

SAP DRC Architecture Comparison

How to choose between standard SAP DRC, SAP BTP extensions, SAP-native add-ons, provider integration and hybrid models.

DECISION PRINCIPLE

Use evidence from the actual country, scenario, SAP edition, release and operating model. Do not select an architecture from a generic product preference.

The architecture question

The right design is not always 'standard only' or 'custom only'. SAP Document and Reporting Compliance provides electronic document and statutory reporting capabilities, including scenarios that integrate SAP business systems with cloud services. SAP also provides formal guidance for choosing on-stack, side-by-side and hybrid extensions.

1

Start with standard capability

Confirm whether the required country, document type, process and SAP landscape are supported before designing an extension.

2

Prove the gap

Separate legal format, SAP prerequisite, master-data, process, connectivity and operating-model gaps.

3

Choose the smallest justified extension

Use released extension points, APIs and events. Keep the core stable and the reason for the extension traceable.

4

Design for operation

Include status, responses, exceptions, reconciliation, support ownership and evidence retention before go-live.

Five architecture paths

- Standard SAP DRC for a supported and operationally suitable scenario.
- SAP DRC with a side-by-side SAP BTP extension for a confirmed decoupled gap.
- SAP-native add-on for a justified on-stack requirement, especially where proximity or transactional consistency matters.
- Provider integration where an approved platform, exchange provider or network is part of the mandated operating model.
- Hybrid architecture when countries, systems or scenarios require more than one controlled path.

Executive comparison

Use this table as a workshop starting point, not as a substitute for country and landscape validation.

Path	Best fit	Main strengths	Main controls
Standard SAP DRC	SAP supports the exact edition, release, country and process scenario.	Strategic SAP capability; standard lifecycle and monitoring; reduced custom footprint.	Prerequisites, Notes, master data, configuration, testing, cloud service and license checks.
DRC + SAP BTP extension	A confirmed function can be decoupled and standard APIs or events are appropriate.	Independent lifecycle and scalability; clean-core alignment; reusable hub patterns.	API contracts, identity, data minimization, event reliability, reconciliation and operations.
SAP-native add-on	The extension needs data proximity, high-volume access or on-stack transactional behavior.	Close SAP process integration; familiar authorization and transport model.	Namespace, upgrade impact, released objects, clean-core assessment, performance and support ownership.
Provider integration	A PA, PAC, Peppol access point or local exchange provider is required or preferred.	Local network expertise; managed connectivity; faster reach for selected mandates.	Mapping ownership, SLA, status model, response lifecycle, security, portability and exit plan.
Hybrid	A multi-country or mixed ECC/S/4 landscape cannot be governed by one technical pattern.	Architecture follows evidence; supports phased transition and country-specific needs.	Canonical status model, cross-path reconciliation, ownership matrix and portfolio governance.

Decision gates

A defensible architecture decision records both the selected path and the rejected alternatives.

01 Mandate and scenario

- Country, entity and effective dates
- Outbound, inbound, reporting and lifecycle events
- Format, exchange and archive responsibilities

02 SAP fit

- ECC or S/4HANA edition and release
- Installed components and SAP Note status
- Supported eDocument or reporting scenario

03 Process and data

- Source document and posting flow
- Master-data identifiers and routing
- Corrections, cancellations and reconciliation

04 Extension characteristics

- Transactional consistency and data proximity
- API and event availability
- Independent release and scale requirements

05 Operating model

- Submission and response ownership
- Exception and support workflow
- Audit evidence and change control

DECISION OUTPUT

Architecture decision record: scope, evidence, selected path, alternatives, assumptions, dependencies, approvals and next implementation work.

Path-specific implementation scope

Architecture choice changes the implementation backlog. The following work packages should be explicit in the proposal and plan.

Architecture	Minimum implementation scope
Standard SAP DRC	Prerequisites and Notes; country configuration; master data; cloud service setup where applicable; mapping; end-to-end testing; cutover; monitoring and support.
DRC + SAP BTP	Standard DRC baseline; API/event contract; extension application; identity and authorization; deployment pipeline; observability; reconciliation; support boundaries.
SAP-native add-on	Package and namespace; released object review; authorization; transports; performance; upgrade assessment; regression testing; operational monitoring.
Provider integration	Provider contract; connectivity; mapping; certificates; status and response handling; retries; SLA; reconciliation; incident and change management.
Hybrid	Shared control model; country path matrix; canonical identifiers and statuses; cross-system evidence; rollout waves; consolidated operating governance.

Red flags

- Selecting an add-on before validating standard DRC coverage.
- Treating format generation as the full end-to-end compliance process.
- Using 'clean core' as a slogan without checking APIs, events, released objects and extension characteristics.
- Leaving authority responses, retries, reconciliation and operational ownership until after build.
- Publishing a country or product claim without a verified edition, release and scenario boundary.

Workshop decision canvas

Complete one canvas per country, entity, SAP system and material document flow.

1. Scope	Country, entity, mandate, dates, outbound/inbound/reporting scenarios
2. SAP baseline	System, client, edition, release, components, relevant Notes and objects
3. Standard fit	Supported, partial, unsupported or not yet evidenced
4. Confirmed gaps	Prerequisite, process, data, format, connectivity, security, operations
5. Extension traits	On-stack proximity, transactional consistency, API/event suitability, independent lifecycle
6. Candidate paths	Standard DRC, BTP extension, SAP-native add-on, provider, hybrid
7. Decision	Selected path, rejected alternatives and reasoning
8. Delivery	Work packages, owners, dependencies, tests, rollout wave and exit criteria
9. Operations	Monitoring, exceptions, responses, reconciliation, evidence and support
10. Approval	Architecture, SAP, finance/tax, security and process owner review

How S4FN applies the comparison

S4FN uses the architecture comparison as a delivery control, not as a generic marketing matrix.

PHASE 1

Assess

Establish country and entity scope, collect SAP evidence, classify gaps and document the architecture decision.

PHASE 2

Implement

Configure the selected DRC scenario, deliver confirmed integrations or extensions, prepare data, test and cut over.

PHASE 3

Extend

Address only evidenced gaps with a governed BTP, SAP-native, provider or hybrid extension path.

PHASE 4

Operate

Maintain status visibility, exception ownership, reconciliation evidence and change impact after go-live.

Recommended next evidence

- Country and entity scope with transaction scenarios
- SAP landscape inventory and relevant component levels
- Existing DRC, eDocument, provider and custom solution status
- Known errors, Notes, objects and configuration evidence
- Process maps for creation, submission, response, correction and reconciliation
- Security, transport, retention and support constraints

Explore S4FN DRC Sprint

See how evidence, decisions and implementation work remain connected.

Request a demo

Review the platform and implementation approach with S4FN.

Sources and boundaries

This guide is architecture decision support. It does not replace SAP product documentation, SAP licensing confirmation, country legal analysis or customer security review.

Primary SAP references

- SAP Help Portal: SAP Document and Reporting Compliance - product and scenario documentation.
- SAP Help Portal: SAP Document and Reporting Compliance, cloud edition - integration and subscription documentation.
- SAP BTP Developer's Guide: Extending Existing SAP Solutions Using SAP BTP.
- SAP Extension Architecture Guide (2025): on-stack, side-by-side and hybrid decision guidance.
- SAP Application Extension Methodology (2025): extension task and target-solution decision method.

Reference links

https://help.sap.com/docs/SAP_S4HANA_CLOUD/71af4585db6d4904b1724730f3776c9b/55a418a0093b4ae6a68b4c492b472bde.html
<https://help.sap.com/docs/cloud-edition>
<https://help.sap.com/docs/btp/btp-developers-guide/extending-existing-sap-solutions-using-sap-btp>
<https://help.sap.com/doc/1e322967d9ef4d788c4165c9aed88c78/Cloud/en-US/892cd77facc4c959ca87aa600e40eac.pdf>
<https://help.sap.com/doc/87e18fdb75fd42f8aee59e3c76de7cd7/Cloud/en-US/sap.application.extension.methodology.pdf>

S4FN positioning boundary

S4FN supports SAP customers with assessment, implementation, country rollout, targeted extension and operational evidence. S4FN does not imply that every scenario requires an extension, does not replace SAP DRC, and does not provide legal or tax advice through this guide.