

A CAP application on SAP BTP that validates business partner master data before SAP Document and Reporting Compliance.

Companion, not replacement — BPV never modifies, replaces or extends DRC or the SAP core. Deterministic-first: a rules engine decides, AI assists and never gates on its own. Multi-tenant SaaS: one codebase, an isolated SAP HANA Cloud container and a dedicated SAP AI Core resource group per subscriber. **0 Z* objects in the runtime · 0 secrets in the repository · 5 role templates · 11 scheduled jobs · UI in English and German.**

Figures from a static scan of the repository at main @ 682dbfad (27 Aug 2026) and from mta.yaml / xs-security.json.

Server files

393

srv/ — CAP services, handlers, rules, jobs

Frontend files

218

app/ — SAPUI5 + React + App Router

Validation rules

159

in 27 rule groups, deterministic

External integrations

23

registries + S/4 via released OData

AI modules

12

plus a RAG assistant, via SAP AI Core

SAP BTP services

14

bound in one EU landscape (eu10)

ARCHITECTURE & PLATFORM FOOTPRINT

Three layers, side-by-side on SAP BTP

PRESENTATION

SAPUI5 / Fiori app/bpvalidationui (Horizon, OData V4) · React SPA app/bpv-react · App Router (XSUAA) app/router

APPLICATION

CAP service, Node.js 22 srv/, OData V4 · Rules engine 159 rules · 27 groups · AI orchestration srv/ai · 12 modules

PLATFORM

SAP HANA Cloud HDI container per tenant · SAP AI Core / Generative AI Hub resource group per tenant · S/4HANA via API_BUSINESS_PARTNER released OData only

14 bound SAP BTP services

Identity & tenancy

XSUAA · SaaS Registry · Service Manager · HTML5 Application Repository

Data & AI

SAP HANA Cloud (HDI) · SAP AI Core / Generative AI Hub

Integration

Connectivity · Destination

Operations

Job Scheduler · Audit Log · Credential Store · Cloud Logging · Alert Notification · Cloud Transport Management

VALIDATION ENGINE & AI SUBSYSTEM

159 deterministic rules — pure by design

Every rule receives the business partner and context and returns a finding. **No rule opens a database connection or calls an external service** — a grep for cds.connect, HANA, RFC or HTTP across the rules returns zero live hits. 27 groups load at startup; 191 rule files resolve to ~159 registered rules.

Domains: VAT / VoP · IBAN & bank · address & geo-risk · duplicates · PEP / sanctions · supplier qualification · withholding tax · EN 16931 · exemptions & cross-mandate · DRC readiness.

23 connectors: S/4HANA (API_BUSINESS_PARTNER), VIES / BZSt, GLEIF, ANAF · ONRC · BRREG, Bundesbank, EC code lists, OpenSanctions, Geoapify, openIBAN — HTTPS, public or released APIs.

Every model call routes through SAP AI Core

12 AI modules + RAG assistant → orchestration.js (single entry point) → SAP AI Core / Generative AI Hub. No third-party agent integrates with SAP on its own; no third-party AI SDK in package.json.

✓ PII masking default-on — SAP Data Privacy Integration masks on every AI path before the prompt leaves.

✓ Model governance — an 11-model allowlist mirrors the code; an assertion gate rejects anything off-list.

✓ Bring-your-own AI Core — inference through the tenant's own AI Core; token usage metered in CAP, billed by SAP.

SECURITY · MULTITENANCY · OPERATIONS · CLEAN CORE

Security

✓ XSUAA (OAuth 2.0) behind the App Router; 5 role templates

✓ Secrets only in SAP Credential Store; audit trail in SAP Audit Log (REST v2)

✓ Security-headers & quota middleware; CodeQL + security workflows; licence check, SBOM

Multitenancy

✓ @sap/cds-mtxs — onboarding, upgrade, offboarding

✓ Isolated HDI container per tenant (Service Manager); dedicated AI Core resource group

✓ Host-pattern routing; callbacks under /-/cds/saas-provisioning

Operations

✓ 11 jobs: sanctions & PEP refresh, delta validation, daily insolvency

✓ /health → Alert Notification; structured logs → Cloud Logging

✓ MTA, semantic versioning, cTMS; runbook, SLA, backup/DR; EU residency (eu10)

Clean core

✓ Released APIs only — API_BUSINESS_PARTNER OData; zero Z* in the runtime

✓ No direct DB access, RFC_READ_TABLE, ODP or screen scraping

✓ Side-by-side on BTP; decoupled lifecycle from the S/4 release train

CERTIFICATION PATH — JULY 2026 FRAMEWORK, CATEGORY 2

1

ARC

Store readiness check

In progress

2

ICC · Category 2

SAP Business AI use case

Target Q4 2026

3

Clean core level

per SAP Note 3690029

Documentation

4

Evidence

live test in SAP's environment

Planned

⚠

Certification is not yet granted — no certification wording is used in the product or its published materials until it is.

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