

LUXURY BEAUTY

Sales & Distribution Data Control Tower

A complete, synthetic and auditable operating model for sell-out reliability, distribution master data, commercial planning and executive analytics

12	240	€112.50m	45,708
MARKETS	POINTS OF SALE	SELL-OUT ANALYSED	CURATED ROWS
97.81%	97.68%	9.21%	100.00%
LATEST COVERAGE	LATEST ON-TIME	FORECAST WAPE	CURATED CRITICAL DQ

Technical report | Version 1.0 | 2 July 2026

Synthetic data only. Independent methodological work. No affiliation with or access to any company system.

Report map

HOW TO READ Sections 1-4 establish the business and data-governance design. Sections 5-12 document each system and calculation. Sections 13-16 present results, tests, limitations and the evidence package.

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1. Executive summary

The control tower resolves a specific operating problem: commercial reporting becomes unreliable when point-of-sale identity, market submissions, planning assumptions and consumption cubes evolve independently. The project therefore treats data reliability as an end-to-end operating process rather than a dashboard-cleaning exercise.

The implemented chain begins with governed POS and product references, ingests multi-source sell-out and stock, applies approved corrections and eight explicit quality rules, preserves SCD Type 2 history, reconciles source and consumption totals, forecasts sell-out on a time-based holdout and consolidates a one-to-three-year network and sales plan.

Outcome	Measured result	Management meaning
Sell-out scope	€112.50m across 18 months	Sufficient scale to test multi-market aggregation and seasonality
Retailer coverage	80.34% to 97.81%	Reporting denominator is explicit and progressively onboarded
Timeliness	97.68% in the latest month	Latest market feeds clear the 95% M+3 target
Critical quality	98.11% first pass; 100% after approved remediation	Errors are corrected with evidence, not silently overwritten
Consumption reconciliation	0.1761% pre-replay; -0.0000% post-replay	Late-batch root cause is detected, owned and closed
Forecast accuracy	9.21% WAPE; +2.34% bias	The holdout clears the <10% and ±3% governance thresholds

Outcome	Measured result	Management meaning
Support	93.89% SLA met; 9.43h median resolution	The data product includes a measurable service model

DECISION The release gate is PASS: critical curated quality, SCD2 integrity, network roll-forward, forecast thresholds, coverage, timeliness and post-replay reconciliation all pass in both automated tests and the Excel control sheet.

Coverage and timeliness strengthened across the 18-month period

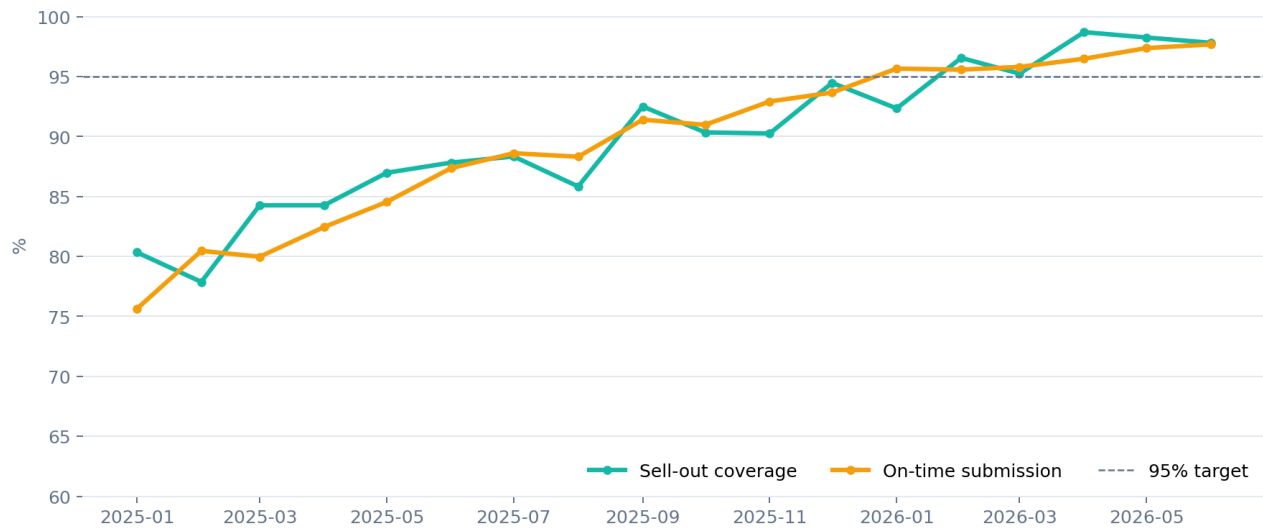


Figure 1. Coverage and submission timeliness improve while the eligibility denominator remains governed.

2. Scope, boundaries and design principles

2.1 Scope

- 12 synthetic markets, 240 point-of-sale records, 262 SCD2 versions, 48 synthetic SKUs and 18 monthly actual periods.
- Source analogues for SAP, Data Entry v2, retailer SFTP/API feeds, SimpliField audits, Anaplan plans and Newviz consumption snapshots.
- Executable Python parity pipeline, BigQuery SQL, Dataform models/assertions, a formula-driven Excel workbook, Power Query and DAX implementation assets.
- Thirty UAT cases, twelve automated pipeline tests, source-to-target lineage, RACI, operating procedures and evidence manifests.

2.2 Claim boundaries

SYNTHETIC BY DESIGN All entities, identifiers, financial values, tickets and store observations are generated deterministically with seed 20260712. No production, personal, confidential or scraped commercial data is used.

SAP, Anaplan, Newviz, Data Entry v2 and SimpliField are proprietary or controlled environments. This repository does not claim authenticated execution inside those environments. It supplies realistic implementation packs—field mappings, import blueprints, schemas, formulas, contracts, SQL and acceptance tests—while Python executes the same business logic offline for reproducibility.

2.3 Design principles

Principle	Implementation
Source of truth	SAP governs POS identity; Anaplan governs approved plan versions; GCP governs conformed analytical facts.
Raw is immutable	Original source events remain unchanged; corrections live in a separately approved log.
No silent repair	Every changed field retains record id, old value, new value, control, role and ticket.
Missing is not zero	Absent feeds reduce coverage; they are not converted into zero sales.
Effective dating	POS attributes are versioned with valid-from, valid-to and one current record.
Publish by evidence	Critical controls, reconciliation and plan checks must pass before downstream refresh.
Reproducibility	Seed, code, inputs, outputs, formula model, tests and hashes are delivered together.

3. Operating context and management questions

The business context is a Paris-based international luxury beauty Maison operating direct boutiques, department-store counters, selective retail and e-commerce. This creates four recurrent tensions: different market reporting cadences, retailer-specific sell-out coverage, rapidly changing distribution attributes and the need to reconcile actuals with a forward network plan.

Management question	Metric / output	Decision supported
Can the latest sell-out be trusted?	Coverage, timeliness, critical DQ and reconciliation	Publish, replay or investigate
Where is performance concentrated?	Market, channel, category, POS and retailer roll-ups	Prioritise commercial review
Is distribution growing productively?	Openings, closures, active POS, sales per POS and stock cover	Approve or challenge network assumptions
How reliable is the plan?	Statistical baseline, overrides, WAPE, bias and scenarios	Lock budget / strategic plan

Management question	Metric / output	Decision supported
Where is operating support needed?	Tickets, root causes, priority SLA and median resolution	Allocate Data Owner and platform capacity

4. Architecture, ownership and lineage

Source-of-truth and publish-gate architecture

Raw evidence is preserved; curated data must pass critical controls before any consumption layer is refreshed.

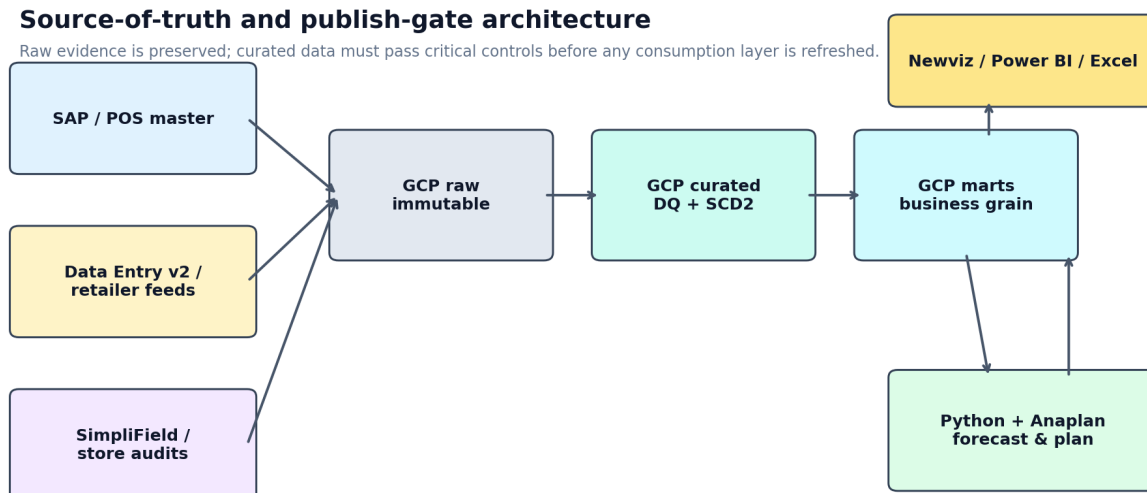


Figure 2. Source-of-truth architecture and gated path from operational sources to planning and executive consumption.

4.1 Layering

1. Raw: immutable copies of SAP reference extracts, Data Entry/retailer submissions, stock, SimpliField audits, Anaplan references and Newviz snapshots.
2. Curated: approved corrections, deduplication, referential checks, arithmetic reconstruction, FX conversion, SCD2 conformance and quarantine.
3. Mart: stable market-month and market-category-month grains, reconciliation outputs, forecast accuracy and executive KPI assets.
4. Consumption: Excel, Power BI, Newviz and the one-page website consume marts and local JSON; none can rewrite master data.

4.2 Ownership

Role	Accountability
Central Data Owner	Data contract, POS activation, DQ rules, cross-system reconciliation, publish gate and incident ownership
Market Data Steward	Local inputs, source correction, openings/closures and commercial override explanation
Master Data Specialist	SAP Business Partner / customer creation and change evidence
Planning Model Owner	Forecast interface, Anaplan modules, formulas, imports and version integrity
Central Finance	Challenge and approval of budget and strategic plan assumptions
Platform / Beauty Tech analogue	GCP pipelines, Dataform execution, consumption refresh and production support
Business Analyst	Metric definitions, management analysis and Power BI presentation

5. Synthetic data design

5.1 Deterministic population

Dataset	Rows	Grain / role
Market reference	12	Market / governed currency and region
POS current	240	Point of sale / current SAP-shaped attributes
POS SCD2	262	POS version / effective history
Product master	48	SKU / category, RRP and standard cost
Raw sell-out	45,891	POS-SKU-month / source events with controlled defects
Curated sell-out	45,708	POS-SKU-month / validated source of truth
Stock	45,708	POS-SKU-month / inventory roll-forward
SimpliField audits	2,326	POS-audit date / execution observation
Support tickets	180	Incident / priority, SLA and root cause

Demand combines category propensity, channel productivity, market index, deterministic seasonality, a 0.65% monthly trend and bounded random noise. Prices begin with a synthetic EUR retail price and convert to local currency through governed budget rates. Returns and discounts are explicit, so net sales remain auditable.

5.2 Controlled defects

Defect	Injection	Resolution
Missing currency	0.6% of source rows	Approved correction from market steward
Invalid POS	0.3%	Ticketed mapping correction
Negative net sales	0.2%	Reconstructed from gross, discount and returns
Duplicate record id	0.4% replay sample	Idempotent canonical record
Late Newviz batch	Latest-month subset	Detect delta, replay batch and rerun reconciliation
SAP-Anaplan drift	10 controlled attribute changes	System-of-record comparison and remediation queue

6. Distribution master and SAP implementation

6.1 Canonical POS identity

The POS master combines stable natural keys (POS id, SAP customer, Anaplan code and GCP location key), location attributes, sales area, channel, retailer hierarchy, effective dates, currency, store capacity and source timestamps. The project also produces a format-valid synthetic 13-digit GLN-shaped identifier with a check digit. It is not a registered GS1 identifier.

Control	Rule	Evidence
Uniqueness	POS id and GCP key occur once in the current master	Excel POS gates and automated tests
Completeness	Required identity, sales area and operational attributes are populated	POS formula checks
Validity	Market, channel, currency and identifier formats use controlled references	SAP-to-canonical mapping
Consistency	Status agrees with opening/closing effective dates	Active-as-of formula
History	Exactly one current version and no date overlap	240 SCD2 control rows, all PASS
Cross-system	SAP attributes match Anaplan before activation	97.08% initial match; 10 items queued

6.2 Creation and change workflow

1. Market submits legal/customer identity, sales area, retailer hierarchy, address, opening date and reporting source.
2. Data Owner checks duplicates, effective date, channel/currency references and downstream readiness.
3. Master Data Specialist creates or changes the SAP Business Partner / customer and retains request id.
4. GCP SCD2 merge closes the prior version and inserts the new current record without rewriting facts.
5. Anaplan and Data Entry v2 import only the governed stable POS code; Newviz refresh waits for publish-gate approval.
6. The four-system reconciliation either activates the POS or creates an owned remediation ticket.

RESULT All 240 POS pass the Excel activation gate; all 240 SCD2 controls show one current version and no overlap.

7. Sell-out ingestion and Data Entry v2

7.1 Contract and arithmetic

CORE FORMULA Net sell-out EUR = (gross local sales - discount local - returns local) / governed local-per-EUR rate.

The JSON Schema defines record id, month, POS, SKU, currency, gross/discount/return/net amounts, sold/returned units and submission metadata. The controlled error catalogue links every invalid state to a user message, system action and accountable role.

7.2 Processing sequence

1. Land raw payload and source metadata without modification.
2. Deduplicate on record id, prioritising the canonical row and preserving replay evidence.
3. Apply only corrections present in the approved steward correction log.
4. Recompute net local and EUR amounts from governed components and FX.
5. Evaluate critical, major and minor quality rules; quarantine any residual critical failure.
6. Enrich with POS, product, market, channel and cost attributes.
7. Publish marts only after rule, SCD2 and reconciliation gates pass.

7.3 Coverage

Coverage is not a row-count ratio. For every month and market, the denominator is the effective-dated population of eligible active POS and the numerator is the distinct POS with at least one valid sell-out record. This prevents a high-volume retailer from masking an absent market feed.

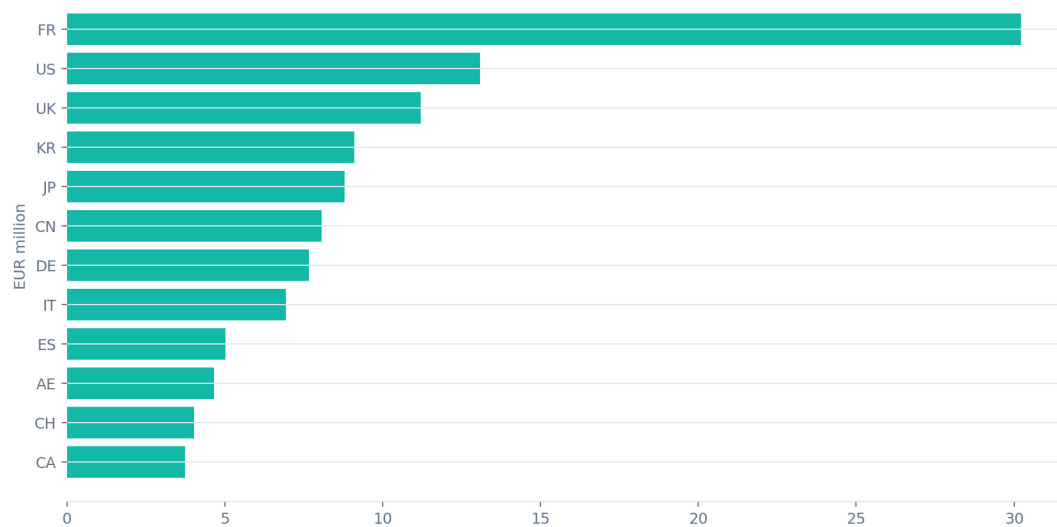
Sell-out by market across the actual period

Figure 3. Actual-period sell-out by market; the French market is the largest synthetic contributor.

8. Data-quality framework

The rules cover uniqueness, completeness, referential integrity, financial validity, arithmetic consistency, FX consistency and timeliness. Critical rules block curated publication. Major rules may be deterministically repaired with an audit record. Minor timeliness failures remain valid commercial facts but affect the service KPI.

Rule	Severity	Definition	Raw fails	Raw pass	Curated pass
DQ_SO_001	Critical	record_id is unique after duplicate handling	366	99.20%	100.00%
DQ_SO_002	Critical	pos_id, sku_id, sales_month and currency are populated	274	99.40%	100.00%
DQ_SO_003	Critical	pos_id exists in the governed distribution master	137	99.70%	100.00%
DQ_SO_004	Critical	sku_id exists in the governed product master	0	100.00%	100.00%
DQ_SO_005	Critical	net sales are non-negative	91	99.80%	100.00%
DQ_SO_006	Major	gross - discount - returns equals net sales	91	99.80%	100.00%
DQ_SO_007	Major	EUR conversion agrees with the governed FX rate	91	99.80%	100.00%
DQ_SO_008	Minor	submission occurs no later than M+3 days	4,556	90.07%	90.08%

Critical data-quality rules reach 100% after controlled remediation

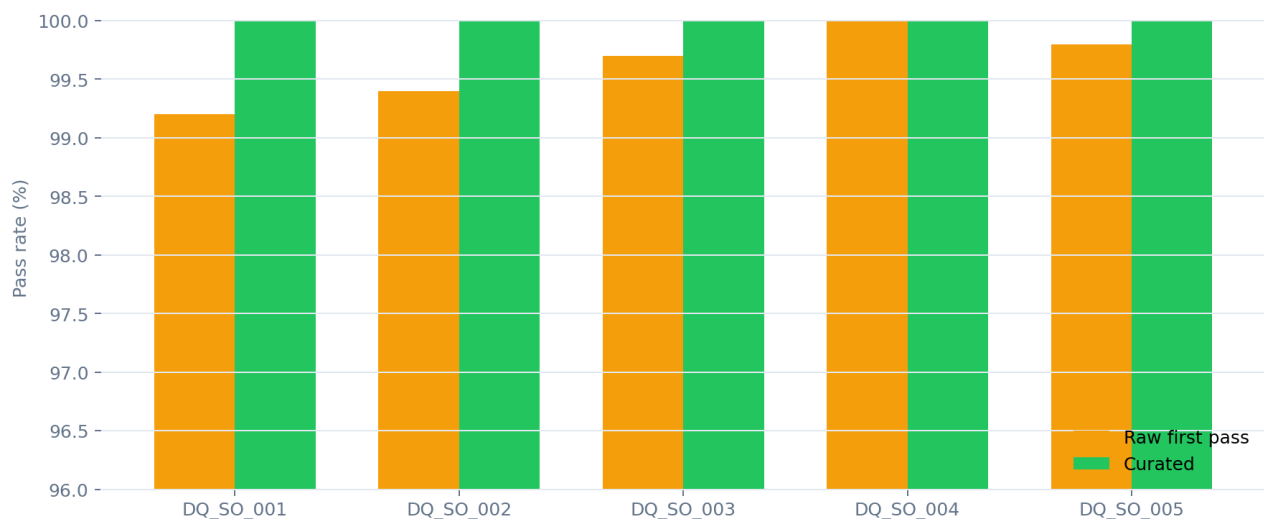


Figure 4. Rule-level critical pass rates reach 100% after deduplication and approved corrections.

INTERPRETATION The 98.11% record-level first-pass rate requires each row to pass every critical rule simultaneously. The Excel workbook also exposes a 99.62% weighted rule-level pass rate; these two metrics answer different questions and are labelled separately.

9. GCP, BigQuery and Dataform

9.1 BigQuery design

Object	Design	Reason
Raw sell-out	Partition by sales month; cluster by POS and SKU	Limit scan cost and support targeted replay
Curated fact	Incremental three-month window; unique record key	Late-data handling with idempotency
POS dimension	SCD Type 2 with surrogate key	Historical channel/retailer accuracy
Market monthly mart	Market-month grain	Stable management and planning interface

Object	Design	Reason
Reconciliation mart	POS-month full outer comparison	Detect missing keys and value deltas
Assertion dataset	Views containing violating rows	Actionable evidence for failed controls

9.2 Dataform

The Dataform package encodes dependencies, incremental configuration, partitioning, clustering, unique keys, non-null rules, row conditions and a recent-feed assertion. A failed assertion produces the violating rows and prevents a green release status. The offline Python pipeline mirrors this logic to provide executable evidence without cloud credentials.

9.3 Security and cloud controls

- Least-privilege service accounts separate load, transformation and consumption.
- No personal data is generated; location attributes are synthetic and not usable as real store coordinates.
- Dataset location is EU and raw/curated/mart responsibilities are separated.
- Lineage, data-quality measurements, access purpose and retention assumptions are documented in the project evidence.

10. Reconciliation, Newviz and SimpliField

10.1 GCP-Newviz reconciliation

A full outer join at POS-month grain compares net sales and units between the curated GCP source and the Newviz-shaped consumption snapshot. The publication threshold is an absolute monthly delta of 0.10%. The latest synthetic snapshot omits part of a late batch, creating a 0.1761% variance and seven affected POS records. The replay file restores the affected values and reduces the residual to floating-point immateriality (~0.0000%).

Stage	Latest delta	Status	Action
Before replay	0.1761%	INVESTIGATE	Identify affected POS and late batch
After replay	~0.0000%	PASS	Publish refreshed consumption layer

10.2 SimpliField retail execution

The audit form captures tester availability, planogram compliance, training completion, stockout observations and action-required status against the governed POS key. The 2,326 generated observations can be joined to sell-out and stock without creating a competing store master.

CONTROL An unknown POS is rejected; percentage values must lie between 0 and 1; an action is required when any governed threshold is missed.

11. Forecast and Anaplan planning

11.1 Forecast methodology

1. Aggregate curated facts to market-category-month and calculate active/reporting POS.
2. Engineer calendar seasonality, time index, active POS, lag-1, trailing three-month mean and lag-12 features.
3. Train a Gradient Boosting regressor through February 2026 and hold out March-June 2026.

4. Calculate row-level error, absolute error and APE; aggregate WAPE and bias with actual sales as denominator.
5. For long-range recursion, blend 35% model signal with a 65% prior-year seasonal anchor grown by 5.5%. This avoids uncontrolled tree-model extrapolation.
6. Keep the statistical baseline separate from network uplift and managerial overrides.

Level	WAPE	Bias	MAE EUR / market-category-month
TOTAL	9.21%	2.34%	€16,784
Fragrance	7.89%	2.38%	€22,713
Makeup	9.63%	3.02%	€9,963
Skincare	11.36%	1.80%	€17,677

11.2 Anaplan logic

APPROVED PLAN FORMULA Approved plan = statistical baseline + network uplift + baseline × (market override + category-mix override + central challenge).

The blueprint follows an Input / Driver / Output structure aligned with Anaplan's public module guidance and a DISCO-style separation of System, Data, Driver, Calculation and Output modules. Market users edit only controlled openings, closures and overrides; Central Finance approves and locks the version.

Year	Approved plan	Horizon
2026	€50.19m	Current forecast
2027	€101.05m	Budget 1Y
2028	€113.34m	Strategic plan 3Y
2029	€128.89m	Strategic plan 3Y

The network plan contains 30 openings and 15 closures through 2029. Downside, Base and Upside scenarios apply factors of 0.94, 1.00 and 1.06 to the approved plan in both Excel and the website assets.

Actual sell-out and approved planning trajectory

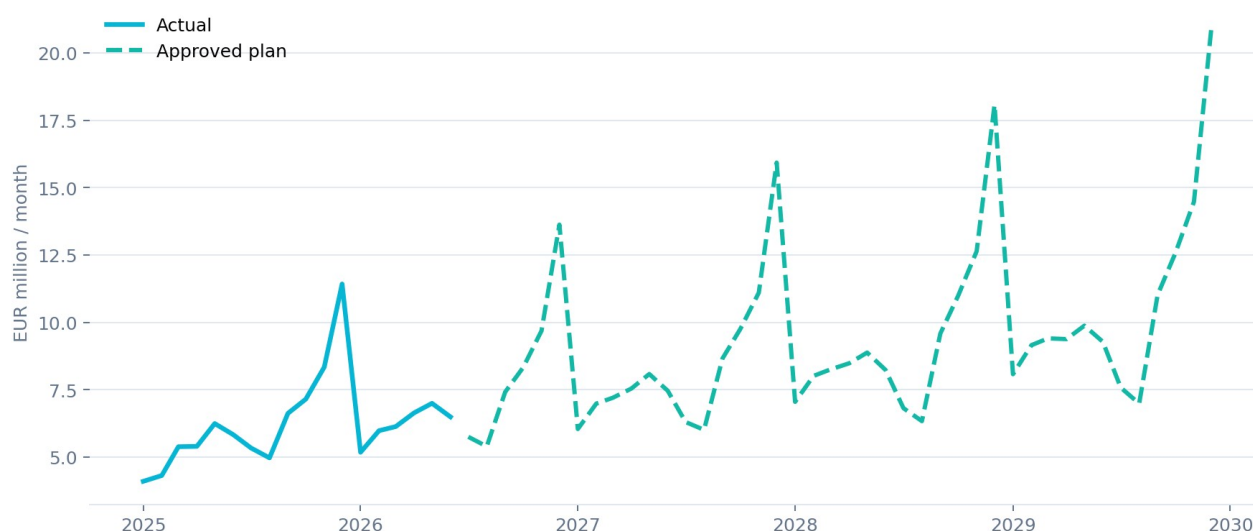


Figure 5. Actual sell-out and the approved monthly planning trajectory.

Approved and strategic distribution movements

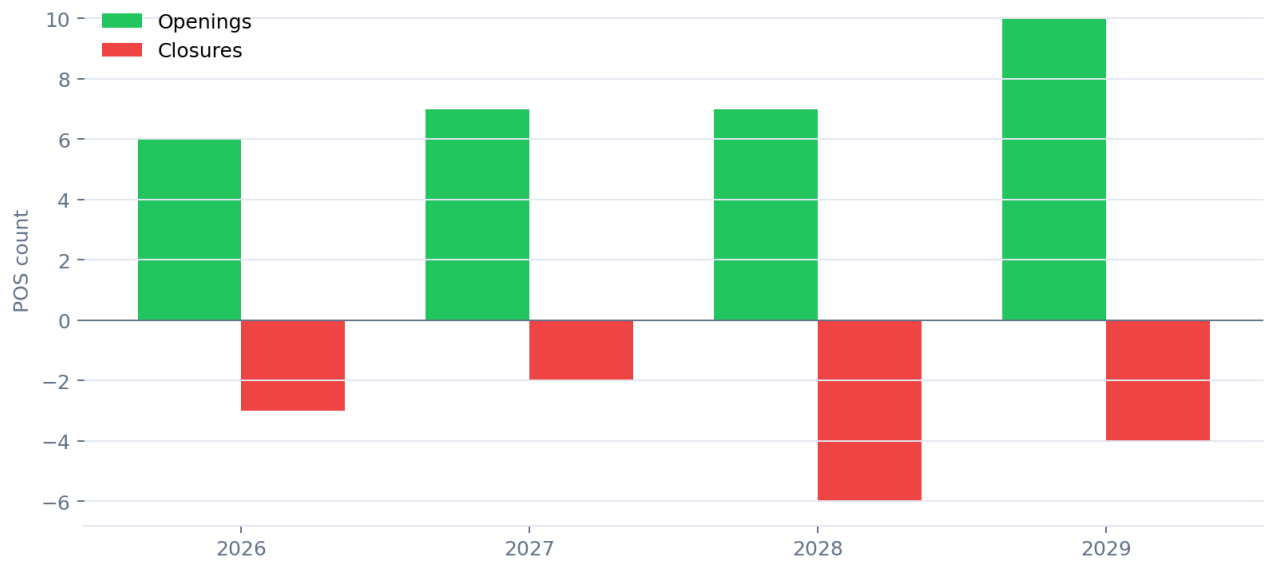


Figure 6. Planned openings and closures by year.

12. Excel and Power BI analytics

12.1 Excel model

Feature	Implementation
Workbook structure	18 tabs from controlled inputs to formula layer, dashboard and release checks
Formula population	14,964 live formula cells
Advanced patterns	SUMIFS, COUNTIF/COUNTBLANK, effective-date logic, EOMONTH/EDATE, scenario formulas, error controls and cross-sheet gates
Python boundary	Only the statistical baseline and backtest predictions are imported; comments identify those cells
Visual layer	Eight KPI cards and four native charts in the dark executive dashboard
Release control	MODEL STATUS: PASS; zero failed checks and no cached formula-error tokens

Input cells are pale yellow, formula cells pale green and executive outputs navy. The scenario selector and plan year use data validation. Conditional formatting highlights PASS, FAIL, CHECK and INVESTIGATE states. All dashboard cards point to the dedicated KPI calculation layer rather than duplicating formulas.

12.2 Power BI

The Power BI implementation pack contains a BigQuery Power Query model, a required-column contract, a dark JSON theme, a five-page report specification and more than forty DAX measures covering sales, margin, time intelligence, plan variance, network, stock, execution, DQ, reconciliation, support and forecast accuracy.

Model rule	Implementation
Star schema	Dimensions filter facts through single-direction one-to-many relationships
Consistent grain	Sell-out, stock, plan, DQ and tickets remain separate fact tables
Explicit measures	No reliance on accidental implicit sums
Safe division	Ratios use DIVIDE to avoid denominator errors
Readable DAX	Complex measures use variables and separate business concepts
Power Query	Column selection, type enforcement and schema-contract failure before model refresh

13. Results and management interpretation

13.1 Commercial results

The actual-period sell-out is €112.50m. The latest month contributes €6.49m, the synthetic gross-margin rate is 75.06%, and weighted stock cover is 1.29 months.

Market	Latest sell-out	Coverage	On-time	Stock cover
FR	€1.71m	100.0%	98.1%	1.31
US	€0.73m	96.2%	97.7%	1.28
UK	€0.67m	100.0%	97.6%	1.26
KR	€0.54m	94.1%	100.0%	1.30
JP	€0.47m	100.0%	96.8%	1.29
CN	€0.46m	93.8%	95.6%	1.29
DE	€0.45m	94.4%	98.5%	1.30
IT	€0.39m	93.3%	96.4%	1.32
ES	€0.34m	100.0%	97.0%	1.31

Market	Latest sell-out	Coverage	On-time	Stock cover
AE	€0.27m	100.0%	99.0%	1.29
CA	€0.24m	100.0%	97.5%	1.28
CH	€0.23m	100.0%	96.9%	1.24

13.2 Data and operating results

- Coverage grows by 17.47 percentage points while the effective-dated denominator remains explicit.
- Latest timeliness reaches 97.68%, above the 95% control target.
- The raw first-pass critical rate is 98.11%; 502 approved correction records and deduplication close residual critical defects.
- SAP-Anaplan current-master match begins at 97.08%, surfacing ten actionable attribute drifts rather than hiding them.
- The Newviz-shaped late batch is detected by the 0.10% threshold and closed by a reproducible replay file.
- Forecast WAPE and bias remain within threshold, supporting use as a baseline—not as an unchallenged budget.

MANAGEMENT ATTENTION Coverage and timeliness are healthy at aggregate level, but the market-level table should still drive intervention. A global PASS never eliminates local exception ownership.

14. Operating model, support and project governance

14.1 Daily / monthly cadence

Cadence	Activity	Evidence / decision
Daily	Monitor arrival, critical DQ, quarantine and consumer freshness	Load status, failures, ticket or publish
Weekly	Review unresolved POS mappings and retailer coverage	Steward action list and due date
Monthly	Close actuals, reconcile Newviz, update forecast and executive pack	Signed reconciliation and locked actual
Budget cycle	Import baseline, collect network/market inputs, challenge and approve	Locked Anaplan version and export hash
Quarterly	Review rule thresholds, lineage, access and recurring root causes	Control change log and backlog

14.2 Incident management

The dataset includes 180 closed synthetic incidents. 93.89% meet priority SLA and median resolution is 9.43 hours. Categories cover late feeds, POS mismatch, Data Entry validation, access, Newviz reconciliation and Anaplan imports.

- P1: acknowledge and restore within 4 hours; executive and platform escalation.
- P2: restore within 8 hours; Data Owner owns business impact and work-around.
- P3/P4: resolve within 24/48 hours and feed recurring root cause into backlog.
- Every incident retains opened time, market, category, priority, SLA, actual duration, root cause and status.

14.3 Project governance

The package includes a RACI, capability coverage matrix, source-to-target lineage, 30 UAT cases, metric dictionary, workflow procedures and a deterministic build/test sequence. This makes the project transferable:

another analyst can reproduce figures, challenge assumptions and identify exactly which file implements each capability.

15. Testing and release evidence

Test family	Result	Evidence
Automated Python tests	12 / 12 PASS	tests/test_pipeline.py
User acceptance tests	30 / 30 PASS	governance/uat_test_cases.csv
SCD2 controls	240 / 240 PASS	data/marts/pos_scd2_control_results.csv
Excel release checks	9 / 9 PASS	16_Checks and rendered preview
Formula error scan	No #REF!, #DIV/0!, #VALUE!, #NAME?, #N/A, #NUM! or #NULL!	XLSX XML scan
Report render	Visual QA after DOCX-to-PNG render	report/rendered
Reproducibility	Deterministic seed and SHA-256 manifest	data/raw/manifest.json; qa/checksums.sha256

RELEASE STATUS PASS. The final package is internally consistent across Python outputs, JSON dashboard assets, the Excel model and the report figures.

16. Limitations and roadmap

Limitation	Why it matters	Production next step
Synthetic data	Cannot establish real commercial performance	Replace extracts under governed access and rerun the same controls
No authenticated proprietary environments	SAP/Anaplan/Newviz/Data Entry/SimpliField execution is not proven here	Import the implementation packs into a sandbox and retain run logs
Monthly sell-out grain	Daily intramonth volatility is simplified	Add daily partitioning, holiday calendar and late-arriving fact policy
Budget FX rates	No actual FX revaluation	Separate actual, budget and constant-currency rates
Forecast sample length	18 months limits structural-regime learning	Add longer history, promotions, launches and external calendars
No causal attribution	Execution correlations do not prove impact	Design matched tests or causal model where decisions require it
PBIX binary not generated	Power BI Desktop is proprietary and unavailable in this environment	Open the supplied M/DAX/theme/report pack in Desktop and publish from PBIP/PBIX

Recommended sequence: first deploy the POS reference and reconciliation controls; then onboard market feeds and Data Entry; next stabilise monthly actual close; finally connect Anaplan planning and the executive semantic model. This order prevents attractive reporting from outrunning source reliability.

Appendix A. Metric dictionary

Metric	Definition	Formula	Target / threshold
Sell-out EUR	Net consumer sales converted to EUR	$(\text{Gross local} - \text{Discount local} - \text{Returns local}) / \text{governed FX}$	Reconcile to source
Sell-out coverage	Share of eligible active POS with at least one valid sell-out record	$\text{Reporting POS} / \text{Active eligible POS}$	At least 95 percent
On-time submission	Share of records submitted no later than the M+3 day cut-off	$\text{On-time records} / \text{Valid records}$	At least 95 percent
Critical DQ pass rate	Share of records passing all critical quality rules	$\text{Records passing critical rules} / \text{Records tested}$	100 percent curated
GCP-Newviz delta	Relative sales difference between conformed source and consumption cube	$(\text{GCP EUR} - \text{Newviz EUR}) / \text{GCP EUR}$	Absolute delta at most 0.10 percent
POS master match rate	Share of POS records whose governed attributes match between SAP and Anaplan	$\text{Matched POS} / \text{Compared POS}$	100 percent before publish
Gross margin rate	Synthetic gross margin after standard product cost	$\text{Gross margin EUR} / \text{Sell-out EUR}$	Diagnostic only
Stock cover months	Closing stock units relative to monthly sold units	$\text{Closing units} / \text{Units sold}$	Category dependent
Forecast WAPE	Absolute forecast error weighted by actual sales	$\text{Sum absolute forecast error} / \text{Sum actual}$	Under 10 percent
Forecast bias	Signed forecast error relative to actual sales	$\text{Sum forecast minus actual} / \text{Sum actual}$	Between -3 and +3 percent
Support SLA met	Share of incidents resolved within priority SLA	$\text{SLA-met tickets} / \text{Closed tickets}$	At least 90 percent
Net openings	Planned change in active distribution network	$\text{Planned openings} - \text{planned closures}$	Approved plan

Appendix B. Capability-to-evidence matrix

ID	Capability	Primary evidence	Validation
CAP-01	Daily sell-out and retail data collection	data_entry_v2/sellout_payload.schema.json; data/raw/data_entry_v2; gcp/dataform/definitions/stg_sellout.sqlx	DQ and freshness tests
CAP-02	Market support for Data Entry	data_entry_v2/validation_error_catalog.csv; data/marts/correction_audit_trail.csv; data/raw/reference/support_tickets.csv	UAT and SLA metrics
CAP-03	Expansion of retailer sell-out coverage	data/marts/mart_market_monthly_performance.csv; results/dashboard_data.json	Coverage trend reconciles reported POS to eligible POS
CAP-04	One-year and three-year sales consolidation	data/raw/anaplan/anaplan_sales_plan.csv; anaplan/module_blueprint.csv; excel/Luxury_Beauty_Data_Control_Tower.xlsx	Forecast backtest and plan roll-up checks
CAP-05	Point-of-sale creation across ERP planning and cloud	sap/pos_creation_change_sop.md; gcp/sql/02_merge_pos_scd2.sql; anaplan/import_actions.csv	Four-system reconciliation and SCD2 tests
CAP-06	Open close and attribute maintenance	data/raw/sap/sap_pos_master_scd2_history.csv; data/marts/pos_scd2_control_results.csv	Exactly one current version and no overlap
CAP-07	Distribution actual and forecast consolidation	data/raw/anaplan/anaplan_distribution_plan.csv; excel/Luxury_Beauty_Data_Control_Tower.xlsx	Beginning plus openings less closures equals ending
CAP-08	GCP migration and transformation	gcp/sql; gcp/dataform; data/curated; data/marts	Offline Python parity and SQL assertions
CAP-09	Data Entry v2 deployment	data_entry_v2; governance/uat_test_cases.csv	Positive negative and replay tests
CAP-10	SimpliField retail execution	simplifield/audit_form_definition.json; data/raw/simplifield/simplifield_store_audits.csv	Threshold and orphan-key checks
CAP-11	Top-management performance	powerbi/report_specification.md;	Figures reconcile to source

ID	Capability	Primary evidence	Validation
	reporting	results/dashboard_data.json; report/Luxury_Beauty_Data_Control_Tower_Report.pdf	maris
CAP-12	Advanced Excel	excel/Luxury_Beauty_Data_Control_Tower.xlsx	Formula scan no errors and rendered QA
CAP-13	Power BI DAX	powerbi/dax/measures.dax	DAX peer-review checklist
CAP-14	Power Query	powerbi/power_query	Required-column contract and documented types
CAP-15	SQL and BigQuery	gcp/sql; gcp/dataform	SQL lint and Python result parity
CAP-16	SAP master-data understanding	sap/sap_to_canonical_field_mapping.csv; sap/pos_creation_change_sop.md	Completeness uniqueness validity and effective-date controls
CAP-17	Anaplan model design	anaplan	Blueprint formula and import-key review
CAP-18	Information-systems architecture	docs/architecture.md; governance/raci.csv; governance/data_lineage.csv	Traceability from source to consumer
CAP-19	Project governance	governance	All critical tests pass before release
CAP-20	Data preparation and analysis	src; notebooks; tests	Automated test suite and SHA-256 manifest

Appendix C. Public methodological sources

1. [ISO 8000-110:2021 - Master data](#)
2. [GS1 - Global Location Number](#)
3. [SAP - Manage Customer Master Data](#)
4. [Anaplan - Modules and Input/Driver/Output organisation](#)
5. [Google Cloud - Dataform assertions](#)
6. [Google Cloud - Medallion data architecture](#)
7. [Google Cloud - Auto data quality](#)
8. [Microsoft - Star schema guidance for Power BI](#)
9. [Microsoft - Power Query transformations](#)
10. [Microsoft - DAX overview](#)
11. [EDM Council - CDMC 14 Key Controls](#)
12. [SimpliField / YOOBIC - Retail operations platform](#)

SOURCE USE These public references inform the methodology. They do not imply certification, compliance, endorsement or access to proprietary environments.

END OF REPORT