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REFERENCE ARCHITECTURE

IT spend visibility and optimization across cloud, SaaS, licenses and hardware: FOCUS, ITAM, TBM — on 2026 standards

CAPABILITY	DOCUMENT	VERSION	DATE
IT Spend Optimization	SRA-SPD-001	1.3	Nov 4, 2026

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Sign-off	"The practice lead signs this document before any build proceeds under it."		

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CONVENTIONS

Source tags. [S] read Sep 24, 2026, or on the date stated in §9, from the standards body's or vendor's own page, listed in §9: FOCUS 1.4 (ratified June 4, 2026) · FinOps Framework and State of FinOps 2026 · TBM Taxonomy 5.0.1 · NIST SP 800-88 Rev. 2 · RFC 9393. [S*] from the publisher's published summary where the page could not be opened (iso.org). [A] typical-buyer assumption, replaced at the design workshop. Layout follows SRA-NET-001's nine sections, as the other practice architectures do; the capability itself is a data-integration system, a dozen feeds normalized into one model. No figure comes from any prior engagement. A row with more than one tag is counted once: as a published figure if any tag is [S] or [S*], otherwise as an assumption if any tag is [A], otherwise as a design target.

Table 1. Revision history

Date	Version	Change
Sep 27, 2026	1.0	First issue.
Oct 7, 2026	1.1	One rule removed from the §9.1 table of industry rules.
Oct 10, 2026	1.2	Approval line now reads: approved by the Founder, issued by Symbeeo. Avinash Dhinakaran remains the author.
Nov 4, 2026	1.3	Wording correction: how the comparison is described.

1 · Scope

Who it is for. An organization that buys public cloud, SaaS, software licenses, hardware and AI services, and sees each through a different system. This system joins those feeds into one cost-and-usage model, allocates spend to owners, holds an effective license position, plans refresh from end-of-support dates and reports to finance in a standard taxonomy.

Typical buyer [A]. 4,000 employees plus 600 contractors, 5,500 endpoints, 700 servers in one owned data center, two public cloud providers, about 220 SaaS applications, ten software publishers carrying most license spend, and a Windows 10 tail on Extended Security Updates.

What is in. The FinOps Framework's own scope: public cloud, SaaS, data platforms, private cloud, licenses, data center and AI [S]. State of FinOps 2026 reports 98 % of FinOps teams managing AI spend and 90 % managing SaaS [S]; a cloud-only design is out of date. **What is out.** Selecting the winning product (done in the comparison, §5); executing disposal (the client or its disposal partner).

Assumptions. Hosting in the client's tenancy; no client data at rest with the integrator [A].

Related standards, read Sep 24, 2026. FOCUS is the canonical cost schema; each provider's published conformance gaps are recorded, not silently patched [S] AWS FOCUS 1.2 conformance report. FOCUS 1.4 was ratified by the FOCUS Steering Committee on June 4, 2026 and is the current version. The FinOps Foundation's hosted FOCUS Validator checks 1.2 and 1.3 datasets; the open-source FOCUS Validator package added 1.4 in release 2.2.1 (Aug 5, 2026), both read on Sep 27, 2026 [S] (§9). ITAM processes follow ISO/IEC 19770-1:2017 with its 2024 amendment, TS 19770-10:2025 and TS 19770-13:2026 (sustainability) [S*]; software identification by SWID or CoSWID tags, RFC 9393 [S]. Finance reporting in TBM Taxonomy 5.0.1 [S]. Sanitization to NIST SP 800-88 Rev. 2 [S].

Quality goals. Completeness · reconcilability to the ledger · safety of action (nothing reclaimed on stale data) · portability (the platform can be replaced without losing history). **Stakeholders.** CIO (owner) · CFO and FP&A · procurement · product owners · IT asset manager · internal audit · software publishers, indirectly, at audit.

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2 · Requirements register

One verifiable statement per row, naming no product.

Table 2. Requirements register

#	Requirement	Value	Source
R1	Reference estate (input, not tested)	as §1	[A]
R2	Public-cloud charges ingested in the FOCUS schema at each provider's newest published version	the provider's newest published FOCUS version, and not below 1.2	[S] focus.finops.org
R3	A provider's daily charges queryable after its export lands	≤ 24 h	[A]
R4	Billed cost per billing period and invoice issuer matches the issued invoice	± 0.5 %	[A]; [S] FOCUS 1.4 Invoice Detail
R5	Monthly cloud and SaaS spend allocated to a named owner	≥ 95 %	[A]
R6	Each shared service's cost split by one written rule	100 %	[S] FOCUS 1.3 split cost allocation
R7	SaaS applications with spend or a sign-in in 90 days listed with an owner	100 %	[A]
R8	SaaS seats with no sign-in for 60 days flagged to the owner	≤ 7 days	[A]
R9	Effective license position (entitlement against consumption) per top publisher	top 10, monthly	[A]; [S*] ISO/IEC 19770-1
R10	Endpoints and servers reconciled across discovery, CMDB and fixed-asset register	≥ 98 %	[A]
R11	Hardware models and OS versions carrying a vendor end-of-support date	100 %	[A]
R12	Commitment utilization reported per provider, alarmed below threshold	monthly; 95 %	[A]; [S] FOCUS 1.4 Contract Commitment
R13	Daily cost anomaly notified to its owner	≤ 24 h	[A]; [S] Framework Anomaly Management

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#	Requirement	Value	Source
R14	IT general-ledger spend mapped to TBM cost pools; to resource towers	100 %; ≥ 90 %	[A]; [S] TBM Taxonomy 5.0.1
R15	Month-end cloud forecast error	≤ ± 10 %	[A]
R16	AI model and token charges reported as their own category with an owner	100 % of identifiable	[A]
R17	Retired storage-bearing assets with a sanitization record	100 %	[S] NIST SP 800-88 Rev. 2
R18	Client billing, license and asset data at rest outside the client's tenancy	none	[A]

Eighteen rows; one input, seventeen testable in STP-SPD-001.

3 · Architecture overview



Figure 1. IT spend visibility architecture overview

Normalize once, decide in one model. Every feed maps to FOCUS (cost) or to the ITAM record (asset, entitlement); allocation happens once and every view reads it. Order follows the Framework phases **inform → optimize → operate** [S]. The client owns the store; platforms read it (§5 D2).

Business context. Providers, publishers and manufacturers issue charges, entitlements and end-of-support dates; finance, procurement and owners consume allocations, positions and plans; auditors consume the license position. **Technical context.** In: provider FOCUS exports, accounts-payable and expense lines, identity- provider sign-ins, endpoint and server discovery, entitlement and contract records, HR headcount (for employee-metric licenses), general ledger. Out: showback or chargeback to the ERP, renewal alerts, reclamation tickets to the ITSM tool, owner dashboards. Service accounts read-only.

Runtime cycles. Daily. Export lands → validate → load → allocate → anomaly check → owner notified. **Month-end.** Billing period closes → invoice matched (R4) → chargeback file to ERP → TBM refresh. **License.** Discovery and sign-ins → consumption → against entitlements → reclaim or true-up. **Refresh.** Inventory → end-of-support dates → quarterly plan → procure → dispose.

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4 · Component design

Standards cited per block are [S].

4.1 Ingestion and validation.

Lands exports; checks schema, completeness and conformance gaps. Standard: FOCUS 1.2–1.4. Symbeeo delivers: build, operate to handover.

4.2 Cost and asset store.

History in the client tenancy. Standard: FOCUS datasets. Symbeeo delivers: deploy.

4.3 Allocation engine.

Tags, hierarchy, split rules, unallocated bucket. Standard: FOCUS 1.3. Symbeeo delivers: rules with finance.

4.4 FinOps platform.

Reports, anomaly, forecast, commitments. Standard: Framework domains 1–3. Symbeeo delivers: compare, integrate.

4.5 Software asset management.

Entitlements, consumption, license position. Standard: ISO/IEC 19770-1; CoSWID. Symbeeo delivers: compare, load.

4.6 Hardware asset management.

Lifecycle, warranty, refresh plan. Standard: ISO/IEC 19770-1. Symbeeo delivers: compare, reconcile.

4.7 SaaS discovery.

Spend and sign-in signals, seat use. Standard: Framework Licensing & SaaS. Symbeeo delivers: integrate.

4.8 TBM model.

Ledger → pools → towers → solutions. Standard: TBM 5.0.1. Symbeeo delivers: map with FP&A.

4.9 Contract and renewal register.

Terms, notice dates. Standard: FOCUS 1.4 commitment columns. Symbeeo delivers: load, alert.

4.10 Disposal record.

Sanitization and disposal certificate. Standard: NIST SP 800-88 Rev. 2. Symbeeo delivers: define; client or disposal partner executes.

4.11 Deployment.

Ingestion and store in the client's cloud account or data center as code; platforms granted scoped read-only access; environments pilot (one provider, one business unit) and production [A]. No data copied to Symbeeo systems.

4.12 Cross-cutting.

Least-privilege service accounts; every automated change logged · FOCUS 1.3 freshness and completeness flags carried to every view where the export emits them, and set by the ingestion checks (4.1) where it does not [S] · no automated reclamation, resize or commitment purchase on data past its freshness threshold · FOCUS mapping versioned per provider, since adoption differs. Read Sep 27, 2026 on each provider's own pages: AWS Data Exports on

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1.2 (GA November 19, 2025); Microsoft Cost Management export on 1.2 (schema labeled 1.2-preview); Google Cloud's dedicated FOCUS export on 1.2 in Preview (pre-GA); Oracle Cloud Infrastructure FOCUS cost reports since June 5, 2024 on a 1.0 schema; FinOps Foundation provider list: AWS, Microsoft and Google Cloud at 1.2, Oracle at 1.0, some SaaS and data platforms such as Snowflake at 1.3; no provider yet lists 1.4 [S] (§9). A provider whose newest export is below 1.2 does not meet R2 as written; whether to waive R2 for it or map its export up to 1.2 with the gaps recorded is decided at the design workshop [A].

5 · Options and platform choices

One row per decision. Every option weighed is listed, rejected ones included, with its §2 result where §2 tells the options apart (D7 and D8 are decided on the rationale given). Products appear as examples compared, not endorsed; [CMP] marks a choice made per client in the comparison, against §2.

Table 3. Options and platform choices

ID	Decision	Requirement	Alternatives considered	Decision taken	Rationale
D1	Cost schema	R2–R6	FOCUS exports landed in client storage (meets R2–R6, R18) · provider-native schemas (fails R2)	**FOCUS**, each provider's own export	one schema; providers now export it [S]
D2	System of record for cost and asset history	R18	client-owned store that platforms read · platform-held store as system of record (fails R18)	**client-owned store; platforms read it**	R18; F10 is real: a SaaS-management vendor ceased operations on August 6, 2026 and deleted all customer data in its wind-down [S]
D3	FinOps platform on the store	R3–R6, R12–R15	commercial FinOps platform (meets R3–R6, R12–R15; e.g. IBM Cloudability, CloudZero, both listed as FinOps Certified Platform on the FinOps Foundation's landscape, read Sep 27, 2026) · provider-native tools plus open tooling (meets R3–R6, R15 weaker; e.g. Microsoft FinOps toolkit, OpenCost, CNCF incubating)	[CMP] per client	either reads the D2 store, so the choice stays reversible (F10) [S]
D4	Software and hardware asset management	R9–R11	ITAM in the ITSM platform (meets R9–R11; e.g. ServiceNow IT Asset Management) · specialist ITAM suite (meets R9–R11; e.g. Flexera One IT Asset Management) · spreadsheet license model (fails R9)	[CMP] per client; spreadsheet rejected	an effective license position needs entitlement against measured consumption [S*] ISO/IEC 19770-1
D5	SaaS discovery	R7, R8	specialist SaaS-management platform (meets R7–R8; vendors in the 2026 analyst evaluation [S*]) · the ITAM product's SaaS module (meets R7–R8; SDD-SPD-001 §3.2)	[CMP] per client	both read AP lines and identity-provider sign-ins; history stays in the D2 store
D6	Finance model	R14	TBM application (meets R14; e.g. IBM Apptio) · spreadsheet TBM model (fails R14)	**TBM for finance, FOCUS for operations, joined at the Cloud Services cost pool**; application [CMP]	TBM 5.0.1 added that pool [S]; spreadsheet rejected
D7	Where tags are enforced	R5, R6	at provisioning · repaired in reports	**at provisioning**	shift-left is a State of FinOps 2026 priority [S]

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ID	Decision	Requirement	Alternatives considered	Decision taken	Rationale
D8	When automation may act	R8, R12	gated on data freshness · ungated	**gated on data freshness**	F5, F8: nothing reclaimed on stale data (§1 quality goals)

6 · Failure conditions

Table 4. Failure conditions

#	Condition	What the user sees	Recovers by itself	Needs a hand	Time
F1	Export late or incomplete	day marked incomplete	re-pull	no	≤ 24 h [A]
F2	Provider changes FOCUS version	load held; last good data	no	mapping update	≤ 5 days [A]
F3	Invoice mismatch beyond R4	period stays open	no	provider query	close +5 days [A]
F4	Untagged spend spike	unallocated bucket grows	no	owner rule	≤ 7 days [A]
F5	Sign-in feed lost	SaaS usage marked stale	reclamation pauses	restore feed	≤ 24 h [A]
F6	Discovery coverage below R10	reconciliation alarm	no	agent redeploy	≤ 7 days [A]
F7	Contract end with no decision	alerts at 90/60/30 days	no	owner decides	before notice date
F8	Seat reclaimed from an active user	access lost	no	restore seat	≤ 4 h [A]
F9	FinOps platform down	dashboards down; store intact	platform recovery	backfill	vendor SLA
F10	Platform vendor exits	no service	no	re-point replacement at store	one quarter [A]

7 · Validation

None yet. STP-SPD-001 tests every testable requirement row and every failure condition against the first build under SDD-SPD-001; results recorded there and summarized here make this a validated architecture. The quality scenarios it must show:

Table 5. Validation

Scenario	Measure
Export landing to queryable	≤ 24 h (R3) [A]
Invoice reconciliation	± 0.5 % (R4) [A]
Allocation completeness	≥ 95 % (R5) [A]

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Scenario	Measure
Wrong reclamation restored	≤ 4 h (F8) [A]

8 · Operations and lessons learned

Day 2 and known debt: FOCUS moves twice a year (1.3 December 2025, 1.4 ratified June 4, 2026, 1.5 planned for ratification on December 3, 2026 with AI model identity and token billing, per the 1.5 release-scope page's status of September 17, 2026) and providers lag it: on Sep 27, 2026 the large clouds export 1.2 or 1.0, not 1.3 or 1.4 (§4.12) [S]; the mapping is reviewed at each release. Until 1.5, R16 is met by tagging, and the Tokenomics Foundation (June 2026) is building the AI standard [S]. License metrics shift: one publisher's Java SE subscription is priced per employee, contractors included (price list of March 1, 2023, still served Sep 24, 2026) [S] — hence the HR feed. Windows 10 commercial ESU is USD 61 per device in year one and doubles yearly, three years at most [S]; the refresh plan retires the tail before renewal. Lessons: to be written by the signing engineer after the first build under this document.

9 · Appendix

Glossary. FOCUS FinOps Open Cost and Usage Specification · TBM Technology Business Management · ITAM IT asset management · CoSWID concise software identification tag · ESU Extended Security Updates.

Sources, all read Sep 24, 2026.

- FOCUS 1.4: `https://www.finops.org/insights/introducing-focus-1-4/`
- FOCUS 1.3: `https://www.linuxfoundation.org/press/finops-foundation-launches-focus-1.3-to-deepen-cloud-and-saas-billing-transparency-announces-expanded-vendor-support-for-focus-1.2`
- FinOps Framework: `https://www.finops.org/framework/` · State of FinOps 2026: `https://data.finops.org/`
- Tokenomics Foundation: `https://www.linuxfoundation.org/press/linux-foundation-launches-the-tokenomics-foundation-to-define-the-economics-and-roi-of-ai-value`
- TBM Taxonomy 5.0.1: `https://www.tbmcouncil.org/learn-tbm/resource-center/the-tbm-taxonomy-5/`
- ISO/IEC 19770-1 [S*]: `https://www.iso.org/standard/68531.html` · TS 19770-10 [S*]: `https://www.iso.org/standard/86588.html` · TS 19770-13 [S*]: `https://www.iso.org/standard/88836.html`
- RFC 9393: `https://www.rfc-editor.org/rfc/rfc9393` · NIST SP 800-88 Rev. 2: `https://csrc.nist.gov/pubs/sp/800/88/r2/final`
- AWS FOCUS 1.2: `https://aws.amazon.com/about-aws/whats-new/2025/11/aws-data-exports-focus-1-2-available` · gaps: `https://docs.aws.amazon.com/cur/latest/userguide/table-dictionary-focus-1-2-aws-conformance.html`
- Windows 10 ESU: `https://learn.microsoft.com/en-us/windows/whats-new/extended-security-updates`
- Java SE price list: `https://www.oracle.com/a/ocom/docs/corporate/pricing/java-se-subscription-pricelist-5028356.pdf`
- OpenCost: `https://www.cncf.io/projects/opencost/` · FinOps toolkit: `https://learn.microsoft.com/en-us/cloud-computing/finops/toolkit/finops-toolkit-overview`
- IBM Cloudability: `https://www.apptio.com/products/cloudability/` · IBM Apptio: `https://www.ibm.com/products/apptio` · ServiceNow ITAM: `https://www.servicenow.com/products/it-asset-management.html`

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- Vendor exit (§5 D2): https://productiv.com/ · analyst evaluation [S*]: https://www.gartner.com/reviews/market/saas-management-platforms

Sources read Sep 27, 2026 (FOCUS versions per provider, §4.12; validator, §1; platforms, §5 D3; FOCUS 1.5, §8).

- FOCUS 1.4 ratified June 4, 2026 (FinOps Foundation, "Introducing FOCUS 1.4", June 10, 2026): https://www.finops.org/insights/introducing-focus-1-4/ · FOCUS 1.5 release scope, status September 17, 2026: https://focus.finops.org/focus-1-5-release-scope/
- FOCUS Validator (hosted; offers versions 1.2 and 1.3): https://focus.finops.org/focus-validator/
- FOCUS Validator open-source releases (2.2.1 of Aug 5, 2026 carries 1.4): https://github.com/finopsfoundation/focus_validator/releases
- Provider list with version per data generator: https://focus.finops.org/ · AWS: https://focus.finops.org/docs/implementation/data-generators/aws/ · Microsoft: https://focus.finops.org/docs/implementation/data-generators/microsoft/ · Google Cloud: https://focus.finops.org/docs/implementation/data-generators/google-cloud/ · Oracle: https://focus.finops.org/docs/implementation/data-generators/oracle/ (its header reads v1.2 while its text and the provider list read 1.0; Oracle's own schema is used, below)
- AWS, FOCUS 1.2 with AWS columns: https://docs.aws.amazon.com/cur/latest/userguide/table-dictionary-focus-1-2-aws.html
- Microsoft, FOCUS cost and usage details file schema (newest version listed: 1.2-preview), updated Oct 9, 2025: https://learn.microsoft.com/en-us/azure/cost-management-billing/dataset-schema/cost-usage-details-focus
- Google Cloud, Structure of FOCUS data export (Preview; conformance gaps listed against v1.0–v1.2), last updated Sep 24, 2026: https://docs.cloud.google.com/billing/docs/how-to/export-data-bigquery-tables/focus-export
- Oracle Cloud Infrastructure, FOCUS cost reports release note, June 5, 2024: https://docs.oracle.com/en-us/iaas/releasenotes/changes/9a6720c1-f449-4239-abd3-4a03b69b0273/index.htm · FOCUS cost report schema (1.0 columns such as ProviderName and PublisherName): https://docs.oracle.com/en-us/iaas/Content/Billing/Concepts/costusagereportsoverview.htm
- FinOps Certified Platform holders, FinOps Foundation landscape (IBM Cloudability and CloudZero listed as FinOps Certified Platform; Flexera One listed with no certification): https://www.finops.org/landscape/ · member pages showing the Certified Platform badge: https://www.finops.org/members/ibm-cloudability/ · https://www.finops.org/members/cloudzero/ · certification criteria: https://www.finops.org/certification-for-organizations/finops-certified-platform/

9.1 · Industry rules this architecture helps a buyer meet.

From Symbeeo's industry research of September 2026. Only rules that research links to this document's requirements are listed; rules it found this document does not address are left out.

Table 6. Industry rules this architecture helps a buyer meet

Rule	Jurisdiction	What it asks of infrastructure	Requirements here	Coverage
PCI DSS v4.0.1, Requirement 9.4.7 [S*]	US / global card industry	electronic media with cardholder data destroyed so the data cannot be recovered	R17	partial (the sanitization record; destruction itself is done under SRA-INT-001 R25 / SRA-IMP-001 R15)

Naming a rule here is not a claim of compliance or certification: the buyer's assessor decides compliance, and Symbeeo holds no certification or authorization.

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Sources for §9.1, read Sep 25, 2026: PCI DSS v4.0.1 [S] `https://www.pcisecuritystandards.org/document_library/` (version); requirement number [S*] from secondary summaries, the standard sits behind a license click-through.

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Figures are as published by their sources on the dates given in this document; figures marked [A] are assumptions.

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