

1 Introduction to IT/business alignment, planning, execution and governance

On Change and Innovation:

*"Never be afraid to try something new.
Remember, amateurs built the Ark,
Professionals built the Titanic!"*

- Anonymous

1.0 What is covered in this chapter?

This chapter contains:

- an overview and execution summary of the key IT/business alignment, planning, execution, governance issues, constraints and opportunities and processes
- discussion of the roles of the Board, and responsibilities of executive management and the CIO
- a review of the value propositions for IT governance
- an overview of IT demand management, decision rights, Balanced Scorecard metrics and how much governance is required
- identifying the steps in making IT governance real
- discussion of an assessment technique to determine the current level of IT governance maturity in an organization, and illustration of a blueprint of an ideal, future target state of IT governance

1.1 Overview

The issues, opportunities and challenges of aligning information technology more closely with an organization, and effectively governing an organization's information technology (IT) investments, resources, major initiatives and superior uninterrupted service, is becoming a major concern of the Board and executive management in enterprises on a global basis. Information technology (IT) has become a vital function in most organizations, and is fundamental to support and sustain innovation and growth.

Therefore, a comprehensive top-down approach, with bottom-up execution of IT governance, which includes all the activities of business/IT alignment, planning, execution and governance of IT, as well as the leadership of those entrusted with the task, is critical to achieve a cost effective solution. Effective 'management' includes the activities of planning, investment, integration, measurement and deployment, and providing the services required to manage a complex strategic asset.

None of this is easy, or obvious, and this pragmatic and actionable 'how to' guide is intended to draw from about 200 current and emerging best practice sources, and over 20 IT governance best practice case studies, some of which are featured in the book.

The purpose of the book is not to repeat in greater detail, what has been published previously. Instead, it aims to describe each of the major IT governance components as part of an overall comprehensive framework and roadmap, in sufficient detail for executives, managers and professionals; to serve as a guideline and starting point for any organization in any industry; to develop and tailor a workable and realistic approach to its environment, strategies, priorities, capabilities and available resources; and to transition IT organizations to a higher level of maturity, effectiveness and responsiveness.

Today's business challenges

The pace of change is accelerating on a global basis. Reducing costs, increasing speed to market, continuous improvements and innovation, greater compliance, more effective accountability, globalization, and more demanding and sophisticated customers, are some of the many pressures facing business and IT executives.

Figure 1.1 illustrates select pressures and trends that organizations must deal with, in a rapidly and dynamically changing global environment.

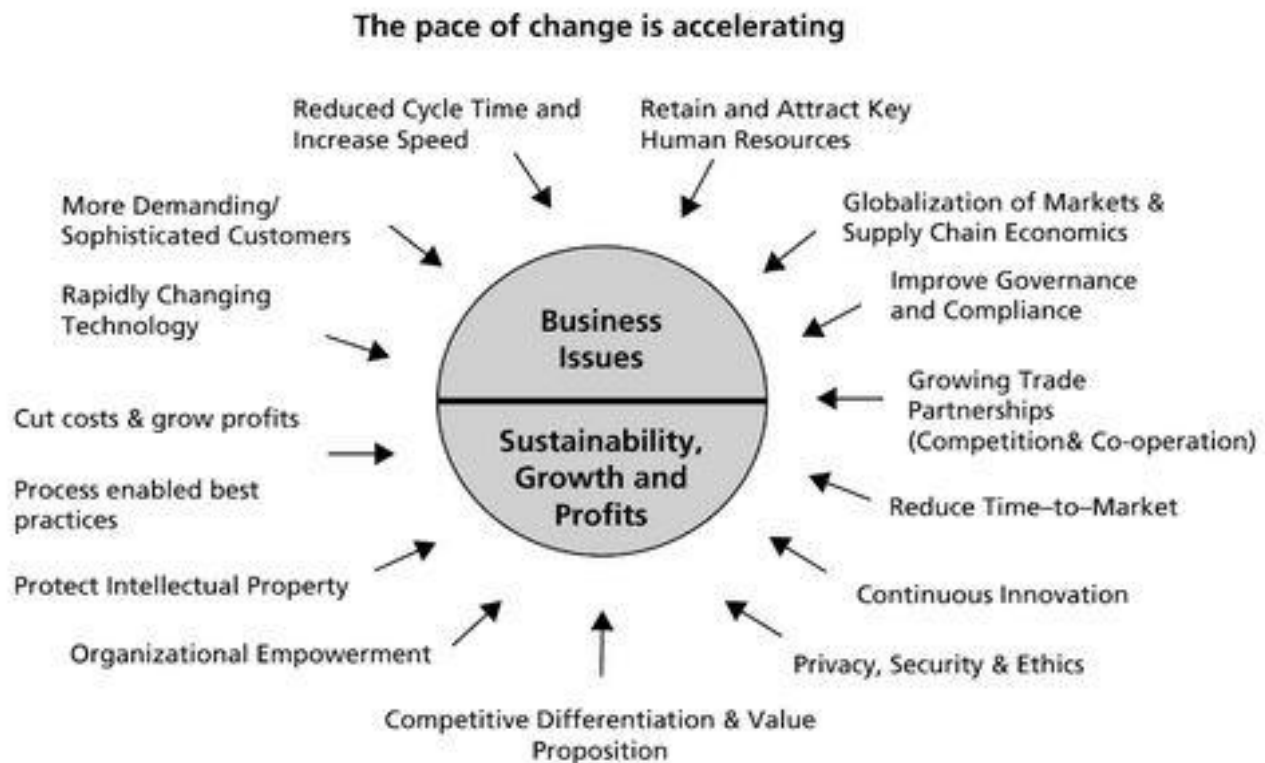


Figure 1.1 Today's business challenges

Scope and definition of enterprise governance and its relationship to business and IT governance

According to the International Federation of Accountants (IFAC),

"enterprise governance constitutes the entire accountability framework of the organization."

- International Federation of Accountants (IFAC)

Enterprise governance is the set of responsibilities and practices exercised by the Board and executive management, with the goal of providing strategic direction, ensuring that plans and objectives are achieved, assessing that risks are proactively managed, and assuring that the enterprise's resources are used responsibly.

Enterprise governance deals with the separation of ownership and control of an organization, while business governance focuses on the direction and control of the business, and IT governance focuses on the direction and control of IT. Figure 1.2 compares and differentiates the key characteristics of enterprise versus business versus IT governance.

| Enterprise Governance | Business Governance | IT Governance |
|--|--|--|
| Separation of Ownership & Control | Direction & Control of the Business | Direction and Control of IT |
| <ul style="list-style-type: none"> • Roles of Board and Executives • Regulatory Compliance • Shareholder Rights • Business Operations & Control • Financial Accounting & Reporting • Risk Management | <ul style="list-style-type: none"> • Business Strategy, Plans & Objectives • Business Processes & Activities • Innovation and Research • Intellectual Capital • Human Resource Management • Performance Metrics and Controls • Asset Management | <ul style="list-style-type: none"> • IT Strategy, Plans & Objectives • Alignment with Business Plans and Objectives • IT Assets and Resources • Demand Management • Value Delivery and Execution Management (PM and ITSMD) • Risk, Change & Performance Management |

Figure 1.2 Enterprise governance versus business governance versus IT governance

The Board's role in IT governance

Historically, the Board of Directors of public companies has focused, through committees, on such issues as audit, executive compensation, executive succession and planning.

With the growing importance of IT in an increasing number of organizations, the Board is becoming a committee that focuses on IT strategy, investments and governance as well. Based on a report by the IT Governance Institute,

"IT governance is the responsibility of the Board of Directors and executive management. It is an integral part of enterprise governance and consists of the leadership and organizational structures and processes that ensure that the organization's IT function sustains and extends the organizations strategies and objectives."

- IT Governance Institute, 2003

Major challenges and issues faced by IT

In our research, we compiled a list of IT challenges and issues, identified by multiple independent sources. There appears to be a common thread running through these issues and therefore, we have summarized them into strategic, value enhancing and execution questions.

Board and executive questions for IT:

- Does the IT strategy align with the business strategy?
- Is the IT investment justified, based on its contributions to the business?
- How likely will IT meet or exceed its plans, objectives and initiatives?
- Is IT being managed prudently or effectively? How is it measured?
- How is IT delivering value? Is there a consistent IT business case format used for justifying IT investments?
- Is IT developing and maintaining constructive relationships with customers, vendors and others?
- Is IT delivering projects and services on time, within scope, within budget and with high quality?
- Is IT staffed adequately, with the right skills and competencies?
- Is there a standard measurement for IT investment across the firm?
- How does IT management and operations compare to other best practice organizations?
- How is IT managing and planning for contingencies, disasters, security, and back-up?
- How is IT measuring its performance? What are the key performance measures?
- How effectively is IT communicating its progress and problems to its constituents?
- What controls and documentation have been instituted in IT? Are they sufficient?
- Does the Board review and possibly approve the IT strategy?
- Is a risk management policy, assessment and mitigation practice followed for IT?
- Is IT compliant to federal, state, country (for global organizations) regulations, and to internal policies and controls?
- Are IT audit policies, procedures and processes in place and followed?
- Is there a succession plan in place for the CIO and key direct reports?

Top issues identified and ranked by over 100 CIOs in a CIO Magazine survey completed in 2006 (CIO Magazine, 2006):

1. align IT strategy with the business strategy and governance
2. meeting the business needs effectively
3. infrastructure and Service Management (reliability and scalability)
4. coping with accelerating change (and become one of the key drivers of innovation)
5. dealing with senior management and the Board (get a seat at the 'C' table)
6. managing costs, budgets and resources (internal and external)
7. keeping up with technology
8. recruiting and retaining staff
9. executing projects effectively (time, cost and resource management)
10. maintaining skills and knowledge (continuous learning)

Select issues addressed by a panel of CIOs of global organizations, such as Pepsi, GE, Ogilvy and Mather and Footstar, at a recent Society for Information Management (SIM) Chapter meeting (Selig, March 15, 2007):

- How do you align the IT strategy with the business strategy? What processes and tools are used? Who is involved? What worked? What did not?
- How, and in what areas, is IT delivering value to your organizations? How is it measured?
- How do you ensure that IT delivers on its plans and commitments, and executes effectively? Program/project management? IT Service Management and delivery? Security? Business and IT continuity? Performance metrics? Other?
- How is IT developing/sustaining constructive and positive relationships with its customer community? Executive management? Vendors?
- What IT controls, governance and compliance frameworks, processes, tools and techniques are being used? What worked? What did not?
- Has your business aligned itself with technology, innovation, the customer, and is it open to managing accelerating change?
- How is IT performance measured? What KPIs are used at CIO level? Above CIO Level? Below CIO level?
- How effective is IT in marketing and communicating its progress and performance results to its constituents? What tools and techniques are used? How often?
- How do you sustain continuous improvement initiatives to increase the level of IT maturity and effectiveness, staff development, constituent ownership and decision rights?
- How are you sustaining compliance processes and reporting?
- Does the Board/operating committee/senior business leadership, review and approve the IT strategy, priorities and funding? Major changes to plan, programs and budgets?

Summary of key strategic, value enhancing and execution questions:

Strategic questions - Are we doing the right thing?

Is the investment in IT:

- in line with our business vision and strategy?
- consistent with our business principles, plan and direction?
- contributing to our strategic objectives, sustainable competitive differentiation and business continuity support?
- providing optimum value at an acceptable level of risk?
- representing a long-term view (roadmap)
- including an architectural roadmap, based on a detailed analysis of the current state or condition of IT?

Value questions – Are we getting the benefits?

Is there:

- a clear and shared understanding and commitment to achieve the expected benefits?
- clear accountability for achieving the benefits, which should be linked to MBOs and incentive compensation schemes, for individuals and business units, or functional areas?

Are they:

- based on relevant and meaningful metrics?
- based on a consistent benefits realization process and sign-off?

Delivery and execution questions – Are we deploying well and effectively? How do we measure our results?

Metrics include:

- scalable, disciplined and consistent management, governance, delivery of quality processes
- appropriate and sufficient resources available with the right competencies, capabilities and attitudes
- a consistent set (of metrics) linked to critical success factors (CSFs) and realistic key performance indicators (KPIs)
- succession planning

Figure 1.3 summarizes the major IT challenges being addressed by a large, global software organization, as part of its IT planning and governance process.



Figure 1.3 Major challenges for IT

Basically, it comes down to the need for a plan that can be executed. At the same time, the role of the CIO is also undergoing significant change. Successful CIOs recognize that IT has become far more than a means of increasing efficiency and reducing costs. Rather, they see IT as a prime stimulus for, and enabler of, business innovation – and themselves as key collaborators in a process that develops business and IT strategies in unison. Throughout the book, we address many of these challenges and issues.

1.2 Definition, purpose and scope of IT governance

Definition of IT governance:

Governance formalizes and clarifies oversight, accountability and decision rights for a wide array of IT strategy, resource and control activities. It is a collection of management, planning and performance review policies, practices and processes; with associated decision rights, which establish authority, controls and performance metrics over investments, plans, budgets, commitments, services, major changes, security, privacy, business continuity and compliance with laws and organizational policies.

Purpose of IT governance

IT governance:

- aligns IT investments and priorities more closely with the business
- manages, evaluates, prioritizes, funds, measures and monitors requests for IT services, and the resulting work and deliverables, in a more consistent and repeatable manner that optimize returns to the business
- maintains responsible utilization of resources and assets
- establishes and clarifies accountability and decision rights (clearly defines roles and authority)
- ensures that IT delivers on its plans, budgets and commitments
- manages major risks, threats, change and contingencies proactively
- improves IT organizational performance, compliance, maturity, staff development and outsourcing initiatives
- improves the voice of the customer (VOC), demand management and overall customer and constituent satisfaction and responsiveness
- manages and thinks globally, but acts locally
- champions innovation within the IT function and the business

Scope of IT Governance:

Key IT governance strategy and resource decisions must address the following topics:
(Modified from Weill and Ross, 2004; Popper, 2000)

- **IT principles** – high level statements about how IT is used in the business (eg scale, simplify and integrate; reduce TCO (Total Cost of Operations) and self fund by re-investing savings; invest in customer facing systems; transform business and IT through business process transformation; strategic plan directions, PMO (project management office), sustain innovation and assure regulatory compliance, etc.)
- **IT architecture** – organizing logic for data, applications and infrastructure captured in a set of policies, relationships, processes, standards and technical choices, to achieve desired business and technical integration and standardization
- **SOA architecture** – service oriented architecture (SOA) is a business-centric IT architectural approach that supports the integration of the business as linked, repeatable business tasks or services; SOA helps users build composite applications that draw upon functionality from multiple sources within and beyond the enterprise to support business processes
- **IT infrastructure** – centrally co-ordinated, based on shared IT services that provide the foundation for the enterprise's IT capability and support

- **business application needs** – specifying the business need for purchased or internally developed IT applications
- **IT investment and prioritization** – decisions about how much and where to invest in IT (eg capital and expense), including development and maintenance projects, infrastructure, security, people, etc.
- **people (human capital) development** – decisions about how to develop and maintain global IT leadership management succession and technical skills and competencies (eg how much and where to spend on training and development, industry individual and organizational certifications, etc.)
- **IT governance policies, processes, mechanisms, tools and metrics** – decisions on composition and roles of steering groups, advisory councils, technical and architecture working committees, project teams; key performance indicators (KPIs); chargeback alternatives; performance reporting, meaningful audit process and the need to have a business owner for each project and investment

Who benefits from effective and sustainable IT governance?

Everyone in an organization benefits from effective IT governance. According to Charles Popper (Popper, January 2003), the following audiences benefit:

- What executives get
 - business improvements that result from knowledgeable participation in IT decision-making from an enterprise perspective
 - ensures that key IT investments support the business and provide optimum returns to the business
 - ensures compliance with laws and regulations
- What mid-level business managers get
 - convinces senior business managers that their combined business-IT resources are being managed effectively
 - helps to communicate with peers in IT to ensure that business services for which they are responsible will meet commitments
- What senior IT managers get
 - obtains sponsorship and support and a clear focus on important strategic and operational initiatives
 - improves customer relationships by delivering results in a more predictable and consistent manner, with the involvement of the customer
- What program/project and operations managers get
 - helps in resolving issues, reviewing progress and enabling faster decisions
- What everyone gets
 - facilitates communications about how IT contributes to the business
 - improves co-ordination, co-operation, communications and synergy across the organization
 - less stress

Value propositions from best-in-class companies on business and/or IT governance

Based on primary and secondary market research, it is possible to identify a number of benefits attributed to major organizations relating to improved governance business and/or IT structures and environments (Selig, March 15, 2006):

Effective and sustainable governance:

- lowers cost of operations by accomplishing more work consistently in less time and with fewer resources without sacrificing quality (General Motors)
- provides better control and more consistent approach to governance, prioritization, development funding and operations (Kodak)
- develops a better working relationship and communications with the customer (Nortel)
- provides for a consistent process for more effectively tracking progress, solving problems, escalating issues and gate reviews (Cigna)
- aligns initiatives and investments more directly with business strategy (GE)
- improves governance, communications, visibility and risk mitigation for all constituents (Robbins Gioia)
- facilitates business and regulatory compliance with documentation and traceability as evidence (Purdue Pharma)
- increases our customer satisfaction by listening proactively to the customers and validating requirements on an iterative and frequent basis (Johnson and Johnson)
- reuse of consistent and repeatable processes helps to reduce time and costs and speeds up higher quality deliverables (IBM)

Successful IT governance is built on three critical pillars – leadership, organization and decision rights, scalable processes and enabling technologies

Effective IT governance is built on three critical pillars. These pillars include: leadership, organization and decision rights, flexible and scalable processes, and the use of enabling technology (Luftman, 2004; Board Effectiveness Partners, 2004; Melnicoff, 2005; Pultorak and Kerrigan, 2005):

- **Leadership, organization and decision rights** - define the organization structure, roles and responsibilities, decision rights (decision influencers and makers), a shared vision and interface/integration touch points and champions for proactive change:
 - roles and responsibilities are well defined with respect to each of the IT governance components and processes, including the steering and review hierarchies for investment authorizations, resolution of issues and formal periodic reviews
 - clear hand-off and interface agreements and contracts exist for internal and external work and deliverables
 - motivated leaders and change champions with the right talent, drive and competencies
 - meaningful metrics
 - CIO is a change agent who links process to technology within the business, and provides the tools for enablement and innovation

- **Flexible and scalable processes** - the IT governance model places heavy emphasis on the importance of process transformation and improvement: (eg planning, project management, portfolio investment management, risk management, IT Service Management and delivery, performance management, vendor management, controls and audits, etc.):
 - processes are well defined, documented, measured
 - processes define interfaces between organizations and ensure that workflow spans boundaries and silos including organization, vendors, geography, technology and culture
 - processes should be flexible, scalable and consistently applied, with common sense
- **Enabling technology** - leverage leading tools and technologies that support the major IT governance components:
 - processes are supported by software tools that support the IT imperatives and components (eg planning and budgeting, portfolio investment management, project management, risk and change management, IT Service Management and delivery processes, financial, asset and performance management and scorecards, etc.)
 - tools provide governance, communications and effectiveness metrics to accelerate decisions, follow-up and management actions

If any one of the above pillars is missing or ineffective, the IT governance initiative will not be effective or sustainable. In addition, over dependence on one dimension over the others will result in sub-optimal performance.

Results of ineffective IT governance can be devastating

A number of negative impacts may result from poor IT governance. These include the following (IT Governance Institute, *The CEO's Guide to IT Value and Risk*, 2006):

- business losses and disruptions, damaged reputations and weakened competitive positions
 - Nike lost an estimated \$200 million, while running into difficulties installing a supply chain software system
 - Hershey attempted to install SAP several years ago and at that time, was not successful; it cost the company significant money and lots of embarrassment
 - Whirlpool ran into significant trouble in attempting to implement a supply chain management system, which did not provide accurate inventory counts at various inventory stages
- schedules not met, higher costs, poorer quality and unsatisfied customers
- core business processes are negatively impacted (eg SAP and other enterprise resource planning systems impact many critical business processes) by poor quality of IT deliverables
 - an operational meltdown of the Southern Pacific-Union Pacific merger was traced largely to the inability to co-ordinate their IT systems
- failure of IT to demonstrate its investment benefits or value propositions

Poor regulatory compliance procedures, controls, audits and/or unethical executive business practices resulted in the demise of such companies as Enron and Andersen, and the jailing of former heads of Tyco and Worldcom. Others such as Parmalat and Global Crossing have also been impacted by compliance issues.

The simple fact is that a poorly executed IT operation will result in the business not working. In addition, business and IT continuity and resumption plans have become critical.

The implications of Sarbanes Oxley Act (SOX) and other regulations on IT governance

In general, governance should be the responsibility of the Board of Directors and executive management in organizations. In order to develop an effective compliance program, executives must understand that compliance can and does involve more than just SOXs. It can involve multiple national, international, local and industry specific regulations, as well as best practices, guidelines and frameworks.

Compliance with a growing number of regulations and laws, regarding financial disclosure, privacy, environmental conformance and others, etc. developed by the SEC, FDA, EPA, Sarbanes-Oxley, HIPPA, Basel II and specific industry-focused regulations, in banking, insurance, brokerage, healthcare, pharmaceutical and others, are creating new and greater IT reporting and systems support requirements for organizations. Much like IT governance, to achieve sustainable compliance, this complex and confusing mix can be approached most effectively as a single comprehensive compliance program that addresses people, process and technology (Sun Microsystems and Deloitte, 2006).

Regulatory, audit and management requirements generally determine the level of management and administrative controls that a company deploys. As an example, Section 302 of Sarbanes-Oxley requires CFOs and CEOs to personally certify and attest to the accuracy of their companies' financial results. Section 404 of Sarbanes-Oxley focuses on financial controls and requires IT to be able to document and trace a company's financials (eg profit and loss, balance sheet, etc.) back to the systems, software and operational processes and sources of the transactions that comprised the numbers. A company has to demonstrate a documented audit trail to be in compliance, and to further demonstrate how an organization plans to sustain that compliance effort. Within IT, the Sarbanes-Oxley Act:

- improves financial reporting/disclosures – new requirement to report on internal controls for financial statements – Section 404
- expands insider accountability – new requirements for code of ethics for executive management and protection for whistleblowers
- means that the external auditors can insist that any gaps in IT controls must be addressed before an overall opinion is reached on the effectiveness of the internal company controls
- requires a back-up for all 'financially significant files, storage of those files and periodic restoration of back-up files'
- requires IT change management tracking and documentation for financial systems
- requires the maintenance of logs for user access to financial data bases, security logs, administrative logs, problem and incident logs, as well as an independent review of the logs to detect any activities that could adversely impact financials
- requires systems documentation and verification that data is properly handed off from one system to another
- strengthens overall corporate governance

In a growing number of companies subject to SOXs, the CIO must internally certify the accuracy of the information audit trail each quarter to support the CEO/ CFO SOX certifications.

There is a growing library of books, articles and documents that provide recommendations on how to deal with these regulatory and legal requirements (Anand, 2006; Ernst and Young, 2005; Forrester Research, March 14, 2004; Protivity, December 2003). In addition, Appendix 1 provides an illustration of a template, used by a manufacturing company as a guideline to help the company track SOX compliance activities and reports.

1.3 Linking the CEO role to achieving business growth, improving profitability and creating an effective governance and compliance environment

The role of the CEO and the executive management team is complex, and requires a balance between sustaining growth and profitability while optimizing organizational effectiveness and complying with the growing and confusing number of regulatory requirements.

Executing enterprise-wide strategic initiatives and managing effective business operations is a complex undertaking that requires effective corporate and IT governance to play a growing role in how the CEO and the executive team deploy the organization's strategy.

As Michael Cinema, President and CEO of Etienne Aligner Group stated, *"The Board of Directors is well aware of its role to oversee the company's organizational strategies, structures, systems, staff, performance and standards. As President, it is my responsibility to ensure that they extend that oversight to the Company's IT as well, and with our growing reliance on IT for competitive advantage, we simply cannot afford to apply to our IT anything less than the level of commitment we apply to overall governance."*

- IT Governance Institute, 2003

Figure 1.4 identifies the attributes that must be addressed for effective growth and profitability. Effective governance is a prominent component for both.

How much governance is required and when is enough, enough?

There are few, if any, standards or guidelines developed that identify and clearly lay out in more detail what level of governance is required for either management or regulatory compliance by an organization. Generally, it is dependent on a number of variables such as:

- investment \$ (capital and expense) criticality to the organization (mission critical)
- degree of business dependency on technology
- strategic corporate value proposition and alternatives for focus (eg growth centric, customer centric, process centric, cost centric, etc.)
- management philosophy and policy (eg first mover versus follower)
- program/project and/or operational importance
- complexity, scope, size and duration of initiative

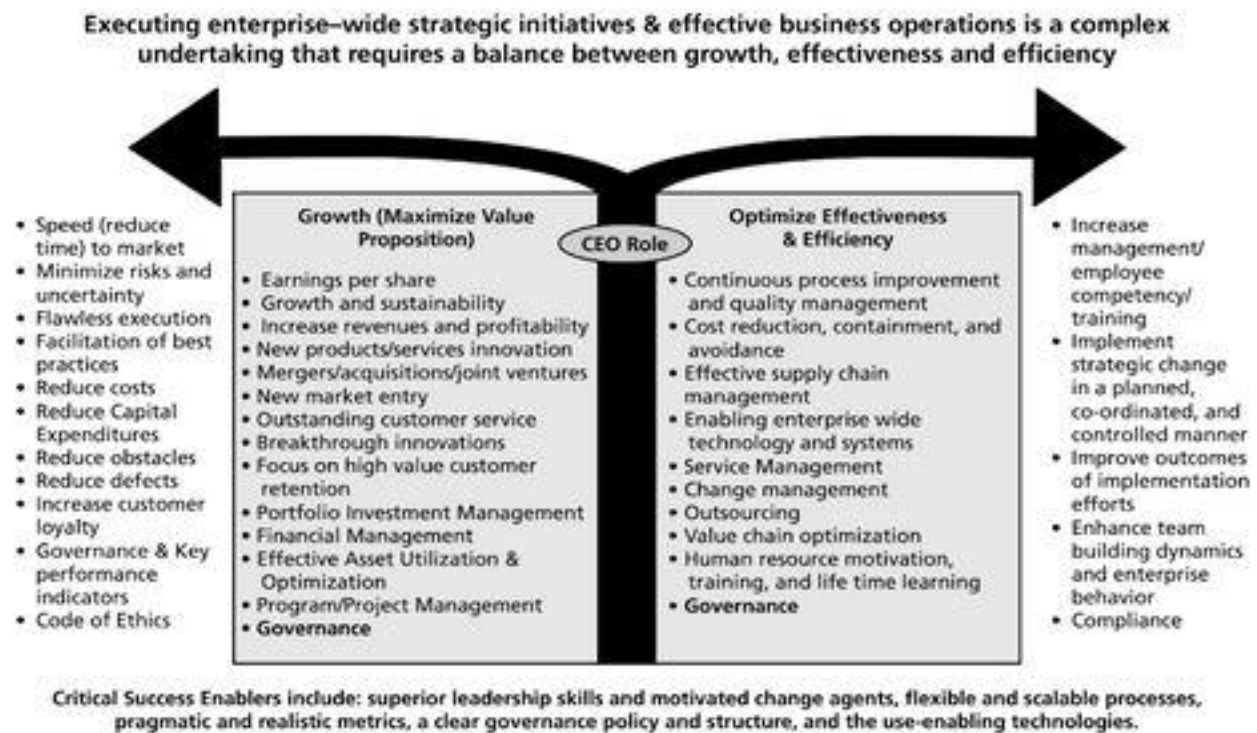


Figure 1.4 Linking the role of the CEO to the success of strategic enterprise initiatives and governance

- number of interfaces and integration requirements with business
- degree of risk and potential impact (of doing or not doing)
- number of organizations, departments, locations and resources involved
- customer or sponsor requirements
- regulatory, legal, control and compliance required
- degree of accountability desired and required
- level of security required or desired
- audit, documentation and traceability requirements

Chapter 2 discusses many of the current and emerging standards, guidelines and frameworks either developed or being developed, that help improve the overall IT alignment, execution, governance, control, strategic sourcing and outsourcing management and performance management processes.