Case Study for Information Management
資訊管理個案

Managing Projects:
JetBlue and WestJet (Chap. 14)

1031CSIM4C14
TLMXB4C (M1824)
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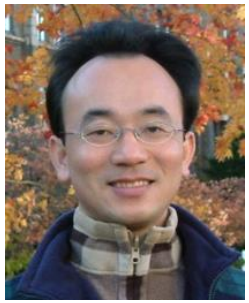

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2014-12-23

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) Managing Projects: JetBlue and WestJet (Chap. 14)
16	103/12/30	Final Report I (期末報告I)
17	104/01/06	Final Report II (期末報告II)
18	104/01/13	期末考試週

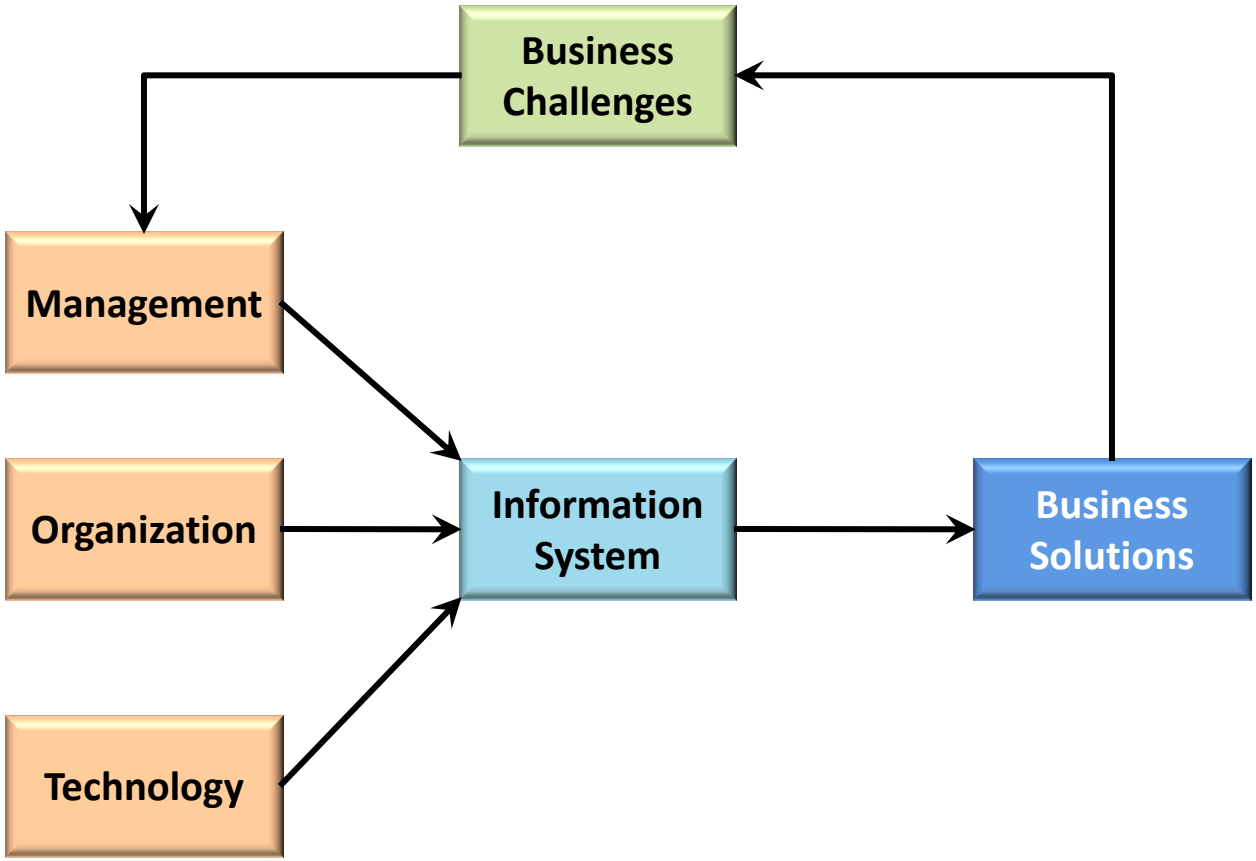
Chap. 14
Managing Projects: JetBlue and WestJet

Case Study: JetBlue and WestJet

JetBlue and WestJet: A Tale of Two IS Projects (Chap. 14)

1. How important is the reservation system at airlines such as WestJet and JetBlue? How does it impact operational activities and decision making?
2. Evaluate the key risk factors of the projects to upgrade the reservation systems of WestJet and JetBlue.
3. Classify and describe the problems each airline faced in implementing its new reservation system. What management, organization, and technology factors caused those problems?
4. Describe the steps you would have taken to control the risk in these projects.

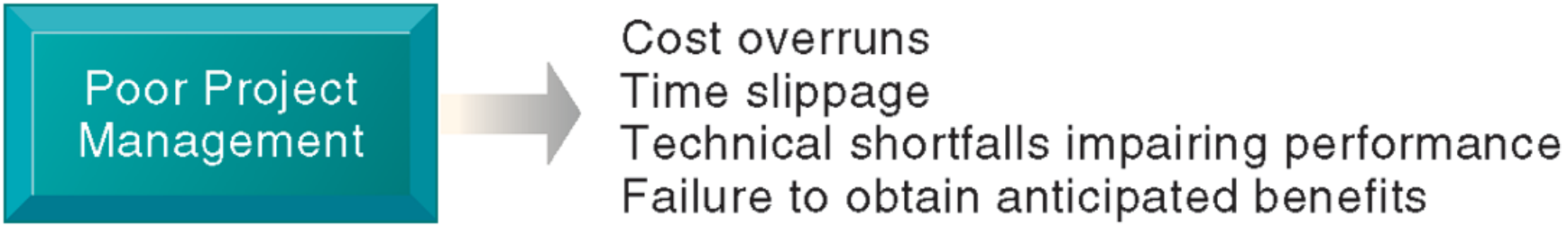
Overview of Fundamental MIS Concepts



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

The Importance of Project Management

- CONSEQUENCES OF POOR PROJECT MANAGEMENT



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

Project Management (PM)

- Activities include
  - planning work,
  - assessing risk,
  - estimating resources required,
  - organizing the work,
  - assigning tasks,
  - controlling project execution,
  - reporting progress,
  - analyzing results.

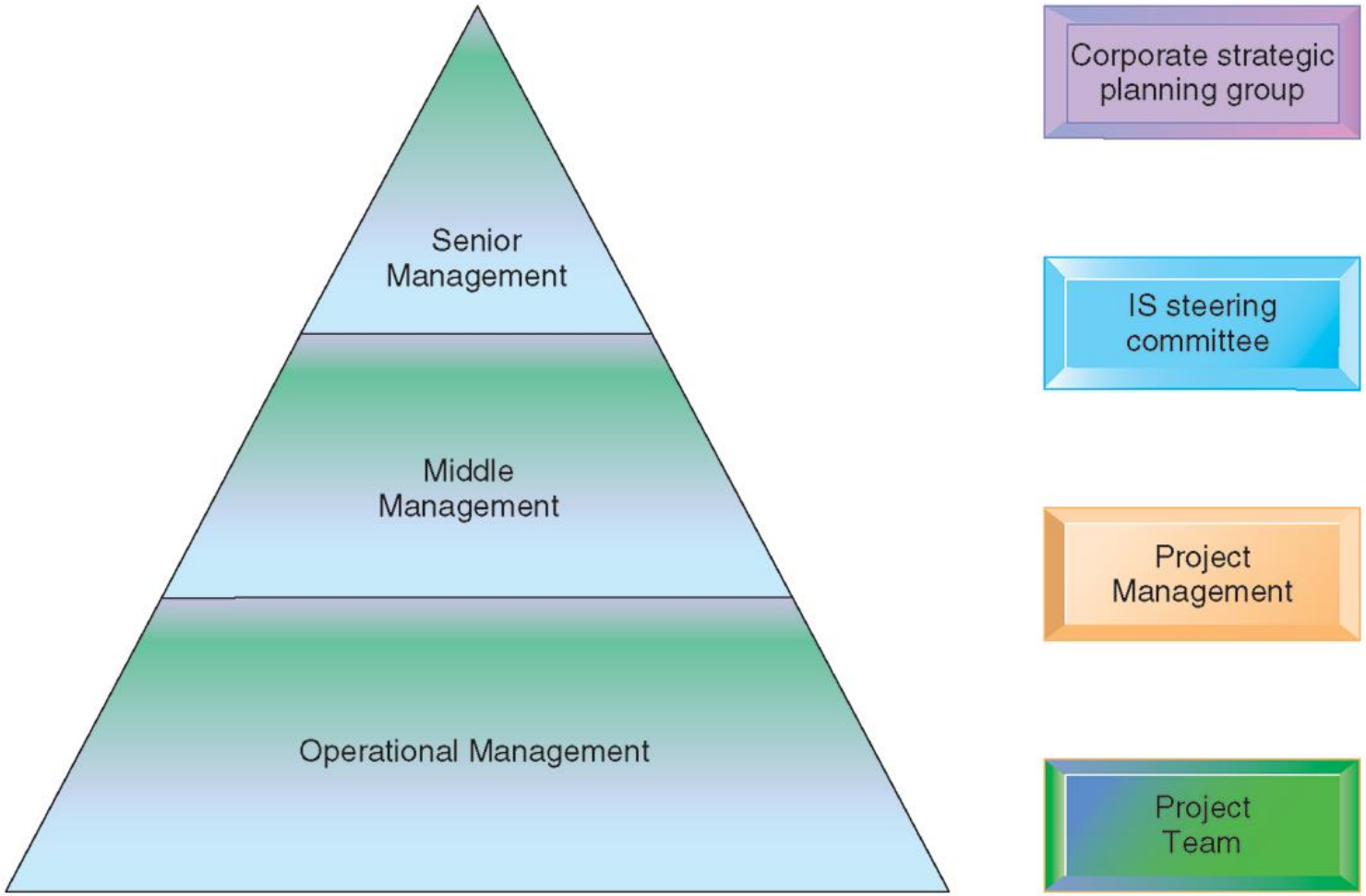
Source: Kenneth C. Laudon & Jane P. Laudon (2012), Management Information Systems: Managing the Digital Firm, Twelfth Edition, Pearson.

Five major variables of project management

1. Scope
2. Time
3. Cost
4. Quality
5. Risk

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

MANAGEMENT CONTROL OF SYSTEMS PROJECTS



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

Linking Systems Projects to the Business Plan

- Information Systems Plan
  - Identifies systems projects that will deliver most business value, links development to business plan
  - Road map indicating direction of systems development, includes:
    - Purpose of plan
    - Strategic business plan rationale
    - Current systems/situation
    - New developments to consider
    - Management strategy
    - Implementation plan
    - Budget

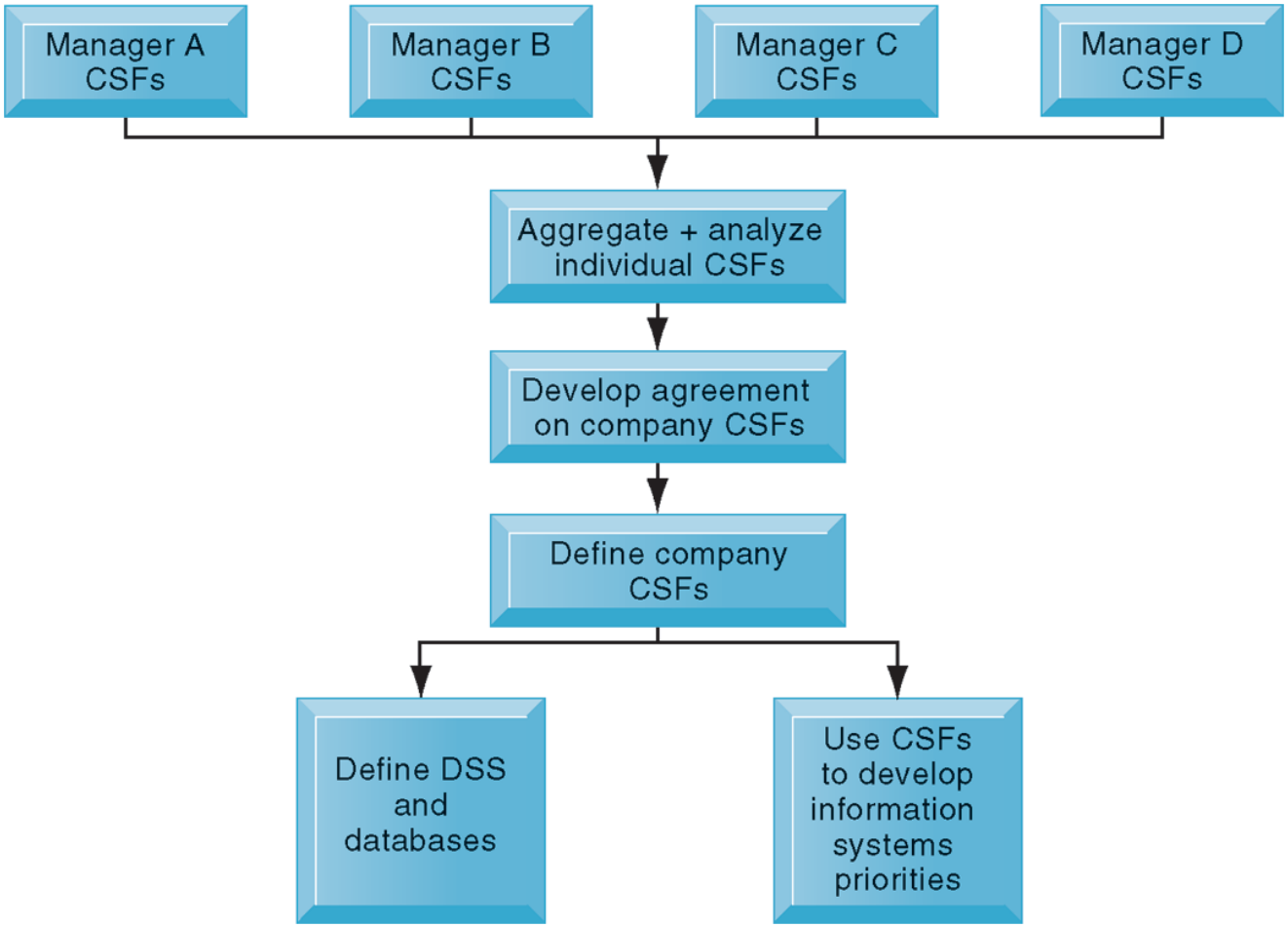
Developing Information Systems Plan

- In order to plan effectively, firms need to inventory and document existing software, hardware, systems
- To develop effective information systems plan, organization must have clear understanding of both long-term and short-term information requirements
- Strategic analysis or critical success factors (CSF) approach
  - Sees information requirements as determined by a small number of critical success factors
  - Auto industry CSFs might include styling, quality, cost

Critical Success Factors (CSFs)

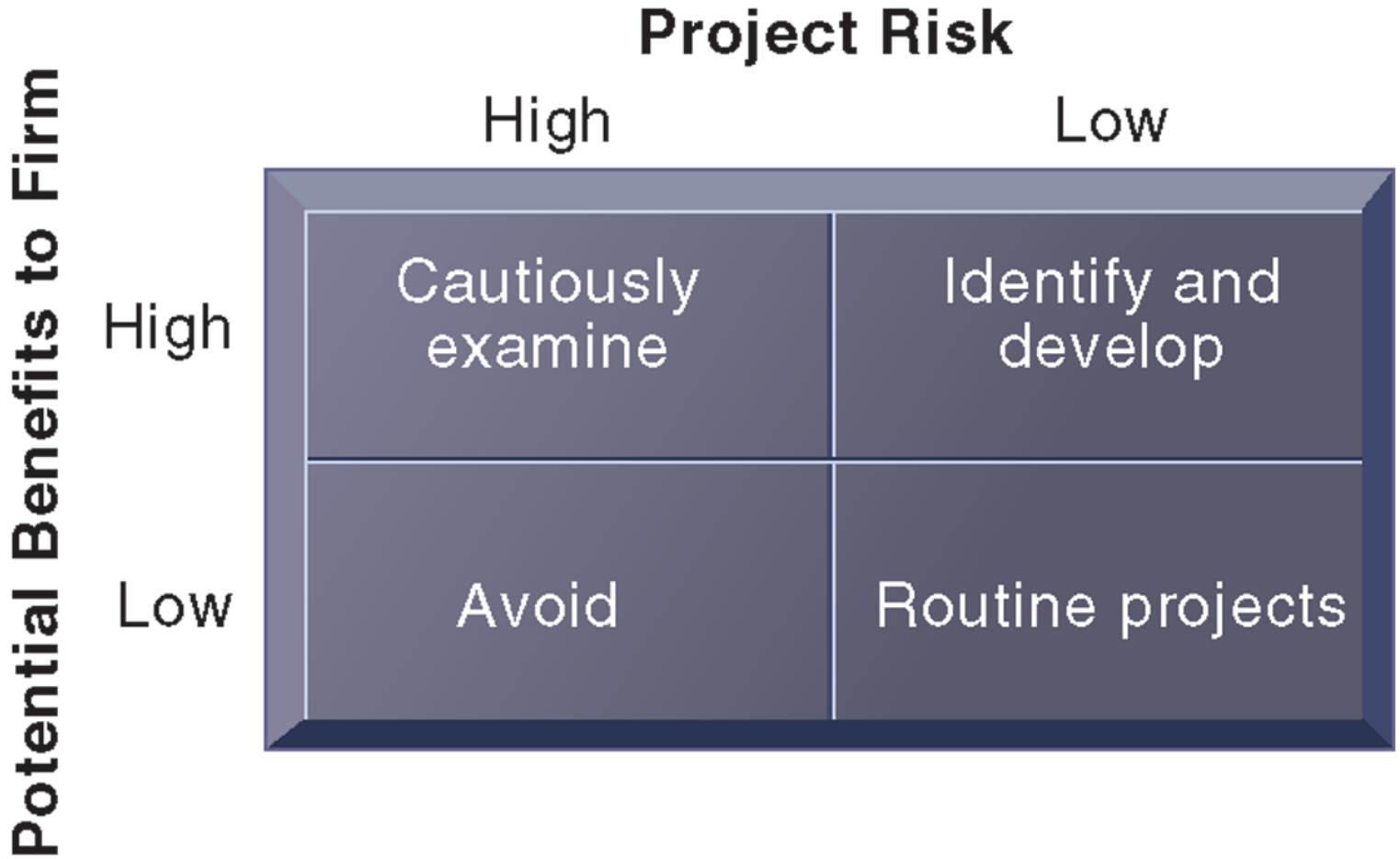
- Principal method:
  - Interviews with 3-4 top managers to identify goals and resulting CSFs
  - Personal CSFs aggregated into small number of firm CSFs
  - Systems built to deliver information on CSFs
- Suitable for top management, building DSS and ESS
- Disadvantages:
  - No clear methods for aggregation of CSFs into firm CSFs
  - Confusion between individual and organizational CSFs
  - Bias towards top managers

USING CSFs TO DEVELOP SYSTEMS



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

A SYSTEM PORTFOLIO



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

Scoring models

- Used to evaluate alternative system projects, especially when many criteria exist
- Assigns weights to various features of system and calculates weighted totals

CRITERIA	WEIGHT	SYSTEM A %	SYSTEM A SCORE	SYSTEM B %	SYSTEM B SCORE
Online order entry	4	67	268	73	292
Customer credit check	3	66	198	59	177
Inventory check	4	72	288	81	324
Warehouse receiving	2	71	142	75	150
ETC					
GRAND TOTALS			3128		3300

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

Establishing the Business Value of Information Systems

- **Information system costs and benefits**
  - Tangible benefits:
    - Can be quantified and assigned monetary value
    - Systems that displace labor and save space:
      - Transaction and clerical systems
  - Intangible benefits:
    - Cannot be immediately quantified but may lead to quantifiable gains in the long run
      - E.g., more efficient customer service, enhanced decision making
    - Systems that influence decision making:
      - ESS, DSS, collaborative work systems

Capital budgeting for information systems

- Capital budgeting models:
  - Measure value of investing in long-term capital investment projects
  - Rely on measures the firm's
    - Cash outflows
      - Expenditures for hardware, software, labor
    - Cash inflows
      - Increased sales
      - Reduced costs
  - There are various capital budgeting models used for IT projects: Payback method, accounting rate of return on investment, net present value, internal rate of return (IRR)

Real Options Pricing Models (ROPM)

- Can be used when future revenue streams of IT projects are uncertain and up-front costs are high
- Use concept of options valuation borrowed from financial industry
- Gives managers flexibility to stage IT investment or test the waters with small pilot projects or prototypes to gain more knowledge about risks before investing in entire implementation

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

Limitations of financial models

- Do not take into account social and organizational dimensions that may affect costs and benefits

Managing Project Risk

- **Dimensions of project risk**
  - Level of project risk influenced by:
    - Project size
      - Indicated by cost, time, number of organizational units affected
      - Organizational complexity also an issue
    - Project structure
      - Structured, defined requirements run lower risk
    - Experience with technology

Change management

- Required for successful system building
- New information systems have powerful behavioral and organizational impact
  - Changes in how information is used often lead to new distributions of authority and power
  - Internal organizational change breeds resistance and opposition

The Concept of Implementation

- Implementation
  - All organizational activities working toward adoption, management, and routinization of an innovation
- Change agent: One role of systems analyst
  - Redefines the configurations, interactions, job activities, and power relationships of organizational groups
  - Catalyst for entire change process
  - Responsible for ensuring that all parties involved accept changes created by new system

The Role of End Users

- Role of end users
  - With high levels of user involvement
    - System more likely to conform to requirements
    - Users more likely to accept system
- User-designer communication gap:
  - Users and information systems specialists
    - Different backgrounds, interests, and priorities
    - Different loyalties, priorities, vocabularies
    - Different concerns regarding a new system

Management support and commitment

- Positive perception by both users and technical staff
- Ensures sufficient funding and resources
- Enforcement of required organizational changes

Change Management Challenges

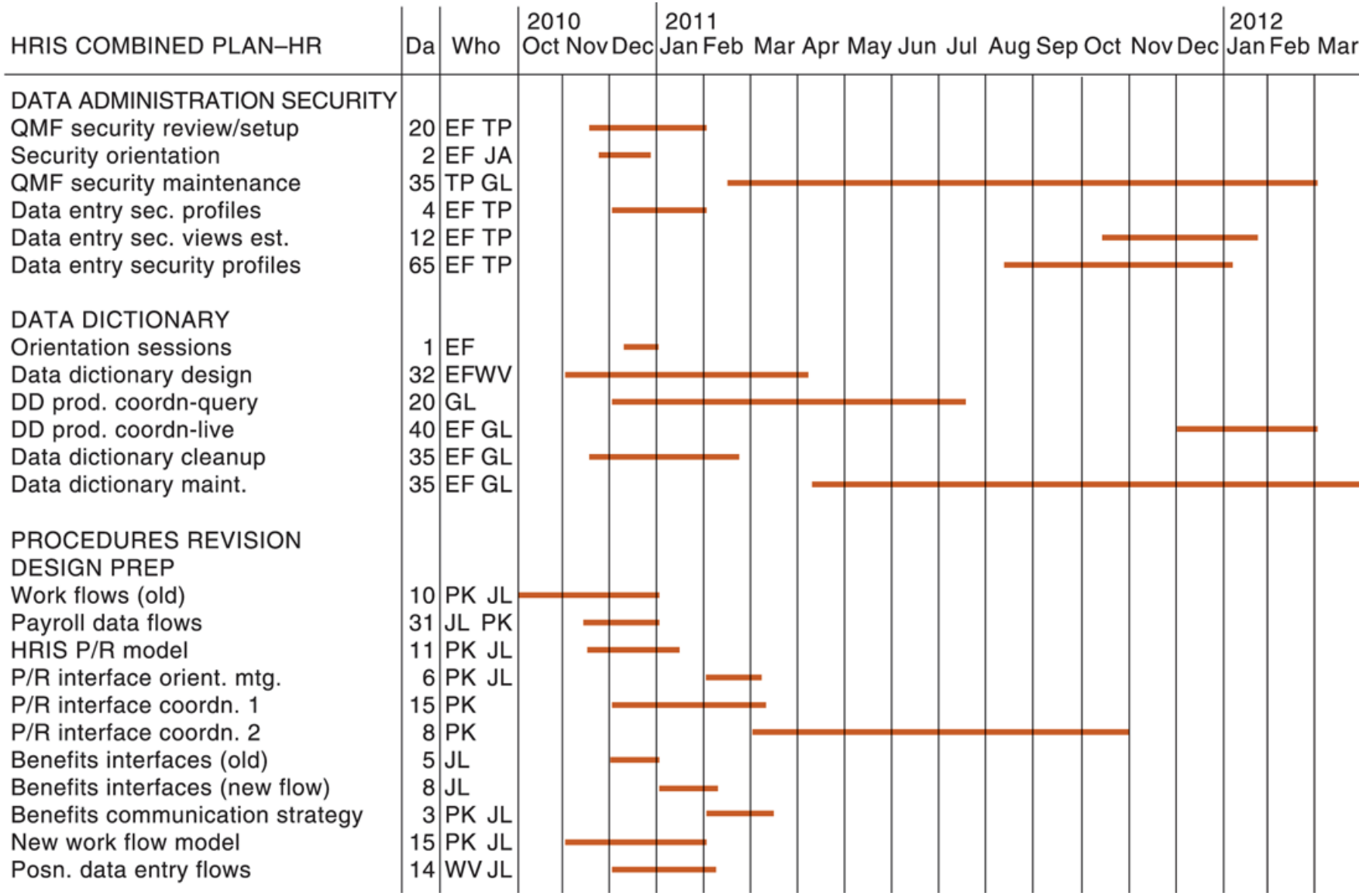
- Very high failure rate among enterprise application and BPR projects (up to 70% for BPR)
  - Poor implementation and change management practices
    - Employee's concerns about change
    - Resistance by key managers
    - Changing job functions, career paths, recruitment practices
- Mergers and acquisitions
  - Similarly high failure rate of integration projects
  - Merging of systems of two companies requires:
    - Considerable organizational change
    - Complex systems projects

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

Controlling Risk Factors

- First step in managing project risk involves identifying nature and level of risk of project
- Each project can then be managed with tools and risk-management approaches geared to level of risk
- Managing technical complexity
  - Internal integration tools
    - Project leaders with technical and administrative experience
    - Highly experienced team members
    - Frequent team meetings
    - Securing of technical experience outside firm if necessary

A GANTT CHART



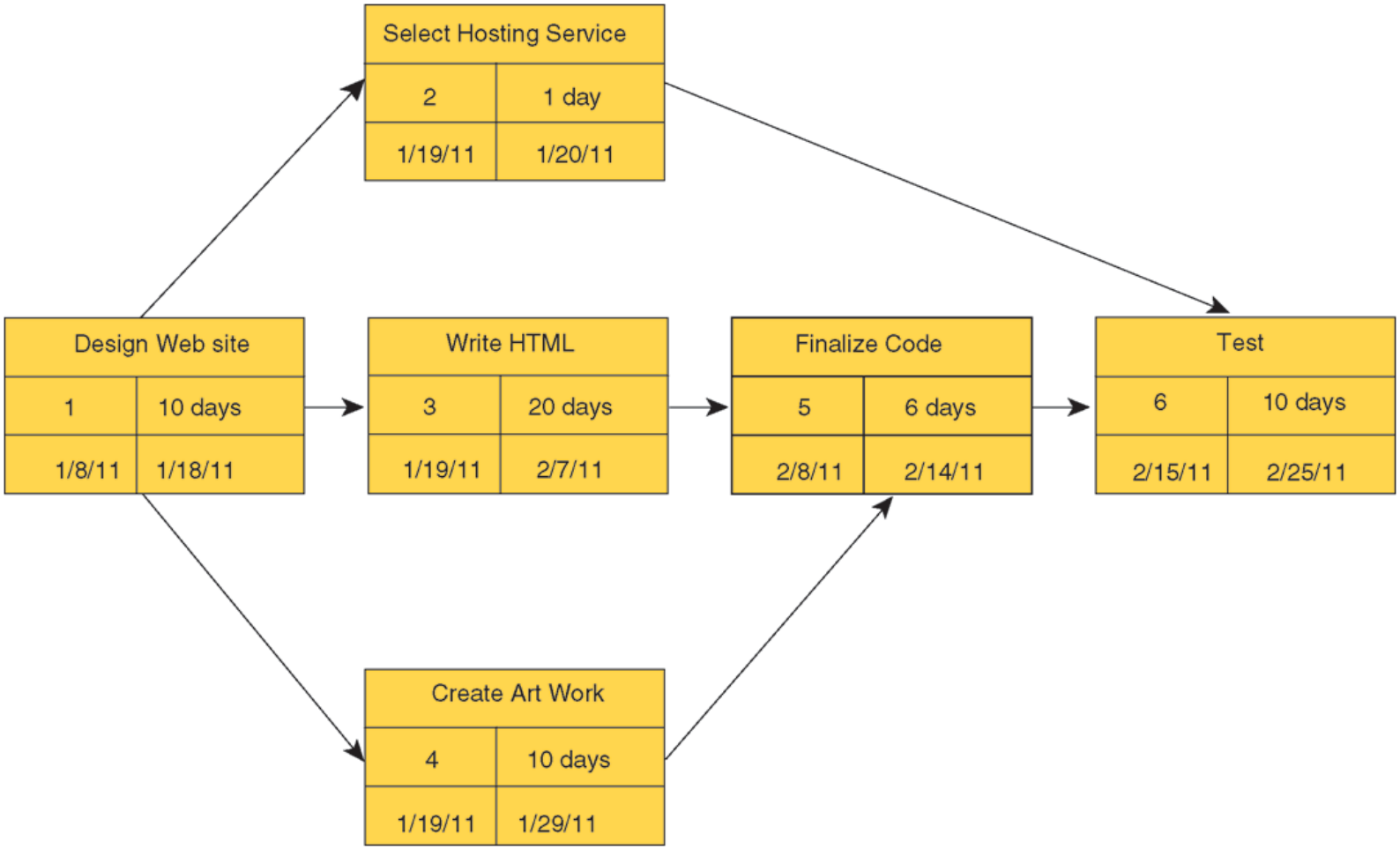
Source: Kenneth C. Laudon & Jane P. Laudon (2012), Management Information Systems: Managing the Digital Firm, Twelfth Edition, Pearson.

A GANTT CHART (cont.)

HRIS COMBINED PLAN–HR		Da	Who	2010 Oct	Nov	Dec	2011 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2012 Jan	Feb	Mar
RESOURCE SUMMARY																					
Edith Farrell	5.0		EF	2	21	24	24	23	22	22	27	34	34	29	26	28	19	14			
Woody Vinton	5.0		WV	5	17	20	19	12	10	14	10	2							4	3	
Charles Pierce	5.0		CP		5	11	20	13	9	10	7	6	8	4	4	4	4	4			
Ted Leurs	5.0		TL		12	17	17	19	17	14	12	15	16	2	1	1	1	1			
Toni Cox	5.0		TC	1	11	10	11	11	12	19	19	21	21	21	17	17	12	9			
Patricia Knopp	5.0		PC	7	23	30	34	27	25	15	24	25	16	11	13	17	10	3	3	2	
Jane Lawton	5.0		JL	1	9	16	21	19	21	21	20	17	15	14	12	14	8	5			
David Holloway	5.0		DH	4	4	5	5	5	2	7	5	4	16	2							
Diane O'Neill	5.0		DO	6	14	17	16	13	11	9	4										
Joan Albert	5.0		JA	5	6			7	6	2	1				5	5	1				
Marie Marcus	5.0		MM	15	7	2	1	1													
Don Stevens	5.0		DS	4	4	5	4	5	1												
Casual	5.0		CASL		3	4	3			4	7	9	5	3	2						
Kathy Mendez	5.0		KM		1	5	16	20	19	22	19	20	18	20	11	2					
Anna Borden	5.0		AB					9	10	16	15	11	12	19	10	7	1				
Gail Loring	5.0		GL		3	6	5	9	10	17	18	17	10	13	10	10	7	17			
UNASSIGNED	0.0		X										9			236	225	230	14	13	
Co-op	5.0		CO		6	4				2	3	4	4	2	4	16			216	178	
Casual	5.0		CAUL								3	3	3								
TOTAL DAYS				49	147	176	196	194	174	193	195	190	181	140	125	358	288	284	237	196	12

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

A PERT CHART



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Increasing user involvement and overcoming user resistance

- External integration tools consist of ways to link work of implementation team to users at all organizational levels
  - Active involvement of users
  - Implementation team's responsiveness to users
- User resistance to organizational change
  - Users may believe change is detrimental to their interests
  - Counterimplementation: Deliberate strategy to thwart implementation of an information system or an innovation in an organization
    - E.g., increased error rates, disruptions, turnover, sabotage

Strategies to overcome user resistance

- User participation
- User education and training
- Management edicts and policies
- Incentives for cooperation
- Improvement of end-user interface
- Resolution of organizational problems prior to introduction of new system

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

Designing for the Organization

- Information system projects must address ways in which organization changes with new system
  - Procedural changes
  - Job functions
  - Organizational structure
  - Power relationships
  - Work structure
- Ergonomics: Interaction of people and machines in work environment
  - Design of jobs
  - Health issues
  - End-user interfaces

Designing for the Organization

- Organizational impact analysis
  - How system will affect organizational structure, attitudes, decision making, operations
- Sociotechnical design
  - Addresses human and organizational issues
    - Separate sets of technical and social design solutions
    - Final design is solution that best meets both technical and social objectives

Project Management Software

- Can automate many aspects of project management
- Capabilities for
  - Defining, ordering, editing tasks
  - Assigning resources to tasks
  - Tracking progress
- Microsoft Project 2010
  - Most widely used project management software
  - PERT, Gantt Charts, critical path analysis
- Increase in SaaS, open-source project management software

2014/12/30, 2015/01/06
Final Report (期末報告)

- 請各組組長整理期末報告資料檔案，
  於2014/12/30 (週二) 上午 9:00 前，
  完成Email 寄出以下兩個壓縮檔的下載連結，
  給所有組員和老師 (正本to: 老師，副本cc: 所有組員) 。
  - 1. 整組各次簡報的 ppt (含整組期末報告目錄 ppt) 壓縮檔
    - (例如：MI4C_資訊管理個案_第1組_學期各次簡報.zip)。
  - 2. 整組各組員的
    [(1) 個人期末報告.ppt
    (2) 個人整學期的書面報告.pdf
    (3) 個人學期總心得.doc]
    之壓縮檔
    - (例如：MI4C_資訊管理個案_第1組_組員個人期末報告.zip)。

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