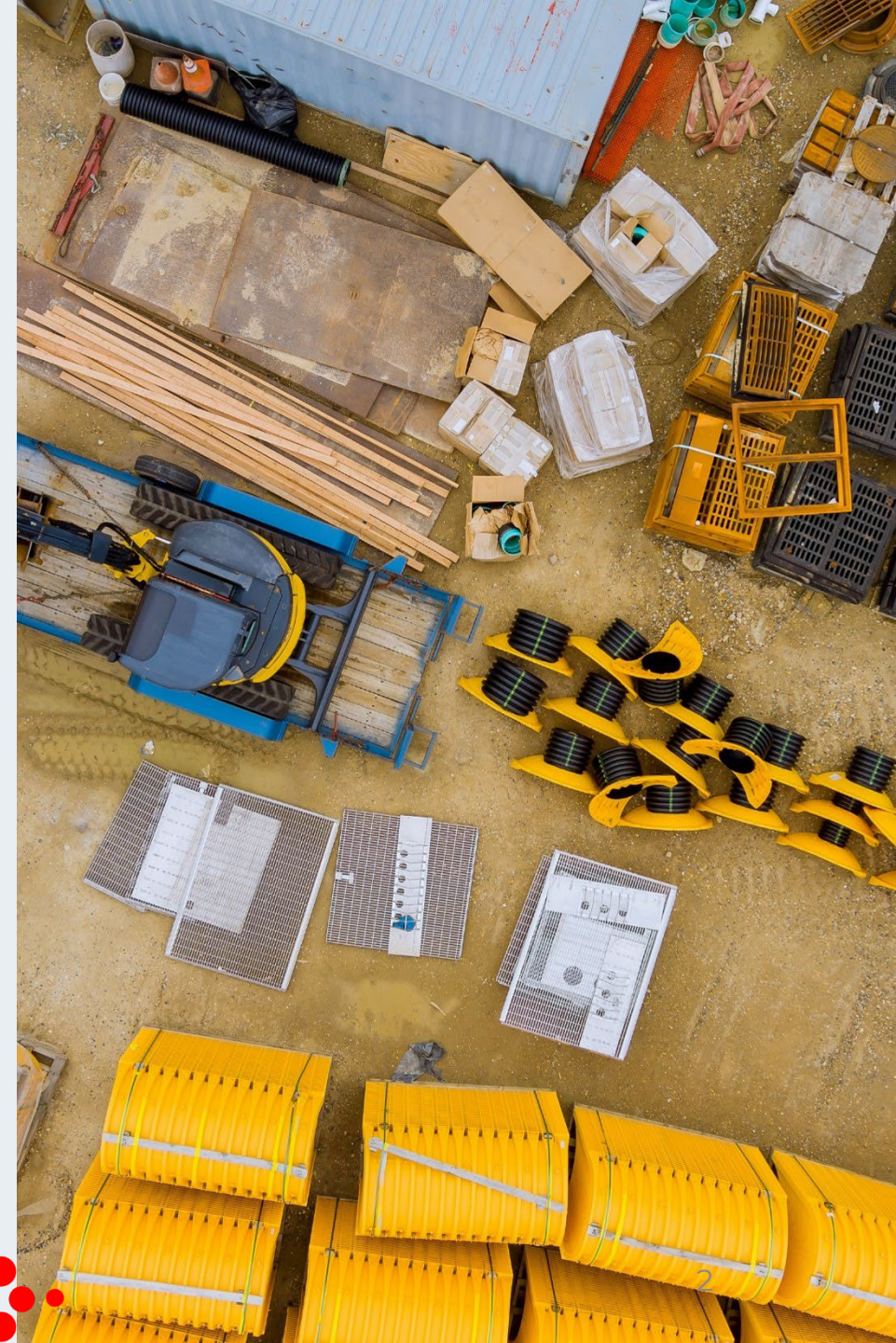




# How to Leverage Data in Utility Construction Projects

# State of Utility Construction

- Construction in the utilities sector is undergoing significant disruption in the post-COVID era
- Despite the expansion of business opportunities in utility construction, profits are declining due to inflation rates and other supply chain constraints.
- Autodesk's survey of 1,275 construction executives reveal that more than half of businesses perceive a notable increase in the costs of **raw materials** and **labor**, leading to erosion in their profits.



# State of Utility Construction

- The cost to complete capital construction projects has surged by **15%** to **25%**, and in some cases, even more.
- In such challenging times, leveraging data will undoubtedly be pivotal for **realizing profit growth** and **thriving** in a competitive environment.
- Adopting data collection, analysis, and informed decision-making offers numerous benefits to businesses



# Benefits of Data

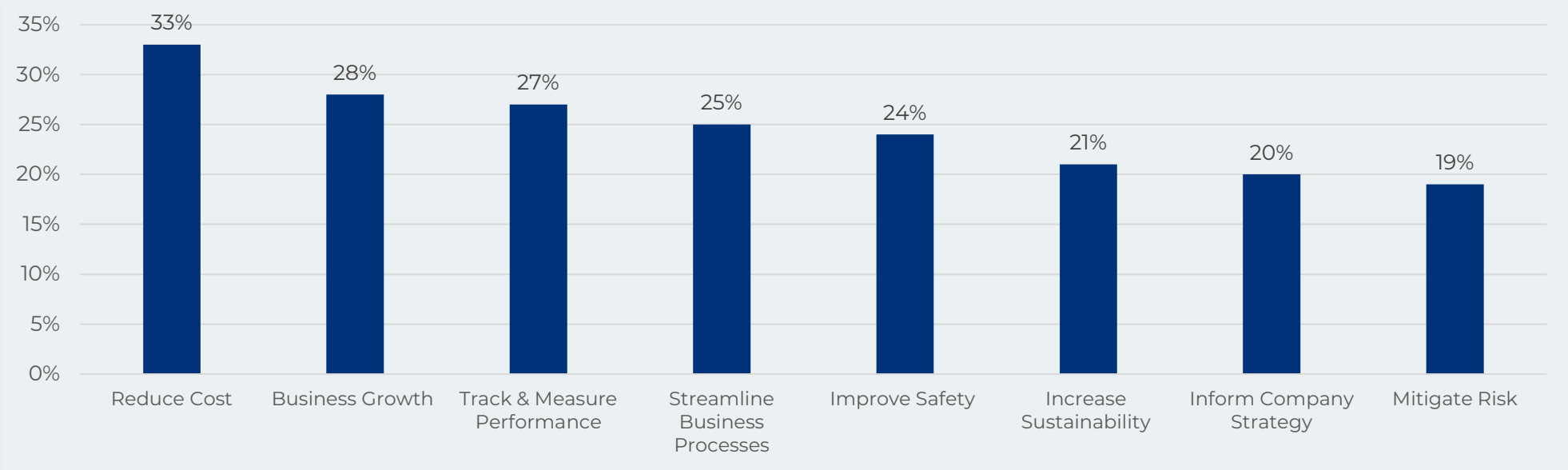
33% of business identify reduced cost being the most common benefits

Source: Deloitte Construction Data Survey (2023)

- ✓ Cost Reduction
- ✓ Track and measure KPIs (Safety, Operations, and Financial)
- ✓ Streamline business processes
- ✓ Informed decision making
- ✓ Drive innovation
- ✓ Gain insights

# Significant Benefits from Greater Use of Data

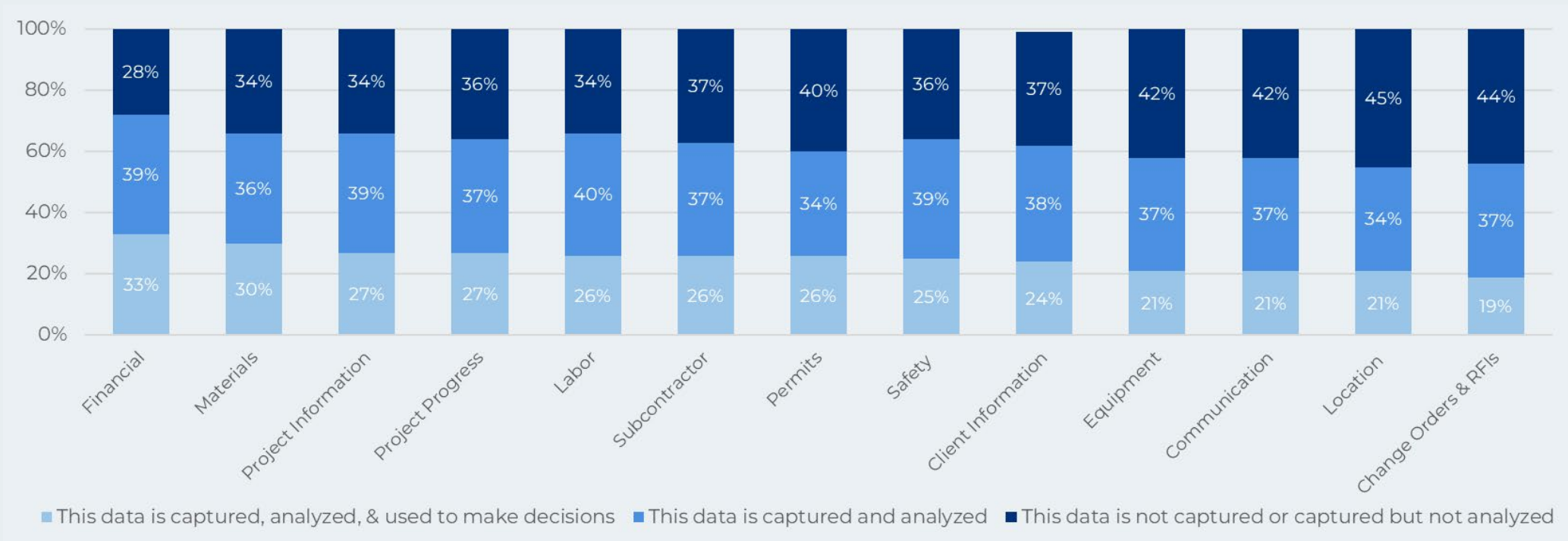
The most common benefit is the reduction in project costs (cited by 33% of businesses), directly addressing the industry's most prevalent challenges of high material and labor costs.



Source: Deloitte Construction Data Survey (2023)

# Types of Data for Decision-making

Avg. construction companies collect 13 different types of data, only 30% of them effectively collect, analyze, and make decisions based on this data. It's striking that 35% to 45% of companies either don't collect data or collect it without subsequent analysis.



Source: Deloitte Construction Data Survey (2023)

# Challenges

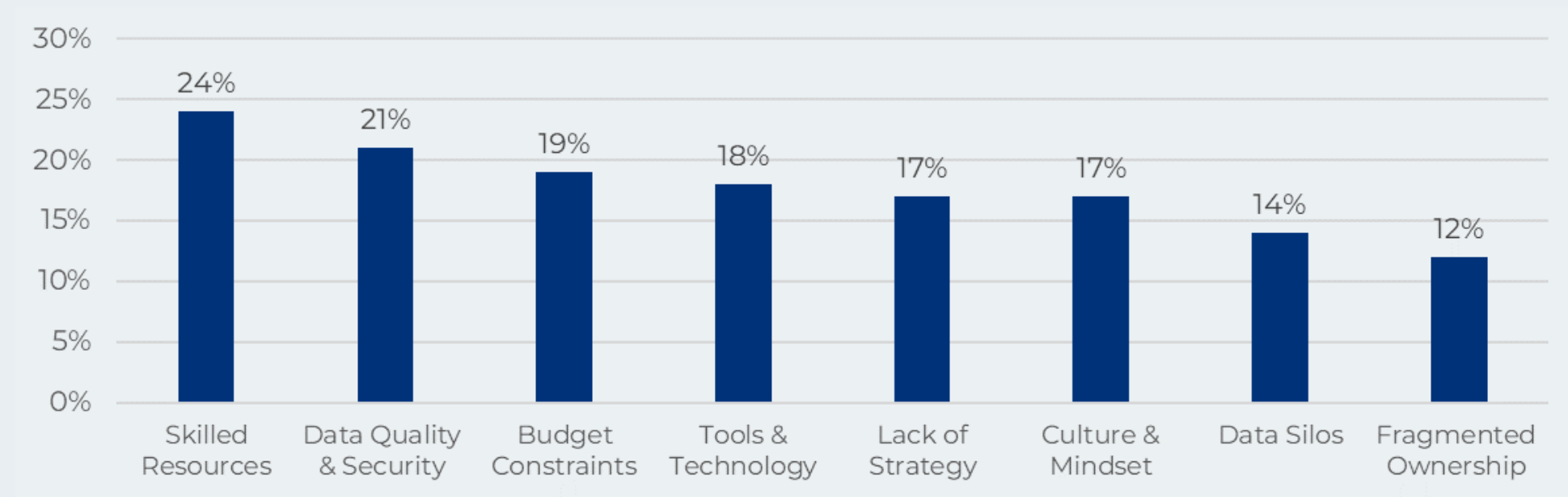
**90%** of businesses face at least one of the top 4 barriers to integrate data driven insights.

Source: Deloitte Construction Data Survey (2023)

- ✓ Access to Skilled Resources
- ✓ Data Quality
- ✓ Data Security and risk
- ✓ Budget Constraints
- ✓ Tools and Technology
- ✓ Lack of Strategy

# Barriers to integrating data driven insights

Over 90% of construction businesses face at least one of the following challenges:



Source: Deloitte Construction Data Survey (2023)



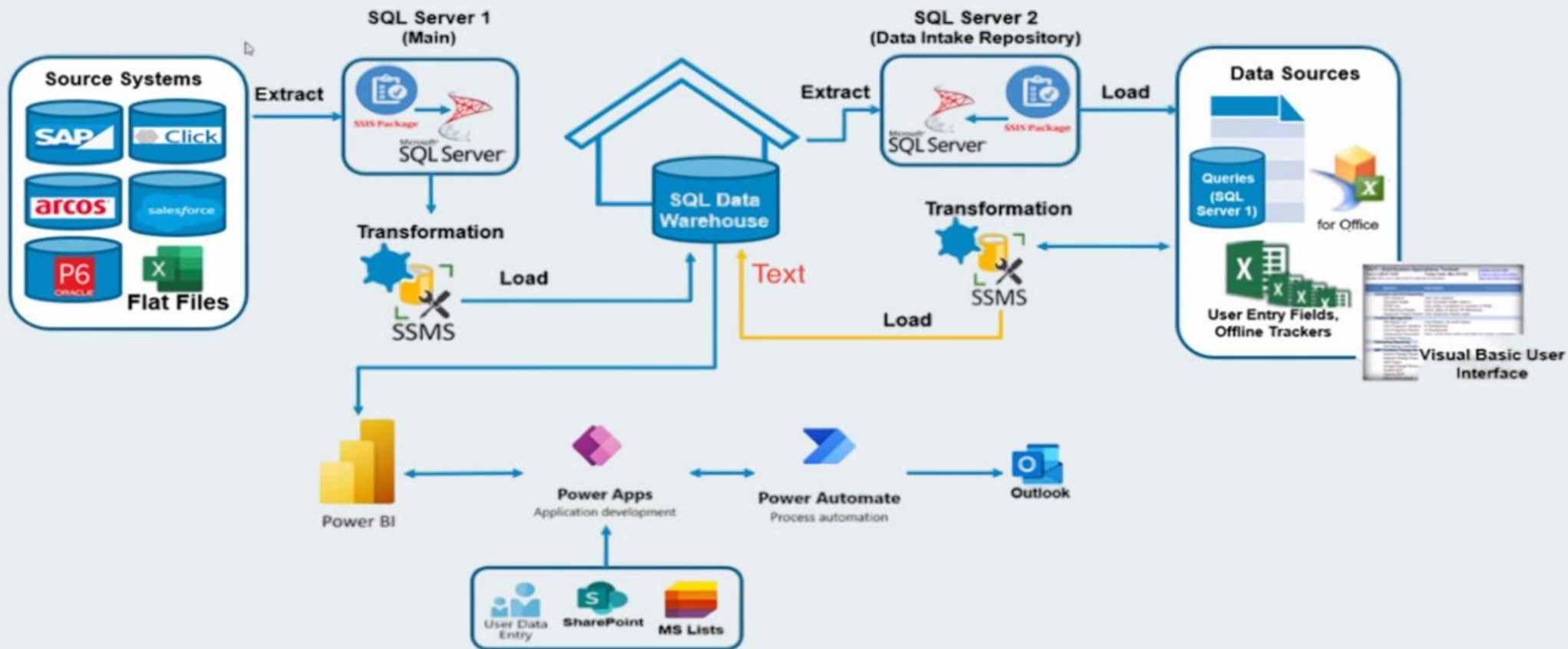
# Case Study - West Coast Utility Client



## Challenges

- Complex data
- Inconsistent data quality
- Forecasting accurate project cost
- Maintain & reporting data refreshes
- Lack of decision making

# Process Workflow



# Case Study - West Coast Utility Client

## Approach

- Develop data models
- Extract data from SQL database
- Analyze and create automated processes
- Develop dashboards & KPIs
- Implement actionable insights



# Case Study – West Coast Utility Client

## SQL Query

```

SELECT [SAP_Order] "Order",
[SAP_MAT] "MAT",
[SAP_CostElement] "Cost Element",
[SAP_CostElementDesc] "CE Description",
SUM([SAPOrderCosts_Amount]) "Total Amount"
FROM [DTP].[tbl_OrderCosts] a
INNER JOIN DEP b ON a.[SAP_Order] = b.Order
AND b.[MAT] = "40D"
AND [SAP_PostingPeriod] BETWEEN 1 AND 12
AND [SAP_PostingYear] IN (2021, 2022, 2023, 2024)
GROUP BY SAP_Order] "Order",
[SAP_MAT] "MAT",
[SAP_CostElement] "Cost Element",
[SAP_CostElementDesc] "CE Description"
ORDER BY [SAP_PostingPeriod] DESC

```

Order	MAT	Cost Element	CE Description	Total Amount
4553769	40D	5567435	Construction	1098
3568835	40D	6435789	Inspection	2000
3557297	40D	5423989	Overheads	3900
3541115	40D	6001024	Field Service	15443
4576748	40D	6709234	Material	4300



# Case Study – West Coast Utility Client

## Results

- Expedite decision making process
- Improved operational efficiency by 10%
- Identified patterns and trends to take proactive action
- Track & reports valuable KPIs
- Stakeholder buy in



# Taking the next steps



## Foster Data Culture

Develop in-house team, & train relevant skills



## Establish Strategy

Identify priorities & objectives with defined timelines



## Improved Data Quality

Implement standard processes, and procedures