



Integration Strategies and Tactics for Information Technology Governance

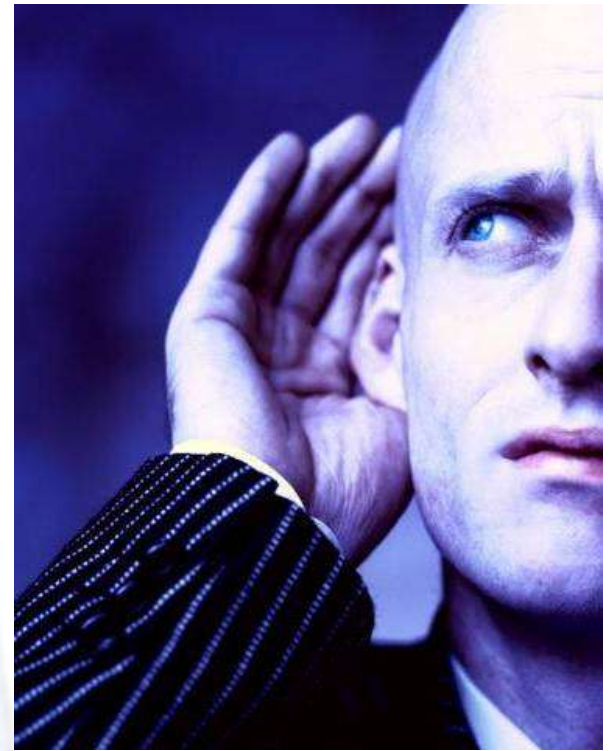
Arrianto Mukti Wibowo, M.Sc., CISA

Disarikan dari judul yang sama,
Chapter 2 (karangan Ryan R. Peterson),
buku “Strategies for IT Governance”

Tujuan Pembahasan

- Bagaimana organisasi bisa mendiagnosa dan mendesain tatakelola TI
- Mengemukakan desain baru mengenai organisasi TI

Definisi-definisi



Definisi Peterson (2001)

- IT Governance is the system by which an organization's IT portfolio is directed and controlled.
- IT Governance describes:
 - The distribution of IT decision making rights and responsibilities among different stakeholders in the organization, and
 - The rules and procedures for making and monitoring decisions on strategic IT resources.

Weill-Ross (2004)

- Weill & Ross, Sloan School of Management, MIT
 - "Specifying the decision rights and accountability framework to encourage desirable behaviour in the use of IT."

Australian Standard AS-8015

- Australian Standard for Corporate Governance of ICT
 - The system by which the current and future use of ICT is directed and controlled. It involves evaluating and directing the plans for the use of ICT to support the organisation and monitoring this use to achieve plans. It includes the strategy and policies for using ICT within an organisation.



Definisi van Grembergen

- Van Grembergen (2002): IT Governance is the organizational capacity exercised by the board, executive management, and IT management to control the formulation and implementation of IT strategy and in this way ensure the fusion of business & IT.



Definisi Luftman

Definisi Henderson & Venkatraman

- Prof Jerry Luftman (Stevens Institute of Technology, former IBM consultant, 1996)
 - IT Governance is the degree to which the authority for making IT decisions is defined, and shared among management, and the process managers in both IT and business organizations apply in setting IT priorities and allocation of IT resources.
- Henderson & Venkatraman (IBM System Journal, 1993)
 - Selection and use of organizational process to make decisions about how to obtain and deploy IT resources and competencies

Definisi Sambamurthy-Zmud

- IT Governance refers to the patterns of authority for key IT activities (Sambamurthy & Zmud, 1999)
- IT Governance defines the locus of enterprise decision-making authority for core IT activities (Sambamurthy & Zmud, 2000)

Mitos-Mitos

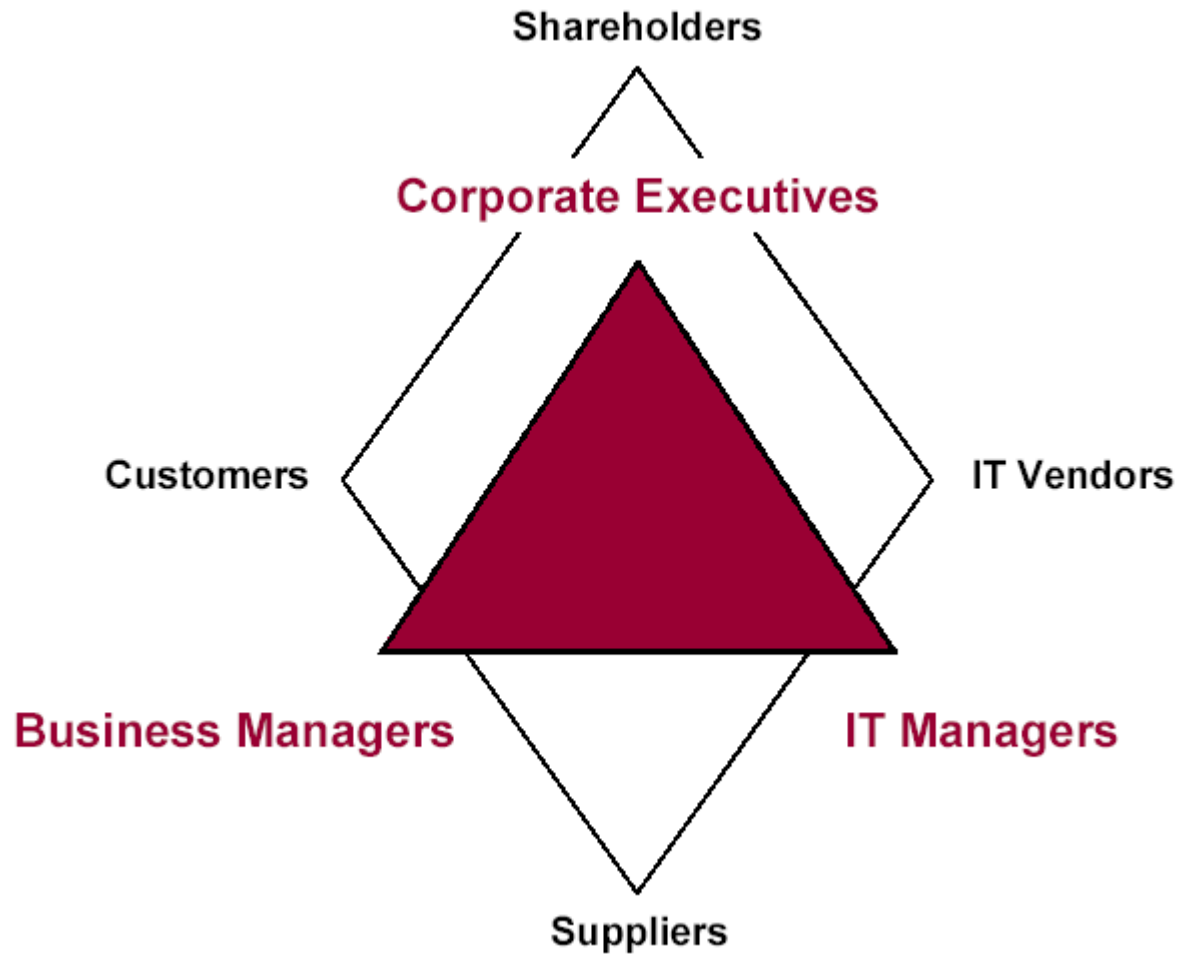


Mitos:

Only CIO responsible for IT Gov?

- Rockart (1998) berkata bahwa business management arus berperan dalam TI.
- Remenyi (1997) also indicates that line leadership is an absolute necessity, and placing business management as the principle stakeholder repositions the locus of responsibility for realizing IT value squarely where it should

Primary and Secondary Stakeholders in IT Governance (Peterson, 1998)

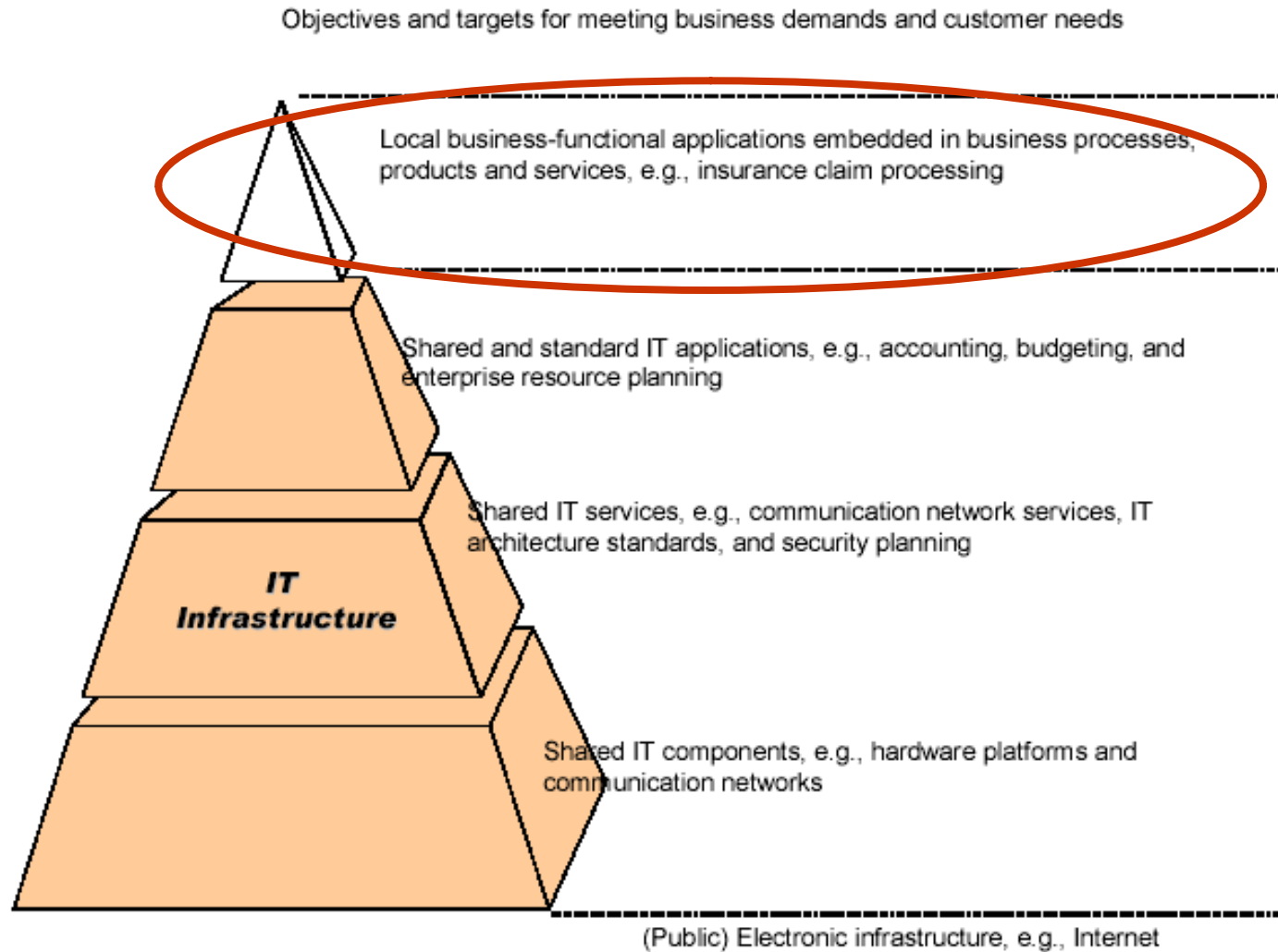


Mitos:

IT Gov adalah mendesain organisasi TI *saja*

- Given the widespread *proliferation and infusion* of IT in organizations, involving, e.g.:
 - technical platforms,
 - shared IT services centers, and
 - local business embedded applications,
- Therefore... the *notion of a single homogenous IT function is obsolete!*
- IT Portfolio juga mencakup apa yang spesifik pada setiap unit bisnis.

IT Portfolio at Local Business

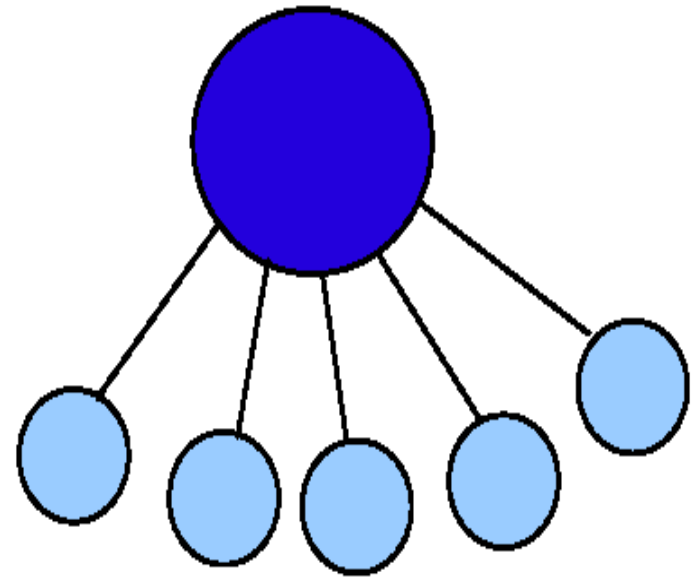


Isu (De)Centralization of IT: Bagian yang mana?

- Based on a rational perspective of the organization, in which choices are reduced to one of internal efficiency and effectiveness (March & Simon, 1958).
- This view assumes a system of goal consonance and agreement on the means for achieving goals, i.e., rational and logical trade-off between :
 - (a) efficiency and standardization under centralization, versus
 - (b) effectiveness and flexibility under decentralization
- The following slides presents Agarwal & Sambamurthy's (2002) model

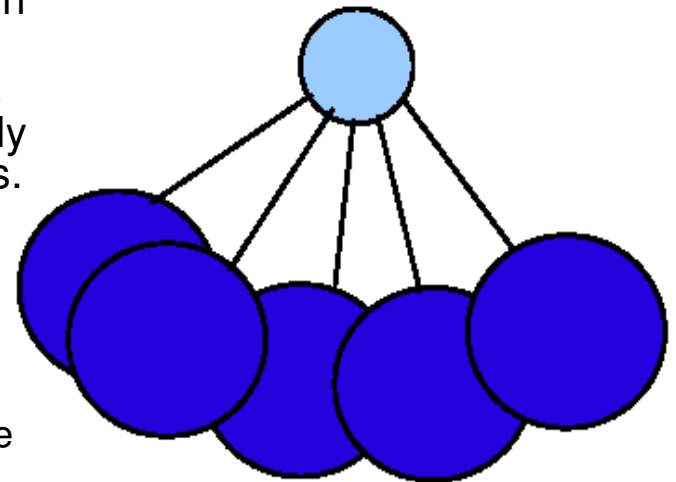
Centralized Model

- In the centralized model, top-down responsibility for solutions delivery, conceptualizing, developing and implementing IT solutions for all parts of the business is controlled by some central authority.
- A centralized model is economical from both a skill and an overhead standpoint, but...
- does little to:
 - build client relationships,
 - foster business knowledge in IT staff, or
 - further align IT with business needs since customizing the solution to fit the business can be difficult.



Decentralized Model

- The decentralized model is the loosest of the organizational choices.
- In the decentralized model, solutions delivery is aligned with the agency line of business and IT managers report to the agency director.
- When coordination happens, it is achieved in IT management and executive councils.
- The decentralized approach gives agencies the most control over IT direction and closely aligns IT service delivery with agency needs.
- Disadvantages:
 - This model does little to leverage enterprise knowledge, information, or processing.
 - Duplicate IT operations are likely and, as a result, costly.
 - leads to pockets of innovation and excellence with little ability to respond to strategic initiatives.
 - IT staff have little opportunity for career development or training because they are fragmented across a large number of separate organizations. This also makes re-training a very costly proposition when IT staff transfer from one agency to another.



Empirical Evidence on (De)-Centralization

1. Central IT Governance is associated with:
 - small-sized organizations
 - following a cost-focused business strategy,
 - and characterized by a centralized business governance structure,
 - environmental stability,
 - low information-intensive business products/services, and
 - low business experience and competency in managing IT.
2. Decentral IT Governance is associated with:
 - large, complex organizations
 - Following an innovation-focused business strategy, and
 - characterized by a decentralized business governance structure,
 - environmental volatility,
 - high information-intensive business products/services and processes, and
 - high business experience and competency in managing IT.

Determinants of IT Governance (Peterson, 1998)

DETERMINANTS	Centralized Model	Federal Model	Decentralized Model
Business strategy	Cost-focus	← →	Innovation-focus
Business governance	Centralized	← →	Decentralized
Firm size	Small	← →	Large
Information-intensity	Low	← →	High
Environment stability	High	← →	Low
Business competency	Low	← →	High

Coba pecahkan 3 skenario ini!

Company A is a large bank focused on operational excellence and new product and service development, and whose business management, however, lacks the professional skills and knowledge to manage IT.

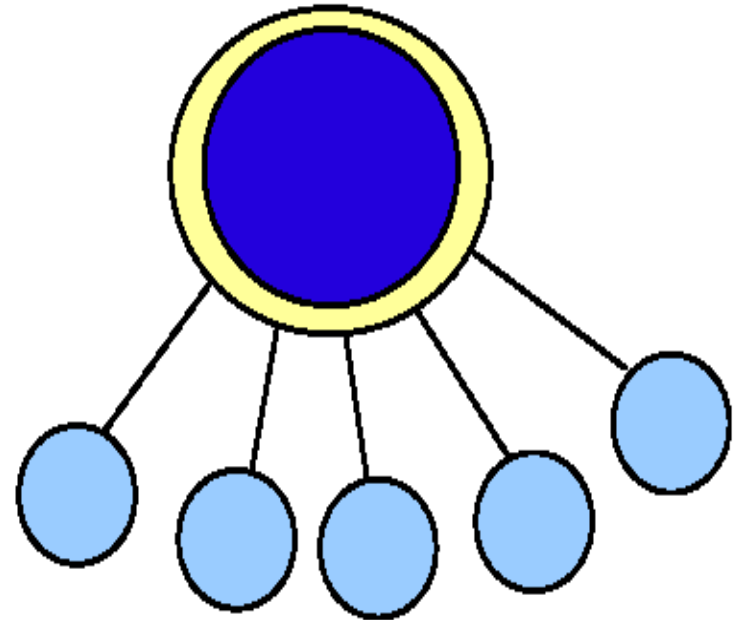
Company B is a small pharmaceutical company focused on product excellence, rapid innovation and quick commercialization, and whose business management is leading in IT innovation.

Company C is a large insurance company focused on achieving cost-efficiencies and providing customer value through customized products, and whose business management has developed the required competencies to manage IT projects.

Centralized-CRM Model

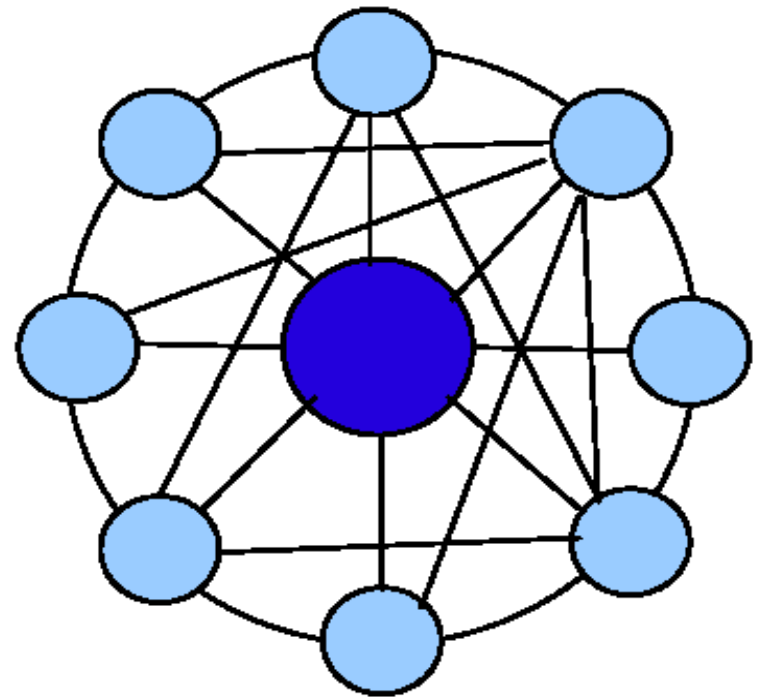
(Agarwal-Sambamurthy)

- In this model, the conceptualization and delivery of IT services is still carried out by a central authority but...
- That authority is augmented with the addition of customer relationship managers—people who deal directly with customers on behalf of the centralized authority to mitigate some of the disadvantages of the central model.
- This model does much better than the pure centralized model because it aligns IT with business needs and builds client relationships.
- Nevertheless, it does require the additional overhead of staffing the CRM function and also requires that effective coordination to occur between the CRM staff and solution delivery teams.



Federated Model (Agarwal-Sambamurthy)

- In the federated model, a statewide IT unit such as the CIO's office has primary responsibility for:
 - architecture,
 - common infrastructure and services, and
 - standards decisions,
- Divisional/functional IT department has primary responsibility for application resource decisions.
- Divisional/functional IT managers report into the agency director as well as the central IT organization.
 - The federated model gives good balance between enterprise and local innovation.
 - Also, it is quite effective at aligning IT with the needs of the business.
- The disadvantages of the federated model are:
 - the complexity of coordinating among so many players,
 - the problem of dual reporting relationships, and, most importantly,
 - the high administrative and staff costs of supporting multiple IT organizations.





Federal IT Governance Model

- Over the past decade, organizations have set out to achieve the ‘best of both worlds’ by adopting a federal IT Governance structure.
- In a federal IT Governance model, IT infrastructure decisions are centralized, and IT application decisions are decentralized

Federal Model

(Hodgkinson)

“Federal”

- Vision & leadership: themes
- Group-wide IT strategy for core infrastructure
- Strategic accountability to stakeholders
- Synergy/Exploitation mechanisms

Decentralized

- | | |
|---|---|
| <ul style="list-style-type: none">• Excessive overall cost• Variable standards of IS/IT competence• Reinvention of wheels• No synergy or integration | <ul style="list-style-type: none">• Users control IS priorities• Business unit ownership• Responsive to changing business needs |
|---|---|

Centralized

- | | |
|---|---|
| <ul style="list-style-type: none">• Economies of scale• Control of standards• Critical mass of skills | <ul style="list-style-type: none">• Unresponsive• No business ownership of systems• No business accountability for cost• Does not satisfy all business needs |
|---|---|

Figure 8.4 The 'Federal IT Organisation' (source: after Hodgkinson)

Tradeoffs and the Best of Both, according to Peterson

Design Drivers	Centralized IT Governance	Decentralized IT Governance	Federal IT Governance
<i>Synergy</i>	+	-	+
<i>Standardization</i>	+	-	+
<i>Specialization</i>	+	-	+
<i>Customer responsiveness</i>	-	+	+
<i>Business ownership</i>	-	+	+
<i>Flexibility</i>	-	+	+

Case *Johnson & Johnson*

- The pharmaceutical competition drives J&J towards improving cost-efficiencies but also business responsiveness, and IT standardization, yet also IT innovation, led Johnson & Johnson to adopt a federal IT Governance model.
- The complexity (size and span) of this organization would dictate a decentralized approach, which was the traditional IT Governance approach.
- Yet, the need to cut costs, standardize IT, and improve IT performance led Johnson & Johnson to centralize IT infrastructure decisions.
- Thus, the case of Johnson & Johnson illustrates how IT Governance is subject to the pulls and pressures of multiple, rather than singular, contingency forces.
- Dikemukakan dalam CIO Magazine thn 2001:
“It’s hard getting all of Johnson & Johnson’s businesses to go along with some of even the most benign changes in policy. Originally, we hoped to create a single, centralized strategy, but soon realized that only a federalized approach would work. We are too complex and independent from one business unit to the next to devise one strategy.”

Contoh Kasus Alasan Kebutuhan Akan “Strategic Flexibility”





Value Proposition

- Treacy & Wiersma
- Blue Ocean

Market Leadership (Treacy & Wiersma 1995)



- Pemimpin pasar harus memiliki satu ceruk pendorong tertentu sebagai dasar semua pengambilan keputusan bisnis.



Operational Excellence

- Business process focused
- Standardized & automated process
- Low prices
- Focus on cos, removing waste
- Examples:
 - Fedex, Dell
 - General Electric “Direct Connect”
 - Japanese automotive industry

Kasus General Electric

- GE tidak menjual partai besar kepada dealer
- Dealer hanya diberikan model untuk demonstrasi
- GE menyimpan stok, tapi dealer bisa memesan produk (atas nama klien) secara online
- Keuntungan:
 - Customer memilih model terbaru
 - Memenuhi demand dari customer dgn baik
 - Sehingga menurunkan finished goods (stocks) sebanyak 12%



imagination at work



Customer Intimacy

- Customer driven, strong relationship with customer
- Customer satisfaction is critical
- Provides solution for customers

Into – Me – 1 - See

Kasus Home Depot



- “Solve customers problem” – bukan “jualan hardware”
- Menyediakan aneka macam produk untuk berbagai jenis pelanggan
- Product offer tergantung pada lokasi penjualan: “micro-merchandising” programs
- Sistem informasi akan mempengaruhi product range, promosi, pricing dan juga layout toko
- Tidak hanya mengambil data penjualan, tapi juga feedback pada karakter produk dan juga layanan.
- Ini memungkinkan segmentasi yang lebih cepat → tidak memamerkan barang mahal di toko yang penduduknya sensitif harga

Product Leadership



Nintendo Wii

- Fast delivery of new product, short product lifecycles
- Future driven
- Risk taking & decisive actions
- Flexible organization
- Example: Microsoft, Apple, Nokia



Apple i-Pod

Kebutuhan untuk memiliki kompetensi

- Empirical studies indicate that value-creating organizations have learned to master more than one value driver.
- Organizations learn to manage the conflicting pulls by becoming 'bifocal', and recognize the requisite *complementary* — not competing — nature of value creation.
- In order to satisfy complementary value-creating drivers, an organization should have a variety of capabilities at least as great as the demands and disturbances in the environment.
- Consequently, organizations develop a repertoire of competencies to respond to and influence their external environment.



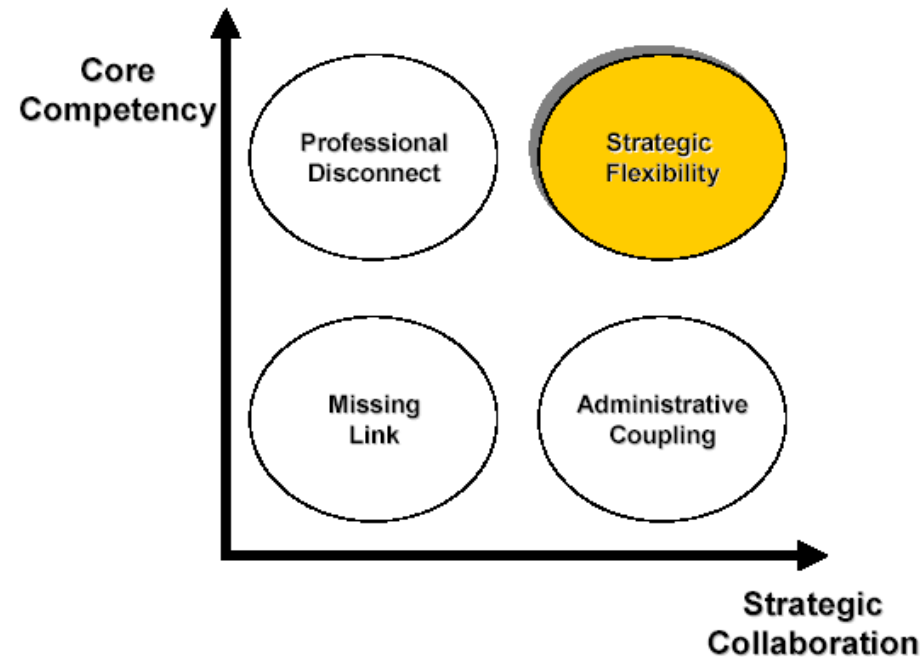
Fokus kompetensi utama & integrasi antar-kompetensi

- Whereas in the 70s and 80s organizations would integrate vertically, today organizations have recognized the need to focus on their core competencies.
- Yet, continuous differentiation leads to fragmentation, unless a corresponding process of integration complements it.
- The uncertainty and ambiguity associated with the complex of external demands and differentiated capabilities creates the need for integration to achieve clarity of direction and unity of purpose in responding decisively and swiftly.

Strategic Flexibility

(Peterson, 2001)

- Organizations improve their chances of success and survival in a turbulent environment by creating strategic flexibility that gives them the ability to pursue alternative courses of actions in response to unexpected environmental conditions.
- Organizations need to simultaneously develop a variety of differentiated capabilities in order to serve a range of changing customer and market demands, and integrate these for developing joint expertise and providing direction



Apa Dampaknya Terhadap Organisasi TI?





Strategic Flexibility

akan memaksa IT untuk:

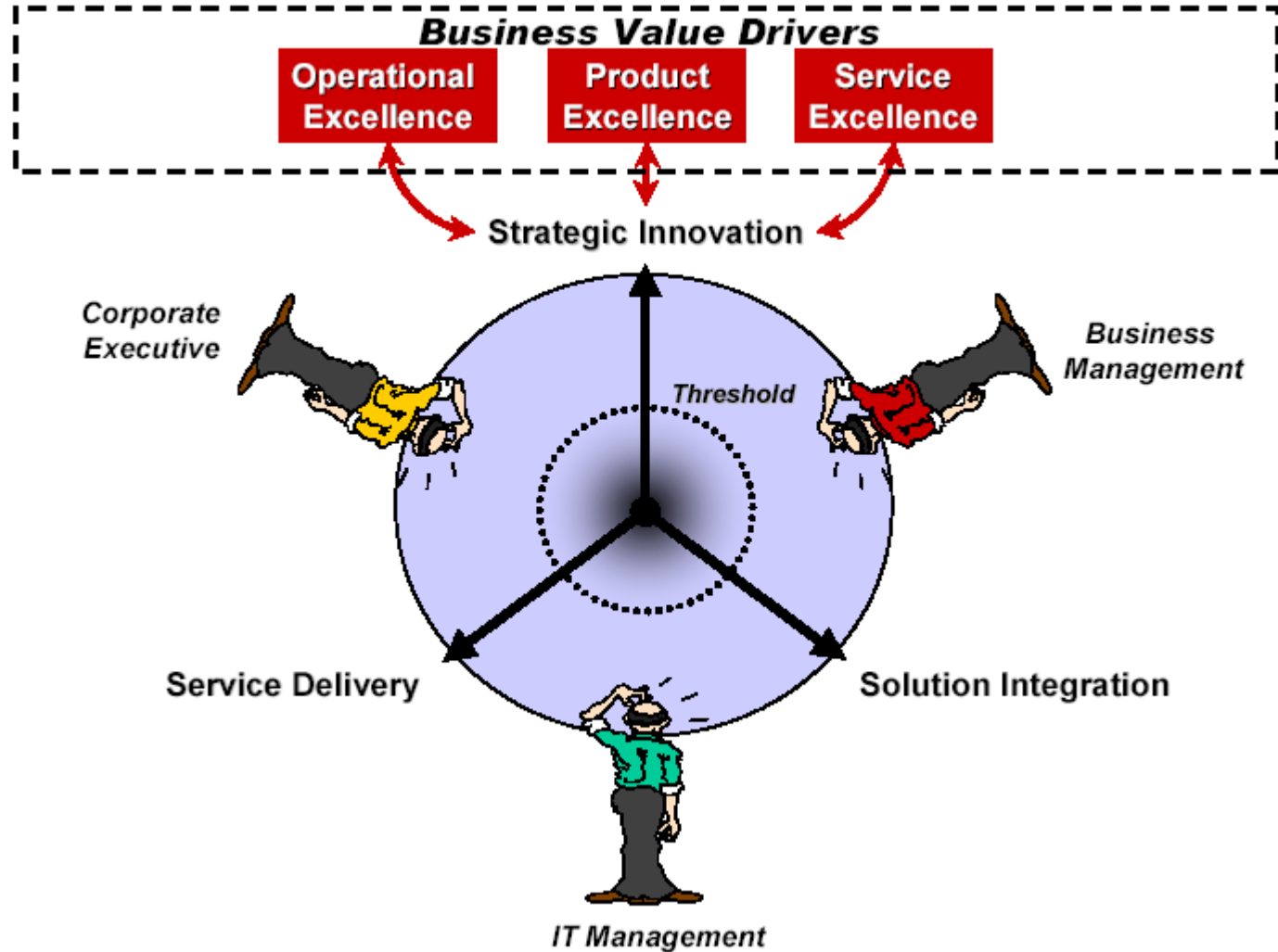
1. Develop and deliver applications that facilitate business responsiveness to customer demands in a rapid and efficient manner;
2. Provide cost-effective, scalable infrastructures and operations that enable cycle time improvement and streamlined, enterprise-wide business processes; and
3. Add value to the enterprise by focusing on operational excellence, product excellence, and service excellence.

Primary IT Value Drivers

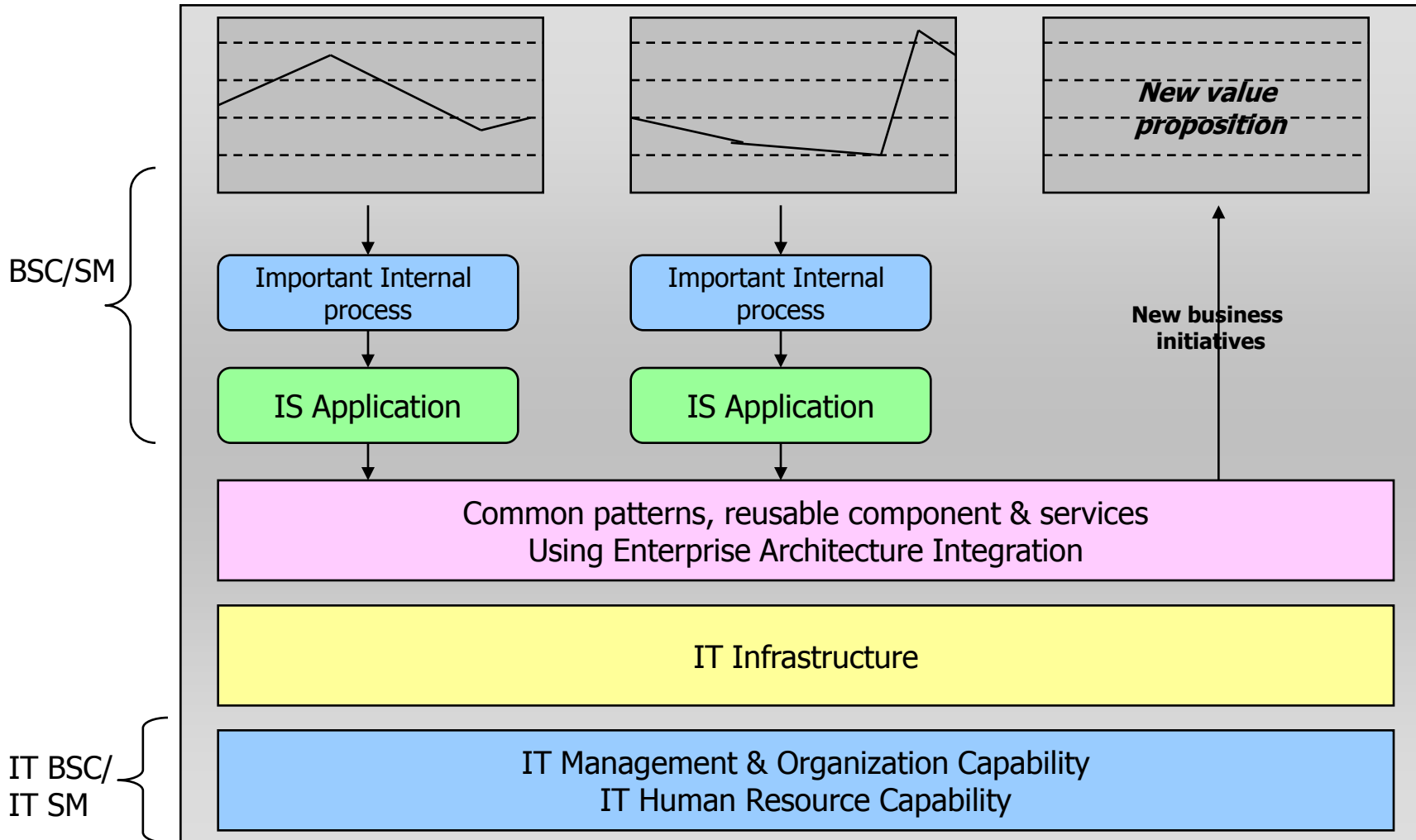
(Peterson et al., 2000)

<i>Value Driver</i>	Service Delivery	Solution Integration	Strategic Innovation
<i>Description</i>	Providing reliable IT operations and services, delivered with maximum reliability and availability	Offering business leading-edge products and services that consistently enhance the business' use of products and services	Targeting business value drivers, and tailoring offerings that supersede the demands of the business
<i>Focus</i>	Provisioning of utilities, provide reliable, cost-effective, and secure IT services, manage cross-unit synergies across the corporation, manage IT infrastructure standards, establish IT infrastructure flexibility and scalability.	Strategic analysis of business needs for IT, deciding on the necessary applications, and delivering them either through internal development, external contracting or packaged software. Focus on ensuring timely and cost-effective delivery of IT applications.	Focus on ways in which IT can be used to strengthen business competencies, customer relationships and business partner networks. Ensure IT applications have a value focus (operational excellence, product excellence, service excellence).
<i>Threshold</i>	Infrastructure	Integration	Impact

IT Value Drivers: An Integrated Perspective

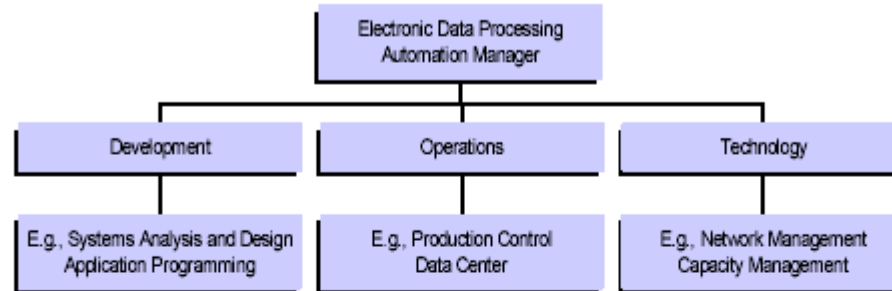


Penciptaan strategic flexibility

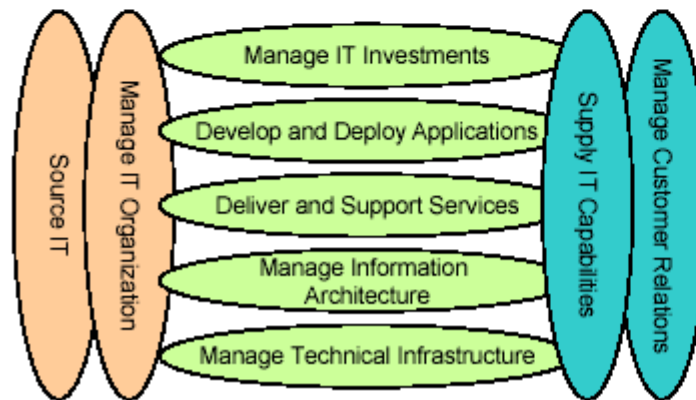


Transformation of IT Organization

Functional IT Departments (I)



Process IT Organization (II)

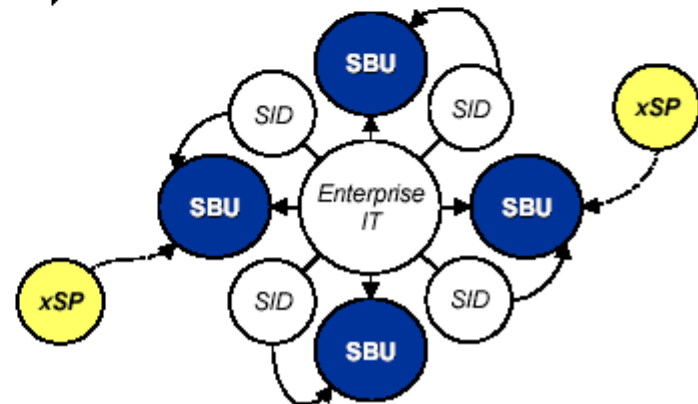


80s - 90s

60s - 70s

90s - ...

NITE - Network IT Enterprise (III)

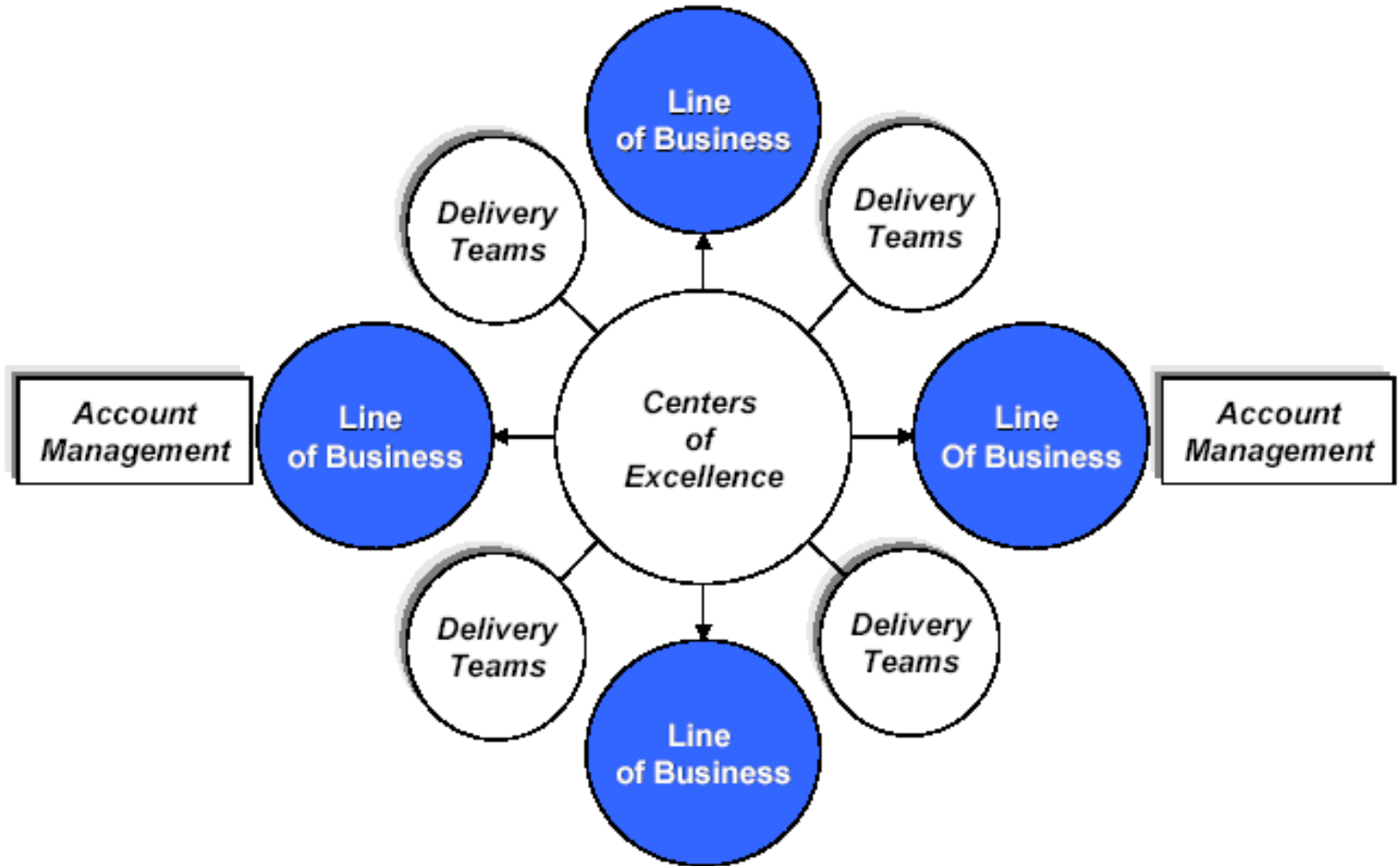


Verizon's NITE Network

- IT organizations are transforming toward a 'core-peripheral' organization design, in which the IT infrastructure is directed by Corporate IT management, and local business applications are managed by business or IT management.
- At the 'core' of the organization, IT infrastructure decisions are centralized and allocated to the corporate unit, whereas...
- IT application decisions are decentralized and allocated to the different operational business units at the organization 'periphery'.
- Network IT Enterprise (NITE) is built around solution integration delivery (SID) teams that focus on the needs of the business, and contracts with external service providers (xSPs).
- The (internal) SID and (external) SP components 'hover' around a center that manages and provides core IT competencies (e.g., IT services and IT skills).
- NITE resembles the enterprise architecture in contemporary organizations, and embodies the principles of strategic flexibility and dynamic stability.

Verizon's NITE Network

(Clark, et.al, 1997)



Example of "Dynamically Stable" organization

Gimana supaya NITE jalan?

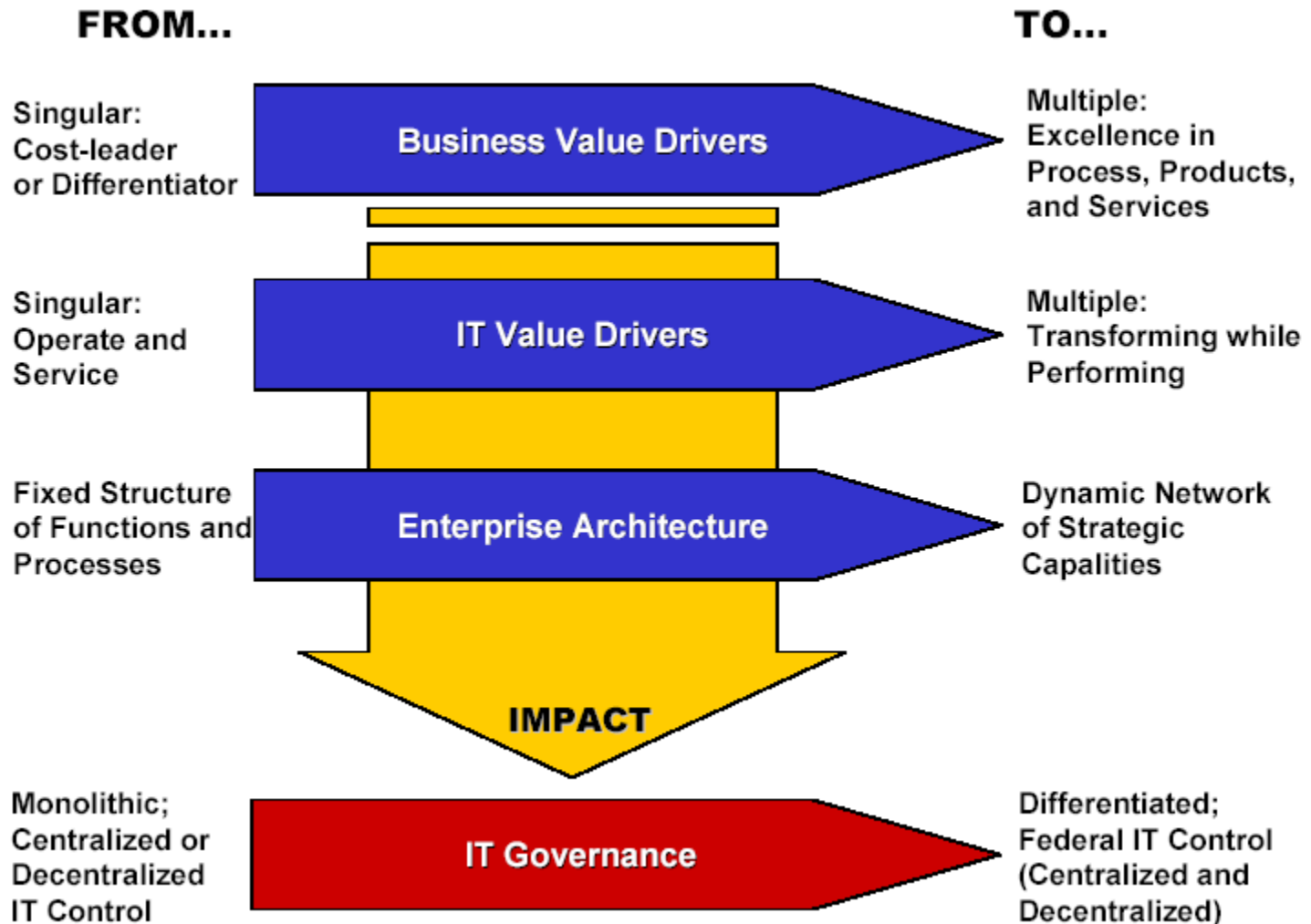
- Kutipan dari Simons (1960)

“...there is no use in one group of experts producing the hull, another the design for the power plant, and a third the plans for the passenger quarters, unless great pains are taken at each step to see that all these parts fit a seaworthy ship.”
- Kutipan dari Lorsch and Lawrence (1970):
 - *“Another shortcoming in the traditional views about centralization and decentralization is a failure to recognize that the issue is really one of a vertical division of labor and coordination.”*
 - *Therefore, it is not just a question of dividing responsibility up and down the hierarchy, but it is also a question of organizing the flow of information and coordinating devices.”*
 - *If these labels are to capture the realities of how complex organizations operate, they must refer to systems of organizational variables which include:*
 - *division of work and differentiation;*
 - *the integration among divisions and the headquarters;*
 - *the types of integrative structural devices used, as well as*
 - *the information flows and*
 - *decision-making processes operating within the organization.”*
- Consequently, IT Governance requires a integration & communication of different business and IT competencies, involving both corporate executives and business and IT management.

Design Logic for Governance

Level of Governance	Design Logic	
Inter-Organizational	Core Competency	Strategic Collaboration
Intra-Organizational	Differentiation	Integration

Evolution of Value Drivers, EA & IT Governance



Integration Strategies



Integration Strategies & Tactics

