
| Sales | 1357 | 2 | 3 | 4 | 5 | 6 |
| Price | 14 | 1583 | 1727 | 1900 | 2111 | 2375 |
| | 15 | 1462 | 1583 | 1727 | 1900 | 2111 |
| | 16 | 1357 | 1462 | 1583 | 1727 | 1900 |
| | 17 | 1267 | 1357 | 1462 | 1583 | 1727 |
| | 18 | 1188 | 1267 | 1357 | 1462 | 1583 |

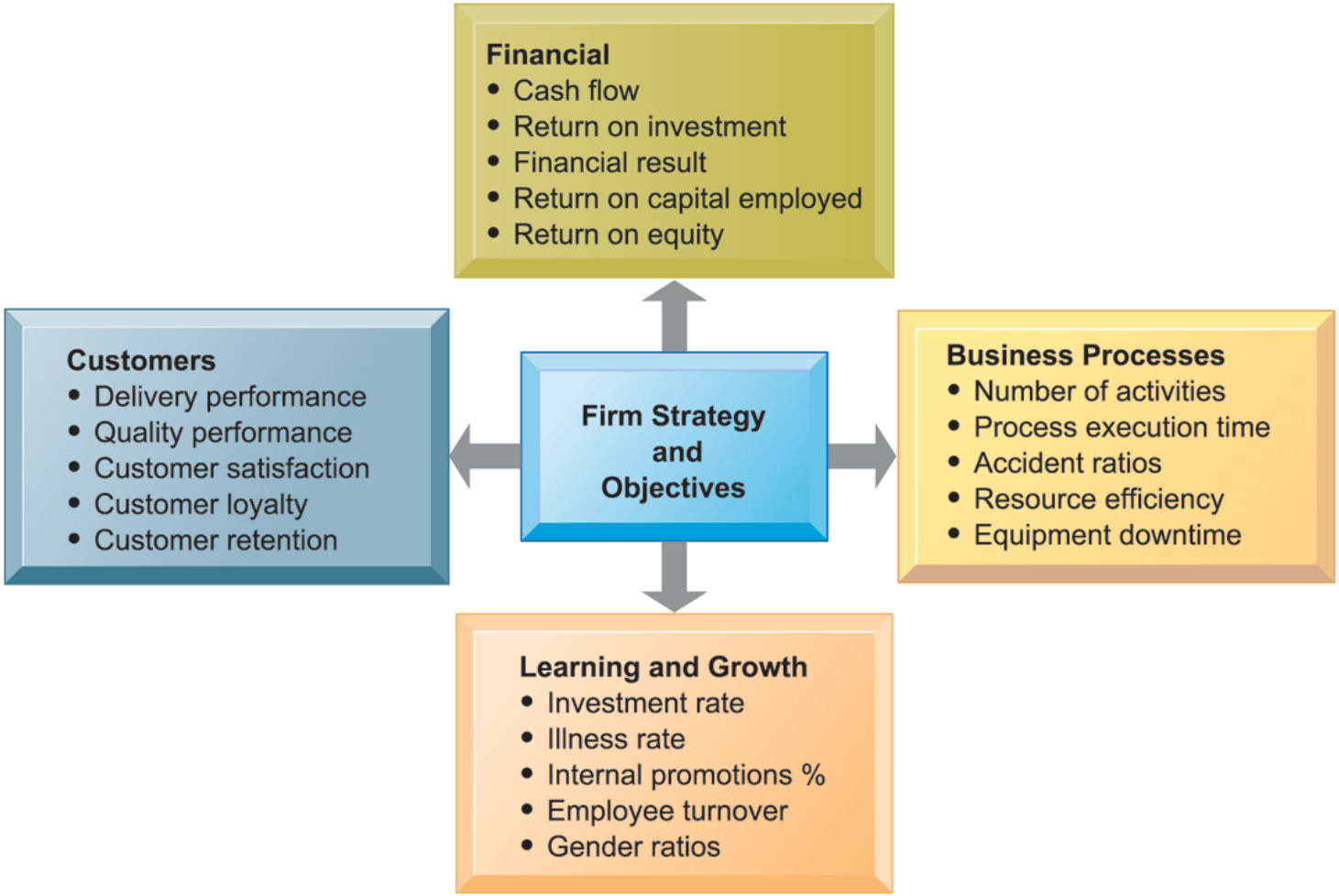
Source: Kenneth C. Laudon & Jane P. Laudon (2012), Management Information Systems: Managing the Digital Firm, Twelfth Edition, Pearson.

# Decision-support for senior management

- Help executives focus on important performance information
- Balanced scorecard method:
  - Measures outcomes on four dimensions:
    1. Financial
    2. Business process
    3. Customer
    4. Learning & growth
  - Key performance indicators (KPIs) measure each dimension

Source: Kenneth C. Laudon & Jane P. Laudon (2012), Management Information Systems: Managing the Digital Firm, Twelfth Edition, Pearson.

# THE BALANCED SCORECARD FRAMEWORK




Source: Kenneth C. Laudon & Jane P. Laudon (2012), Management Information Systems: Managing the Digital Firm, Twelfth Edition, Pearson.

# Decision-support for senior management (cont.)

- Business performance management (BPM)
  - Translates firm's strategies (e.g. differentiation, low-cost producer, scope of operation) into operational targets
  - KPIs developed to measure progress towards targets
- Data for ESS
  - Internal data from enterprise applications
  - External data such as financial market databases
  - Drill-down capabilities

Source: Kenneth C. Laudon & Jane P. Laudon (2012), Management Information Systems: Managing the Digital Firm, Twelfth Edition, Pearson.

# Case Study: Electronic Medical Records

## Are Electronic Medical Records a Cure for Health Care? (Chap. 13)

1. What management, organization, and technology factors are responsible for the difficulties in building electronic medical record systems? Explain your answer.
2. What stages of system-building will be the most difficult for building electronic medical record systems? Explain your answer.
3. What is the business and social impact of not digitizing medical records (to individual physicians, hospitals, insurers, patients)?
4. What are business and social benefits of digitizing medical recordkeeping?
5. Name two important information requirements for physicians, two for patients, and two for hospitals that should be addressed by electronic medical records systems.
6. Diagram the "as-is" and "to-be" process for prescribing a medication for a patient if an EMR system is implemented.

# 資訊管理個案
# (Case Study for Information Management)

1. 請同學於資訊管理個案討論前
   應詳細研讀個案，並思考個案研究問題。
2. 請同學於上課前複習相關資訊管理相關
   理論，以作為個案分析及擬定管理對策的
   依據。
3. 請同學於上課前
   先繳交個案研究問題書面報告。

# References


- Kenneth C. Laudon & Jane P. Laudon (2012), Management Information Systems: Managing the Digital Firm, Twelfth Edition, Pearson.
- 周宣光　譯 (2011)，
  資訊管理系統—管理數位化公司，
  第12版，東華書局