

CASE FILE 004 • NOVO NORDISK • ON ASTRATO • RECONSTRUCTED

Novo Nordisk, and the number that was true twice

WHAT a reporting layer for Novo Nordisk, built on Astrato
FOR finance and supply planning
PROBLEM one quarter's sales were up and down at once, depending on a basis no screen showed

A reporting layer for a company whose sales both rose and fell in the same quarter, where the honest answer depends on a **basis** nobody was showing.

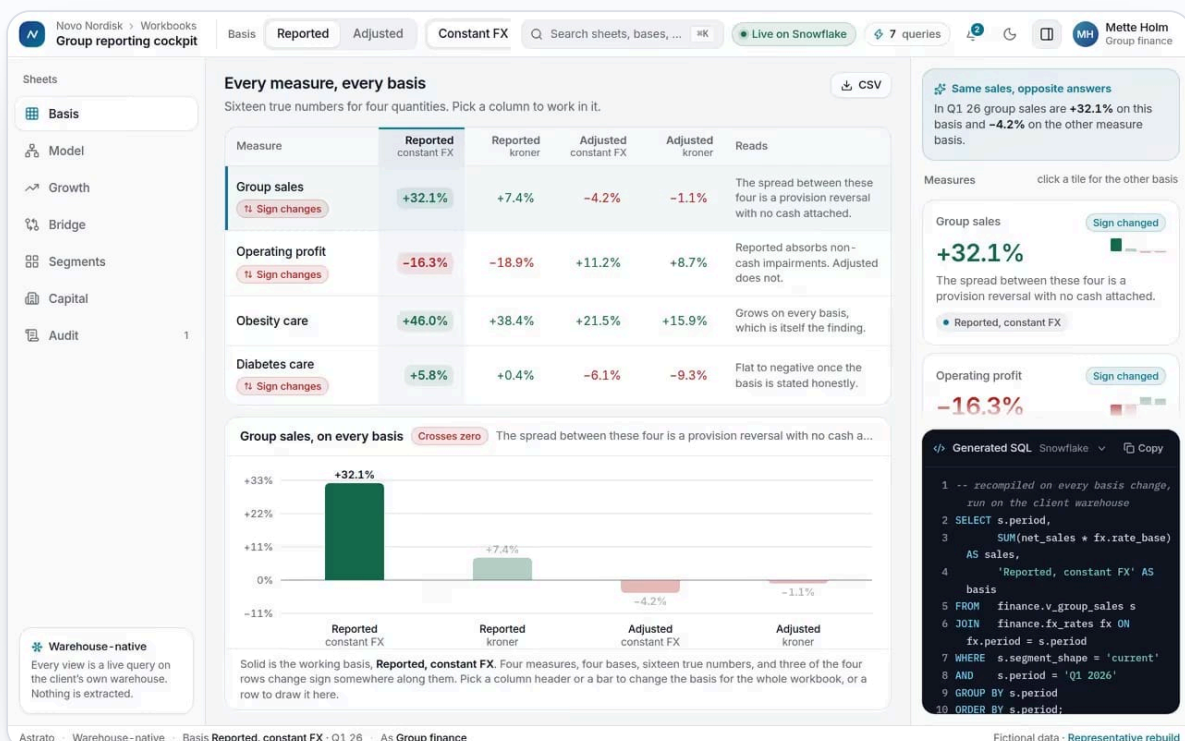
A reconstruction. The engagement was real and delivered on Astrato; the company figures are public, the data in the product is fictional, and no outcome is claimed.

Novo Nordisk · the basis cockpit

Accessibility: The basis cockpit passes axe-core's WCAG 2.1 AA rules at desk and phone, in both settings, and in the 11 states this file links into. Not yet tried with a screen reader. [The statement](#)

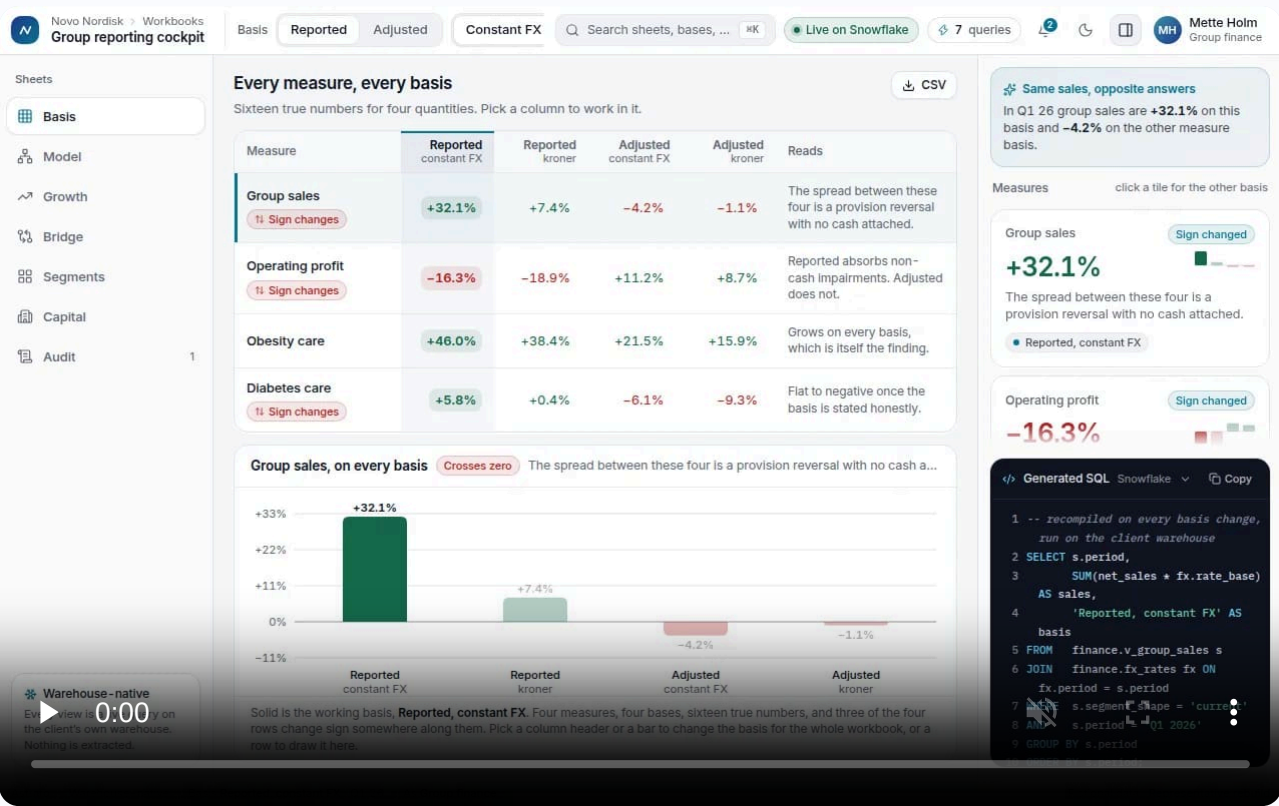
Weight on a first visit: 315 KB of script and 13 KB of style, compressed, against budgets of 330 and 15 KB. The build fails if a product passes its budget. React Flow loads only when the Model sheet is opened.

The states around it, each one a link: [the warehouse not answering](#), where nothing is extracted and so no figure is shown, and the [withheld group figures](#) above. Each says what is true, names the next step and offers one action.



The cockpit works on a phone, with the matrix as cards and the inspector as a sheet. Open it full screen for the whole cockpit.

Open the cockpit ↗



A walkthrough, 18 seconds, recorded from the rebuild. The cockpit, step by step: the basis switched and back, the bridge, the segments, and the same screen seen as one segment's controller. Each step is captioned as it happens, and the transcript has the same words.

Watch while you read

TRANSCRIPT

ROLE	CLIENT	PLATFORM	STATUS
Lead Product Designer · Astrato	Novo Nordisk	Astrato on Snowflake	Reconstructed, see source notes

I OWNED	The design of the reporting layer, as lead product designer at Astrato; this file rebuilds it with fictional data
WITH	Astrato's delivery pods, as their one designer
THEIRS	The client's systems and the delivery team's build; their roles are not part of this reconstruction, so none is claimed here
CONSTRAINTS	Five validated systems that could not be altered and a warehouse billed by the second, so the model had to sit over them, never beside them; and a quarter whose two honest readings pointed opposite ways

FRICTION

One quarter with two honest readings that pointed opposite ways; the screen surfaces the basis instead of choosing one for every reader

THE POSITION

A number without its basis is an opinion

No measure renders without the basis it was computed on, and changing basis restates the whole screen at once.

THE PROBLEM

Every figure was true four ways

Reported or adjusted, kroner or constant currency. In Q1 2026 two of those readings pointed up and two pointed down, on the same sales.

THE CONSTRAINT

Nothing could be copied

Five validated systems that cannot be altered, and a warehouse billed by the second. The model had to sit over them, not beside them.

00

THE BLUEPRINT

Five systems that cannot change, drawn as one

Before the cockpit: the estate end to end from the validated systems to the reader, the gate that no figure may pass without its basis, the targets the rebuild is held to, the evidence under each decision, and the spec that is checked before every release.

SERVICE
BLUEPRINT

The basis cockpit as a service: twelve moments from five validated sources to a figure a reader can check, with the basis switch as the gate. Pan, zoom, pick a moment, count the clicks to any point, switch the sad paths on.

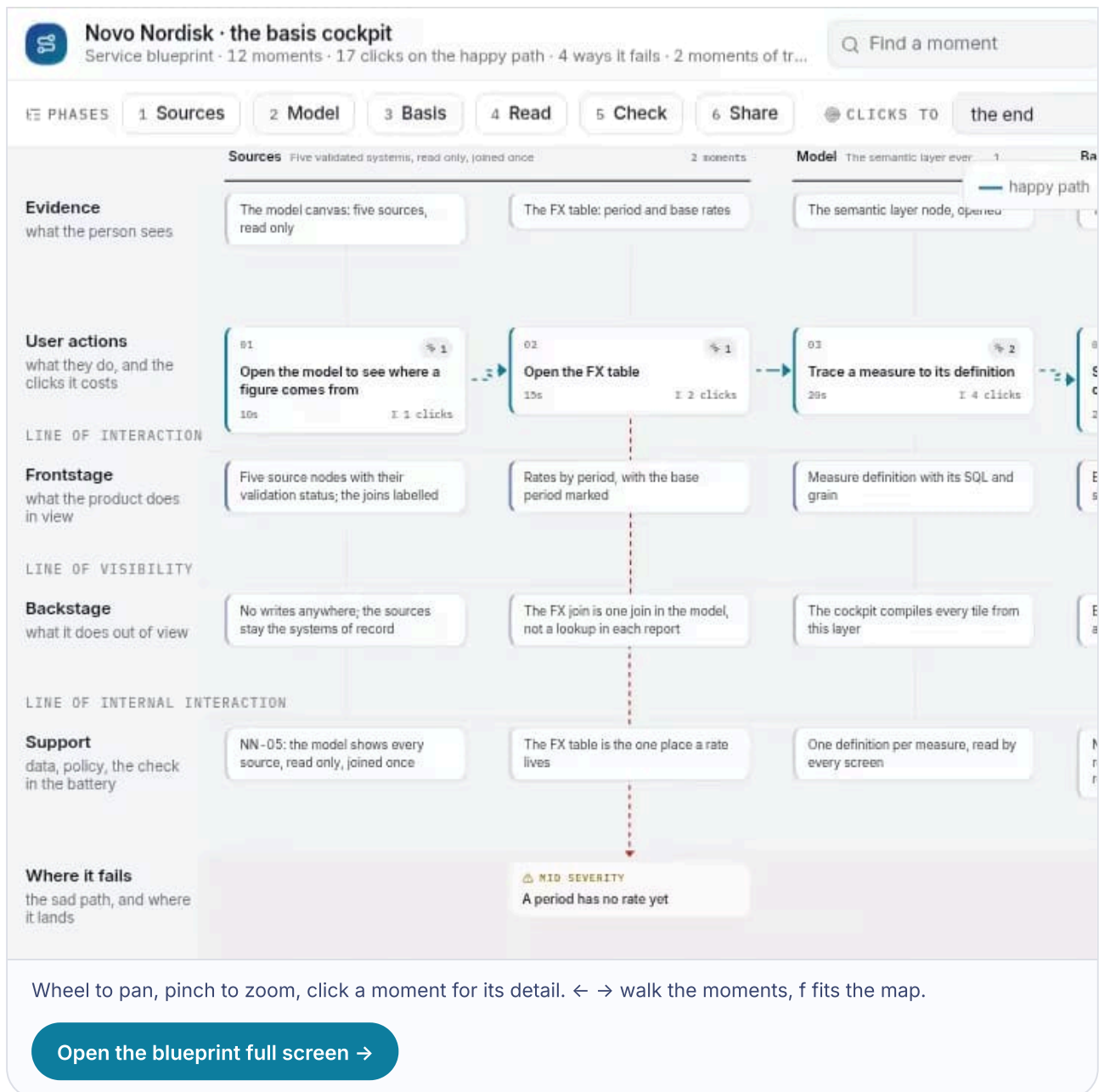
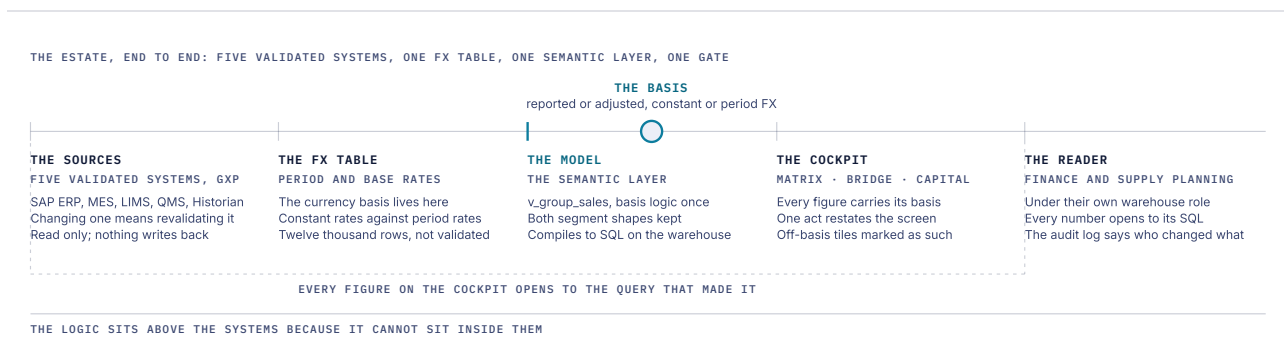


FIG. 001 · THE SYSTEM



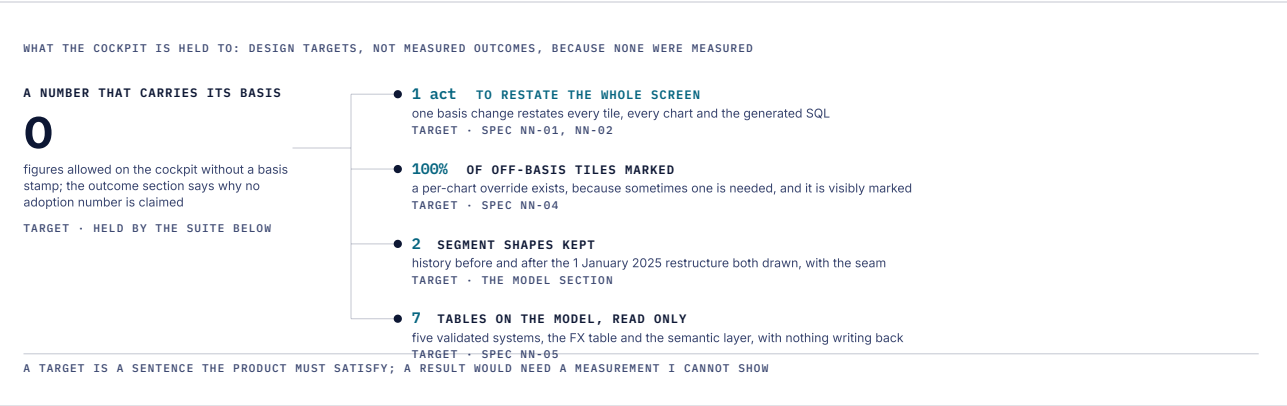
Nothing to the left of the model can be touched. The basis is a gate rather than a setting because a figure that has not passed it does not exist on the cockpit.

The gate is the drawing. Reported and adjusted figures on two currency bases produced a quarter that was up 32% and down 4% at the same time, both correctly, and the cockpit's whole design is that no figure reaches the screen without passing the

basis gate and carrying its stamp. Where the basis control sits, what it restates, and how an off-basis tile is marked all follow from where the gate is on this line.

The return leg is the regulated-estate version of trust. A reader in finance had already built the correct logic privately and distrusted anything that could not show its working, so every number opens to the SQL that produced it, under the reader's own warehouse role.

FIG. 002 · THE KPI TREE



Targets, not results. The outcome section explains why no adoption number is claimed; what can be claimed is that the rebuilt cockpit satisfies these four sentences every time the site is released.

FIG. 003 · THE EVIDENCE



Three of the inputs are public or structural facts about the estate. The fourth is a representative reader, and the research section further down says exactly how much that can honestly support.

The spec below holds the rebuilt cockpit to six statements, each written as an acceptance test before the screens were rebuilt, and each verified by a check that runs before every release of this site, named in the right-hand column. It is the only kind of

claim this file makes about the product: not that it was adopted, but that it satisfies these sentences, and that something other than my eye confirms it.

01

THE SPEC

NN-01

No measure renders without its basis.

ACCEPTANCE

Given any sheet, when a basis is chosen from a column header or the control, then the footer states the basis in force and every figure on screen carries it.

VERIFIED BY

The check “a column header sets the basis for the workbook”.

THE INTERACTION SUITE, RUN BEFORE EVERY RELEASE OF THIS SITE

02

THE SPEC

NN-02

Switching the basis restates the headline, including its sign.

ACCEPTANCE

Given the matrix on reported, constant FX, when Adjusted is chosen, then the insight restates from +32.1% to -4.2% and says so.

VERIFIED BY

The checks “insight states +32.1%” and “Adjusted restates the headline to -4.2%”.

THE INTERACTION SUITE, RUN BEFORE EVERY RELEASE OF THIS SITE

03

THE SPEC

NN-03

The generated SQL recompiles for the basis and for the FX join.

ACCEPTANCE

Given the inspector, when the measure basis or the currency basis changes, then the query shows the adjusted measure and the period or base rate join.

VERIFIED BY

The checks “SQL recompiles for the adjusted basis” and “Kroner recompiles the FX join”.

04

THE SPEC

NN-04

A tile taken off the global basis says so on its face.

ACCEPTANCE

Given a tile, when its basis is overridden, then it is marked Off basis where the figure is, not in a panel.

VERIFIED BY

The check “a clicked tile goes off basis and says so”.

THE INTERACTION SUITE, RUN BEFORE EVERY RELEASE OF THIS SITE

05

THE SPEC

NN-05

The model shows every source, read only, joined once.

ACCEPTANCE

Given the Model sheet, when it opens, then seven tables are drawn, the validated ones stamped GxP, with no join label covered or crossed.

VERIFIED BY

The check “the model shows seven tables” and the canvas check over the model.

THE INTERACTION SUITE, RUN BEFORE EVERY RELEASE OF THIS SITE · THE CANVAS CHECK, RUN BEFORE EVERY RELEASE OF THIS SITE

06

THE SPEC

NN-06

The cockpit works on a phone, in the dark setting as well as the light one.

ACCEPTANCE

Given a 390-pixel viewport, when any sheet opens, then four tabs are on screen, nothing scrolls sideways, and the canvas controls take the dark setting.

VERIFIED BY

The checks “novo phone: 4 bottom tabs” and “the canvas controls take the dark setting”.

THE INTERACTION SUITE, RUN BEFORE EVERY RELEASE OF THIS SITE

Two brands. One molecule. Two thirds of the company.

Novo Nordisk sells about DKK 309bn a year. Ozempic and Wegovy are DKK 206bn of that, roughly two thirds, and they are the same active molecule, semaglutide, in different presentations for different indications. One API, one supply chain, one patent estate, carrying most of a company that employs around 69,000 people and sells in about 170 countries.

FIG. 004 • ONE MOLECULE, TWO THIRDS

FY2025 GROUP NET SALES, DKK 309,064m, DRAWN TO SCALE
OZEMPIC



DKK 127,089m

DKK 79,106m

DKK 102,869m

BOTH OF THESE ARE SEMAGLUTIDE

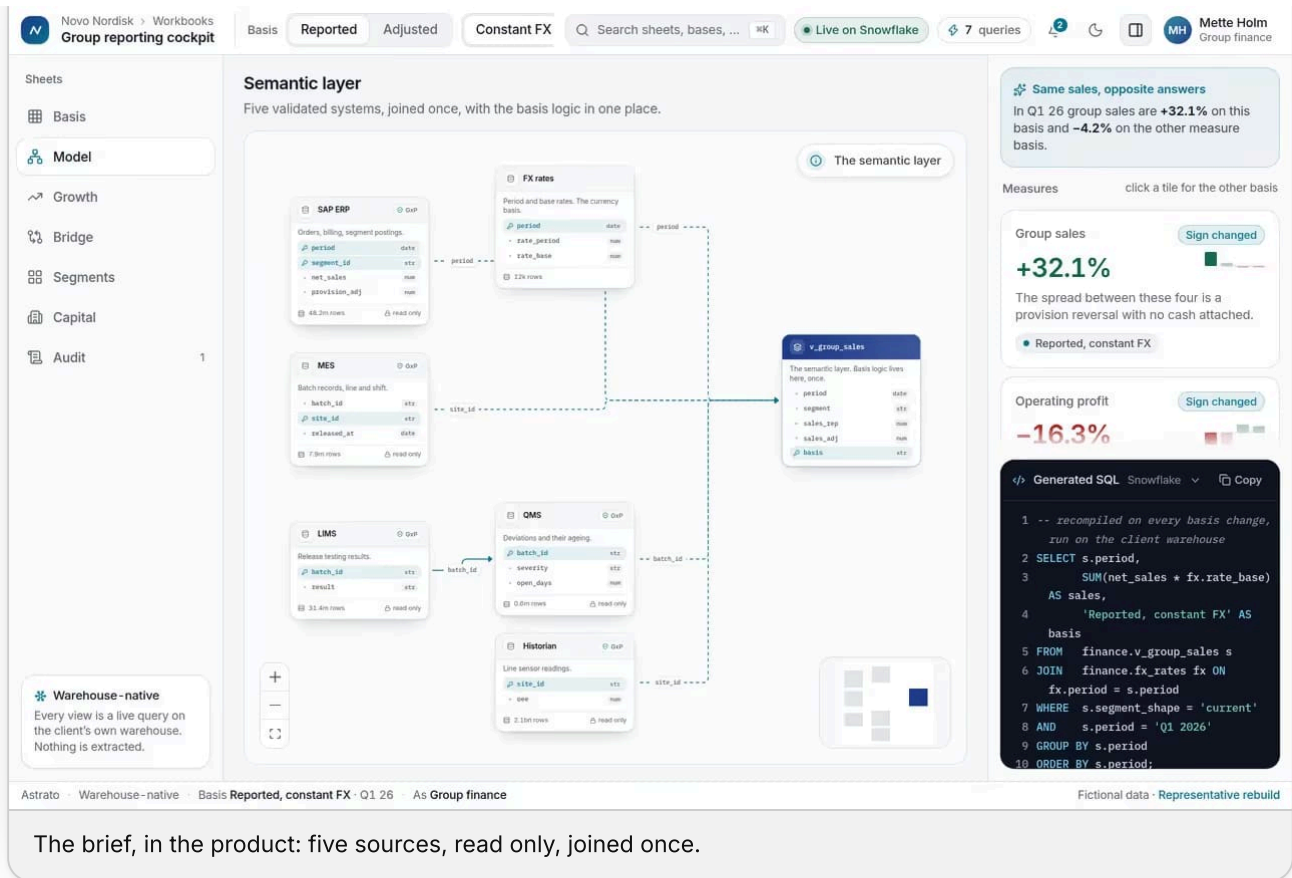
67% OF GROUP REVENUE, ONE MOLECULE

1

active ingredient behind two thirds of the revenue,
with US exclusivity ending in 2032

Diabetes care, the century-old franchise, is now flat in kroner and price-pressured. Obesity carries the growth. Both run on the same molecule, which is why a question about supply and a question about revenue are the same question here.

That concentration is the reason this file exists. When one molecule carries two thirds of the revenue, the questions a finance team asks and the questions a supply team asks stop being different questions. "Can we make more" and "what will we book" are the same sentence read from two ends, and they were being answered in two different systems that did not agree.



02

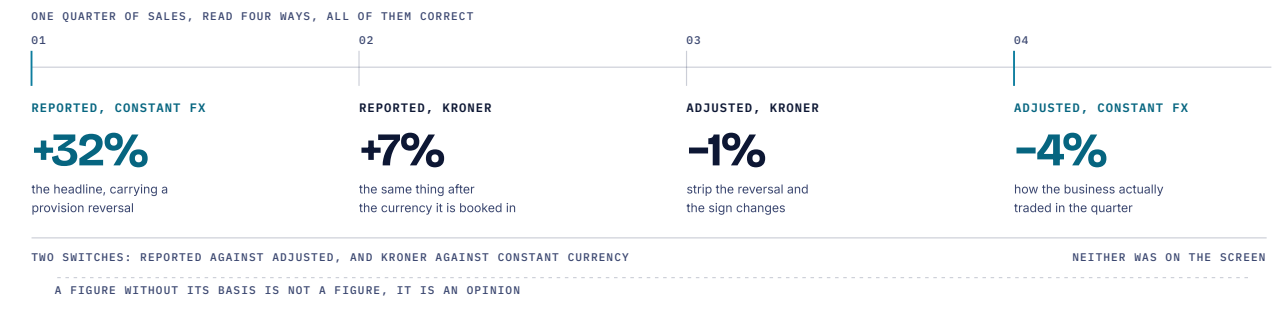
THE BASIS PROBLEM

Sales grew 32%. Sales fell 4%. Both were true.

In the first quarter of 2026 Novo Nordisk reported sales up 32% at constant exchange rates and adjusted sales down 4% at constant exchange rates. Neither figure is wrong and neither is spin. They are the same sales measured on two bases, and the gap between them is a DKK 26.8bn provision reversal with no cash attached to it.

"Which number do I put in the deck?"

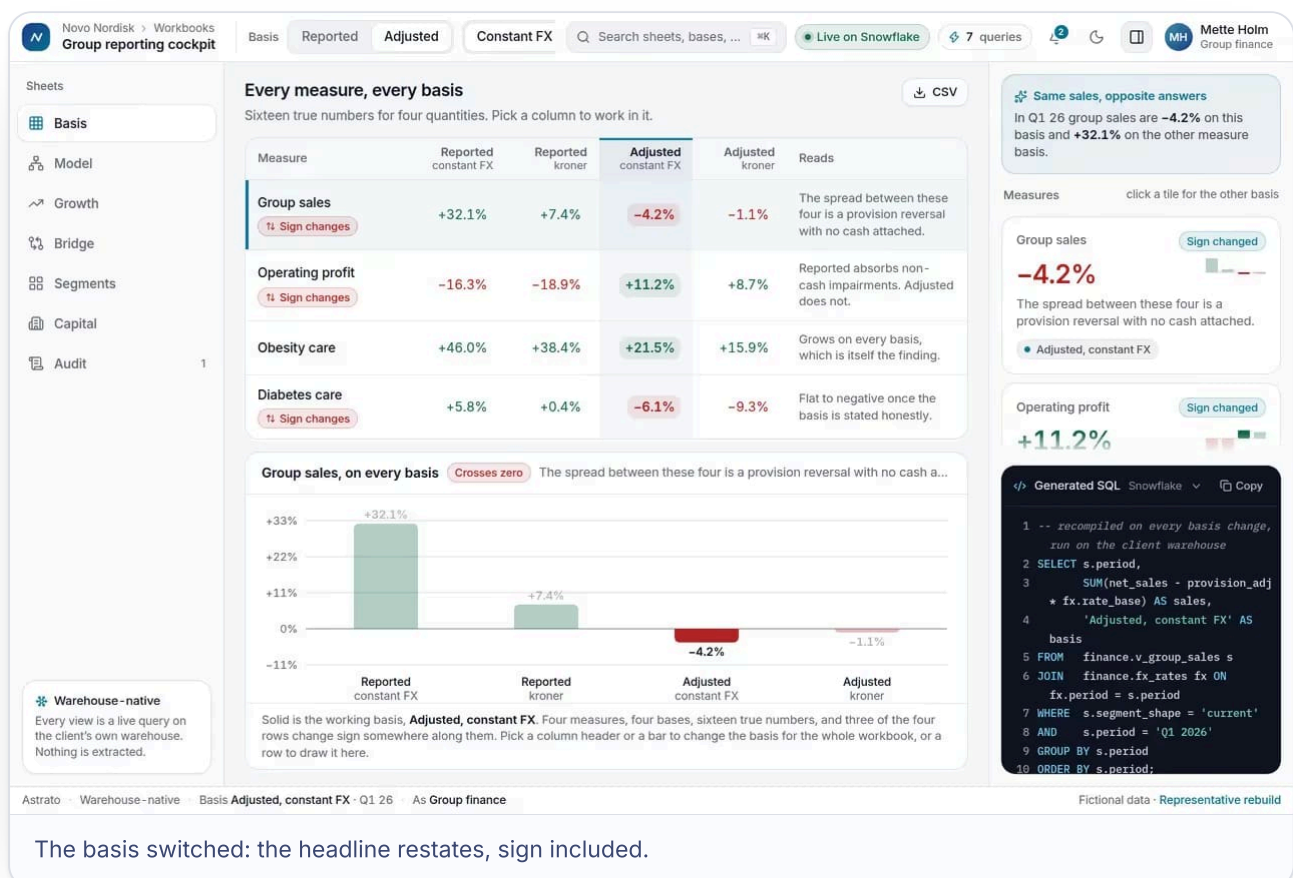
THE QUESTION THE WHOLE PROJECT IS AN ANSWER TO

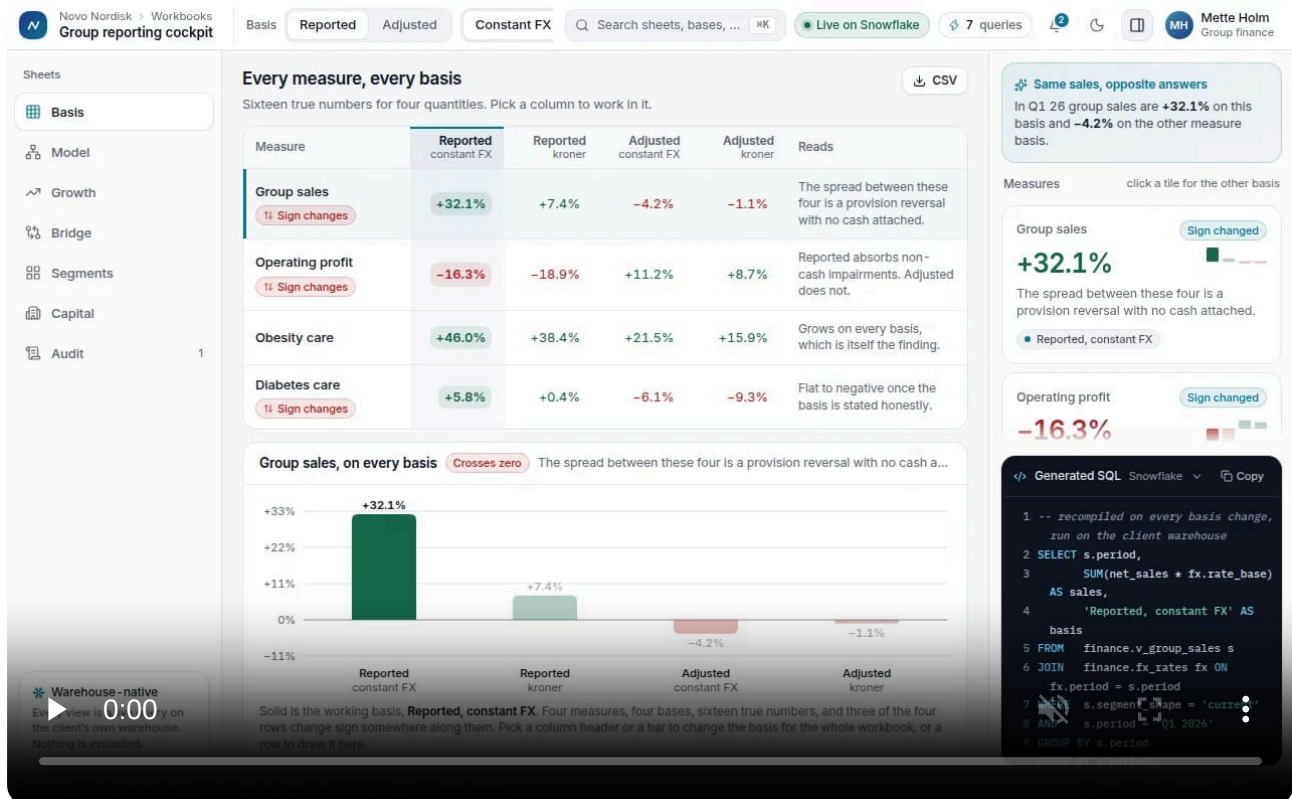


Over half of Novo Nordisk's revenue is booked in dollars and reported in kroner, so the currency switch moves every growth rate by several points on its own. The reversal switch moves some of them across zero. A dashboard that picks one and says nothing has not simplified the problem, it has hidden it.

The instinct in a room like that is to pick a default and move on. I argued against it, and the argument is the whole design. A default basis is a silent editorial decision taken by whoever built the dashboard, applied to everyone who reads it, and invisible at the moment it matters most. The company had introduced adjusted measures for 2026 precisely because the reported figures had stopped describing trading. Choosing one on a reader's behalf throws that away.

So the rule the screens enforce is narrow and absolute: **no measure renders without the basis it was computed on**. The basis is not a filter in a panel somewhere. It sits against the number, in the same visual breath, and it is the one control on the screen that restates everything at once.





Nine seconds, recorded from the rebuild. The basis goes from reported to adjusted and group sales turn from +32.1% to -4.2%; to kroner, -1.1%; back to reported, +7.4%; and to constant FX, +32.1% again. Each time every figure, the chart and the generated SQL restate, and the cards whose sign changed say so.

Watch while you read

TRANSCRIPT

Each chart, and what it has to say

A chart is chosen by the relationship it has to show, in the categories of the Financial Times' [Visual Vocabulary](#). In the rebuild every mark reads at 3:1 against its card or carries its value in print, so no number depends on telling two colours apart.

THE CHARTS IN THE REBUILD, BY WHAT THEY SHOW

CHART	WHAT IT HAS TO SHOW	THE FORM, AND WHY
<u>One measure, every basis</u>	Deviation: four readings of the same quantity either side of zero	Columns from a zero line, signed and coloured by direction; the basis in use solid, the other three quiet, every one with its value printed
<u>Group sales growth</u>	Change over time, across a change of definition	Quarterly columns with the segment change drawn as a seam, because a line would join two shapes that do not restate into each other
<u>From one reading to the next</u>	Flow: how one figure becomes another, step by step	A bridge, each step named and labelled, so the provision reversal is a bar with a name rather than a gap
<u>Segments</u>	Deviation, by segment	Horizontal bars from zero,

CHART	WHAT IT HAS TO SHOW	THE FORM, AND WHY
		labelled at their tips
<u>Capital projects</u>	Part-to-whole, at magnitude: spent within budget	Bars on one kroner scale, spent solid and what remains outlined; rings would show two schemes at 47% and 67% as comparable when one is three times the other

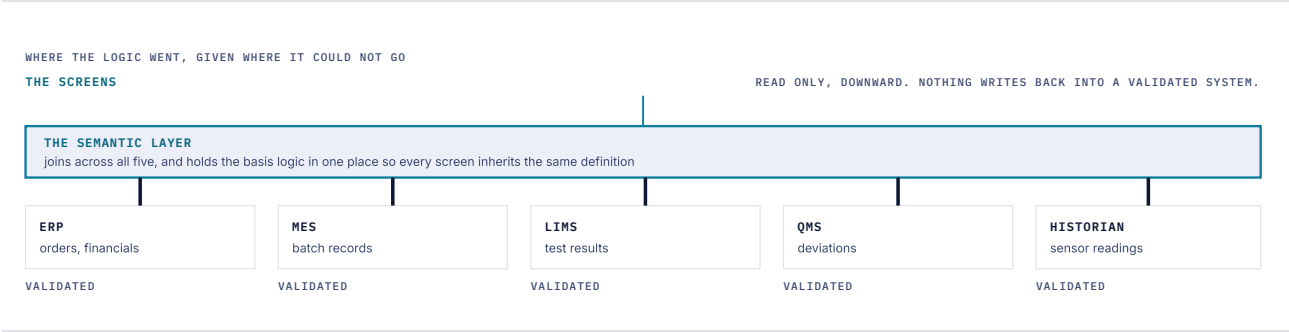
03

MODELLING ACROSS

You cannot fix the systems.
You model across them.

A regulated manufacturer runs on validated systems. Validation means the system was formally proven fit for its purpose and that changing it means revalidating it, so the practical answer to "can we add a field" is usually no, or not this year. The reporting problem has to be solved somewhere else.

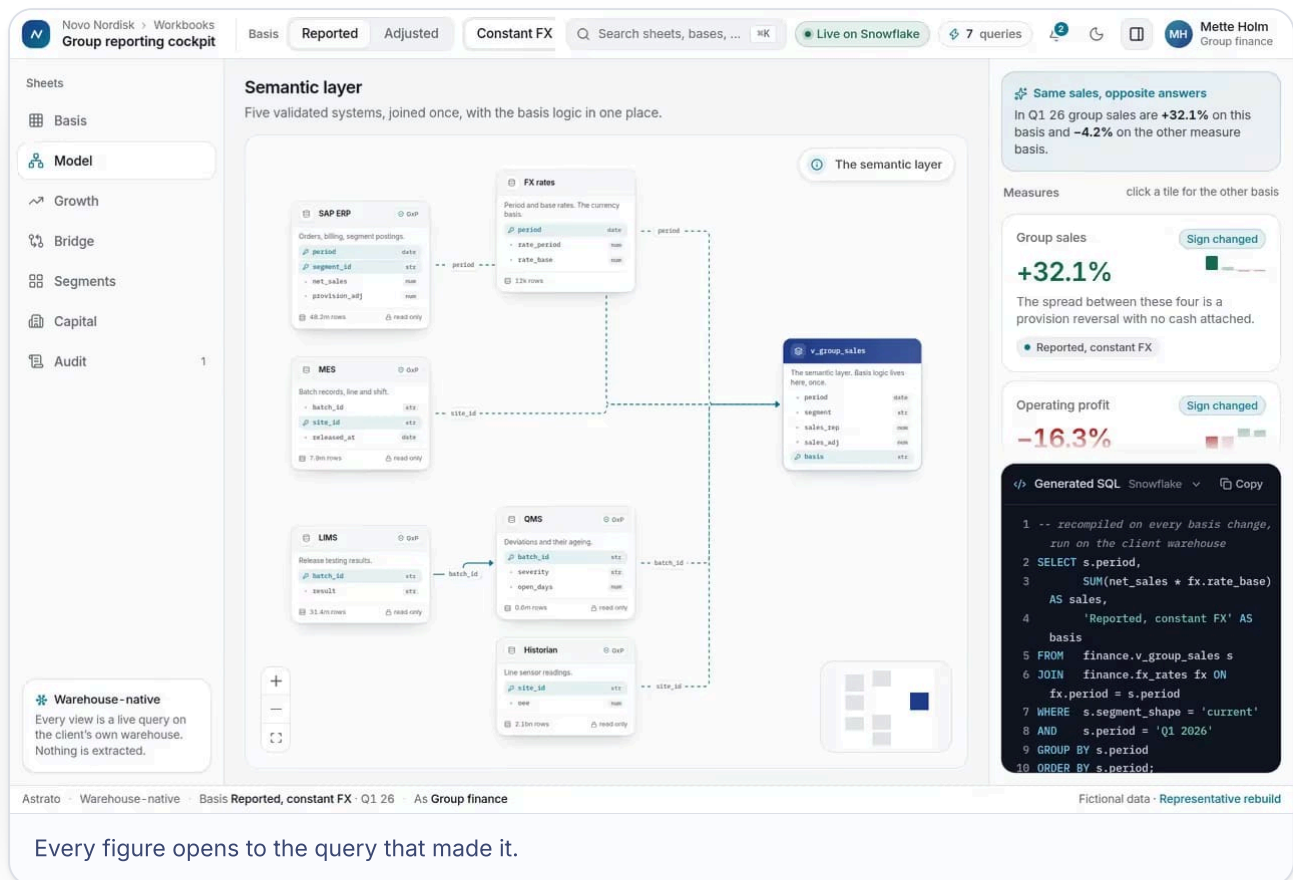
FIG. 006 · FIVE SYSTEMS, NONE OF THEM TOUCHABLE



This is also why a warehouse-native tool was the right one. Astrato stores nothing and extracts nothing: every chart compiles to SQL that runs on the client's own warehouse, under the reader's own warehouse role. The governance is the warehouse's, not the dashboard's, which in a regulated estate is the only arrangement that survives an audit question.

The second thing the semantic layer had to carry was less obvious and caused more trouble. On 1 January 2025 the company restructured its reporting segments into US Operations and International Operations, replacing the previous North America and International split, with Canada moving across. Any history built against the old shape does not restate cleanly into the new one.

The temptation is to quietly map the old segments onto the new ones and present an unbroken line. That line would be fiction. The model keeps both shapes and the charts draw the seam: before the restructure the series is drawn on the old basis and labelled as such, and the join is a visible discontinuity rather than a smoothed curve. A reader who wants a continuous trend has to ask for a restated one, and gets told what the restatement assumes.



A manufacturer spending a fifth of revenue on concrete

Novo Nordisk spent DKK 60.1bn on property, plant and equipment in 2025, roughly 19% of sales, on API capacity, aseptic production and packaging. At that scale the capital portfolio stops being a finance footnote and becomes an operating system of its own, with its own reporting needs.

FIG. 007 • PART SPENT, PART BUILT

TWO NAMED EXPANSIONS, BUDGET AGAINST SPENT AT 31 DEC 2025

KALUNDBORG • API



DKK 49.6bn

DKK 23.1bn SPENT • ABOUT 47% • FULLY OPERATIONAL DURING 2029

BARS DRAWN TO THE SAME SCALE

HILLERØD • API



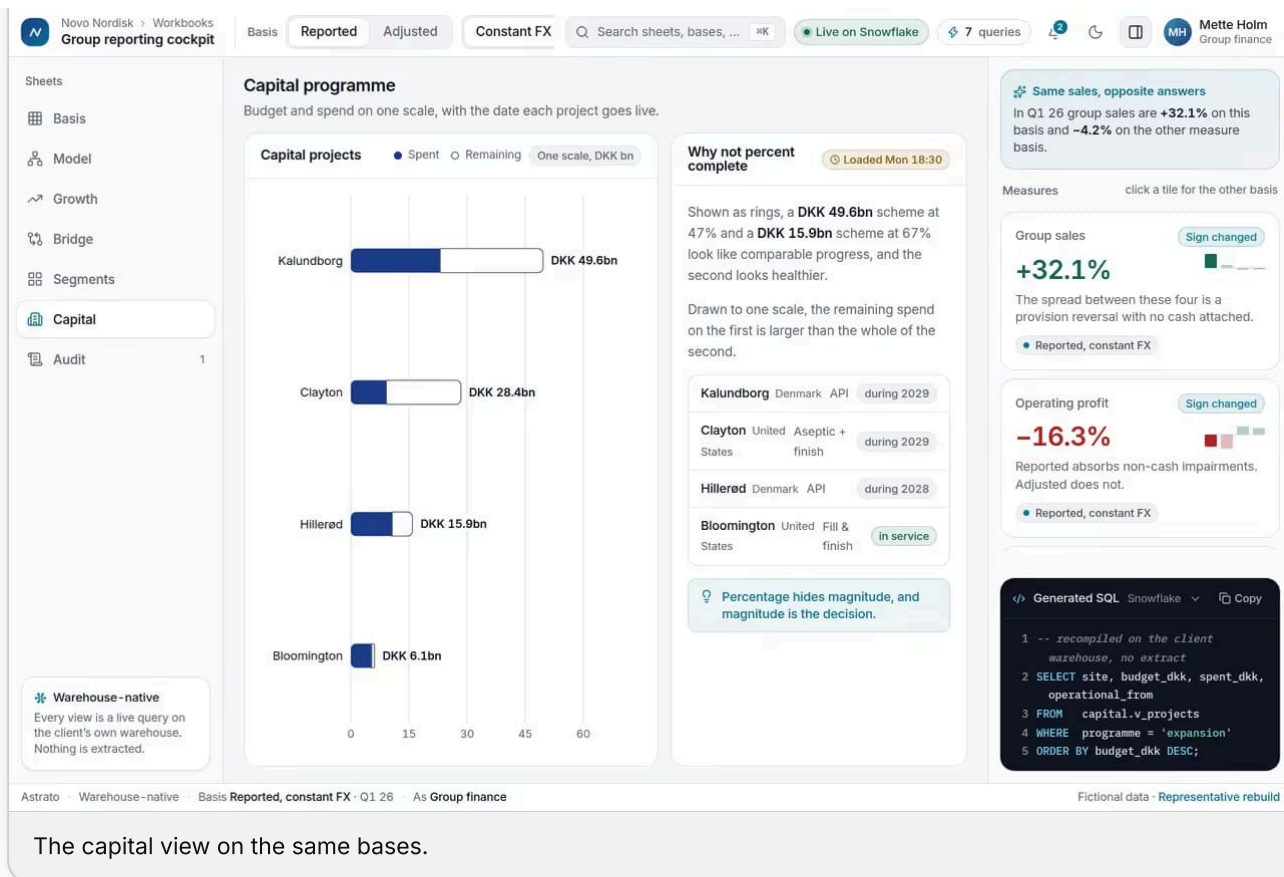
DKK 15.9bn

DKK 10.7bn SPENT • ABOUT 67% • OPERATIONAL DURING 2028

Drawn to a common scale, which the project reporting did not do. Two schemes shown side by side as percentage-complete rings read as comparable progress, when one of them is three times the size of the other and a year further out. Percentage hides magnitude, and magnitude is the decision.

The fill-and-finish footprint moved from 11 sites to 14 through the 2024 Catalent transaction, adding capacity in Italy, Belgium and Indiana. Three new sites on three regulatory regimes, arriving mid-programme, is the kind of change that quietly breaks a reporting layer: the site dimension grows, the historical series does not, and every chart that was keyed on the old site list silently drops the new ones or silently includes them without saying so.

That is the unglamorous half of this work, and it is most of it. A reporting layer earns trust by being explicit about what changed underneath it, and loses trust the first time a reader finds a total that moved without explanation.



05

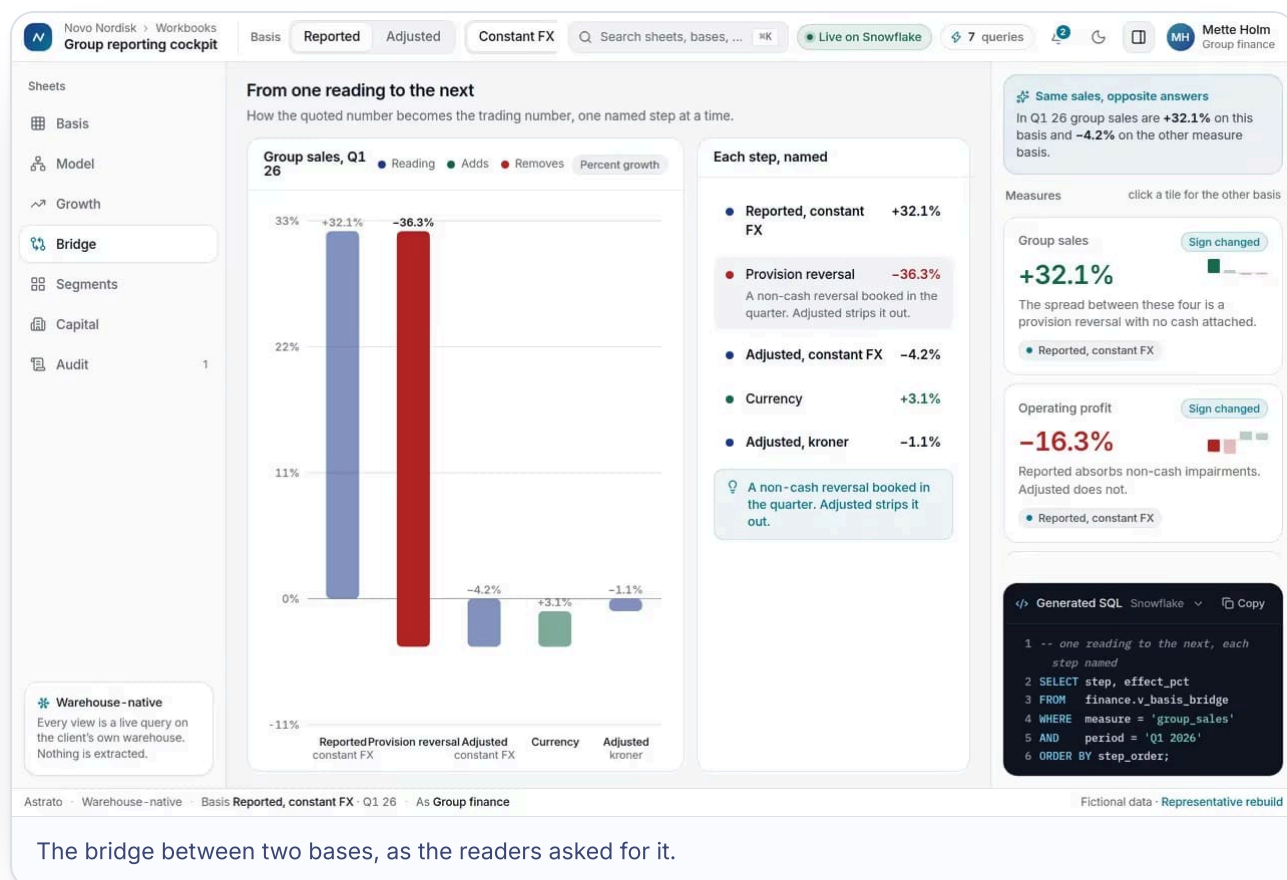
RESEARCH

The people who already knew which number was right

The analysts in finance and supply planning were not confused by the basis problem. They had solved it privately, each in their own spreadsheet, and the cost of that was not error so much as duplication and delay.

What a reconstruction can honestly say about research is limited, and I would rather say the limited true thing than a detailed invented one. The pattern across this kind of engagement is consistent and it held here: the people closest to the data had already built the correct logic by hand, and they distrusted any central dashboard that could not show its working. The question they asked of every new screen was not "is this pretty" but "where did this come from, and on what basis".

That is why the SQL stays visible. Astrato Insights generates measures, dimensions and the query that produced them, and the decision I had pushed for on the platform side applies here with more force than anywhere else: the generated SQL is shown and editable at every step, not tucked behind a disclosure after the fact. In a regulated reporting context, a number whose derivation you cannot read is a number you cannot sign.



The bridge between two bases, as the readers asked for it.

In the rebuild that position is a setting you can try. View the cockpit as one segment's controller and the warehouse applies a row access policy before any query sees a row, looking the role up in a mapping table, the mechanism [Snowflake documents](#) for exactly this. The segment chart then draws that segment alone, and every group figure, derived across both, is withheld rather than shown without its working, with the reason in its place. [Open it as the US Operations controller.](#)

a number someone signs

The path a figure takes, and the two places where a human decision is recorded rather than inferred.

FIG. 008 · RECORD TO SIGNATURE



Most of this chain is plumbing. The two accented stages are the design: a reader can always see the query, and a reader who publishes a figure states the basis they are publishing on, which is recorded beside it.

07

WHAT WAS BROKEN ·
WHAT CHANGED

Five problems, and the decision taken on each

The design decisions that carried weight, each with the thing that made it necessary.

Novo Nordisk · Workbooks

Group reporting cockpit

Basis

Reported

Adjusted

Constant FX

Search sheets, bases, ...

Live on Snowflake

7 queries

Mette Holm

Group finance

Sheets

Basis

Model

Growth

Bridge

Segments

Capital

Audit

Audit trail

Every figure shown this session, with its basis and the query that produced it, and how fresh each source is.

This session

1 entries

Time	What was shown	Basis	Query
20:52:28	Cockpit opened on Every measure, every basis	Reported, constant FX	d5dfd981

Source freshness

4 of 5 loaded today

finance.v_group_sa...

SAP ERP · 48.2m rows

06:02 today

finance.fx_rates

Treasury feed · 12k rows

06:00 today

ops.v_batches

MES · 7.9m rows

05:40 today

quality.v_deviation...

QMS · 0.6m rows

04:15 today

capital.v_projects

Project office · 112 rows

Weekly load, next on Monday

Mon 18:30

Nothing is extracted. Every view is the warehouse answering the question again.

Same sales, opposite answers

In Q1 26 group sales are +32.1% on this basis and -4.2% on the other measure basis.

Measures

click a tile for the other basis

Group sales

Sign changed

+32.1%

The spread between these four is a provision reversal with no cash attached.

Reported, constant FX

Operating profit

Sign changed

-16.3%

Reported absorbs non-cash impairments. Adjusted does not.

Reported, constant FX

Generated SQL

Snowflake

Copy

```
1 -- every figure on screen, with the basis and the query that produced it
2 SELECT shown_at, measure, basis, query_hash, rows_scanned
3 FROM audit.v_cockpit_lineage
4 WHERE session_id = CURRENT_SESSION()
5 ORDER BY shown_at DESC;
```

Warehouse-native

Every view is a live query on the client's own warehouse. Nothing is extracted.

Every figure that reaches the screen is logged with the basis it carried and a hash of the query that produced it, so a number quoted from this cockpit can be traced back to the warehouse.

Astrato · Warehouse-native · Basis Reported, constant FX · Q1 26 · As Group finance

Fictional data · Representative rebuild

Every basis change and every query, logged with its hash and the figure it produced.

01

WAS BROKEN

The same quarter's sales could be quoted as up 32% or down 4%, and both were correct, because reported and adjusted figures on two currency bases circulated without labels.

WHAT I CHANGED

No measure renders without its basis. The control is global, sits against the figures rather than in a panel, and restates the whole screen in one act.

WHY IT HOLDS

The company introduced adjusted measures because the reported ones had stopped describing trading. A dashboard that picks one basis silently throws that distinction away.

02

WAS BROKEN

An early build let each chart carry its own basis, which produced screens where two adjacent tiles measured different things and looked like a comparison.

WHAT I CHANGED

Basis went global. A per-chart override still exists, because sometimes you need one, but it visibly marks the tile as off-basis.

WHY IT HOLDS

Adjacency is an argument. Two tiles side by side assert comparability whether or not the data supports it, and no caption undoes that.

03

WAS BROKEN

The 1 January 2025 segment restructure meant history did not restate cleanly, and the easy fix was to map old segments onto new ones and draw one smooth line.

WHAT I CHANGED

The model keeps both shapes and the chart draws the seam. A continuous trend has to be asked for, and arrives with its restatement assumptions stated.

WHY IT HOLDS

A smoothed line across a definition change is the one chart nobody can audit later, because the discontinuity it hides is exactly what a reviewer would look for.

04

WAS BROKEN

Capital projects were reported as percentage-complete rings, which made a DKK 49.6bn scheme and a DKK 15.9bn scheme look like comparable progress.

WHAT I CHANGED

Budget and spend drawn to a common scale, with the operational date on the same row.

WHY IT HOLDS

Percentage hides magnitude, and magnitude is what the decision turns on. Half of fifty billion and two thirds of sixteen are not the same news.

05

WAS BROKEN

Going from 11 fill-and-finish sites to 14 mid-programme meant charts keyed on the old site list either dropped the new sites or absorbed them silently.

WHAT I CHANGED

Dimension changes are first-class events in the model. A series whose membership changed mid-range says so on the chart, at the point where it changed.

WHY IT HOLDS

A total that moves without explanation is the single fastest way for a reporting layer to lose a reader, and it never gets that reader back.

08

OUTCOME

The honest version of a

number is a slower one

HELD TO THE DESIGN TARGETS IN THE BLUEPRINT; NO OUTCOME WAS MEASURED

IT WORKED IF	RESULT	STATUS
No figure appears without its basis	0 figures on the cockpit without a basis stamp	HELD IN THE REBUILD
One act restates the whole screen	1 basis change restates every tile, every chart and the generated SQL	HELD IN THE REBUILD
An override is never silent	100% of off-basis tiles marked	HELD IN THE REBUILD
Readers adopt it and save time	Not measured, so not claimed	NOT MEASURED

DKK 309bn

FY2025 group net sales

PUBLIC · ANNUAL REPORT 2025

14

fill-and-finish sites

UP FROM 11 AFTER THE 2024 TRANSACTION

67%

of revenue on one molecule

OZEMPIC + WEGOVY, BOTH SEMAGLUTIDE

DKK 60.1bn

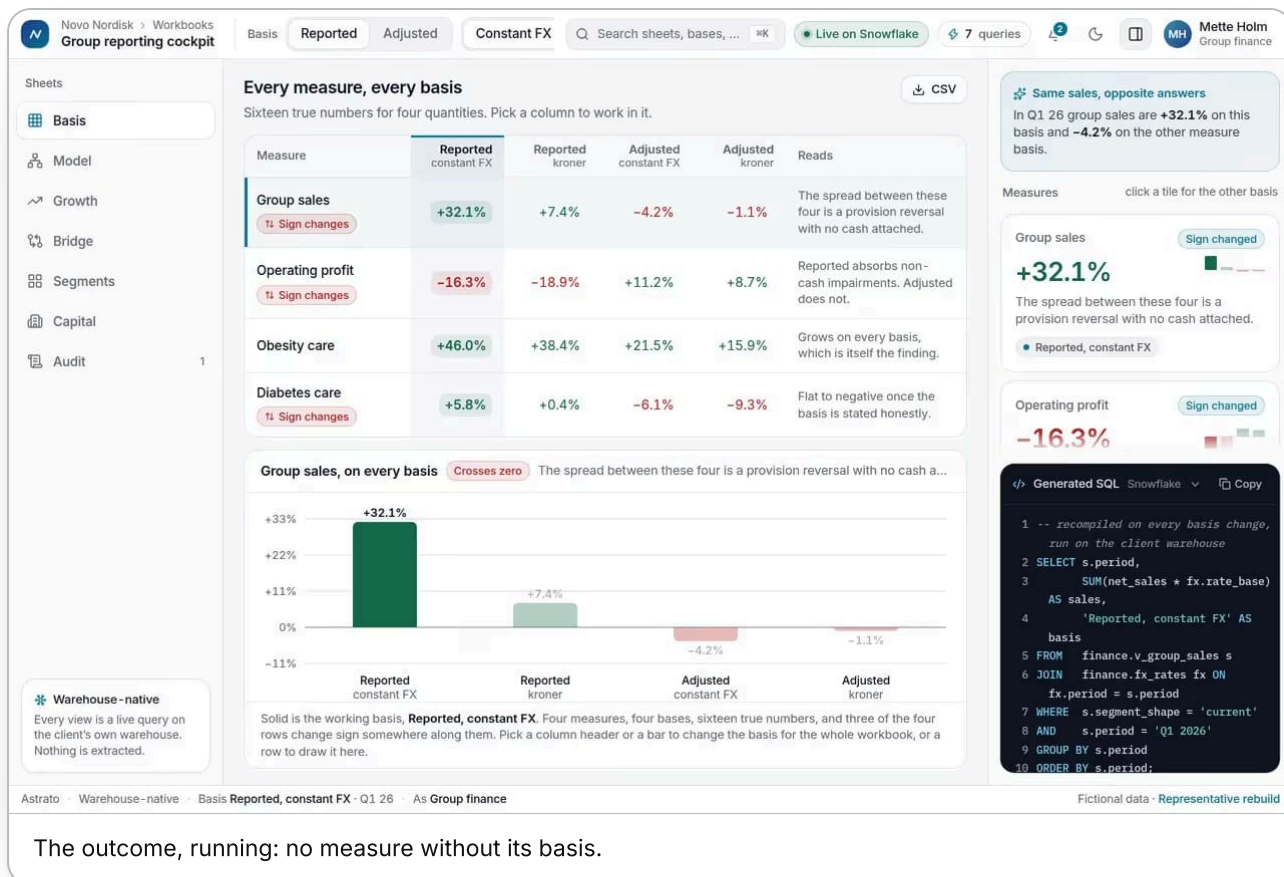
capex, about 19% of sales

PUBLIC · PP&E PURCHASES, 2025

Every figure in that band is public, taken from Novo Nordisk's own reporting, and none of them is a result of this work. I have not put an adoption number or a time-saved number on this page, because I cannot show you the measurement and a number you cannot check does not belong on a site whose argument is that every number carries its source.

What I will claim is the design position, because it is mine and it is arguable either way. A reporting layer for a business like this one should be slower to assert than the spreadsheets it replaces. The spreadsheets were fast because each analyst had already decided the basis privately. A shared screen cannot make that decision privately on behalf of hundreds of readers, so it has to surface the choice, and surfacing a choice costs a click and a moment of thought. That cost is the product, not a failure of it.

What I would tell another designer taking this on: the instinct to simplify is the enemy here. In a company reporting in one currency and earning in another, through a year with a provision reversal large enough to flip the sign of its own headline, the simplification is the error. The job is not to produce one number. It is to make the four honest ones legible, and to make it impossible to quote one without saying which.



What I would do differently

- 01 Agree the measurement before it ships.** This page carries no adoption or time-saved number because I cannot show the measurement. A reporting layer about honest numbers should have shipped with its own.
- 02 Put the click in front of readers early.** Surfacing the basis costs every reader a click and a moment of thought. I would have tested that trade with finance and supply planning in the first prototype, not argued it afterwards.

SEE ALSO

005 • JBS

The other reporting layer on Astrato: a spread stated while it forms, with how settled it is.

002 • Astrato

The platform both reconstructions are built on, from the inside, over three years.

SOURCE NOTES

This case file is a reconstruction. The engagement was real and was delivered on Astrato, the Snowflake-native platform described in case file 002. The delivered artefacts, screens, research material and results are covered by confidentiality and are not shown here. What is on this page is a representative account: the problems are real and public, the design decisions are the ones I argue for in this situation, and the screens are rebuilt for this site rather than exported from the work.

No figure on this page is a measured project outcome. Nothing claims an adoption rate, a time saved or a cost reduced, because that evidence cannot be shown.

Company figures are from Novo Nordisk's published reporting: FY2025 net sales DKK 309,064m, operating margin 41.3%, Ozempic DKK 127,089m and Wegovy DKK 79,106m (Annual Report 2025 and the FY2025 Form 6-K). Capex on property, plant and equipment DKK 60.1bn in 2025.

The Q1 2026 contrast between reported sales up 32% at constant exchange rates and adjusted sales down 4% at constant exchange rates, and the DKK 26.8bn reversal of the 340B provision behind it, are from Novo Nordisk's 2026 quarterly reporting. The intermediate kroner readings in FIG. 005 are the same quantity on the other currency basis and are drawn to illustrate the four-way split.

Kalundborg budgeted ~DKK 49.6bn with DKK 23.1bn spent at 31 December 2025, operational during 2029; Hillerød ~DKK 15.9bn with DKK 10.7bn spent, operational during 2028. From the 2025 annual report's project disclosures.

The segment restructure into US Operations and International Operations took effect 1 January 2025. The fill-and-finish footprint moved from 11 to 14 sites through the 2024 Catalent transaction.

The visual identity here is informed by Novo Nordisk's clinical blue, not copied from it. No logo, wordmark or trade dress is reproduced anywhere on this page or in the running product. Novo Nordisk publishes no hex values for its current primary colour.

← PREVIOUS

**Safe Space · youth mental health
for the NHS**

NEXT →

**JBS · the spread, and what it is
made of**

Shad Abbaslou

Product Design Lead · London
withcontexts.com

Last updated 31 Oct 2026

LinkedIn ↗

Read the CV