

As illustrated in Fig. 2.1, the IT organization receives requests for IT services and commissions suppliers to help meet these requests.

It is important to properly consider the needs of the enterprise and to make sure that the IT services that are purchased bring the expected advantages for the enterprise's development.

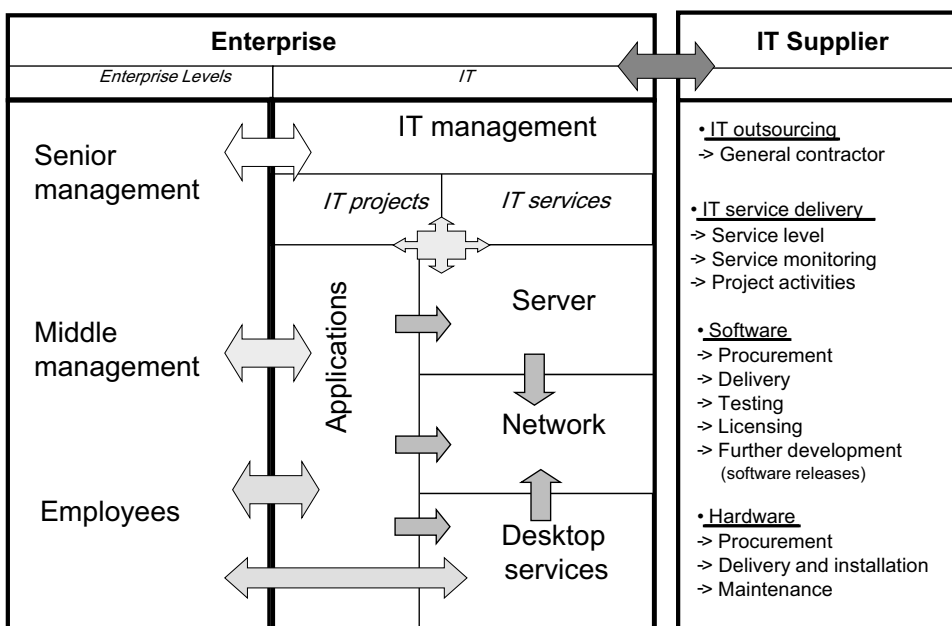


Fig. 2.1 The role of the IT organization

To illustrate this, a distinction is drawn between three different levels of responsibility within an enterprise:

1. Senior management: this term refers to the group of individuals responsible for the wealth and development of the enterprise as a whole and for overseeing its various units.
2. Middle management: this term refers to managers at department level.
3. Employees: this term refers to employees who are responsible for handling individual operational assignments, but not for collective results.

In the context of defining the process map, these three levels are conceived of as distinct roles, with the senior management sometimes being referred to as the “board,” middle management sometimes being referred to as the “IT client,” and employees sometimes being referred to as “IT users.”

2.1 The IT Process Map

An IT process map is as indispensable for executives and IT administrators as a compass is for seafarers navigating the vast oceans. The map enables one to systematically order the various processes and to specify the individual process tasks that are performed within the IT organization.

In the interest of greater clarity, the standard IT processes are grouped according to distinct functional groups, i. e., the superordinate functions they serve to fulfill. This enables one to demarcate the corresponding tasks and to gain a better understanding of process dependencies (See Fig. 2.2).

The functional group known as “**Strategic Decision Making**” is relevant to the strategic level and is primarily a matter of strategic decision-making in the area of IT.

The functional groups known as “**Planning and Controlling**,” “**Account Management**,” and “**Implementation of Changes**” are primarily associated with the tactical level.

The functional group known as “**IT Support**” is primarily associated with the operational level.

Two of the functional groups are distributed across at least two levels:

- **IT Operation and Configuration Management:** This functional group includes both tactical and operational aspects.
- **Supply Management:** The procurement of external services concerns all levels. The CIO may need the support of strategy consultants to restructure the enterprise’s IT organization. A project manager may procure IT services to parameterize a new IT system. A system owner may procure additional storage capacity to make sure that the system continues to run smoothly.

The functional group “**Strategic Decision Making**” includes definitions of the various IT services and descriptions of how they are to be provided so as to optimally meet the

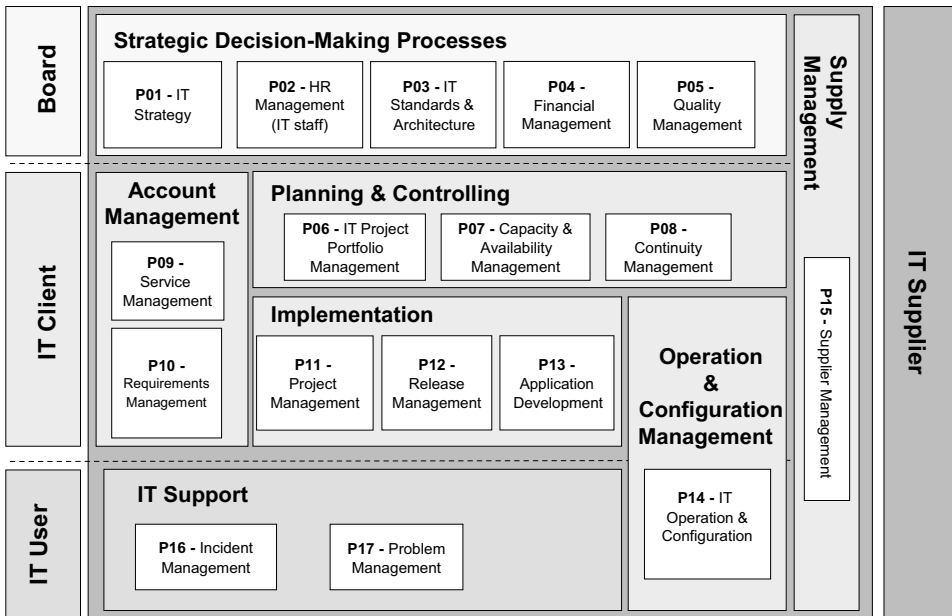


Fig. 2.2 The IT process map

needs of the enterprise. This also ensures a proper consideration of the enterprise's IT security needs.

The following standard processes are defined for this functional group:

- P01 – IT Strategy
- P02 – HR Management
- P03 – IT Standards & Architecture
- P04 – Financial Management
- P05 – Quality Management

The functional group “**Planning and Controlling**” includes the planning of all of the activities and monitoring tasks that are necessary to guarantee the quality of the IT services.

The following processes are defined for this functional group:

- P06 – IT Project Portfolio Management
- P07 – Capacity & Availability Management
- P08 – Continuity Management

The focus of **Account Management** is to optimize client relationships so as to optimally align one's business requirements to the relevant IT guidelines.

The following processes are defined for this functional group:

- P09 – Service Management
- P10 – Requirements Management

The purpose of **Implementation of Changes** is to ensure the timely implementation of planned changes. The changes need to be approved pursuant to an analysis of their associated risks.

The following processes are defined for this functional group:

- P11 – Project Management
- P12 – Release Management
- P13 – Application Development

The purpose of **IT Operation and Configuration Management** is to make sure that the existing IT services continue to run smoothly. The information base for the configuration elements used to secure service provision is updated continuously.

The following process is defined for this functional group:

- P14 – IT Operation & Configuration

Supplier Management encompasses the evaluation of selective sourcing on the basis of the strategic significance of the services in question. This enables the procurement of IT services and IT products from external companies and covers other important IT matters such as licensing and agreements.

The following process is defined for this functional group:

- P15 – Supplier Management

The purpose of **IT Support** is to ensure proper user support and the continued smooth functioning of existing IT services. This includes an early warning mechanism that helps to prevent and mitigate problems.

The following processes are defined for this functional group:

- P16 – Incident Management
- P17 – Problem Management

2.2 Process Dependency

Analyses and descriptions of the 17 standard IT processes give us an indication of the IT organization's complexity. Indeed, all of the various processes are interrelated. Close process dependencies tend to make it harder to maintain a clear view of the individual procedures and activities within a given process. It is therefore essential to clearly demarcate the various processes. Given that it is not possible to integrate all of the many IT activities into a single global process, one is forced to clearly define and ensure the implementation of the relevant process interfaces. In order to be able to provide answers to fundamental questions concerning the functioning of a successful IT organization, one must first arrive at a precise definition of the procedures and gain a good understanding of how IT processes behave.

Processes of various degrees of complexity are initiated by certain triggers. Such triggers are themselves activated by individual employees, groups of employees, or by other processes. In the latter case, the relationship between the processes is defined as a **process dependency**, as is illustrated in Fig. 2.3.

In the example outlined above, process P0X is comprised of three main actions and a status check that is carried out after activity P0X-B. Depending on the result of the status check, the process will either be brought to completion or, if the status is not the desired status, recourse will be taken to process P0Y. In this latter case, process P0Y is directly dependent on process P0X.

Fig. 2.3 Basic process dependency

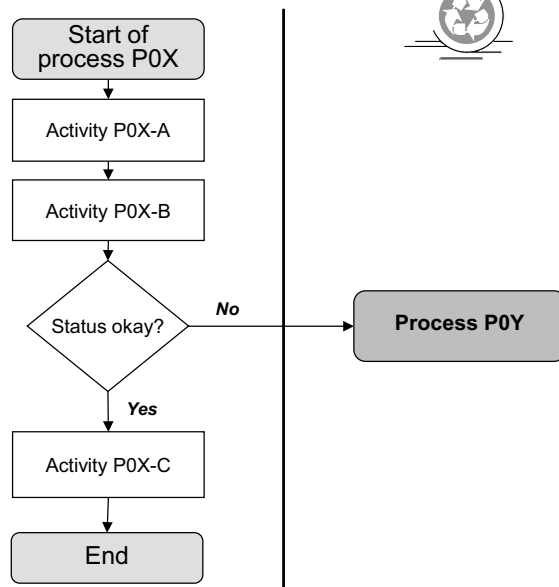
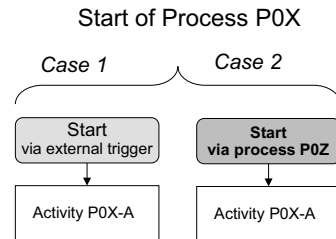


Fig. 2.4 Different ways of activating process



The following symbol is used to signify process dependencies:



The symbol enables one to determine at a glance how many processes are dependent on a given process.

Figure 2.4 shows two different ways of activating process P0X. In Example 1 process P0X is activated by an external trigger. In Example 2 process P0X is dependent on process P0Z and is triggered by process P0Z.

2.3 Principles of IT Governance

IT organizations develop IT services as a means of optimally supporting the various business units within an enterprise. This enables them to determine and record specific client requirements, measure the quality of the provided services, and quantify the utility generated by the services in the form of service invoices. In addition to this, special IT projects are conceived and executed with the aim of securing the further development of the enterprise.

In the face of increasingly complex system dependencies and growing pressures to contain costs, attempts are made in this context to meet service requirements via standard IT processes. In addition to greater efficiency, the standardization of these services can help one to keep the desired benefits of such services in focus whilst at the same time containing IT costs and to thereby secure added value for the enterprise. The implementation of an enhanced service and customer orientation will depend on the introduction of new IT roles and processes whose impact on the procurement, development, and operation of the IT systems is tangible.

The nature of the interaction that takes place between the IT organization and its internal clients is especially critical. Indeed, harmonized interaction between these two is a condition for the successful implementation of the standard IT processes. The management of the relationships between an enterprise's business units and its IT organization

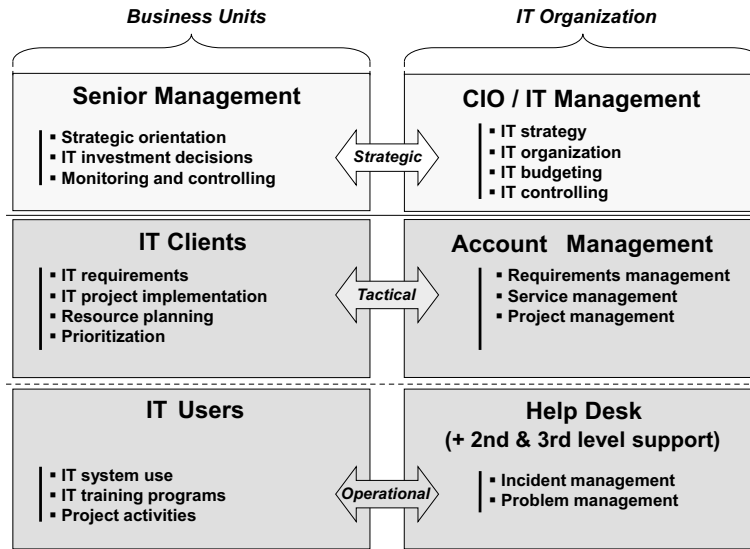


Fig. 2.5 Interfaces between enterprise levels and IT organization

(i. e., IT Governance) is in general a crucial factor when it comes to the successful provision of IT services. The role played by the executive management warrants special mention in this regard because many of the decisions that have a direct impact on the IT organization are made by the executive management. The CIO faces the double challenge of ensuring a streamlined IT organization and exerting influence over the executive management so as to enable sound decision-making. Smooth functioning cooperation at the level of middle management is also essential. Projects, for instance, will only be successful if all of the relevant parties are willing and able to work together.

As seen in the context of IT governance, the enterprise's management must support the implementation of the standard IT processes. There is otherwise no point in making an attempt. IT performance reporting is an important channel of communication in this context, as it can help to ensure the necessary alignment of strategic decision-making and operational management.

As is illustrated in Fig. 2.5, each level of an enterprise will have specific requirements that it hopes will be met by the IT organization.

In addition to meeting the needs of its internal clients, the IT organization is also expected to properly formulate the service requests it issues to external IT service providers, properly arrange for the provision of such services, and properly manage the actual provision of the services. In critical sectors such as the pharmaceutical sector, the medical device sector, and the banking sector, the IT organization will also be expected to take account of the applicable statutory provisions, especially when outsourcing essential IT services.

2.4 Roadmap for Implementing Standard IT Processes

Unlike self-contained tasks, the implementation of a standard process is not a matter of completing a single action. Preparing for the introduction of a standard process takes a lot of time and it often takes a year or more for a process to become well established in an enterprise. In order to ensure the quality of the process, it will first be necessary to introduce a means of measuring its maturity. Doing so will enable the organization to determine where to concentrate its efforts to support the various business units and to measure progress towards full process implementation. It will then be possible to continuously raise the degree to which the various stakeholders in the enterprise are aware of the value of standard processes and the efficiency they enable within the enterprise.

The current state of the enterprise can be expected to play a significant role in this connection. Indeed, IT processes are often introduced as a response to a crisis. The following examples warrant consideration:

Inadequate IT organization

It is advisable in such a context to aim for an incremental introduction. Figure 2.6 offers an outline of the activities that can be initiated to arrive at a favorable position for taking the initial steps.

Company merger

Here, the question arises as to whether and the extent to which the enterprise's IT services are to be outsourced. Otherwise, it may be more cost-effective to simply integrate the one IT organization into the dominant organization. In both cases, it will be advantageous to clearly define and document the relevant IT processes. This will enable one to conduct negotiations in a more professional manner and to arrive at a clear analysis of the organization's development.

Outsourcing IT services

If a decision is made to outsource the enterprise's IT services, then it will be crucial to address the financial, legal, organizational, and technological issues in the framework of a transition project. The option of hiring the IT staff for the IT organization is a central issue. There is a major risk of losing an important knowledge base as a result of employee dismissals, whether these dismissals are desired or not. A financial plan should be established for maintaining key staff members.

Company formation

The founding of a company presents an opportunity for establishing a basis for a solid IT infrastructure. It is important to ensure the scalability of the IT organization.

While it may make sense to purchase the necessary IT services from an external provider – depending on the size of the enterprise – it will generally be advantageous to

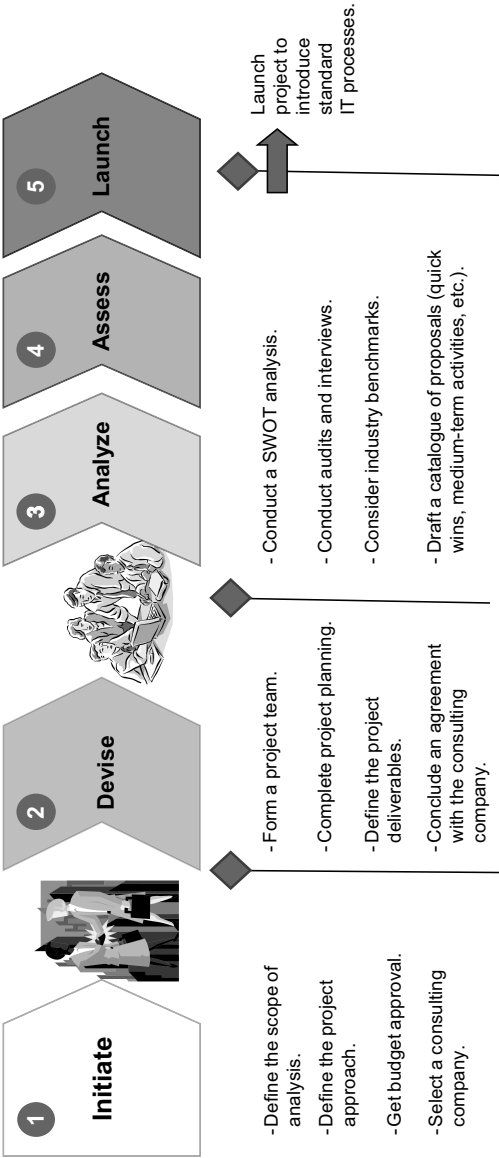


Fig. 2.6 Preparing for a project to implement standard IT processes

Table 2.1 Factors that influence the selection of standard IT processes

Factor	Features	Significance for the IT organization
Size	Large enterprise (as opposed to small or medium-sized companies)	Global contracts with leading IT manufacturers
		Critical mass for the provision of 24/7 IT services
		Offshore IT services option
Global presence	Global representation (as opposed to regional or national representation)	Common corporate language (especially important for IT services relating to communication technologies)
		Problems relating to software language incompatibilities
		Follow-the-sun support concept for the 24/7 IT service availability
		Significance of country-specific legal framework
Customer portfolio	Global customers (as opposed to local customers)	Security issues
		Superordinate data structure
		Processing of special customer conditions
Process complexity	Standardized processes (as opposed to highly specialized and volatile processes)	Dedicated reporting
		Automated approach to system monitoring tasks
		Performance metrics applied to IT infrastructure and systems
		Regular backups
		Software distribution and remote control
		Global IT investments
		Global project management
Legal statutes	Highly regulated (as opposed to a deregulated market)	Supplier integration thanks to an e-business platform (B-to-B vertical business integration)
		High IT quality standards (e.g., computer system validation)
		Significance of document management and integration in the context of executing production sequences
		Highly specialized IT providers

maintain a degree of IT competence within the enterprise. This may be a matter of identifying a number of employees who have a certain affinity for IT technologies. Beyond this consideration, it is generally advisable to establish a professional IT management for IT departments encompassing 20 or more employees.

The particular design or arrangement of the standard IT processes will depend on the nature of the enterprise, i. e., features and key data including (Table 2.1):

- Size
- Global representation
- Customer portfolio
- Process complexity
- Legal framework

Implementing IT Processes

The Main 17 IT Processes and Directions for a
Successful Implementation

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