E1

Plan, Calculate, and Optimize

Fabric Planning · Self-Paced · 60 min

The Big Picture

Before a single number can be planned, the infrastructure needs to exist and be connected. ACME's finance team starts from scratch — importing the Acme Beverages semantic model, creating a Fabric SQL database, and building the Plan app that links everything together.

From there, finance sets an $18.75B company-wide revenue target and cascades it down to every region, category, and brand. Sales managers refine the plan from the bottom up — applying a brand-level adjustment and a segment-wide seasonal uplift. A Gross Profit formula measure surfaces the business outcome, and the Optimizer finds the combination of revenue growth and cost reduction that hits the $12.5B gross profit target.

What You Will Do in This Exercise

Build a complete planning environment, enter and distribute a 2026 revenue plan, evaluate business outcomes with a formula measure, and use the Optimizer to hit a gross profit target.

Part 1

Set Up the Training Environment

Connect the Acme Beverages semantic model, create the Fabric SQL database, build the Plan app, and configure a SQL connection so the planning sheet is ready for input and collaboration.

Part 2

Explore the Interface

A focused orientation to the ribbons, header, Explorer pane, sidebar panels, and footer — enough to navigate the planning environment confidently before input begins.

Part 3

Top-Down and Bottom-Up Planning

Finance sets a $18.75B Sales Target distributed by prior-year weights with an H2 skew. Sales builds a Sales Plan — Summit Lager NA +8% with trend, EU and LA Q3 +8% via Bulk Edit. Comments and Status column added.

Part 4

Optimizer

Build a Gross Profit sheet with the 2026 Sales Plan and 2025 COGS as inputs. Create a Gross Profit formula measure, then run the Optimizer to hit a $12.5B gross profit target.

Part 5

Approval Workflow

Configure a two-level approval workflow with Regional Manager and Finance Director levels, then verify by submitting a change and observing the status update.

Concepts Behind This Exercise

1 Top-Down Planning

Leadership sets a total target first, then distributes it downward through the hierarchy — to regions, categories, and brands. The opposite of bottom-up, where teams estimate individually and roll up. In a typical cycle, top-down comes first: it gives every level a number to plan against before bottom-up input begins.

2 The 3 Distribution Modes

When a value is entered at a parent level, it spreads to children in one of three ways:

Equal — each child receives the same amount.

Weights — each child receives a share proportional to a reference series (e.g., prior-year actuals). Used in E3.

Trend — values increase or decrease by a percentage as they spread across periods or hierarchy levels.

3 Bottom-Up Planning

Each team builds its plan independently from the ground up, based on its own market knowledge. Results roll up through the hierarchy to a regional and company total. Unlike top-down, which pushes a number down, bottom-up surfaces what teams believe is actually achievable.

Concepts Behind This Exercise

4 Formula Measures

A formula measure is defined by a calculation rather than stored data. Values derive automatically from other measures and update whenever the underlying sources change.

In E1, Gross Profit = Sales Plan − COGS — connecting the planning input to a business outcome. Formula measures cannot be edited directly; they always reflect the current state of their inputs.

The formula must reference the editable Sales Plan and COGS data input columns — not the original From Sheets or semantic model measures — so the Optimizer can update them and the formula recalculates in real time.

5 Optimizer

The Optimizer finds the combination of variable values that achieves a defined objective — maximum, minimum, or a specific target — subject to optional constraints.

In E1, the objective is a $12.5B gross profit target. The variables are the Sales Plan and COGS input columns. The Optimizer adjusts both simultaneously — increasing revenue and reducing costs.

Constraints can restrict how far a variable moves. In E1, no constraints are applied, giving the Optimizer full freedom to find the most efficient path.

Your Deliverable at the End of E1

1. Plan app built and connected
2. 2026 Sales Target set and distributed
3. 2026 Sales Plan built with brand and segment adjustments
4. Collaboration columns added
5. Gross Profit sheet with Optimizer result at $12.5B
6. (Optional) Approval workflow configured

Year	2025		
Region Name	Sales Plan in Millions	COGS in Millions	Gross Profit in Millions
All	19,546.96	7,046.96	12,500.00
APAC	2,467.00	844.45	1,622.55
Beer	2,195.44	746.25	1,449.19
Hard Seltzer	142.12	48.00	94.12
Non-Alcoholic Beverages	91.63	38.84	52.78
Ready to Drink Cocktails	37.81	11.35	26.46
EU	4,782.85	1,750.75	3,032.10
Beer	4,166.86	1,529.92	2,636.95
Hard Seltzer	327.70	108.75	218.95
Non-Alcoholic Beverages	205.38	87.12	118.25
Ready to Drink Cocktails	82.91	24.96	57.95

Key Terms

Plan App	A planning item in Microsoft Fabric, comprising Planning sheets for budgeting, forecasting, and scenario modelling, PowerTable sheets for large-scale dimensional planning, and Intelligence sheets for variance analysis and reporting.
SQL Database Connection	A connection used to store collaboration data for a Plan app, enabling multiple users to work on the same plan and write data back to the same Fabric SQL database.
Planning Sheet	A structured, spreadsheet-like workspace within a Plan app where users enter, update, and analyze planning data across defined business dimensions such as time, category, or region. Data can come from a semantic model connection, From Sheets references to other planning sheets, or direct manual input.
Data Input Column	A column used to capture values that aren't in the underlying dataset or need manual adjustment — such as targets or forecasts. Unlike data source columns, which are read-only, data input columns are editable in the sheet.
Visual Measure	A data input field that appears at every level of the column hierarchy — year, quarter, and month. Values roll up and distribute across all levels automatically.

Key Terms

Visual Column	A single static data input column at the end of the table. Unlike a Visual Measure, it does not appear at every level of the column hierarchy.
Copy from	A column insertion option that pre-fills the new column with values from an existing measure. One-time snapshot — the column is independent immediately after.
Distribution Menu	The popup on any parent cell offering Equal, Weights, or Trend distribution — plus Copy Values (replicate the same value to leaf-level cells).
Lock This Cell	Locks a single cell only. Siblings and children are unaffected.
Lock All Children	Locks every descendant of the selected cell.
From Sheets	A data source option that pulls values from another planning sheet within the same Plan app.
Append by	Increases a cell's current value by a specified percentage or amount rather than replacing it. Entering +8% adds 8% on top of whatever the cell already contains.
Overwrite	Replaces a cell's current value entirely with the value you enter. The previous figure is discarded. Used when you want to set an absolute number rather than adjust relative to the baseline.
Bulk Edit	Applies a single value or percentage across all rows and columns matching a defined filter — region, category, channel, period, or any combination. Eliminates repetitive cell-by-cell entry for consistent segment-wide assumptions.

References

Explore the plan interface	Describes the menu bar, ribbons, Explorer pane, sidebar panels (Data, Fields, Filter, Comments, Bookmarks), and footer controls that make up the Plan app canvas.
Basic interactions	Covers adding planning, intelligence, and PowerTable sheets, configuring layout options, managing hierarchy expand/collapse and totals, and sorting and filtering data.
Create a plan/budget	Details how to create a planning series from scratch or build upon an existing series.
Lock values	Explains how to secure specific cells or their children to prevent unwanted recalculations when parent values are updated.
Optimizer	Describes how to configure objectives, variables, and constraints to find optimal planning values.