

## Title: Splitting Forecasted Workload by Typology

### Scenario: Project Resource Forecasting

You are part of the **PMO** in a company managing large-scale industrial programs. Your team has received a **sales forecast** that estimates the number of hours expected to be spent on each upcoming project (at the reference level). However, these hours are aggregated and do not show how the work is split across internal functions.

To support workforce planning, the PMO has created a **typology file** that indicates the standard percentage split of work hours between for each category of projects:

- **Project Management (PM)**
- **Engineering**
- **Sourcing**

Your job is to build a normalized table that takes the total forecasted hours and allocates them by function based on this typology.

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### Data Description

1. Sales forecast.xlsx
    - Sheet: Forecast
    - Fields:
      - Opportunity Number, Name, Project Type, Segment, Scenario, Expected Order Date : Information about the sales deals
      - PM Hours, Engineering Hours, Sourcing Hours: Estimated hours for each deal per function
  2. Typology.xlsx
    - Sheet: Typology
    - Fields:
      - Project Type, Segment, Employee
      - Workload allocated on a 12-month basis, as % of the total
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## Goal

Create a detailed dataset where each reference is broken down into multiple rows — one per function — with calculated forecasted hours per function.

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## Key Steps

- Load both Excel files into Power BI.
  - Review and **check column types** (ensure numeric formats are correctly detected).
  - **Merge** the two datasets using a Reference field.
  - **Unpivot** the columns PM, Engineering, Sourcing to get two columns:
    - Function, Ratio
  - Add a **calculated column** in Power Query:
    - $\text{FunctionHours} = \text{ForecastHours} \times \text{Ratio}$
  - Remove any unnecessary or blank columns.
  - Rename columns for clarity and maintain consistent casing (e.g., reference → Reference).
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## Key Takeaways

- Practice using **Merge** and **Unpivot** together to build analytical-friendly data.
- Learn how to apply **business logic** through calculated columns in Power Query.
- Build a foundation for **resource forecasting dashboards** by role or department.