

IT4IT™ for Managing the Business of IT

A Management Guide



Rob Akershoek et al.

IT4IT™

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IT4IT™ FOR MANAGING THE BUSINESS OF IT
A MANAGEMENT GUIDE

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Contents

1	Executive Summary	1
1.1	Benefits	3
1.2	Transformation and Reshaping the IT Function	4
1.3	Target Audience	4
1.4	Complementary with ITIL and Other Frameworks and Standards	5
2	Introduction	7
2.1	What is IT Management (and IT4IT)?	7
2.2	IT Management Challenges	14
2.3	An Introduction to The Open Group IT4IT Reference Architecture Standard	27
2.4	Why Use the IT4IT Reference Architecture?	30
2.5	Relationship with ITIL and Other Practices or Standards	33
3	The IT4IT Standard in Detail	41
3.1	The IT Value Chain	41
3.2	IT4IT Value Streams	42
3.2.1	Strategy to Portfolio	43
3.2.2	Requirement to Deploy	46
3.2.3	Request to Fulfill	47
3.2.4	Detect to Correct	49
3.3	The IT4IT Reference Architecture	51
4	The Benefits of Using the IT4IT Standard	55
4.1	Benefits of Each IT4IT Value Stream	56
4.1.1	Strategy to Portfolio	59
4.1.2	Requirement to Deploy	62
4.1.3	Request to Fulfill	65
4.1.4	Detect to Correct	69
4.1.5	Supporting Activities	72
4.2	Benefits per Stakeholder	76
4.2.1	Business (and IT Users)	78
4.2.2	The IT Organization	80
4.2.3	The IT4IT Organization	86
4.2.4	IT Service Providers	89
4.2.5	IT Management Software Vendors (or IT4IT Tool Vendors)	91
4.2.6	Industry-Related Training and Certification Providers	94

5	How to Use the IT4IT Reference Architecture	95
5.1	Introduction	95
5.2	A High-Level Approach for Implementing the IT4IT Standard	100
5.2.1	Conduct IT4IT Baseline Assessment	105
5.2.2	Perform IT Value Stream Analysis	116
5.2.3	Define IT4IT Ownership and Governance Model	130
5.2.4	Define IT Management Vision, Mission, and Strategy	139
5.2.5	Define the Target IT4IT Architecture	142
5.2.6	Perform Gap Analysis	143
5.2.7	Define the IT4IT Roadmap and Build the Business Case	148
5.2.8	Set Up an IT4IT Model Office	152
5.2.9	Execute the IT4IT Transformation Roadmap	155
A	Case Studies	161
A.1	The Adoption of the IT4IT Standard at Shell	161
A.1.1	Introduction	161
A.1.2	Background	161
A.1.3	Adoption of the IT4IT Reference Architecture	163
A.1.4	An IT4IT Governance Model	165
A.1.5	Learnings and Conclusion	168
A.2	Rabobank	169
A.2.1	Background	170
A.2.2	The Problem	170
A.2.3	The Solution	171
A.2.4	The Result	172
A.2.5	Looking Forward	173
B	IT4IT Reference Architecture and Other Best Practices	174
B.1	IT4IT Value Stream Mapping to Other Best Practices and Standards	174
B.2	ITIL and COBIT Mapping	176
C	IT4IT Tool Categories	183
D	IT4IT Data Entities	192
	Glossary of Key Terms and Acronyms	196
	Index	199

Preface

The Open Group

The Open Group is a global consortium that enables the achievement of business objectives through IT standards. With more than 500 member organizations, The Open Group has a diverse membership that spans all sectors of the IT community – customers, systems and solutions suppliers, tool vendors, integrators, and consultants, as well as academics and researchers – to:

- Capture, understand, and address current and emerging requirements, and establish policies and share best practices
- Facilitate interoperability, develop consensus, and evolve and integrate specifications and open source technologies
- Offer a comprehensive set of services to enhance the operational efficiency of consortia
- Operate the industry's premier certification service

Further information on The Open Group is available at www.opengroup.org.

The Open Group publishes a wide range of technical documentation, most of which is focused on development of Open Group Standards and Guides, but which also includes white papers, technical studies, certification and testing documentation, and business titles. Full details and a catalog are available at www.opengroup.org/bookstore.

Readers should note that updates – in the form of Corrigenda – may apply to any publication. This information is published at www.opengroup.org/corrigenda.

About the IT4IT™ Forum

The Open Group IT4IT Forum was established in October 2014. It develops and maintains the IT4IT Reference Architecture. The mission of The Open Group IT4IT Forum is to create and drive the adoption of the IT4IT standard that provides a vendor-neutral Reference Architecture for managing the business of IT, enabling insight for agile improvement with increased focus on business outcomes.

For more information on The Open Group IT4IT Forum, visit www.opengroup.org/IT4IT.

About the IT4IT™ Standard

- IT4IT, an Open Group standard, provides a vendor-neutral, technology-agnostic, and industry-agnostic reference architecture for managing the business of IT, enabling insight for continuous improvement.
- IT4IT provides the capabilities for managing the business of IT that will enable IT execution across the entire value chain in a better, faster, cheaper way with less risk.
- IT4IT is industry-independent to solve the same problems for everyone.
- IT4IT is designed for existing landscapes and accommodates new IT paradigms such as cloud-brokering, DevOps, Bimodal IT, Agile, and Lean IT.
- IT4IT complements existing process frameworks and methodologies (e.g., ITIL®, COBIT®, and the TOGAF® standard) by taking a data-focused and solution oriented implementation model perspective, essentially specifying what information is needed and how IT activities can be automated across the entire value chain.

This Document

This document is the IT4IT Management Guide. It provides guidance on how the IT4IT Reference Architecture can be used within an IT organization to manage the business of IT. It is designed to provide a guide to business managers, CIOs, IT executives, IT professionals, and all individuals involved or interested in how to transition an IT organization to become a Lean and Agile IT service provider.

After reading this document you should be able to:

- Understand why the IT4IT approach is needed to improve the performance of the IT function; and support the business to leverage new IT in the digital age
- Understand the vision, scope, and content of the IT4IT Reference Architecture (from a high-level perspective)
- Understand the benefits of using the IT4IT Reference Architecture within the IT function
- Initiate the first steps to implement the IT4IT standard in your own IT organization

After many years of improving IT management capabilities, applying many best practices (and standards), configuring countless IT management tools, and defining dozens of IT processes, most IT organizations have to admit they are still not in control. They now realize that a different approach is needed because they lost sight of the bigger picture as a result of organizing in silos, focusing on individual processes, teams, and tools. This hinders the IT function to establish end-to-end workflows, which is vitally needed to enhance the value of IT for the business. The IT4IT Reference Architecture and value chain-based IT operating model are designed to provide a holistic and integrated foundation for IT management that offers this fundamentally different approach to managing the business of IT.

The IT Value Chain and IT4IT Reference Architecture represent the IT service lifecycle in a new and powerful way. They provide the missing link between industry standard best practice guides and the technology framework and tools that power the service management ecosystem. They provide a new foundation of how to organize and run the business of IT. Together, they deliver a welcome blueprint for the CIO to accelerate IT's transition in becoming a service broker and service integrator focusing on delivering value to the business. They also address management challenges brought about by new technologies or trends such as mobility, cloud, big data, security, Internet of Things (IoT), containers, Software-Defined Networking (SDN), and Bring Your Own Device (BYOD).

Organizing the IT operating model based on the IT4IT Reference Architecture allows organizations to:

- Focus on the true role of IT: to deliver added-value services that makes the company more competitive and innovative
- Become more responsive to deliver changes and act upon a continuously changing technology and business landscape (becoming a Lean and Agile IT function)
- Support the multi-sourced service economy; enable new experiences in driving the self-sourcing of services that power innovation
- Improve the overall performance and efficiency of the IT function and its capabilities to deliver exceeding expectations
- Create an efficient and streamlined IT service organization by automating IT activities from an end-to-end value stream perspective
- Attract and retain the vital IT skills and competences required to manage the new IT ecosystem

- Control risks associated with IT to ensure secure and reliable operations for the business

Adoption of the IT4IT Reference Architecture enables an IT organization to optimize the IT management activities throughout the IT service lifecycle by creating a more mature and professional IT function. This is realized by implementing a standard-based holistic IT management capability, integrating tools from different vendors, supporting (and automating) end-to-end workflows, and providing standard interfaces to collaborate with external service providers while leveraging established best practices.

The audience for this Management Guide is:

- CIOs and other IT executive managers who would like to transform their IT organization to support end-to-end value streams
- Senior leaders and executives in the business and IT responsible for how IT is organized, managed, and improved
- Enterprise Architects involved in the implementation of IT management solutions within the IT organization
- IT professionals and consultants involved in the transition of their organizations to a new streamlined IT factory

Prior knowledge of IT Service Management (ITSM) and related frameworks such as ITIL is advantageous but not required.

This Management Guide is structured as follows:

- Chapter 1 provides an executive summary of this Management Guide.
- Chapter 2 provides an introduction to the IT4IT standard (and IT management in general), the challenges, and the key drivers for changing the way IT is managed today. It also describes how the IT4IT standard fits into the overall landscape of best practices and standards such as ITIL.
- Chapter 3 introduces the IT4IT value streams and provides an overview of the IT4IT Reference Architecture.
- Chapter 4 explains why the IT4IT Reference Architecture is needed and what value it brings to the business and the IT function itself.
- Chapter 5 describes how the IT4IT Reference Architecture is best used and how to implement the standard within your own IT organization.

The appendix contains two case studies of organizations that have applied the IT4IT Reference Architecture. The appendix also contains the mapping of the IT4IT standard and other relevant best practices, frameworks, and standards.

Conventions Used in this Management Guide

The following conventions are used throughout this Management Guide in order to help identify important information and avoid confusion over the intended meaning.

- **Ellipsis (...)**
Indicates a continuation; such as an incomplete list of example items, or a continuation from preceding text.
- **Bold**
Used to highlight specific terms.
- *Italics*
Used for emphasis. May also refer to other external documents.

In addition to typographical conventions, the following conventions are used to highlight segments of text:



A Note box is used to highlight useful or interesting information.

About the Authors

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Rob Akershoek is an IT Management Architect and Consultant at Logicalis SMC. For over 20 years he has been involved in improving IT organizations by designing and implementing integrated processes and tools. He has been working on dozens of projects to implement best practices (such as ITIL and COBIT) and responsible for the roll-out of numerous integrated IT management solutions. This included projects related to Enterprise Architecture (EA), Application Portfolio Management (APM), Project Portfolio Management (PPM), Continuous Delivery, Agile and Lean Software Development, Test Management, Deployment Automation, Service Monitoring, IT Service Management (ITSM), Software Asset Management (SAM), IT Financial Management (ITFM), IT Reporting, CMDB, IT Asset Management, and Automated Discovery. Currently he is working as an IT4IT architect at Shell responsible for the solution architecture and design of IT management solutions. In this role he has been involved in The Open Group IT4IT Forum from the start.

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The following documents are referenced in this Management Guide.

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- Unified Modeling Language (UML), Object Management Group (OMG); refer to: www.uml.org.

Chapter 1

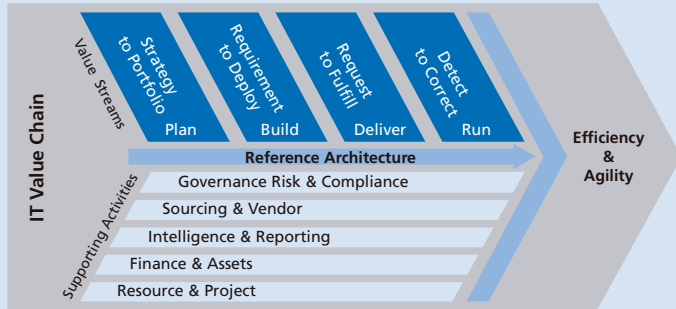
Executive Summary

Business is in the middle of an unfolding era of disruption, driven by digital transformation, which challenges how IT is organized and managed today. The role of IT in the business is elevated from being a support function to an enabler to drive innovation, enhance competitive advantage, boost productivity, and reduce cost by applying new innovative technology. However, new technologies, such as big data and cloud, can only provide value to the business if these can be properly implemented and managed. Unfortunately, most IT organizations are not ready to cope with this new demand of IT and are therefore headed for a crisis. More and more IT leaders realize that the current IT operating models are no longer viable and that the IT function needs to reinvent itself. A fundamentally different approach is needed than how we plan, build, deliver, and run IT today.

Despite the availability of many best practices, frameworks, and standards for managing IT, enterprises often suffer from poor services and high costs and risks due to a siloed IT function with badly integrated IT management tools. To reinvent IT, the CIOs must go beyond current process-based approaches and equip their teams with the right information and tools to support new ecosystem collaborations, completely automate end-to-end workflows, and provide the business with the controls to govern IT. The Open Group IT4IT Reference Architecture standard with its value-chain-based IT operating model address this problem by providing a prescriptive and detailed information model-based framework that enhances and supports traditional process-based frameworks and standards.



The IT4IT Reference Architecture was created because there is a need for a holistic, concise, and structured standard of how IT should be managed in order to provide maximum value for the business (managing IT as a business) based upon the IT Value Chain.



The IT4IT standard is a vendor-neutral open standard for managing the business of IT. It is developed and maintained by The Open Group IT4IT Forum, in which consumer organizations, IT vendors, and academic institutions participate. The standard is designed to be used with process-based frameworks and standards such as ITIL and ISO/IEC 20000 for IT Service Management. While these frameworks and standards place emphasis on process, the IT4IT Reference Architecture focuses on the capabilities and information needed to manage a service through its lifecycle. It defines how the IT function can be supported by information systems automating the IT activities as well as providing the necessary insight to improve IT decision-making and support continuous improvement.

As “IT for IT” implies, it refers to the internal activities and relationships within the IT function of an enterprise. It is about improving the business of IT by using IT as effectively as businesses use IT. The standard enables optimized IT resources (in particular IT management information systems), together with more efficient and controlled IT operations. These IT-related results can be translated into benefits for the enterprise in terms of improvement to the financial bottom line, the risk profile, and to enable the business to enhance its competitive position.

1.1 Benefits

The IT4IT Reference Architecture describes how the new IT function should be managed to optimize the value of IT for the business. Like a business, IT's strategic goal is to create value via IT. This value can come through enabling the business to develop innovative products and/or services, expanding markets (growth strategy), or helping the business become more efficient and cost-effective (productivity).

The IT4IT Reference Architecture enables a more streamlined, transparent, and automated IT function across the entire IT value chain.

Both the enterprise's operating expenditure and capital expenditure are reduced. Operating expenditure is reduced by making both IT operations and business operations more efficient. The improvement in IT development and operations efficiency is realized by improving the information exchange across all parts of the IT function as well as automating IT management tasks. Improving the adaptability of the IT operating model and therefore reducing the impact and cost of changes also reduce IT operating expenditure. The efficiency improvement in business operations is realized by reducing the number and size of IT-related business disruptions, and by accelerated deployment of any IT functionality that improves business operations efficiency. Rationalizing the information systems used to manage and support the IT function reduces capital expenditure. For enterprises with a large IT function, an IT cost reduction of between 5% and 20% is feasible.

The enterprise's risk profile is improved by greater transparency and tighter control of IT services throughout its lifecycle and therefore more predictable costs, delivery, and quality of IT services, leading in turn to more predictable business operations.

Improving business operations, enhancing competitive advantage, and boosting customer loyalty by quicker introduction of new or improved products realize the improvement of the enterprise's revenue. Customer loyalty is improved by more reliable IT services that impact customers directly or indirectly. Products that depend on IT can be launched quicker due to the improved throughput of IT operations.

1.2 Transformation and Reshaping the IT Function

The transformation that is needed to realize these benefits entails adoption of the IT4IT standard. The standard comprises a reference architecture and value chain-based IT operating model for managing the business of IT. The reference architecture and IT operating model cover all of the activities that are needed to provide business functions with appropriate IT services.

The IT4IT Reference Architecture describes the IT function from a value focused end-to-end perspective covering all capabilities and data needed to manage the IT services. It describes the IT function both as IT service provider to the business, and as consumer of IT services that support the IT function. The standard specifies the IT function's workflows, integrations, data, and functions as requirements for (automated) information systems that support the IT function.

The transformation can be undertaken incrementally, enabling the benefits to be realized as soon as possible.

1.3 Target Audience

The IT4IT Reference Architecture is primarily aimed at IT functions within enterprises that rely on large, complex, and changeable information systems, which are supported by multiple internal and external parties. These IT functions can improve the quality and cost of their IT services by adopting the IT4IT value stream approach, and by stipulating that IT tools and IT services comply with the IT4IT interoperability standards.

The IT4IT standard is therefore relevant for not only the enterprise's internal IT function, but also for external tool vendors, IT management improvement consultancies, external IT service providers, external IT component providers, and training and certification providers. Within these organizations, the IT4IT standard should attract the interest of senior managers and their trusted advisors, and those who are tasked with actually improving the "business of IT".

1.4 Complementary with ITIL and Other Frameworks and Standards

The IT4IT Reference Architecture should be used together with other standards and frameworks, such as PMBOK Guide, COBIT, and ITIL for IT Service Management. The IT Value Chain-based IT operating model complements these existing standards and process best practices by combining them into an overarching blueprint, in which Enterprise Architecture, portfolio management, project management, and service development are integrated with IT Service Management, enabling the IT function to be managed from an end-to-end perspective.

The IT4IT Reference Architecture's Service Model, Information Model, Functional Model, and Integration Model add a layer of prescriptive detail to COBIT and ITIL-based processes, providing the IT function with requirements for selecting and implementing interoperable IT solutions that support and automate activities within the IT function. This includes developing more flexible IT processes and IT management solutions and building stronger, more fluid connections among employees and with customers and vendors.

