

Architecture of the Ambidextrous Enterprise

Introducing EA6,
Organizational
Architecture & Design

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Introducing EA6, Organizational Architecture & Design

Enterprise Architecture has been defined as “The analysis and documentation of an enterprise in its current and future states from a strategy, business, technology perspective” by Dr. Scott Bernard, author of An Introduction to Enterprise Architecture (Bernard, 2005). Bernard developed the EA3 framework that takes the form of a cube with three dimensions: Levels, Segments and Artifacts:

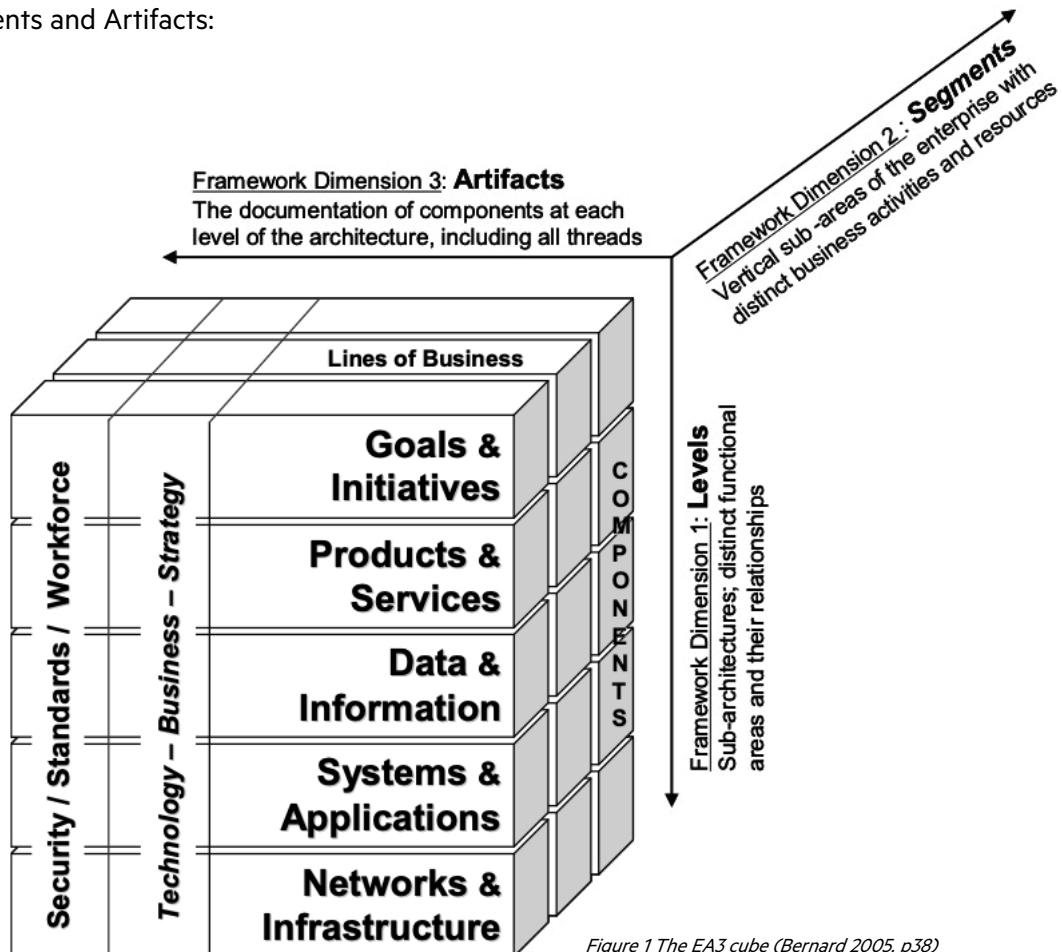


Figure 1 The EA3 cube (Bernard 2005, p38)

The EA3 framework supports the creation of current and future views of the enterprise, as well as the change management of transforming from the one to the other.

Since the EA3 framework's inception, the scope of Enterprise Architecture has evolved. The focus is increasingly on strategic management, including the customers' perspective and the business' eco system.

Business Ambidexterity

In 2014, Gartner introduced the term Bimodal IT (Mingay, Iyengar, & Potter, 2014), explaining that organizations must be able to both **explore** how to

solve new problems and innovate and **exploit** and incrementally improve existing, well known areas (Gartner, 2018). This notion of bimodality is very similar to 'business ambidexterity', which is leaderships' **balancing act between exploitation and exploration**.

The exploitative and explorative parts of a business should be held together through senior-team integration, common vision and values (O'Reilly & Tushman, 2004). To do so, we need to integrate the 'people-aspect' and organizational structure into how we view an organization, and not just focus on its strategy, business processes and supporting technology.

Alignment of:	Exploitative Business	Explorative Business
Strategic intent	Cost, profit	Innovation, growth
Critical tasks	Operations, efficiency, incremental innovation	Adaptability, new products, breakthrough innovation
Competencies	Operational	Entrepreneurial
Structure	Formal, mechanistic	Adaptive, loose
Controls, rewards	Margins, productivity	Milestones, growth
Culture	Efficiency, low risk, quality, customers	Risk taking, speed, flexibility, experimentation
Leadership role	Authoritative, top down	Visionary, involved

Figure 2 Examples of the different properties that are related to the two aspects of the ambidextrous organization

The New Framework

This has culminated in a new version of the EA3 cube: the EA6 cube, and a new branch of Enterprise Architecture; **Organizational Architecture & Design (OAD)**. OAD is a holistic management discipline which deals with enterprise transformation. It is especially helpful in periods of restructuring, such as Mergers & Acquisitions, as it provides a holistic view of the

organization and its parts. Thereby it also enables ambidextrous endeavors, as it helps to illuminate which parts of the organization to exploit and which can be freed to explore.

In the coming sections, you will be introduced to each side of the new EA6 cube and get to know which existing templates in QualiWare you can use to support it.

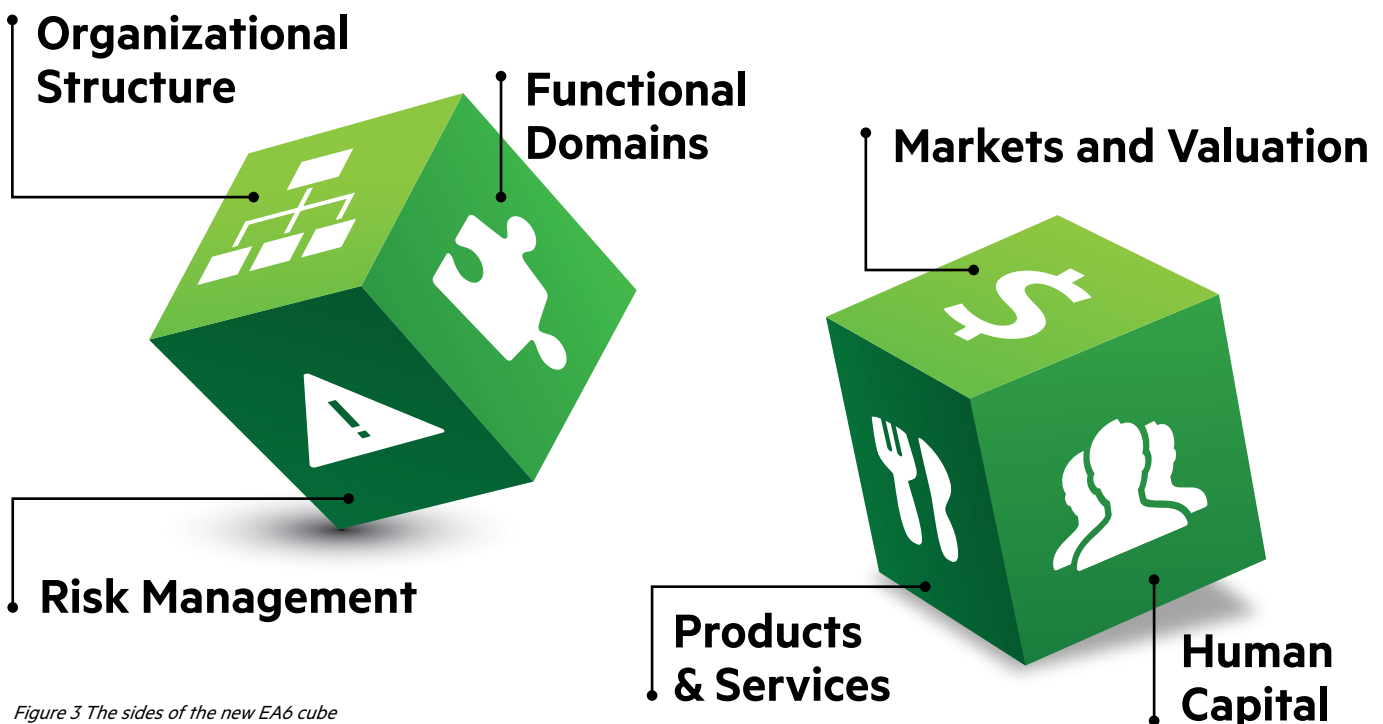


Figure 3 The sides of the new EA6 cube

Organizational Structure

The Organizational Structure dimension contains the major business units that make up the organization.

Reporting relationships between governance bodies and the business units are usually depicted through an organization chart and a role/responsibility matrix.

Types of business units include subsidiary whole companies, internal divisions, departments, stand-alone and integrated lines of business, program and staff offices, cross-functional teams, contractors, and independent workers. External groups may also be depicted if there is a persistent relationship. Oversight of business units is achieved by centralized or decentralized (federated) governance methods.

In **QualiWare**, you can model the Organizational Structure using the OrganizationDiagram. It is built using OrganizationUnits which can be enriched with links to Positions that are responsible for a given unit and Roles that can be linked as resources for the unit. Each unit can be broken down into one or several OrganizationDiagrams. This enables you to model a large and complex organization and responsibility structure.

Functional Domains

The Functional Domains dimension contains the major performance capability areas of an organization, presented hierarchically in sub-architecture domains.

The different functional domains are all related. Strategic goals drive business activities/information exchanges, which are enabled by technology systems that are hosted on networks and in facilities. There are industry best practices at each domain level that help with effectiveness and efficiency, but which need to be selected and used with the whole organization in mind. There may also be government regulations and resource constraints that must be factored into plans and projects.

In **QualiWare**, there are several templates for each domain – see the table on page 5 for some examples:

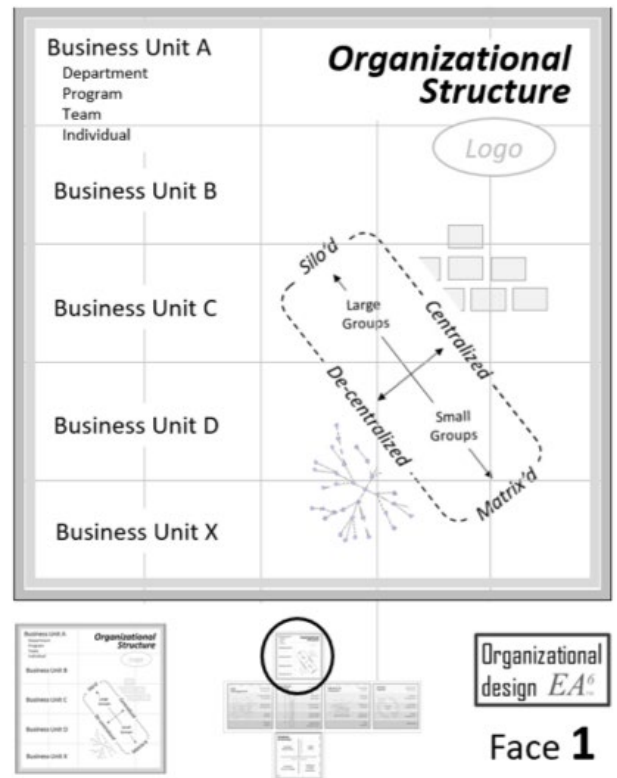


Figure 4 Close-up of the Organizational Structure dimension of the EA6 cube

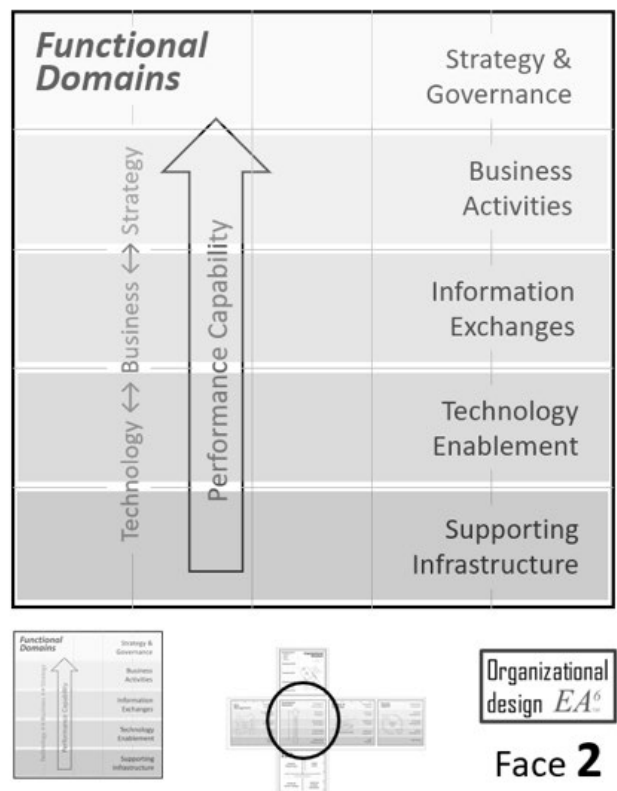


Figure 5 Close-up of the Functional Domains dimension of the EA6 cube

Strategy & Governance	Business Activities	Information Exchanges	Technology Enablement	Supporting Infrastructure
Architecture Framework	Business Process Diagram	Business Object Model	Application Architecture Diagram	Architecture Overview
Brand Overview	Business Process Network	Concept Model	Application Functionality Context	Infrastructure Diagram
Business Canvas	Decision Model	Conceptual Data Model	Class Diagram	
Business Excellence Diagram	Decision Requirement Diagram	Data Flow Diagram	Component Diagram	
CPM Diagram	Manufacturing Routing Network	Data Mapping Diagram	Decision Model	
Requirement Model	Sequence Diagram	Data Replication Diagram	Sequence Diagram	
Strategy Model	Workflow Diagram	Relational Diagram	State Event Diagram	

Figure 6 non-exhaustive view of templates for functional domains in QualiWare

▲ Risk Management

The Risk Management dimension contains key areas of risk in each functional domain and in the business units. Organizations want to eliminate or limit disruptions that effect mission success or profitability.

Risk derives from uncertainty in predicting or dealing with disruption. Mitigation centers on the avoidance or response actions. Tolerance reflects the acceptable level of exposure to a certain type of disruption and the negative effects that would result. A trigger is something that causes a disruption event.

A holistic approach to managing risk begins at the enterprise level and is completed by more detailed procedures at the business unit and program levels.

In QualiWare, there are several templates that help cover Risk Management – see the table on page 6 for some examples:

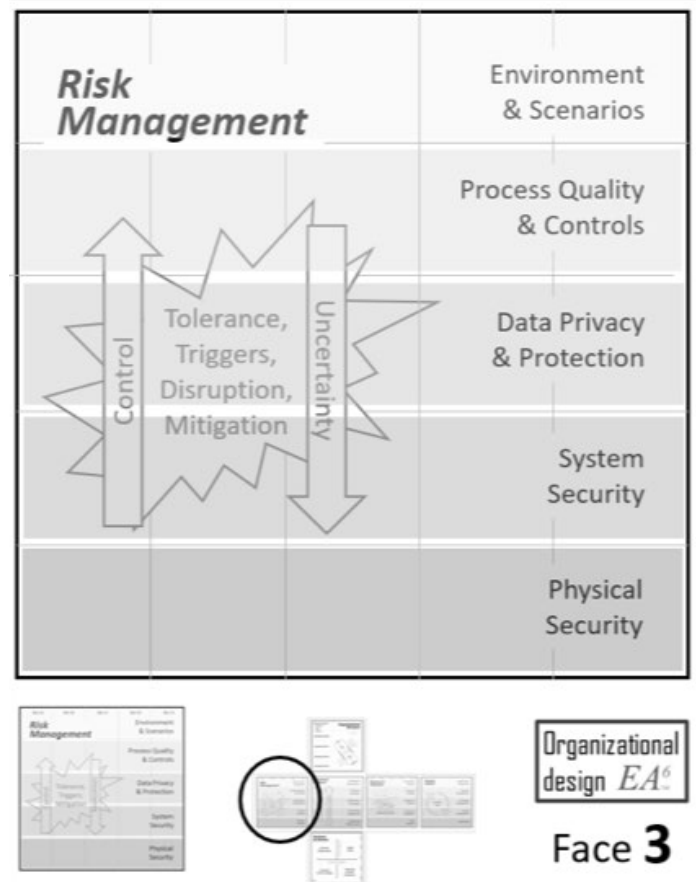


Figure 7 Close-up of the Risk Management dimension of the EA6 cube

Environment & Scenarios	Process Quality & Controls	Data Privacy & Protection	System Security	Physical Security
Environmental Impact Diagram	Account Context Diagram	Regulation Diagram	Firewall	Strategy Model
Lifecycle Assesment Diagram	Audit Program	Risk	Regulation Diagram	Regulation Diagram
Strategy Model	Control Coverage Map	Strategy Model	Strategy Model	Risk
Risk	Risk			

Figure 8 non-exhaustive view of templates for risk management in QualiWare

There are several useful reports for risk management available in QualiWare. They enable you to see the full context of the environment the risk are situated in. This includes where the risk occure, what actions are taken to remediate them, what their residual significance and likelihood are, as well as who is responsible for handling the risk:

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STRATEGY

PROCESS

APPLICATION

ORGANIZATION

NEWS

Risks

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Name:	Type:	Concerns:	Contained In:	Responsible:	LL:	SL:	Heatmap:	Control:	Control Respo:	R.:	R.:
Incompatible package components	Business	Prepare Work Package	Create Solution	Solution Developer	High	Substan...	Create Solution Residual Risks	Control Component Compatibility	Solution Architect	Moderate	Moderate
1.6. Poor performing suppliers are re-selected because 1. enterprise wide information about supplier performance is not available	Business risk	ERP system at ABC			Low	Substan...				Low	Substan...
Work Package Does Not Conform to Customer Expectations	Business	Instal Work Package	Create Solution	Solution Architect	Moderate	Substan...	Create Solution Residual Risks	Control Work Package for Alignment with Contract	Solution Development Manager	Moderate	Moderate
Coding missing	Business risk	95% customer satisfaction within 18 months Paint robot Develop Beacon/IoT technology platform Deliver Beacon based PAX service platform by 2021 Assembly robot Places Purchase order Packing robot	Create and Place Purchase Order Directly Create and place Purchase Order using Indirect Materials	Tony Zhang Chief Information Officer	Moderate	Substan...	Procurement Risks	test		Moderate	Substan...
Pump	Manufacturing risk	QC Control			Very high	Substan...				Very high	Substan...
CheckList	Business Continuity	Roll-out of new Products and Service Offerings Finalize / Shipment Satisfied PAX/customers Detect errors Roll-out Preventative Maintenance for Airlines		Accounts payable clerk Goods Receive Department Head of IT Operations Chief Architect	Moderate	Substan...				Moderate	Substan...

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Figure 9 Example of a risk overview in QualiWare

To learn more about Risk Management in QualiWare please visit QualiWare's Center of Excellence, where you can find descriptions of the different templates and our Risk Management Guide.

Link: <https://coe.qualiware.com>

\$ Markets and Valuation

The Markets & Valuation dimension contains the public and private sector markets and/or mission areas that the organization is active in.

For private sector organizations this is the market's valuation (stock price) versus the aggregate sale value if broken-up. It is also the anticipated value increase or decrease from mergers, acquisitions, start-ups, and spin-offs, as well as a comprehensive balance sheet of monetized assets and liabilities in each business unit.

For public sector organizations it is the liquidation value of all tangible and intangible assets.

In **QualiWare**, there are several templates that help cover Markets & Valuations – see the table below for some examples:

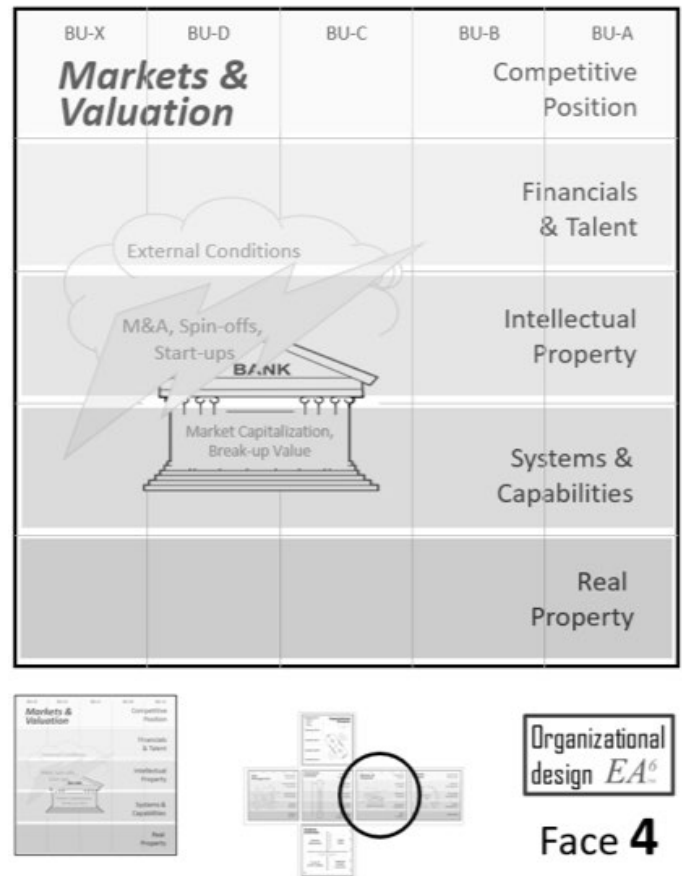


Figure 10 Close-up of the Markets & Valuation dimension of the EA6 cube

Competitive Position	Financials & Talent	Intellectual Property	Systems & Capabilities	Real Property
Balanced Score Card	Business Capability Model	Business Object Model	Application Architecture Diagram	Infrastructure Diagram
Business Eco System	Enterprise Investment Portfolio		Business Capability Model	Assets
Enterprise Investment Portfolio	Performance Diagram			
Strategy Model				

Figure 11 non-exhaustive view of templates for Markets & Valuations in QualiWare

Human Capital

The Human Capital dimension contains the knowledge, skills, and abilities (KSAs) needed in each functional domain of the organization. The KSAs are different for executives, managers, and staff in each area.

There is a “cultural core” in each organization that is comprised of the values, norms, beliefs, facts, history, traditions, and methods in each business unit and program area.

Cultural norms create informal power centers, communication channels, and processes.

People are often thought of as the most important and valuable resource of any organization, so full-lifecycle (hire-to-retire) talent management is very important.

In **QualiWare**, there are several templates that help cover Human Capital – see the table below for some examples:

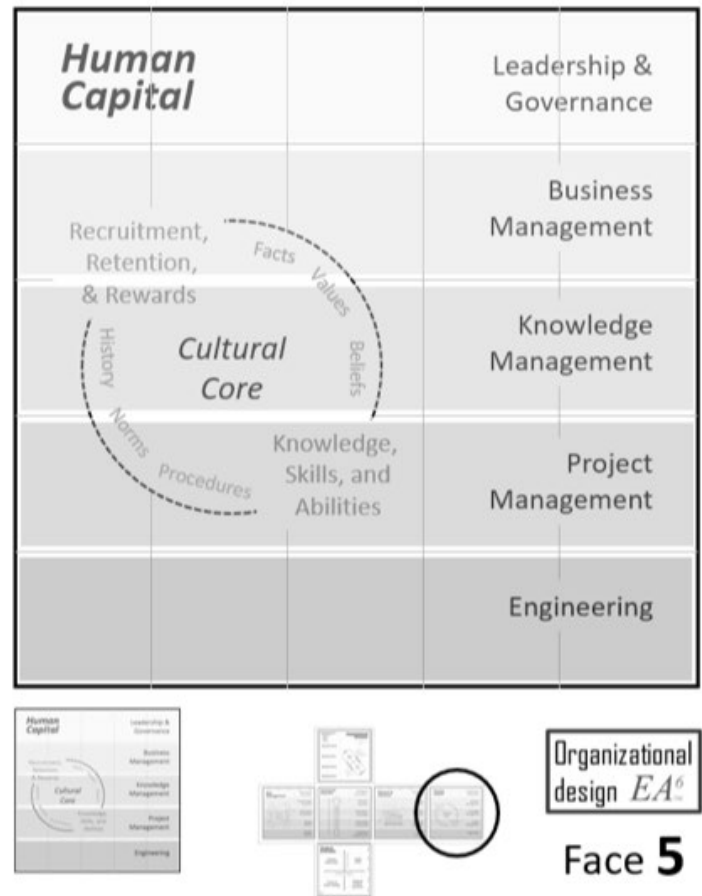


Figure 12 Close-up of the Human Capital dimension of the EA6 cube

Leadership & Governance	Business Management	Knowledge Management	Project Management	Engineering
Governance Workflow	Actor Map	Idea	Competence	Manufacturing Routing Network
Position	Education Plan	Innovation Canvas	Product Roadmap	Product Architecture
	Role	Requirement Model	Transformation Plan	Product Rule Table
	Stakeholder Model		Work Breakdown Structure	Product Variant Master

Figure 13 non-exhaustive view of templates for Human Capital in QualiWare

🔧 Products & Services

The Products & Services dimension contains the tangible or virtual products and services that the organization provides to internal and external customers.

Mission success and profitability are maximized through a holistic approach to delivery with a focus on vertical/horizontal process integration within/between business units.

Key areas of focus include customer relationships, end-to-end supply chain management, onsite/online store efficiency, and marketing/communications effectiveness. Architecture methods can help to identify gaps and overlaps, process improvement and reengineering projects, managing change, and handling disruption.

In **QualiWare**, there are several templates that helps cover Products & Services – see the table below for some examples:

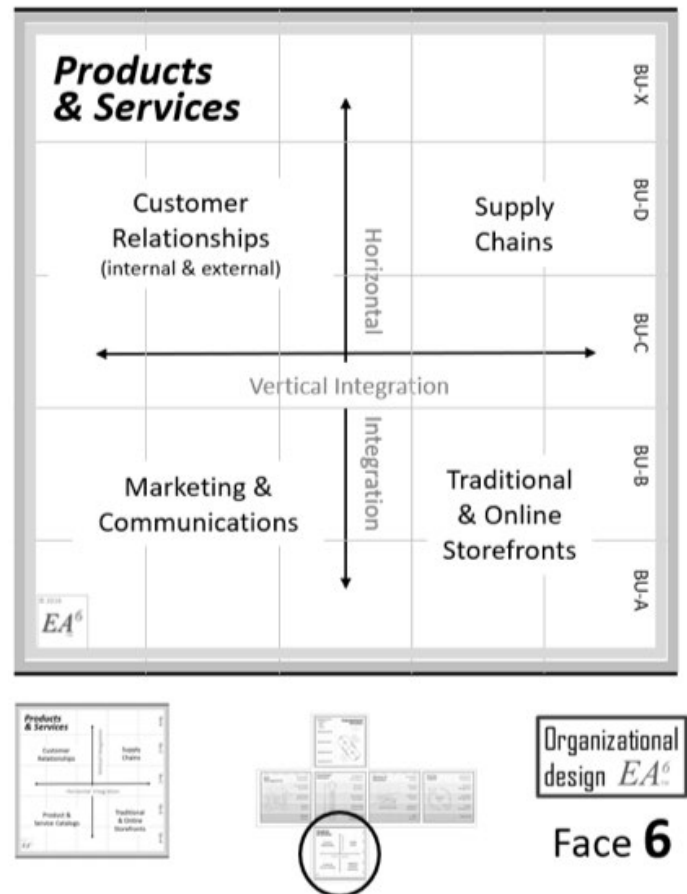


Figure 14 Close-up of the Products & Services dimension of the EA6 cube

Customer Relationships	Supply Chains	Marketing & Communication	Traditional & Online Storefronts
Communication Plan	Business Operating Model	Communication Plan	Infrastructure Diagram
Customer Journey Map	Business Canvas	Business Eco System	Business Eco System
Use Case Diagram	Business Eco System		
Business Eco System			

Figure 15 non-exhaustive view of templates for Products & Services in QualiWare

References

Bernard, S. A. (2005). An Introduction to Enterprise Architecture. Bloomington, IN: AuthorHouse.

Gartner. (2018). Gartner.com. Retrieved from Gartner.com: <https://www.gartner.com/it-glossary/bimodal>

Mingay, S., Iyengar, P., & Potter, K. (2014). How CIOs Need to Prepare for Industrializing and Mutualizing IT in the Digital Economy. Gartner, ID Number: G00259981.

O'Reilly, C. A., & Tushman, M. L. (2004). The Ambidextrous Organization. Harvard Business Review.

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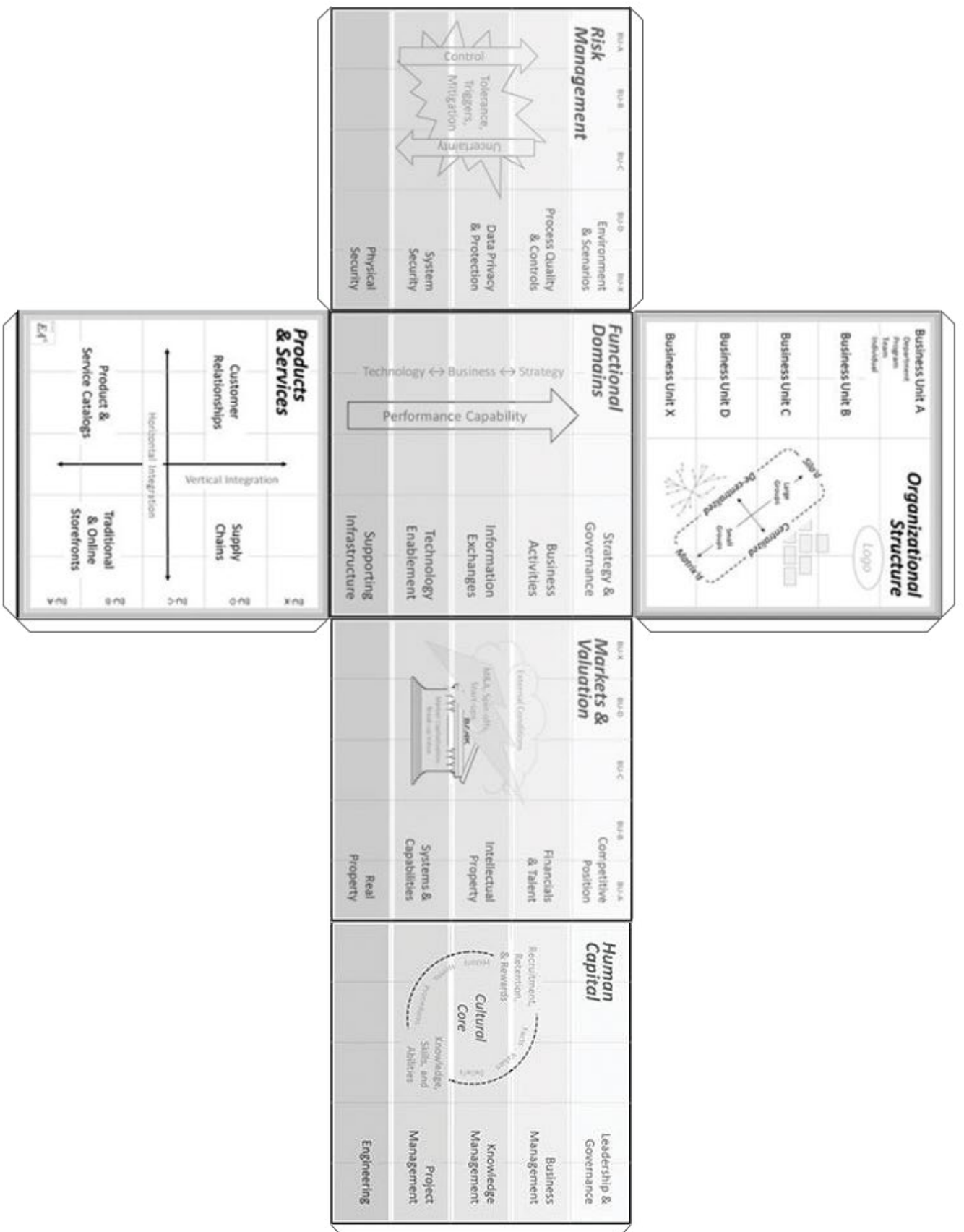


Figure 15 The EA6 cube

The background of the entire image is a dark teal color with a complex, light green circuit board pattern. The pattern consists of numerous lines of varying thicknesses, some straight and some at right angles, creating a maze-like structure. Interspersed among these lines are many small circles, some of which are larger than others, resembling vias or component footprints on a PCB. The overall effect is a high-tech, digital aesthetic.

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