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Colophon

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Preface

The Open Group

The Open Group is a global consortium that enables the achievement of business objectives through IT standards. With more than 450 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

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

The IT4IT™ Forum

The IT4IT Forum, a Forum of The Open Group, was created when its predecessor, the IT4IT Consortium, transferred its activities to The Open Group. The IT4IT Consortium came into being in 2011 as a practitioner-driven initiative. The Consortium was comprised of IT professionals from multiple industry segments and several IT vendors who agreed to share their experiences for the purpose of developing and publishing future-safe prescriptive guidance for implementing end-to-end an IT4IT architecture with full insight. Past and present members include Enterprise Architects and IT department leaders or industry consultants from: Accenture, Achmea, AT&T, HP IT, ING Bank, Munich RE, PwC, Royal Dutch Shell, and University of South Florida.

The Consortium formed a strategy board that spent thousands of hours sharing their insights and analyzing their experiences to develop a future-safe IT operating model. This model includes a prescriptive architecture for implementing the IT Value Chain to optimize the efficiency and effectiveness of IT. The strategy board is backed by an executive board sponsor from each member company.

"Cloud services and multi-provider outsourcing are adding new degrees of complexity to IT service management. The Consortium will use its real-life, cross-industry expertise to define a new operating model for IT."

Dr. Dirk Heiss, Global Infrastructure Services Officer, Munich RE

This Document

The Open Group IT4IT™ Reference Architecture refers to the capability or capabilities required to manage the business of IT, covering IT end-to-end from plan, through build and operate. It assumes the principle that the business of running IT is industry-agnostic and that IT leaders share the same problems and opportunities in managing the service lifecycle effectively. At the core, these problems are rooted in IT structure, competencies, and capabilities and the missing link has been the lack of an IT operating model. The IT4IT Reference Architecture proposes that it is possible to establish an IT operating model standard mapped to the existing IT landscape yet flexible enough to support the volatility inherent in the IT industry and accommodate changing IT paradigms (composite apps, agile development, mobile technology, multi-sourcing, etc.).

The IT Value Chain and IT4IT Reference Architecture represent the IT service lifecycle in a new and powerful way, providing the missing link between industry standard best practice guides and the technology you need to select and execute those processes. The IT Value Chain and IT4IT Reference Architecture are a new foundation on which to base your IT4IT operating model and provide a welcome blueprint for the CIO to accelerate IT's transition to becoming a service broker to the business.

This document is The Open Group IT4IT Reference Architecture, Version 2.0, an Open Group Standard. It has been developed and approved by The Open Group.

This document is structured as follows:

- Chapter 1 (Introduction) introduces this document and the purpose of the IT4IT work.
- Chapter 2 (Definitions) lists important definitions needed in order to read the document.
- Chapter 3 (Overview) is an introduction for executives and others introducing the IT Value Chain and IT4IT Reference Architecture concepts.
- Chapter 4 (IT4IT Core) defines the structure of the IT4IT standard as well as the process and document structure used by the IT4IT standard.
- Chapter 5 (Strategy to Portfolio (S2P) Value Stream) explains the S2P Value Stream in detail.
- Chapter 6 (Requirement to Deploy (R2D) Value Stream) explains the R2D Value Stream in detail.
- Chapter 7 (Request to Fulfill (R2F) Value Stream) explains the R2F Value Stream in detail.
- Chapter 8 (Detect to Correct (D2C) Value Stream) explains the D2C Value Stream in detail.

- Appendix A (Rationale (Informative)) contains background information on the standard.

How to Use this Standard

It is recommended that the reader start by familiarizing themselves with Chapter 3 (Overview) which introduces the concepts of the IT Value Chain. This should then be followed by the IT4IT Core (Chapter 4), and the four IT Value Streams. These are:

- Strategy to Portfolio (S2P) Value Stream (Chapter 5)
- Requirement to Deploy (R2D) Value Stream (Chapter 6)
- Request to Fulfill (R2F) Value Stream (Chapter 7)
- Detect to Correct (D2C) Value Stream (Chapter 8)

Documentation Structure of the IT4IT Reference Architecture

Figure 1 is a graphical representation of the data objects associated with the IT4IT Reference Architecture. The architecture is comprised of a set of normative documents[1] and a formal model described using the ArchiMate® modeling language and UML. These define "what" the architecture is. The normative documentation includes:

- IT4IT Reference Architecture Overview
- IT4IT Value Stream Overview
- IT4IT Reference Architecture diagrams
- IT4IT meta-model diagram
- Glossary

The Reference Architecture diagrams, in ArchiMate notation, will be provided as a set of web pages, and also as a downloadable zip file of those pages. When available, they will be found at: https://collaboration.opengroup.org/data/IT4IT/RA_2.0.

A set of guidance documents is being developed to accompany the architecture, intended to describe "how" to apply the architecture in practice. Planned guidance documents include:

- Multi-Supplier Management White Paper
- Definition of IT Service White Paper
- Service Model Management White Paper
- Scenario White Papers (see Section 4.2.6.1)

[1] A normative document is one that provides rules, guidelines, or characteristics for activities or their results. The term "normative document" is a generic term that covers such documents as standards, technical specifications, codes of practice, and regulations; e.g., European Cooperation for Space Standardization (ECSS).

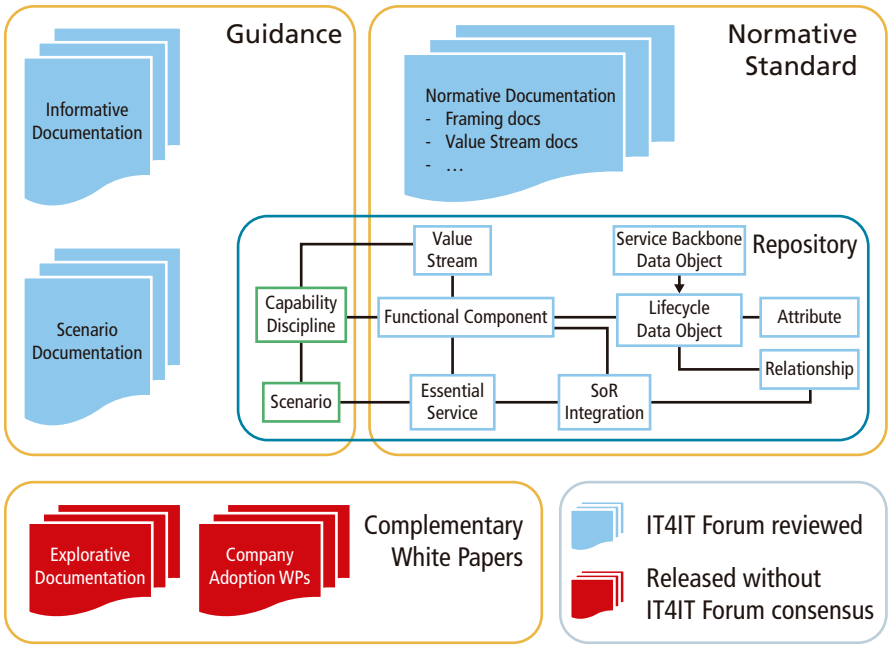

Figure 1: Documentation Structure of the IT4IT Reference Architecture

Documents/artifacts that fall into these two categories are governed by The Open Group Standards Process. In addition, The Open Group will maintain a set of White Papers that complement the architecture and elaborate on its applicability and use in various settings.

Related Industry Standards

Most IT management standards fall into one of two categories: process and/or method-focused technology and/or implementations-centric. There are no standards that prescribe both the operating model and automation guidelines for running the IT function. Therefore, the IT4IT Reference Architecture fills this gap and as such complements a number of existing standards and best practices such as:

- ISO/IEC 19770:2012: Information Technology – Software Asset Management
- ISO/IEC 20000:2011: Information Technology – Service Management
- ISO/IEC 38500:2008: Corporate Governance of Information Technology
- ISO/TC 258: Project, Program, and Portfolio Management
- Information Technology Infrastructure Library (ITIL)
- Control Objectives for Information and Related Technology (COBIT)
- Business Process Framework (eTOM)

- The TOGAF® standard
- The ArchiMate modeling language
- The Scaled Agile Framework (SAFe)
- The Project Management Body of Knowledge (PMBOK)

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When The Open Group approved the IT4IT™ Reference Architecture, Version 2.0, an Open Group Standard, on October 5, 2015, the membership of the IT4IT™ Forum was as follows:

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Referenced Documents

(Please note that the links below are good at the time of writing but cannot be guaranteed for the future.)

Normative References

Normative references for this standard are defined in Section 1.4.

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1 Introduction

1.1 Objective

This standard is the specification of The Open Group IT4IT Reference Architecture, Version 2.0, an Open Group Standard. It describes a reference architecture and value chain-based operating model for managing the business of IT.

1.2 Overview

The Open Group IT4IT Reference Architecture is a standard reference architecture and value chain-based operating model for managing the business of IT. It uses a value chain approach to create a model of the functions that IT performs to help organizations identify the activities that contribute to business competitiveness. This value chain framework, called the IT Value Chain and specified in this document as part of the IT4IT Reference Architecture (see Section 3.1), applies this concept to IT by defining an integrated IT management framework focusing on the lifecycle of services. It identifies the key things that IT must do – and do well. It allows IT to achieve the same level of business predictability and efficiency that supply chain management has allowed for the business, and was designed by practitioners to be industry, product, and vendor-independent.

1.3 Conformance

Readers are advised to check The Open Group website for any conformance and certification requirements referencing this standard.

1.4 Normative References

The following standard contains provisions which, through references in this standard, constitute provisions of the IT4IT Reference Architecture. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the standard listed below.

- ArchiMate® 2.1 Specification, Open Group Standard (C13L), December 2013, published by The Open Group; refer to: www.opengroup.org/bookstore/catalog/c13l.htm.

1.5 Terminology

For the purposes of this standard, the following terminology definitions apply:

Can	Describes a possible feature or behavior available to the user or application.
May	Describes a feature or behavior that is optional. To avoid ambiguity, the opposite of "may" is expressed as "need not", instead of "may not".
Shall	Describes a feature or behavior that is a requirement of the standard. To avoid ambiguity, do not use "must" as an alternative to "shall".
Shall not	Describes a feature or behavior that is an absolute prohibition of the standard.
Should	Describes a feature or behavior that is recommended but not required.
Will	Same meaning as "shall"; "shall" is the preferred term.

1.6 Future Directions

Work is currently underway to produce a roadmap for how IT can move from the familiar IT capability-based understanding to implementing the new service-centric IT Value Chain model.

Scenarios currently being discussed to be constructed in future releases include the following:

- Multi-vendor Availability & Capacity Management
- Multi-vendor Service-Level Management (SLM)
- Hybrid Requirements Management in the enterprise
- Change Management, including the relationship with Configuration Management
- S2P alignment with the TOGAF standard, Service Model Management, and Service Definition
- Service Request (Self-service & Knowledge Management)
- Risk Management
- Asset Management
- Alignment to Cloud
- Intelligence and Reporting
- IT Financial Management