The SAP Architecture Framework: Linking EA Tools, Methods, and Content

Erik Braun, Patrik Fiegl
The SAP Architecture Framework is an integrated approach to EA, focused on an “SAP-savvy" design, deployment, operation, and continuous improvement of IT landscapes and solutions.

- It builds on the EAF experience, adding explicit SAP tool and reference content components.
- It is based on a shared meta-model that ensures alignment across products, services, and content.
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BEST PRACTICES

- Business Architecture Practices
- Application Architecture Practices
- Data Architecture Practices
- Technology Architecture Practices

Not Applicable
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Background and Motivation for an “SAP Architecture”

Introducing: The SAP Architecture Framework and SAPA200 Information Model
SAP Tooling and Content Interfaces

Outlook
Why an “SAP Architecture”?

Enabling a true global approach on SAP Architecture – One voice.

Consistent clear messaging on SAP’s Architect solutions and best practices across the globe.

Ensuring consistent service delivery and quality standards by providing centralized and standardized SAP Architecture training curriculum.

Key contributor for the design and delivery of SAP’s new and upcoming Innovation topics and services like “Innovation Value Partnership” (IVP).

Establish a global community to enable common SAP Architecture definition, alignment and standardization to foster a clear, transparent End to End solution design and delivery.
Enablement: SAP Architecture course

Determine a consistent and coherent Architectural way

- Business Architects
- Solution Architects
- Enterprise Architects
- Technical Architects
1. Use SAP Architecture to drive maximum contribution to business value by optimal utilization of SAP Solutions, SAP Services and SAP Content to enable realization of business opportunities and business transformations

2. Bring structure, coherence and transparency in complex business environments having an SAP context

3. Improve the value of the architecture development by means of applying SAP Architecture styles to fully explore and apply the potential of the SAP technology portfolio, including the next generation technologies, such as HANA, Cloud and Mobility
What Customers Want from SAP
E2E Guidance / Enablement to Run better

What do I need to improve in my Business Strategy?

How do I adjust my current setup of People, Processes & Technology?

How to achieve accurate and rapid implementation?

Questions asked on the way to run better

Value Generation
Reference Models
- Business Networks & Stakeholders
- Business Models for Differentiation

Problem-specific Process & Solution Designs
- Connected Value Chains, Performance Metrics & Process Models
- Direct Links to SAP Solutions Functions

Solution-Specific Implementation Content
- Preconfigured Solutions
- Transformation Plans

Integrated Business Modeling to Execution Platform
- Ideate → Design → Implement → Optimize

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Full Question-to-Answer Linkage
What do Architects expect from SAP?

→ This is in focus of SAP Architecture (which we will be talking about today)

→ This is in focus of SAP’s Advanced Delivery Management

→ This is in focus of SAP Development Standards

→ The “EA core” – ensuring integration across the 3 aspects

Focus of SAP Architecture
Background and Motivation for an “SAP Architecture”

**Introducing: The SAP Architecture Framework and SAPA200**

Information Model

SAP Tooling and Content Interfaces

Outlook
• The importance of Stakeholder support and communication has been underestimated (Alignment between Business and IT)
• Lack of Business focus and (missing focus on enterprise context / Business strategy)
• Architects are not working effectively together – missing a common “big picture”
• Focus is on current – not future state
• Architects are “challenged” due to increasing complexity of the environment and emerging changes and innovation
• Utilized meta models are too theoretical and cumbersome; missing SAP environment relevance
1. Use SAP Architecture to drive **maximum contribution to business value** by optimal utilization of SAP Solutions, SAP Services and SAP Content to enable realization of business opportunities and business transformations.

2. Bring **structure, coherence and transparency** in complex business environments having an SAP context.

3. **Improve the value of the architecture development** by means of applying SAP Architecture styles to fully explore and apply the potential of the SAP technology portfolio, including the next generation technologies, such as HANA, Cloud and Mobility.
A consistent and coherent Architectural Way of

- **Thinking**
- **Working**
- **Modelling**

towards **Planning**, **Building** and **Running** End 2 End SAP Business Solutions

As a value-driven SAP Architecture Development Method

- **Stakeholder driven** – securing business “buy-in”
- **Requirements-driven** – securing value planning and realization
- **SAP Solution-driven** – Securing TCI- and TCO optimization

providing a **common language** in addressing **opportunities** and **pain points** in the organization, across the Business- and Information Technology domains

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Optimize architecture
Based on the SAP Portfolio

Value driven
Business focused

Utilize SAP experience
and best practice

Using SAP Knowledge and SAP Architecture Method to drive true value out of SAP Solutions

1 Supporting: Business Applications, Database & Technology, Cloud, Mobile, Analytics
Business Involvement and Business <-> IT Alignment

Provides Value Potentials for Business Development

Secure and Enables Business Success

Demonstrates the Added Value of Information Technology

SAP Architecture
Is NOT Architecture for Architecture Sake

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SAP Architecture aspect
Demonstrating the integrative nature of Architecture core deliverables

Core Artifacts

Value
Process
Capability map
Process model
Business footprint diagram

Business

Data

Data distribution diagram
Data Process matrix

Core Artifacts

Application

Technical Reference model
Instance Strategy

Technology

Information

Data Process matrix
Business system floor plan

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### TOGAF
- **Architecture Development Method**: Capability driven architecture development method, focused on software development

### SAP EAF
- **Capability driven** architecture development method, focused on SAP Solution deployment

### SAP Architecture
- **Value driven** architecture development method, focused on full exploitation of SAP (Next Generation) Solutions, Services and Content

<table>
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<th><strong>Architecture Development Method</strong></th>
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<th><strong>SAP EAF</strong></th>
<th><strong>SAP Architecture</strong></th>
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<tbody>
<tr>
<td>Hybrid approach between software development and service architecture style</td>
<td>Hybrid approach between software development and service architecture style, supporting SAP Solutions using a SAP Taxonomy</td>
<td>Simple and robust meta model geared toward supporting the SAP Architecture Development Method</td>
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<th><strong>Meta Model</strong></th>
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<td>Generic templates</td>
<td>Features SAP specific narratives, templates and worksheets. These materials are included in the SAP ASAP 7.1 method.</td>
<td>Proven, architectural deliverables having cross-industry context to support re-use for solution design development and reference purposes</td>
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SAPA200 Enablement
The Objective: People – Process – Technology in a Best-Run Business

Tell the story to be

- **Consistent**
- A reference, enabling to build your own Architecture Best-Practice
- Contextual, supporting Industry Specific requirements and solutions

Bringing a coherent structure into complex Business- and Information Technology questions and requirements.

Teaches

- A Practical, Hands-On Architecture Method
- Development of Value Driven SAP Solution Architectures
- Supporting Business Transformations in alignment with other SAP Methods

Utilizing SAP Tools & Methods in a One Voice to our Customers

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SAP Architecture 200 (SAPA200)
Teaching Framework

01 – Architecture 101
02 – SAP Architecture Method
03 – Content Meta Model
04 – Stakeholders & Requirements

Architecture Theory

05 – Business Architecture
06 – Data Architecture
07 – Application Architecture
08 – Technology Architecture

Architecture Content

09 – Architecture Realization
10 – SAP Tools
11 – SAP Mappings
12 – EA Practice & Governance

Architecture Practice

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SAP Architecture core artifacts
Examples and Illustration

Strategy map
Value
Business
Process
Capability map
Business footprint diagram

Core Artifacts

Data
Data distribution diagram
Data Process matrix

Application
Data Process matrix

Instance Strategy
Technical Reference model
Technology
Business system floor plan
One Bullet Statement outlining the rationale (Noun) to engage in resulting in the delivery of the identified Golden Nuggets - (raison d’être)

Will have to be a verb - Describe a brief rationale to the motivation / reason / usage of the identified Golden Nuggets

Brief description of the actual Golden Nugget, including a reference to the entities and relation from the meta model upon which the nuggets is based.
Strategic Anchors

Capture Strategy

Achieve an appreciation of the strategic direction of the organization as a motivation for the envisioned transformation

Strategy map

Graphical Representation of the organization’s Goals and Objectives

Business Capability Analysis

Steps to create an overview of the required capabilities (related to people, process and technologies) the organization will need to realize its strategic objectives

Business Capability Mapping

Assess and analyze the available and need capabilities in line with the strategic priorities of the organization

Capability map

Matrix representation of available / required capabilities the organization deploys to achieve the stated Goals and Objectives (both an As-Is and To-Be view is supported)
SAP EAF

- Business
- Data
- Applications
- Technology

SAP Architecture

Support SAP Solution Style Architectures
- Business Applications
- Analytics
- Database & Technology
- Cloud
- Mobile

Fully Embrace Common Content Architecture
- Establish SAP Architecture Library
- Integrated Tooling Platform
- Final Meta Model

Not confirmed and subject to change

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Information Model

SAP Tooling and Content Interfaces

Outlook
Common Semantics across Products, Services, and Knowledge

INTEGRATED OFFERING

Customer’s Needs

- Optimal Value Chain Design
- Optimal Business Processes & Practices
- Effective Performance Measurement
- Optimized Application Architecture
- Optimized Data Architecture
- Optimized Technology Architecture

Customer Metamodel* (Information Model)

Varied and Changing Business Needs (T2V)

Value Layer

Process Layer

Information Layer

Application Layer

Data Layer

Infrastructure Layer

SAP Solution Patterns (TCO/TCI)

1. Systematic Traversal up and down

2. Varied and Changing Business Needs (T2V)

3. SAP Solution Patterns (TCO/TCI)

SAP Customer Engagement

- Business Networks and Value Streams by Industry
- Best Practices for Process Design
- Reference Performance Metrics
- Solution Architecture & Implementation Content
- Data Architecture Drilldown
- Reusable Platform Options

SAP Reference Content

Integrated Tooling Landscape for Content Creation & Usage

Customer Metamodel* (Information Model)

Value Layer

Process Layer

Information Layer

Application Layer

Data Layer

Infrastructure Layer

* Based on Open standards (not SAP-proprietary)

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**Metamodel Usage**

**Interfaces to SAP Services**

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**Customer View Metamodel**

- Structure + Navigation in Repositories

**SAP Reference Content**

- Structure
- Deliverables

**SAP Transformation Methods**

- VE
- ASAP
- BTM2
- SAP Arch

**Applicable Entities used in Deliverables**

**E2E Navigation Structure and links for**

**SAP Architecture Library**

* Referred to as “Common Content Architecture” within ADM4HVS Program

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Data Architecture Models

- Data Architecture Model
  - Application-specific Data Architecture

SAP Reference Content

- Business Networks and Value Streams by Industry
- Best Practices for Process Design
- Reference Performance Metrics
- Solution Architecture & Implementation Content
- Data Architecture Drilldown
- Reusable Platform Options

Customer’s Needs

- Optimal Value Chain Design
- Optimal Business Processes & Practices
- Effective Performance Measurement
- Optimized Application Architecture
- Optimized Data Architecture
- Optimized Technology Architecture
Technology Layer

IT Landscape Design Content

Technology Architecture Models

Technology Build Diagram

System Landscape

SAP Reference Content

Customer’s Needs

Business Networks and Value Streams by Industry

Optimal Value Chain Design

Best Practices for Process Design

Optimal Business Processes & Practices

Reference Performance Metrics

Effective Performance Measurement

Solution Architecture & Implementation Content

Optimized Application Architecture

Data Architecture Drilldown

Optimized Data Architecture

Reusable Platform Options

Optimized Technology Architecture

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**SAP Tooling and Content Interfaces**

Outlook
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Outlook
SAP Architecture Metamodel

Roadmap overview

SAP Architecture

Supports SAP Solution Style Architectures
- Business Applications
- Analytics
- Database & Technology
- Cloud
- Mobile

Fully Embrace Common Content Architecture
- Establish SAP Architecture Library
- Integrated Tooling Platform
- Final Meta Model

Enterprise Architecture Framework

1. Varied and Changing Business Needs
2. Value Layer
3. Infrastructure Layer
4. Cost-optimized SAP Solution Patterns

SAP EAF

Supports 4 domains
- Business
- Data
- Applications
- Technology

Need update

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