ZetaMinds
Turning Complexity Into Clarity

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Lesson 3: Analysis of Cost

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Agenda

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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

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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.

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What does this mean for data analysis

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"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

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

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P&L

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Revenue (“Top line”)

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

Cost breakdown

- Labour
- Materials
- Utilities
- Depreciation

Total

Profit (“Bottom line”)

How is XYZ organized

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- XYZ
  - Operations
    - Production Facility A
      - Product making facilities. Facility A is the main one with highest capacity, Facility B is smaller, dedicated to lower quality chips and some special designs.
    - Production Facility B
    - Research Lab
      - Dedicated to creating new Know-how. Has the same equipment as production facilities. Responsible for licensing revenue.
    - Delivery House
      - Dedicated to creating new Know-how. Has the same equipment as production facilities. Responsible for licensing revenue.
  - Corporate
    - Marketing & sales
      - Represents the marketing and sales departments. As corporate function only generates cost
    - Finance & Mgmt
      - Represents finance and senior management roles and functions.
    - IT Support
      - Represent IT department. Unlike other corporate function it has long term assets like servers etc.
    - Central
      - Contains the data for financial investment, debt, interest, tax etc. All other segments are operational, this one is for accounting purposes.

Data pipeline

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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

Add analytics accounts for different debt interest and taxes

Interest & Tax Accounts

Main accounting table (prepared)

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

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

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

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Lets go in Databricks