

# ENTERPRISE ARCHITECTURE

## THE CONCEPT OF THE ARCHITECTURE OF AN ENTERPRISE

The concept and purpose of the architecture of an enterprise. The role of information technology in the development of an enterprise. The concept of business strategy and IT strategy of an enterprise, their relationship. Layers and aspects of the representation of the enterprise architecture and information system. Modern enterprise architectures.

## METHODOLOGICAL AND INSTRUMENTAL FOUNDATION OF THE DESIGN OF THE ARCHITECTURE OF AN ENTERPRISE

Principles and guidelines that ensure the integrity of the architecture description presented in the international standard ISO IS 15704 Requirements for Enterprise Reference Architecture ISO IS 15704 Requirements for Enterprise Reference Architecture and Methodologies. Methods for describing architectures: Zahman and Gartner models, META methods Group and TOGAF, NASCIO. Models "4+1", SAM, Microsoft, etc. The choice of a methodology for describing the architecture of an enterprise. Methods and tools for describing enterprise architecture: ARIS, Archimate, UML, and the IBM Rational toolkit. The EAP Enterprise Architecture Planning method.

## DESCRIPTION AND DESIGN OF THE BUSINESS ARCHITECTURE

The mission, strategy, goals, and objectives of the enterprise. Key performance factors. A balanced scorecard. Organizational structure, distribution channels, products and services, functions and processes, document flow.

## DESCRIPTION AND DESIGN OF THE APPLIED ARCHITECTURE

Applications: subsystems – task complexes – software modules (methods, services, and procedures. User interfaces. Software interfaces. Client-server architectures. Service-oriented architectures. Cloud technologies.

## DESCRIPTION AND DESIGN OF THE ARCHITECTURE OF AN INFORMATION SYSTEM

Information space, databases (storages) of data, tables (files, classes of objects), details. Elements of information support: documents, classifiers, regulatory and reference information. DBMS functions: database management, queries, report generators, maintaining the integrity and security of access.

## DESCRIPTION AND DESIGN OF THE TECHNICAL ARCHITECTURE

The architecture of the platforms. Network architectures. Technical complexes: servers (databases, applications), client sites (workstations), network equipment (communicators, routers). Operating environment – the operating system, middleware, and utilities.

## ENGLISH REFERENCES

1. Jeanne W. Ross, Peter Weill, David Robertson. Enterprise Architecture as Strategy: Creating a Foundation for Business Execution. Harvard Business Review Press (August 1, 2006), 234 p.
2. Svyatoslav Kotusev. The Practice of Enterprise Architecture: A Modern Approach to Business and IT Alignment 2nd ed. Edition. SK Publishing; 2nd ed. edition (January 15, 2021) <https://www.amazon.com/Practice-Enterprise-Architecture-Approach-Alignment/dp/064508252X>

## RUSSIAN REFERENCES

3. Архитектура и проектирование программных систем: монография / С.В. Назаров. — 2е изд., перераб. и доп. — М.: ИНФРА-М, 2017. — 374 с. — (Научная мысль). ISBN 978-5-16-005735-4. Режим доступа: <http://znanium.com/catalog/product/907016>
4. Введение в архитектуру программного обеспечения: Учебное пособие / Гагарина Л.Г., Федоров А.Р., Федоров П.А. — М.: ИД ФОРУМ, НИЦ ИНФРА-М, 2016. - 320 с.: 60x90 1/16. - (Высшее образование) (Переплёт 7БЦ) ISBN 978-5-8199-0649-1 Режим доступа: <http://znanium.com/catalog/product/542665>