

Multi-Dimensional Planning

Fabric Planning · Self-Paced · 15 min

The Big Picture

Different teams plan at different levels of detail. Finance plans revenue by region and country — the grain that matches their reporting structure. The cost team plans by category and brand — the grain that matches their cost structure. Neither team should have to re-enter their numbers at the other's level.

In this exercise, ACME builds three connected sheets — a Regional Plan, a Brand Plan, and a Profitability sheet that brings both together at the common Region → Country → Category → Brand grain. Cube measures make this possible: each plan is entered once at its natural level, allocated automatically to the shared grain, and kept in sync in both directions — a revision made anywhere is reflected everywhere, instantly.

What You Will Do in This Exercise

Build plans at two different grains and consolidate them into a single profitability view — with live two-way sync.



Part 1

Build the Templates

Create the Regional Plan sheet with a Sales Plan Cube measure — Region and Country rows, with Category and Brand added to the breakdown. Create the Brand Plan sheet with a Cost Plan Cube measure — Category and Brand rows, with Region Name and Country Name added to the breakdown. Then build the Profitability sheet at the full four-dimension grain, import both Cube measures, and calculate Gross Profit — with values populating automatically and no manual entry.



Part 2

Real-Time Plan Alignment

Revise the revenue assumption in Regional Plan and watch it cascade to the Profitability sheet. Then revise a cost assumption directly in the Profitability sheet and watch it flow back to Brand Plan — demonstrating that the connection works in both directions with no reconciliation step.

The Planning Problem and How Cube Solves It

Most organizations plan revenue and costs at different levels of detail — finance thinks in regions and countries, the cost team thinks in categories and brands. Both views are correct for their owners, but the business needs them together: profitability by region, country, category, and brand.

The obvious approach fails. Pulling a region-level Sales Plan into a sheet that also has category and brand rows produces a dimension mismatch — the measure was built on two dimensions and cannot resolve at four. The traditional workaround is manual re-entry or re-allocation every time either plan changes.

Cube measures remove that step entirely. Each plan declares through its breakdown every dimension it needs to participate in — and the system handles the allocation automatically using a reference measure as the weighting basis. One entry, any grain, always in sync.

How Cube Measures Work

1 The Breakdown

A breakdown defines every dimensional level a Cube measure can be read into — not just the dimensions on the sheet where it is created. The Regional Plan has only Region Name and Country Name rows, but its Sales Plan measure carries Category and Brand in its breakdown so it can resolve at the full four-dimension grain on the Profitability sheet. Brand Plan mirrors this in reverse. Each measure's breakdown is configured independently.

2 The Reference Measure

The reference measure does two jobs: it determines which dimension combinations are valid — no allocation to a brand never sold in a country — and it provides the weights for distributing values across the additional dimensions.

3 Two-Way Sync

On the Profitability sheet, Cube measures are pulled in through Data → From Sheets → Cube and inserted as measures. A Cube measure can be edited on any sheet it appears on — and the change writes back to the source using the breakdown's allocation logic. An edit in the Regional Plan cascades down to every category and brand on Profitability. An edit to costs on Profitability flows back to Brand Plan. The three sheets are one connected model.

Your Deliverable at the End of E5

1

Regional Sales
Plan Sheet

2

Cost Brand Plan
Sheet

3

Profitability
Sheet

4

Update Assumptions
and verify real-time
sync

Year	2025															
Quarter Name	Total				> Q1				> Q2				> Q3			
Region Name	Cost Plan in Millions	Sales Plan in Millions	Gross Profit in Millions	Cost Plan in Millions	Sales Plan in Millions	Gross Profit in Millions	Cost Plan in Millions	Sales Plan in Millions	Gross Profit in Millions	Cost Plan in Millions	Sales Plan in Millions	Gross Profit in Millions	Cost Plan in Millions	Sales Plan in Millions	Gross Profit in Millions	Cost Plan in Millions
All	7,763.49	18,334.46	10,570.96	1,941.20	4,585.84	2,644.64	1,945.89	4,593.14	2,647.25	1,938.22	4,577.62	2,639.40	1,938.19	4,577.86	2,639.67	
APAC	903.92	2,152.03	1,248.11	227.72	542.71	314.99	225.88	538.34	312.46	226.34	538.40	312.05	223.97	532.58	308.61	
EU	1,874.04	4,901.46	3,027.41	471.98	1,234.27	762.29	465.44	1,216.61	751.17	467.33	1,222.92	755.59	469.29	1,227.66	758.37	
LA	865.32	2,060.41	1,195.09	215.66	513.30	297.64	219.25	522.07	302.81	215.11	512.52	297.41	215.30	512.53	297.23	
NA	4,120.21	9,220.56	5,100.35	1,025.84	2,295.56	1,269.73	1,035.32	2,316.13	1,280.81	1,029.43	2,303.79	1,274.35	1,029.63	2,305.08	1,275.46	
Canada	609.00	1,447.64	838.64	153.59	365.04	211.45	152.55	363.18	210.63	152.00	361.82	209.82	150.87	357.60	206.74	
Mexico	143.76	342.94	199.18	34.89	83.33	48.44	35.92	85.71	49.79	35.78	85.26	49.48	37.18	88.64	51.46	
United States	3,367.45	7,429.98	4,062.53	837.36	1,847.20	1,009.84	846.85	1,867.24	1,020.39	841.66	1,856.71	1,015.05	841.58	1,858.84	1,017.26	
Beer	2,973.51	7,429.98	4,062.53	837.36	1,847.20	1,009.84	846.85	1,867.24	1,020.39	841.66	1,856.71	1,015.05	841.58	1,858.84	1,017.26	
Artisan Ale	283.02	618.23	335.21	69.62	152.00	82.39	72.43	158.01	85.58	70.84	154.76	83.92	70.13	153.46	83.33	
Cosmic Craft Brews	2.70	5.86	3.16	0.65	1.40	0.75	0.65	1.42	0.77	0.54	1.18	0.64	0.86	1.86	1.00	
Eclipse Light	189.22	411.09	221.87	48.92	105.45	56.53	47.33	102.85	55.52	46.16	100.83	54.66	46.80	101.96	55.16	
Old Mill Stout	372.91	813.22	440.31	92.87	202.02	109.15	93.58	204.36	110.78	92.59	202.67	110.08	93.88	204.18	110.30	
Riverbend IPA	498.46	1,084.99	586.54	122.11	265.89	143.79	125.23	272.89	147.66	128.33	277.89	149.56	122.79	268.32	145.53	
Summit Lager	1,627.20	3,540.44	1,913.24	407.05	886.71	479.67	412.71	897.99	485.29	403.07	876.21	473.14	404.38	879.52	475.15	

References

[Create a Multi-Dimensional Planning Cube](#)

Full guide covering CUBE measure configuration, breakdown setup, reference measure allocation, importing cube measures into other sheets, and best practices