



*360 Degree View of the
Technology, Strategy and
Business*

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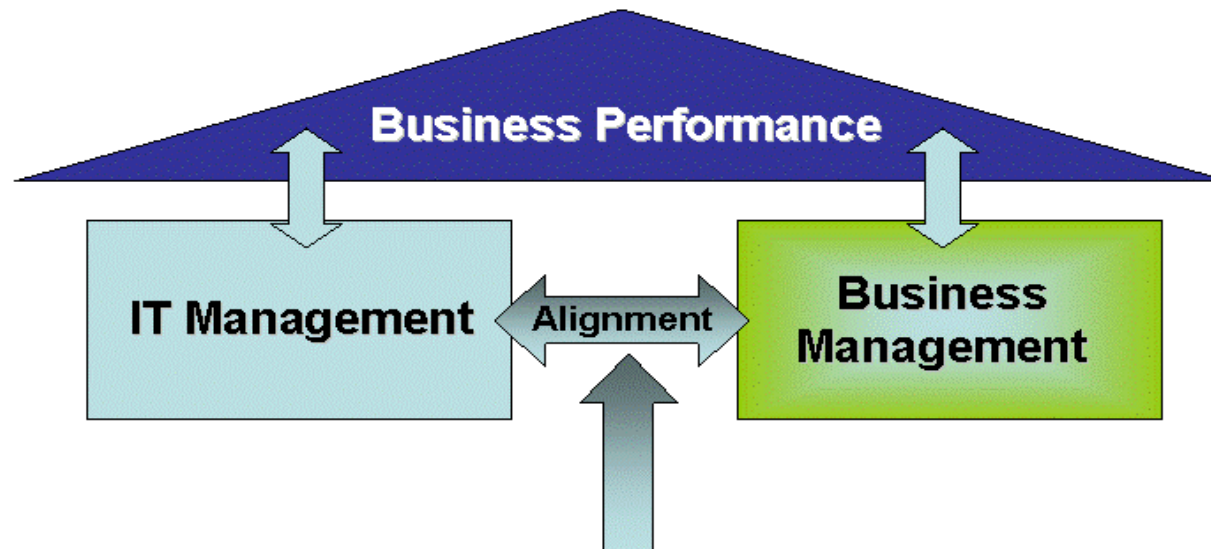
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- Social Concerns
- Paradigm Shift
- 360-Degree View
- SE Leadership Theory
- Thompson's Alignment Model
- Success Story
- Emerging Alignment Themes
- Conclusion
- Q & A

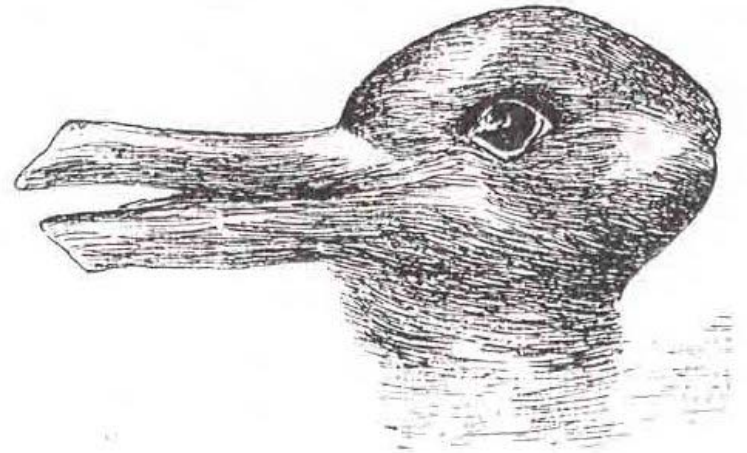


Social concerns and theoretical interests

- Lack of understanding IT's business value
- Ever changing organizational structure
- Danger of IT overspending
- Increasing IT spending
- Increasing dependence on IT
- The changing CIO roles
- IT and business alignment is a must
- The pressing urgency
- Establish irreversible momentum for change

Thompson (2008)

- Thomas Kuhn (1962) first used this term in his influential book, “The Structure of Scientific Revolutions”, to describe a change in basic assumptions within the ruling theory of science.
- Jastrow (1899) used the duck-rabbit optical illusion to demonstrate the way in which a paradigm shift could cause one to see the same information in an entirely different way.
- The term has been adopted since the 1960s and applied in non-scientific contexts (Wikipedia)



The famous duck-rabbit ambiguous image. Is it a duck? Is it a rabbit?

Source: Jastrow, J. (1899). The mind's eye. Popular Science Monthly, 54, 299-312.

View, Understand, Map, & Manage



Individual Contributor



Program Leadership



- **360-Degree Leader**
 - Serves others
 - Needs to practice and be trained
 - Works as a program leader
 - Shines as a setting sun: Make others successful
- **Strategy & Business Leader**
 - Encourages Teamwork
 - Works as a Coordinator
 - Makes wise decisions
 - Works as a project leader
 - Has risk of losing passion of technical leadership
 - Shines as a high noon: Strong
- **Technology Leader**
 - Is a leader of technology
 - Is a hero/heroine for warriors
 - Works as a technical task leader
 - Has risk of asking too much of a control
 - Shines as a rising sun: Potential

Program Leadership




Individual Contributor

- Leadership
 - Visionary: Provide vision for changes
 - Core values (what we stand for, that is, Imagination: Walt Disney)
 - Core purpose (why we exist, that is, To make people happy: Walt Disney)
 - Envisioned future includes long-term goals (that is, Become the Harvard of the West: Stanford University, 1940s)
 - Technical
 - Business
 - Functional
 - Managerial: Produce plans for stability and leaders
- Technology
- Process
- People

- **Theory W**
 - **Negotiator**
 - **B.W. Boehm and R. Ross, 1989**
 - **Make everyone a winner**

360-Degree Leader
 - **Theory Z**
 - **Facilitator**
 - **Motivation and Productivity (Gellerman, 1978)**
 - **Do up-front investment in developing shared values and arriving at major decisions by consensus within an organization**

Strategy & Business Leader
 - **Theory Y**
 - **Coach**
 - **Productive Software Management (Evans, Piazza, & Dolkas, 1983)**
 - **Stimulate creativity and individual initiative**
 - **Theory X**
 - **Autocrat**
 - **Scientific Management (Taylor, 1911)**
 - **Do more precise time and motion studies**
 - **Organize jobs into well-orchestrated sequences of tasks**

Technology Leader
- 

Boehm, B. W., & Ross, R. (1989). Theory-w software project management: Principles and examples. IEEE Transactions on Software Engineering, 15(7), 902-916.

- **Builder of Learning Organizations**
 - Here is our purpose and direction – I will guide and coach!
- **Group Facilitator**
 - You are empowered!
- **Task Manager**
 - Here is what to do and how to do it!
- **Bureaucratic Manager**
 - Follow the rules!

The role of leadership in software development by Mary Poppendieck, 2007 (Originally from The Toyota Way, Jeffery Like, p. 181)

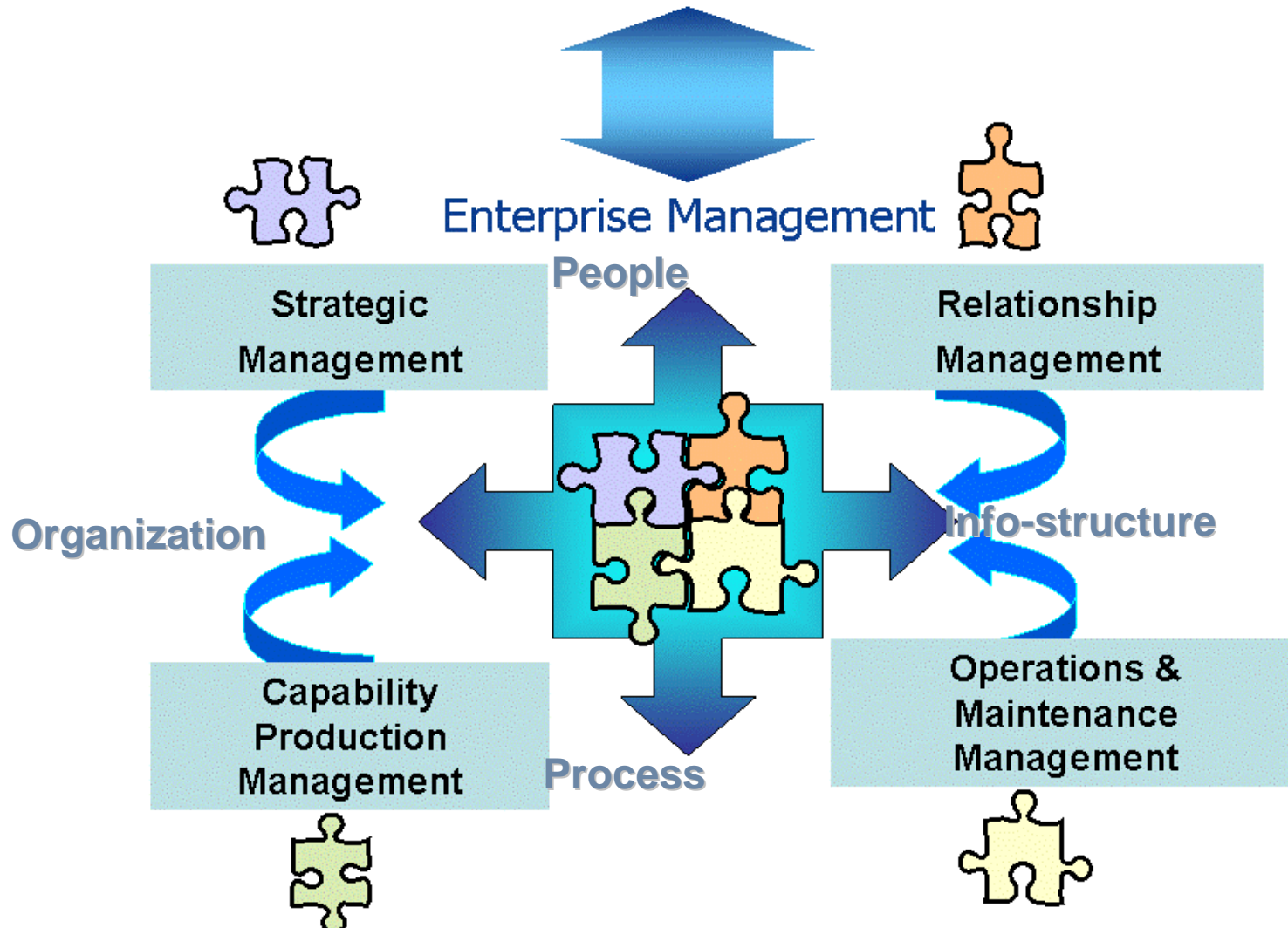


- Shape the Future
- Build Effective Relationships
- Energize the Team
- Deliver Results
- Model Personal Excellence, Integrity, and Accountability





Business Performance



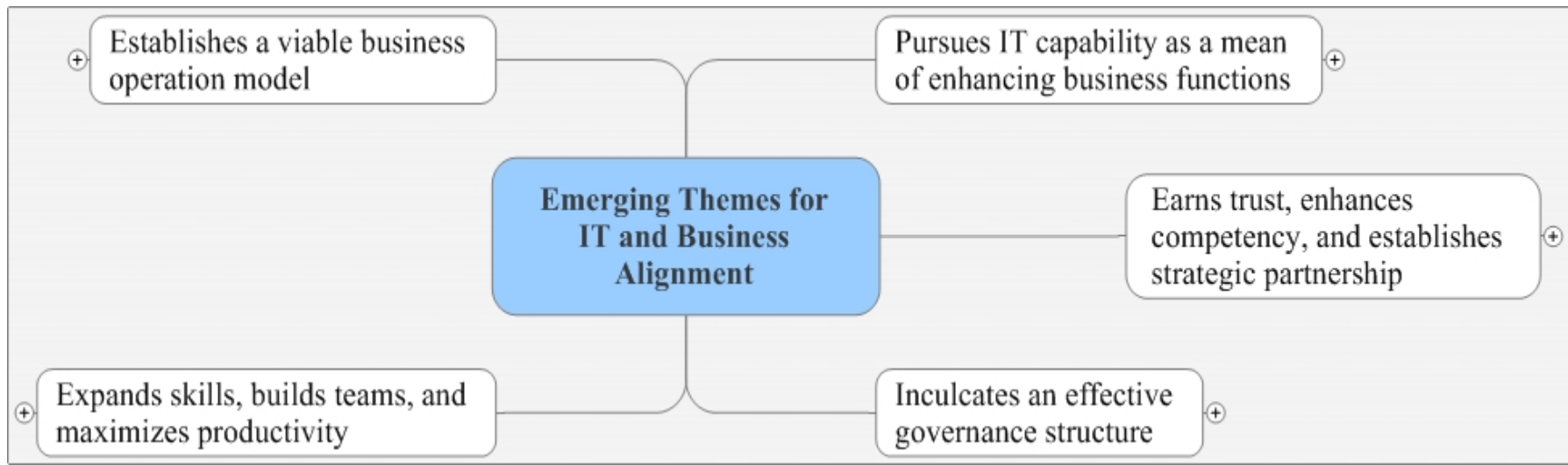
- **Program Overview:**
 - Provides a wide range of systems engineering services to a civilian government agency nationwide
 - Nine-year contract worth approximately \$700 million
 - Indefinite Delivery/Indefinite Quantity (IDIQ)

- Restructured and empowered to implement the program-wide technology governance and sharing
 - Architectural Control Board (ACB)
 - Organizational Process Group (OPG)
 - Sr. Technical Council
- Established
 - Chief Technology Officer (CTO) 360-Degree Dashboard
 - Technology Inventory
 - Distributed Software Development Team (Develop globally, manage centrally)
 - Continuous Integration & Automated Testing
 - Standard Defect Tracking
 - Document and Knowledge Management
 - Removing Accidental Complexity from Architectures
 - Challenge – Action – Results

- Collaborate with
 - Customer
 - Enterprise Architecture (EA) Workgroup
 - Web Workgroup
 - Portal Workgroup
 - SOA Workgroup
 - GIS Workgroup
 - National Computer Center
 - Industry
 - Software Vendors
 - Consortia
 - LM
 - LM Engineering Process Improvement Group
 - LM Center of Excellence (COE)
 - LM IS&GS Advanced Technology Group
 - LM NexGen
 - LM I&KS Technical Council

- Provide the active and quality support to the Task Order Project Officers (TOPO) and Contract Technical Managers (CTM) to solve their business challenges in a timely fashion.
- Conduct the analysis of customer needs to ensure the program provides the leading-edge solutions that meet and exceed customer expectations.
- Restructure one of Task Orders to include consultations on the Enterprise Tools Best Practices.

- Establish a viable business operation model
- Earn trust, enhance competency, and establish strategic partnerships
- Pursue IT capability as a means of enhancing business functions
- Expand skills, build teams, and maximize productivity
- Instill an effective governance structure



(Thompson, 2008)



- 360-Degree View is proven to be necessary and helpful for further aligning business and technology
- Business management aligned with technology planning often enhances business performance (Thompson, 2008)



Questions?



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