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SAP Enterprise Architecture Methodology Guide

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1 Getting Started

Introduction to SAP Enterprise Architecture (EA) Methodology.

Expand each section to learn more about SAP Enterprise Architecture (EA) Methodology.

What is the SAP EA Methodology?

The SAP EA Methodology establishes Enterprise Architecture **artifacts** and **practices** for various EA use cases. It is based on accepted EA principles.

At SAP, across-board area and cross-product working group collaborates to to continuously evolve the SAP EA Methodology and build practitioner skills and knowledge. The SAP EA Methodology also provides concrete modeling guidance.

Enterprise Architecture **principles** are rules that reflect general consensus on enterprise architecture work. The principles build the foundation for enterprise architecture governance and guidance.

Enterprise Architecture **artifacts** introduce architecture deliverables that describe different enterprise architecture aspects. Artifacts include models, concepts or entities, diagrams, and associations that are defined in underlying metamodels.

Enterprise Architecture **practices** introduce techniques to leverage the artifacts used to create value during the entire software lifecycle.

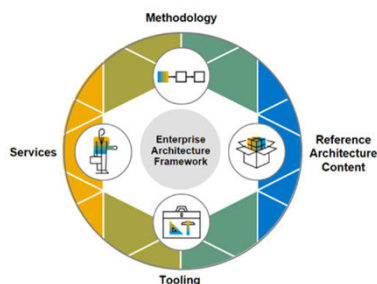
SAP EA Methodology is connected to the IT Landscape Domain and includes these architecture domains:

- Business Strategy and Model Domain
- Business Architecture Domain
- Solution Architecture Domain

What is the SAP EA Framework?

The SAP EA Methodology is one of the four pillars of the SAP Enterprise Architecture (EA) Framework. The other pillars are:

- **Reference Architecture Content:** SAP Reference Business and Solution Architecture mapping business and SAP IT Solutions. See [SAP Reference Business Architecture \[page 18\]](#) and [SAP Reference Solution Architecture \[page 19\]](#) for more information.
- **Enterprise Architecture Tools:** a set of SAP EA tools that leverage the SAP EA Methodology to support internal and customer-facing use cases.
- **Enterprise Architecture Services:** standardized SAP EA services to support customer transformation.



When to apply the SAP EA Methodology?

The SAP EA Methodology offers practices to apply in all phases of the software lifecycle:

- portfolio planning
- solution design
- cross-development alignment
- test and validation
- documentation
- rollout
- transformation planning
- solution implementation
- configuration
- continuous optimization

2 SAP EA Methodology Details

The SAP Enterprise Architecture Methodology establishes EA **artifacts**, **concepts**, and **practices** for various EA use cases.

SAP EA Methodology is based It is based on various **principles**:

- [Artifacts and Concepts \[page 6\]](#)
- [Practices \[page 12\]](#)
- [Principles \[page 14\]](#)

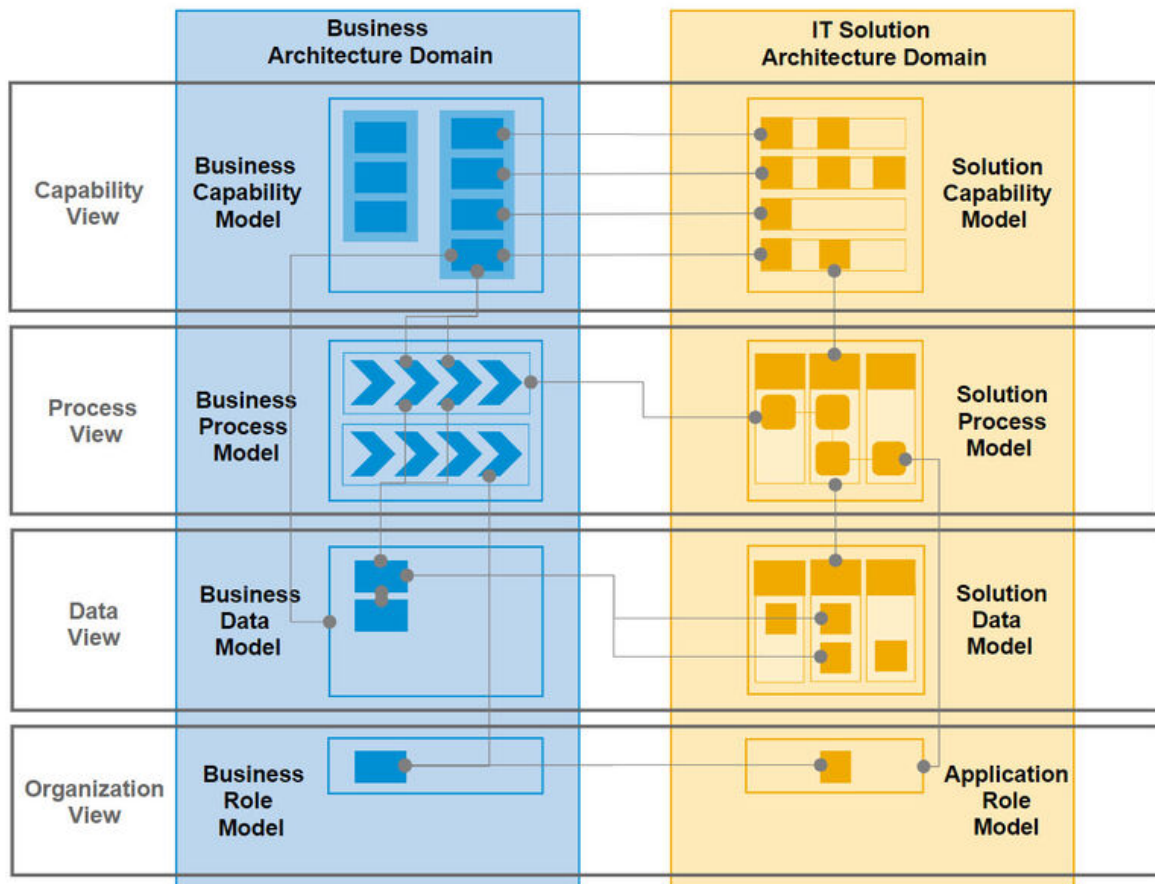
2.1 Artifacts and Concepts

Overview of SAP EA Methodology artifacts and concepts.

The core artifacts of the SAP EA Methodology are classified into four interlinked architecture views: capability, process, data, and organization views.

Each view includes aligned business and IT perspectives, which enables business owners and IT architects to collaborate on new business opportunities. Closely interlinked business and IT perspectives allows seamless navigation from business capabilities and business processes to SAP products and implementation artifacts, such as APIs, iFlows, data objects, and events.

Integration between SAP solutions is depicted in a meaningful and technical level. It enables alignment and consistency across SAP solutions and supports integration with non-SAP solutions.



2.1.1 Process View Diagrams

The Process View includes diagrams that are the basis for the Intelligent Enterprise Technology Guideline TG05 (Reference Architecture).

SAP Products Standards Integration and Application Lifecycle Management follow this process view.

Here's a list of the process view diagrams:

- [Business Value Flow Diagram \[page 8\]](#)
- [Solution Component Diagram \[page 8\]](#)
- [Solution Value Flow Diagram \[page 9\]](#)
- [Solution Process Flow Diagram \[page 10\]](#)
- [Solution Data Flow Diagram \[page 11\]](#)

Related Information

[Artifacts and Concepts \[page 6\]](#)

2.1.1.1 Business Value Flow Diagram

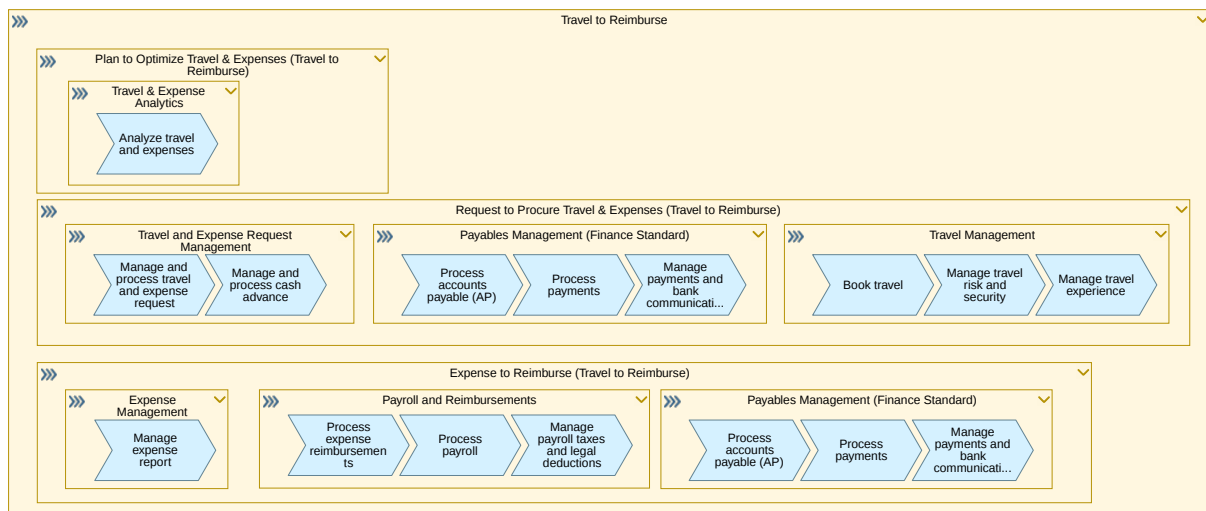
The Business Value Flow diagram represents a Business Process and contains a collection of value-adding Business Activities that create valuable results for the stakeholder.

In a Value Flow diagram, the business activities display in a logical order to easily see the business process. The order and specific steps to follow in the process can vary based on requirements.

Value Flows are easy to consume because the diagrams don't show alternative flows, paths, loops, or decision points in the execution. The diagram also gives an overview on the relevant value-adding business processes.

Next to the Value Flow in Business Architecture, SAP EA Methodology also shows the [Solution Value Flow Diagram \[page 9\]](#) as an entity of the Solution Architecture that is specific to a concrete solution variant.

Here's an example of a Business Value Flow diagram for Travel to Reimburse.



Business Value Flow Diagram Example

Related Information

[Business Activity \[page 25\]](#)

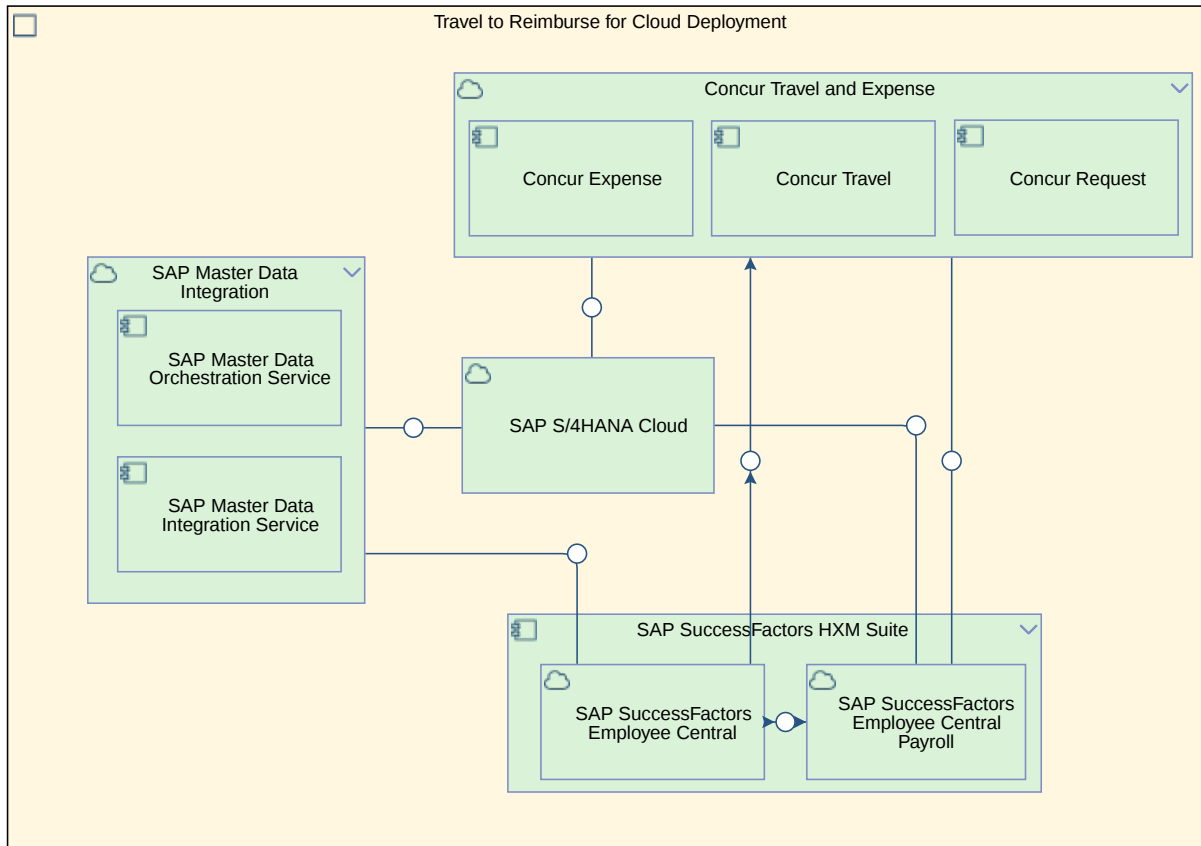
[Business Process \[page 27\]](#)

2.1.1.2 Solution Component Diagram

A Solution Component Diagram is a structural component diagram that provides an overview of a concrete Solution Variant.

It visualizes the main Solution Components, describes structural groupings, and the Communication Channels between Deployment Units.

Here's an example of a Solution Component diagram for Travel to Reimburse.



Solution Component Diagram Example

Related Information

[Solution Component \[page 32\]](#)

[Deployment Unit \[page 30\]](#)

[Communication Channel \[page 29\]](#)

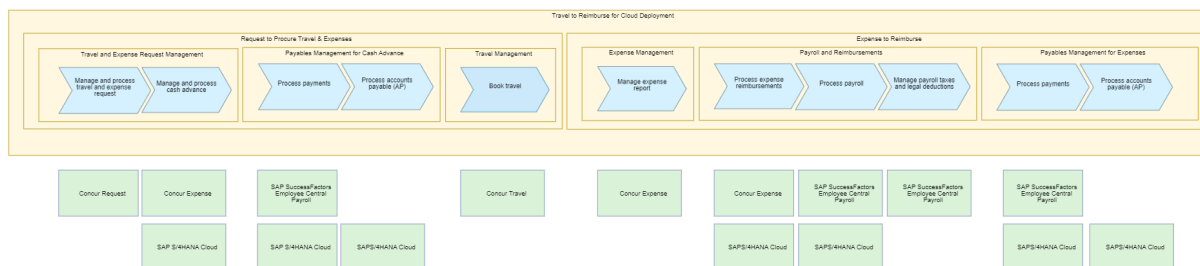
2.1.1.3 Solution Value Flow Diagram

A Solution Value Flow diagram is an abstract representation of a Solution Process and contains a collection of addressed Business Activities that create additional value for the stakeholders.

The addressed Business Activities are associated with relevant Solution Components and Solution Capabilities implementing them.

The diagrams showing Solution Value Flows are called Solution Value Flow Diagrams. The associated Solution Components and Solution Capabilities might be displayed.

Here's an example of a Solution Value Flow diagram for Travel to Reimburse for Cloud Deployment.



Solution Value Flow Diagram Example

Related Information

[Solution Capability \[page 32\]](#)

[Solution Component \[page 32\]](#)

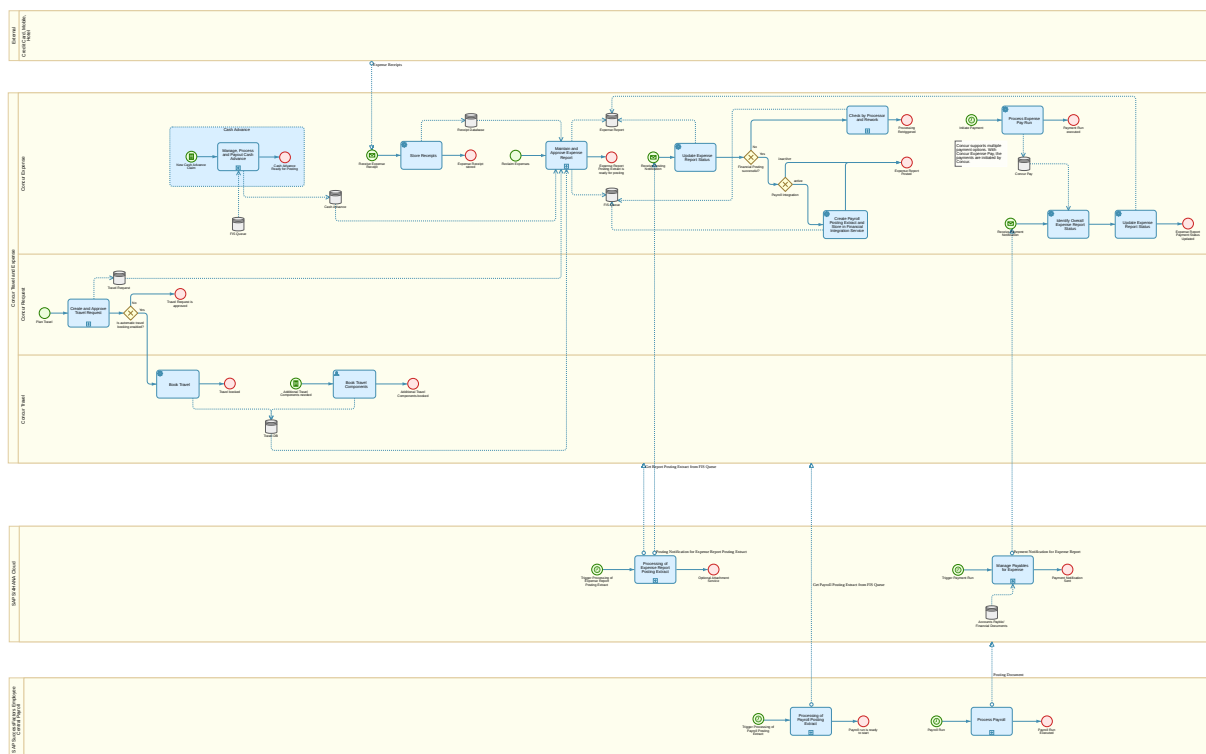
2.1.1.4 Solution Process Flow Diagram

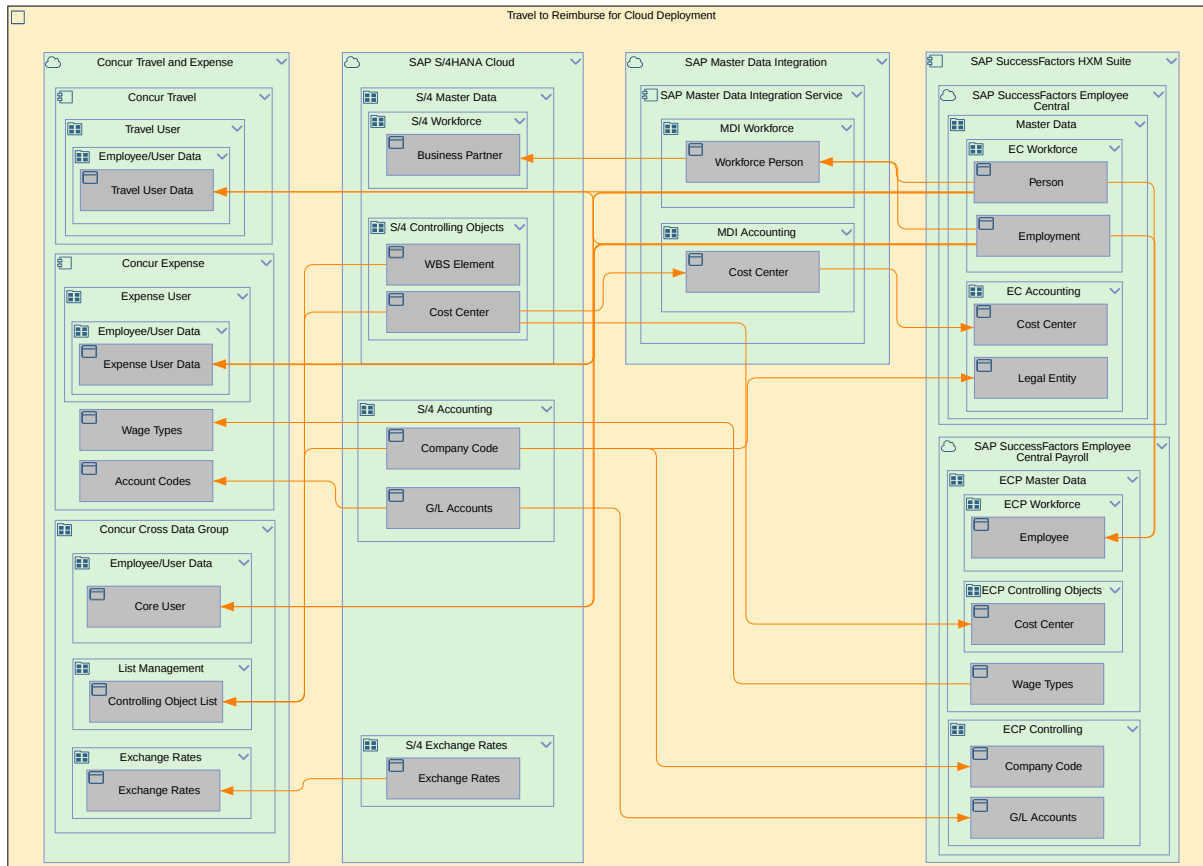
The Solution Process Flow Diagram is a behavioral diagram that is used to describe a concrete process flow of a Solution Process.

Depending on the level of shown detail, Solution Process Diagrams are basically BPMN 2.0 collaboration or process diagrams with various SAP Enterprise Architecture Methodology-extensions to describe, for example, integration architecture aspects.

Pools in collaboration diagrams represent Deployment Units (Solution Components). The message flows describe the collaboration and integration aspects between these Deployment Units. Lanes can represent Sub-Solution Components or Application Roles.

Here's an example of a Solution Process Flow diagram for Travel to Reimburse.





Solution Data Flow Diagram Example

Related Information

[Solution Component \[page 32\]](#)

2.2 Practices

SAP EA Methodology practices include:

- [Engineering \[page 13\]](#)
- [Presales and Consulting \[page 13\]](#)

2.2.1 Engineering

SAP Product Engineering uses the SAP EA Methodology during product development in several ways.

SAP EA Methodology Engineering Practices

When and how does SAP Product Engineering use the SAP EA Methodology?

In SAP Product Engineering, the SAP EA Methodology can help in different phases of product development:

- Portfolio Planning
- Requirements and Product Backlog Management
- Cross-Development Unit Alignment
- Solution Architecture Description, Rollout Material Production
- Test and Validation

The portfolio planning maps intended investments to business capabilities, related solution capabilities, and SAP solution components. It becomes transparent if investments close existing whitespaces or raise the maturity level of an existing solution. Backlog items are associated with business needs expressed in business architecture.

The solution architecture captures strategic architecture decisions and creates contracts between development units as the basis for standard integration tests. Business and solution architecture descriptions are integrated into the agile development process. The solution architecture input and its iterative refinements drive the development process and create first-class architecture descriptions that become integral ingredients of the rollout material. Business needs and business architecture are subject to the validation process.

Why is applying SAP EA Methodology at SAP Product Engineering relevant for SAP partners and customers?

The efficient, business-driven development process creates outcomes with a clear business impact and faster time-to-market. In cloud days, customers don't rely on software products and services from only one vendor. Therefore, system integrators need to understand the positioning of SAP solution components to combine them with other (legacy or 3rd-party) components in the customer's cross-provider landscape.

Partners need to know how to extend SAP's offering and to address specific requirements that aren't on SAP product roadmaps. Likewise, customers need to understand the solution offering to thoughtfully decide if and how to differentiate from standard processes in their core business areas.

Both partners and customers benefit from clean and accurate architecture descriptions. SAP Product Engineering publishes firsthand reference solution architecture content that is based on agreed reference business architecture as it is created and validated in the software innovation lifecycle process.

2.2.2 Presales and Consulting

Content coming soon.

2.3 Principles

The SAP Enterprise Architecture Methodology bundles artifacts and concepts and practices.

- [Artifacts and Concepts \[page 6\]](#)
- [Practices \[page 12\]](#)

A **principle** is a fundamental belief that helps to make concrete decisions. Goals, objectives, and core values influence principles.

SAP EA Methodology principles include:

It's essential for a team to agree on common principles. Common principles empower people to make consistent decisions with speed, high confidence, and clarity. Applying these agreed to principles is a prerequisite to creating a consistent overall result. Without common principles, decision-making is difficult and time-consuming.

- [Separation and Mapping of Business and IT \[page 14\]](#)
- [Using Industry Standards \[page 15\]](#)
- [Respect and Connect to Architecture Contexts \[page 15\]](#)
- [Collaborative Approach and Content Fluency \[page 16\]](#)
- [Defined Content Ownership \[page 17\]](#)
- [Sustainability and Simplicity \[page 17\]](#)

We share these principles because they are critical to achieving all enterprise architecture goals. SAP EA services help customers to clarify their organization's enterprise architecture principles to efficiently determine target and transition architectures.

2.3.1 Separation and Mapping of Business and IT

The SAP EA Methodology carefully separates Business from IT Solution aspects.

The clear separation allows you to clearly:

- define business needs independent from concrete solution architecture or the SAP portfolio.
- map recommended solution architecture to the expressed needs of the business.
- explain the business impact of IT solutions in a business language.

The basis for bridging the gap between business and IT for our customers is the clear separation and mapping of business and IT in the SAP EA Methodology and SAP reference architecture.

2.3.2 Using Industry Standards

SAP EA Methodology is built on industry-standard methodology.

Some examples include:

- **Business Process Model and Notation™ (BPMN™)**: SAP uses [BPMN](#) from the Object Management Group® to model concrete process flows within our Solution Architecture. The SAP EA Methodology gives concrete guidance on using the BPMN™ concepts to describe Solution Process Flows in IT landscapes and extend the BPMN™ notation where needed, (for example, to specify integration).
- **The Open Group Architecture Framework (TOGAF®)**: SAP bases the Enterprise Architecture Development Cycle on the de-facto standard from [TOGAF](#)®, which is tailored to our needs and leverages SAP Reference Architecture content.
- **American Productivity and Quality Center (APQC)**: SAP uses the [APQC](#) Process Classification Framework (PCF)® to derive multiple Business Activities in the reference architecture content area. The APQC Process Classification Framework® is an open standard developed by APQC, a nonprofit that promotes benchmarking and best practices worldwide. The PCF is intended to facilitate organizational improvement through process management and benchmarking, regardless of industry, size, or geography. To download the full PCF or industry-specific versions of the PCF and associated measures and benchmarking, visit www.apqc.org/pcf.

Using proven, well-known industry standards reduces training efforts for practitioners. Created architecture artifacts are easier to understand.

For some topics, there can be different, similar, or conflicting standards available in the industry. In the SAP EA Methodology, SAP carefully decides which standards to apply.

Related Information

[Process View Diagrams \[page 7\]](#)

[SAP Reference Business Architecture \[page 18\]](#)

2.3.3 Respect and Connect to Architecture Contexts

Enterprise architecture's discipline aims to drive more effective business and IT operations.

Enterprise architecture's discipline helps avoid fragmented process within the whole enterprise. Enterprise architecture touches many architecture contexts, including: areas of interest around diverse expert groups with their own language, concepts, and models.

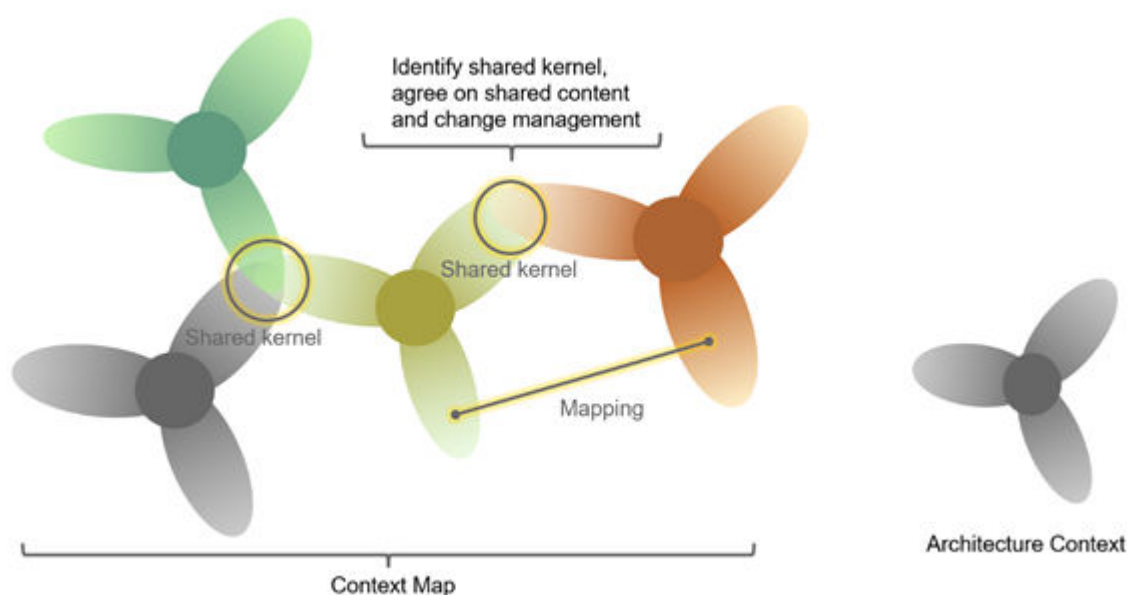
Examples of architecture contexts are:

- Integration architecture
- Data architecture
- System landscape architecture

Strategic enterprise architecture is only relevant when it connects to different architecture contexts and builds on top of them. Enterprise architecture doesn't rule different architectures groups, but needs to involve and connect to the available expertise.

The SAP EA Methodology introduces a core model with different architecture views and domains. We relate this meta-model to other architecture contexts. Shared kernels with other architecture contexts bundle the common concepts. Within a shared kernel, we use common languages, agree on shared content and follow a standard change and version management. Additional mappings relate concepts outside the shared kernels.

This approach, which follows Domain Driven Design principles, prevents a single, monolithic, and overly complex (enterprise) architecture model and follows a more collaborative approach.



2.3.4 Collaborative Approach and Content Fluency

Enterprise Architecture helps to overcome the fragmentation of processes within the whole enterprise.

Enterprise Architecture serves multiple use cases along the business architecture and the software lifecycle. At SAP, we see use cases in requirements management, portfolio planning, solution design, rollout, solution implementation, operations, and optimization. Enterprise architecture must always connect, not separate.

Enterprise architecture content flows to all the use cases it supports. It is constantly evaluated in the different use cases; both extended and optimized. The content fluency supports smooth transitions between all phases, saves time and effort, supports efficient feedback cycles, and is the basis for consistent communication between units and organizations. Distinct viewpoints on the shared enterprise architecture content support different use cases that can possibly extend by use case-specific content.

Different units and organizations that create and use shared enterprise architecture content require a highly collaborative approach. Participants must have high-level interpersonal skills. All information requires clearly defined ownership and accountability.

At SAP, an open, cross-board area and cross-product architecture working group drives the evolution of the SAP EA Methodology. The experts of the different units own the content. The ownership of all

enterprise architecture content must be carefully defined. Available expertise and ultimate accountability in the organization finally define the right to approve.

2.3.5 Defined Content Ownership

The ownership of all enterprise architecture content must be thoughtfully defined. All available expertise and ultimate accountability in the organization defines the right to approve.

2.3.6 Sustainability and Simplicity

Because of the broad area of interest, enterprise architecture must focus on and carefully define the key topics and architectural deliverables.

Enterprise architects must carefully validate the relationship between stakeholder value, authoring efforts, concept complexity, and ease of use. Only conceptual assets that authors can sustainably maintain and that customers can thoroughly understand should be selected. Good architecture includes shared understanding and meaningful decisions.

3 SAP Reference Architecture Content

Based on the SAP EA Methodology, the standardized SAP Reference Architecture Content provides a harmonized Business and Solution Architecture Reference content customers can leverage to accelerate their business transformation.

Reference Architecture Content aims to align business and IT by mapping business capabilities and processes with IT solutions. SAP Reference Architecture Content includes:

- [SAP Reference Business Architecture \[page 18\]](#): (RBA) describes the scope and undertaking of any enterprise, in a business-centric and product-agnostic way.
- [SAP Reference Solution Architecture \[page 19\]](#): (RSA) explores how SAP addresses a customer's business challenge with its unique product portfolio

3.1 SAP Reference Business Architecture

The SAP Reference Business Architecture (RBA) is a collection of reference architecture content that describes the **complete business scope** of enterprises in a standardized and structured manner and business language.

RBA includes interconnected:

- Business Capability Models
- Business Process Models
- Business Data Models
- Business Organization Models

Business Capability Models provide a comprehensive catalog of business capabilities and a hierarchical structure. The Business Process Models introduce a system of Business Processes organized into 8 Business Process Groups and based on a common Business Activity Repository.

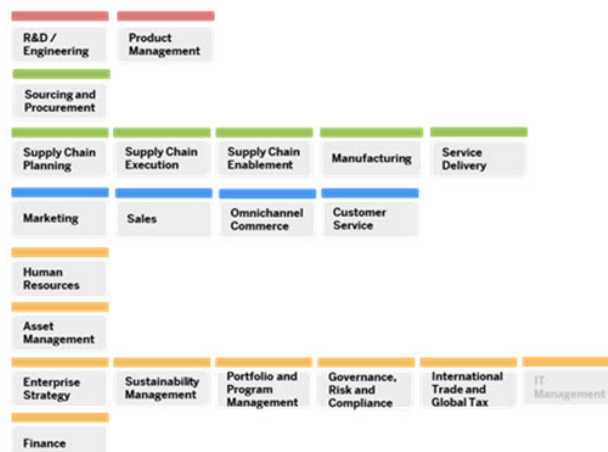
Enterprise Domains

Business Processes run across 4 Enterprise Domains



Business Capability Model

Business Capabilities describe the ability of an Enterprise to deliver value. They are hierarchically structured by Business Domains.



Business Process Model

The Value Chain of an Enterprise can be described by 8 Business Process Patterns, defining the building blocks to model Business Processes.



Related Information

[Process View Diagrams \[page 7\]](#)

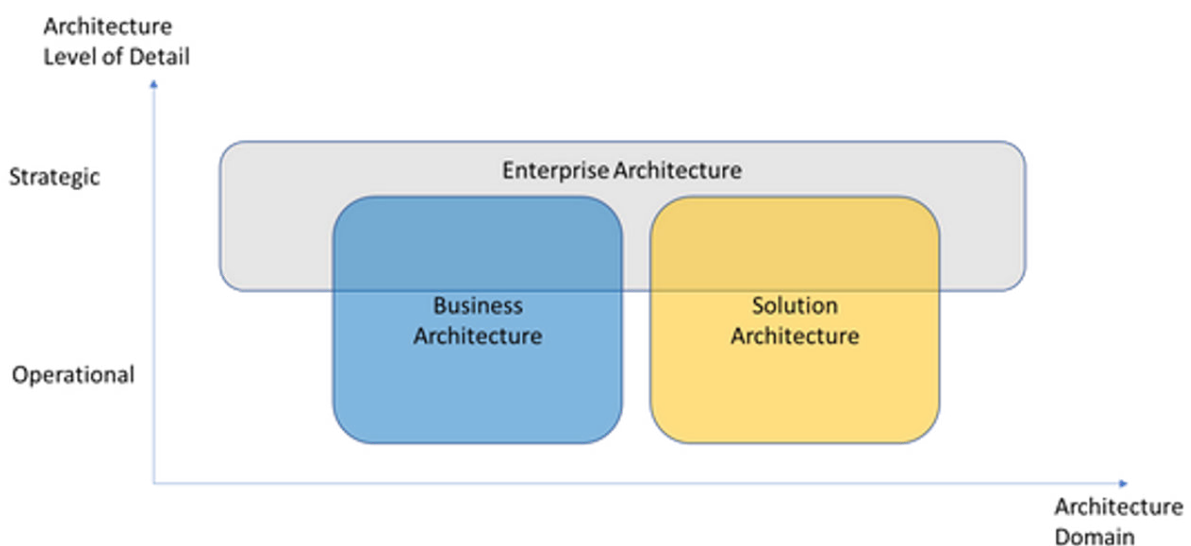
3.2 SAP Reference Solution Architecture

The SAP Reference Solution Architecture (RSA) describes the application, data, and technology aspects of SAP and partner solutions mapped to business architecture assets.

Enterprise Architecture and Solution Architecture Relationship

Enterprise architecture aims to advance strategic decision-making for organizing an enterprise, its business value creation, and supporting IT solutions. Enterprise Architecture is typically on a strategic level.

This image shows the relationship between Enterprise Architecture and Solution Architecture.



Not all Solution Architecture belongs to the strategic level of Enterprise Architecture. But Solution Architecture plays a crucial role in Enterprise Architecture.

Solution Architecture Connection

A principle of the SAP EA Framework is consistently connecting the strategic Solution Architecture within EA to the operational Solution Architecture level. This connection allows customers to transition smoothly from strategic decision preparation to the actual implementation of software or services with minimal problems. The consistent connection allows the mapping from high-level process descriptions to run-time relevant artifacts such as events, APIs, and middleware content.

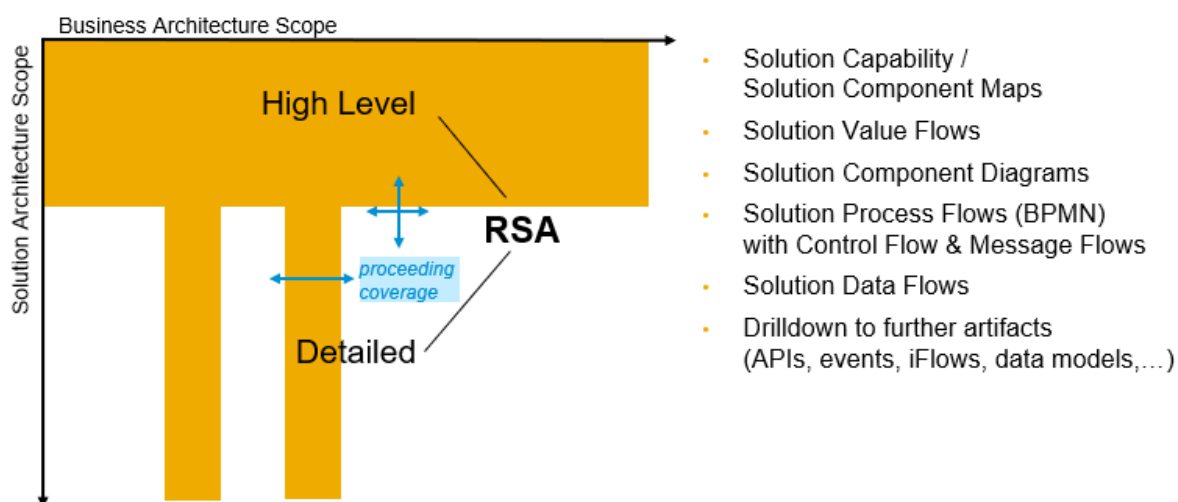
High-Level Reference Solution Architecture

High-Level Reference Solution Architecture describes solutions for a broad business scope (for example, by positioning strategic solution components, assigning solution capabilities, and providing high-level process overviews). High-level Reference Solution Architecture provides the first-level orientation. However, an

implementation of the recommended architecture needs to be assessed and validated in the context of a specific customer scenario as additional integration development and enhancements effort might be required to achieve the desired outcome."

Detailed Reference Solution Architecture

Detailed Reference Solution Architecture supports the drill-down to run-time relevant artifacts such as APIs, events, middleware content, data models, etc. It typically focuses on business scope. The recommended detailed setup is tested and validated.



Related Information

[Intelligent Enterprise Reference Solution Architecture \[page 20\]](#)

3.2.1 Intelligent Enterprise Reference Solution Architecture

The Intelligent Enterprise Reference Solution Architecture focuses on the SAP EA Methodology process view for over 20 solution variants.

Architecture views include Solution Value Flows, Solution Component Diagrams, Solution Process Flows, and Solution Data Flows. Solution variants that the Intelligent Enterprise program provides are in the [API Business Hub](#).

[Explore](#)
[Resources](#)
[Discover Integrations](#)
[Partner with Us](#)[Login](#)

Discover Business Processes for Faster Integration

Recruit to Retire

Understand, manage, and optimize all aspects of workforce (employees and external workers).

Lead to Cash

Cover the entire business process from initial contact with a prospective customer, to order fulfillment and service delivery.

Source to Pay

Optimize, simplify, and effectively manage all spend processes and spend categories to drive business outcomes.

Plan to Fulfill

Manage and optimize the digital supply chain from planning and manufacturing to the delivery of a product

Acquire to Decommission

Manage within Design to Operate all aspects of an industrial product as it is received, on-boarded and maintained on-site.

Idea to Market

Manage within Design to Operate all activities from a product idea to market readiness

FEEDBACK

Learn more about Intelligent Enterprise and SAP's Cloud Integration story in the [Intelligent Enterprise Integration Whitepaper](#).

4 SAP EA Glossary

You can use this glossary to find terms related to SAP Enterprise Architecture Methodology.

Here's a list of important SAP Enterprise Architecture Methodology terms with links to learn more. Use the search and filters to see specific terms.

Glossary

Term	Definition
Application Role	Implements one or more complete business roles or parts of a business role in a specific SAP software product. Learn more: Application Role [page 24].
Architecture Model	A system of abstractions that describes selected aspects of an architecture domain that are relevant in a specific context. Learn more: Architecture Model [page 25].
Business Activity	A work activity in an organization that creates value for an internal or external customer. Learn more: Business Activity [page 25].
Business Architecture Domain	One of the core architecture domains within SAP EA Methodology. Learn more: Business Architecture Domain [page 25].
Business Capability	Describes the organization's capacity to successfully perform Business Activities to reach business objectives and deliver value to customers. Learn more: Business Capability [page 26].
Business Capability Model	A multi-level hierarchy of Business Capabilities. Learn more: Business Capability Model [page 27].
Business Process	A combination of value-adding Business Activities to reach a defined business goal and create a valuable result for a stakeholder. Learn more: Business Process [page 27].
Business Role	Defines a general job profile. Learn more: Business Role [page 28].

Term	Definition
Business Scenario	Defines a significant business need or problem. Learn more: Business Scenario [page 28].
Business Value Flow Diagram	Represents a Business Process and contains a collection of value-adding Business Activities that create valuable results for the stakeholder. Learn more: Business Value Flow Diagram [page 8].
Communication Channel	Represents the integration between Solution Components (Deployment Units) in Solution Component diagrams. Learn more: Communication Channel [page 29].
Data Flow	The transfer of data between two Solution Data Objects in different Solution Components. Learn more: Data Flow [page 30].
Deployment Unit	Solution Components that bundle solution components that can operate separately from other Deployment Units. Learn more: Deployment Unit [page 30].
Message Flow	Describes the interaction between two Deployment Units as participants in a Solution Process. Learn more: Message Flow [page 31].
SAP Enterprise Architecture	A systematic approach to formally model the business (strategy, organization, processes) and IT (application, data, technology) for an enterprise. Learn more: SAP Enterprise Architecture [page 32].
Solution Capability	Describes a functional ability of one or more software components that addresses and supports a Business Capability. Learn more: Solution Capability [page 32].
Solution Component	A Solution Component combines built-in and partially exposed functionality, behavior, and data. Learn more: Solution Component [page 32].
Solution Component Diagram	A structural component diagram that provides an overview of a concrete Solution Variant. Learn more: Solution Component Diagram [page 8].

Term	Definition
Solution Data Flow Diagram	A diagram that represents the typical flow of data between Solution Components in the context of a specific Solution. Learn more: Solution Data Flow Diagram [page 11].
Solution Process	The business process solution in an IT environment. It combines a defined set of solution components to meet the business process requirements. Learn more: Solution Process [page 35].
Solution Process Flow Diagram	A behavioral diagram used to describe a concrete process flow of a Solution Process. Learn more: Solution Process Flow Diagram [page 10].
Solution Value Flow Diagram	An abstract representation of a Solution Process and contains a collection of addressed Business Activities that create additional value for the stakeholders. Learn more: Solution Value Flow Diagram [page 9].

4.1 Application Role

An Application Role implements either a complete or parts of a Business Role within a specific SAP software product or Solution Component.

Application roles reflect the tasks of general, commonly known job profiles and allow users to access the required applications for their daily work

Related Information

[Business Role \[page 28\]](#)

[Solution Component \[page 32\]](#)

4.2 Architecture Model

An architecture model is a system of abstractions that describes selected aspects of an architecture domain that are relevant in a specific context.

A model includes:

- a list of entities (catalog, "things")
- associations between entities (relationship between "things")
- diagrams ("graphical representation")

4.3 Business Activity

A Business Activity is a work activity within an organization that creates value for an internal or external customer.

A Business Activity:

- requires [Business Capability \[page 26\]](#) in the organization for successful execution.
- is assigned to one or more participating Business Roles.
- is used as building blocks to model a Business Processes in Business Value Flow Notation.

Examples if business activities are:

- develop sales forecast
- determine and calculate sales prices
- invoice customers

Related Information

[Business Role \[page 28\]](#)

[Business Process \[page 27\]](#)

4.4 Business Architecture Domain

The Business Architecture Domain is one of the core architecture domains within SAP EA Methodology.

Business aspects include:

- Capabilities
- Processes

- Data
- Organizational Structure

In the SAP EA Methodology, Business Strategy and Business Model are separated from the Business Architecture and build a domain of their own. Business Architecture describes how Business Strategy and Business Model are implemented (from a pure business perspective, not from an IT perspective).

Value of Business Architecture

Enterprise architecture domain values include:

- Allows business-led discussions with all stakeholders and decisions on the basis of agreed business terms
- Enables to communicate the business value and impact of architecture work to all stakeholders

4.5 Business Capability

Business Capabilities describe the organization's capacity to successfully perform Business Activities to reach business objectives and deliver value to customers.

Business Capabilities can be organized within Business Capability Models that describe the complete set of Business Capabilities an organization may require to execute its business model and fulfill its mission.

Business capabilities:

- Business Capabilities are described from a **pure business perspective**.
- Business Capabilities **define “what” the business requires**, not "how" a technical or organizational solution looks like.
- Business Capabilities are **unique and independent** from each other.
- Business Capabilities are not Business Processes but do **support Business Processes** to create value.
- Business Capabilities are **written in a business language** and build a common link between executive intent and operational activities.
- Business Capabilities **provide the foundation for various assessments** (for example, maturity and prioritization).

SAP Reference Business Architecture defines Business Capabilities on three hierarchical levels using the following names:

- **Level 1:** Business Domain
- **Level 2:** Business Area
- **Level 3:** Business Capability

Related Information

[Business Process \[page 27\]](#)

[Business Capability Model \[page 27\]](#)

4.6 Business Capability Model

The Business Capability Model is a multi-level hierarchy of Business Capabilities.

The Business Capability Model organizes the complete set of [Business Capabilities](#)  an organization requires to successfully complete its mission, reach its strategic objectives, and execute its business model. It observes the "mutually exclusive and collectively exhaustive" (MECE) principle.

Business Capability Map is a visualization or diagram of a Business Capability Model. SAP Reference Business Architecture defines Business Capabilities in a BCM with three levels of granularity, using the following names:

- Level 1: Business Domain
- Level 2: Business Area
- Level 3: Business Capability

Related Information

[Business Capability \[page 26\]](#)

4.7 Business Process

A Business Process is a combination of value-adding Business Activities to reach a defined business goal and create a valuable result for a stakeholder.

In the SAP EA Methodology, Business Value Flows describe Business Processes from a value perspective.

Business Processes belong to the [Business Architecture Domain](#) . The SAP Reference Business Architecture provides a system of Business Processes independent from their concrete realization in IT. In the Solution Architecture Domain, Solution Processes and SAP Solution Components address the needs of Business Processes.

Related Information

[Business Value Flow Diagram \[page 8\]](#)

[Business Activity \[page 25\]](#)

4.8 Business Role

A Business Role defines a general job profile.

It is product agnostic and can be implemented by one or multiple Application Roles within a specific SAP Software Product or Solution Component.

Examples of these business roles are:

- Internal Sales Representative
- Billing Clerk
- Purchaser

Related Information

[Application Role \[page 24\]](#)

4.9 Business Scenario

A Business Scenario defines a significant business need or problem.

A Business Scenario defines a concrete business scope, specified using business architecture entities as business processes and business capabilities.

In business process-driven development, business scenarios typically embrace one or multiple business processes.

Related Information

[Business Capability \[page 26\]](#)

4.10 Business Value Flow Diagram

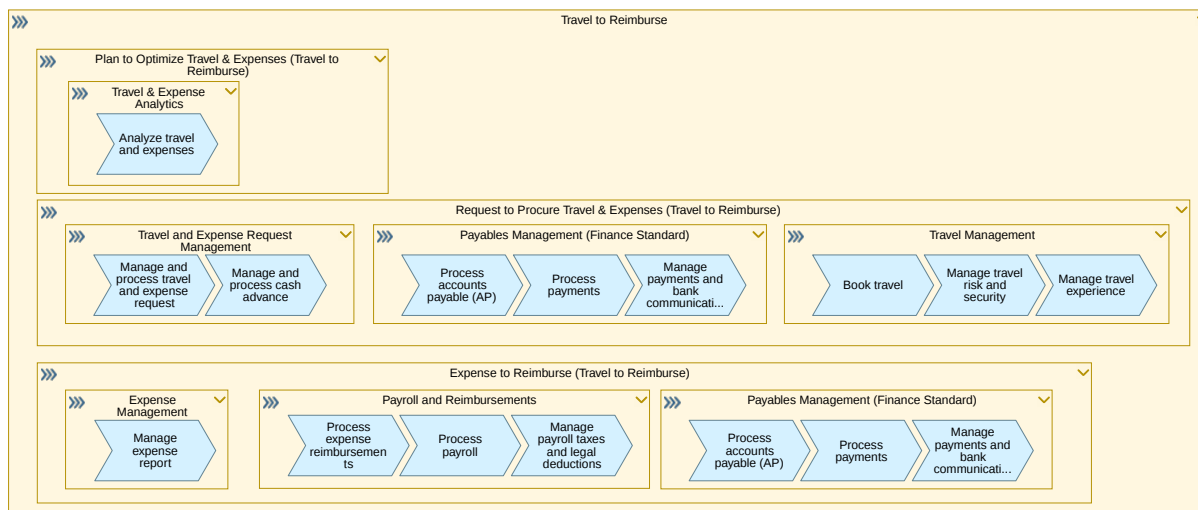
The Business Value Flow diagram represents a Business Process and contains a collection of value-adding Business Activities that create valuable results for the stakeholder.

In a Value Flow diagram, the business activities display in a logical order to easily see the business process. The order and specific steps to follow in the process can vary based on requirements.

Value Flows are easy to consume because the diagrams don't show alternative flows, paths, loops, or decision points in the execution. The diagram also gives an overview on the relevant value-adding business processes.

Next to the Value Flow in Business Architecture, SAP EA Methodology also shows the [Solution Value Flow Diagram \[page 9\]](#) as an entity of the Solution Architecture that is specific to a concrete solution variant.

Here's an example of a Business Value Flow diagram for Travel to Reimburse.



Business Value Flow Diagram Example

Related Information

[Business Activity \[page 25\]](#)

[Business Process \[page 27\]](#)

4.11 Communication Channel

A Communication Channel represents the integration between Solution Components (Deployment Units) in Solution Component Diagrams.

Communication Channels bundle one or many Message Flows (as described in BPMN-based Solution Process Flows).

Related Information

[Deployment Unit \[page 30\]](#)

[Solution Component Diagram \[page 8\]](#)

[Solution Process Flow Diagram \[page 10\]](#)

4.12 Data Flow

Data Flow is the transfer of data between two Solution Data Objects in different Solution Components.

Each data flow endpoint is an Solution Data Object that indicates data of the sending object is sent to the receiving objects. Message Flows bundle multiple Data Flows and describe technical details, such as protocol and authentication. Data Flow is a reusable object that includes steps to define the transfer of information from source to target.

Related Information

[Message Flow \[page 31\]](#)

4.13 Deployment Unit

Deployment Units are Solution Components that bundle solution components that can operate separately from other Deployment Units.

Deployment Units are relevant for integration modeling per SAP EA Methodology.

- interactions between Deployment Units are described technically in Communication Channels and Communication Scenarios in SAP EA Methodology.
- interactions in Deployment Units (direct interaction) are generally not described technically.

Interactions within Deployment Units include typically method calls (direct/non-remote), service calls, modification and access to shared data on a common database..

Deployment Unit Characteristics

Deployment Unit characteristics include:

- separated operations
- the operations team needs to set up, run/manage/monitor the Communication Scenario, including monitoring and issue fixing

Solution Component Diagram Notation

In Solution Component Diagrams, Solution Components of the type of Deployment Unit are displayed with specific icons. The icons separate the Deployment Units of different deployment types from other Solution Components.

Standard
Solution Component



Deployment Unit
(Solution Component)



Related Information

[Communication Channel \[page 29\]](#)

[Solution Component Diagram \[page 8\]](#)

4.14 Message Flow

A Message Flow describes the interaction between two Deployment Units as participants in a Solution Process.

In the SAP EA Methodology Message, this interaction can be described in detail by providing information on the communication protocol or the used Application Programming Interface (API).

Related Information

[Data Flow \[page 30\]](#)

[Solution Data Flow Diagram \[page 11\]](#)

[Solution Component \[page 32\]](#)

4.15 SAP Enterprise Architecture

SAP Enterprise Architecture is a systematic approach to formally model the business (strategy, organization, processes) and IT (application, data, technology) for an enterprise.

The SAP EA Architecture approach defines and identifies change opportunities and needs, and budget. This approach helps close the gap between business and IT by creating transparent mid-term planning roadmaps for business and IT.

SAP EA focus manages the architecture of key programs by merging IT Architecture and Enterprise Architecture functions and organizations. Enterprise Architecture domains include:

- Enterprise Architecture (overall methodology)
- Business Architecture (business or line of business (LOB) drives this)
- Application Architecture (Global IT Architecture drives this)
- Data Architecture (Global IT Architecture and Data Council drive this)
- Technology Architecture (Infrastructure/SAP HANA Enterprise Cloud)
- Program Architecture (driven within project engagements by Global IT Architecture)

4.16 Solution Capability

The Solution Capability describes a functional ability of one or more software components that addresses and supports a Business Capability.

A Business Capability can be supported by zero, one, or many Solution Capabilities.

Related Information

[Business Capability \[page 26\]](#)

4.17 Solution Component

A Solution Component combines built-in and partially exposed functionality, behavior, and data.

Solution Components are key elements within Solution Architecture description. Solution Variants are built by Solution Components that can be broken down further.

Today we separate the following types of solution components:

- Software Applications and Software Services
- Software Component Groups

- External Components

Sub-components below the Software Applications and Services may not be further described. Software Component Groups group Software Applications and Software Services or Subcomponents. External Components are not provided by SAP. Solution Components that can be deployed to different deployment targets, can be operated separately, and collaborate via modeled integration are labeled as Deployment Units.

Related Information

[Deployment Unit \[page 30\]](#)

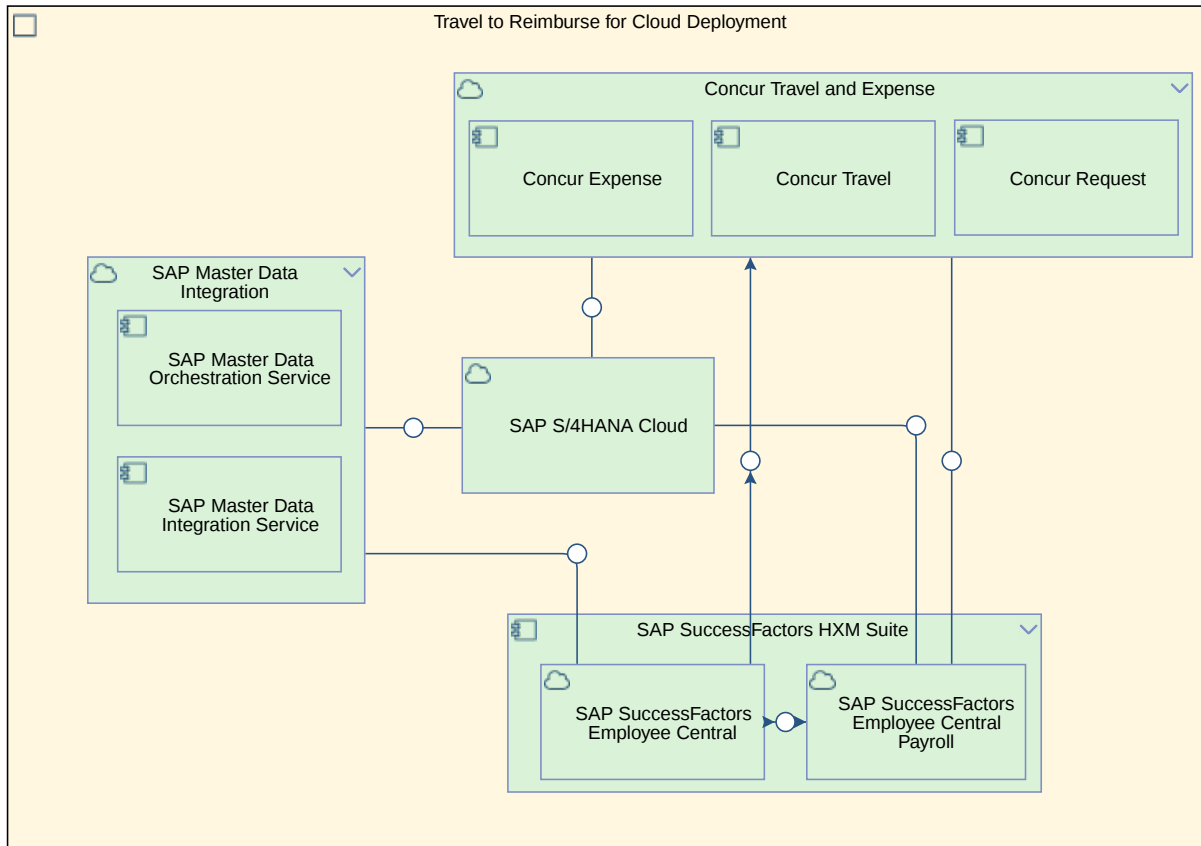
[Solution Component Diagram \[page 8\]](#)

4.18 Solution Component Diagram

A Solution Component Diagram is a structural component diagram that provides an overview of a concrete Solution Variant.

It visualizes the main Solution Components, describes structural groupings, and the Communication Channels between Deployment Units.

Here's an example of a Solution Component diagram for Travel to Reimburse.



Solution Component Diagram Example

Related Information

[Solution Component \[page 32\]](#)

[Deployment Unit \[page 30\]](#)

[Communication Channel \[page 29\]](#)

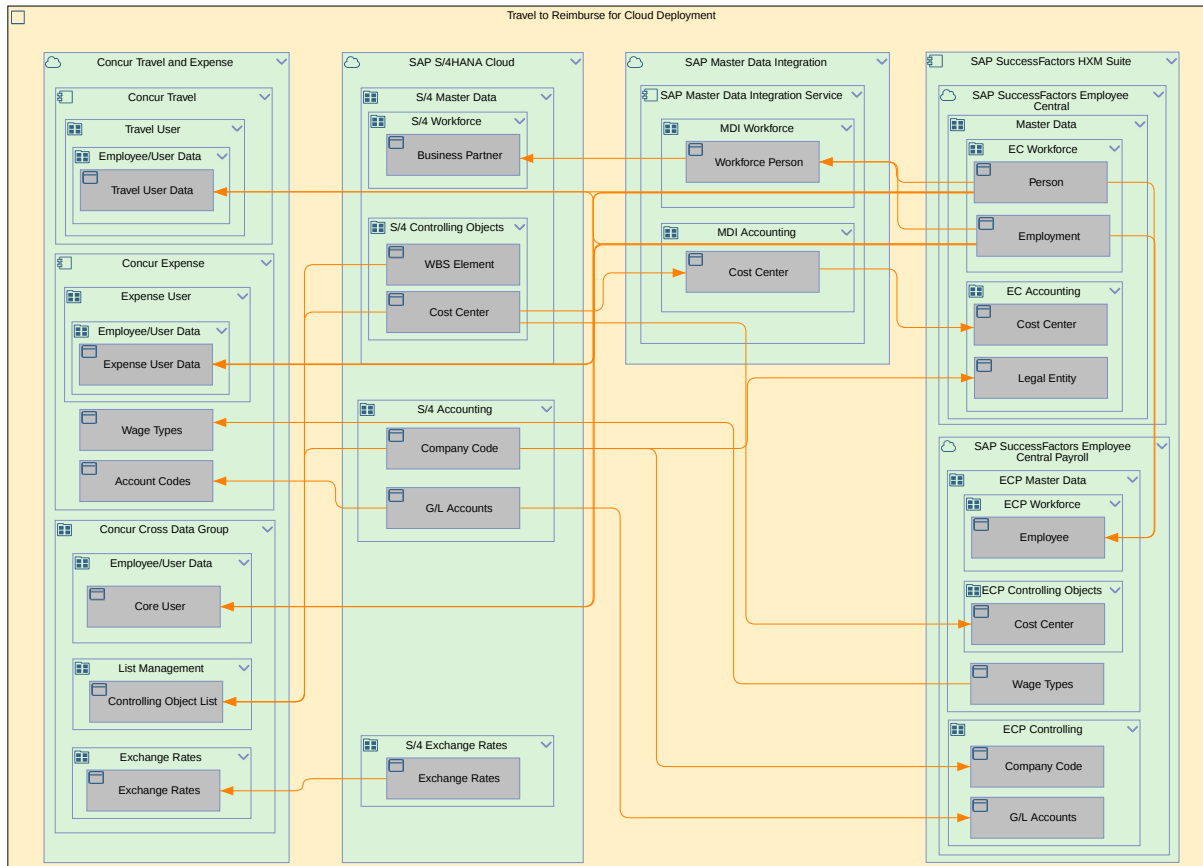
4.19 Solution Data Flow Diagram

A Solution Data Flow Diagram represents the typical flow of data between Solution Components in the context of a specific Solution.

The Data Flow Diagram depicts Solution Components and their implemented, integration-relevant Solution Data Objects.

The Data Flows show the flow of data between the System of Records and subsequent Solution Components.

Here's an example of a Solution Data Flow diagram for Travel to Reimburse for Cloud Deployment.



Solution Data Flow Diagram Example

Related Information

[Solution Component \[page 32\]](#)

4.20 Solution Process

A Solution Process is the realization of the Business Process in an IT environment.

The Solution Process combines a defined set of solution components to meet the business process needs. A Solution Process is described using architecture views (that build the architecture description).

Architecture views are:

- [Solution Component Diagram \[page 8\]](#)
- [Solution Value Flow Diagram \[page 9\]](#)
- [Solution Data Flow Diagram \[page 11\]](#)
- [Solution Process Flow Diagram \[page 10\]](#)

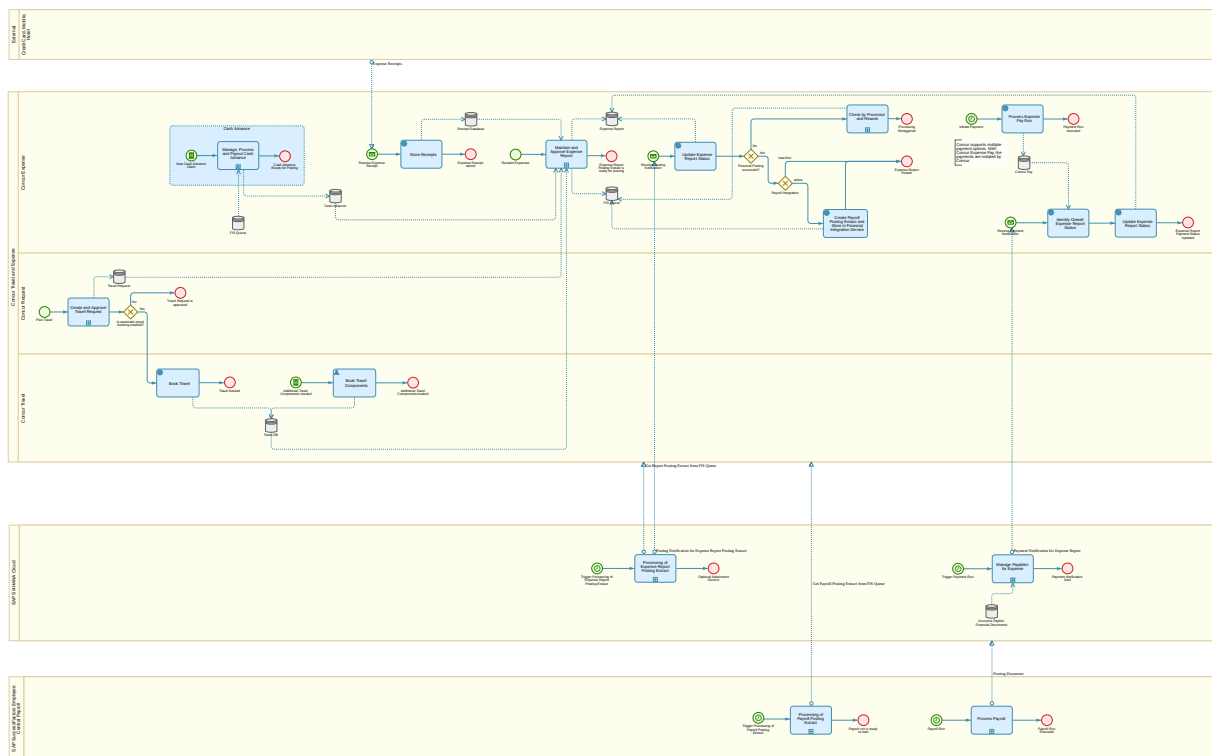
4.21 Solution Process Flow Diagram

The Solution Process Flow Diagram is a behavioral diagram that is used to describe a concrete process flow of a Solution Process.

Depending on the level of shown detail, Solution Process Diagrams are basically BPMN 2.0 collaboration or process diagrams with various SAP Enterprise Architecture Methodology-extensions to describe, for example, integration architecture aspects.

Pools in collaboration diagrams represent Deployment Units (Solution Components). The message flows describe the collaboration and integration aspects between these Deployment Units. Lanes can represent Sub-Solution Components or Application Roles.

Here's an example of a Solution Process Flow diagram for Travel to Reimburse.



Solution Process Flow Diagram Example

Related Information

Business Process [page 27]

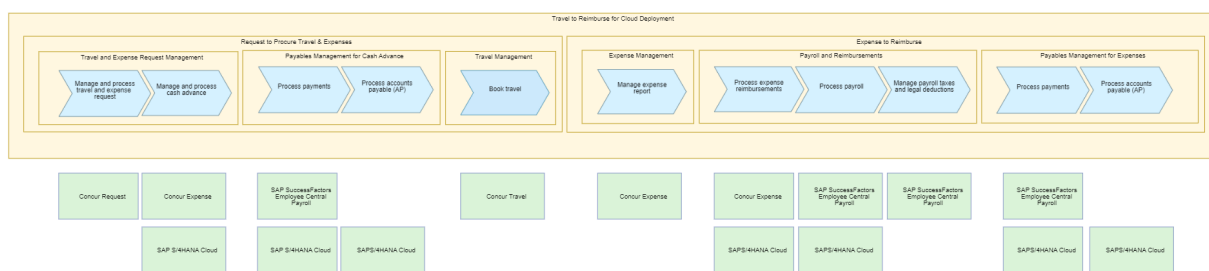
4.22 Solution Value Flow Diagram

A Solution Value Flow diagram is an abstract representation of a Solution Process and contains a collection of addressed Business Activities that create additional value for the stakeholders.

The addressed Business Activities are associated with relevant Solution Components and Solution Capabilities implementing them.

The diagrams showing Solution Value Flows are called Solution Value Flow Diagrams. The associated Solution Components and Solution Capabilities might be displayed.

Here's an example of a Solution Value Flow diagram for Travel to Reimburse for Cloud Deployment.



Solution Value Flow Diagram Example

Related Information

[Solution Capability \[page 32\]](#)

[Solution Component \[page 32\]](#)

5 SAP EA Learning

There are various channels to learn more about SAP Enterprise Architecture (EA) and SAP EA Methodology. Here are a few great resources and training courses.

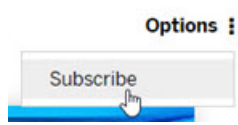
SAP EA Training

Check out the learning opportunities and courses to help you get up to speed with SAP EA.

Training	Description
SAP Intelligent Enterprise Architecture Foundation (IEA10) Training Course 	- Learn about the relevant insights and get practice on with SAP Enterprise Architecture Framework. Find out how SAP EA is applied and how to leverage it to expedite your architecture engagements. From the IEA10 course page: - Select your country/region and language to find a course near you. - Select Find a course date. - Pick a course date and select  Book to reserve a spot.
SAP Intelligent Enterprise Architecture and Processes Learning Journey	Learn about how SAP enables the Intelligent Enterprise via application integration and built-in intelligence for key E2E processes and earn your digital badge.
An Enterprise Architect's View on SAP Business Technology Platform  openSAP course.	Explore SAP Business Technology Platform from an enterprise architect's perspective. Learn how to apply an architecture development method to SAP Business Technology Platform to put technology in the context of business requirements.

SAP EA Resources

Get the latest SAP EA information and resources such as, blog posts, articles, and help pages.

Resource	Description
SAP Enterprise Architecture Community Group 	Blog posts, discussions, insights, and other useful information to stay up-to-date on SAP EA topics. Subscribe to the SAP EA Community and don't miss a thing. From the SAP EA Community: 1. Select <i>Options</i>: at the top right of the page. 2. Select <i>Subscribe</i>. You'll receive email alerts about posts in the SAP EA Community. 
SAP Enterprise Architecture Training (IEA10) Announcement 	SAP Community blog article introducing the new 5-day training course for SAP customers and partners for the SAP Enterprise Architecture Framework (IEA10).
Intelligent Enterprise Help Pages	Learn about all things Intelligent Enterprise.

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