

The TOGAF® Standard

10th Edition

Leader's Guide



The
TOGAF®
Standard — *10th Edition*

The TOGAF® Standard, 10th Edition
Leader's Guide

The Open Group Publications available from Van Haren Publishing

The TOGAF® Standard, 10th Edition:

Introduction and Core Concepts
Architecture Development Method
Content, Capability, and Governance
Leader's Guide
ADM Practitioners' Guide
Business Architecture
Enterprise Agility and Digital Transformation
A Pocket Guide

The TOGAF Series:

The TOGAF® Standard, Version 9.2
The TOGAF® Standard, Version 9.2 – A Pocket Guide
TOGAF® 9 Foundation Study Guide, 4th Edition
TOGAF® 9 Certified Study Guide, 4th Edition
TOGAF® Business Architecture Level 1 Study Guide

The Open Group Series:

The IT4IT™ Reference Architecture, Version 2.1
IT4IT™ for Managing the Business of IT – A Management Guide
IT4IT™ Foundation Study Guide, 2nd Edition
The IT4IT™ Reference Architecture, Version 2.1 – A Pocket Guide
Cloud Computing for Business – The Open Group Guide
ArchiMate® 3.1 Specification – A Pocket Guide
ArchiMate® 3.1 Specification
The Digital Practitioner Pocket Guide
The Digital Practitioner Foundation Study Guide
Open Agile Architecture™ – A Standard of The Open Group

The Open Group Press:

The Turning Point: A Novel about Agile Architects Building a Digital Foundation
Managing Digital

The Open Group Security Series:

O-TTPS – A Management Guide
Open Information Security Management Maturity Model (O-ISM3)
Open Enterprise Security Architecture (O-ESA)
Risk Management – The Open Group Guide
The Open FAIR™ Body of Knowledge – A Pocket Guide

All titles are available to purchase from:

www.opengroup.org

www.vanharen.net

and also many international and online distributors.

The TOGAF® Standard, 10th Edition

Leader's Guide

The
TOGAF®
Standard — 10th Edition



Title: The TOGAF® Standard, 10th Edition — Leader's Guide
Series: TOGAF Series Guide
A Publication of: The Open Group

Publisher: Van Haren Publishing, 's-Hertogenbosch - NL, www.vanharen.net
ISBN Hardcopy: 978 94 018 0868 2
ISBN eBook: 978 94 018 0869 9
ISBN ePub: 978 94 018 0870 5
Edition: First edition, first impression, April 2022

Layout and Cover Design: The Open Group

Copyright: © 2018-2022 The Open Group. All rights reserved

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior permission of the copyright owner. Any use of this publication for commercial purposes is subject to the terms of the Annual Commercial License relating to it. For further information, see www.opengroup.org/legal/licensing.

The TOGAF® Standard, 10th Edition — Leader's Guide

Document number: G184

Published by The Open Group, April 2022.

This document supersedes the previous version published in February 2018.

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

The Open Group
Apex Plaza
Reading
Berkshire, RG1 1AX
United Kingdom

or by electronic mail to: ogspecs@opengroup.org

Contents

Part 1: Introduction.....	1
1 Introduction.....	3
1.1 How to Use this Guide with the TOGAF Framework.....	5
1.2 The State of Enterprise Architecture.....	5
2 Definitions.....	7
2.1 Enterprise.....	7
2.2 Enterprise Architecture (EA).....	7
2.3 Enterprise Architecture (EA) Capability.....	7
2.4 Capability.....	7
2.5 Leader.....	8
3 General Concepts.....	9
3.1 Who is an EA Capability Leader?.....	9
3.2 What is an Enterprise?.....	9
3.3 What is an EA Capability and EA?.....	10
3.4 EA Lifecycle.....	12
3.5 EA and Other Fields.....	12
3.6 Characteristics of EA.....	13
3.7 Referenced Techniques.....	13
Part 2: Guidance on Context.....	15
4 Enterprise Context and EA Context.....	17
4.1 What is the Enterprise and What is its Purpose?.....	18
4.2 What is the Enterprise’s Strategic Position, Approach, and Environment?.....	18
4.2.1 Business Model and Operating Model.....	19
4.2.2 Operating Environment and Compliance, Regulations, Industry Standards.....	21
4.2.3 Organization Model of the Enterprise.....	22
4.2.4 Scope the Impacted Teams.....	23
4.2.5 Econometric Model.....	24
4.2.6 Accountability Model and Decision Model.....	25
4.2.7 Risk Management Model.....	26
4.3 What is the Special Context for the EA Capability?.....	28
4.3.1 Financial Accounting Model.....	28
4.3.2 Strategic Planning Horizon.....	29
4.3.3 EA Principles.....	29
5 Business Objectives for the EA Capability.....	31
5.1 What is Expected?.....	32

5.2	What is the Depth and Breadth of EA?	32
5.3	What is the Organization Model for EA Capability?	33
5.3.1	Alignment of EA Capability Team in the Organization Model	35
5.4	How is Success Going to be Measured?	37
5.4.1	Revivalist and Bottom-Up EA Capability	39
Part 3: Guidance on Structure		41
6	Architecture Governance	43
6.1	Introduction to Governance	43
6.1.1	Key Characteristics	44
6.2	Essential Governance	45
6.3	What is the Current Reporting Framework?	48
6.4	What is the Current Risk Management Approach?	49
6.4.1	What is Risk?	50
6.4.2	Core Concepts of Enterprise Risk Management (ERM)	50
6.5	Existing Governance Process	51
6.5.1	Definition of Roles	52
7	Alignment with Other Frameworks	53
7.1	Create a Catalog of Frameworks	53
7.2	Intersection with EA Capability	54
8	Customization of Architecture Contents and Metamodel	55
8.1	What is the EA Capability's Purpose Supporting Decision-Making and Governance?	55
8.2	Are there Specific Questions to be Addressed?	56
8.3	What Constitutes the Content Metamodel?	57
8.4	Information Managed by the EA Capability	59
8.5	Managing the Enterprise Repository	60
9	Organization Model for the EA Team	63
9.1	Shared Roles and Alignment	64
9.2	Alignment	64
9.3	Structure	66
9.3.1	Roles and Responsibilities	68
9.3.2	Skills Framework	69
9.3.3	Performance Evaluation (of the EA Capability)	69
9.4	Capacity	70
9.4.1	Recruiting to Build Capacity	71
9.5	Scoping the Depth and Breadth of Business Impact with the EA Capability	71
9.5.1	Value Chains, Value Streams, and Capabilities	72
9.5.2	Domains and Layers	73
9.5.3	Depth and Breadth	75
9.5.4	Impact of Time Dimension on Scope	76
10	Process Model	77

10.1	What are the Touch-Points with Existing Enterprise Processes?	77
10.1.1	Decision-Making Process Integration Model	78
10.1.2	Execution Process Integration Model	79
10.1.3	Strategy Development Process	80
10.1.4	Portfolio and Program Management Processes	80
10.1.5	Project Initiation, Project Management, and Change Management Processes	80
10.1.6	Budgeting Processes	81
10.1.7	Operational Management Processes	81
10.1.8	Governance Processes	81
10.1.9	Enterprise Risk Management (ERM) Process	83
10.2	How is ADM Iteration Realized in Practice?	83
Part 4: Realizing the EA Capability		87
11	Create the EA Capability Roadmap	89
11.1	Activities to Create a Roadmap	89
11.2	Linking the EA Value Map to the Enterprise Value Map	90
11.3	EA Capability Model	92
12	Establishing and Evolving the EA Capability	95
12.1	Recap of Concepts	95
12.2	Start with Purpose	96
12.3	Trusted Advisor and Instigator of Change	97
12.4	Change Management	98
12.5	Sustaining and Maturing	98
12.5.1	How to Engage and Promote Value Execution of the Internal Stakeholders	99
12.6	Building Community and Mentoring	100
12.7	Tools and Techniques	101
Part 5: Mapping to the TOGAF Framework		103
13	Mapping the EA Leader's Guide to the TOGAF Framework	105
13.1	Mapping the EA Leader's Guide to TOGAF ADM Phases	105
13.2	Mapping EA Content, EA Leader's Approach, and Metamodel	109
Part 6: Appendices		111
A	Partial List of EA Content Frameworks	113
B	Maturity Models	115
C	Suggested Reading	116

Preface

The Open Group

The Open Group is a global consortium that enables the achievement of business objectives through technology standards. With more than 870 member organizations, we have a diverse membership that spans all sectors of the technology community – customers, systems and solutions suppliers, tool vendors, integrators and consultants, as well as academics and researchers.

The mission of The Open Group is to drive the creation of Boundaryless Information Flow™ achieved by:

- Working with customers to capture, understand, and address current and emerging requirements, establish policies, and share best practices
- Working with suppliers, consortia, and standards bodies to develop consensus and facilitate interoperability, to evolve and integrate specifications and open source technologies
- Offering a comprehensive set of services to enhance the operational efficiency of consortia
- Developing and operating the industry's premier certification service and encouraging procurement of certified products

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 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/library.

The TOGAF® Standard, a Standard of The Open Group

The TOGAF Standard is a proven enterprise methodology and framework used by the world's leading organizations to improve business efficiency.

This Document

This document is a TOGAF® Series Guide: The TOGAF® Leader's Guide to Establishing and Evolving an EA Capability. It has been developed and approved by The Open Group.

This Guide puts forward advice on establishing an Enterprise Architecture (EA) Capability that aligns to a set of requirements and expectations specific to each enterprise. It proposes an approach for the standing-up and enhancing of an enterprise's EA Capability based upon the established best practice contained within the TOGAF® standard, a standard of The Open Group.

This Guide is structured to provide the context, content, and rationale behind choices and steps that an EA Leader can consult at any point in time to set up, operate, or improve the value extracted from the practice of EA in the organization.

The intended audience for this Guide is as follows:

- Professionals who have been tasked with establishing and evolving an enterprise's EA Capability
- Business Leaders who are contemplating an investment in EA as a strategy
- Strategy and technology advisors to an enterprise's Leaders
- Professionals and experts who are enthusiasts in the field of EA or organizational transformation

This Guide is written directly for the person who is tasked with developing, sustaining, and evolving an EA Capability that delivers what their enterprise needs.

A high-functioning EA Capability optimizes Boundaryless Information Flow™ within and between enterprises based on open standards and global interoperability.

About the TOGAF® Series Guides

The TOGAF® Series Guides contain guidance on how to use the TOGAF Standard and how to adapt it to fulfill specific needs.

The TOGAF® Series Guides are expected to be the most rapidly developing part of the TOGAF Standard and are positioned as the guidance part of the standard. While the TOGAF Fundamental Content is expected to be long-lived and stable, guidance on the use of the TOGAF Standard can be industry, architectural style, purpose, and problem-specific. For example, the stakeholders, concerns, views, and supporting models required to support the transformation of an extended enterprise may be significantly different than those used to support the transition of an in-house IT environment to the cloud; both will use the Architecture Development Method (ADM), start with an Architecture Vision, and develop a Target Architecture on the way to an Implementation and Migration Plan. The TOGAF Fundamental Content remains the essential scaffolding across industry, domain, and style.

Trademarks

ArchiMate, DirecNet, Making Standards Work, Open O logo, Open O and Check Certification logo, Platform 3.0, The Open Group, TOGAF, UNIX, UNIXWARE, and the Open Brand X logo are registered trademarks and Boundaryless Information Flow, Build with Integrity Buy with Confidence, Commercial Aviation Reference Architecture, Dependability Through Assuredness, Digital Practitioner Body of Knowledge, DPBoK, EMMM, FACE, the FACE logo, FHIM Profile Builder, the FHIM logo, FPB, Future Airborne Capability Environment, IT4IT, the IT4IT logo, O-AA, O-DEF, O-HERA, O-PAS, Open Agile Architecture, Open FAIR, Open Footprint, Open Process Automation, Open Subsurface Data Universe, Open Trusted Technology Provider, OSDU, Sensor Integration Simplified, SOSA, and the SOSA logo are trademarks of The Open Group.

Capability Maturity Model and CMM are registered trademarks of Carnegie Mellon University.

COBIT is a registered trademark of the Information Systems Audit and Control Association (ISACA) and the IT Governance Institute.

eTOM is a registered trademark and Framework is a trademark of the TM Forum.

ITIL and PRINCE2 are registered trademarks of AXELOS Limited.

PMBOK, PMI, and Project Management Institute are registered trademarks of Project Management Institute, Inc.

SABSA is a registered trademark of The SABSA Institute.

SCOR is a registered trademark of APICS.

UML is a registered trademark and BPMN is a trademark of the Object Management Group, Inc. in the United States and/or other countries.

All other brands, company, and product names are used for identification purposes only and may be trademarks that are the sole property of their respective owners.

About the Authors

(Please note affiliations were current at the time of approval.)

Dave Hornford, Conexiam

Dave Hornford is Conexiam's Managing Partner and leads Conexiam's Boston practice. He is the owner of Conexiam's Navigate and Navigate Atlases. Dave serves on the board of trustees of The SABSA Institute. He is the former Chair of The Open Group Architecture Forum and was a key contributor to the TOGAF® 9 standard. Based in North America, he works in a variety of industries including financial services, oil and gas, technology, and capital-intensive industry. Typically, he helps clients develop and execute a roadmap to transform.

Taylor Hornford, Conexiam

Taylor Hornford is an Enterprise Architect. Based in Canada, he is a member of Conexiam's Boston practice. Taylor specializes in formal modeling and supports the option analysis and roadmap development. Taylor works with all of Conexiam's practices.

Sriram Sabesan, Conexiam

Sriram Sabesan is an Open Group Certified Distinguished Architect. Based in North America, he specializes in technology, manufacturing, telecommunication, and financial services industries. Sriram helps clients to develop and execute strategies in response to digital or economic disruptions. He is actively involved in development of various standards of The Open Group.

Sadie Scotch, Conexiam

Sadie Scotch is an Enterprise Architect. Sadie is based in the US and is a member of Conexiam's Boston practice. Sadie specializes in governance, option analysis, and roadmap development. She helps clients to develop and govern change programs to address current enterprise priorities.

Ken Street, Conexiam

Ken Street is an Enterprise Architect. Based in Canada, he leads Conexiam's Governance and IT4IT initiatives. He is the current Vice-Chair of The Open Group Big Data project and is active within the IT4IT™ and Open Platform 3.0™ Forums. He works primarily in financial services and oil and gas, helping clients to develop their EA Capability, improve their IT organization, and execute architecture-driven change programs.

Samantha Toder, Conexiam

Samantha Toder is an Enterprise Architect and ABACUS Certified Architect and Designer, who is actively involved in The Open Group Architecture Forum. Sam is a member of Conexiam's Boston practice and is based in the US. She helps clients to develop in-house EA Capability and execute complex transformation programs primarily in the public sector and the financial services industry.

Acknowledgements

The authors gratefully acknowledge the contribution of the authors of the World-Class Enterprise Architecture White Paper (W102, published by The Open Group, April 2010): Mick Adams, John Arnold, Tim Davey, Laura Harris, Peter Haviland, Richard Heward, Ian Hughes, Navdeep Panaich, Michael Pearson, Joseph Sherry, Mike Turner, Martin Van Den Berg, and Jane Varnus.

The authors gratefully acknowledge the contribution on enterprise risk of the authors of Integrating Risk and Security within a TOGAF® Enterprise Architecture (G152, published by The Open Group, January 2016), and by The SABSA Institute, specifically John Sherwood and Pascal de Konig.

Referenced Documents

The following documents are referenced in this TOGAF® Series Guide, or the concepts discussed in this Guide are derived from these works.

- A Causal Model of Organization Performance and Change, Burke and Litwin, *Journal of Management*, Vol. 18, No. 3, pp 523-545, 1992
- A Guide to the Project Management Body of Knowledge (PMBOK® Guide), 5th Edition, Project Management Institute (PMI), 2013; refer to www.pmi.org
- American Productivity and Quality Center (APQC); refer to: www.apqc.org
- Applied Corporate Governance, Nigel Kendall, Arthur Kendall; refer to: www.applied-corporate-governance.com/best-corporate-governance-practice.html
- Blue Ocean Strategy: How to Create Uncontested Marketspace and Make the Competition Irrelevant, Chan W. Kim, Renée Mauborgne, Harvard Business School Press, 2005; refer to: www.amazon.com/Blue-Ocean-Strategy-Uncontested-Competition/dp/1591396190
- Building an Enterprise Architecture Practice: Tools, Tips, Best Practices, Ready-to-Use Insights, Martin van den Berg, Marlies van Steenberghe, The Enterprise Series, ISBN:1402056052
- Business Model Canvas, Alexander Osterwalder; refer to: <http://businessmodelalchemist.com/blog/2005/11/what-is-business-model.html>
- Corporate Governance: An Essential Guide for South African Companies, Ramani Naidoo, April 2007
- Diffusion of Innovations (1st Edition), E.M. Rogers, New York Free Press of Glencoe. OCLC 254636, 1962
- Enterprise Architecture as Strategy: Creating a Foundation for Business Execution, Jeanne W. Ross, Peter Weill, David C. Robertson, Harvard Business School Press, 2006
- Enterprise Architecture – Critical to Large Transformation Programs, Suyog Mahendra Shah, AEA Journal, December 2011
- Enterprise Transformation – An Architecture-Based Approach, William B. Rouse, The Open Group Conference, January 2012
- Exploring Synergies between TOGAF® and Framework™, White Paper (W114), published by The Open Group, May 2011; refer to: www.opengroup.org/library/w114
- Gartner Clarifies the Definition of the Term “Enterprise Architecture”; Gartner, ID Number: G00156559, August 12, 2008; refer to: <https://online.ist.psu.edu/sites/forinstructors/files/gartnerclarifies.pdf>
- How Competitive Forces Shape Strategy, Michael E. Porter, *Harvard Business Review* 57, No. 2, March-April, 1979, pp.137-145; refer to: www.hbs.edu/faculty/Pages/item.aspx?num=10692

- Integrating the TOGAF® Standard with the BIAN Service Landscape, White Paper (W135), published by The Open Group, October 2013; refer to: www.opengroup.org/library/w135
- ISO 31000: Risk Management; refer to: www.iso.org/iso/home/standards/iso31000.htm
- ISO/IEC 7498-1:1994: Information Technology – Open Systems Interconnection – Basic Reference Model: The Basic Model; refer to: www.iso.org/iso/catalogue_detail.htm?csnumber=20269
- ISO/IEC 38500:2015: Information Technology – Governance of IT for the Organization; refer to: www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=62816
- Managing Organizations, David A. Nadler, Michael Tushman, Nina Hatvany, Organizational Dynamics, Autumn 1980
- Occupational Outlook Handbook, US Department of Labor; refer to: www.bls.gov/ooh
- Organization Design, Jay R. Galbraith, Reading MA, Addison-Wesley, 1977
- Organizational Diagnosis: Six Places to Look for Trouble With or Without a Theory, Marvin R. Weisbord, Group & Organization Studies 1, 4, pp.430-447, December 1976
- OSGi Alliance Model; refer to: www.osgi.org/Technology/WhatIsOSGi
- Reinventing your Board: A Step-by-Step Guide to Implementing Policy Governance, John Carver, Jossey-Bass, 2006
- Skills Framework for the Information Age (SFIA), SFIA Foundation; refer to: www.sfia-online.org
- SOA Reference Architecture, a standard of The Open Group (C119), published by The Open Group, December 2011; refer to: www.opengroup.org/library/c119
- The Open Group Certified Architect (Open CA) Program: Conformance Requirements, Certification Program Documentation (X1411), published by The Open Group, October 2014; refer to: www.opengroup.org/library/x1411
- The TOGAF® Standard, 10th Edition, a standard of The Open Group (C220), published by The Open Group, April 2022; refer to: www.opengroup.org/library/c220
- TOGAF® 9 and DoDAF 2.0, White Paper (W105), published by The Open Group, July 2010; refer to: www.opengroup.org/library/w105
- TOGAF® and SABSA® Integration, White Paper (W117), published by The Open Group, October 2011; refer to: www.opengroup.org/library/w117
- TOGAF® Series Guide: Integrating Risk & Security within a TOGAF® Enterprise Architecture, The Open Group Guide (G152), published by The Open Group, April 2022; refer to: www.opengroup.org/library/g152
- World-Class Enterprise Architecture, White Paper (W102), published by The Open Group, April 2010; refer to: www.opengroup.org/library/w102

- World-Class Enterprise Architecture: A Leader’s Approach to Establishing and Evolving an EA Capability, White Paper (W160), published by The Open Group, January 2016; refer to: www.opengroup.org/library/w160

Part 1: Introduction

1 Introduction

This Guide presents advice on establishing an Enterprise Architecture (EA) Capability that aligns to a set of requirements and expectations that are specific to each enterprise.¹ It proposes an approach for the standing-up and enhancement of an enterprise's EA Capability based upon established best practices. This approach follows a configured path through the TOGAF® Architecture Development Method (ADM).

This Guide is written for the EA Capability Leader, the person who is tasked to lead the effort to establish or evolve an EA Capability. We have selected the term *Leader* deliberately to reflect the role rather than any one of the myriad titles in an enterprise the Leader may have. This Guide is structured to provide the context, content, and rationale behind choices and steps that an EA Leader can consult at any point in time to set up, operate, and improve the value extracted from the practice of EA in the organization. A high-functioning EA Capability optimizes Boundaryless Information Flow™ within and between enterprises based on open standards and global interoperability.

Practicing EA requires in-depth interaction with several specialized functions such as strategy development, HR policies, and corporate accounting. This Guide:

- Introduces key topics of concern
- Defines the terms related to the topic
- Shows the terms that are related to an EA Capability
- Discusses what the Leader needs to know
- Describes what the Leader should do with this knowledge

This Guide transitions its focus between setting up a new EA Capability practice and evolving or re-establishing the practice. It is presented this way to reflect the reality of the state of EA prevalent in the industry at the time of writing.

This Guide is divided into six parts.

Part 1 (this part) is the introduction, including an assessment of the state of EA, definitions, and key concepts used in this Guide.

Parts 2 and 3 present a narrative that leads the reader through a series of topics and related steps to assist in stepping back from the current operational context to seek a broader perspective. Ideally, the contents of these first two parts should form a companion to the TOGAF ADM or

¹ The terms *business*, *company*, *organization*, and *enterprise* are often used interchangeably in various texts. This Guide uses the term *Enterprise* to refer to a logical entity that is taking part in an economic activity; i.e., one that involves some kind of risk/reward or new way of solving socio-economic problems. Likewise, the term *organization* is in reference to a group of personnel brought together to perform a set of tasks and deliver the outcomes defined for them. The term *business* is used to refer to the team that formulates and manages the outcomes that the Enterprise is set to do. And the term *company* is used only when it improves readability, though the definition remains that of an Enterprise.