



# ITIL® and TOGAF® 9.1: two frameworks

Tom van Sante and Jeroen Ermers, KPN IT Solutions

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## Management summary

This White Paper traces the development of The Open Group Architecture Framework (TOGAF®) and ITIL® as a background to discussions about the potential overlap in the processes they both describe. It does not give an account of the models themselves. Further details about these frameworks are given in the References section at the end.

The development of information systems in large organizations, and in multipart supply-and-demand chains, has become complex and flexible. Increasingly, systems are being designed and managed using a structured approach. Best-practice models are based on the experience of day-to-day users and therefore support users' needs. The development of these models follows the requirements of the organizations that deploy these models. In a way, they change from descriptions of best practice to theoretical models of how processes should work in practice.

Both TOGAF and ITIL are frameworks that follow a process approach. They are based upon best practice and are supported by a large community of users. However, whereas TOGAF is focused on enterprise architecture, ITIL focuses on service management. During the years of development of these frameworks, the domains they have described have changed from IT to business processes. In recent final versions, the two frameworks appear to have entered into each other's domains.

In this White Paper we try to explain that although these models describe similar processes, you do not have to choose between them. It is more important that the people who are concerned with service management understand TOGAF and that enterprise architects understand ITIL – because in most large companies both will be used in parallel. As most IT architects will probably have more knowledge of TOGAF than ITIL, and vice versa, this White Paper will help architects and service managers to understand how these two frameworks are interrelated. Perhaps even more importantly they should understand how the 'other' framework can enhance the value of their 'own' framework.

## 1 Introduction

The last major refreshes of ITIL and TOGAF were in 2007 (ITIL) and 2009 (when TOGAF 9 succeeded TOGAF 8.1.1). Since then, both frameworks have been updated; ITIL was updated in July 2011 and TOGAF 9.1 was released in December 2011. Both frameworks have large user groups and the continued progression of their content shows that their development is ongoing.

Because of these large user groups, the number of companies that work with both frameworks is growing. Questions arise about how to use these models side by side or choose between them. In this White Paper these questions are answered by explaining the background and history of the frameworks. We need to understand that they are both based on best practice and

that their strength is in the common vocabulary they provide to professionals all over the world. However, do not assume that they are meant to be followed blindly, as every organization will find its own method of implementation in its day-to-day operations.

Although ITIL and TOGAF describe areas of common interest, it is not necessarily from the same perspective. ITIL was developed to support service management and TOGAF to support organizations in the development of enterprise architecture. The focus of ITIL is therefore on services, whereas TOGAF is focused on architecture. However, since services have become an integral part of fast-changing organizations, predicting what will be needed tomorrow is of growing interest to the people who deliver these services. Conversely, architecture has changed from a rather static design discipline to one that encompasses the whole organization, and it is only useful if the whole organization is using it to enable all developments to be aligned with each other.

Service management has matured from a mere operational task to one that can be practised at chief information officer level. Architecture has developed from a technical discipline to one fulfilling the role of trusted adviser to senior-level management. Therefore, the question of identifying where one ends and the other begins has changed over the years. A common way to look at their domains of interest, and their role in the organization as a whole, is depicted in Figure 1.



**Figure 1 The domains and roles of ITIL and TOGAF within an organization**

Source: Radhakrishnan (2008).

## 2 Organizational development

We are living in a time when information is being spread within and between organizations with hardly any restrictions. New possibilities will make this flow of information grow enormously. Information technology has become a complex matter in which not every individual will find their way. IT departments are becoming increasingly complex and are having to control and manage this complexity. Adjusting to rapid change has become a dominant factor in controlling IT developments.

This is especially true today, with organizations outsourcing more and more functionality and bringing parts of their IT 'into the cloud'. Issues such as governance and security are

becoming more complex, and there is a growing interest among organizations in bringing processes to a higher maturity level in order to control the risks involved.

The early IT departments were typically extensions of the accounting or, less commonly, the administrative departments within organizations. They tended to operate in a stand-alone mode and were not connected with the primary business processes. IT organizations were grouped in separate silos, and were described as the 'network team' or the 'system management team'. It was in that era that standards for service management and architecture were first formulated. The speed of change in those times was a lot slower than it is today. There was enough time to plan and organize processes to last for a long period.

'Quality' was the magic word and this became the focus of many of the first improvements. A large number of organizations concentrated on describing their activities in order to make their outcomes predictable. However, that was only possible in times of relatively slow change, and these activities were geared more to the organizations themselves than to the customers involved. The improvements and actions were activity-based. The next step in improving organizations therefore focused on customer satisfaction, promoting the general idea that services needed customers in order to have a 'raison d'être'.

As business started to recognize the potential of IT for supporting primary business functions, IT became increasingly entangled in the business itself. Initially this occurred between the financial and business functions; and then later between the business functions, thereby increasing the added value of the products and services the business provided to its customers. Nowadays the information flow supported by IT has crossed both geographical and organizational boundaries as both suppliers and customers have started to participate, thus further increasing the added value. IT has also provided the means to enter markets that were hitherto inaccessible.

A quick glance at the credit crisis of 2007 demonstrates how much organizations are affected by the problems of powerful and dominant players in these information networks. Both between and within organizations, departments have to rely on each other. Organizations continuously make centralization and decentralization efforts in order to maintain their competitive advantage. At the same time, outsourcing information systems that support core processes can cause difficulties for an organization in the development of its future information systems and service capability.

The trend towards organizing work based on best-practice models is a result of this growing complexity. The possibility of an international market supported by the internet has also forced organizations to improve their productivity. Although best-practice models have been helpful, their use conceals a fundamental problem. The fragmented way in which IT services are being built across different departments, or even by external parties, makes the development and day-to-day

management of these services even more complex. This explains the more holistic approach of existing models to keep a grip on all elements in the supply chain. All-encompassing models try to harness this development, but it will be impossible to direct all the players in the network. Therefore the 'common language' part of TOGAF and ITIL is more important than the completeness of the processes they describe.

Today's IT is often a combination of many components that need to be aligned seamlessly in order to be perceived as a service to the end-user.

### 3 History of ITIL

ITIL was first released to the public in the late 1980s by the Central Computer and Telecommunications Agency (CCTA), an office of the British government, and as such was and still is vendor-neutral. ITIL V1 consisted of 42 separate books. The rationale behind ITIL was, of course, to describe best practices concerning the management of IT. Those best practices were mainly based on experience in data centres running big mainframes; at this time the PC was just being introduced and was not yet a common sight in the office or in everyday life. This first set of ITIL books was, as can be expected from a first version, somewhat ambiguous in its conception: the distinction between processes, work activities and organizational units was not very clear. Some of the books (such as those on change management and problem management) concentrated on processes; some focused on both process and organization (for example, the helpdesk); while a third group described a set of activities that were related without actually being a process (for example, network management). As a general rule, the 42 books of ITIL V1 can be characterized using terms such as 'data centre', 'internal IT perspective' and 'the focus on sets of related activities'. In the early 1990s this first set of ITIL books was extended, three of which were written from an altogether different perspective, oriented towards the business. Known as the business perspective set, these books were: *In Times of Radical Change*; *Understanding and Improving*; and *Surviving IT Infrastructure Transitions*.

In 2000, ITIL V2 was launched. Authors were sought from the rapidly growing worldwide IT service management community. In ITIL V2, related processes were bundled together, thus reducing the number of books from 42 to eight. ITIL V2 distinguishes itself from its predecessor mainly by emphasizing the need for close relationships with both the customer and the supplier, thereby adopting a more service-oriented approach. The core focus of ITIL V2 can be defined as truly process-oriented, but still from a mainly internal IT perspective. ITIL V2 helped organizations to improve the quality of their services and became an important aid in implementing formal quality systems such as ISO/IEC 9000 and EFQM.

ITIL V2 also included best-practice guidance on how to use and apply ITIL. A separate volume, *Planning to Implement Service Management* (Office of Government Commerce, 2002), provided detailed guidance and introduced concepts with regard to the management of change. Instead of being solely a description of an IT utopia, ITIL V2 showed you how to actually get there. By the time V2 was released, ITIL had become a worldwide *de facto* standard for IT service management – especially in the more operational processes where ITIL had a lot of followers. This was reflected not only in the large number of people completing ITIL training courses and the growth of itsMF, but also in the adaptation of ITIL by the British Standards Institute. This involved the incorporation of the ideas behind ITIL in the BSI standard BS 15000 (now ISO/IEC 20000).

In 2007, ITIL V3 was launched. This version introduced the lifecycle principle, whereby the provision of services was considered to be a continuous process in which new services were brought into existence whilst others were phased out. In ITIL V3 the focus was on this cycle of life, renewal and eventual decommissioning of services rather than on the services themselves. Once again the number of books was reduced; the ITIL core guidance now consisted of five publications (Office of Government Commerce, 2007). The ITIL V3 processes were, not surprisingly, brought together according to the place they occupied in the lifecycle. As it was recognized that the birth of a new service (or, for that matter, the adaptation of an existing service) was almost always triggered by business need, alignment with the primary business processes got to play a much bigger part than it did in the previous versions of ITIL. Furthermore, IT was increasingly considered to be a strategic asset to the business. Therefore, ITIL V3 placed much greater emphasis on defining and implementing a service strategy. At the time, this was quite a new concept to IT service management. One of the big differences between the two previous versions of ITIL and V3 is that V3 adopted a more business-focused perspective, based on the philosophy of ‘Don’t ask what the business can do for you, ask what you can do for the business.’

ITIL V1 and V2 contain hardly any references to architecture as a concept, method or framework. For example, in V2 of *ICT Infrastructure Management* (Office of Government Commerce, 2002), the word ‘architecture’ is frequently used, but only in the sense of a design, and not in the sense that is used in subsequent versions of ITIL and TOGAF.

It is clear that the development of ITIL has been strongly influenced by the development of organizations in general. Furthermore, its scope has even grown to areas outside of IT to enable IT services to keep in line with constantly changing business needs.

ITIL was most recently updated in 2011 in response to issues raised through the change control log, advice from the change advisory board and feedback from the training community. The ITIL 2011 editions share a similar standard structure to improve consistency and aid navigation. The update project removed errors and inconsistencies, both in content and presentation,

and clarified the concepts relating to service strategy. The ITIL core (Cabinet Office, 2011) now consists of the following five publications, each of which is also a lifecycle stage:

- *ITIL Service Strategy*
- *ITIL Service Design*
- *ITIL Service Transition*
- *ITIL Service Operation*
- *ITIL Continual Service Improvement.*

## 4 History of TOGAF

As with ITIL, TOGAF has a long history. It was developed and is currently maintained as a standard by The Open Group, a vendor- and technology-neutral consortium focused on a diverse range of open standards and affiliated certification programmes, and also for advancing the profession of enterprise architecture.

The first version of TOGAF, developed in 1995, was based on the US Department of Defense’s Technical Architecture Framework for Information Management (TAFIM). Following on from this, The Open Group Architecture Forum has developed successive versions of TOGAF at regular intervals and published each one on The Open Group public website at [www.opengroup.org](http://www.opengroup.org)

Each version of the TOGAF standard is developed collaboratively by the Architecture Forum, which currently has more than 250 corporate members, including vendor and customer organizations. The development is carried out by architecture practitioners, the content being based on proven best practices that evolved within the participating member companies.

The first seven versions of TOGAF addressed technology architecture based on the way each was adopted by business at the time of writing. In 2002, V8 (the ‘enterprise edition’) was published, and was followed by a series of improvements in 2003 (V8.1) and 2006 (V8.1.1). By including business and information systems architecture, the new version expanded the scope of TOGAF from a purely technology architecture to an enterprise one.

In 2004, The Open Group launched a TOGAF certification programme for individuals and organizations. Anybody who wanted to be certified as a practitioner of TOGAF could either attend an approved training course presented by a training provider or complete an online examination. There has been a popular uptake of this programme by architects globally; in December 2012 there were more than 12,000 TOGAF 9-certified professionals, emphasizing that TOGAF is one of the leading architecture frameworks worldwide.

The role of architecture in organizations has changed from a focus on design to one that attempts to explain the details of the existing and future states of certain parts of the IT capability in an organization. Increasingly it is about helping

organizations to make the right decisions about their future and showing them how to get there. By combining input from different stakeholders, architects can help organizations to reduce the complexity of today's IT and organizational landscape. The growing success of a framework such as TOGAF underlines this development.

TOGAF was one of the first models to have a strong emphasis on this process approach to architecture in the organization. In fact, architecture must be seen as an organization-wide process that will be directed by management, with the support of the enterprise architect – who for this reason will have changed from a technical individual to someone with organizational sensitivity.

As TOGAF evolved into V8.1.1, alongside a higher level of detail in the description of the architecture, there was also increasing reflection on the use of the architecture and its governance. This marked the point where TOGAF began to deal with other fields of expertise. At this stage, what could be achieved by means of the architecture became TOGAF's biggest concern. This, in a way, was the same kind of development that occurred in ITIL, where support to the business was (and still is) vital. In TOGAF the ultimate goal was not the architecture itself (as described in different artefacts) but the things an organization could achieve with it. Furthermore, it was the owners and executors who received the benefits of the new version of TOGAF at the deployment phase and not the architect. The architecture focused more on the 'soft' side of the discipline and less on the technical content side.

Following the publication of TOGAF V8.1.1, the Architecture Forum began its work on TOGAF V9, which was released in February 2009. In order to meet the needs of TOGAF users, a survey was conducted in the first quarter of 2007 to determine the requirements for the next version. Three prominent views were expressed:

- The need for closer alignment with the business
- The desire for simple implementation and greater usability
- A preference for the next version of TOGAF to be an evolution rather than a revolution.

These views provided the required direction for the developers of TOGAF V9 to get started on the next revision. Emerging architecture trends were also considered, such as service-oriented architecture and the emphasis on security, as well as alignment with The Open Group's vision of Boundaryless Information Flow™.

TOGAF V9.1 was published in 2011 (The Open Group, 2011). It includes a set of maintenance updates based on the feedback received from the 2009 publication of TOGAF V9. The changes are mostly upwards-compatible, adding clarification, consistency and additional details where needed.

## 5 The framework dilemma

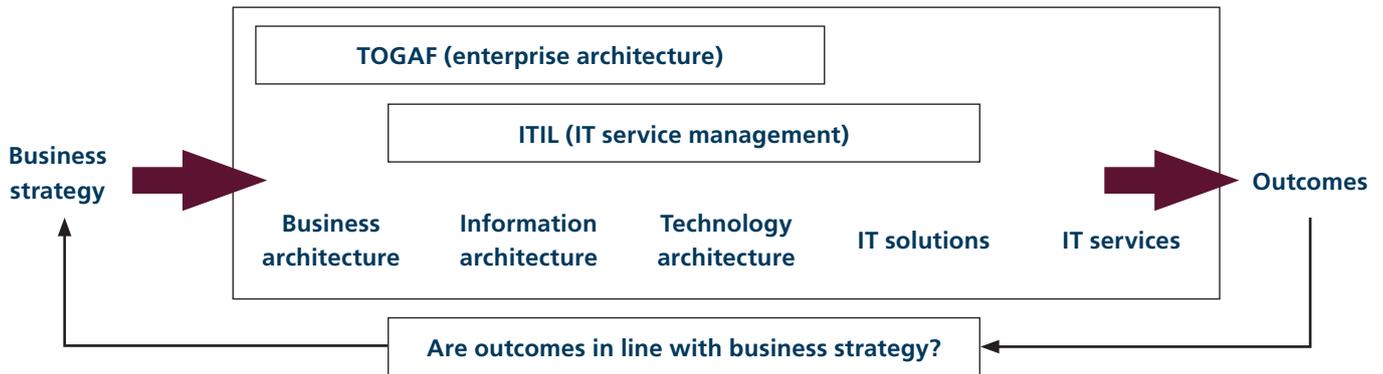
Until recent years the professionals who used ITIL and TOGAF worked in different parts of the organization and had little opportunity to cross over into each other's fields of expertise. However, since they have begun addressing the issue of business and IT alignment, they have increasingly overlapped. Consequently, they have been inundating business managers with claims that IT professionals understand what business is about. We have seen that business and IT alignment has become a field where IT professionals tell their business colleagues how they should be doing their jobs.

In general, there is a broad discussion about comparing the different frameworks. All recognized standards take notice of the similarities and differences between frameworks and the description of the optimal interfaces. What is most commonly observed is that ITIL and TOGAF describe topics from different angles, and in some cases those descriptions seem to conflict. There is an additional problem that occurs in both frameworks: for those practitioners who need exact instructions on how to perform their processes, the models are too vague and unclear. Both frameworks therefore result in discussions on who should do what and who is responsible for what.

When we examine exactly what is important in a theoretical model, we must recognize that best-practice guidance works on a trial-and-error basis. Therefore IT experts typically advise you to read the guidance, try to understand why a process functions in the way it is described, work out which problems can be solved in that way, and then use the newly gained knowledge in that particular situation. In other words, they forget that reality creates best practices and not the other way around. Pragmatism is a guiding principle in implementing a framework. For that purpose, communication between professionals in different fields is seen as a tool for cooperation towards a pragmatic use of best-practice frameworks.

Optimizing supply-and-demand chains is a multidisciplinary issue. Our need to work with best-practice models has led us to try to solve new problems by making new models for them. However, the changes occur so fast that the models cannot keep up with the pace. The next stage is to describe the best solution theoretically without a reality check, as a test of their relevance or applicability.

As we grow more dependent on other people, it is essential to know what every party in the supply chain does. Communication with others is of growing importance. Before we expect others to work according to our rules, we need to ask them whether they already do so. Architects and service managers can cooperate in their efforts to align business and IT if they understand each other. In each framework you



**Figure 2 The scope of ITIL and TOGAF on a business continuum**

will find references to the other, but these references do not exist when making comparisons between both frameworks in terms of the division of work and responsibilities. The easiest solution is to describe how others should perform their work, but this raises the question of whether they know if that description is meant to be for them. In other words, the way in which specialists from both domains should work together is not found in the descriptions of either framework.

## 6 Where ITIL and TOGAF meet

This section summarizes the overlap between ITIL and TOGAF. In older versions, the two frameworks did not make reference to each other. That changed, however, with ITIL V3 and TOGAF V8.1.1. ITIL now refers to architectural concepts – these were previously only discussed in publications on architecture. To a lesser extent, TOGAF refers to IT management and the overlap with enterprise architecture is explicitly mentioned and described. However, before we delve into these encounters, it is wise to describe in a nutshell the scope of both frameworks. Figure 2 depicts where ITIL and TOGAF can be placed on a continuum, from primary business processes to delivering and maintaining IT services.

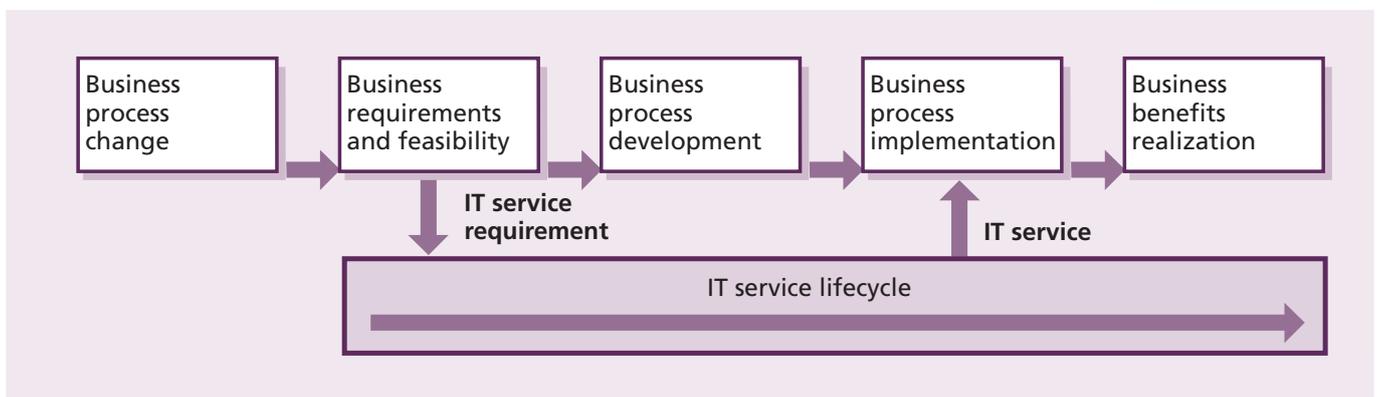
Business architecture is addressed by TOGAF but not by ITIL and, conversely, IT services are addressed by ITIL but not by TOGAF.

The other elements (information architecture, technology architecture and IT solutions) are covered in both frameworks, although the level of detail differs for each framework. In summary, TOGAF gives you all you need to build the perfect IT solution and monitor the building of it, but provides no guidance on how to actually deliver IT services. ITIL gives you all you need to deliver IT services perfectly but without an in-depth knowledge of and influence on the supported business processes; it also misses out on the opportunity to improve the outcomes through business process improvement.

### High-level comparison

John Zachman defined enterprise architecture as a means of modelling an enterprise in a coherent way to enable the efficient and effective deployment of IT services. In the same way, it could be said that service management is a means of modelling an IT department in a coherent way to enable the efficient and effective deployment of IT services. The two definitions look alike and indeed have a lot in common. Furthermore, if you compare the two de facto frameworks for architecture and service management (TOGAF V9 and ITIL V3, respectively), a number of similarities are easily found. These are described below, along with a number of differences. The similarities will then be examined in more detail in the next section.

Figure 3 shows clearly that these two frameworks do indeed meet.



**Figure 3 The business change process**

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IT service design is part of the overall business change process. *ITIL Service Design* (section 3.1) emphasizes that ITIL and TOGAF are trespassing (in a friendly way) on each other’s turf:

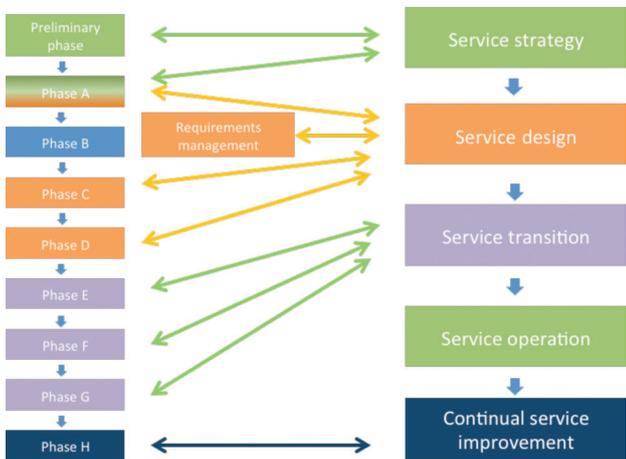
*‘All designs and design activities need to be driven principally by the business needs and requirements of the organization.’*

You could be forgiven for thinking that activities described in TOGAF are to a large extent covered by ITIL. However, in ITIL, especially when it comes to architectural activities or concepts, the theory on architecture is not as coherent and well-thought-out as it is in TOGAF.

Both frameworks are a set of best or good practices. Furthermore, they both contain an extended version of the Deming Cycle. In TOGAF this is referred to as the Architecture Development Method (ADM) and in ITIL it is dubbed the ITIL service lifecycle. Another similarity between the frameworks is that they both originated in IT, thus explaining to a large degree why integration of both frameworks within the business is not yet a common practice.

Besides a number of similarities between the frameworks, there are also a number of differences. Although each framework contains a quality loop, these loops do not completely overlap. Figure 4 depicts which parts of the two frameworks are actually connected. There are two main differences:

- Developing business architecture is part of the TOGAF framework (as demonstrated in Phase A – see Figure 6 in the appendix for phase names). The scope of ITIL is limited to developing an effective and efficient IT department, while developing business architecture is out of the scope of ITIL.
- Running IT operations and delivering actual IT services are within the scope of ITIL (as demonstrated in *ITIL Service Operation*). TOGAF does not cover the development and maintenance of a run-time environment, nor how services are actually produced and delivered. After an IT solution has become part of the operational environment, it turns into (part of) one or more services, with which TOGAF is not concerned.



**Figure 4 Connections between the TOGAF and ITIL frameworks**

The overlap between ITIL and TOGAF is described in the following sections, based on the five core ITIL publications (Cabinet Office, 2011).

### Detailed comparison based on the service lifecycle

#### ITIL Service Strategy

In Chapter 3 of *ITIL Service Strategy*, Professor Emeritus Theodore Levitt of the Harvard Business School is quoted as saying: ‘People do not want quarter-inch drills. They want quarter-inch holes.’

As obvious and logical as this statement might be, it forms the core principle of how ITIL looks upon its relationship with business. The added value of IT is not found so much in the IT solutions and services it provides, but in the outcomes relevant for the business. *ITIL Service Strategy* focuses on objectives, policies and guidelines and defines a service as ‘a means of delivering value to customers by facilitating outcomes customers want to achieve without the ownership of specific costs and risks’. In TOGAF comparable subjects can be found in the ADM; more precisely in the preliminary phase and Phase A.

*ITIL Service Strategy* provides guidance on how to design, develop, implement and maintain service management. IT service management is not only seen as an organizational capability but is also considered to be of strategic value. The service strategy stage of the lifecycle addresses the principles guiding the development of policies, guidelines and processes. TOGAF in the preliminary phase performs more or less the same role regarding enterprise architecture. Whereas service strategy is concerned with the prerequisites for building a service management system, TOGAF performs the same role for building an architecture management system. Furthermore, as both frameworks are converging, they are at least partially building the same management system.

Both management systems take into account the requirements of the business and how value can be added from either the architecture or service perspective.

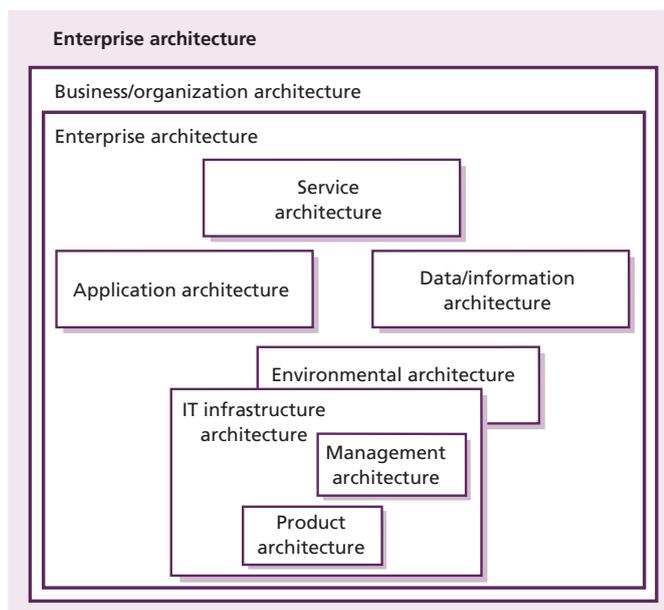
#### ITIL Service Design

Service design is the ITIL lifecycle component that crosses over most significantly with TOGAF. Guidance in *ITIL Service Design* focuses on designing new or changed services. The design of the service management system itself, based on the strategy prerequisites in *ITIL Service Strategy*, is also covered in service design. The design activities and outputs in *ITIL Service Design* can to a great extent be found in TOGAF as well, though with different wording. The collection of requirements as defined in TOGAF’s requirements management is part of service design.

There is no doubt that designing architectures constitutes an important activity within service design. In several places throughout *ITIL Service Design*, it states that architecture is one of the deliverables of this part of the IT service lifecycle. References are made to TOGAF and other architecture frameworks. In the same way as TOGAF, ITIL also makes a distinction between the

different types of architecture. *ITIL Service Design* refers to the following architectural disciplines and areas of expertise within enterprise architecture (see Figure 5):

- Service architecture
- Application architecture
- Data/information architecture
- Environmental architecture
- IT infrastructure architecture (including management architecture and product architecture).



**Figure 5 Enterprise architecture**

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One large difference between the two frameworks is that TOGAF addresses the business architecture in Phase B, whereas ITIL places limited emphasis on business architecture. The activities performed in TOGAF Phases C and D resemble the activities described in *ITIL Service Design*, as both frameworks are about designing architectures for data, applications and technology. Finally, the environmental architecture described in *ITIL Service Design* does not seem to have a counterpart in TOGAF. This architecture is not explicitly excluded from the scope of TOGAF, but the wording in TOGAF suggests that the environment is taken into account only as far as it might influence the physical layout and set-up of the location where the IT solution is to be deployed. Environmental architecture itself seems to be out of its scope.

### **ITIL Service Transition**

The activities described in Phases E, F and G of TOGAF can also be found in ITIL Service Transition. However, the scope of the service transition activities in ITIL is much broader. For example, TOGAF is only concerned with designing the architectures and

planning their migration, whereas in ITIL this part of the activity also includes the building, testing and planning of the migration of the desired IT solution.

In Phase G of TOGAF, a number of activities seem to encompass the implementation of service management. TOGAF states, for instance, that implementing IT operations is an activity carried out in Phase G. It also states that this activity is about carrying out deployment projects, including IT service delivery implementation, although it doesn't elaborate on what this involves. In addition, one of the activities of Phase G is to guide the development of business and IT operating models for services. Based on these comments, you could argue that all the outputs of adopting ITIL are also outputs of adopting TOGAF. The thought then occurs – could you use TOGAF to implement service management?

Luckily TOGAF itself provides an answer to this question. When TOGAF is implemented it will be adapted to the organization for which it is intended. Also, when other frameworks such as ITIL are already in place, or can be proved to be of use, TOGAF explicitly states that (parts of) these frameworks can and should be used and incorporated into the architecture framework. ITIL's 'adopt and adapt' philosophy encourages organizations to use ITIL best practices to suit their own individual environments and business needs.

### **ITIL Service Operation**

With respect to service operation, the conclusion is simple: TOGAF does not provide guidance on this aspect of the IT service lifecycle, other than stating that the development of IT operating models and implementing IT service delivery are the only activities carried out within TOGAF.

### **ITIL Continual Service Improvement**

It is no surprise that the continual service improvement phase bears a great resemblance to Phase H of TOGAF: architecture change management. Whereas TOGAF addresses this topic from a more theoretical viewpoint, ITIL provides much detailed and extensive guidance on how to bring a quality improvement cycle into operation. An example of this difference is the level of detail with which both frameworks describe the measurement and monitoring of the quality of the IT services. TOGAF states that monitoring tools must be deployed and applied to enable (among other things) the tracking of quality of service performances and usage, but doesn't elaborate further. ITIL, however, contains a very detailed description of a seven-step improvement process which provides guidance on how to measure, report, plan and implement improvements to services. This process is used not only on an operational level but also provides input to improvement cycles on both tactical and strategic levels. With regard to continual improvement, TOGAF embraces the use of other frameworks if they fulfil a need. For example, TOGAF states that if change management processes are already in place (e.g. ITIL-aligned change management) they could very well be used for, or adapted to, managing changes to the architecture.

## 7 Conclusions

In this White Paper we have attempted to describe how the ITIL and TOGAF frameworks have evolved, and the key areas of overlap and differentiation between them. The fact that processes have extended outside existing departments has created a challenge that goes beyond the description of the processes themselves. The focus will thus turn to communication on different levels, and in explaining to partners in the supply-and-demand chain why some activities are necessary and others are not.

These models do not give an answer to every organization in every situation. They are based on best practice and are not business-specific. Ultimately, it is the users who translate the common denominator to the specific situation; they then adopt and adapt the frameworks to suit their specific needs and environment.

## Appendix

### TOGAF components

At the core of TOGAF is the Architecture Development Method (ADM): a process-based model that describes the steps needed to develop and use an enterprise architecture. To underpin the ADM, there is the enterprise continuum: a concept of a virtual repository based on reusable building blocks. These building

blocks can be commonly accepted market standards or specific to an organization. To further support the ADM and the process of architecture development, there are a number of elements described in TOGAF 9.1 which comprises:

- **PART I Introduction** A high-level introduction to the key concepts of enterprise architecture and in particular the TOGAF approach
- **PART II Architecture Development Method** This forms the core of TOGAF. It describes the TOGAF Architecture Development Method (ADM): a step-by-step approach to developing an enterprise architecture.
- **PART III ADM guidelines and techniques** A collection of guidelines and techniques available for use in applying TOGAF and the ADM
- **PART IV Architecture content framework** A structured metamodel for architectural artefacts or products, the use of reusable architecture building blocks, and an overview of typical architecture deliverables
- **PART V Enterprise continuum and tools** Appropriate taxonomies and tools to categorize and store the outputs of architecture activity within an enterprise
- **PART VI TOGAF reference models** A selection of architectural reference models, including the TOGAF foundation architecture, and the Integrated Information Infrastructure Reference Model (III-RM)

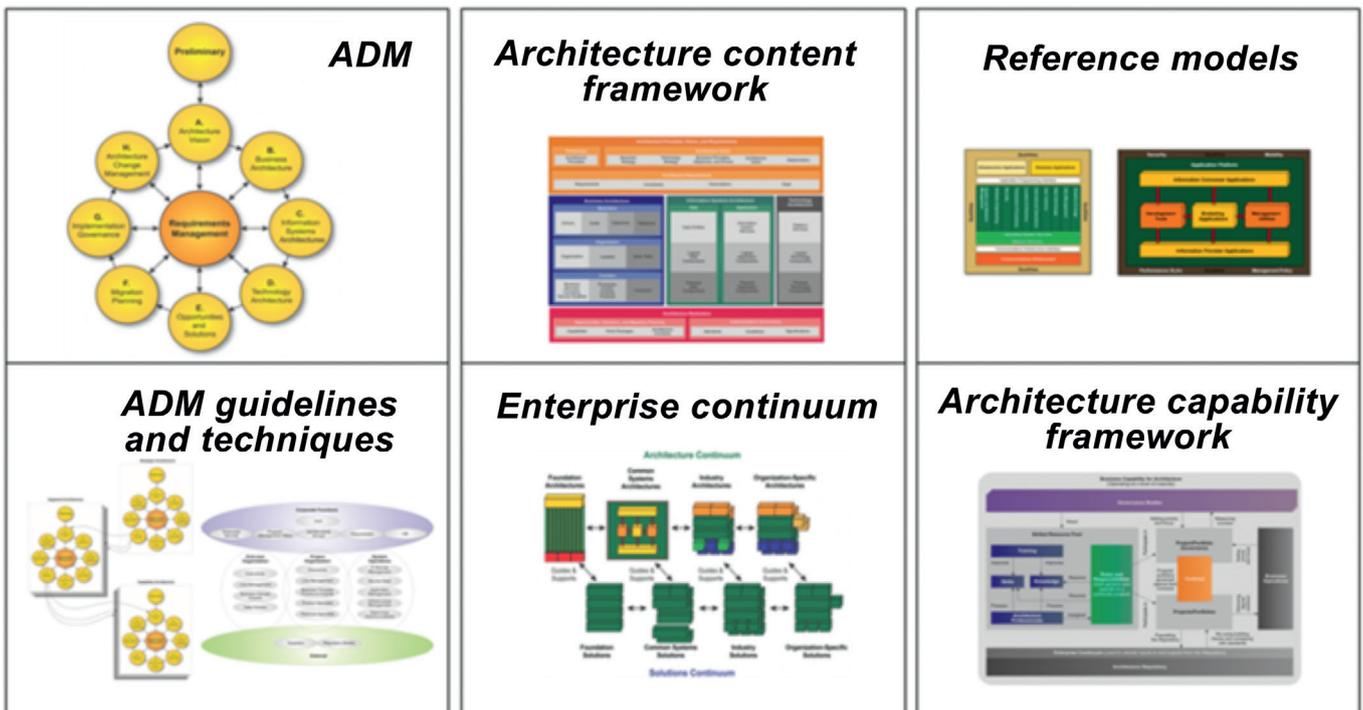


Figure 6 The components of TOGAF

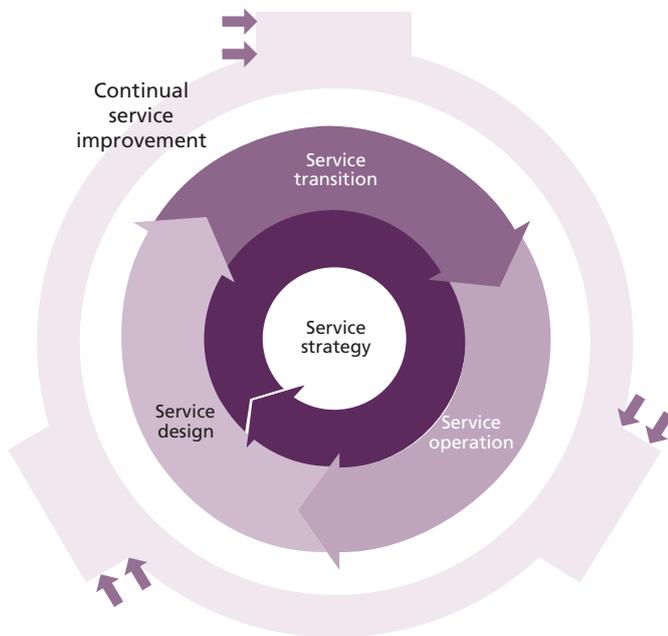
Phases of the Architecture Development Method (ADM): A. Architecture vision; B. Business architecture; C. Information system architectures; D. Technology architecture; E. Opportunities and solutions; F. Migration planning; G. Implementation governance; H. Architecture change management. Linked together by a central process (requirements management).

■ **PART VII Architecture capability framework** The organization, processes, skills, roles and responsibilities required to establish and operate an architecture function within an enterprise.

The various components of TOGAF are illustrated in Figure 6.

**The ITIL service lifecycle**

Service strategy is at the core of the ITIL service lifecycle, as Figure 7 shows. Service strategy provides the foundation for a successful service management function. Service design provides a framework for the creation of business-aligned service assets, which are migrated into the live environment through service transition and into live operation during the service operation stage. Continual service improvement, which surrounds the service lifecycle, ensures that services are aligned with changing business needs.



**Figure 7 The ITIL service lifecycle**

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**References and further reading**

**ITIL**

Cabinet Office (2011). *ITIL Continual Service Improvement*. The Stationery Office, London.

Cabinet Office (2011). *ITIL Service Design*. The Stationery Office, London.

Cabinet Office (2011). *ITIL Service Operation*. The Stationery Office, London.

Cabinet Office (2011). *ITIL Service Strategy*. The Stationery Office, London.

Cabinet Office (2011). *ITIL Service Transition*. The Stationery Office, London.

Office of Government Commerce (2002). *ICT Infrastructure Management*. The Stationery Office, London.

Office of Government Commerce (2002). *Planning to Implement Service Management*. The Stationery Office, London.

Office of Government Commerce (2007). *Continual Service Improvement*. The Stationery Office, London.

Office of Government Commerce (2007). *Service Design*. The Stationery Office, London.

Office of Government Commerce (2007). *Service Operation*. The Stationery Office, London.

Office of Government Commerce (2007). *Service Strategy*. The Stationery Office, London.

Office of Government Commerce (2007). *Service Transition*. The Stationery Office, London.

Radhakrishnan, Rajesh (2008). *ITSM Frameworks and Processes and their Relationship to EA Frameworks and Processes*. White Paper, catalogue number W078. [www.opengroup.org](http://www.opengroup.org)  
[www.best-management-practice.com](http://www.best-management-practice.com)

**TOGAF 9.1**

The Open Group (2011). *TOGAF® Version 9.1*. Van Haren Publishing.

The Open Group (2011). *TOGAF® Version 9.1: A Pocket Guide*. Van Haren Publishing.  
[www.opengroup.org](http://www.opengroup.org)

## About the authors

### Tom van Sante

Tom van Sante started his career in IT over 25 years ago after studying architecture at the Technical University in Delft. Working in a variety of functions, spanning operations, management, commerce and business development, he has always operated on the borders between business and IT. He was involved in the introduction and development of ITIL/ASL/BiSL in The Netherlands. His involvement in enterprise architecture brought him into contact with TOGAF. He is currently a selected board member of The Open Group. Tom has also produced a number of publications on IT standards and is co-writer of *TOGAF Version 9.1: A Pocket Guide* and chief author of *TOGAF – A Management Guide*.

### Jeroen Ermers

Jeroen Ermers has almost 30 years of experience in IT. He began his career studying law part-time at the University of Amsterdam. For the last 20 years he has worked as a consultant for KPN Consulting (and previously for other companies) on topics such as ITIL, business IT alignment, enterprise architecture and IT governance. Jeroen co-authored *De Kleine ITIL*, a Dutch publication on ITIL V3.

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