[ITG] Chap 6

Chapter 6: Enterprise Architecture Governance Implementation
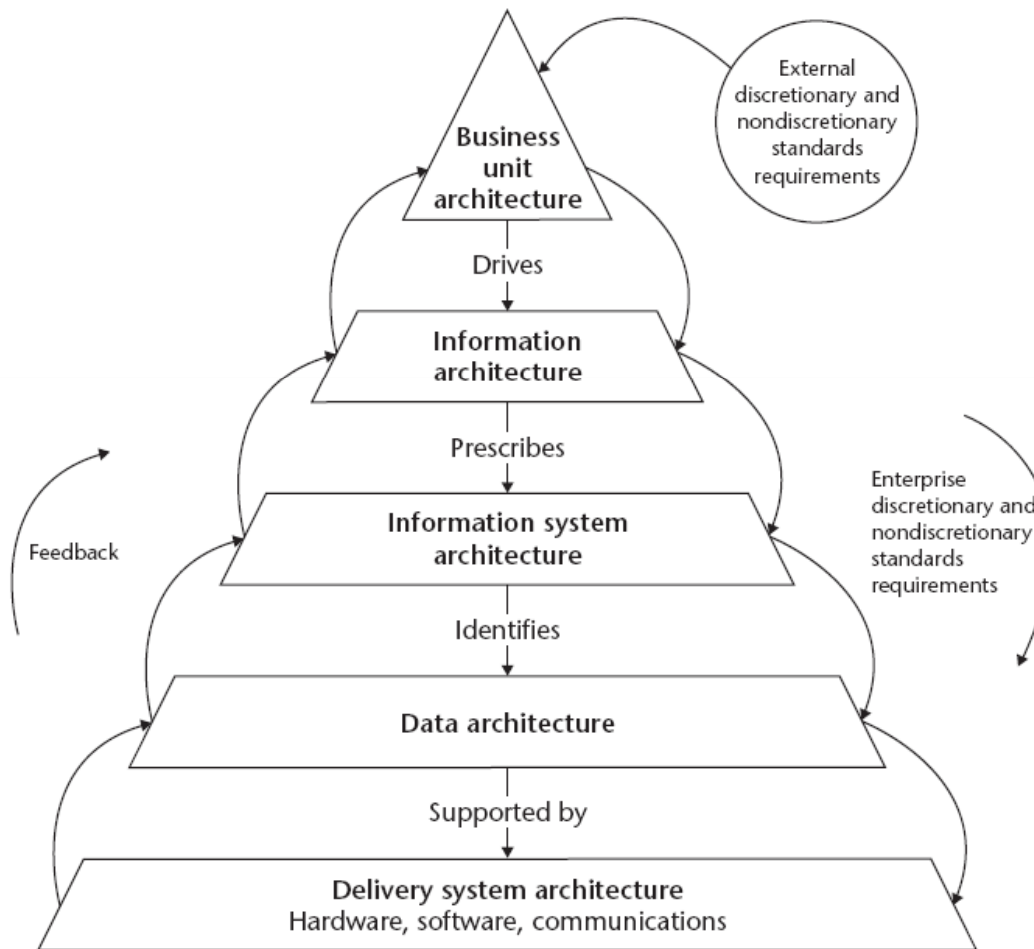
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What Is Enterprise Architecture

❖ representation of a conceptual framework of components and their relationships at a point in time, view of business, matching it with the associated information.

❖ Hard decisions regarding resources, investments, information, applications, and technology all require enterprise architecture.

❖ provides the framework for ensuring that enterprisewide goals, objectives, and policies are properly and accurately reflected in decision making related to building, implementing, or changing information systems and to provide reasonable assurance that standards for interprocess communication, data naming, data representation, data structures, and information systems will be consistently and appropriately applied across the enterprise

Responsibility of CIO

❖ *Make decisions.*

❖ *Manage change.*

❖ *Improve communications.*

❖ *Ensure information technology is acquired and information resources are managed to be consistent with business planning.*

Enterprise Architecture

Source: "Information Management Directions: The Integration Challenge," NIST Special Publication 500–167 (September 1989).

Five layer of Enterprise Architecture (1989, NIST)

1. *Business unit architecture: Business processes*
2. *Information architecture: Information flows and relationships*
3. *Information systems architecture: Applications*
4. *Data architecture: Data descriptions*
5. *Delivery system architecture: Technology infrastructure*

Implementing and Maintaining Enterprise Architecture

❖ *Change management.*

❖ *Legacy systems integration.*

❖ *IT personnel planning.*

❖ *Enterprise architecture compliance, waivers, and certification*

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IT Governance Background

- ❖ Governance development has been driven primarily by the need for transparency of enterprise risks and the protection of shareholder value

- ❖ The pervasive use of information, systems, and technology has created a critical dependency on IT and requires specific focus on IT governance.

- ❖ IT governance plays an important part in the total governance responsibility of the board of directors and executive management and is an integral part of enterprise governance.
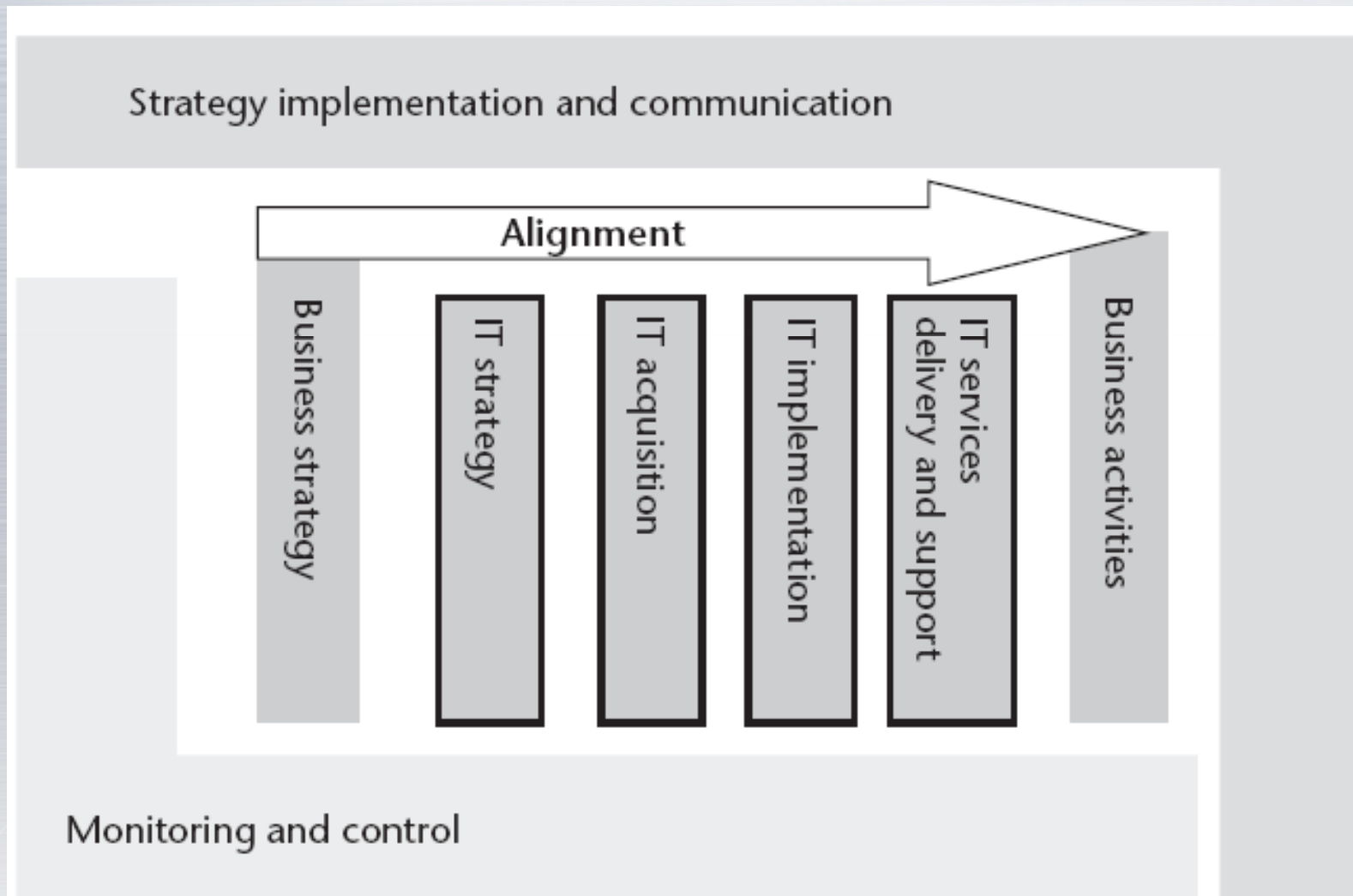
Definition of IT Governance

❖ a system of control that ensures the business objectives are achieved.

By following:

1. Strategic IT infrastructure to enable the business and maximize its benefits
2. Maturity model of the enterprise architecture/IT architecture to ensure IT resources are being used responsibly
3. Partner ability for networking/information flows and relationships
4. Maturity model for IT governance
5. Information and data model for quick knowledge base implementation

Alignment of Business Strategy and IT

IT INFRASTRUCTURE TO ENABLE BUSINESS

The purpose of IT governance is to direct IT endeavors to ensure that performance meets the following objectives:

❖ IT activities are aligned with the business

❖ Value delivery of IT

❖ IT resources management

❖ Business and IT-related risks are being managed appropriately

❖ Performance measurement of IT

Maturity Model for the Enterprise Architecture

Level	Focus	Characteristics
0	No enterprise architecture program.	No enterprise architecture
1	**Initial** — Informal enterprise architecture process is under way.	Processes are ad hoc and informal. Some enterprise architecture processes are defined. There is no unified architecture process across technologies and lines of business. Success depends on individual efforts. Quality of work is inconsistent. There is little communication about the enterprise architecture process and possible improvements.
2	Enterprise architecture process is **Under Development.**	Basic enterprise architecture process program is documented based on Office of Management and Budget Circular A-130 and U.S. Department of Commerce enterprise architecture guidance. Responsibilities are assigned and work is underway. The architecture process has developed clear roles and responsibilities. There is a clear understanding of where the organization is at the present time. Business and IT vision, combined principles, baselines, and targets are identified.
3	**Defined** — Enterprise architecture includes detailed diagrams and technical reference model to promote common understanding.	The architecture is defined and communicated. The process is largely followed. Gap analysis, migration plan, technical reference model, standards profile, and migration plan are completed. Cost-benefits are considered in identifying projects. IT goals and methods are identified. Training and awareness programs are provided at regular intervals. Enterprise architecture is integrated with strategic planning and budgeting processes.

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Maturity Model for the Enterprise Architecture(2)

Level	Focus	Characteristics
4	Enterprise architecture process is **Managed** and measured.	Enterprise architecture is used to guide development and acquisition. Enterprise architecture is updated on a regular cycle to refresh the architecture content and to adjust the strategic planning and budgeting processes based on the feedback received and lessons learned. Enterprise architecture projects are reviewed against architecture standards. Opportunities associated with the architecture process are captured. Organizational personnel understand the architecture and its uses.
5	The continuous improvement of enterprise architecture process is **Optimized.**	Opportunity analysis is used to drive continuous process improvements in enterprise architecture. The process feeds business process reengineering and other characteristics.

Source: U.S. Department of Commerce.

Maturity Model for IT Governance

Level	Focus	Characteristics
0 Not ready	Impossible	It is impossible to get into effective partnerships, as there is a complete lack of information systems through which useful information about customers and products/services relationships can be generated or exchanged.
1 Partial integration	Ad hoc	High risk. There is a possibility of networking only if the partners agree to outsource entire information systems and business processes of the core business to one of the most competent partners in the extended enterprise.
2 Core systems integrated management	Intuitive	With strong leadership, management may contract for limited partnerships within an extended enterprise, but it may require significant empowerment of employees.
3 Fully integrated management	Defined/ integrated	Contracts clarify overall accountability and key performance indicators among partners, and partners are rewarded based on performance against key performance indicators across the enterprise.
4 Monitoring management	Controlled/ measurable	Contracts extend to the core resource sharing level, and monitoring systems have started to be implemented by the partners. There is a clear focus on the identity of world-class levels for products/services.
5 Knowledge management	Ideal/ optimized	Contracts extend to the knowledge-sharing level to meet the customers' expectations on a continuous basis.