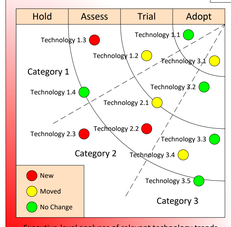
Enterprise Architecture on a Page

(A one-page aggregated view of popular EA artifacts used in organizations with their most essential properties, including their informational content, representation format, high-level structure, overall meaning, typical usage, temporal lifecycle, general role, key purpose and associated benefits)

Analytical Reports



Executive-level analyses of relevant technology trends and their potential impact on the organization

Principles

Principle 1: Standardized Business Processes
Statement: .....
Rationale: .....
Implications: .....

Principle 2: Single Customer View
Statement: .....
Rationale: .....
Implications: .....

Principle 3: Business Continuity
Statement: .....
Rationale: .....
Implications: .....

Global high-level guidelines relevant to all decision-making and planning in the organization

Policies

External	National Privacy Policies	Policy 1: Personal Data Must Be Stored Onshore Description: .....
	Sarbanes-Oxley Policies	Policy 2: Destroy Personal Data When Not Needed Description: ..... Policy 3: Log All Accesses to Accounting Systems Description: .....
Internal	Data Security Policies	Policy 4: Retain Audit Trails and Emails for 5 Years Description: ..... Policy 5: No Sensitive Data on Mobile Devices Description: .....
	Data Exchange Policies	Policy 6: Store Credit Cards in Encrypted Formats Description: ..... Policy 7: Do Not Share Key Data with Third Parties Description: .....
	Cloud Hosting Policies	Policy 8: Share Client Data with Trusted Partners Description: ..... Policy 9: Use Only the PCI DSS Compliant Cloud Description: ..... Policy 10: Do Not Store Health Data in the Cloud Description: .....

Overarching normative prescriptions relevant to certain aspects of organizational decision-making

Architecture Strategies

Supply Chain Strategy

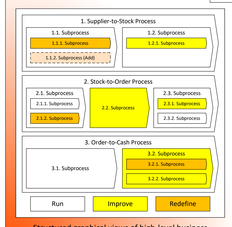
1. Current Drivers and Challenges .....
2. Long-Term Business Objectives .....
3. Existing IT Capability Gaps .....
4. Proposed Architectural Direction
   Current Logistics Platform: | Future Logistics Platform:
5. Key Architectural Decisions .....

Abstract conceptual directions for the organization in terms of the relationship between business and IT

Business Capability Models

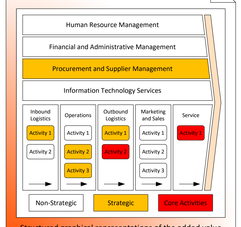
Structured graphical views of organizational business capabilities, their relationship and hierarchy

Process Maps



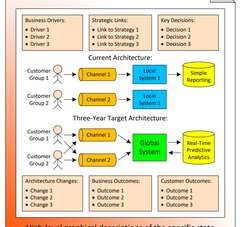
Structured graphical views of high-level business processes, their relationship and hierarchy

Value Chains



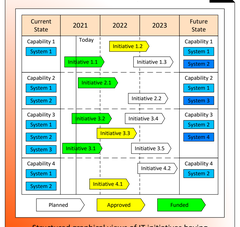
Structured graphical representations of the added value chain of the organization or its lines of business

Target States



High-level graphical descriptions of the specific state of the organization in terms of business and IT

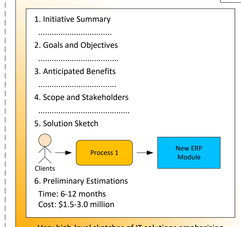
Roadmaps



Structured graphical views of IT initiatives having direct business value for the organization

Solution Briefs

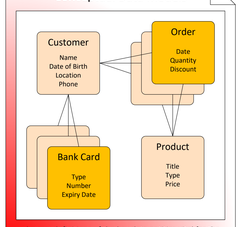
1. Initiative Summary .....
2. Goals and Objectives .....
3. Anticipated Benefits .....
4. Scope and Stakeholders .....
5. Solution Sketch



6. Preliminary Estimations
   Time: 6-12 months
   Cost: $1.5-3.0 million

Very high-level sketches of IT solutions emphasizing their business contribution to the organization

Conceptual Data Models



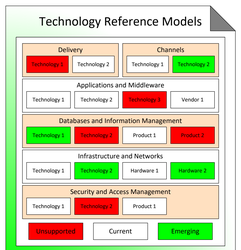
Abstract definitions of the key data entities vital for the business of the organization and their relationship

Solution Options

Option	Score
Solution 1:  Time: 8-13 months Cost: $2.0-3.5 million Advantages: ..... Disadvantages: ..... Risks:	Functionality: 5 Feasibility: 2 Alignment: 4 Total Score: 11
Solution 2:  Time: 4-7 months Cost: $1.0-1.7 million Advantages: ..... Disadvantages: ..... Risks:	Functionality: 3 Feasibility: 3 Alignment: 1 Total Score: 7
Solution 3:  Time: 3-5 months Cost: $0.7-1.3 million Advantages: ..... Disadvantages: ..... Risks:	Functionality: 2 Feasibility: 5 Alignment: 2 Total Score: 9

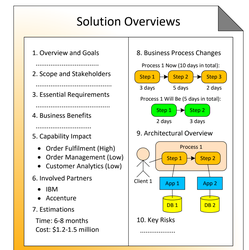
Lists of possible high-level implementation options for IT solutions with their pros and cons

Technology Reference Models



Structured graphical representations of the technology portfolio of the organization

Solution Overviews



High-level descriptions of IT solutions with their logical components highlighting their business aspects

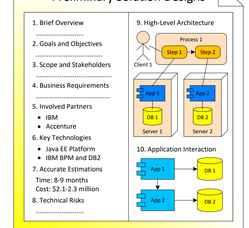
Technology Inventories*

Technology	Vendor	Version(s)	Category	Function
Technology 1	.....	.....	.....	.....
Technology 2	.....	.....	.....	.....
Technology 3	.....	.....	.....	.....
Technology 4	.....	.....	.....	.....
Technology 5	.....	.....	.....	.....
Technology 6	.....	.....	.....	.....
Technology 7	.....	.....	.....	.....
Technology 8	.....	.....	.....	.....
Product 1	.....	.....	.....	.....
Product 2	.....	.....	.....	.....
Product 3	.....	.....	.....	.....
Product 4	.....	.....	.....	.....
Product 5	.....	.....	.....	.....

Obsolete | Up-to-date | Cutting-edge

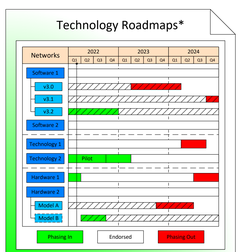
Structured catalogs of technologies with their key properties, attributes and features

Preliminary Solution Designs



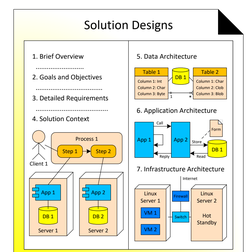
High-level technical and functional descriptions of IT systems with their physical components

Technology Roadmaps*



Structured graphical views of the lifecycles of technologies with their phases

Solution Designs



Detailed technical and functional specifications of IT systems with their physical components

What EA Artifacts Describe?

Generic ⟷ Specific

	Rules	Structures	Solutions
Business-Focused	**Considerations** **Content:** Global conceptual rules and fundamental considerations important for business and relevant to IT **Focus:** Do not refer to specific points in time or focus on the long-term future **Format:** Expressed in simple intuitive formats, often as brief written statements, sometimes with inelaborate visualizations **Meaning:** Decisions on how the organization needs to work or what it wants to achieve from a business and IT perspective **Usage:** Developed collaboratively by senior business leaders and architects and then used to influence all architectural decisions (see *Enterprise Architecture Practice on a Page*) **Lifecycle:** Established once and then updated according to the ongoing changes in the business environment **Role:** Overarching organizational context for information systems planning **Purpose:** Help achieve the agreement on basic principles, values, directions and aims **Benefits:** Improved overall consistency between business and IT	**Visions** **Content:** High-level conceptual descriptions of the organization from a business perspective **Focus:** Often focus on the long-term future up to 3-5 years ahead **Format:** Expressed in brief informal formats, often as large but simple one-page diagrams **Meaning:** Decisions on what IT should provide to the organization in the long run **Usage:** Developed collaboratively by senior business leaders and architects and then used to guide IT investments, identify, prioritize and launch new IT initiatives (see *Enterprise Architecture Practice on a Page*) **Lifecycle:** Created once and then updated according to the ongoing changes in strategic business priorities **Role:** Shared views of the organization and its future agreed by business and IT **Purpose:** Help achieve the alignment between IT investments and long-term business outcomes **Benefits:** Improved strategic alignment and effectiveness of IT investments	**Outlines** **Content:** High-level descriptions of separate IT solutions from a business point of view **Focus:** Usually focus on the mid-term future up to 1-2 years ahead **Format:** Expressed as a mix of textual descriptions and simple diagrams **Meaning:** Decisions on how approximately specific IT solutions should be implemented **Usage:** Developed collaboratively by architects and business leaders and then used to evaluate, approve and fund specific IT solutions (see *Enterprise Architecture Practice on a Page*) **Lifecycle:** Produced at the early stages of IT projects to support decision-making and then archived **Role:** Benefit, time and price tags for proposed IT solutions **Purpose:** Help estimate the overall business impact and value of proposed IT solutions **Benefits:** Improved efficiency and ROI of IT investments
IT-Focused	**Standards** **Content:** Global technical rules, norms, patterns and best practices relevant to information systems **Focus:** Do not refer to specific points in time or focus on the current state **Format:** Can be expressed in various formats, often using strict notations **Meaning:** Decisions on how all IT systems should be constructed and some facts on the current approaches and technologies **Usage:** Developed collaboratively by architects and technical subject-matter experts and used to shape the architectures of all IT initiatives (see *Enterprise Architecture Practice on a Page*) **Lifecycle:** Established on an as-necessary basis and updated according to the ongoing technology progress **Role:** Proven reusable means for IT system implementation **Purpose:** Help achieve technical consistency, technological homogeneity and regulatory compliance **Benefits:** Faster project implementation, reduced costs, risks and complexity	**Landscapes** **Content:** High-level technical descriptions of the organizational IT landscape **Focus:** Focus mainly on the current state, sometimes looking into the future **Format:** Expressed in strict formats, often as complex one-page diagrams using formal modeling notations, e.g. ArchiMate **Meaning:** Facts on the current IT landscape and some decisions on its future evolution **Usage:** Developed and maintained by architects and used to rationalize the IT landscape, manage the lifecycle of IT assets and plan new IT initiatives (see *Enterprise Architecture Practice on a Page*) **Lifecycle:** Created on an as-necessary basis and updated according to the ongoing evolution of the IT landscape **Role:** Knowledge base of reference materials on the corporate IT landscape **Purpose:** Help understand, analyze and modify the structure of the IT landscape **Benefits:** Increased reuse and agility, reduced duplication and legacy	**Designs** **Content:** Detailed technical and functional descriptions of separate IT systems with their internal structure **Focus:** Normally focus on the short-term future up to one year ahead **Format:** Expressed as a mix of text, tables and complex diagrams, can be voluminous and often use formal modeling notations, e.g. UML **Meaning:** Decisions on how exactly specific IT systems should be constructed **Usage:** Developed collaboratively by architects, project teams and business representatives and then used by project teams to deliver IT systems (see *Enterprise Architecture Practice on a Page*) **Lifecycle:** Produced at the later stages of IT projects to support delivery efforts and then archived **Role:** Communication interfaces between architects and project teams **Purpose:** Help build approved IT systems according to business and architectural requirements **Benefits:** Improved quality of project delivery
	Describe: Universal rules defining the organization or its divisions **Scope:** Very broad, often relate to the entire organization **Format:** Often textual **Question:** How do we work or want to work? **Lifecycle:** Permanent, created once and then periodically updated **Role:** Basis for all other architectural decisions **Purpose:** Help achieve consistency and homogeneity of all planning decisions	**Describe:** High-level structures of the organization or its parts **Scope:** Broad, often cover large areas of the organization **Format:** Usually graphical **Question:** What approximately do we have or want to have? **Lifecycle:** Permanent, created once and then continuously updated **Role:** High-level "maps" facilitating decision-making **Purpose:** Help understand what changes are desirable and how to implement them	**Describe:** Specific IT solutions in the organizational context **Scope:** Narrow, limited to separate IT solutions or systems **Format:** Mix of textual and graphical **Question:** What exactly are we going to change right now? **Lifecycle:** Temporary, created for specific purposes within IT projects but then discarded **Role:** Tactical plans of the organization **Purpose:** Help implement separate landscape changes

How EA Artifacts Describe? Business ⟷ IT

Enterprise Architecture

Language: Technology-neutral business language
Domains: Business domain and often other relevant domains at a high level
Format: Brief, intuitive, largely informal and include only the most essential information
Stakeholders: Business leaders and architects
Role: Communication interfaces between business and IT
Purpose: Help business leaders manage IT

Language: Technical IT-specific language
Domains: Various technical domains and sometimes also business domain
Format: Can be voluminous, formal, use strict notations and include comprehensive details
Stakeholders: Architects and other IT specialists
Role: Internal IT tools invisible to business
Purpose: Help architects organize IT

IT Principles

Applications	IT Principle 1: Prefer Open Source Solutions Description: ..... IT Principle 2: Log All Main Operations Description: .....
Data	IT Principle 3: Use Scalable Storage Description: ..... IT Principle 4: Backup All Permanent Data Description: .....
Integration	IT Principle 5: Use Middleware for Integration Description: ..... IT Principle 6: Avoid Binary Integration Protocols Description: .....
Infrastructure	IT Principle 7: Host in the Cloud Description: ..... IT Principle 8: Dedicated Server for Each System Description: .....
Security	IT Principle 9: Place Public Systems in DMZ Description: ..... IT Principle 10: Secure by Default Description: .....

Global high-level IT-centric guidelines relevant to all IT-related decisions and plans in the organization

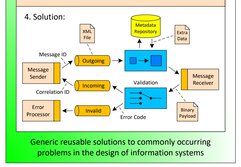
Guidelines

Server Deployment Standards	Guideline 1: Run Applications as OS Services Description: ..... Mandatory
Network Protocol Standards	Guideline 2: Store Deployment Packages in VCS Description: ..... Optional Guideline 3: Prefer REST Over SOAP Description: ..... Recommended
Data Encryption Standards	Guideline 4: Avoid Using UDP Multicast Description: ..... Optional Guideline 5: Use 256-Bit Encryption Keys Description: ..... Recommended
Interface Design Guidelines	Guideline 6: Store MD5 Hashes of Passwords Description: ..... Mandatory Guideline 7: Place Menu in the Top Right Corner Description: ..... Recommended
Secure Coding Guidelines	Guideline 8: Use Web-Safe Colours Description: ..... Optional Guideline 9: Initialize Variables to Safe Defaults Description: ..... Mandatory Guideline 10: Validate All Incoming Data Description: ..... Mandatory

Detailed IT-specific implementation-level prescriptions applicable to narrow technology areas or domains

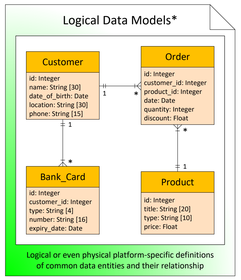
Patterns

1. Name: Enriched Asynchronous Request/Reply
2. Context: .....
3. Problem: .....
4. Solution:



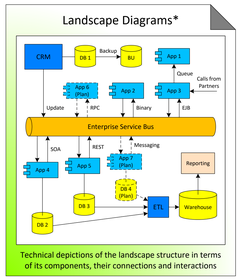
Generic reusable solutions to commonly occurring problems in the design of information systems

Logical Data Models*



Logical or even physical platform-specific definitions of common data entities and their relationship

Landscape Diagrams*



Technical depictions of the landscape structure in terms of its components, their connections and interactions

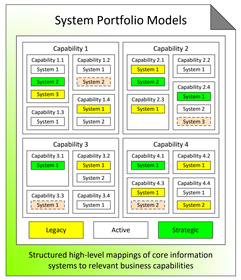
Asset Inventories*

Asset	Purpose	Owners	Cost	Problems
Application 1	.....	.....	.....	.....
Application 2	.....	.....	.....	.....
Application 3	.....	.....	.....	.....
Application 4	.....	.....	.....	.....
System 1	.....	.....	.....	.....
System 2	.....	.....	.....	.....
System 3	.....	.....	.....	.....
System 4	.....	.....	.....	.....
System 5	.....	.....	.....	.....
Database 1	.....	.....	.....	.....
Database 2	.....	.....	.....	.....
Database 3	.....	.....	.....	.....
Database 4	.....	.....	.....	.....

Decommission | Reuse | Invest

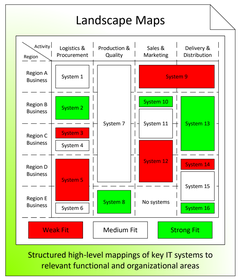
Structured catalogs of IT assets with their essential properties, attributes and features

System Portfolio Models



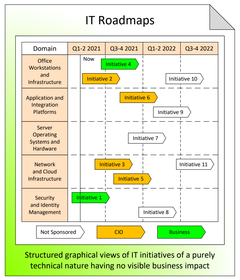
Structured high-level mappings of core information systems to relevant business capabilities

Landscape Maps



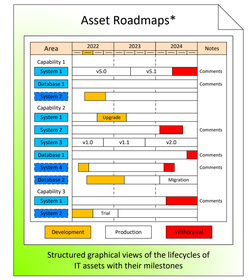
Structured high-level mappings of key IT systems to relevant functional and organizational areas

IT Roadmaps



Structured graphical views of IT initiatives of a purely technical nature having no visible business impact

Asset Roadmaps*



Structured graphical views of the lifecycles of IT assets with their milestones

Essential (Used in virtually every EA practice) | Popular (Used in 50-75% of EA practices) | Common (Used in 25-50% of EA practices) | Uncommon (Used in 10-25% of EA practices)

Mature EA practices usually use pragmatic sets of 10-15 value-adding EA artifacts, or only about a half of all the shown artifacts

Templates demonstrate only the most typical contents, structure and format of EA artifacts; they should be adapted, not copied mindlessly

[*] These EA artifacts are often stored in specialized tool-based architectural repositories and extracted as views

Enterprise Architecture on a Page v2.1 (https://eaonapage.com), Svyatoslav Kotusev (https://kotusev.com)