IT Governance & Management in Healthcare Organizations

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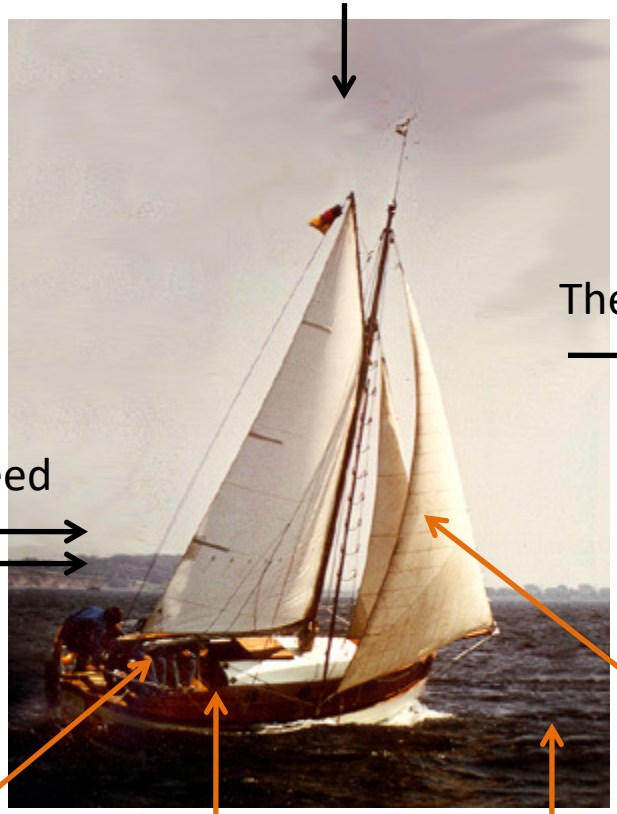
November 2, 2022

Context



The sailboat image source: Uwe Kils via http://en.wikipedia.org/wiki/Sailing

Management Point:

Know Your Context & Align IT with Context

Destination & Direction

- Vision
- Mission
- Strategic goals & business strategies

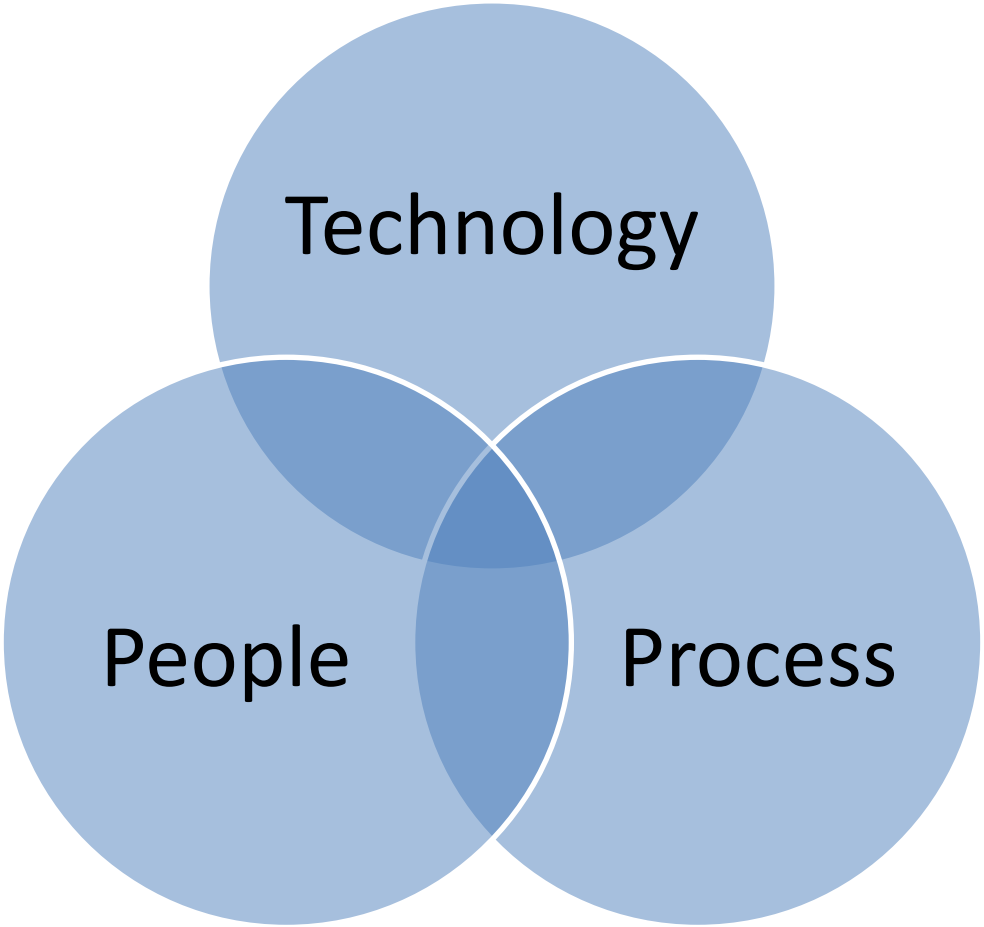
SMART Criteria

- Specific?
- Measurable?
- Achievable/Attainable?
- Relevant/Realistic/Resourced?
- Time-bound?

A Good "Vision"

"Our goal is to land a man on the moon and return him safely to the earth by the end of the decade."

John F. Kennedy (1961)


Technology
People
Process

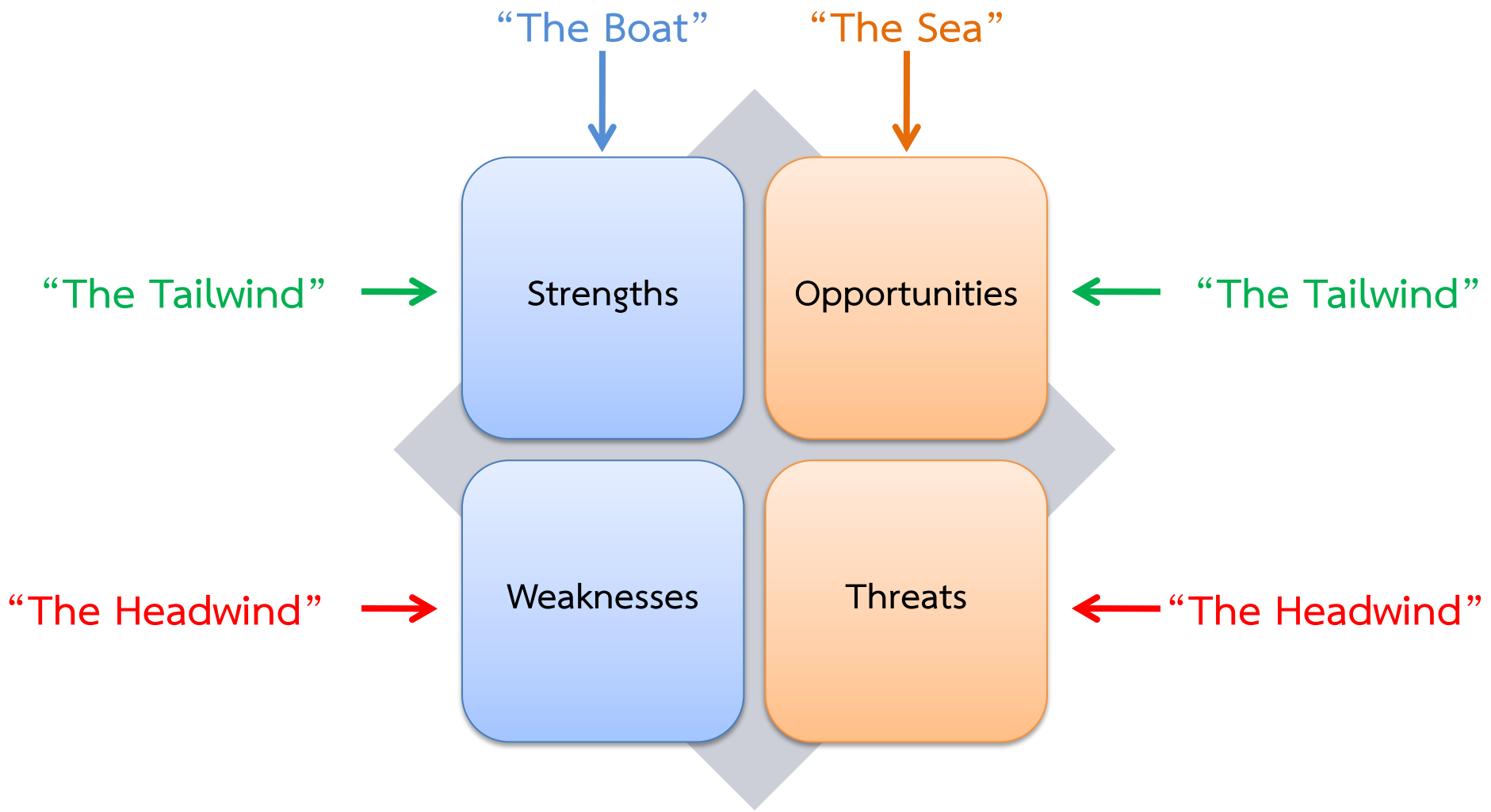
“The Boat”

- Size
- Resources
- Structures
- Work Processes
- Facilities/Geography
- Etc.

“The Sea”

- Target customers
- Local competitiveness
- Relationship of hospital to local players
- Inter-organizational collaboration
- IT market environment
- National/international trend
- Regulations
- Standard of care
- Etc.

SWOT Analysis

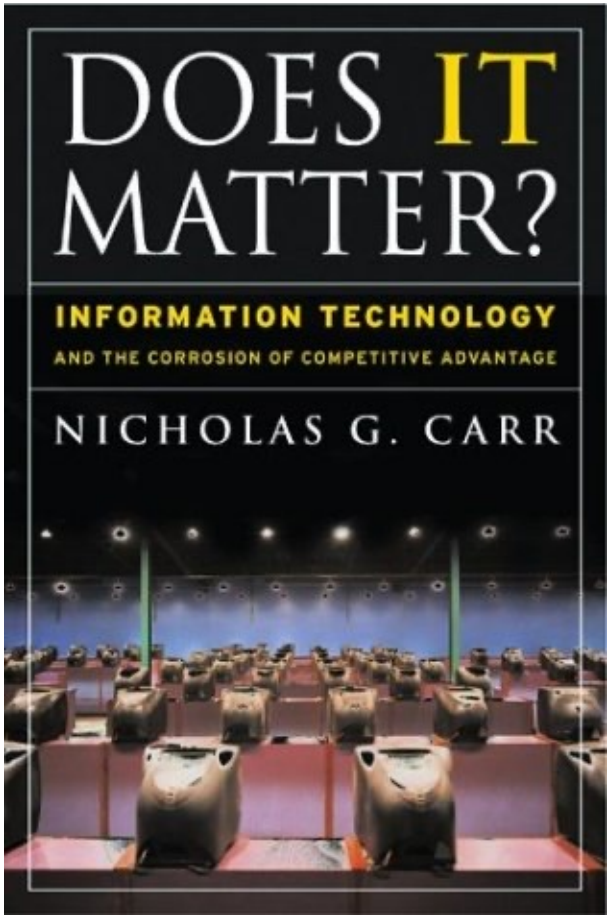


Part 2

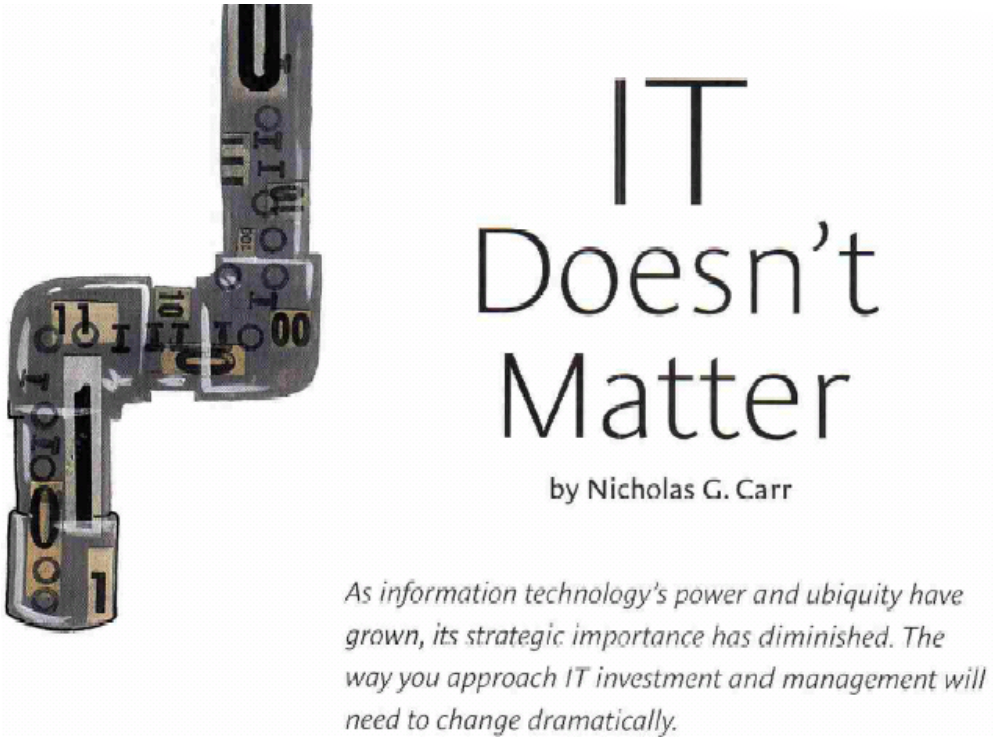
Moving organizations with IT

- Strategic IT Management
- Project Management
- Change Management

IT as "The Sail"

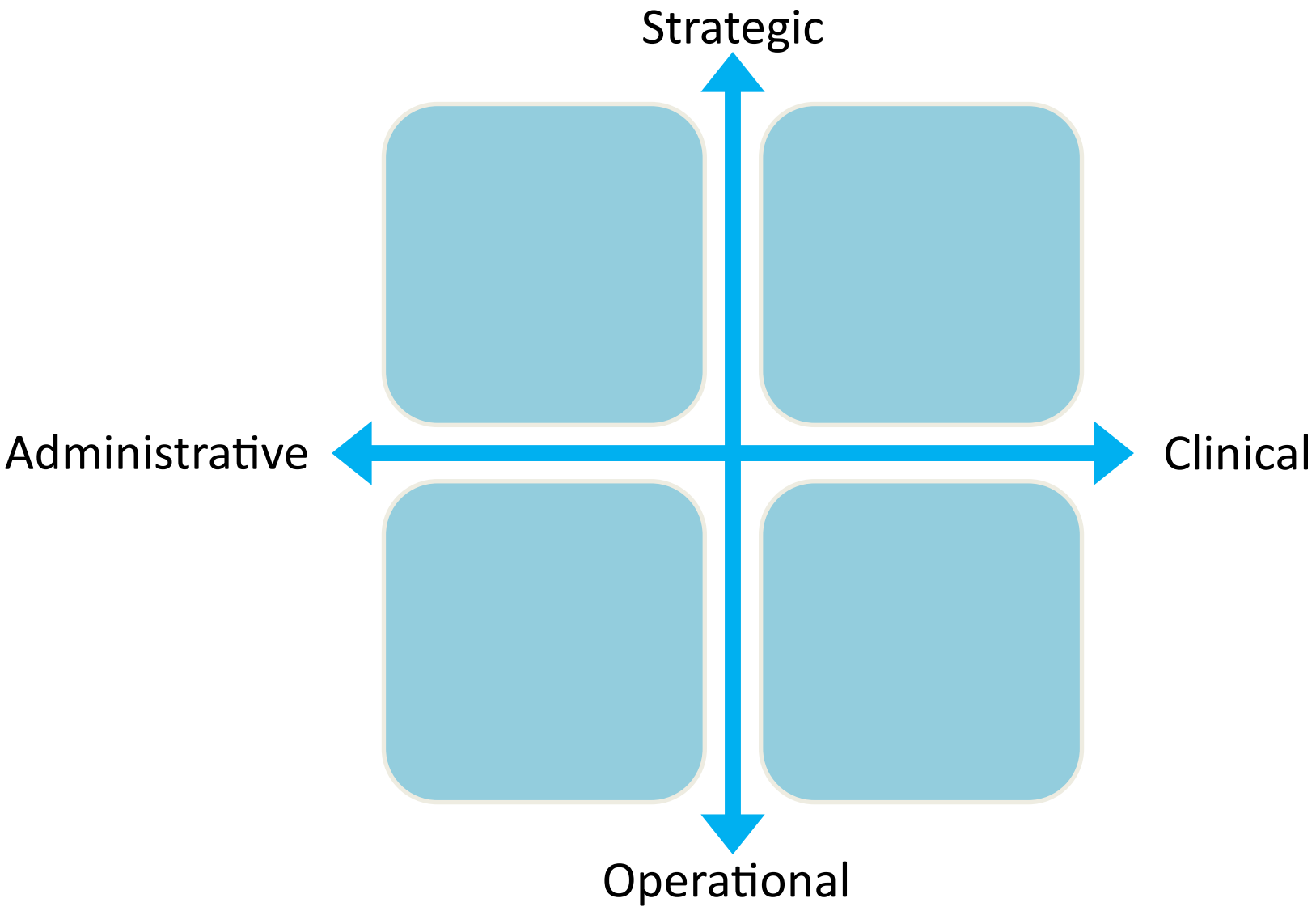


Carr (2004)

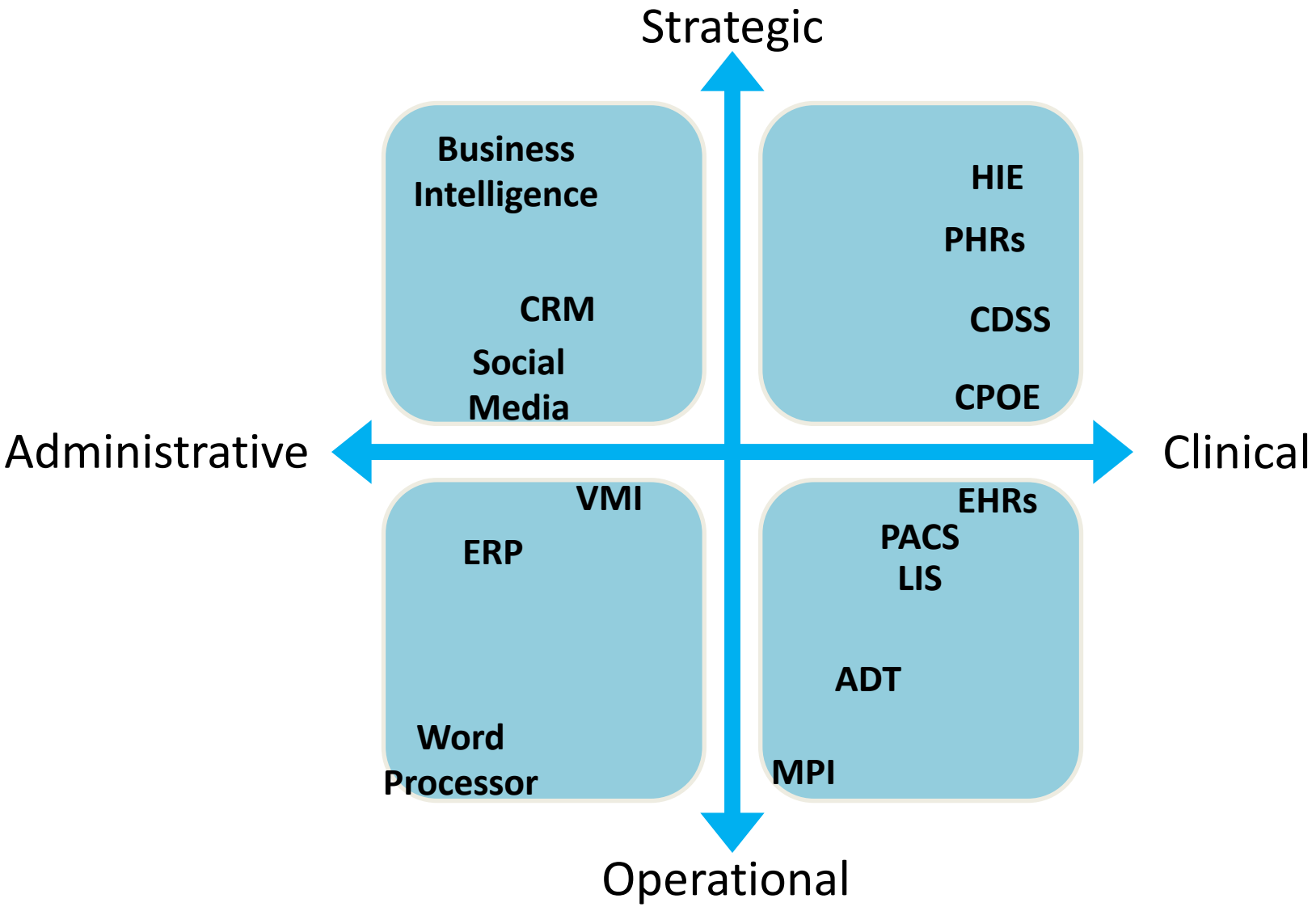


Carr (2003)

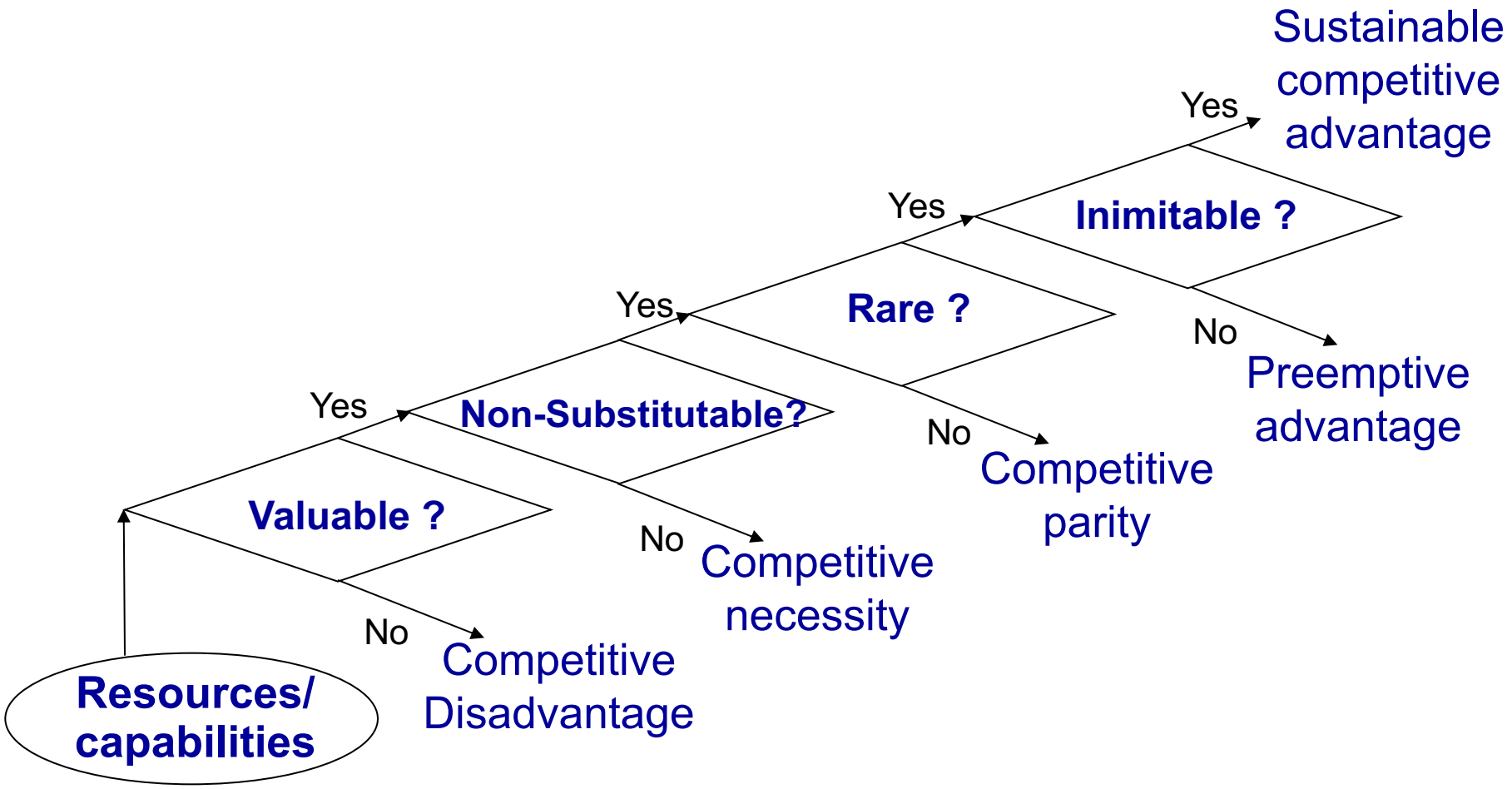
4 Quadrants of Hospital IT



4 Quadrants of Hospital IT



IT As A Strategic Advantage



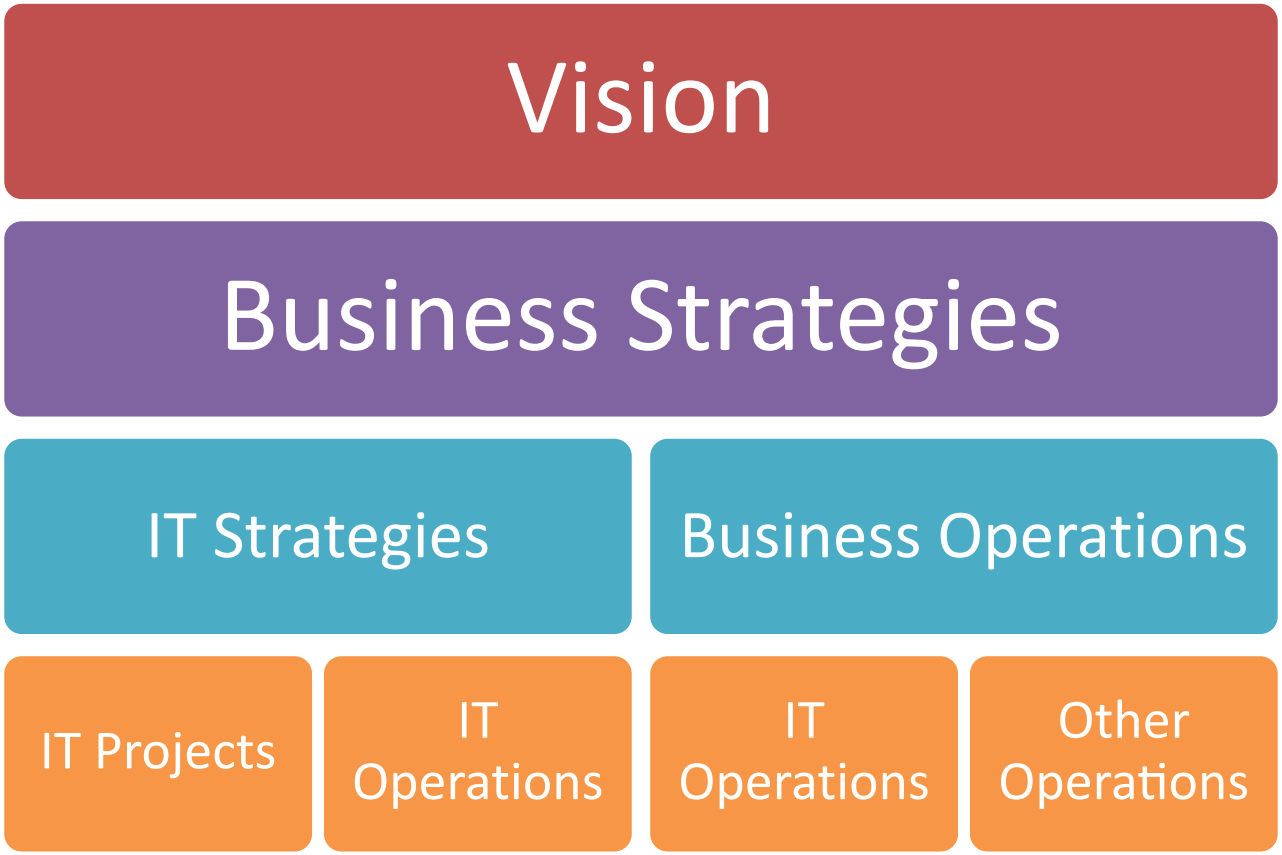
From a teaching slide by Nelson F. Granados, 2006 at University of Minnesota Carlson School of Management

Management Point:

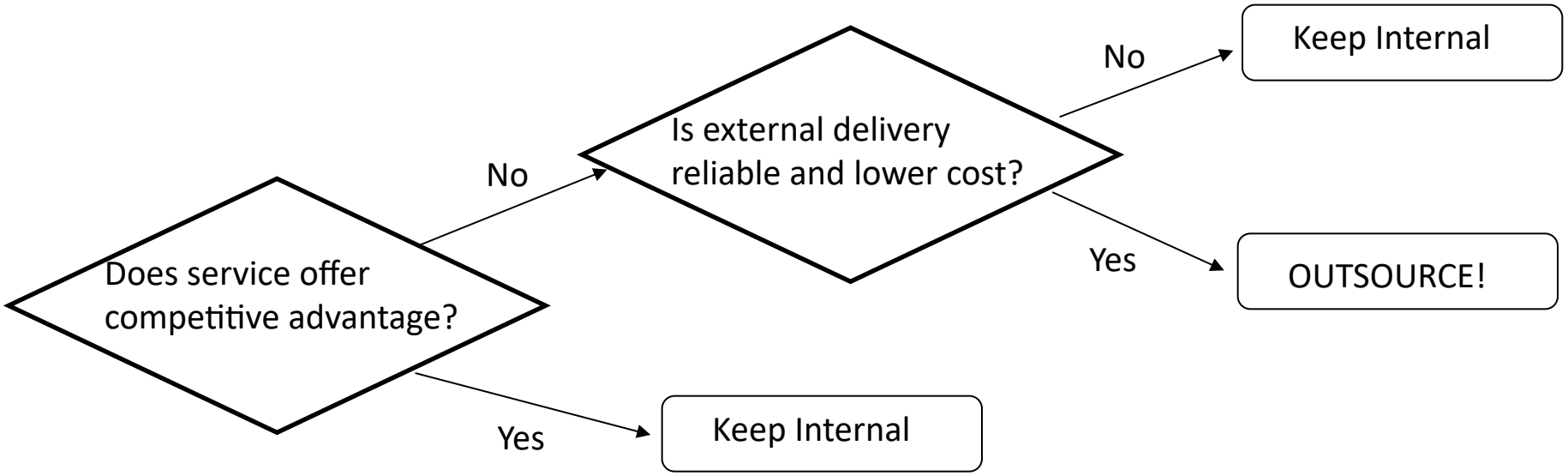
Identify Your Strategic IT Assets

IT-Business Alignment

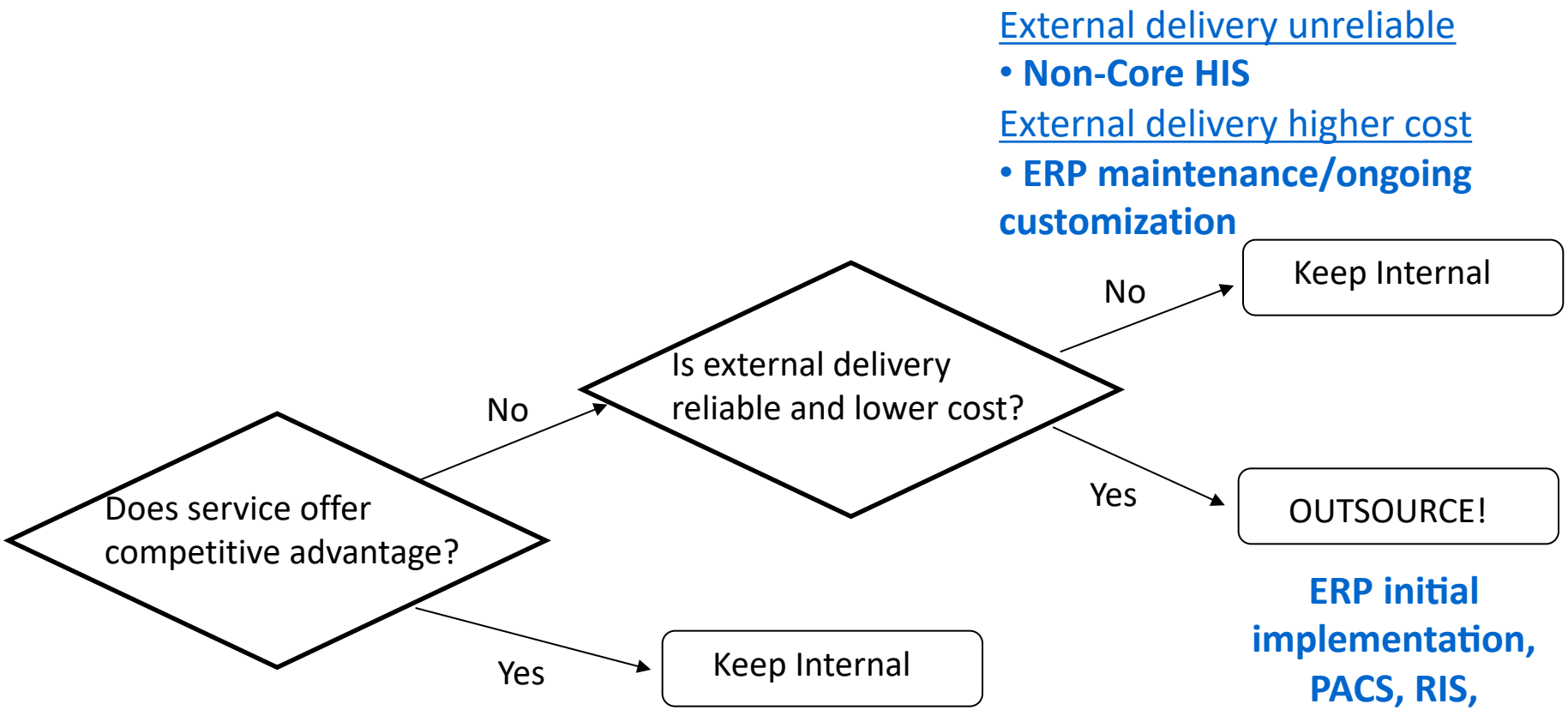
IT & Business


Vision
Business Strategies
IT Strategies
Business Operations
IT Projects
IT Operations
IT Operations
Other Operations

IT Outsourcing Decision Tree



IT Outsourcing: Ramathibodi's Case



External delivery unreliable
- **Non-Core HIS**

External delivery higher cost
- **ERP maintenance/ongoing customization**

ERP initial implementation, PACS, RIS, Departmental systems, IT Training

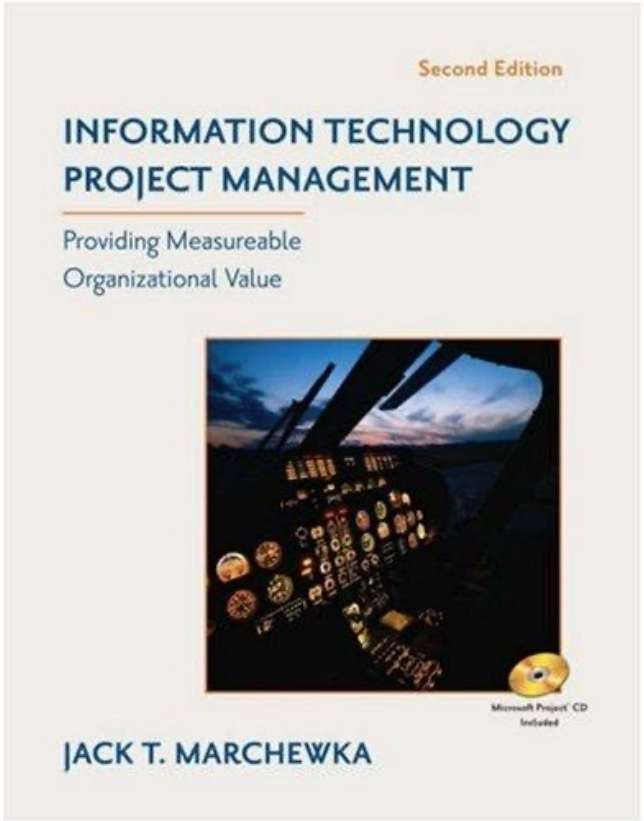
Core HIS, CPOE

Strategic advantages
- Agility due to local workflow accommodations
- Secondary data utilization (research, QI)
- Roadmap to national leader in informatics

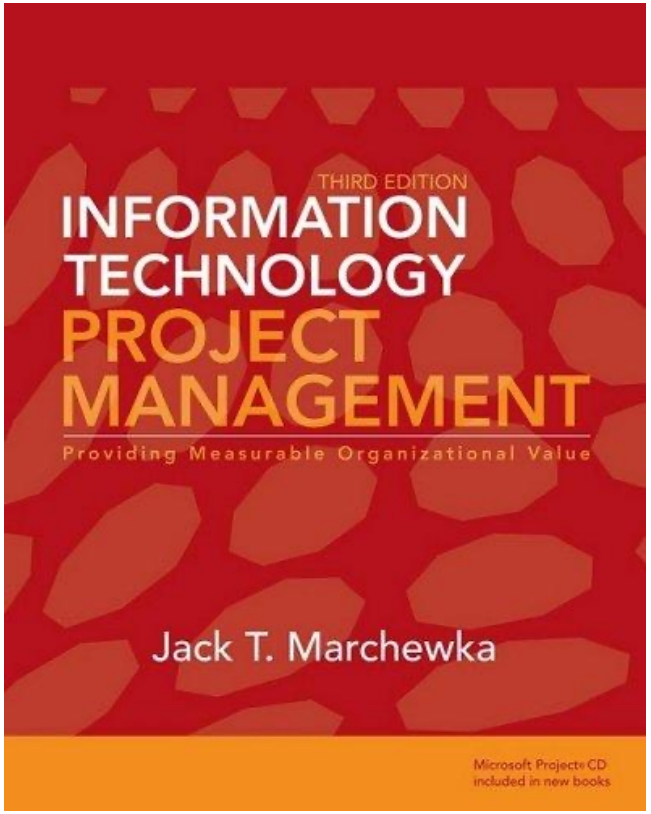
Management Point:

Know When To and When Not To Outsource

IT Project Management



Marchewka (2006)



Marchewka (2009)

IT Project Management

- **A project:** “a temporary endeavor undertaken to accomplish a unique purpose”

- **Project management:** “the application of knowledge, skills, tools, and techniques to project activities in order to meet or exceed project requirements”

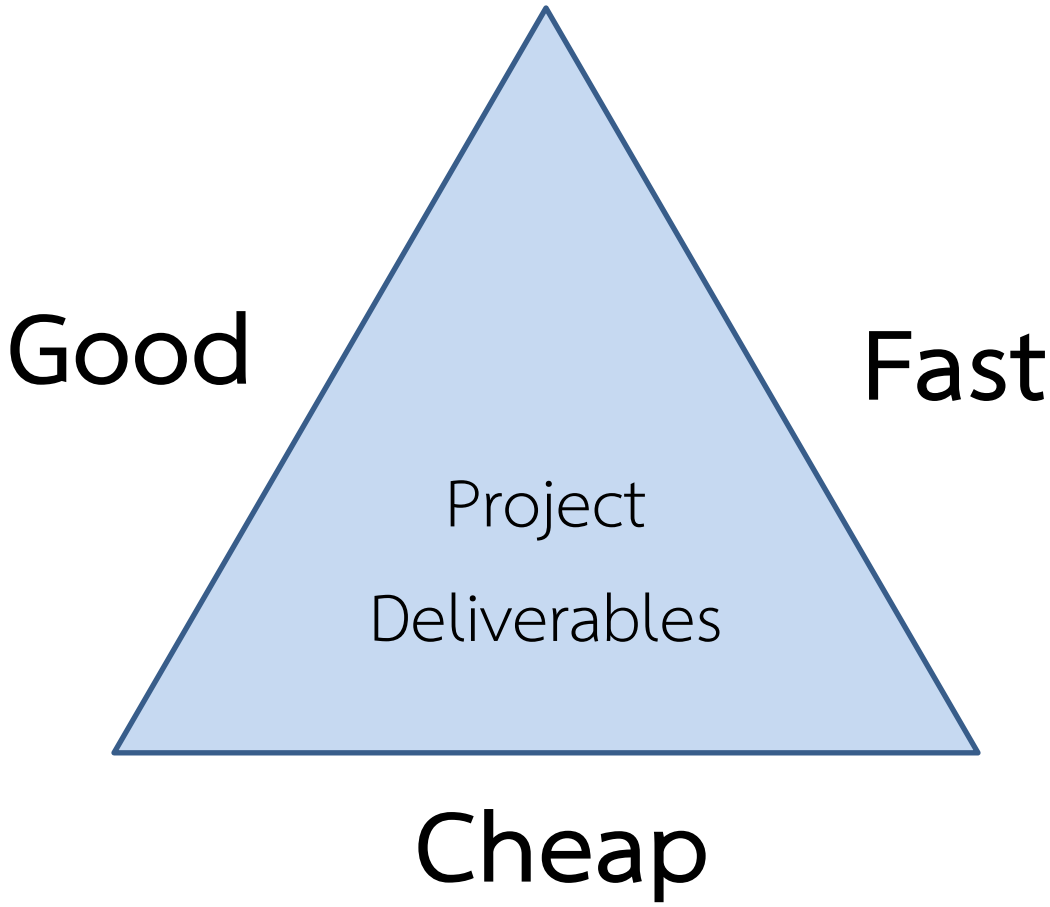
Marchewka (2006)

The Project Management Body of Knowledge (PMBOK®)

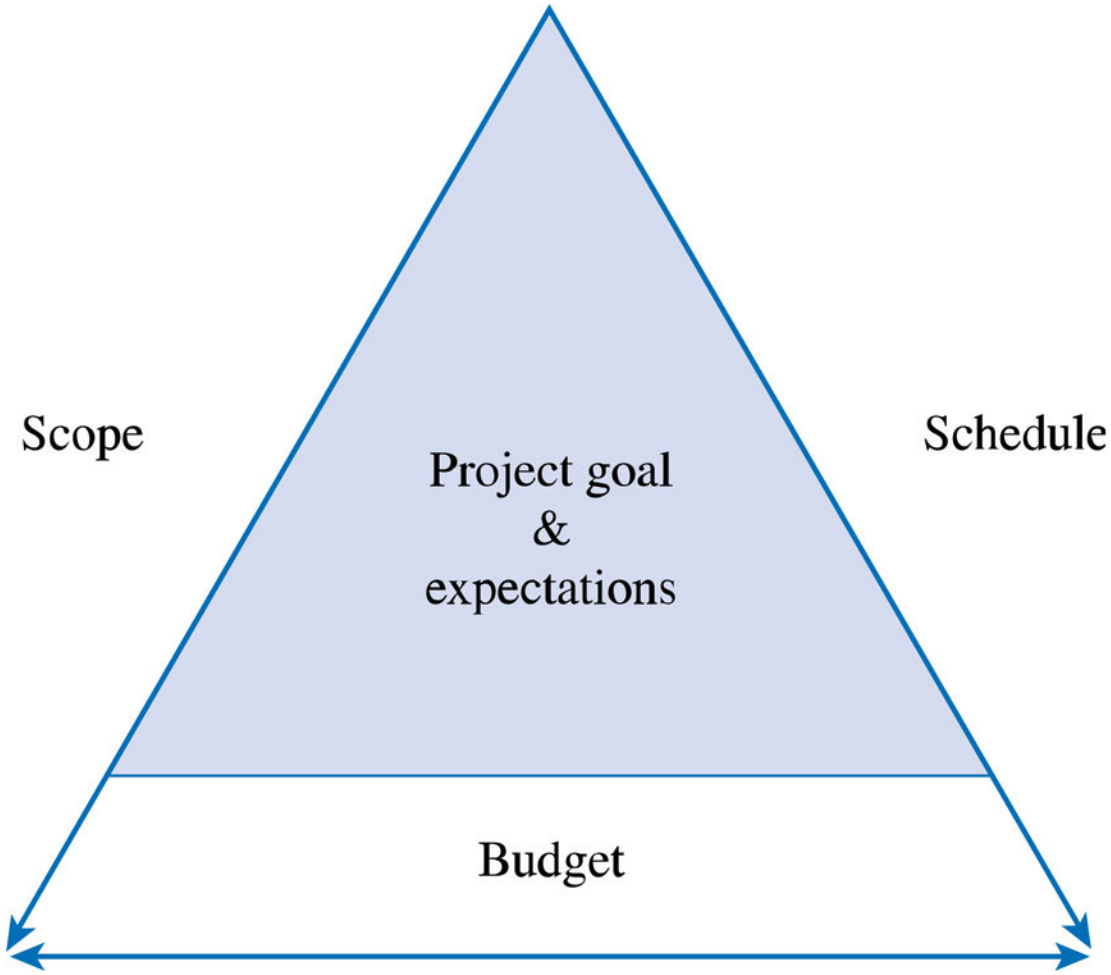
1. Project Integration Management
2. Project Scope Management
3. Project Time Management
4. Project Cost Management
5. Project Quality Management
6. Project Human Resources Management
7. Project Communications Management
8. Project Risk Management
9. Project Procurement Management

Marchewka (2006)

The Project Management Dilemma



The Triple Constraint



Marchewka (2006)

The CHAOS Report

Among the IT projects studied:

- 31% were cancelled before completion
- 53% were completed but over budget, over schedule, and did not meet original specifications.

The Standish Group (1995)

The CHAOS Report

Table 1.2 Summary of Factor Rankings for Successful, Challenged, and Impaired Projects

Rank	*Factors for Successful Projects*	*Factors for Challenged Projects*	*Factors for Impaired Projects*
1	User involvement	Lack of user input	Incomplete requirements
2	Executive management support	Incomplete requirements	Lack of user involvement
3	Clear statement of requirements	Changing requirements & specifications	Lack of resources
4	Proper planning	Lack of executive support	Unrealistic expectations
5	Realistic expectations	Technology incompetence	Lack of executive support
6	Smaller project milestones	Lack of resources	Changing requirements specifications
7	Competent staff	Unrealistic expectations	Lack of planning
8	Ownership	Unclear objectives	Didn't need it any longer
9	Clear vision & objectives	Unrealistic time frames	Lack of IT management
10	Hard-working, focused team	New technology	Technology illiteracy

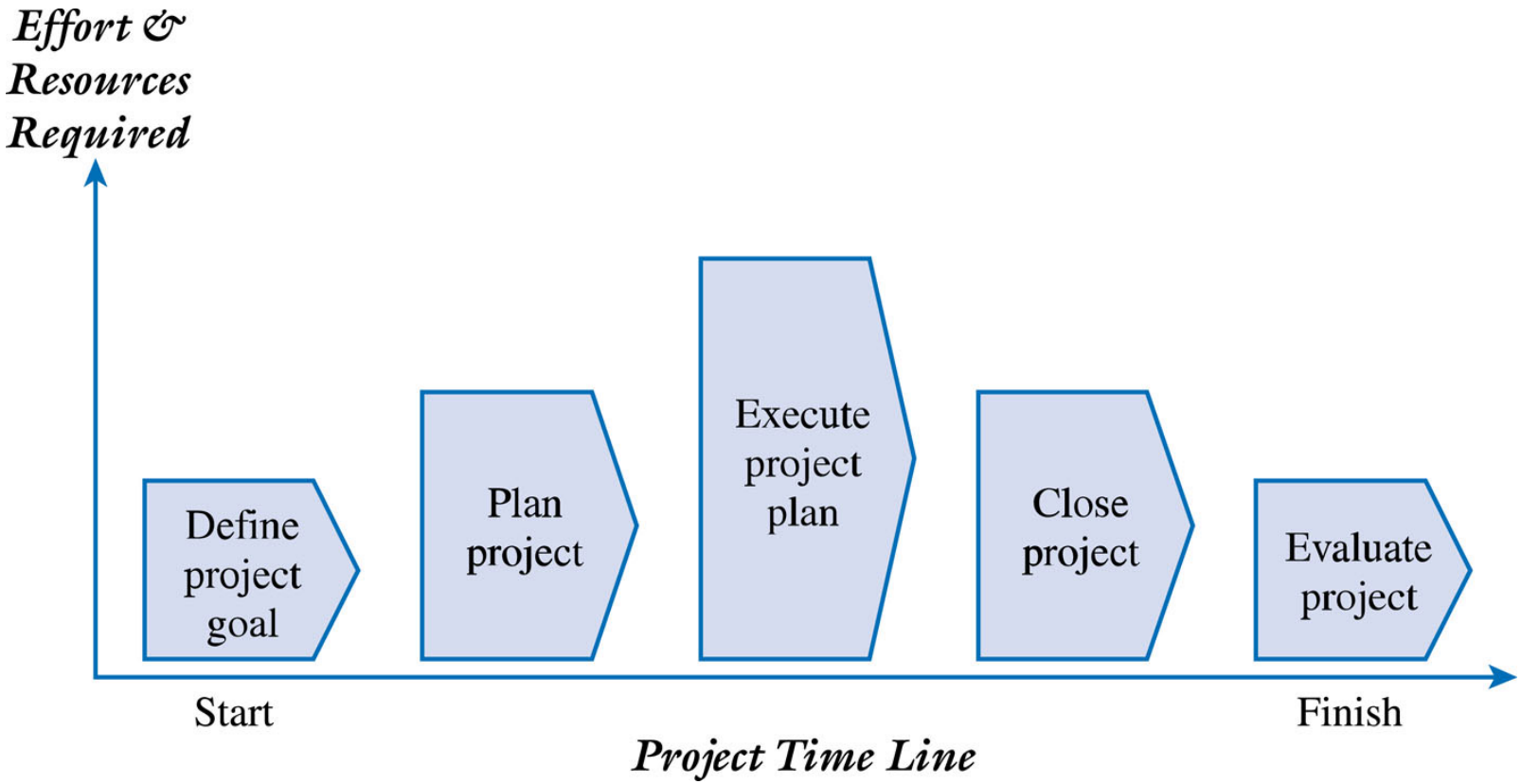
SOURCE: Adapted from The Standish Group, *CHAOS* (West Yarmouth, MA: 1995), http://www.standishgroup.com/visitor/chaos.htm.

New Top Ten Factors for IT Project Success

Rank	Success Factor
1	Executive Support
2	User Involvement
3	Experienced Project Manager
4	Clear Business Objectives
5	Minimized Scope
6	Standard Software Infrastructure
7	Firm Basic Requirements
8	Formal Methodology
9	Reliable Estimates
10	Other

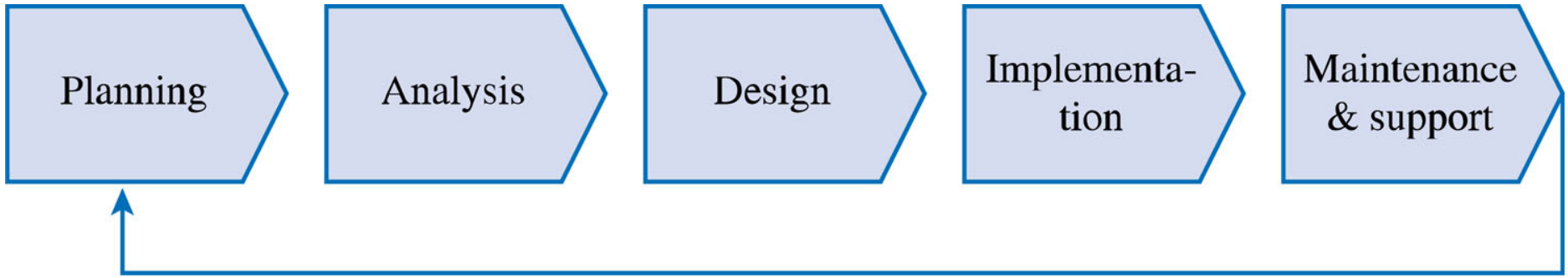
Table 1.3 Source: *Extreme Chaos.* The Standish Group International, Inc. 2001. http://www.standishgroup.com/sample_research/index.php

Project Life Cycle



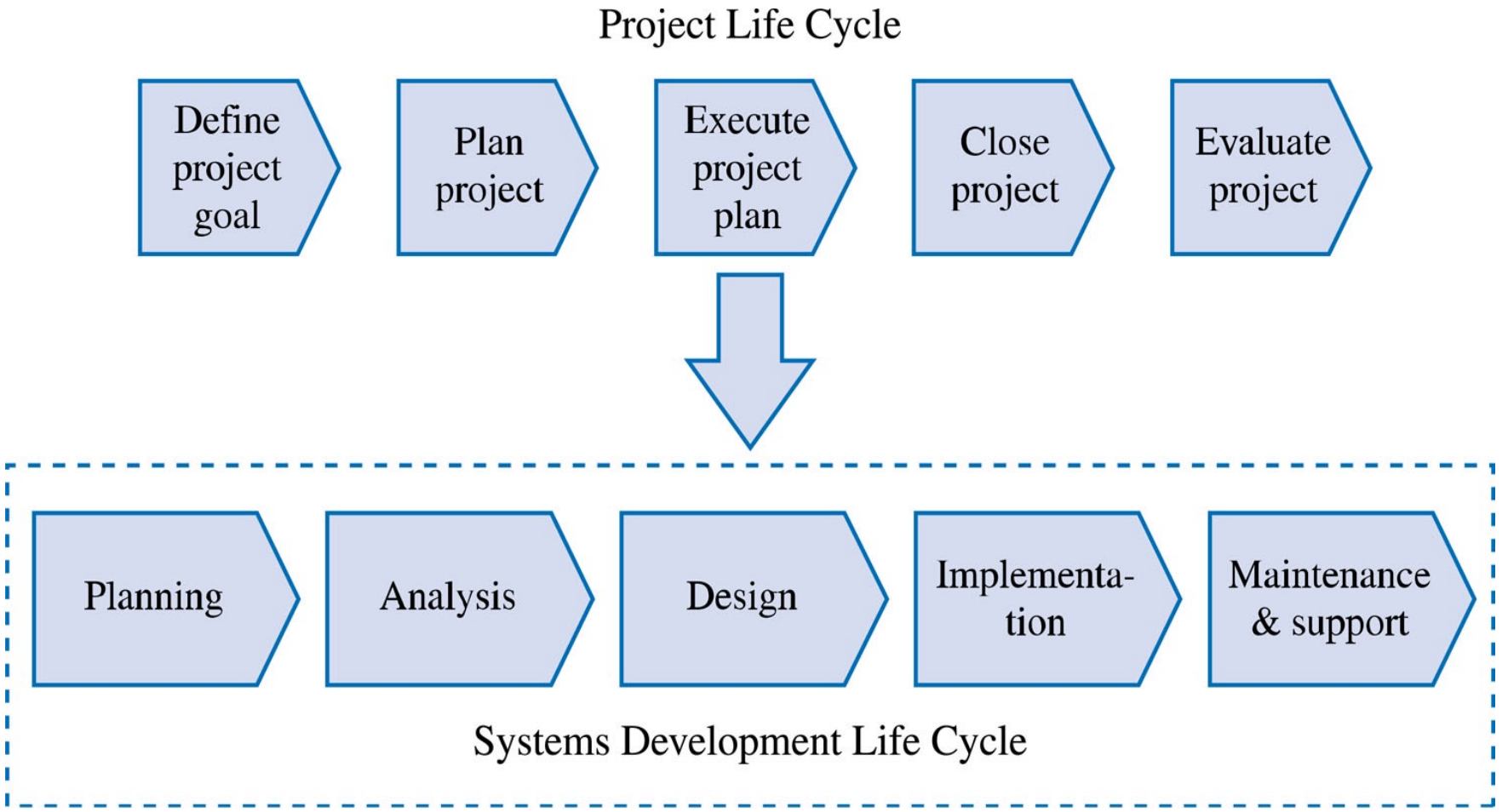
Marchewka JT (2006)

Software Development Life Cycle



Marchewka JT (2006)

PLC & SDLC


Project Life Cycle
Define project goal
Plan project
Execute project plan
Close project
Evaluate project
Planning
Analysis
Design
Implementa-tion
Maintenance & support
Systems Development Life Cycle

Gartner Hype Cycle

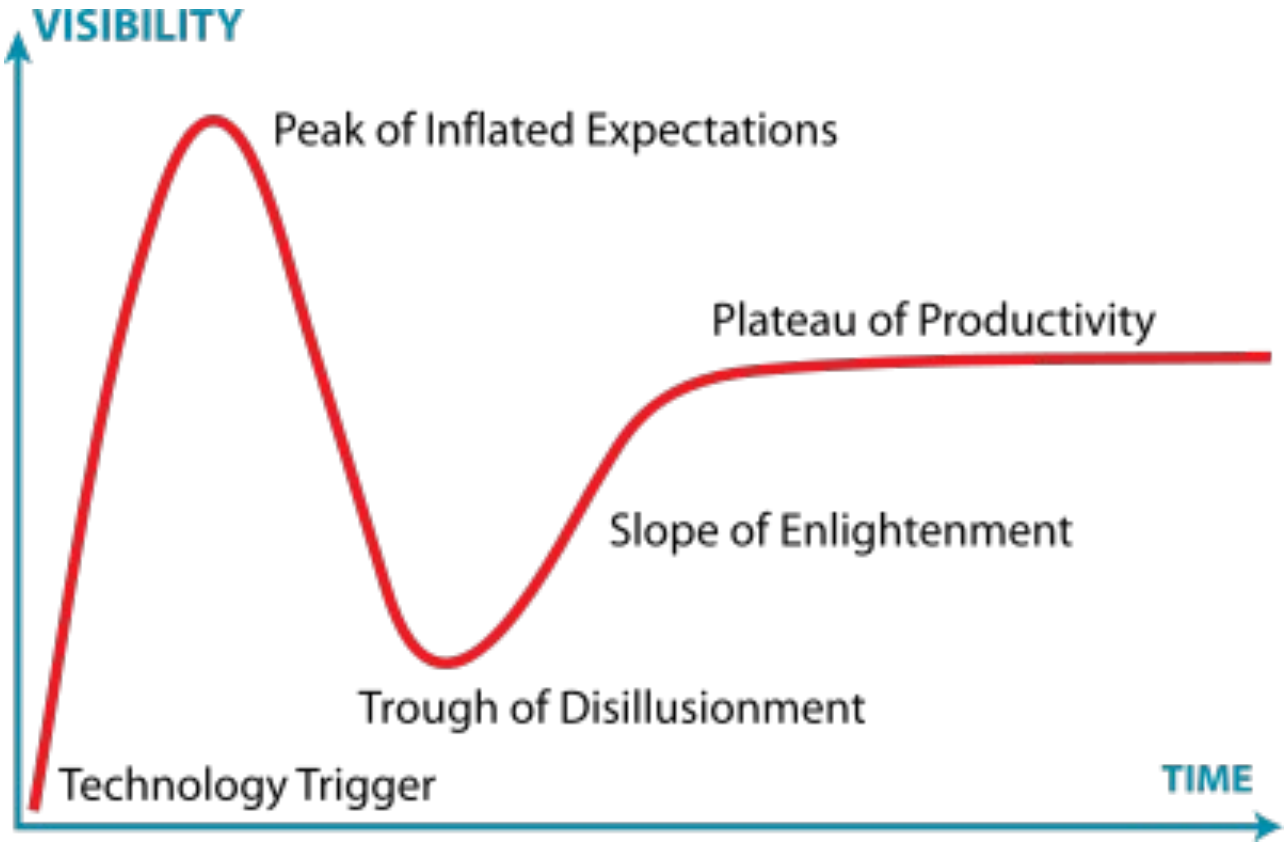
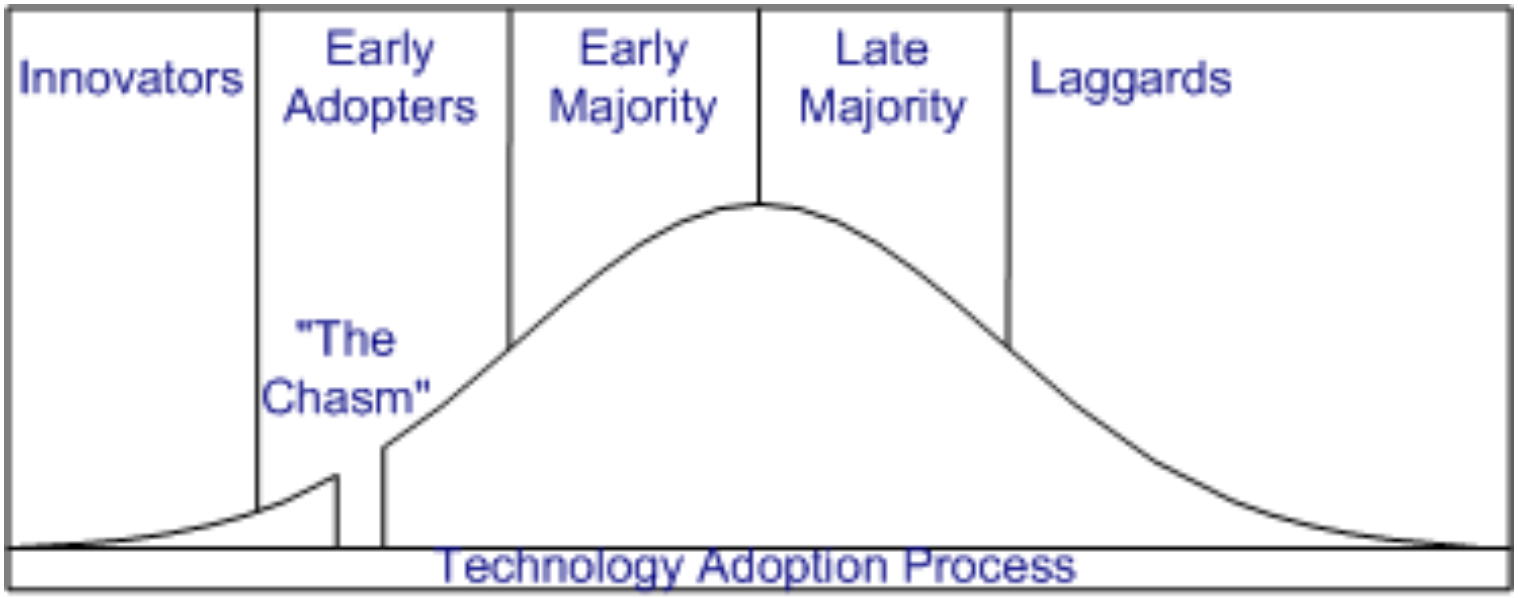


Image source: Jeremy Kemp via http://en.wikipedia.org/wiki/Hype_cycle

http://www.gartner.com/technology/research/methodologies/hype-cycle.jsp

Rogers' Diffusion of Innovations: Adoption Curve



Rogers (2003)

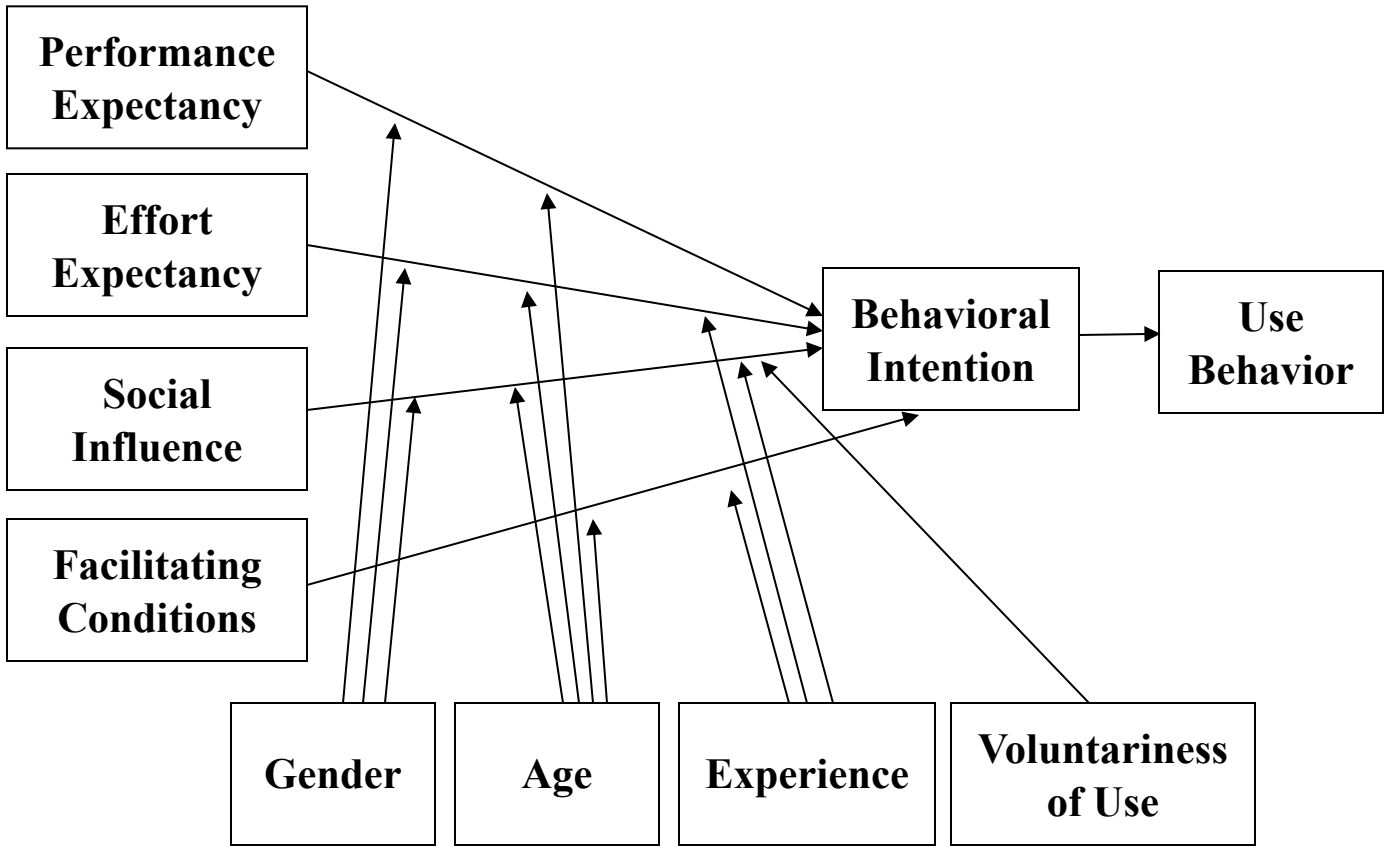
Unified Theory of Acceptance and Use of Technology (UTAUT)

Usefulness

Ease of Use

Social Norm & Opinions

IT Support



Venkatesh et al. (2003)

Adoption Strategies:
"The Tipping Point" Version

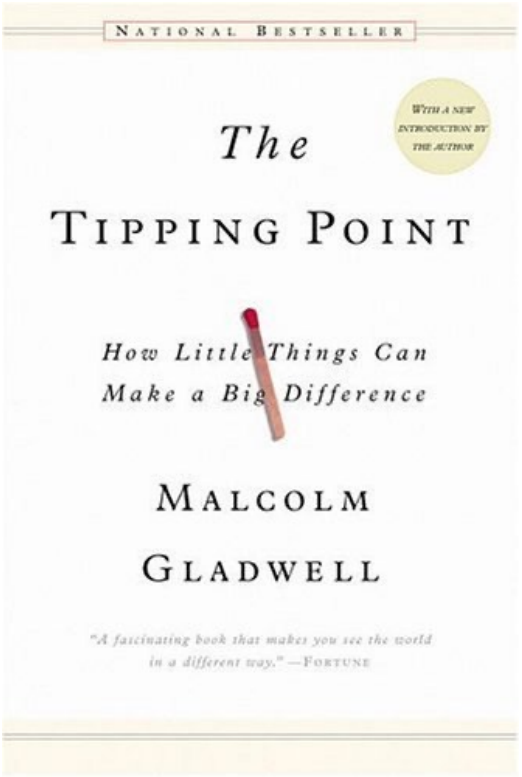
The Three Rules of Epidemics

- The Law of the Few
  - Connectors
  - Mavens
  - Salesmen
- The Stickiness Factor
- The Power of Context

Change Agents
Opinion Leaders
Super-Users
Champions

Ease of Use

Social Norm & Opinions
IT Support



Gladwell (2000)

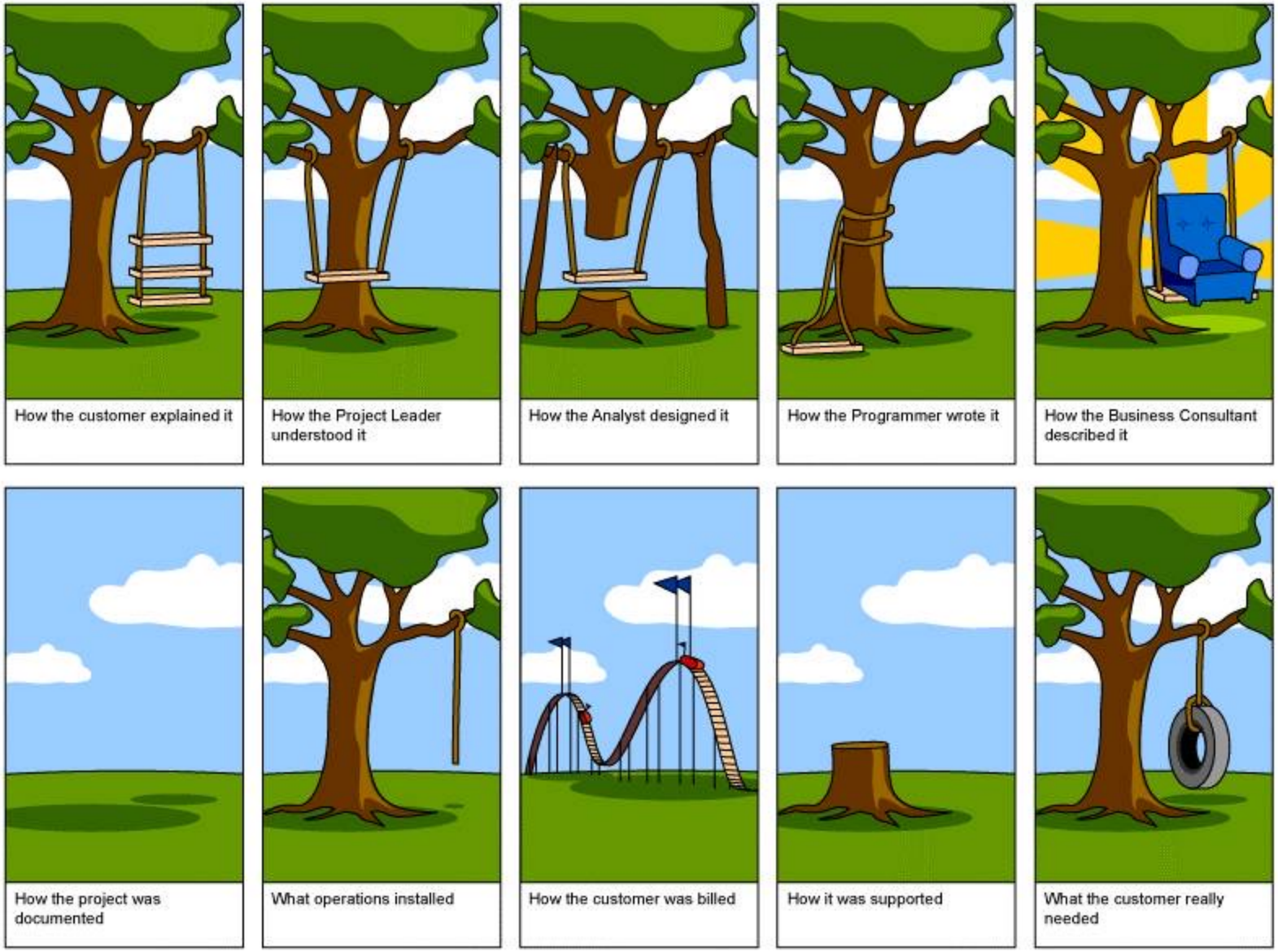


Image Source: Paragon Innovations, Inc. (2005)

A True Story of Failure to Involve Users in Hospital IT Implementation

Management Point:

Involve Users Early & Intensively in Your Process

Management Point:

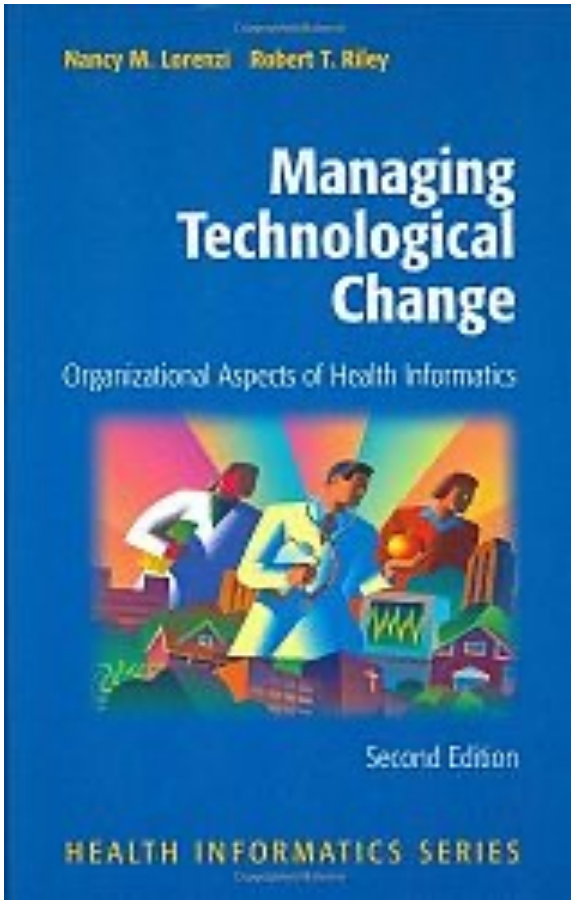
Influence Your People's Behaviors through Managing their Expectations & Attitudes

Success Factors of Hospital IT Adoption

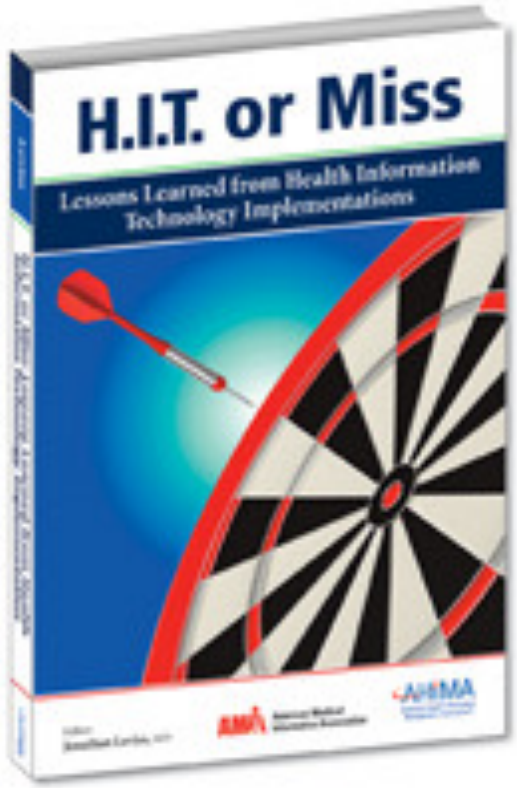
- Communications of project plans & progresses
- Workflow considerations
- Management support of IT projects
- Common visions
- Shared commitment
- Multidisciplinary user involvement
- Project management
- Training
- Innovativeness
- Organizational learning

Theera-Ampornpunt (2009, 2011)

Resources on Change Management



Lorenzi & Riley (2004)



Leviss (Editor) (2010)

Q&A