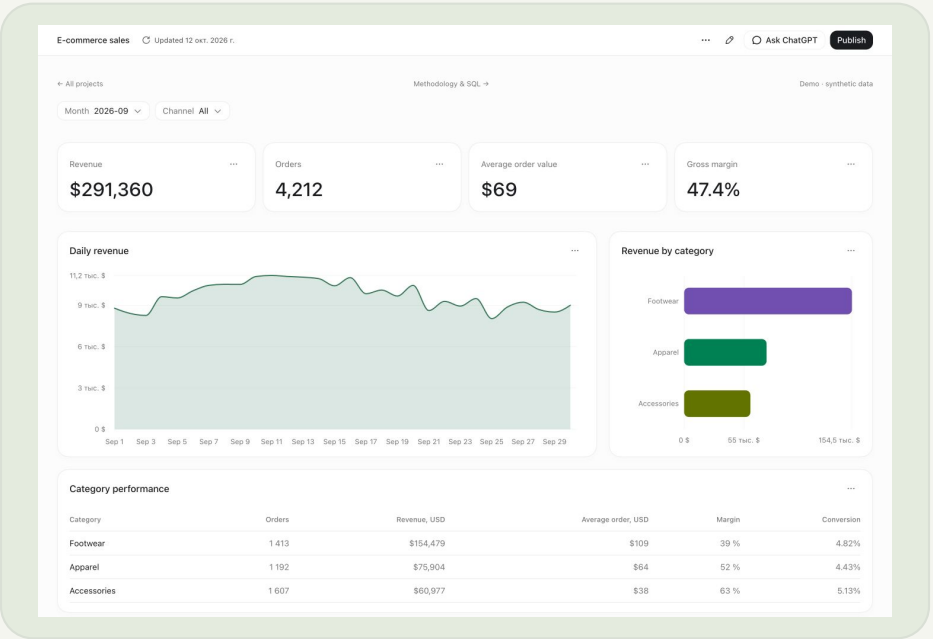


FROM BUSINESS QUESTIONS TO CHECKABLE FINDINGS

Data. Clarity. Decisions.

Three analytical case studies with working dashboards, inspectable SQL and explicit assumptions.



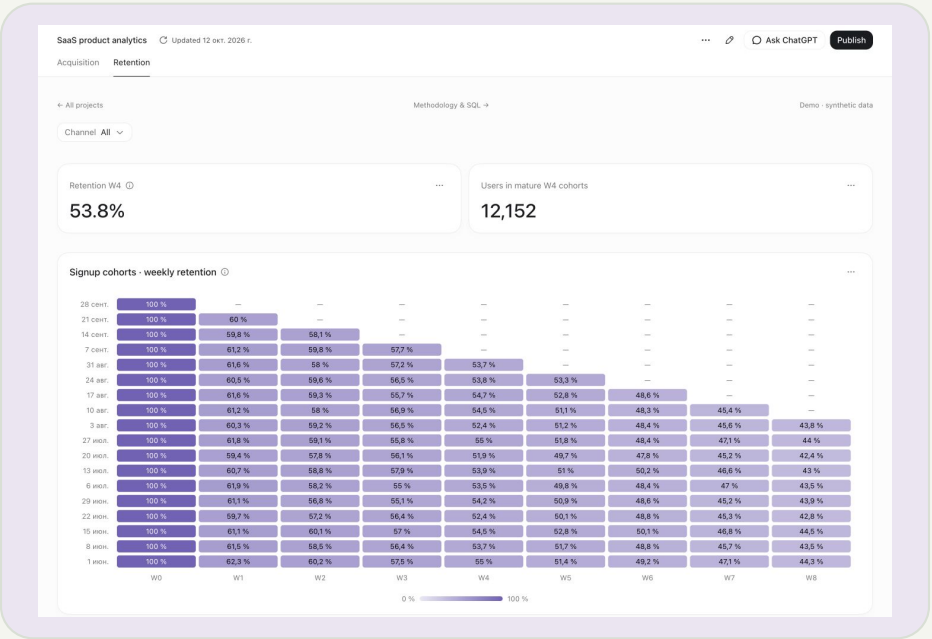
01 / FOUNDATIONAL

Sales & profitability

Weighted KPIs, category contribution and comparable periods.

SQL + SQLite

24 validation checks

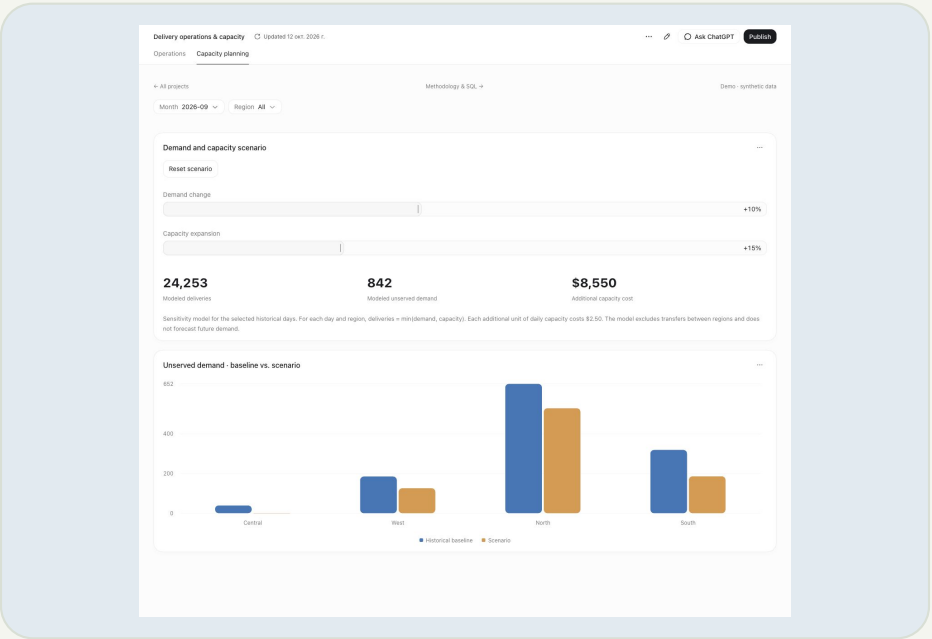


02 / INTERMEDIATE

Product & retention

Funnel logic, mature cohorts and the right denominator.

Interactive web demos



03 / ADVANCED

Operations & scenarios

Capacity constraints, drill-downs and modeled trade-offs.

Reproducible source package

01 / FOUNDATIONAL

Sales, growth and profitability

Question: is the business growing, and which categories generate gross profit?

1,647 source rows

\$291,359.54

September revenue

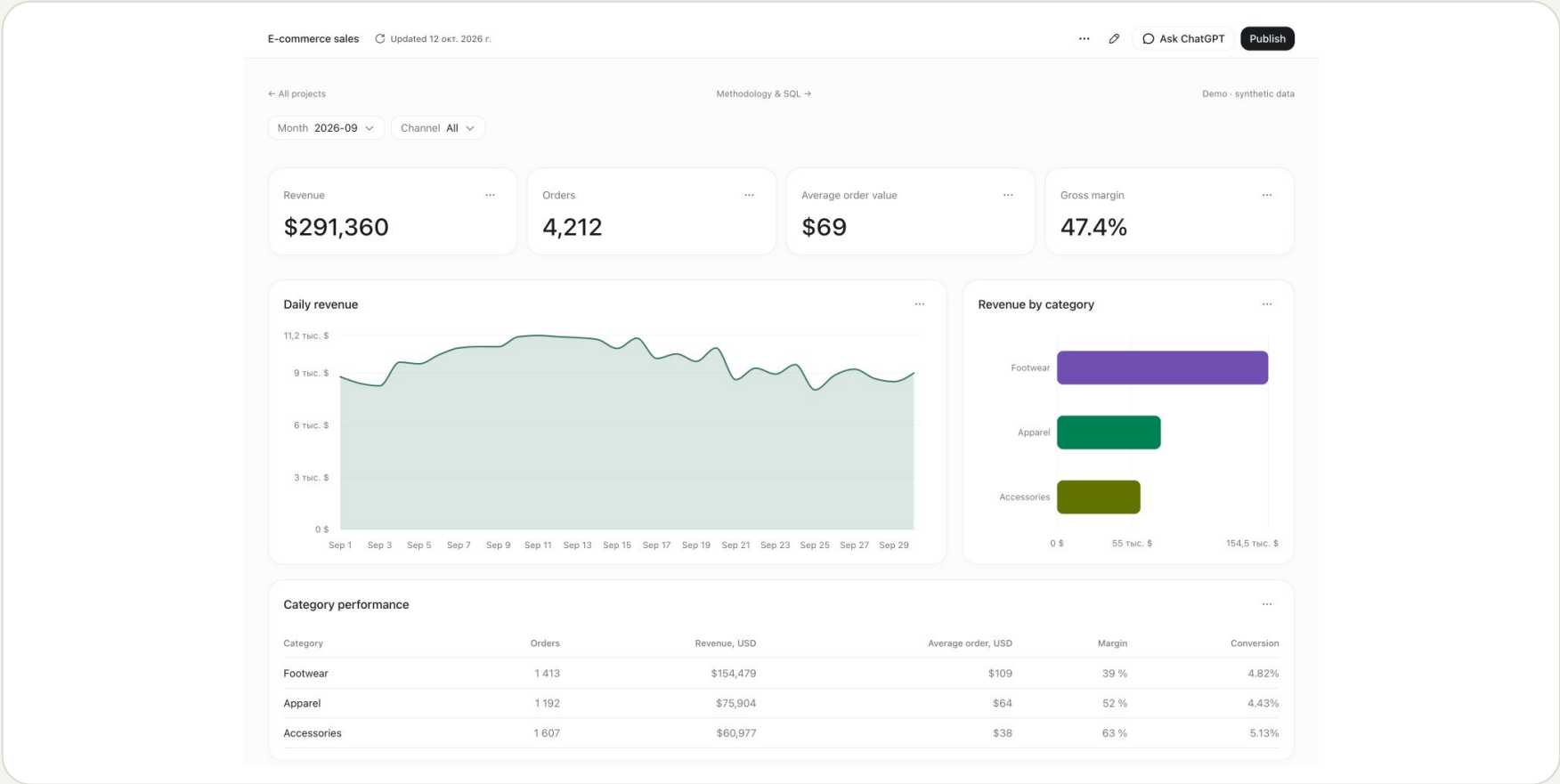
+0.12%

total revenue vs. August

+3.45%

revenue per day vs. August

A 30-day month and a 31-day month need a comparable basis. Footwear brings 53.0% of revenue, but its margin rate is lower than accessories.



Open interactive case study

What this demonstrates

Star schema, ratio-of-sums KPIs and period comparison. A revenue increase does not by itself establish better profitability.

02 / INTERMEDIATE

Funnel and cohort retention

Question: which acquisition cohorts activate, pay and return in week 4?

18 signup cohorts

53.8%

weighted week-4 retention

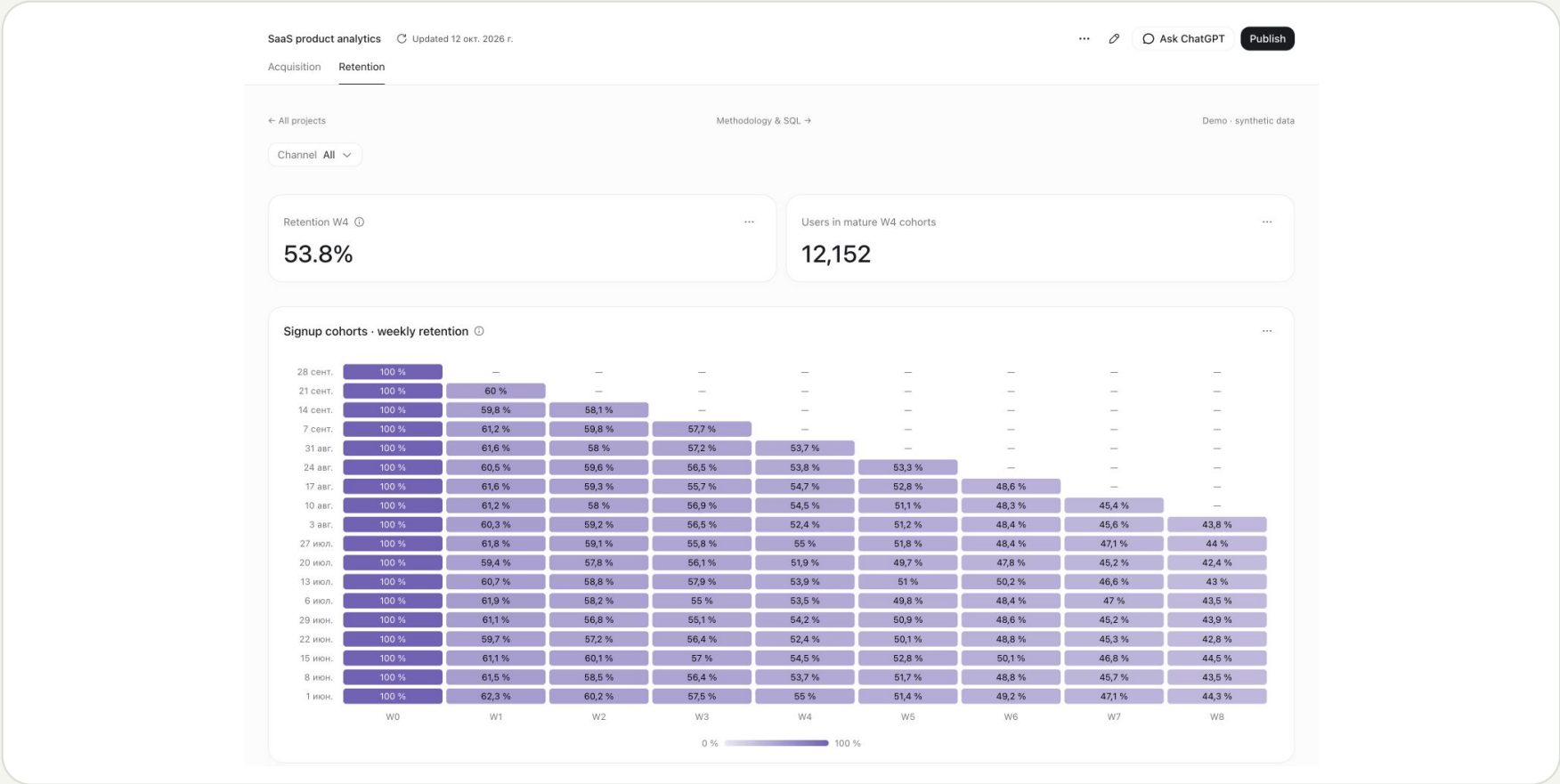
12,152

eligible signups

6,538

active in week 4

Only 14 cohorts have a complete W4 window. Separate signup and retention facts prevent repeated cohort sizes from inflating the denominator.



Open interactive case study

What this demonstrates

Eligibility rules, exact-week retention and NULL handling. Channel differences are descriptive; they do not prove a causal effect.

03 / ADVANCED

Delivery capacity and what-if analysis

Question: how much unmet demand could extra capacity remove at the same demand level?

Demand held at +10%

2,766

unserved with unchanged capacity

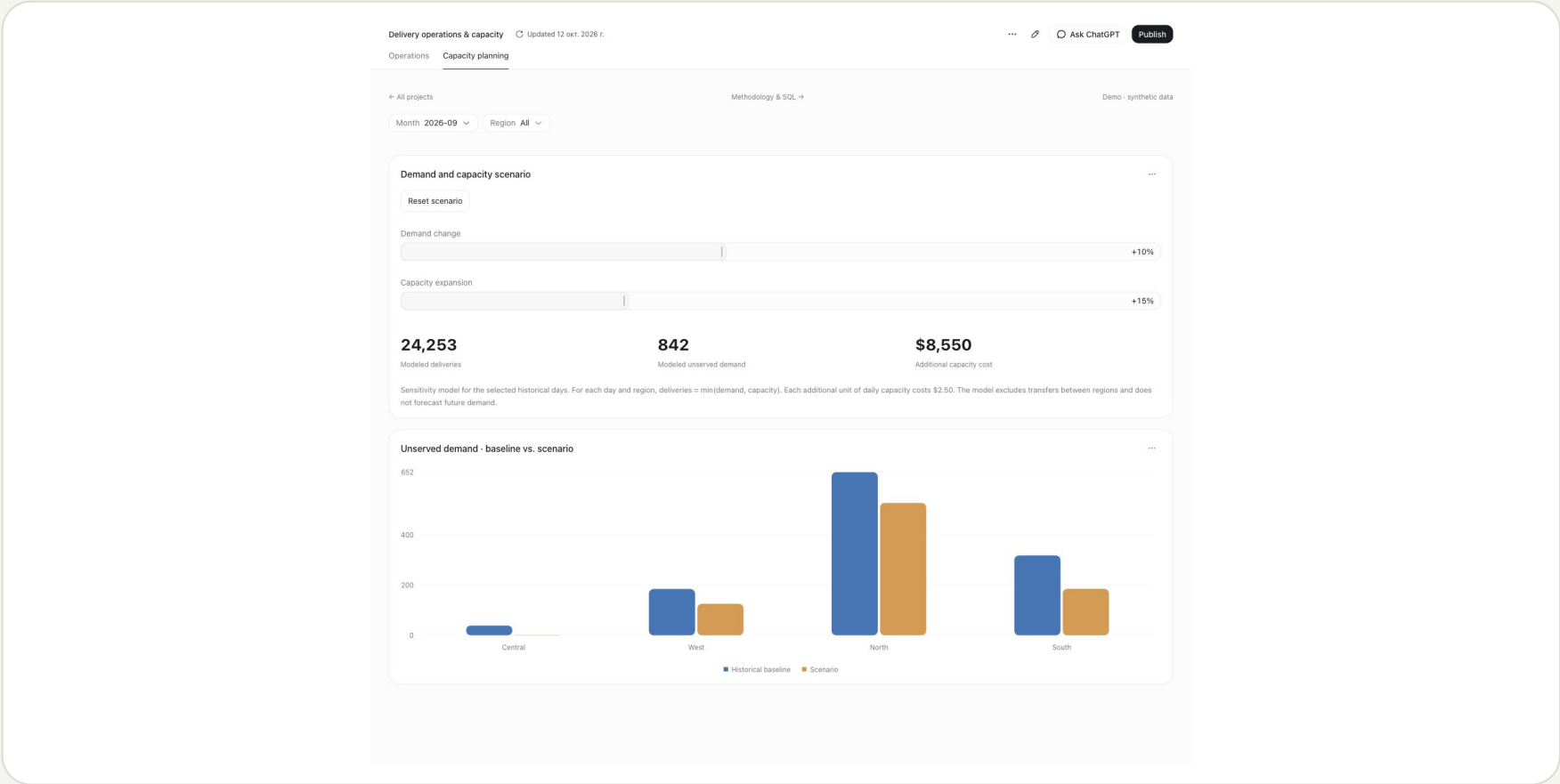
842

unserved with +15% capacity

1,924 additional modeled deliveries.

\$8,550 additional capacity cost.

\$4.44 capacity cost per additional delivery.



Open interactive case study

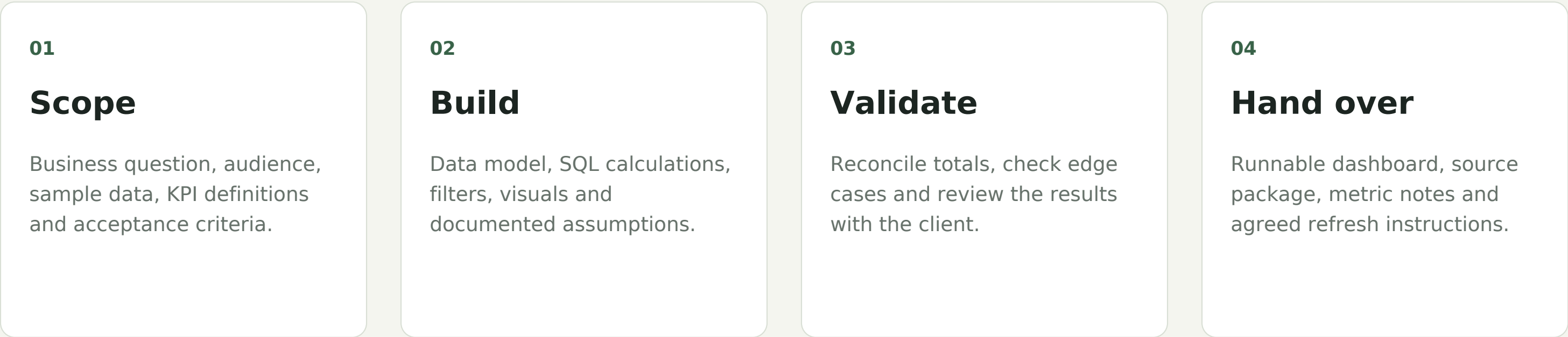
What this demonstrates

Explicit assumptions and equal-demand comparison. Sensitivity analysis, not a forecast. Cost excludes variable delivery costs and revenue.

A PRACTICAL DELIVERY WORKFLOW

From a client brief to a working dashboard

Start with the business decision, agree the metric definitions, then connect and validate the data.



Inside this portfolio: three browser-based demos, three analytical case studies, a SQLite model, parameterized SQL, input fixtures and 24 checks. Run the analysis with Python 3; no external dependencies.

Explore the live demos

<https://dashboard-studies.pages.dev>

Created with Codex and the standard Data Analytics runtime. These are synthetic demonstration cases, not paid client results. Dashboard number formatting follows the viewer’s browser locale.