INTERNATIONAL STANDARD

ISO/IEC 17998

First edition
2012-09-01

Information technology — SOA Governance Framework

Technologies de l'information — Cadre de gouvernance SOA

Reference number
ISO/IEC 17998:2012(E)

COPYRIGHT PROTECTED DOCUMENT

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 17998 was prepared by The Open Group and was adopted, under the PAS procedure, by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, in parallel with its approval by national bodies of ISO and IEC.

Technical Standard

SOA Governance Framework

THE Open GROUP

Making standards work®

Technical Standard

SOA Governance Framework

ISBN: 1-931624-82-8

Document Number: C093

Published by The Open Group, August 2009.

Comments relating to the material contained in this document may be submitted to:

The Open Group, Thames Tower, 37-45 Station Road, Reading, Berkshire, RG1 1LX, United Kingdom

or by electronic mail to: ogspecs@opengroup.org

Contents

Preface

The Open Group

The Open Group is a vendor-neutral and technology-neutral consortium, whose vision of Boundaryless Information Flow™ will enable access to integrated information within and between enterprises based on open standards and global interoperability. The Open Group works with customers, suppliers, consortia, and other standards bodies. Its role is to capture, understand, and address current and emerging requirements, establish policies, and share best practices; to facilitate interoperability, develop consensus, and evolve and integrate specifications and Open Source technologies; to offer a comprehensive set of services to enhance the operational efficiency of consortia; and to operate the industry's premier certification service, including UNIX® certification.

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

The Open Group has over 15 years' experience in developing and operating certification programs and has extensive experience developing and facilitating industry adoption of test suites used to validate conformance to an open standard or specification.

More information is available at www.opengroup.org/certification.

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

As with all *live* documents, Technical Standards and Specifications require revision to align with new developments and associated international standards. To distinguish between revised specifications which are fully backwards-compatible and those which are not:

- A new *Version* indicates there is no change to the definitive information contained in the previous publication of that title, but additions/extensions are included. As such, it *replaces* the previous publication.
- A new *Issue* indicates there is substantive change to the definitive information contained in the previous publication of that title, and there may also be additions/extensions. As such, both previous and new documents are maintained as current publications.

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

This Document

This document is the Technical Standard for the SOA Governance Framework. It has been developed by the SOA Governance project of The Open Group SOA Working Group.

Trademarks

Boundaryless Information Flow™ and TOGAF™ are trademarks and Making Standards Work®, The Open Group®, UNIX®, and the "X" device are registered trademarks of The Open Group in the United States and other countries.

The Open Group acknowledges that there may be other brand, company, and product names used in this document that may be covered by trademark protection and advises the reader to verify them independently.

Acknowledgements

The Open Group gratefully acknowledges all contributors to the SOA Governance project, and in particular the following individuals:

- Ali Arsanjani, IBM
- Stephen G. Bennett, Oracle (Former Co-Chair)
- William A. Brown, IBM
- Tony Carrato, IBM (Former Co-Chair)
- Carleen Christner, HP
- Jorge Diaz, IBM (Co-Chair)
- Steve Dupont, The Boeing Company
- Mats Gejnevall, Capgemini (Co-Chair)
- Chris Harding, The Open Group (Forum Director)
- Andrew Hately, IBM (Former Co-Chair)
- Heather Kreger, IBM
- Nikhil Kumar, ApTSi
- Bob Laird, IBM
- Milena Litoiu, CGI
- Ranu Pandit, Deloitte
- Vishal Prabhu, Deloitte
- Madhu Reddiboina, Deloitte
- Chuck Reynolds, Deloitte
- Mohan Venkataraman, Deloitte
- Bobbi Young, Unisys

Referenced Documents

The following documents are referenced in this Technical Standard:

- Introduction to SOA Governance and Service Lifecycle Management, Bill Brown, IBM, March 2009; refer to: ftp://ftp.software.ibm.com/software/soa/pdf/IBMSGMMOverview.pdf
- Introduction to SOA Governance: The official IBM definition and why you need it, Bobby Woolf, IBM developerWorks, July 2007; refer to: www.ibm.com/developerworks/webservices/library/ar-servgov
- Navigating the SOA Open Standards Landscape Around Architecture", Joint White Paper from OASIS, OMG, and The Open Group, July 2009 (W096); refer to: www.opengroup.org/bookstore/catalog/w096.htm
- OASIS Reference Model for SOA (SOA RM), Version 1.0, OASIS Standard, 12 October 2006; refer to: docs.oasis-open.org/soa-rm/v1.0/soa-rm.pdf
- OECD Corporate Governance Principles 2004, Organization for Economic Cooperation and Development; available from: www.oecd.org
- SOA Source Book, C. Harding (editor), The Open Group, 2009; refer to: www.opengroup.org/bookstore/catalog/g093.htm
- The Open Group Architecture Framework (TOGAF); refer to: www.opengroup.org/architecture/togaf9
- The Open Group SOA Integration Maturity Model (OSIMM), Technical Standard, August 2009 (C092); refer to: www.opengroup.org/bookstore/catalog/c092.htm

See also Appendix D.

1 Introduction

1.1 Objective

This document describes a framework that provides context and definitions to enable organizations to understand and deploy SOA governance.

This document defines:

- SOA Governance, including its relationship between Business, IT, and EA governance; this assists organizations in understanding the impact that the introduction of SOA into an organization has on governance
- An SOA Governance Reference Model (SGRM) and its constituent parts, which assists organizations in specifying their appropriate governance regimes; and capturing best practice as a basis for a common approach
- The SOA Governance Vitality Method (SGVM) which assists organizations in customizing the SGRM and realizing their SOA Governance Regimen

This document is not intended to be used as provided; it is intended to be customized to create appropriate SOA governance for the organization. Many of the lists are non-normative and exemplary and intended to be filtered and as input to the customization process.

This document does not include an explanation of the fundamentals and value of SOA which is important for being able to understand and apply SOA governance. Many other specifications and books are available on SOA basics (see Referenced Documents and Appendix D).

1.2 Overview

Many companies have adopted Service-Oriented Architecture (SOA) as an approach to architecture to assist in closing the business and IT gap by delivering the appropriate business functionality in a timely and efficient manner. For more details on this, refer to available books and standards on SOA (see Referenced Documents and Appendix D).

Many companies that have approached SOA via a pilot project have not been seeing the same demonstrated SOA benefits once they have deployed a fully-fledged SOA project. While pilot projects achieved a level of re-use, they have tended to be within one division, but as soon as a project boundary crosses multiple divisions, new challenges are encountered.

One of the key disciplines to assist in addressing these challenges is governance. Whilst governance has been around a long time, SOA has heightened the need and importance of having a formal SOA Governance Regimen that sets expectations and eases the transition of an organization to SOA by providing a means to reduce risk, maintain business alignment, and

show business value of SOA investments through a combination of people, process, and technology. The role of the SOA Governance Regimen is to create a consistent approach across processes, standards, policies, and guidelines while putting compliance mechanisms in place.

Most organizations already have a governance regimen for their IT department covering project funding, development, and maintenance activities. These tend to have been defined using either one of the formal standard IT governance frameworks – such as COBIT, ITIL, etc. – or an informal in-house governance framework that has been built over many years. The focus of The Open Group's initial release of an SOA Governance Framework is primarily based on the IT aspects of SOA governance.

This document contains a description of the governance activities that are impacted by SOA, and puts forward some best practice governance rules and procedures for those activities. In order to specify the changes necessary to accommodate SOA in an existing governance regime, the governance activities described in this document must be mapped and integrated to the activities being utilized in the existing regime. Many of the lists provided with the explanations of the SGRM and SGVM are non-normative examples intended to provide a starting point for customization to the SOA solution.

This document is organized as follows:

- This chapter provides a general introduction.
- Chapter 2 discusses the background to SOA governance, describing the reasons why governance is important for SOA, the challenges involved, and the benefits that should be achieved.
- Chapter 3 defines SOA governance and explains The Open Group SOA Governance Framework.
- Chapter 4 defines the generic SOA Governance Reference Model (SGRM) used as a baseline for tailoring an SOA Governance Model for an organization.
- Chapter 5 defines the SOA Governance Vitality Method (SGVM) which describes a method using the generic SGRM to instantiate an organizational unique SOA Governance Model.
- Appendix A describes the SOA governance process activities.
- Appendix B describes the SOA governance process information entities.
- Appendix C provides an SOA governance metrics example.
- Appendix D describes the relationship of this document to other SOA standards.

1.3 Conformance

The SOA Governance Framework does not have strict compliance statements or testing. It is expected that this Technical Standard will be customized appropriately into a governance regimen for the industry or organization applying it.

For those SOA Governance Regimens to be conformant with this Technical Standard, they must have at least the following processes defined:

- Compliance process
- Dispensation process
- Communication process

The SGVM must also be defined for the organization.

The nature and extensiveness of the guidelines and the governed processes depends upon the SOA maturity of the organization; therefore, SOA governance conformance does not assert any requirements on them.

1.4 Terminology

Can — Describes a permissible optional feature or behavior available to the user or application. The feature or behavior is mandatory for an implementation that conforms to this document. An application can rely on the existence of the feature or behavior.

Implementation-dependent — (Same meaning as "implementation-defined".) Describes a value or behavior that is not defined by this document but is selected by an implementer. The value or behavior may vary among implementations that conform to this document. An application should not rely on the existence of the value or behavior. An application that relies on such a value or behavior cannot be assured to be portable across conforming implementations. The implementer shall document such a value or behavior so that it can be used correctly by an application.

Legacy — Describes a feature or behavior that is being retained for compatibility with older applications, but which has limitations which make it inappropriate for developing portable applications. New applications should use alternative means of obtaining equivalent functionality.

May — Describes a feature or behavior that is optional for an implementation that conforms to this document. An application should not rely on the existence of the feature or behavior. An application that relies on such a feature or behavior cannot be assured to be portable across conforming implementations. To avoid ambiguity, the opposite of "may" is expressed as "need not", instead of "may not".

Must — Describes a feature or behavior that is mandatory for an application or user. An implementation that conforms to this document shall support this feature or behavior.

Shall — Describes a feature or behavior that is mandatory for an implementation that conforms to this document. An application can rely on the existence of the feature or behavior.