

Cluster cockpit: new dashboards, the data behind them, and how we built it

Binzagr proof of value · 30 operating tasks · data to 20 Oct 2026, forecast to 30 Nov 2026

In one minute

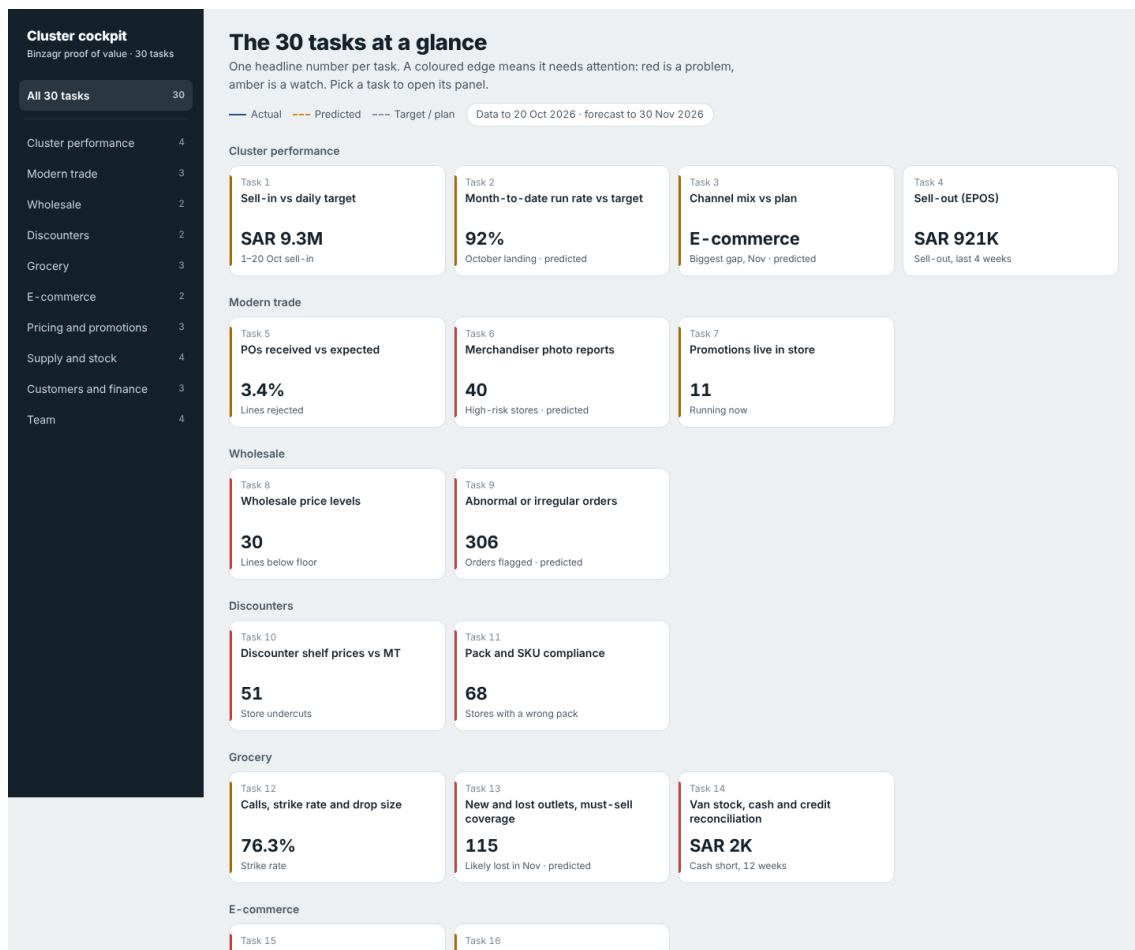
- Binzagr gave us a list of 30 tasks a cluster manager does every week, from checking sell-in against target to seeing where their own time goes.
- The current 15 PoV pages cover only some of them. We built one new panel per task, grouped into 10 area pages plus an "All 30 tasks" overview.
- Binzagr's real data covers Riyadh van sales, returns, customers and balances, plus the Jeddah warehouse. Most of the 30 tasks need data we don't have yet: modern trade, wholesale, discounters, e-commerce, promotions, stock, finance and team.
- So we simulated the missing data around the real data: 38 tables, about 3.9M rows, all joined to real outlet, product and van codes. Every row is labelled Actual or Simulated.
- From that we built prediction files: 38 small CSVs, about 22K rows, with Actual up to 20 Oct and Predicted from 21 Oct to 30 Nov. We also built a working dashboard file (HTML) that shows them.
- All checks pass. Grocery sales still equal the real SAR 40.4M, all 60 key joins match, and the planted problems can be found.
- The SAR 3.47M value case does not change. The 30 tasks are the operating layer on top of the 9 levers, and they point to new levers we can size once real data arrives.

What is in the folder (Downloads\Binzagr_Data)

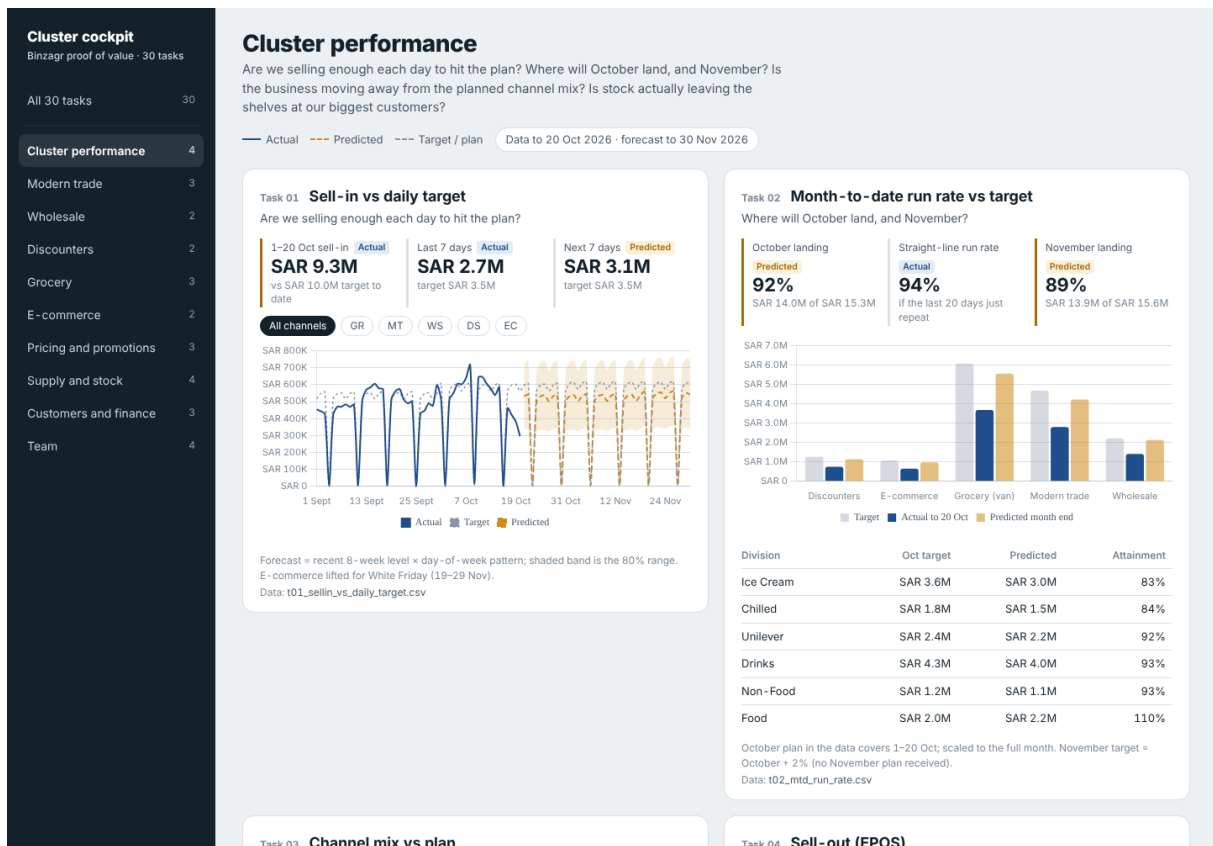
Folder / file	What it is
09_Simulation_Spec \ Binzagr_Simulation_Dataset_Spec.xlsx	The design: 33 datasets, 311 columns, task → table map
10_Simulated_Datasets \ *.parquet / *.csv	38 simulated tables plus README, data dictionary, integrity checks, planted problems, parameters, scripts
11_Dashboard_Data \ t01...t30 *.csv	Prediction data behind each panel (1-2 files per task)
11_Dashboard_Data \ Binzagr_Cluster_Cockpit.html	The dashboard: open in any browser, works offline
11_Dashboard_Data \ panels.json, README.md, scripts\	Exact numbers per panel, file guide, the code to rebuild

1. The new dashboards (wireframes)

- Overview page: 30 tiles, one headline number per task. A red edge means a problem, amber means watch. Click a tile to open its panel.
- 10 area pages, the same areas as Binzagr's list: Cluster performance (4), Modern trade (3), Wholesale (2), Discounters (2), Grocery (3), E-commerce (2), Pricing and promotions (3), Supply and stock (4), Customers and finance (3), Team (4).
- Every panel has the same layout: task number and question, then three headline numbers (each tagged Actual or Predicted), one chart, a short watch-list table, the data file name and a note on any assumption.
- Chart rules: actual is a solid blue line, predicted a dashed gold line with a shaded 80% range, target a grey dashed line. Bars use the same colours. Red bars mean a problem.
- Works on a phone and in dark mode, and opens offline. Rep and staff names are never shown; vans and people appear by code only. Retailers, platforms and competitors are anonymised.



Overview page (top part): one tile per task, coloured by status.



2. The 30 panels: what each answers and what it shows today

Headline numbers below are what the dashboard shows now. A "P" means predicted.

#	Task / question	Headline numbers	Data file
1	Sell-in vs daily target Are we selling enough each day to hit the plan?	1-20 Oct sell-in: SAR 9.3M Last 7 days: SAR 2.7M Next 7 days: SAR 3.1M (P)	t01_sellin_vs_daily_target.csv
2	Month-to-date run rate vs target Where will October land, and November?	October landing: 92% (P) Straight-line run rate: 94% November landing: 89% (P)	t02_mtd_run_rate.csv
3	Channel mix vs plan Is the business moving away from the planned channel mix?	Grocery share, Nov: 39.6% (P) Biggest gap, Nov: E-commerce (P) E-commerce share, Nov: 7.8% (P)	t03_channel_mix.csv
4	Sell-out (EPOS) Is stock actually leaving the shelves at our biggest customers?	Sell-out, last 4 weeks: SAR 921K Out-of-stock days: 3.2% Next 4 weeks: SAR 918K (P)	t04_sell_out.csv
5	POs received vs expected Are the chains ordering as normal, and how many lines get rejected or delayed?	POs, last 4 weeks: 2,378 Lines rejected: 3.4% Lines delayed: 2.8%	t05_po_tracker.csv t05b_po_rejection_reasons.csv
6	Merchandise photo reports What did the photos show, and which stores will be out of stock next visit?	Visits done: 82% Photos per visit: 8.4 High-risk stores: 40 (P)	t06_merch_photo_reports.csv
7	Promotions live in store Are promotions actually running in the stores we pay for?	Running now: 11 Starting by 30 Nov: 49 (P) Price wrong at shelf: 9%	t07_promotions_live.csv
8	Wholesale price levels Are wholesalers buying at the right price, or is the price slipping?	Avg price vs list: 80.0% Lines below floor: 30 Price index, end Nov: 80.0% (P)	t08_wholesale_price_levels.csv
9	Abnormal or irregular orders Which orders look wrong before they ship?	Orders flagged: 306 (P) Hit rate: 46% Caught: 76%	t09_irregular_orders.csv
10	Discounter shelf prices vs MT Are discounters undercutting the chains by more than agreed?	Avg DS price gap: -14.6% Store undercuts: 51 Gap next 4 weeks: -14.6% (P)	t10_ds_vs_mt_price.csv
11	Pack and SKU compliance Are discounters stocking the discounter packs, not the MT packs?	Stores with a wrong pack: 68 Planogram OK: 86% Stores likely to breach: 17 (P)	t11_pack_compliance.csv
12	Calls, strike rate and drop size How productive is each van rep (by van code)?	Strike rate: 76.3% Drop size: SAR 558 Calls per van-day: 9.2	t12_salesman_kpis.csv
13	New and lost outlets, must-sell coverage Is the outlet base growing, and are shops buying the must-sell range?	Active outlets, Sep: 3,612 Must-sell coverage: 42% Likely lost in Nov: 115 (P)	t13_outlet_movement.csv t13b_outlets_at_risk.csv
14	Van stock, cash and credit reconciliation Does every van balance at the end of the day?	Cash short, 12 weeks: SAR 2K Stock unexplained: SAR 15K Credit sales, 12 weeks: SAR 13.0M	t14_van_reconciliation.csv
15	Orders by platform, stock-outs, inactive listings How are the platforms trading, and what is switched off?	Order lines, last 4 weeks: 130,406 Listing-days out of stock: 7.1% Listings down today: 88	t15_ecom_orders.csv t15b_ecom_listings_down.csv
16	Search ranking, ratings, ad return Can shoppers find us, do they like us, and do ads pay back?	Average rating: 4.19 ★ Ad return (ROAS): 5.0x Listings losing rank: 123 (P)	t16_ecom_rank_rating_roas.csv

#	Task / question	Headline numbers	Data file
17	Promotion uplift vs plan Do promotions deliver the extra volume we planned?	Measured uplift (median): 50% Below plan: 52% November promos: 49 (P)	t17_promo_uplift.csv
18	Trade spend vs budget and claims Are we spending the promo budget well, and are claims fair?	Spend vs budget, YTD: 48% Disputed claims: 72 November spend: SAR 88K (P)	t18_trade_spend.csv
19	Competitor launches and price cuts What are competitors doing, and who is likely to cut price next?	Events, last 45 days: 180 Avg price-cut depth: 18% Likely cuts next 30 days: 8 (P)	t19_competitor_activity.csv t19b_competitor_events_re cent.csv
20	Warehouse stock cover vs forecast Will we run out, or are we sitting on too much?	Stock-out risk: 134 (P) Overstock value: SAR 1.2M Median cover: 35 days	t20_stock_cover.csv
21	Fill rate and OTIF with cut reasons Do customers get the full order on time, and why not?	OTIF, last 4 weeks: 92.0% Case fill: 97.2% Top cut reason: no stock	t21_fill_otif.csv
22	Customer stock, near-expiry, pending returns What stock in our customers' stores is about to come back to us?	Near-expiry units: 2,636 Returns pending: 186 Returns next 30 days: SAR 9K (P)	t22_customer_stock_expiry .csv
23	Demand shifts to share with planning Which November forecasts have moved enough to tell planning?	Shifts to share: 166 (P) Up vs plan: 84 (P) Down vs plan: 82 (P)	t23_demand_shifts.csv
24	Overdue receivables and credit blocks Who owes us, how late, and what will come in this month?	Overdue: SAR 4.9M Expected in 30 days: SAR 10.1M (P) Customers on credit block: 103	t24_receivables.csv t24b_credit_blocks_monthl y.csv
25	Claims, deductions and disputes What have customers deducted, and how much can we win back?	Open cases: 227 Recoverable: SAR 19K (P) Median days to resolve: 27	t25_deductions_disputes.cs v
26	Key account escalations Which customer relationships need the manager this month?	Open escalations: 8 Value at risk (open): SAR 271K Accounts likely to escalate: 10 (P)	t26_escalations.csv t26b_account_risk.csv
27	Uncovered routes, absent merchandisers Which routes and stores have nobody today?	Uncovered routes / day: 1.7 Merchandiser gaps / day: 2.2 Next 3 weeks: 41 (P)	t27_coverage.csv
28	KAM and supervisor meetings Are the right meetings happening, and what do they win?	Meetings, last 4 weeks: 204 Value negotiated: SAR 6.7M Agreed: 56%	t28_meetings.csv
29	Action log and approvals What is waiting on whom, and will it slip?	Open actions: 124 Median wait: 48 days Backlog end Nov: 116 (P)	t29_action_log_open.csv t29b_action_backlog.csv
30	Where the manager spends time Is the manager's week spent on customers and the field, or on reports?	Hours per week: 57 Customer + field time: 31% Reports + admin: 43%	t30_manager_time.csv

3. The data we used

Real data from Binzagr (kept as it is)

- Riyadh sales: 325,544 invoice lines, SAR 40.4M, 1 Mar-20 Oct 2026 (234 days), 119 vans, 4,531 buying outlets after merging 430 twin codes.
- Riyadh returns: 7,170 lines. Customer master with real 20 Oct outstanding balances (SAR 3.8M) and payment terms. Product master and salesman codes.
- Jeddah warehouse attendance: 58,634 rows, 261 people, Jan-Sep (employee numbers only, names dropped). WMS scans and payroll were used in the labour lever.
- Neeraj's division mapping and route breakevens (T1-T3 per division), and Badr's answers on payroll and full-time staff.

What was missing, so we simulated it

- Modern trade, wholesale, discounter and e-commerce orders, POs and deliveries. Shelf, photo and price checks. EPOS sell-out.
- Promotions, trade spend, claims and competitor activity. Warehouse stock by lot and the demand plan. Receipts, credit blocks, deductions and escalations.
- Route visits without a sale, van stock and cash, merchandiser and rep attendance, meetings, the action log and manager time.

The 38 tables (10_Simulated_Datasets)

Table	Rows	Basis	Table	Rows	Basis
dim_account	4,607	Actual 4,531, Simulated 76	fact_merch_visit	24,431	Simulated 24,431
dim_channel	5	Simulated 4, Actual 1	fact_open_invoice	14,609	Simulated 14,609
dim_competitor_product	600	Simulated 600	fact_order_fulfilment	403,995	Simulated 403,995
dim_employee	187	Actual 119, Simulated 68	fact_price_observation	394,215	Simulated 394,215
dim_outlet	4,979	Actual 4,415, Simulated 564	fact_promo_execution	45,400	Simulated 45,400
dim_product_ext	1,038	Inferred 1,008, Simulated 30	fact_promotion	1,680	Simulated 1,680
dim_route	119	Inferred 119	fact_purchase_order	347,900	Simulated 347,900
dim_vehicle	119	Simulated 119	fact_receipt	86,157	Simulated 86,157
fact_account_escalation	155	Simulated 155	fact_route_visit	94,640	Actual 68,984, Simulated 25,656
fact_action_log	2,548	Simulated 2,548	fact_sales_target	26,337	Simulated 26,337
fact_competitor_activity	868	Simulated 868	fact_sales_target_daily	58,450	Simulated 58,450
fact_credit_block	503	Simulated 503	fact_sell_in	729,539	Simulated 403,995, Actual 325,544
fact_customer_stock	26,968	Simulated 26,968	fact_sell_out	114,614	Simulated 114,614
fact_deduction_dispute	1,058	Simulated 1,058	fact_shelf_audit	525,125	Simulated 525,125
fact_demand_plan	18,900	Simulated 18,900	fact_team_attendance	27,092	Simulated 27,092
fact_ecom_listing_daily	234,000	Simulated 234,000	fact_trade_spend	685	Simulated 685
fact_inventory_weekly	139,386	Simulated 139,386	fact_van_cash	10,907	Simulated 10,907
fact_manager_time	3,618	Simulated 3,618	fact_van_stock	313,628	Simulated 313,628
fact_meeting	1,450	Simulated 1,450	fact_warehouse_attendance_jeddah	58,634	Actual 58,634

4. How we simulated: rules

- Real data is never changed. Simulated records are built around it and join on real keys: outlet = dist_cd-cust_cd, SKU = product code, van = salesman code, division and warehouse.
- Totals reconcile to real figures. Grocery sell-in in the simulation equals the real SAR 40,409,419 line for line. Simulated grocery receipts leave exactly the real 20 Oct balances (SAR 3.48M for outlets that bought in the window).
- Every row is labelled with basis (Actual / Inferred / Simulated) and sim_version. All settings sit in one parameters file. The seed is fixed (20261027), so a rerun gives identical data.
- Problems are planted on purpose and labelled (anomaly_label), so we can test whether the dashboard finds them.
- Fictional names only: Key account 01-08, Discounter 01-04, Wholesaler 001-060, Platform A-D, Competitor A-L.

Volume: how big each channel is

- Window 1 Mar-20 Oct 2026 to match the real data. Channel mix assumed: Grocery 40%, modern trade 30%, wholesale 15%, discounters 8%, e-commerce 7%. The simulation hit this exactly.
- Real grocery sales (SAR 40.4M) set the scale, so the other channels add about SAR 60M. Daily phasing follows the real grocery seasonality.
- Store counts: 8 chains with 260 stores, 4 discounters with 120 stores, 60 wholesalers, 4 platforms with 8 fulfilment centres. 40 merchandisers (3 posts vacant from 1 Aug), 12 supervisors, 8 KAMs.

How each stage was built

Stage	Tables	Method in one line
1 Masters	channels, accounts, outlets, products, employees, routes, vans, competitor SKUs	Real outlets, SKUs and vans extended with simulated chains, stores, price lists (P75 of real price), shelf life, must-sell lists
2 Sell-in	sell-in, targets, promotions	Real grocery lines kept. Other channels' order lines scaled to daily targets. Promotion uplift and discounts applied. Whole cases rounded without bias
3 Field	route visits, van stock, van cash	Real invoices become sale calls. No-sale calls added to a 76% strike rate. Route order by nearest stop. Van loads to a P90 target. Real sold and returned quantities
4 Trade	fulfilment, POs, merch visits, promo checks, sell-out, customer stock, trade spend, shelf audit, prices, competitors	Order to delivery with cut reasons (OTIF 90%). PO rejections 3.5%. Photo audits with OOS 6-9%. EPOS from 3 chains. Claims with 10% over-claims
5 Supply	inventory by lot, demand plan, e-com listings	Weekly stock by lot with first-expiry-first-out, reorder point, lead times 1-5 weeks and 12% late deliveries. S&OP; plan with sales bias. Platform listings with rank, rating and ads
6 Finance	receipts, open invoices, credit blocks, deductions, escalations	Invoices paid by terms and each customer's payment behaviour (prompt to chronic). Blocks when overdue >60 days or over limit. Deductions on 6% of MT/DS/WS payments
7 Team	field attendance, warehouse attendance (real), meetings, action log, manager time	Rep presence from real route days. Merchandiser absences and vacancies. KAM meetings by account tier. Actions from escalations, approvals and app recommendations

Calibration: does it look like the real world?

Check	Result	Status
Grocery sell-in = real Riyadh sales	SAR 40,409,419 = 40,409,419; 325,544 lines	Pass
Channel mix vs plan	GR 40.0% · MT 29.9% · WS 15.1% · DS 8.0% · EC 7.0%	Pass
Foreign keys (60 joins)	All ≥ 99.9% match	Pass
Strike rate / calls per van-day	76.5% / 8.3	Pass
OTIF / line fill	90.5% / 96.6%	Pass
Target attainment	91-94% a month	Pass
Promotions live in store / sell-out OOS	84% / 11.7%	Pass

Check	Result	Status
Credit-blocked customers	About 10% of credit customers	Pass
Grocery open AR vs real 20 Oct balance	SAR 3.48M vs SAR 3.53M (outlets in window)	Pass

Planted problems (for testing detection)

Table	Problem	Rows
fact_merch_visit	checkin far from store	150
fact_price_observation	ds below mt price	60
fact_price_observation	ws below floor	53
fact_route_visit	gps far from outlet	120
fact_sell_in	price below floor	90
fact_sell_in	large irregular	60
fact_sell_in	parallel trade	40
fact_shelf_audit	channel pack breach	300
fact_van_cash	cash short	217
fact_van_stock	stock unexplained loss	928

5. How the predictions are made

- Kept simple on purpose, so anyone can explain it in a meeting. No black boxes.
- Time series (sales, POs, sell-out, orders, OTIF): the level of the last 6–8 weeks × the day-of-week pattern, a gentle damped trend, and an 80% range from recent variation.
- Rates (rejection, delays, live rate, absence): the average of the last 8 weeks carried forward.
- Risks (outlet loss, payment date, escalation, breach, van variance, stock-out): simple scores from each item's own history. For example, an outlet is at risk when its silence is over 1.5× its usual order gap.
- Calendar: Fridays low for van sales. White Friday (19–29 Nov) +35% on e-commerce.
- Realism checks: predicted grocery is SAR 1.34M a week against SAR 1.2–1.55M in real recent weeks. October lands at 92% of target, November 89% (September real: 94%). November lost outlets 115 against a history of 60–150 a month.

Method per task

#	How it is predicted
1	Daily level × weekday pattern, 80% band; Nov target = Oct + 2%
2	Actual to date + forecast for remaining days, split by division share
3	Oct actual + forecast; Nov forecast shares vs plan
4	Weekly EPOS level of last 6 weeks, damped trend
5	Expected = median POs of last 8 weeks; reject and delay rates carried
6	Next-visit OOS = 60% store's own rate + 40% account rate
7	Live rate of running and Nov promotions = account's past live rate
8	Smoothed price index with drift capped ±3%
9	Rules: odd ship-to region, non-promo price < 73% of list, line 12× usual
10	Per-unit DS vs MT shelf price; store > 25% below MT flagged
11	Breach chance from store + account wrong-pack rate, 25 SKUs per audit
12	Weekly van level (zero weeks kept), damped trend
13	At risk = silent > 1.5× usual gap; 20% never return (measured)
14	Chance of a variance next week from the van's own history
15	Weekly platform orders, White Friday +35%
16	Rank next week = last 7 days + 3-week trend
17	Measured uplift vs 4-week baseline; upcoming = account × mechanic median
18	Nov spend = budget × account spend ratio, blended with last 3 months
19	Chance of another event in 30 days from the recent monthly rate (Poisson)
20	Cover = (on hand + in transit) ÷ 8-week demand; stock-out date
21	OTIF and fill: 8-week average carried forward
22	Returns next 30 days = near-expiry × observed return rate
23	Nov: last plan vs 8-week run rate + promo volume; shift > 30% flagged
24	Pay date = due date + customer's average lateness; 30-day chance per invoice
25	Chance a deduction is valid = acceptance rate by reason
26	Escalation chance from OTIF gap, disputes, overdue and history
27	Weekday absence and uncovered rates of the last 8 weeks
28	Average weekly meetings by role and type
29	Close date from median wait by type; backlog trend
30	Average hours mix; suggested mix is our proposal

6. What we get out of it

- Covers the client's full list. All 30 tasks now have a panel with numbers. Before, the 15 PoV pages covered only part of grocery, receivables, churn, returns and forecasting.
- From reporting to looking ahead. Every panel says where things will land (end of month, next 6 weeks, next visit), not only what happened.
- Watch lists, not just charts. Each panel names the 5–8 items to act on: vans, stores, SKUs, customers, promotions or actions.
- A ready data contract. The column specs show Binzagr exactly which systems and fields to send (SAP SD and FI, DMS, merchandiser app, WMS, retailer EPOS, platform portals, HR).
- Swap and go. When real data arrives, replace a simulated table with the real one. The prediction scripts and dashboard rebuild unchanged.
- Testable detection. Planted problems let us show detection quality honestly. Irregular orders: 76% caught, 46% of flags real.

Effect on the SAR 3.47M value case

- No change to the total. The 9 levers rest on Binzagr's real data. The new channels are simulated, so adding value from them would not stand up.
- Several panels report on levers already counted, so don't add them twice: fleet (tasks 12, 27), price (8, 9), returns (22), churn (13), collections (24), inventory (20, 23), labour (27, 30).
- New levers to size once real data arrives (kept off the total): trade spend and promotion return (17, 18), deductions recovery (25), OTIF penalties and lost sales (5, 21), stock-outs (4, 6, 15, 20), channel price leakage (10, 11), van shrinkage (14).

7. How to use it in the portal

- The CSVs follow the existing pattern (uploads/binzagr_pov/*.csv → table). Every file has a basis and an as_of column for the Actual/Predicted chips.
- Each new portal page = one area. Each panel reads 1–2 CSVs (file names are on the panel), or reads panels.json directly for the exact numbers shown.
- To refresh: rerun stage scripts s1–s9 (simulation) → p1_predictions.py (CSVs) → p2_dashboard.py (panels) → rebuild the HTML. A full rerun takes about 15 minutes.
- Keep the wording on panels: Actual vs Predicted chips, the data file and the assumption note. Presenters must not call simulated channels Binzagr's figures.

8. Assumptions to confirm and known limits

Assumption or limit	Why it matters	What we need from Binzagr
Channel mix 40/30/15/8/7	Sets the size of MT, WS, DS and EC everywhere	Sales by channel (SAP SD)
No November plan; target = Oct + 2%	Drives the November landing (89%)	Monthly targets by channel and division
October target in the data covers 1–20 Oct	Scaled ×31/20 to the full month	Confirm the October plan
November promotion calendar = last 4 weeks repeated	Drives tasks 7, 17, 18, 23	Promotion calendar and budgets
Supplier lead times 1–5 weeks by division	Stock-out risk and cover	Lead times per supplier
Payment behaviour mix (prompt to chronic)	Pay dates, credit blocks	Receipts history (SAP FI)
Outlet no-return rate 20%	November lost outlets	Measured on real data; confirm the definition of a lost outlet
Actions open > 90 days treated as expired	Backlog size	Real action and approval log
Inventory weekly, not daily	Smaller files	Daily stock snapshot (WMS)

Assumption or limit	Why it matters	What we need from Binzagr
Twin merge 430 / 4,531 outlets (app uses 465 / 4,535)	Small count difference	Align on one rule
Meetings and manager time are invented patterns	Tasks 28, 30	Calendars or a 2-week time diary

Next steps

- Agree the panel layout and which panels go into the portal first (suggested: tasks 1, 2, 12, 13, 21 and 24, all closest to real data).
- Send Binzagr the data request built from the spec, starting with channel sales, targets, the promotion calendar, receipts and OTIF.
- Replace simulated tables as real data lands, rerun, and only then size the new levers.