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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 18757-2025

Replacing GB/T 18757-2008

**Enterprise modelling and architecture - Requirements for
enterprise-referencing architectures and methodologies
(English Translation)**

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Table of Contents

Preface	
Introduction	
1 Scope	
2 Normative references	
3 Terms and Definitions	
4 Abbreviations	
5 Requirements for the Enterprise Reference Architecture and Model	
5.1 General requirements	
5.2 Applicability and coverage of enterprise architecture	
5.3 Basic Concepts of Enterprise Reference Architecture	
6 Components of an Enterprise Reference Architecture	11
6.1 Enterprise Reference Model	
6.2 Modeling Language	
6.3 Model Representation	
6.4 General purpose effects	
6.5 Enterprise Views and Perspectives	
6.6 Enterprise Reference Modeling Framework	
6.7 Tools	
6.8 Module	
6.9 Enterprise Operation System	
6.10 Expression	
Appendix A (Informative) Key Principles for Enterprise Integration and Interoperability	
A.1 Overview	

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces GB/T 18757-2008 "Requirements for enterprise reference architecture and methodology for industrial automation systems" and Compared with GB/T 18757-2008, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- Changed the scope of application of the document (see Chapter 1, Chapter 1 of the 2008 edition);
- Deleted the terms "activity" (see 3.1 of the 2008 edition), "attribute" (see 3.3 of the 2008 edition), "behavior" (see 3.4), "Master Plan" (see 3.13 of the 2008 edition), "Methodology" (see 3.14 of the 2008 edition), "Structure" (see 3.19 of the 2008 edition), "system" (see 3.20 of the 2008 edition);
- Changed the terms "architecture" (see 3.1, 3.2 of the 2008 edition), "enterprise" (see 3.4, 3.6 of the 2008 edition), "enterprise model" "Model" (see 3.6, 3.8 of the 2008 edition), "Framework" (see 3.10, 3.9 of the 2008 edition), "Universality" (see 3.11, 3.10 of the 2008 edition), "life cycle" (see 3.12, 3.11 of the 2008 edition), "life course" (see 3.13, 3.12 of the 2008 edition), "use mission" (see 3.14, 3.15 of the 2008 edition), "model" (see 3.15, 3.16 of the 2008 edition), "organization" (see 3.18, 3.17 of the 2008 edition), the definition of "resources" (see 3.21, 3.18 of the 2008 edition);
- Added the terms "level" (see 3.2), "enterprise reference" (see 3.7), "entity" (see 3.8), "environment" (see 3.9), "model-based" "of" (see 3.16), "modeling dimensions" (see 3.17), "viewpoints" (see 3.19), "reference benchmarks" (see 3.20), "stakeholders" (see 3.22), "view" (see 3.23), "perspective" (see 3.24);
- Added a chapter on "Abbreviations" (see Chapter 4);
- Deleted the general description of the applicability and coverage of business entity types (see 4.1 of the 2008 edition);
- Added general requirements for enterprise reference architecture and model requirements (see 5.1);
- Added the description of enterprise types (see 5.2.1);
- Added the description of the characteristics of the enterprise architecture (see 5.2.2);
- Added the description of the methodology of enterprise engineering and architecture (see 5.2.3);
- Changed the expression of enterprise design (see 5.2.4, 4.1.2 of the 2008 edition);
- Changed "Concept" to "Basic concepts of enterprise reference architecture" (see 5.3, 4.2 of the 2008 edition);
- Deleted "Overview" (see 4.1.1 of the 2008 edition);
- Added the expression "the span of concept positioning" (see 5.3.1);
- Added the concepts of "interoperability-oriented" (see 5.3.4) and "decision-oriented" (see 5.3.5);
- Changed the concepts of "mission-oriented" (see 4.2.5 of the 2008 edition) and

"mission-oriented control" (see 4.2.6), added the sub-concept "economic-oriented" (see 5.3.6.3), and merged the three into the concept "realization-oriented" (see 5.3.6);

--- Added the concepts of "technology-oriented" (see 5.3.7) and "environment-oriented" (see 5.3.8);

--- Changed the concept of "life cycle" (see 4.2.8 of the 2008 edition) to "life cycle oriented" (see 5.3.9.1), changed the concept of "life cycle" the 2008 edition changed the "life course" to "life course" (see 4.2.9), adding "the interaction between life cycle and life course".

The three are combined to form "life cycle oriented" (see 5.3.9);

--- Added the concepts of "stakeholder-oriented" (see 5.3.10), "perspective-oriented" (see 5.3.122), "model-oriented" (see 5.3.122), "Model view oriented" (see 5.3.13), "Enterprise interoperability oriented" (see 5.3.14), "Verification and validation oriented" (see 5.3.15);

--- Changed "Components of Enterprise Reference Architecture" to an independent chapter (see Chapter 6, 4.3 of the 2008 edition), deleted "Engineering Methodology" (see 4.3.1 of the 2008 edition), added "Enterprise Reference Model" (see 6.1), changed the structure of the modeling language the requirements for structure, expression, etc. (see 6.2, 4.3.2 of the 2008 edition) and the description of "model representation" are added (see 6.3);

--- Changed "common elements" to "common enterprise elements" (see 6.4.1, 4.3.3 of the 2008 edition), changed "partial common model" to "Partial enterprise model" (see 6.4.2, 4.3.4 of the 2008 edition), change "specific model" to "specific enterprise model" (See 6.4.3, 4.3.5 of the 2008 edition);

--- Added descriptions of enterprise views and perspectives (see 6.5) and enterprise reference modeling framework (see 6.6);

--- Changed "Tools" (see 6.7, 4.3.6 of the 2008 edition), "Modules" (see 6.8, 4.3.7 of the 2008 edition), "Enterprise Operation System" "System" (see 6.9, 4.3.8 of the 2008 edition) and other expressions;

--- Deleted the expression "vocabulary" (see 4.5 of the 2008 edition);

--- Deleted the chapter "Integrity and Consistency" (see Chapter 5 of the 2008 edition).

This document is equivalent to ISO 15704:2019 "Enterprise modeling and architecture - Requirements for enterprise reference architecture and methodology".

For ease of use, the following minimal editorial changes have been made to this document.

--- The term numbering in 3.4 of the original international standard is incorrect. It is corrected from "3.13" to "3.14".

0.1 Principles of Enterprise Architecture and Models

In the Industrial and Information Age, companies improve their local and global marketing by innovating and improving their manufacturing and business operations.

In the operational phase, they employ a variety of resources such as human resources, information systems, automated machinery, and business services, which individually and collectively provide Provides the various functions required to promote the business process and its combined activities. The deployment of these resources, target markets, and coordinated operations are required to complete the enterprise Mission requires appropriate operating rules and organizational structure to enable the company to provide customers with products and services consistent with agreed standards.

Enterprises operate in uncertain and changing market and environmental conditions, making the continuous development of enterprise engineering beneficial.

In a heterogeneous environment, multiple components are working together using different models and systems. In addition, most enterprises interact with other the company operates in the context of a business, such as a supply chain or a parent company. Therefore, the company's personnel are in the company's mission, operating rules, manufacturing and operations There are various responsibilities for the concept and ongoing development of processes, organizational structures, and supporting resources and services.

Given the complexity of these projects, it is necessary to adopt means to assess, build, coordinate and support these engineering activities, including means of collaborative support and interoperability.

The broad enterprise reference architecture concerns and enterprise modeling components form a reference foundation for preparing and coordinating enterprise by adopting and adapting such a reference base, Based on the enterprise's engineering project progress, enterprise personnel will improve the enterprise, improve communication with stakeholders and utilize enterprise resources.

With the right toolset, business people will be able to use clear business designs and models repeatedly and more practically, achieving business success on a continuous basis.

Continuous improvement of industrial engineering and enterprise operations.

The reference benchmark needs to include the following capabilities.

--- Attract stakeholders who fulfill the corporate mission (manufacturing, transportation, service providers, etc.) and operational stakeholders;

---Describe appropriate solutions to problems identified within the enterprise;

---Model the entire life cycle of an enterprise integration project, from initial concept to