Achieving Business Agility with SAP Cloud Platform Business Rules

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Agenda

Intelligent Enterprise

Decision Management Overview

SAP Cloud Platform Business Rules Introduction

Key Capabilities

Recipes

Summary
Intelligent Enterprise
The digital era is evolving into the intelligence era
Deliver the Intelligent Enterprise

THE INTELLIGENT ENTERPRISE features

3 KEY COMPONENTS:

1. Intelligent Suite
2. Digital Platform
3. Intelligent Technologies
Integration & Orchestration services in SAP Cloud Platform

Supported customers scenarios

- Developers: Develops integrations, APIs, Workflows or Apps
- Business Users: Works with tasks, digital process and apps
- Citizen Integrators/Developers: Develops integrations and apps using APIs with low-code productivity tools

A2A/B2B Integration

IOT and Device Integration

Digital Processes and Apps

Real-time Omni-Channel Access

Intelligent Process Visibility

Cloud Integration

API Management

Internet Of Things

Workflow

Business Rules

Process Visibility*

*planned

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Decision Management

Overview
Decisions are needed in every business

**Banking**
Relationship based pricing, credit decisioning, scorecards

**Public Sector**
Tax calculations, customs duties, land regulations, license fee calculations

**Logistics and Shipping**
Parts management, duties calculations, pricing calculations

**Education**
Fee calculations, course selections

**Insurance**
New products, claims settlement, agent commissions

**Healthcare**
Patient monitoring, fraud detection, claims
Across different business landscapes, leaders are asking challenging questions:

- How to control fraud? Change the routing to focus on new fraud.
- How to react faster to market trends? Change the assessment to manage risk.
- How to better understand and deliver competitive change? Change the discount to remain competitive.
- How to implement policies changes with minimal disruptions? Change validation to track new data requirements.
- How to adapt to changes in consumer behavior? Change to keep selecting the right deal terms.
- How to effectively manage regulation changes? Change to keep eligibility decisions compliant.

Source: Inspired by James Taylor of Decision Management Solutions
SAP Cloud Platform Business Rules

Introduction
SAP Cloud Platform Business Rules

Platform reuse service that encapsulates high change decision logic from application logic

Digitize and automate decision making with business rules

Enable centralized decision management across the Intelligent Enterprise Suite
**Enterprise Business Rules – our vision**

**SAP® Cloud Platform**
- Integration | Analytics | Machine Learning | Security | Business Services and more

### SAP Enterprise Rule Model

- **SAP Business Applications**
  - SAP S/4HANA
    - On-premise and cloud

- **SAP Cloud Platform Business Rules**
  - Rule authoring & governance
  - Decision Mining & simulation *
  - Tools & embedded UI controls
  - Repository & lifecycle management
  - Runtime & compilers

- **SAP Cloud Platform**
  - Central design-time & runtime repository

### Legends
- Local runtime repository
- Local rule runtimes
- Cloud rule runtimes
- Advanced Capabilities planned in future roadmap

**SaaS | Business Services**
- SAP Industry Cloud
- SAP S/4HANA Extension
- SAP Leonardo
- Partner Services

**SAP HANA Data Management (on-premise & DBaaS)**
- SAP Vora

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Simplify management of decision logic across SAP Solutions

<table>
<thead>
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<th>Capabilities</th>
<th>Outcomes</th>
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<tr>
<td><strong>Agility</strong></td>
<td><strong>Automate decision logic</strong> with web-based tool and common lifecycle management approach with central repository and governance</td>
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<tr>
<td>Encapsulate business logic from application logic and make business changes without the need to redevelop the application.</td>
<td><strong>Enterprise rule model and central decision management</strong> to manage rules centrally across different platforms generating low operation and maintenance cost</td>
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<tr>
<td><strong>Reuse</strong></td>
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<td>Consistent and flexible decision management with reuse of business rules across different business processes</td>
<td><strong>Open APIs</strong> to integrate and extend business logic with processes across various SAP and non-SAP applications</td>
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<td><strong>Transparency</strong></td>
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<td>Reduce manual intervention and dependency on the IT expert to apply changes to business logic across applications</td>
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SAP Cloud Platform Business Rules
Key Capabilities
Enabling decision management across Intelligent Enterprise

Empower users to automate and manage decision logic independently from application development

Centrally build and manage decision logic across different solutions and landscapes

Rapidly build and extend decision logic for SAP and non-SAP applications with managed APIs
Enabling decision management across Intelligent Enterprise

Empower users to manage decision logic independently from application development
- Model business rules and formulas in tabular spreadsheet-like decision tables
- Provide an easy-to-use web-based business rules editor for managing business rule changes
- Embed UI5 controls for decision tables into configuration apps for business users
- Implement policy changes in applications without requiring application development

Centrally build and manage decision logic across different solutions and landscapes
- Reduce code and management effort for developers by externalizing business policy
- SAP Enterprise Rules Model to standardize modelling notations
- Central rule authoring and governance with web-based tool and common repository
- Direct deployment to different systems and platforms like SAP HANA, SAP S/4HANA

Rapidly build and extend decision logic for SAP and non-SAP applications with managed APIs
- Build, manage and invoke business rules from code by using APIs
- Create rules to control process extensions for S/4HANA Cloud
- Model rules to control custom workflows for SAP Cloud applications such as SAP Hybris Cloud for Customer, SAP SuccessFactors, Concur, or SAP Ariba
Empower users to manage decision logic independently from application development

- Model business rules and formulas in tabular spreadsheet-like decision tables and text rule
- Provide an easy-to-use Web-based business rules editor for managing business rule changes
- Embed UI5 controls for decision tables into configuration apps for business users
- Implement policy changes in applications without requiring application development
Centrally build and manage decision logic across different solutions and landscapes

- SAP Enterprise Rules Model to standardize modelling notations based on DMN 1.1
- Central rule authoring and governance capabilities with web-based tool and common repository
- Direct deployment to different platforms like SAP HANA and S/4HANA
- Enable effective use of data assets to achieve desired outcome with less risk
- Flexible and consistent decision automation and management for different platforms
Ease developers use and management of rules with managed APIs

- Build and manage decision tables from code by using APIs
- Invoke the rules engine via APIs published in SAP API Business Hub
- Reduce code and management effort for developers by externalizing business policy
Rapidly build decision logic for SAP and non-SAP applications

Create business rules to encapsulate decision logic of extension applications of SAP S/4HANA Cloud, SAP SuccessFactors, etc.

Model business rules to control custom workflows for SAP Cloud applications such as
- SAP C/4HANA Cloud for Customer
- SAP SuccessFactors
- SAP Concur
- SAP Ariba

SAP® S/4HANA Cloud
SAP® S/4HANA

SAP® C/4HANA
SAP Ariba
SAP Concur
SAP Health
SAP SuccessFactors
SAP Cloud Platform Business Rules Recipes
Business Rules Usage Patterns

**Recipes**

**Extension Applications**
that require business logic to vary and remain outside the application lifecycle
- A cloud native application built side by side to an SAP Solution e.g. SAP S/4HANA
- Invokes the Rule Service via API

**Human Centric or System Centric Processes**
that require decision logic to be isolated from the process flow logic
- A cloud *Workflow* or *Integration* flow process that extends or integrates an SAP Solution
- Workflow or Integration Flow Service Task invokes the Rule Service via API

**Core Business Processes for In App Extensions**
that require rule based field calculations & derivations and controlled environment
- SAP back office core processes e.g. Availability to Promise, Financial Reporting in S/4HANA
- SAP front office customer facing processes like Marketing Campaign Score Recommendation in C/4HANA

**Analytical Decisions**
that require executions on mass data typically stored in Agile Data Mart
- Agile data marts refers to repository of data gathered from operational data originating from transactional systems and other sources.
- Business rules are push down to HANA to leverage faster execution of analytical rules on mass data
Recipe 1: Extension Applications that require flexible business logic

Extension Layers

- User Interface
- Business Logic
- Persistency
- Connectivity

Custom Applications (Pass and SaaS)

SAP Cloud Platform Business Rules

Author  Deploy  Manage

Business rules used in:
- Customer specific extension applications
- Partner built SaaS applications

Business Rules is used to extend backend business logic that varies often for functional reasons
Recipe 2: Isolate Decision Logic from Process Logic

Separate decision, simpler process

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<th>Class II sports</th>
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<th>Cancer</th>
<th>New Customer</th>
<th># Claims</th>
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<td>&gt;1</td>
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Recipe 3: Operational Decisions in Core Business Processes

**SAP® S/4HANA**
Core Business Processes
- Procurement
- Sales
- Manufacturing & Supply Chain
- Finance

**BRFPlus**
(Rules engine)

**Database**
(HANA DB)

**Operational Decision:**
- daily repeatable business decisions
- done in high-volume
- rely on transactional data
- database lookup needed

**Example:** Does the new account have invalid zip?
**Example:** What persisted accounts have invalid zip?

**SAP Cloud Platform Business Rules**
- Author
- Deploy
- Manage
Recipe 4: Analytical Rules for Agile Data Mart

Analytical rules run on historic operational data combined with current operational data.

Agile data marts is a repository of data from operational data originating in transactional systems and other sources.

SAP HANA (Agile Data Mart)

Business Intelligence
Analytical & Reporting tools

Replication server

SAP system (transactional)

non-SAP system (OLTP-based)

SAP Cloud Platform
Business Rules

Author

Deploy

Manage
Summary
Orchestration
Rapidly build and modify workflow applications while managing business logic

Orchestrate and extend workflows with SAP Cloud Platform Workflow

- Rapidly build and modify workflow applications with web-based tooling
- Create and adapt value-adding processes in your company
- Increase efficiency and transparency
- Users can manage their workflow tasks using the My Inbox Fiori application

Quickly automate flexible decision with SAP Cloud Platform Business Rules

- Empower users to manage business logic independently from application development
- Create application specific business vocabulary independent of the runtime container
- Integrate Rules as a service into your applications using the REST API
More Information

- SAP Cloud Platform Business Rules – Product Page
- Solution Brief
- SAP Help
- SAP Cloud Platform Business Rules API
- SAP Cloud Platform Business Rules Roadmap
- SAP Cloud Platform regions

- Product Overview on YouTube
- Product Expert Video on YouTube
- SAP Cloud Platform Podcast #Episode 47
- Webinar: What's new in SAP Cloud Platform Business
- RulesSAP Code Talk with DJ Adams
- Quick Demo by Midhun VP
- Authoring & Testing series by Antonio

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Blueprints:
- Automating Employee Onboarding Processes
- Automate the Business Partner Creation Process Using SAP Cloud Platform Workflow and Business Rules
- Automate the Document Review Process with SAP Cloud Platform Workflow and SAP Jam Collaboration

Sample Content:
- Shopping Cart Rules: consumption of rules in custom application
- Offer Management Rules: integration with SAP HANA
- Flight Booking Rules: integration with SAP S/4HANA
- Rules Manager App: how to embed business rules in custom app
Thank you.