



UNIVERSITAS KOMPUTER INDONESIA

## **Chap II: Structures, Processes and Relational Mechanisms for IT Governance**

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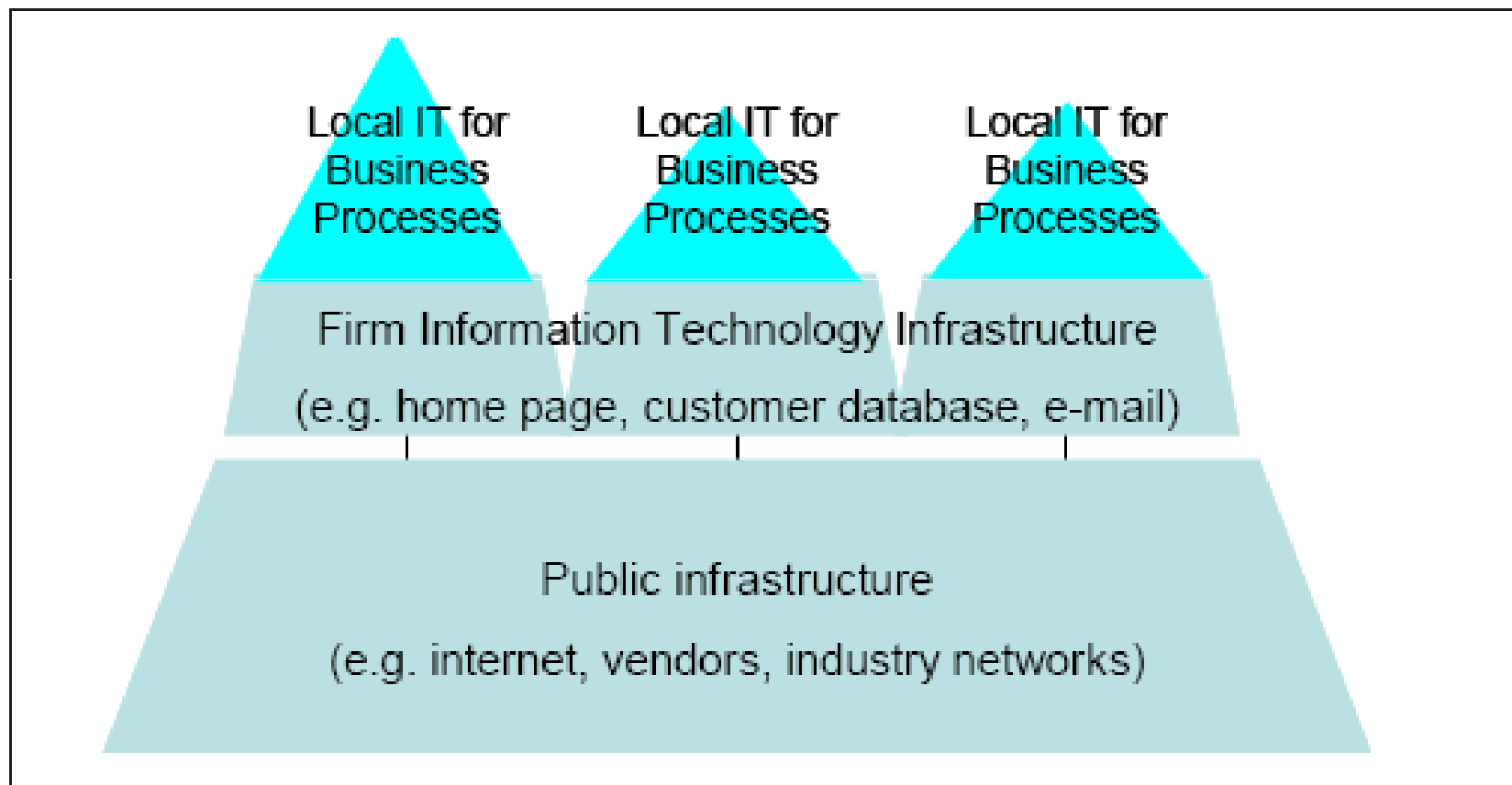
- ❖ Information Technology (IT) has become **pervasive in current dynamic and often** turbulent business environments. While in the past, business executives could delegate, ignore or avoid IT decisions, this is now impossible in most sectors and industries
- ❖ The *Public Infrastructure is the foundation of the New Infrastructure*, which is in turn linked to external industry infrastructures such as Internet, EDI networks, etc.



# Public Infrastructure



*Figure 1. The New Infrastructure*





# IT GOVERNANCE STRUCTURES, PROCESSES AND RELATIONAL MECHANISMS



Integration strategy	Structures	Processes	Relational mechanisms	
Tactics	IT Executives & accounts	Strategic IT decision-making	Stakeholder participation	Strategic dialogue
	Committees & councils	Strategic IT monitoring	Business-IT partnerships	Shared learning
Mechanisms	<ul style="list-style-type: none"> <li>- roles and responsibilities</li> <li>- IT strategy committee</li> <li>- IT steering committee</li> <li>- IT organisation structure</li> <li>- CIO on Board</li> <li>- project steering committees</li> <li>- e-business advisory board</li> <li>- e-business task force</li> </ul>	<ul style="list-style-type: none"> <li>- Balanced (IT) scorecards</li> <li>- Strategic Information Systems Planning</li> <li>- COBIT and ITIL</li> <li>- Service Level Agreements</li> <li>- Information economics</li> <li>- Strategic Alignment Model</li> <li>- Business/IT alignment models</li> <li>- IT Governance maturity models</li> </ul>	<ul style="list-style-type: none"> <li>- Active participation by principle stakeholders</li> <li>- Collaboration between principle stakeholders</li> <li>- Partnership rewards and incentives</li> <li>- Business/IT co-location</li> </ul>	<ul style="list-style-type: none"> <li>- Shared understanding of business/IT objectives</li> <li>- Active conflict resolution ('non-avoidance')</li> <li>- Cross-functional business/IT training</li> <li>- Cross-functional business/IT job rotation</li> </ul>



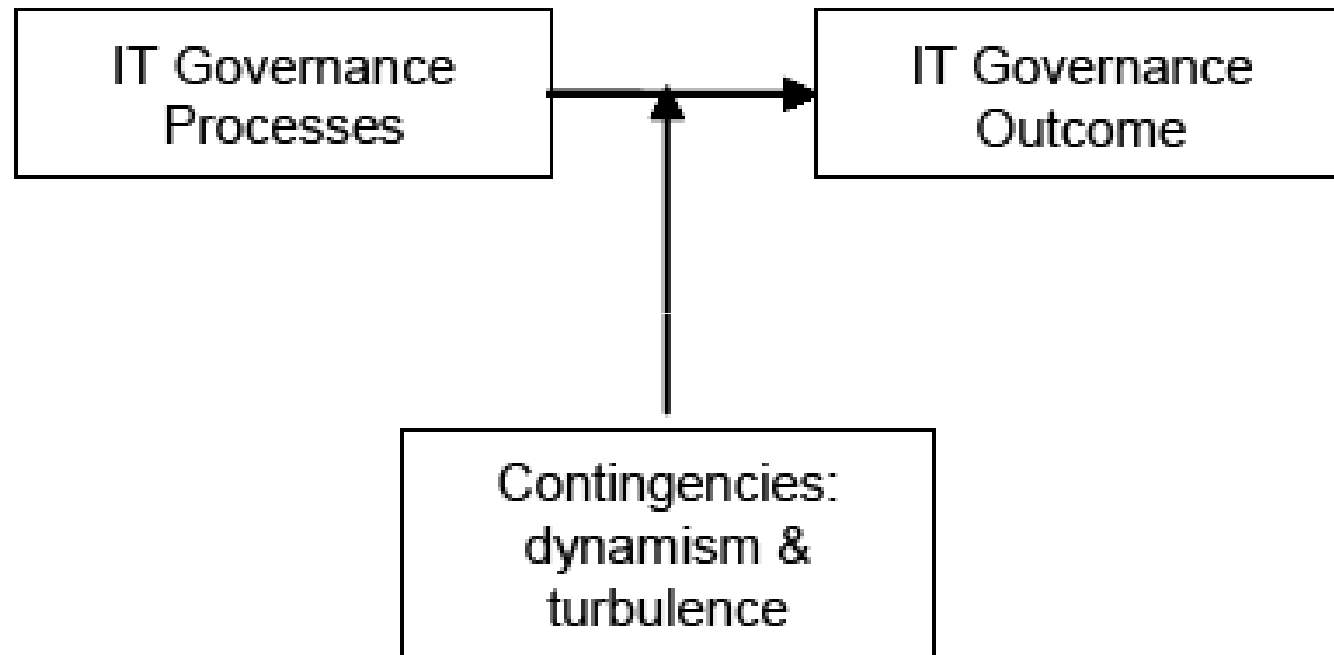
# Information Economics



<b>Traditional ROI (+)</b>		
+ value linking (+) + value acceleration (+) + value restructuring (+) + innovation (+)		
<b>= Adjusted ROI</b>	<b>+ Business Value</b>	<b>+ IT Value</b>
	<ul style="list-style-type: none"> <li>■ Strategic match (+)</li> <li>■ Competitive advantage (+)</li> <li>■ Competitive response (+)</li> <li>■ Management information (+)</li> <li>■ Service and quality (+)</li> <li>■ Environmental quality (+)</li> <li>■ Empowerment (+)</li> <li>■ Cycle time (+)</li> <li>■ Mass customization (+)</li> </ul>	<ul style="list-style-type: none"> <li>■ Strategic IT architecture (+)</li> </ul>
	<b>- Business</b>	<b>- IT Risk</b>
	<ul style="list-style-type: none"> <li>■ Business strategy risk (-)</li> <li>■ Business organization risk (-)</li> </ul>	<ul style="list-style-type: none"> <li>■ IT Strategy risk (-)</li> <li>■ Definitional uncertainty (-)</li> <li>■ Technical risk (-)</li> <li>■ IT service delivery risk (-)</li> </ul>
<b>= VALUE (business contribution)</b>		



# ***IT Governance Contingencies***





# ***IT as Service Provider or as Strategic Partner***

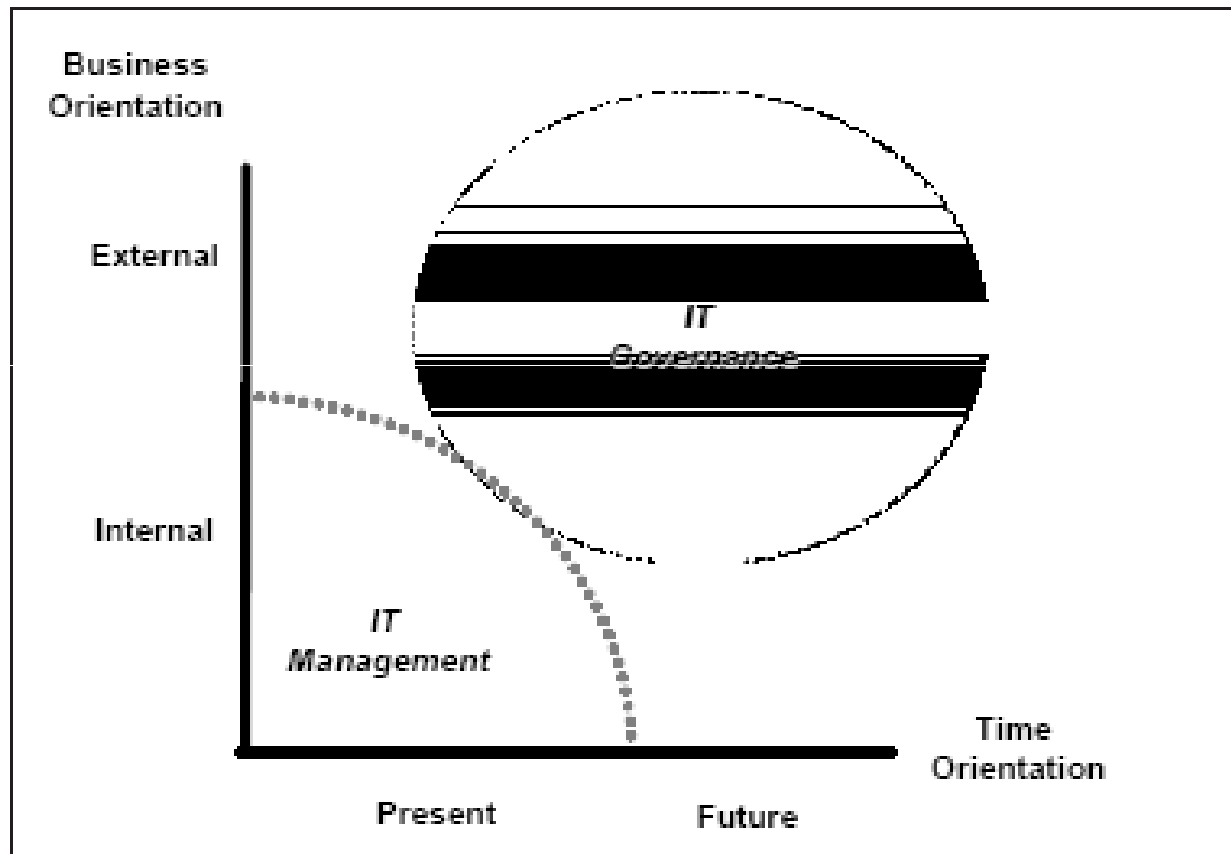


Service provider	Strategic partner
<ul style="list-style-type: none"><li>• IT is for efficiency</li><li>• Budgets are driven by external benchmarks</li><li>• IT is separable from the business</li><li>• IT is seen as an expense to control</li><li>• IT managers are technical experts</li></ul>	<ul style="list-style-type: none"><li>• IT for business growth</li><li>• Budgets are driven by business strategy</li><li>• IT is inseparable from the business</li><li>• IT is seen as an investment to manage</li><li>• IT managers are business problem solvers</li></ul>

*Venkatraman, N. (1999). Valuing the IS Contribution to the Business. Computer Sciences Corporation.*



# IT Governance and IT Management



*Peterson (2003). Information Strategies and Tactics for Information Technology Governance. In W. Van Grembergen (Ed.), Strategies for Information Technology Governance. Hershey, PA: Idea Group Publishing*





# Management Practises that Lead to IT-Enabled Business Value



## Technology standardisation

- Shared services, enterprise applications, technology architectures, centralisation of IT staff, technology councils to establish & monitor standards & architectures

## Disciplined project management

- Project office, standard methods, engaging business managers, Sponsor role for the business, frequent stakeholder meetings, holding business mgmt responsible for business outcomes

## Value clarifications

- Post-implementation review, service level agreements, project justification, performance measurement with metrics to capture costs, benefits and progress towards achieving expected value

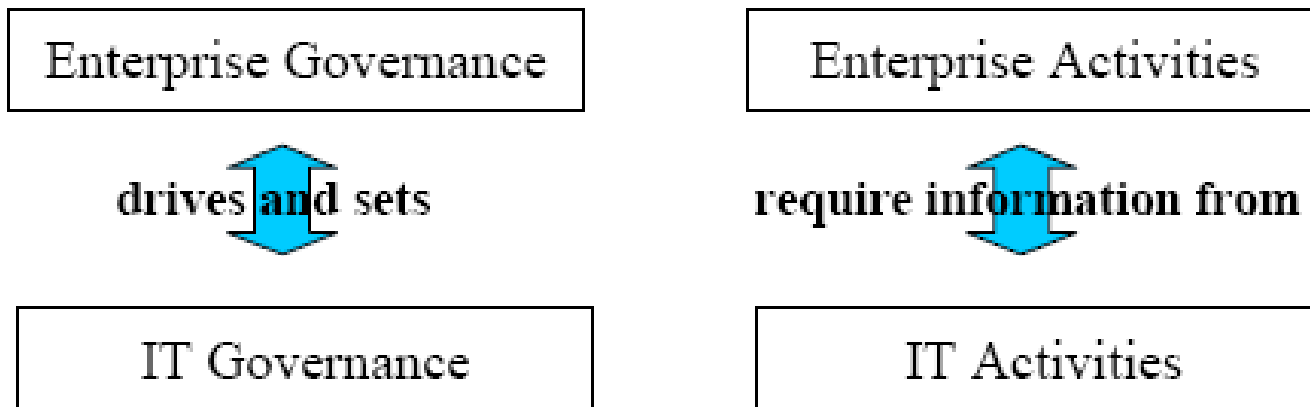
## IT Governance

- IT Steering Committee, IT Strategy Committee, Priority Setting

*Based on: Weill, P. (2002). Research Briefing. MIT Sloan, 2, nr. 2C.*



# Enterprise Governance and IT Governance



*ITGI (2000). CobiT: Governance, Control and Audit for Information and Related Technology. Available online: [www.itgi.org](http://www.itgi.org).*



# IT Governance and Corporate Governance Questions



Corporate Governance questions	⇒	IT Governance questions
How do suppliers of finance get managers to return some of the profits to them?	⇒	How does top management get their CIO and IT organisation to return some business value to them?
How do suppliers of finance make sure that managers do not steal the capital they supply or invest it in bad projects?	⇒	How does top management make sure that their CIO and IT organisations do not steal the capital they supply or invest in bad projects?
How do suppliers of finance control managers?	⇒	How does top management control their CIO and IT organisation?

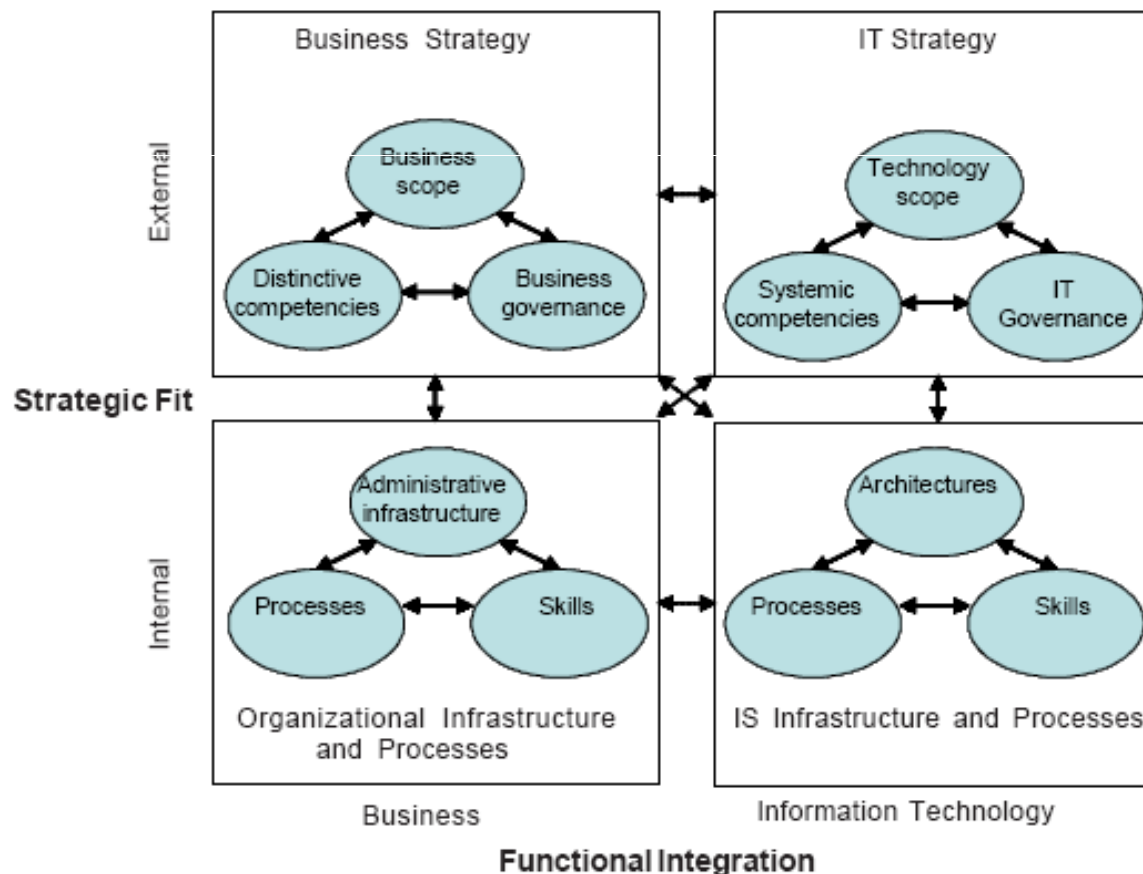
*Adapted from: Shleifer, A. & Vishny, W. (1997). A survey on corporate governance. The Journal of Finance, 52(2).*



# IT Governance is the alignment of Information Technology with the business



## ❖ Business/IT Alignment: The Strategic Alignment Model (SAM) (Henserson, Venkatraman, 1993)





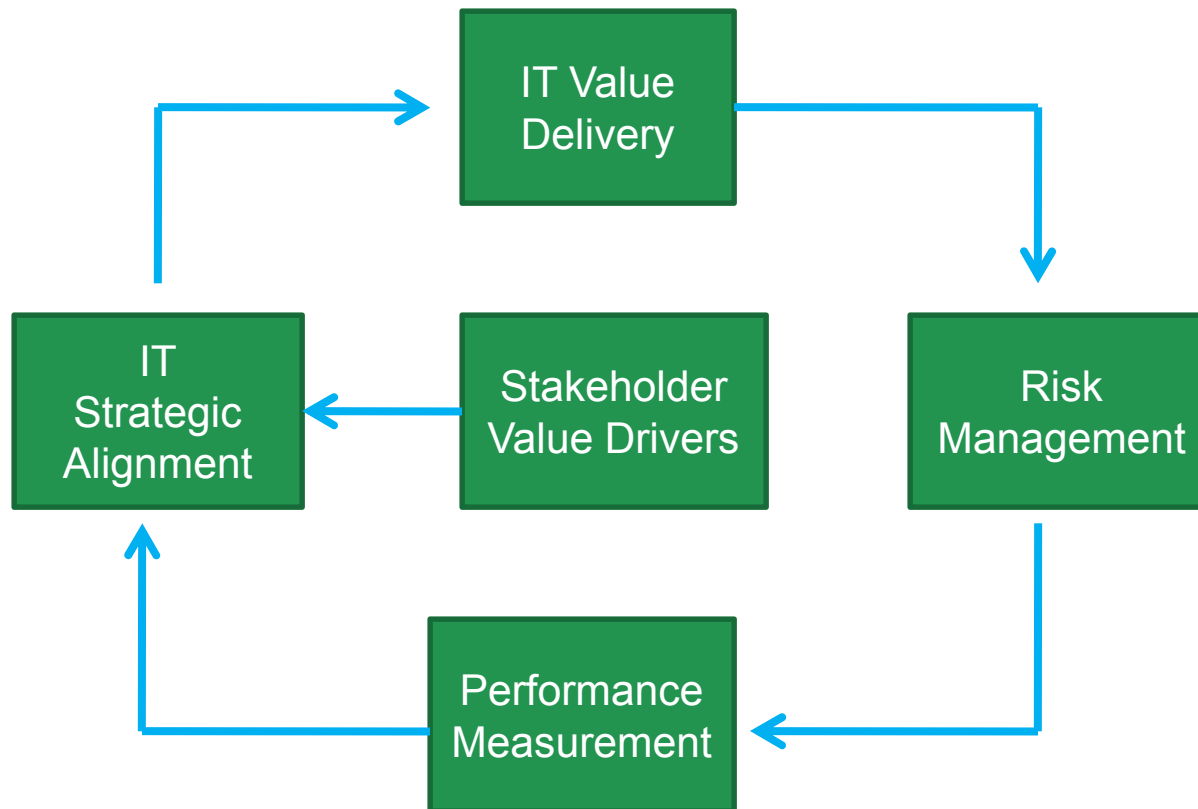
## *Six-Step Process for Alignment*



1. Set the goals and establish a team
2. Understand the business-IT linkage
3. Analyze and prioritize gaps
4. Specify the actions (project management)
5. Choose and evaluate success criteria
6. Sustain alignment



# Alignment, Value Delivery, Risk Management, Performance Management





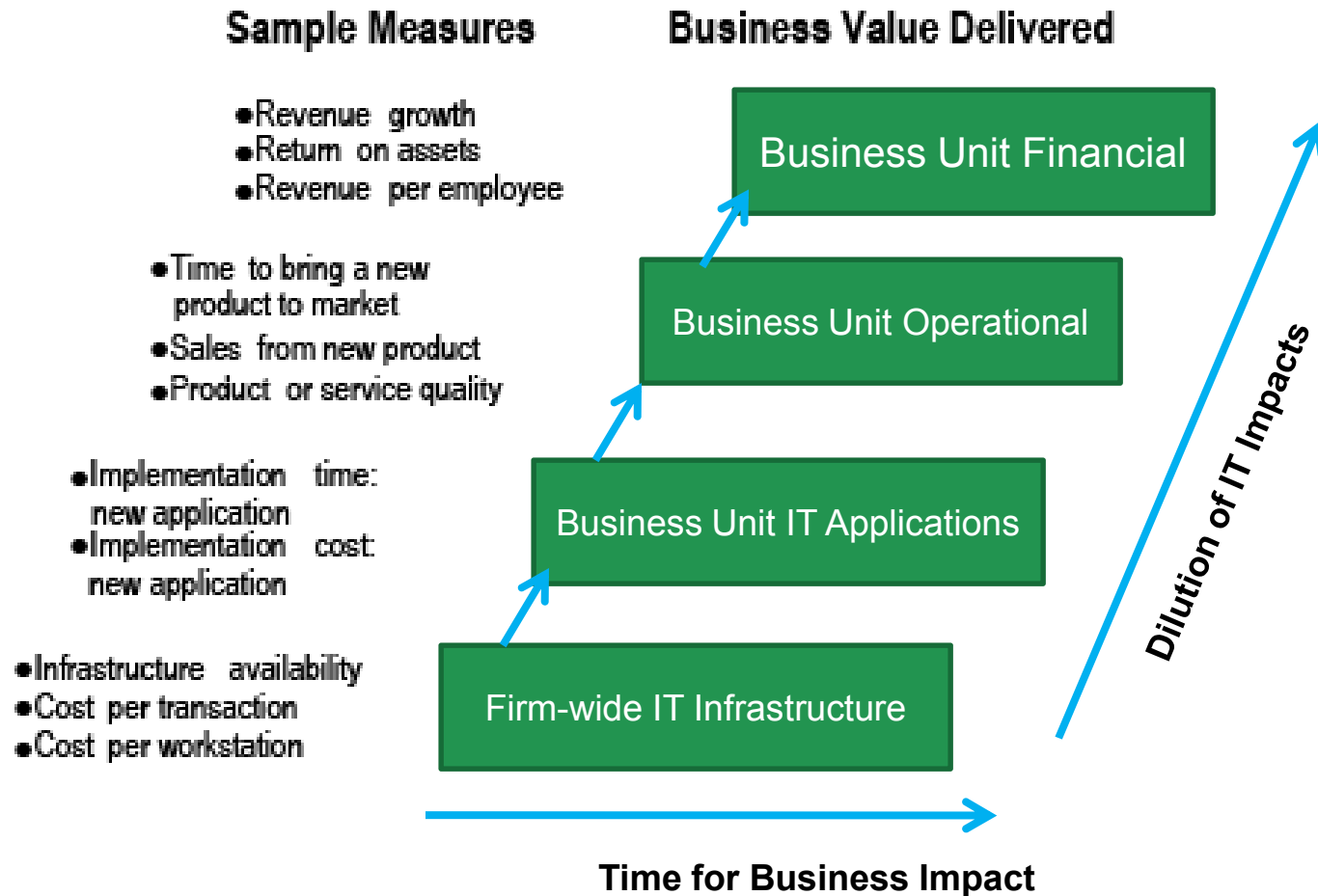
# Category in Enterprise Risk management



- ❖ *Strategic – high-level goals, aligned with and supporting its mission*
- ❖ *Operations – effective and efficient use of its resources*
- ❖ *Reporting – reliability of reporting*
- ❖ *Compliance – compliance with applicable laws and regulations.*



# Business Value Hierarchy







# Business Value through IT



## *Maturity Model for IT Strategic Planning*

### **0 Non-existent**

IT strategic planning is not performed. There is no management awareness that IT strategic planning is needed to support business goals.

### **1 Initial/Ad Hoc**

The need for IT strategic planning is known by IT management, but there is no structured decision process in place. IT strategic planning is performed on an as needed basis in response to a specific business requirement and results are therefore sporadic and inconsistent. IT strategic planning is occasionally discussed at IT management meetings, but not at business management meetings. The alignment of business requirements, applications and technology takes place reactively, driven by vendor offerings, rather than by an organisation-wide strategy. The strategic risk position is identified informally on a project-by-project basis.

### **2 Repeatable but Intuitive**

IT strategic planning is understood by IT management, but is not documented. IT strategic planning is performed by IT management, but only shared with business management on an as needed basis. Updating of the IT strategic plan occurs only in response to requests by management and there is no proactive process for identifying those IT and business developments that require updates to the plan. Strategic decisions are driven on a project-by-project basis, without consistency with an overall organisation strategy. The risks and user benefits of major strategic decisions are being recognised, but their definition is intuitive.

### **3 Defined Process**

A policy defines when and how to perform IT strategic planning. IT strategic planning follows a structured approach, which is documented and known to all staff. The IT planning process is reasonably sound and ensures that appropriate planning is likely to be performed. However, discretion is given to individual managers with respect to implementation of the process and there are no procedures to examine the process on a regular basis. The overall IT strategy includes a consistent definition of risks that the organisation is willing to take as an innovator or follower. The IT financial, technical and human resources strategies increasingly drive the acquisition of new products and technologies.

### **4 Managed and Measurable**

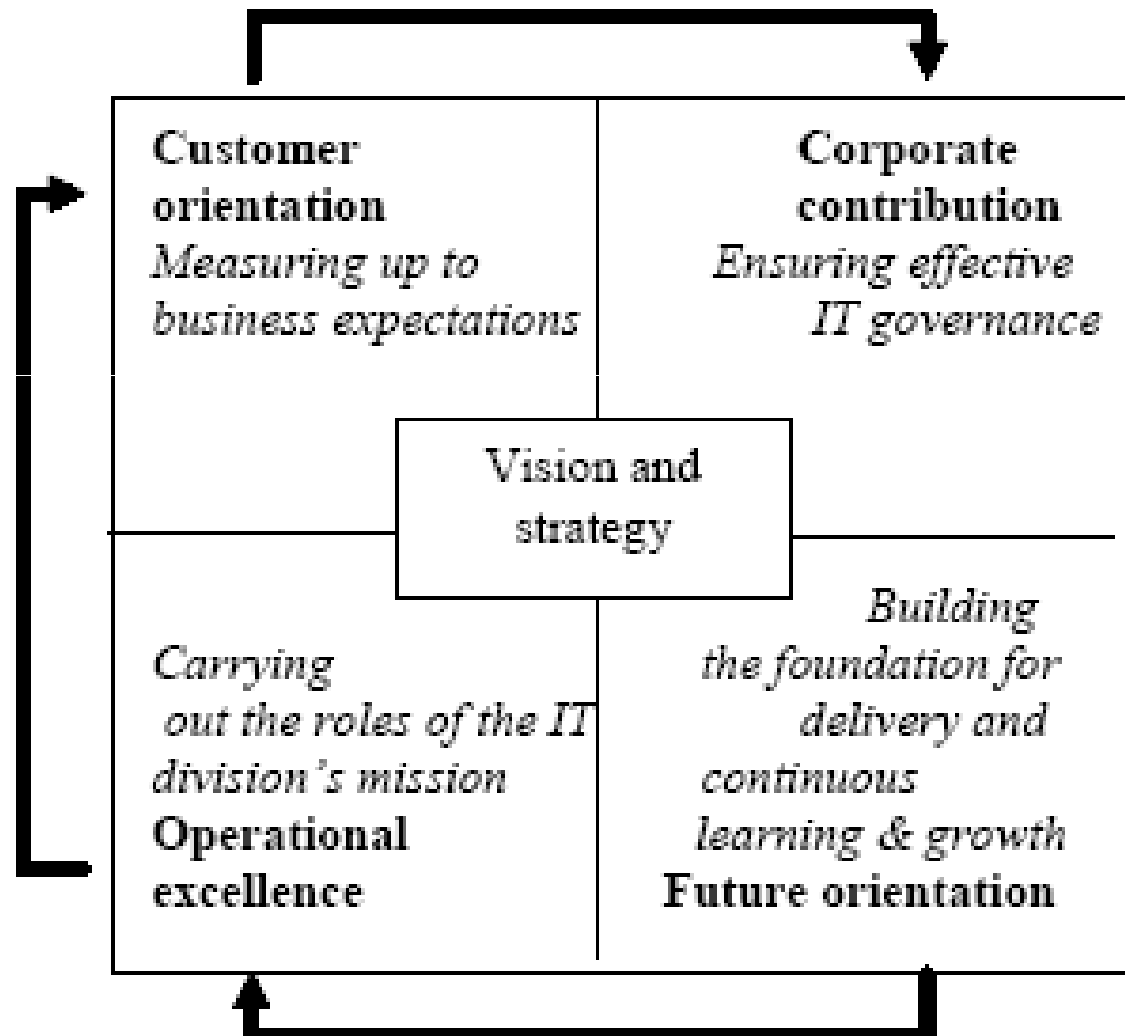
IT strategic planning is standard practice and exceptions would be noticed by management. IT strategic planning is a defined management function with senior level responsibilities. With respect to the IT strategic planning process, management is able to monitor it, make informed decisions based on it and measure its effectiveness. Both short-range and long-range IT planning occurs and is cascaded down into the organisation, with updates done as needed. The IT strategy and organisation-wide strategy are increasingly becoming more coordinated by addressing business processes and value-added capabilities and by leveraging the use of applications and technologies through business process re-engineering. There is a well-defined process for balancing the internal and external resources required in system development and operations. Benchmarking against industry norms and competitors is becoming increasingly formalised.

### **5 Optimised**

IT strategic planning is a documented, living process, is continuously considered in business goal setting and results in discernable business value through investments in IT. Risk and value added considerations are continuously updated in the IT strategic planning process. There is an IT strategic planning function that is integral to the business planning function. Realistic long-range IT plans are developed and constantly being updated to reflect changing technology and business-related developments. Short-range IT plans contain project task milestones and deliverables, which are continuously monitored and updated, as changes occur. Benchmarking against well-understood and reliable industry norms is a well-defined process and is integrated with the strategy formulation process. The IT organisation identifies and leverages new technology developments to drive the creation of new business capabilities and improve the competitive advantage of the organisation.

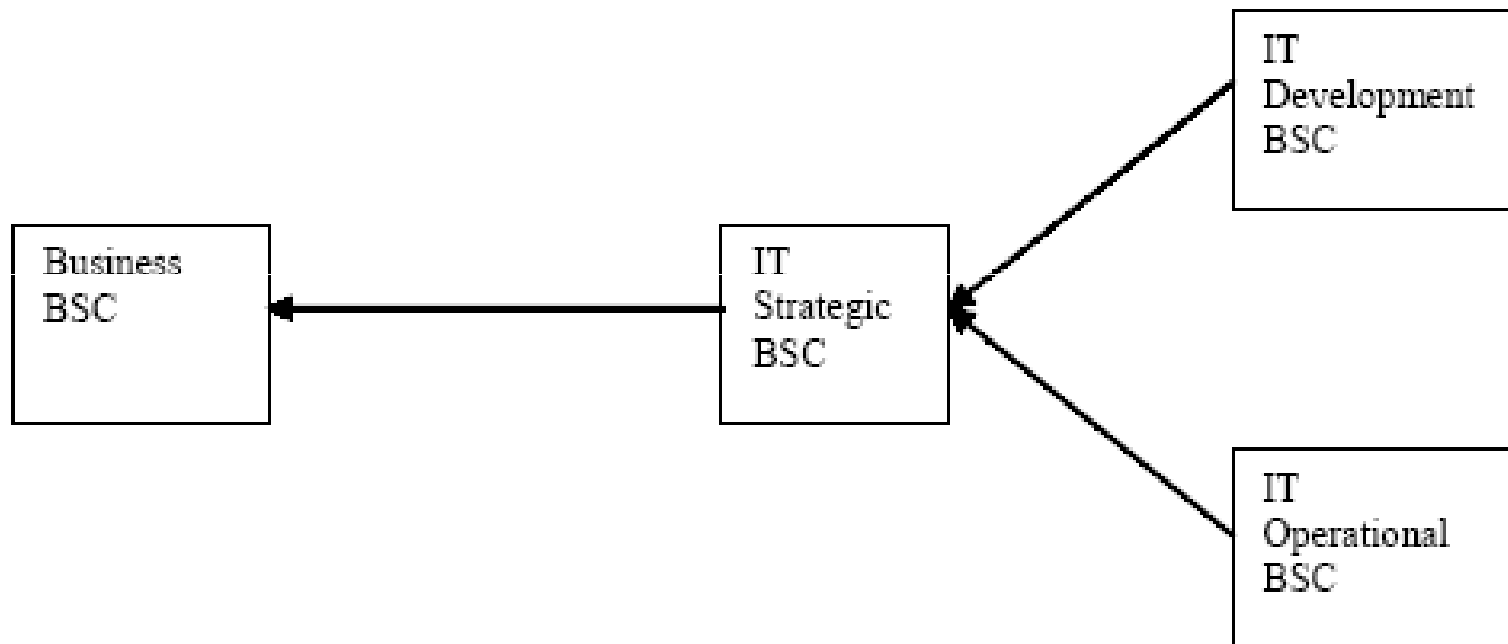


# Alignment through the IT Balanced Scorecard

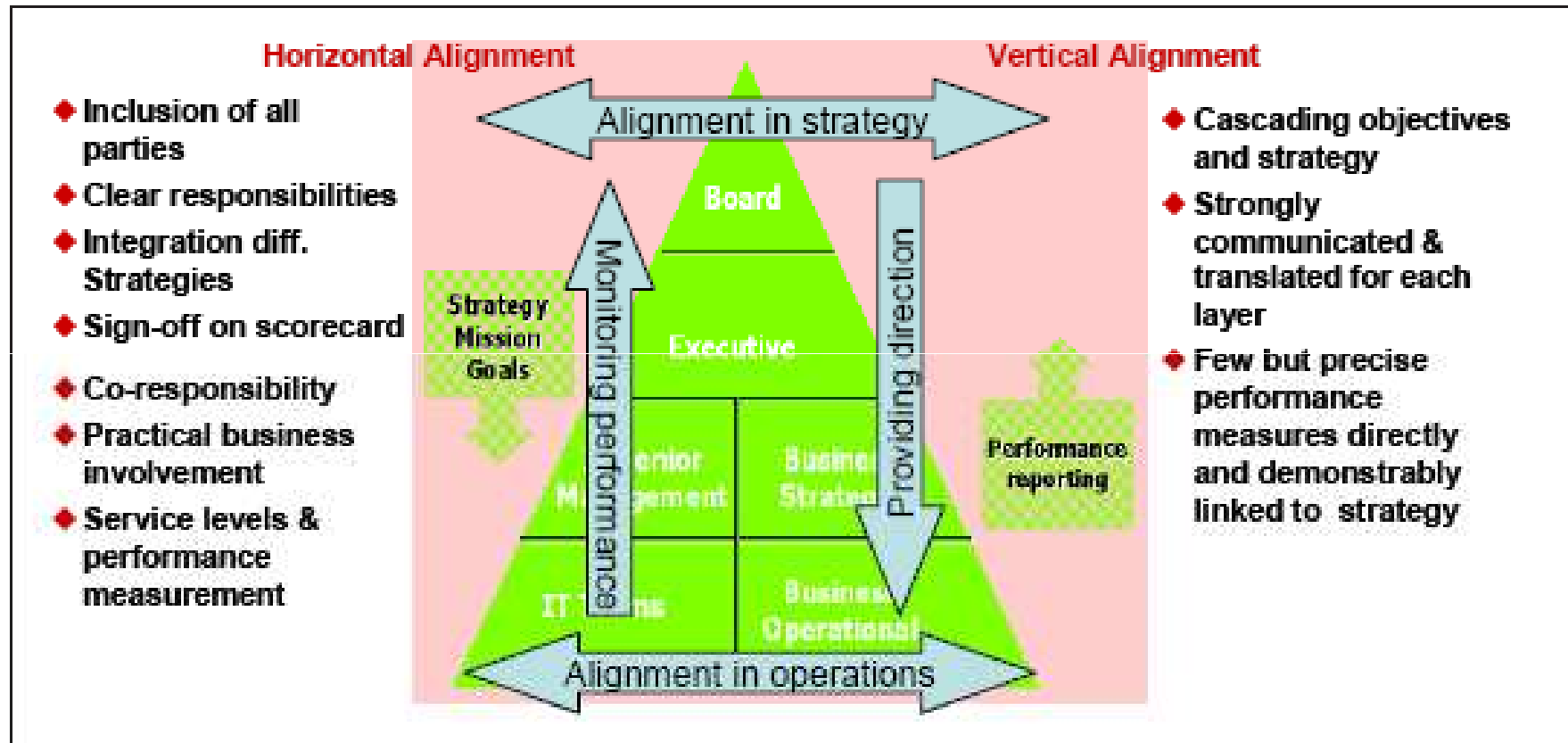




# ***Cascade of Balanced Scorecards***



# Vertical and Horizontal Alignment Practises



Guldentops, E. (2003). *IT Governance: Part and parcel of Corporate Governance*. CIO Summit, European Financial Management & Marketing (EFMA) Conference, Brussels.



# Enablers — Inhibitors of Strategic Alignment



ENABLERS	INHIBITORS
Senior executive support for IT	IT/business lack close relationships
IT involved in strategy development	IT does not prioritise well
IT understands the business	IT fails to meet commitments
Business-IT partnerships	IT does not understand the business
Well-prioritised IT projects	Senior executives do not support IT
IT demonstrates leadership	IT management lack leadership

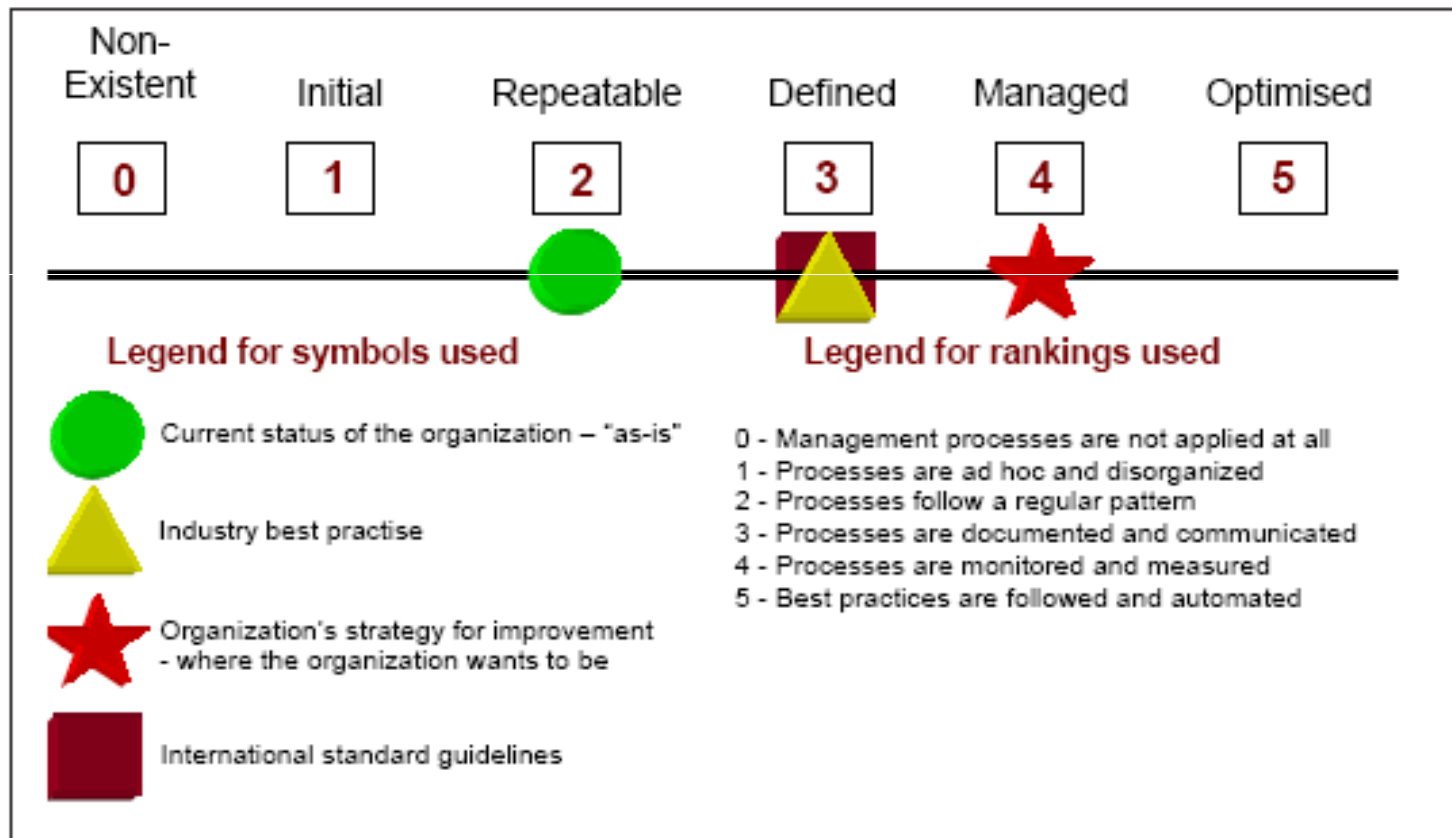
*Luftman, J. & Brier, T. (1999). Achieving and sustaining Business-IT alignment. California Management Review, 42(1), 109-122.*



# Maturity Models for Strategic Alignment



## ❖ *Generic Maturity Model (CobiT's Framework)*







## Strategic Alignment Maturity Levels (Luftman)



Criteria	Attribute	Characteristics level 1	Characteristics level 5
Communications	Understanding of business by IT	Minimum	Pervasive
	Understanding of IT by business	Minimum	Pervasive
	Inter/intra-organisational learning	Casual, ad-hoc	Strong and structured
	Protocol rigidity	Command and control	Informal
Competency/value measurement	Knowledge sharing	Ad-hoc	Extra-enterprise
	Liaison(s) breadth/effectiveness	None or ad-hoc	Extra-enterprise
	IT metrics	Technical, not related to business	Extended to external partners
	Business metrics	Ad-hoc, not related to IT	Extended to external partners
	Balanced metrics	Ad-hoc unlinked	Business, partner, & IT metrics
	Service Level Agreements	Sporadically present	Extended to external partners
Governance	Benchmarking	Not generally practised	Routinely performed with partners
	Formal assessments/reviews	None	Routinely performed
	Continuous improvement	None	Routinely performed
	Business strategic planning	Ad-hoc	
	IT strategic planning	Ad-hoc	
	Reporting/organization structure	Central/decentral, CIO report to CFO	
Partnership	Budgetary control	Cost center, erratic spending	Integrated across, external
	IT investment management	Cost based, erratic spending	Integrated across, external
	Steering committee(s)	Not formal/regular	CIO reports to CEO, federated
	Prioritization process	Reactive	Investment center, profit center
	Business perception of IT value	IT perceived as a cost of business	Business value
	Role of IT in strategic business planning	No seat at the business table	Partnership
Scope and architecture	Shared goals, risks, rewards/penalties	IT takes risk with little reward	Value added partner
	IT program management	Ad-hoc	
	Relationship/trust style	Conflict/minimum	
	Business sponsor/champion	None	
	Traditional enabler/driver, external	Traditional (e.g. accounting, email)	
	Standards articulation	None or ad-hoc	
Skills	Architectural integration	No formal integration	
	Functional organization		
	Enterprise		
	Inter-enterprise		
	Architectural transparency, flexibility	None	
	Innovation, entrepreneurship	Discouraged	
	Locus of Power	In the business	
	Management style	Command and control	
	Change readiness	Resistant to change	
	Career crossover	None	
	Education, cross-training	None	
	Attract and retain best-talent	No program	



# Strategic Alignment Maturity Model (Duffy)



<p><b>Maturity Level One: “Uneasy Alliance”</b></p> <p>In this stage, there is a fundamental disconnect between the technology executive and the rest of corporate management. IT responds to business demands with little understanding of how the technology can contribute to value. IT is viewed primarily as something to make the company more efficient. Business units have little understanding of technology and prefer to hold the IT organisation accountable for the success and/or failure of any IT-related project.</p>	<p><b>Maturity Level Two: “Supplier/Consumer Relationship”</b></p> <p>If IT has a strategic plan it is developed in response to the corporate strategy. IT is probably viewed as a cost center and there is little appreciation for the value that IT contributes to corporate success. In this stage, IT is still not viewed as a strategic tool and IT executives are unlikely to be involved in developing corporate strategy.</p>
<p><b>Maturity Level Three: “Co-dependence/Grudging Respect”</b></p> <p>In this stage, the business is dependent on IT and there are early signs of recognition that it is a strategic tool. CIOs are becoming more knowledgeable about cross-functional business processes because of ERP, CRM, etc. The Internet and interest in e-business forces some level of IT/business alignment. CEO's begin to recognize that IT is a competitive tool.</p>	<p><b>Maturity Level Four: “United we succeed, divided we fail”</b></p> <p>In this stage, IT and business are inextricably entwined. Business executives have less time to prove they can deliver. Business cannot continue without IT and IT has little real value if it is not to support the corporate strategy. There is only a single strategy and it incorporates both IT and business. Whether the business is a pure play Internet company, or a “bricks 'n clicks” company, IT and business move in lockstep.</p>





# ***Authority and Membership of IT Strategy/Steering Committee***



	IT Strategy Committee	IT Steering Committee
<b>Authority</b>	<ul style="list-style-type: none"><li>• Advises the Board and Management on IT strategy</li><li>• Is delegated by the Board to provide input to the strategy and prepare its approval</li><li>• Focuses on current and future strategic IT issues</li></ul>	<ul style="list-style-type: none"><li>• Assists the Executive in the delivery of the IT strategy</li><li>• Oversees day-to-day management of IT service delivery and IT projects</li><li>• Focuses on implementation</li></ul>
<b>Membership</b>	<ul style="list-style-type: none"><li>• Board members and (specialist) non-Board members</li></ul>	<ul style="list-style-type: none"><li>• Sponsoring executive</li><li>• Business executive (key users)</li><li>• CIO</li><li>• Key advisors as required (IT, audit, legal, finance)</li></ul>



## ***Critical Success Factors for Sustaining Steering Committees***



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Bureaucracy	Focus on reduction/elimination to expedite opportunities to leverage IT
Career Building	Opportunities for participants to learn and expand responsibilities
Communication	Primary vehicle for IT and business discussions and sharing knowledge across parts of the organisation
Complex Decisions	Do not get involved in 'mundane areas'
Influence/Empowerment	Authority to have decisions carried out
Low hanging fruit/Quick hits	Immediate changes carried out when appropriate
Marketing	Vehicle for 'selling' the value of IT to the business
Objective Measurement	Formal assessment and review of IT's business contributions
Ownership	Responsible/accountable for the decisions made
Priorities	Primary vehicle for selecting what is done, and how much resources to allocate
Relationships	Partnerships of business and IT
Right Participants	Cooperative, committed, respected team members with knowledge of business and IT
Share risks	Equal accountability, recognition, responsibility, rewards, and uncertainty
Structure, facilitator	Processes and leadership to ensure the right focus

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# ***Determinants of Centralised/Decentralised IT Organisation***



	Centralized	Decentralized
<b>Business strategy</b>	Cost focus	Innovation focus
<b>Business governance</b>	Centralised	Decentralised
<b>Organisation size</b>	Small	Large
<b>Information intensity</b>	Low	High
<b>Environment stability</b>	High	Low
<b>Business competency</b>	Low	High