



Lesson 3: Analysis of Cost

Agenda



Session 1:

- How is cost tracking organized in corporations
- Building the pipeline (in SQL)
- P&L Statements

Session 2:

- Variable vs fixed cost in real world (multi-level P&L)
- Allocating central costs

How is cost organized – three key dimensions



Type

Function

Segment

What is being spend?

For what we are spending?

Who is spending?

Spending 1000 USD on **electricity** for **product delivery** at **Production Facility A**

Usually called account

Usually called cost center, cost pool

Usually called business unit, segment

Idea is to track cost by what is being used: labour, materials, utilities etc.

Organized by the different functions like production, delivery, finance, IT etc.

Follows the business organization on departments, units etc.

What does this mean for data analysis



“Long” data table with raw data			
Account	Cost pool	Business Segment Code	Amt
ACC-200101 (Salary)	CP-001 (Lithography)	BU-Op-101 (Production Facility A)	50000
ACC-200101 (Salary)	CP-002 (Maintenance)	BU-Op-101 (Production Facility A)	60000
ACC-200101 (Salary)	CP-002 (Maintenance)	BU-Op-103 (Finance center)	10000
ACC-300101 (Electricity)	CP-001 (Lithography)	BU-Op-101 (Production Facility A)	20000
ACC-300101 (Electricity)	CP-001 (Lithography)	BU-Op-102 (Production Facility B)	30000



Our simulated company data has only two
dimensions – type & segment



Revenue (“Top line”)

Another dimension (total, time, segment, function
etc.)

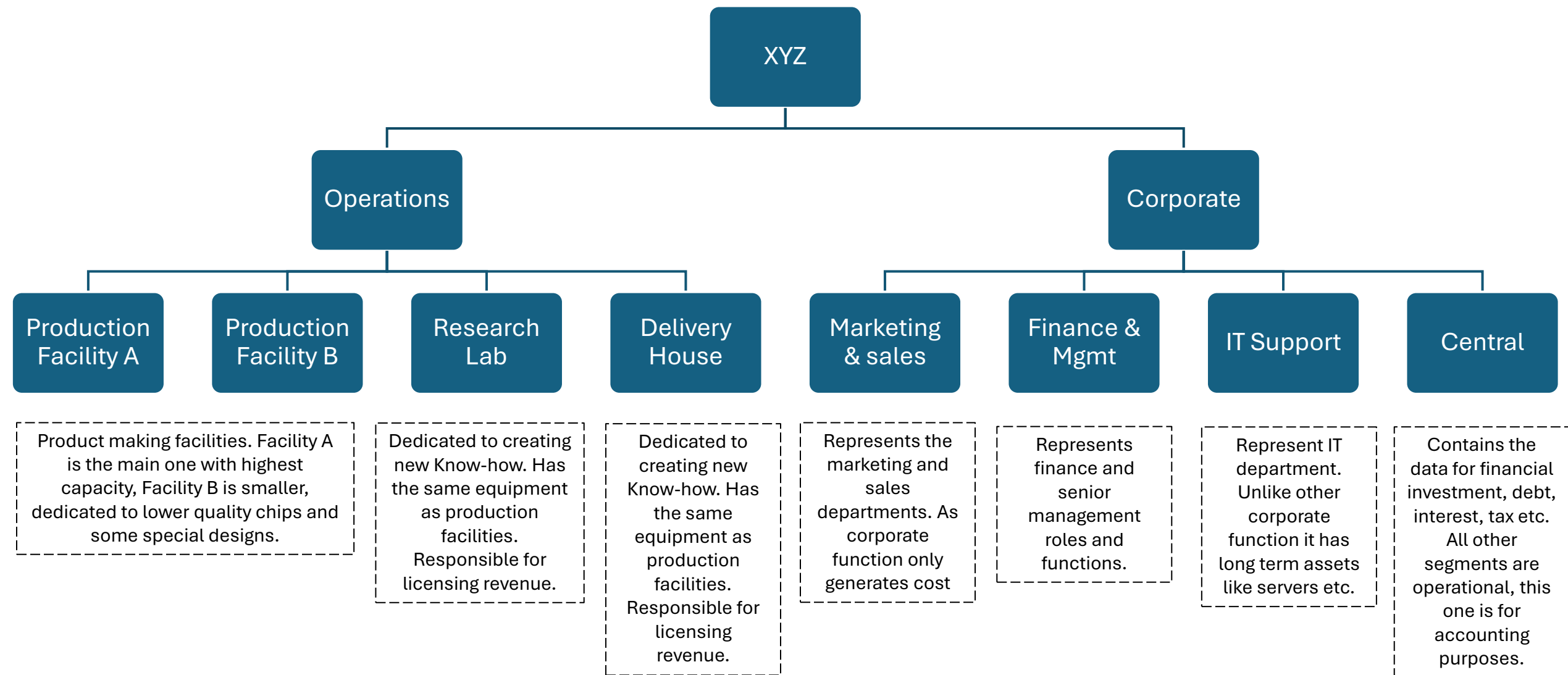
Cost breakdown

Labour
Materials
Utilities
Depreciation

Total

Profit (“Bottom line”)

How is XYZ organized





Provided each month at job-title level and spread across all segments. Broken down to salary, bonus and taxes

Labor cost table

Monthly spending on utilities – electricity, water, specialty. Provided by each business segment

Utilities cost

Main accounting table (prepared)

Summary table provided at account level each month, without details native tables

Materials cost

Cost of materials provided each month and allocated on a product level

Depreciation cost

Depreciation cost provided by each asset type and allocated to each business segment

Add analytics accounts for different debt interest and taxes

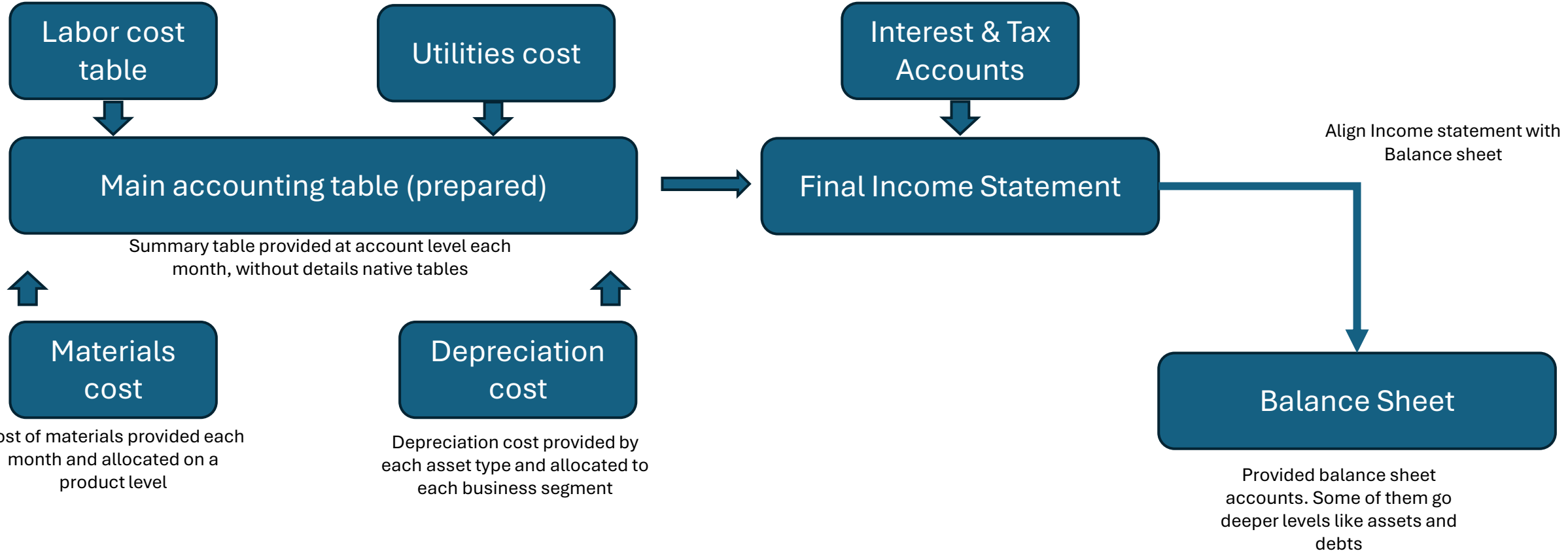
Interest & Tax Accounts

Final Income Statement

Align Income statement with Balance sheet

Balance Sheet

Provided balance sheet accounts. Some of them go deeper levels like assets and debts





Lets go in Databricks