Yvis Fu

Yvis Fu – A fun fact

I came from a Chinese background and my parents named me

Fu Yu
付 宇

With Fu as my surname Fu and Yu, meaning Universe, as my first name.

While traveling through different countries, I observed that people perceive their names and understand their identities in various ways. Desiring to be unique, I decided to create an English first name for myself starting with the letter Y, to take with me on my long journey to the UK.

Taking inspiration from the elegant French name 'Yvette,' I had some fun combining 'Yv' with 'is' to make Yvis. And that's how Yvis was born—a name with a story as unique as its sound!

The Journey of Yvis: A Roadmap from 2012 to 2024

Professional Experience

2012 - 2016

09/2012 – 06/2016 **BEng** in Computer Science **BISTU**
06/2015 – 04/2016 Assistant Product Manager **Qunar**

2016 - 2019

07/2016 – 08/2019 Product Strategy Manager
Jianpu Technology

2019 - 2020

19/2020 **MSc** Business Analytics
University of Edinburgh

2020 - 2022

12/2020 – 07/2022 Lead Business Data Analyst
China Telecom Europe

2022 - 2024

08/2022 - Now Analyst Consultant
Alvarez and Marsal

Skillset

1. SQL
Data Structure
Data Engineering

2. User Research
A/B testing
Product Strategy

3. Python
Predictive modelling
Data Analytics

4. B2B Marketing
Revenue forecast
Sales operation

5. Power BI
Value Creation / Cost-out

Case Study

Project Background

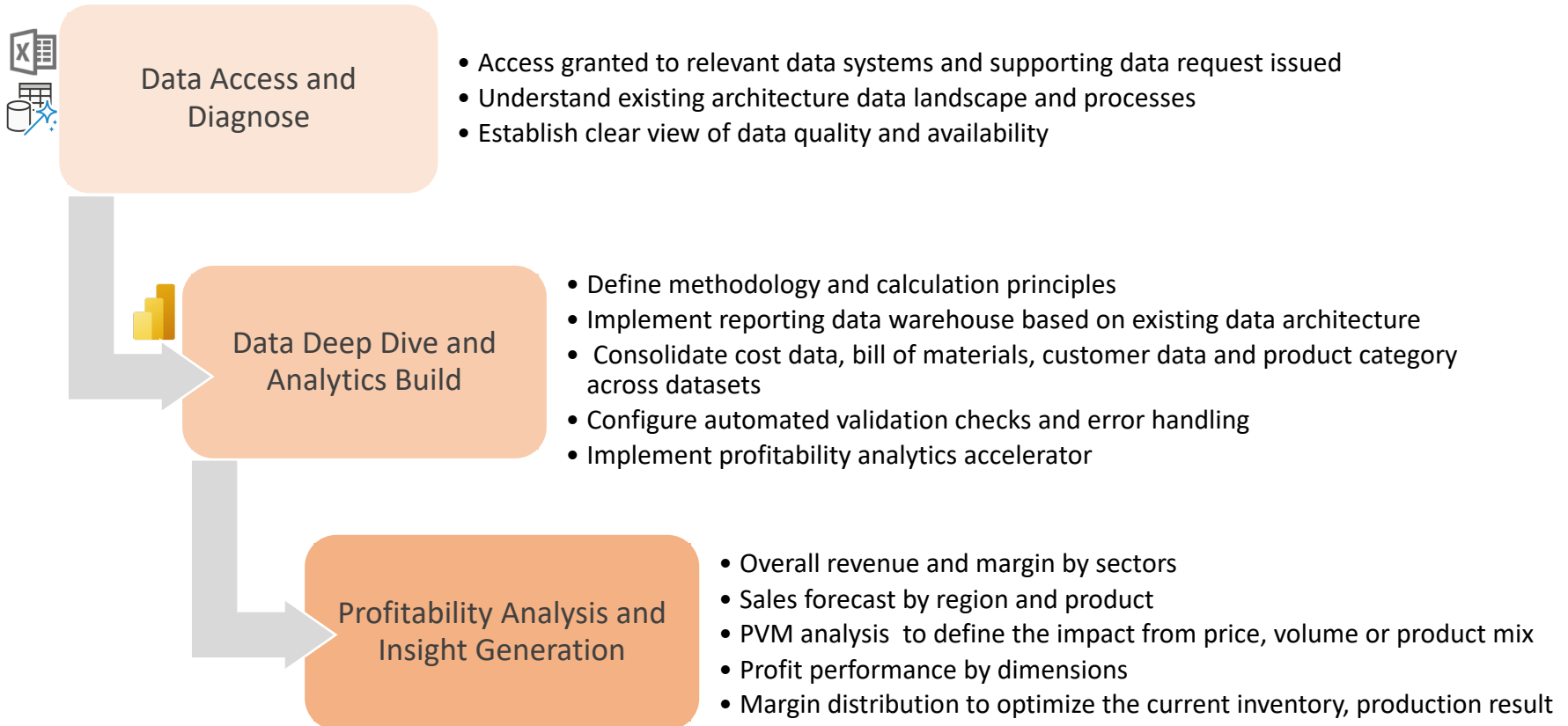Manufacturer client currently under the end-to-end systems transformation assessment

A single source of truth is required for C-suite executives to understand margin erosion in the current high-inflation environment. Standard costing practices, though maintained across divisions, often fail to allocate costs at the BoM or SKU level, hindering timely, accurate, and data-driven decisions. By refining cost allocation and data processes, the organization will achieve more reliable reporting and better strategic decisions.

Key Objectives:

- **Revenue Pockets**: Pinpoint key revenue sources and sales forecast, including major client and product

- **Margins**: Examine margin gains and losses to understand profitability drivers

- **Cost Allocation**: Improve cost allocation methods at the BoM and SKU levels for better precision

- **Data Collection and Reporting Systems** : Rationalize the current data collection process for efficiency and accuracy, strengthen the impact of reporting systems across ERP, CRM, and EPM systems

Enhancing Profitability and Visibility through Applied Technical Expertise

Leverage accelerators to deliver value

Data Access and Diagnose

- Access granted to relevant data systems and supporting data request issued
- Understand existing architecture data landscape and processes
- Establish clear view of data quality and availability

Data Deep Dive and Analytics Build

- Define methodology and calculation principles
- Implement reporting data warehouse based on existing data architecture
- Consolidate cost data, bill of materials, customer data and product category across datasets
- Configure automated validation checks and error handling
- Implement profitability analytics accelerator

Profitability Analysis and Insight Generation

- Overall revenue and margin by sectors
- Sales forecast by region and product
- PVM analysis to define the impact from price, volume or product mix
- Profit performance by dimensions
- Margin distribution to optimize the current inventory, production result

Product Profitability Analysis Model Leveraging Revenue-Cost

Enhanced visibility into product performance and actionable recommendations for decision-making

SKU Margin Model

Revenue: sales detail, recorded on a daily basis

Revenue — Cost = £ Gross Profit

Cost: Standard Cost and Actual Cost, which are measured in an ingredient level

...

- **Product profitability analysis** targets margin at a BoM granularity level, allowing manufacturers to better understand their real-time product margins. By following a single source of truth, this analysis can quickly identify underperforming SKUs and examine specific dimensions, including the impact of price-volume mix on revenue.

Data Modelling
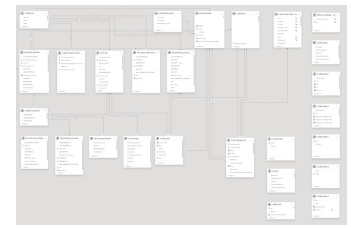
'no regret' data opportunities to extract early value from existing systems and lay the building blocks for the wider systems transformation

Sales
- **SKUs No.**
- Net Sales
- Gross Margin
- Unit Cost
- Unit Price
- **Customer Code**

KPI
- **SKUs No.**
- Net Sales
- Gross Margin
- Unit Cost
- Unit Margin
- Unit Price

Bill_of_Materials
- **SKUs No.**
- **Component_No**
- QTY_PER_ASSEMBLY
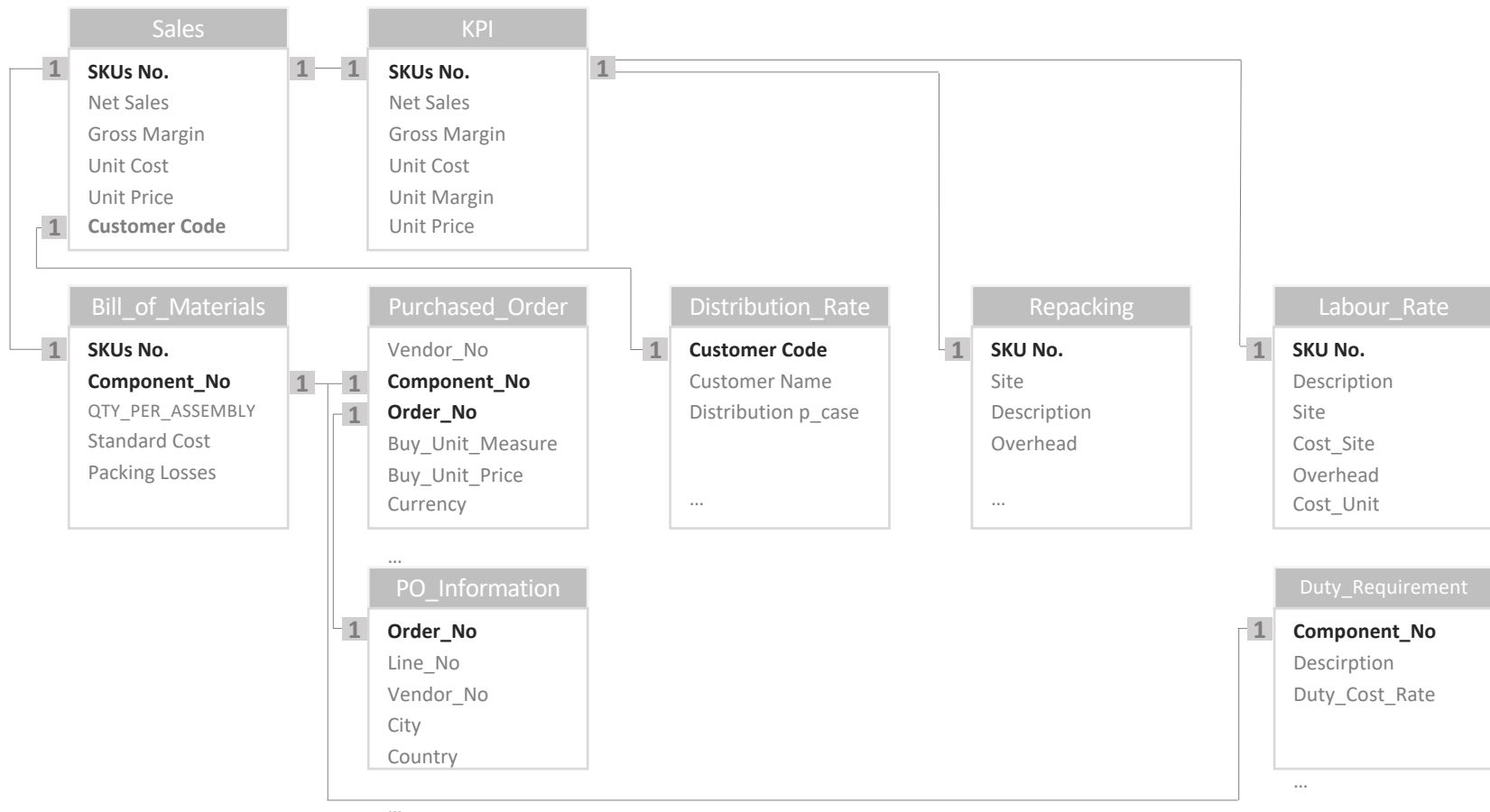- Standard Cost
- Packing Losses

Purchased_Order
- Vendor_No
- **Component_No**
- **Order_No**
- Buy_Unit_Measure
- Buy_Unit_Price
- Currency
- …

Distribution_Rate
- **Customer Code**
- Customer Name
- Distribution p_case
- …

Repacking
- **SKU No.**
- Site
- Description
- Overhead
- …

Labour_Rate
- **SKU No.**
- Description
- Site
- Cost_Site
- Overhead
- Cost_Unit

PO_Information
- **Order_No**
- Line_No
- Vendor_No
- City
- Country
- …

Duty_Requirement
- **Component_No**
- Descirption
- Duty_Cost_Rate
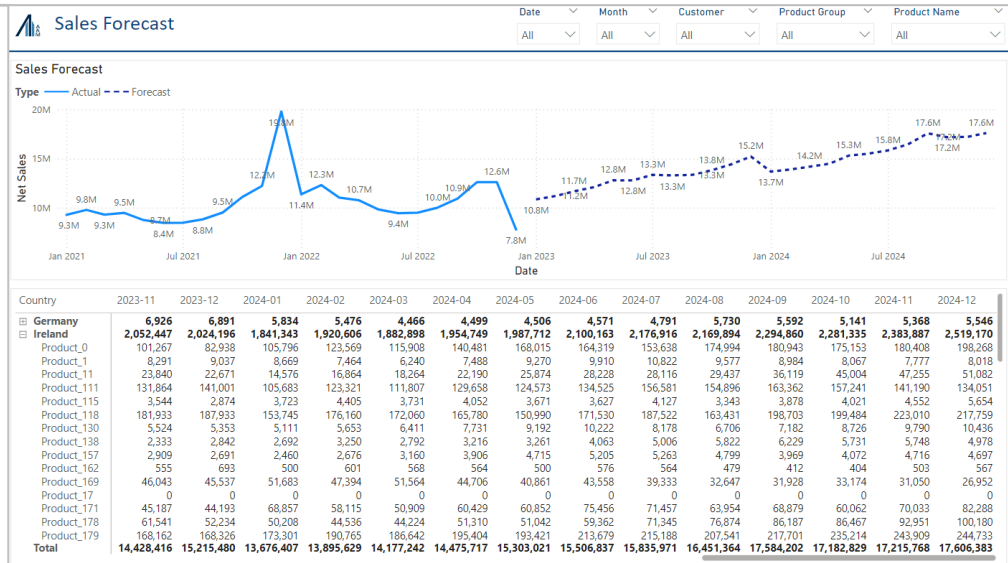- …

Sales Forecast - ARIMA Time Series Model

Accurate predictions about future sales leads to better planning and informed decision-making

- Time series models analyze historical data to forecast future values, providing essential sales guidance. Their strong ability to make accurate short to medium-term forecasts is crucial for sales planning. By combining autoregression, differencing (to stabilize the data), and moving averages, these models help predict future values by analyzing past data and adjusting for regular patterns and random fluctuations.

Limitations

Although insufficient or inconsistent data points can cause variance in the model's outcomes, incorporating a moving average can help mitigate significant biases and gaps in the forecasts

The company has experienced a rapid sale growth in Dec, 2021. The forecast balanced the high sales in Dec. due to the covid impact in 2022.

Sales Forecast

Date	Month	Customer	Product Group	Product Name
All	All	All	All	All

Sales Forecast

Type — Actual --- Forecast

Net Sales (chart): 9.3M, 9.8M, 9.3M, 9.5M, 8.7M, 8.4M, 8.8M, 9.5M, 12.7M, 19.4M, 12.3M, 11.4M, 10.7M, 9.4M, 10.0M, 10.9M, 12.6M, 10.8M, 7.8M (Actual); 11.7M, 11.2M, 12.8M, 12.8M, 13.3M, 13.3M, 13.3M, 13.7M, 13.8M, 14.2M, 15.2M, 15.3M, 15.8M, 17.2M, 17.6M, 17.6M (Forecast)

Dates: Jan 2021, Jul 2021, Jan 2022, Jul 2022, Jan 2023, Jul 2023, Jan 2024, Jul 2024

Country	2023-11	2023-12	2024-01	2024-02	2024-03	2024-04	2024-05	2024-06	2024-07	2024-08	2024-09	2024-10	2024-11	2024-12
⊞ Germany	6,926	6,891	5,834	5,476	4,466	4,499	4,506	4,571	4,791	5,730	5,592	5,141	5,368	5,546
⊟ Ireland	2,052,447	2,024,196	1,841,343	1,920,606	1,882,898	1,954,749	1,987,712	2,100,163	2,176,916	2,169,894	2,294,860	2,281,335	2,383,887	2,519,170
Product_0	101,267	82,938	105,796	123,569	115,908	140,481	168,015	164,319	153,638	174,994	180,943	175,153	180,408	198,268
Product_1	8,291	9,037	8,669	7,464	6,240	7,488	9,270	9,910	10,822	9,577	8,984	8,067	7,777	8,018
Product_11	23,840	22,671	14,576	16,864	18,264	22,190	25,874	28,228	28,116	29,437	36,119	45,004	47,255	51,082
Product_111	131,864	141,001	105,683	123,321	111,807	129,658	124,573	134,525	156,581	154,896	163,362	157,241	141,190	134,051
Product_115	3,544	2,874	3,723	4,405	3,731	4,052	3,671	3,627	4,127	3,343	3,878	4,021	4,552	5,654
Product_118	181,933	187,933	153,745	176,160	172,060	165,780	150,990	187,522	171,530	163,431	198,703	199,484	223,010	217,759
Product_130	5,524	5,353	5,111	5,653	6,411	7,731	9,192	10,222	8,178	6,706	7,182	8,726	9,790	10,436
Product_138	2,333	2,842	2,692	3,250	2,792	3,216	3,261	4,063	5,006	5,822	6,229	5,731	5,748	4,978
Product_157	2,909	2,691	2,460	2,676	3,160	3,906	4,715	5,205	5,263	4,799	3,969	4,072	4,716	4,697
Product_162	555	693	500	601	568	564	500	576	564	479	412	404	503	567
Product_169	46,043	45,557	51,683	47,394	51,564	44,706	40,861	43,558	39,333	32,647	31,928	33,174	31,050	26,952
Product_17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Product_171	45,187	44,199	68,857	58,115	50,909	60,429	60,852	75,456	71,457	63,954	68,879	60,062	70,033	82,288
Product_178	61,541	52,234	50,208	44,536	44,224	51,310	51,042	59,362	71,345	76,874	86,187	86,467	92,951	100,180
Product_179	168,162	168,326	173,301	190,765	186,642	195,404	193,421	213,679	215,188	207,541	217,701	235,214	243,909	244,733
Total	14,428,416	15,215,480	13,676,407	13,895,629	14,177,242	14,475,717	15,303,021	15,506,837	15,835,971	16,451,364	17,584,202	17,182,829	17,215,768	17,606,383

Please note that anonymous data has been used in this case study to maintain confidentiality

Optimizing Profitability through Advanced Analytics Methodologies and Strategies

Overview financial performance and drivers

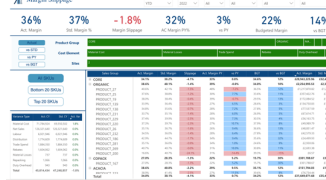| Visibility & Profitability	Price Volume Mix	Margin Distribution	Margin Slippage	Purchase Price Variance
Develop consolidated " One source of truth" and detailed view of Entity, BU, Product Group profitability performance with relevant and comparable dimensions	Conduct PVM analysis to define the impact of product price, selling volume and the mix of price and volume to the revenue and margin	Establish consolidated margin cube from client, break down to a product level. 80:20 analysis helps track better with product profit in different margin group	Define the drivers from cost category and how it impact margin. i.e., Material cost, labor cost, trade spend, rebates and repacking etc.	Consolidated Purchase Price Variance specifically focused on the bill of material level for how we measuring the cost in an ingredient level

Outputs

✓ Harmonised data across business unit, product group and category ✓ Aggregated and drillable Revenue, BU, Product Group and SKUs ✓ Product profitability ✓ Standard costing and variance reporting ✓ Dimensions e.g., brand contribution margin ✓ Revenue/ Cost KPIs	✓ Detailed bridge view of revenue and margin ✓ Full pilot methodology and analytical toolkit to evaluate impacts ✓ Analysis the effectiveness of new, churn (discontinued), other type of product ✓ On-going monitoring of product revenue and variances	✓ Distributed product margin with long tail ✓ Category product into different profit level group ✓ Effectively display the product with their margin performance	✓ Group view of detailed cost category ✓ Analysis of standard cost, Actual cost in a detailed level ✓ Variance analysis with PY, Budget, Standard and Actual cost ✓ Track ongoing with cost category for accurate result	✓ Overview level on favourable and unfavourable SKUs ✓ Targeted areas bill of material to measure the ingredient cost change of making finished goods ✓ Baseline to quantify the procurement efficiency and functionality