

# TOGAF™ Version 9 Enterprise Edition

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## Migration Overview

*A White Paper by:*

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January, 2009

## **TOGAF™ 9 Migration Overview**

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TOGAF™ Version 9 Enterprise Edition: Migration Overview

Document No.: W095

Published by The Open Group, January 2009.

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## **Executive Summary**

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This document contains high-level migration information – a description of what is new in TOGAF 9 and a mapping of TOGAF 9 to and from TOGAF 8.1.1.

Readers are assumed to be familiar with the content of TOGAF 8.1.1.

## Migration Overview

### Introduction

This document contains high-level migration information – a description of what is new in TOGAF 9 and a mapping of TOGAF 9 to and from TOGAF 8.1.1. Readers are assumed to be familiar with the content of TOGAF 8.1.1.

### What's New in TOGAF 9?

Following is an overview of the major new features within TOGAF 9.

#### Modular Structure

TOGAF 9 introduces a modular structure. Content that was contained within the TOGAF 8.1.1 Resource Base has been classified and moved into parts that have a defined purpose (as opposed to generic “resources”). The modular structure supports:

- Greater usability – defined purpose for each part; can be used in isolation as a standalone set of guidelines
- Incremental adoption of the TOGAF specification
- More sophisticated release management of the TOGAF specification

#### Content Framework

TOGAF 9 includes a content framework to drive greater consistency in the outputs that are created when following the Architecture Development Method (ADM). The TOGAF content framework provides a detailed model of architectural work products, including:

- Deliverables
- Artifacts within deliverables
- The architectural building blocks that artifacts represent

#### Extended Guidance on Adopting TOGAF within an Enterprise

TOGAF 9 features an extended set of concepts and guidelines to support the establishment of an integrated hierarchy of architectures being developed by teams within larger organizations that operate within an overarching architectural governance model. In particular, the following concepts are introduced:

- **Partitioning:** A number of different techniques and considerations on how to partition the various architectures within an enterprise.
- **Architecture Repository:** A logical information model for an Architecture Repository which can be used as an integrated store for all outputs created by executing the ADM.
- **Capability Framework:** A more structured definition of the organization, skills, roles, and

## **TOGAF™ 9 Migration Overview**

responsibilities required to operate an effective enterprise architecture capability. The new TOGAF materials also provide guidance on a process that can be followed to identify and establish an appropriate architecture capability.

### **Explicit Consideration of Architectural Styles**

TOGAF 9, in its new Part III: ADM Guidelines & Techniques, brings together a set of supporting materials that show in detail how the ADM can be applied to specific situations:

- The varying uses of iteration that are possible within the ADM and when each technique should be applied
- The linkages between the TOGAF ADM and Service Oriented Architecture (SOA)
- The specific considerations required to address security architecture within the ADM
- The various types of architecture development required within an enterprise and how these relate to one another

### **Additional ADM Detail**

TOGAF 9 includes additional detailed information supporting the execution of the ADM. Particular areas of enhancement are:

- The Preliminary phase features extended guidance on establishing an enterprise architecture framework and planning for architecture development. This extended phase also provides pointers to the definition of a governance model for architecture benefit realization and discusses the linkage between TOGAF and other management frameworks.
- The Opportunities & Solutions and Migration Planning phases feature a more detailed and robust method for defining and planning enterprise transformation, based on the principles of capability-based planning.

## **TOGAF 8.1.1 to TOGAF 9**

This section lists the parts of the TOGAF 8.1.1 specification with a description explaining where the TOGAF 8.1.1 content is located within TOGAF 9.

### **Part I: Introduction**

The Introduction from TOGAF 8.1.1 has been used as the basis for creation of Part I: Introduction in TOGAF 9. The introduction to TOGAF 9 reflects the content of TOGAF 9 rather than the content of TOGAF 8.1.1, and also features a number of enhancements to improve accessibility, including a revised executive overview, a new chapter introducing the core concepts within TOGAF, a revised chapter of key terms and definitions, and a chapter containing information about changes in TOGAF 9.

### **Part II: Architecture Development Method**

The essence of the TOGAF 8.1.1 ADM has been retained in TOGAF 9. Part II: Architecture Development Method (ADM) within TOGAF 9 is structured along similar lines to Part II of TOGAF

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8.1.1. The “crop circle” diagram is an evolution, with just the single change to rename the “Preliminary Phase: Framework and Principles” to simply the “Preliminary Phase”. There is also a double-ended arrow between the Preliminary Phase and Phase A to denote that the Preliminary Phase may be revisited. The TOGAF ADM phase inputs and outputs (Chapter 16 of TOGAF 8.1.1) have been moved from Part II in TOGAF 8.1.1 to Part IV: Architecture Content Framework in TOGAF 9, and renamed “Architecture Deliverables”.

The TOGAF 9 ADM features additional content in the majority of ADM phases, which in the most part adds further detail and clarification to the same approach that was described in TOGAF 8.1.1.

### **Part III: Enterprise Continuum**

The TOGAF 8.1.1 Enterprise Continuum has seen a substantial degree of change.

The Enterprise Continuum concept is retained within Part V: Enterprise Continuum & Tools in TOGAF 9. The TOGAF Technical Reference Model (TRM) and Integrated Information Infrastructure Reference Model (III-RM) are extracted and placed within Part VI: TOGAF Reference Models in TOGAF 9. The TRM, rather than having the Detailed Platform Taxonomy as a separate chapter, now includes it as a subsection within the same chapter.

TOGAF 9 adds new materials that describe an approach to architecture partitioning and also provides a structured model of an Architecture Repository. These concepts support and elaborate on the original intent of the Enterprise Continuum.

TOGAF 9 removes the Standards Information Base (SIB) from TOGAF. However, an example SIB remains at The Open Group web site ([www.opengroup.org](http://www.opengroup.org)). The concept of a Standards Information Base is described within TOGAF, but the breadth and speed of change of relevant architectural standards mean that it is impractical to maintain a current and relevant collection of standards within a specification such as TOGAF.

### **Part IV: Resource Base**

The Resource Base is not included in TOGAF 9. Some elements of the Resource Base have been deprecated from the specification, but will still be available in White Paper form. Other elements of the Resource Base have been moved to other areas of the specification related to their content matter.

## **TOGAF 9 to TOGAF 8.1.1**

This section contains high-level migration information – a summary description of what is changed from TOGAF 8.1.1. Readers are assumed to be familiar with the content of TOGAF 8.1.1.

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TOGAF 9 Reference		Derivation from TOGAF 8.1.1
<b>Part I: Introduction</b>		
1	Introduction	Material revised; based on Chapter 1 This revised chapter describes the structure, an executive overview of enterprise architecture, and the benefits of using TOGAF. Some of the previous contents have been moved to the new chapters 2 and 4.
2	Core Concepts	New chapter This new chapter introduces the Core Concepts of TOGAF: what it is, what is architecture in the context of TOGAF, what types of architecture does TOGAF deal with, and the ADM. It introduces key concepts such as deliverables, artifacts, and building blocks. It introduces the Enterprise Continuum and the Architecture Repository. It introduces the establishment and operations of an Enterprise Architecture Capability. It describes considerations for using TOGAF with other frameworks. It also contains the TOGAF Document Categorization Model which is used to structure release management of the specification itself.
3	Definitions	Derived from Chapter 36, reworked into formal definitions and abbreviations This revised chapter contains the key terms and definitions. Other supplementary definitions and abbreviations have been moved to separate appendices.
4	Release Notes	New chapter This is a new chapter containing information on this release of the document. It contains an overview of what's new, the benefits of the changes, and summary mappings of the structure of the document from TOGAF 8.1.1 to TOGAF 9 and <i>vice versa</i> . It also includes information on terms and conditions for using TOGAF and where to download it.
<b>Part II: Architecture Development Method</b>		
5	Introduction	Material revised; based on Chapter 3 The changes made in this chapter are to position the ADM with respect to the Architecture Repository, and to Part III: ADM Guidelines & Techniques. The concept of document versioning is introduced with an example.
6	Preliminary Phase	Material revised; based on Chapter 4 The <i>Approach</i> has been expanded considerably to address in addition the definition of the enterprise, key drivers and elements for the organization, requirements for architecture work, management frameworks and their relationship, as well as enterprise maturity. There are now explicit <i>Steps</i> defined whereas previously there were none.



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TOGAF 9 Reference		Derivation from TOGAF 8.1.1
7	Phase A: Architecture Vision	<p>Material revised; based on Chapter 5</p> <p><i>Business Scenarios</i> are now called out as a separate section in <i>Approach</i>; previously they were included as a subsection to <i>Steps</i>.</p> <p>The <i>Steps</i> have been revised to additionally include an evaluation of Business Capabilities, Readiness for Business Transformation, definition of Target Architecture Value Propositions and KPIs, and identification of Business Transformation Risks and Mitigation activities.</p> <p>The <i>Inputs</i> and <i>Outputs</i> are reorganized to match the deliverables for TOGAF 9.</p>
8	Phase B: Business Architecture	<p>Material revised; based on Chapter 6</p> <p>The <i>Approach</i> is revised to discuss the Architecture Repository rather than the Enterprise Continuum. The description of the Gap Analysis technique is moved to Part III.</p> <p>A revised sequence of <i>Steps</i> is introduced. This same sequence of steps is also used in Phases C and D.</p> <p>The <i>Inputs</i> and <i>Outputs</i> are reorganized to match the deliverables for TOGAF 9. A key difference is the introduction of two container documents: the Architecture Definition Document and the Architecture Requirements Specification.</p>
9	Phase C: Information Systems Architectures	<p>Material revised; based on Chapter 7</p> <p>The <i>Inputs</i> and <i>Outputs</i> are reorganized to match the deliverables for TOGAF 9.</p>
10	Phase C: Data Architecture	<p>Material revised; based on Chapter 8</p> <p>In <i>Approach</i>: the reference to Enterprise Continuum is replaced with the Architecture Repository. The section on Gap Analysis is removed. A section on Key Considerations for Data Architecture is added.</p> <p>A revised sequence of <i>Steps</i> is introduced. This same sequence is also used in Phases B, C (Application Architecture), and D.</p> <p>The <i>Inputs</i> and <i>Outputs</i> are reorganized to match the deliverables for TOGAF 9.</p>
11	Phase C: Application Architecture	<p>Material revised; based on Chapter 9</p> <p>In <i>Approach</i>: the reference to Enterprise Continuum is replaced with the Architecture Repository. The section on Gap Analysis is removed.</p> <p>A revised sequence of <i>Steps</i> is introduced. This same sequence is also used in Phases B, C (Data Architecture), and D.</p> <p>The <i>Inputs</i> and <i>Outputs</i> are reorganized to match the deliverables for TOGAF 9.</p>
12	Phase D: Technology Architecture	<p>Material revised; based on Chapter 10</p> <p>In <i>Approach</i>: the reference to Enterprise Continuum is replaced with the Architecture Repository.</p> <p>The <i>Steps</i> have undergone a major reorganization, and now use the same sequence also used in Phases B and C.</p> <p>The <i>Inputs</i> and <i>Outputs</i> are reorganized to match the deliverables for TOGAF 9.</p>

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TOGAF 9 Reference		Derivation from TOGAF 8.1.1
13	Phase E: Opportunities & Solutions	Material revised; based on Chapter 11 This phase has had a major revision to add extensive detail on an <i>Approach</i> and <i>Steps</i> to move from Target Architectures to implementation via a series of Transition Architectures. The <i>Inputs</i> and <i>Outputs</i> are reorganized to match the deliverables for TOGAF 9.
14	Phase F: Migration Planning	Material revised; based on Chapter 12 This phase has had a major revision to add extensive detail on an <i>Approach</i> and <i>Steps</i> to finalize the Implementation and Migration Plan for the Transition Architectures identified in Phase E. The <i>Inputs</i> and <i>Outputs</i> are reorganized to match the deliverables for TOGAF 9.
15	Phase G: Implementation Governance	Material revised; based on Chapter 13 The <i>Objectives</i> include rewording and additions to emphasize the Governance aspect of the phase. The <i>Approach</i> has been updated to include Business Value Realization. The <i>Steps</i> have had a major revision to include confirmation of scope for Deployment with Development Management, identification of Deployment Skills and Resources, guidance development for Solutions Deployment, Compliance Reviews, implementation of Operations, and a post-implementation Review.
16	Phase H: Architecture Change Management	Material revised; based on Chapter 14 The <i>Objectives</i> have been reworked and including maximizing business value. The <i>Approach</i> is expanded to additionally include monitoring of the business and capacity management. The <i>Steps</i> have had a major revision, and additionally include establishment of the value realization process, deployment of monitoring tools, management of risks, analysis for change, and development of change requirements to meet performance targets.
17	ADM Architecture Requirements Management	No material change; maps to Chapter 15 The <i>Inputs</i> and <i>Outputs</i> are reorganized to match the deliverables for TOGAF 9.
<b>Part III: ADM Guidelines &amp; Techniques</b>		
18	Introduction	New chapter This new part is provided to support application of the ADM.
19	Applying Iteration to the ADM	New chapter This chapter describes the concept of iteration and shows potential strategies for applying iterative concepts to the ADM.
20	Applying the ADM at Different Enterprise Levels	New chapter This chapter describes the different types of architecture engagement that may occur at different levels of the enterprise and how the ADM process can be focused to support them.

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TOGAF 9 Reference		Derivation from TOGAF 8.1.1
21	Security Architecture and the ADM	New chapter; derived from Security White Paper (W055) This chapter provides specific security considerations for each phase of the ADM.
22	Using TOGAF to Define and Govern SOAs	New chapter This chapter describes how the SOA style of architecture can be supported by TOGAF.
23	Architecture Principles	No material change; maps to Chapter 29 A new example principle of Service Orientation is added to the Business Principles.
24	Stakeholder Management	New chapter This chapter describes the technique of Stakeholder Management, an important discipline for architecture practitioners.
25	Architecture Patterns	No material change; maps to Chapter 28
26	Business Scenarios	No material change; maps to Chapter 34
27	Gap Analysis	New chapter; derived from Gap Analysis This chapter is introduced to allow the technique to be referenced from the ADM phases, and therefore reduce duplication of text.
28	Migration Planning Techniques	New chapter This chapter describes a number of techniques to support Phases E and F.
29	Interoperability Requirements	New chapter This chapter provides guidelines for developing interoperability requirements.
30	Business Transformation Readiness Assessment	New chapter This chapter describes a technique for identifying business transformation issues.
31	Risk Management	New chapter This chapter describes a technique for managing risk during an architecture or business transformation project.
32	Capability-Based Planning	New chapter This chapter describes the technique of capability-based planning.
<b>Part IV: Architecture Content Framework</b>		
33	Introduction	New chapter This new part of TOGAF addresses content output, providing a framework within which to place major work products.
34	Content Metamodel	New chapter This chapter provides a metamodel definition of all the types of Building Blocks within an architecture, showing how they can be described and how they relate to one another.

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TOGAF 9 Reference		Derivation from TOGAF 8.1.1
35	Architectural Artifacts	Derived from Chapter 31, plus new material This chapter is revised to address a set of atomic work products created when following the ADM. A diagram to illustrate the concepts from ISO/IEC 42010:2007 is introduced. Classes of viewpoints are defined: catalogs, matrices, diagrams. Additional Architecture Viewpoints are added.
36	Architecture Deliverables	Revised from Chapter 16 A significant revision of the deliverables has been undertaken. A table is provided showing where deliverables are produced and consumed within the ADM cycle. A key difference is the introduction of two container documents: the Architecture Definition Document and the Architecture Requirements Specification.
37	Building Blocks	Revised from Chapter 32 The description of the Building Blocks Specification Process in the ADM has been updated to match the changes to the ADM Steps. The section on <i>Levels of Modeling</i> has been removed.
<b>Part V: Enterprise Continuum &amp; Tools</b>		
38	Introduction	New chapter This chapter introduces this part.
39	Enterprise Continuum	Derived from Chapters 17 and 18 The explanation of the Enterprise Continuum has been rewritten to better explain its purpose and context, including its relationship to enterprise repositories. Organization Architectures has been updated to Organization-Specific Architectures in the diagram of the Architecture Continuum. Organization Solutions has been updated to Organization-Specific Solutions in the diagram of the Solutions Continuum. In the description of the Architecture Continuum, Enterprise Architectures is updated to Organization-Specific Architectures. In the description of the Solutions Continuum, Enterprise Solutions is updated to Organization-Specific Solutions.
40	Architecture Partitioning	New chapter This chapter describes the various characteristics that can be applied to classify and then partition architectures.
41	Architecture Repository	New chapter This chapter describes how the abstract classifications of architecture can be applied to a repository structure.
42	Tools for Architecture Development	No material change; maps to Chapter 38 A reference has been added to the TOGAF certification program.
<b>Part VI: TOGAF Reference Models</b>		
43	Foundation Architecture: Technical Reference Model	No material change; maps to Chapters 19 and 20 The <i>Detailed Platform Taxonomy</i> is now a section of this chapter rather than being a separate chapter.

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TOGAF 9 Reference		Derivation from TOGAF 8.1.1
44	Integrated Information Infrastructure Reference Model	No material change; maps to Chapter 22
<b>Part VII: Architecture Capability Framework</b>		
45	Introduction	New chapter
46	Establishing an Architecture Capability	New chapter This chapter describes how to use the ADM to establish an architecture practice within an organization.
47	Architecture Board	Minimal change; maps to Chapter 23 Changes have been limited to minor editorial updates.
48	Architecture Compliance	Minimal change; maps to Chapter 24 Section 24.3, Project Impact Assessments (Project Slices) has been removed.
49	Architecture Contracts	Minimal change; maps to Chapter 25 Wording is added to tie this chapter more closely to Architecture Governance. Instead of listing the contents of the Statement of Architecture Work, a reference to the definition in Part IV is added.
50	Architecture Governance	Minimal change, maps to Chapter 26 A reference to the TOGAF/COBIT mapping paper from ITGI is added. Some editorial rewording has been applied to the section <i>Architecture Governance in Practice</i> .
51	Architecture Maturity Models	Minimal change; maps to Chapter 27 Minor changes have been applied to refer to the latest version of ACMM.
52	Architecture Skills Framework	Some cosmetic changes; maps to Chapter 30 References to IT Architect have been replaced with Enterprise Architect.
<b>Appendices</b>		
A	Glossary of Supplementary Definitions	Derived from Chapter 36 The terms and definitions provided here have been split out from the original glossary as they are not specific to TOGAF.
B	Abbreviations	Derived from Chapter 36 This section has been split out from the original glossary.

## About the Author

Andrew Josey is Director of Standards within The Open Group. He is currently managing the standards process for The Open Group, and has recently led the standards development projects for TOGAF 9, IEEE Std 1003.1-2008 (POSIX), and the core specifications of the Single UNIX Specification, Version 4. Previously, he has led the development and operation of many of The Open Group certification development projects, including industry-wide certification programs for the UNIX system, the Linux Standard Base, TOGAF, and IEEE POSIX. He is a member of the IEEE, USENIX, UKUUG, and the Association of Open Group Enterprise Architects.

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