

# **Title:** Tender Price Analysis

**Subtitle:** Optimizing Bid Strategies for Increased Success

**Client:** Leading Railroad Equipment Supplier

**Domain:** Railroad Equipment & Tendering

## Summary

The **Tender Price Analysis** project focuses on providing actionable insights to a leading railroad equipment supplier facing challenges in securing tenders due to a competitive market. The project utilizes data analysis to help improve the company's bid success rate and overall profitability.

### Business Problem:

The client is struggling to win tenders, leading to a significant loss in revenue. The primary issue stems from losing bids to competitors, either due to overpricing or underpricing their tender submissions.

### Business Objective:

The goal of the project is to maximize the bid success rate. By gaining deeper insights into pricing trends, competitor strategies, and market share, the company aims to increase the odds of winning tenders by at least 10%.

### Key Insights:

•**Market Share and Competition:** A few key players, such as Company B, dominate the market, with Company B holding a market share of 36.69%, followed by Company A at 30.24% and Company C at 21.77%. These top three companies collectively account for over 66% of the successful bids.

### Recommendation:

To increase bid success by 10%, the client should optimize pricing based on competitors (**Company B, A, and C**), focus on high-demand materials like **R260, 60 Kg, and 52 Kg**, and prioritize **Supply** tenders to secure more bids.

# TABLE OF CONTENTS

- **Title Slide** : Project Title, Client, and Presenter Information.
- **Executive Summary**: Key objectives, business problem, insights, and recommendations.
- **Business Context**: Problem, Objective, Constraints, and Success Criteria.
- **Data Overview**: Dataset scope, columns, and timeframe.
- **Methodology**: Steps and tools used for analysis.
- **Project Architecture**: Flow of data from input to insights
- **Market Insights**: Market Share, Win Rate, and Quantity Distribution.
- **Tender Analysis**: Tender Nature and Material Type insights.
- **Regional Performance**: Top-performing railway regions.
- **Pricing Trends**: L1 Price vs. Basic Amount trends.
- **Competitor Analysis**: Performance of major players.
- **Recommendations**: Strategic actions for business objectives.
- **Conclusion**: Summary of findings and next steps.

## Business Context

- **Business Problem:** Losing tenders to competitors leading to revenue loss.
- **Business Objective:** Maximize bid success rate.
- **Business Constraints:** Minimize losses due to overpricing and underpricing.
- **Success Criteria:** Increase the odds of winning by 10%.
- **Economic Success Criteria:** Increase profit margins by 5-10%.

# DATA OVERVIEW

The dataset contains the following columns, providing detailed insights into tender and bidding information:

- 1.Tender No:** Unique identifier for each tender.
- 2.Railway Name:** Name of the railway division issuing the tender.
- 3.Opening Date:** Date on which the tender was opened.
- 4.Tender Nature:** Nature of the tender (e.g., Supply, Execution, Supervision, etc.).
- 5.Awarded To:** Name of the company that won the tender.
- 6.L1 Price:** Final bid amount (winning bid).
- 7.Basic Amount:** Starting bid amount for the tender.
- 8.Quantity:** Total quantity of material specified in the tender.
- 9.Material Type:** Type of material required (e.g., R260, 60 Kg, 52 Kg, etc.).
- 10.Comp A to Comp L:** Bid amounts submitted by competing companies (A to L).

# Methodology

The project followed a structured approach using various tools for data cleaning, analysis, and visualization:

## **1.Data Cleaning and Organization (Excel):**

Initial data cleaning and organization were performed in Excel, focusing on structuring the data by removing duplicates, handling null values, and ensuring data consistency for further analysis.

## **2.Exploratory Data Analysis (EDA) & Preprocessing (SQL):**

EDA and data preprocessing tasks, including handling missing values, outlier detection, and type casting, were carried out using SQL. This enabled a deeper understanding of the data and improved its quality for further analysis.

## **3.Data Transformation and Aggregation (SQL):**

SQL queries were used to extract, transform, and aggregate data based on project requirements, aligning the data with the business objectives for more detailed insights.

## **4.Data Visualization (Power BI):**

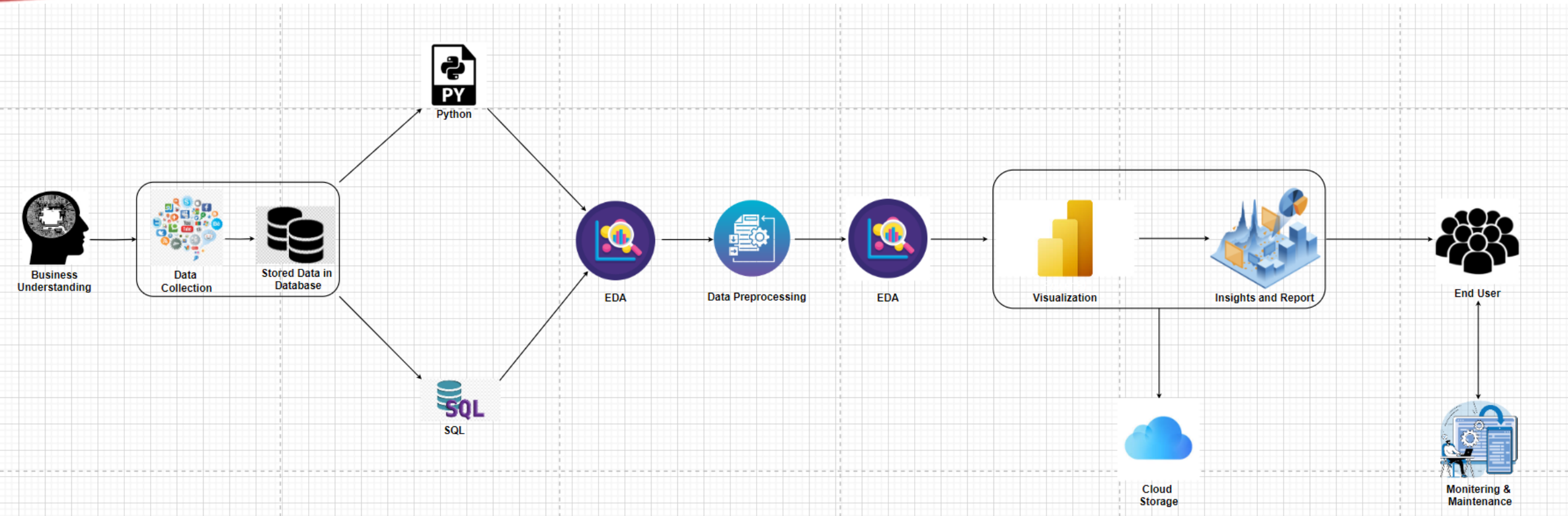
The cleaned and transformed data was visualized in Power BI, creating dashboards and charts to analyze market trends, competitor performance, and key tender insights.

## **5.Final Presentation (PowerPoint):**

A PowerPoint presentation was created to summarize the findings, insights, and recommendations, using visualizations from Power BI to communicate the results effectively to stakeholders



# Project Architecture - Data Flow Diagram



# MARKET INSIGHTS

## Market Share & Win Rate:

- The market is dominated by a few key players, with **Company B** holding the largest market share (36.69%) through 91 successful bids, followed by **Company A** (30.24%) with 75 wins, and **Company C** (21.77%) with 54 wins. These three companies collectively control over 66% of the market share, indicating a concentrated competitive landscape.
- Smaller players like **Company D, E, and L** together account for just 11.29% of the market share, with a combined total of 28 successful bids out of 248 bids.

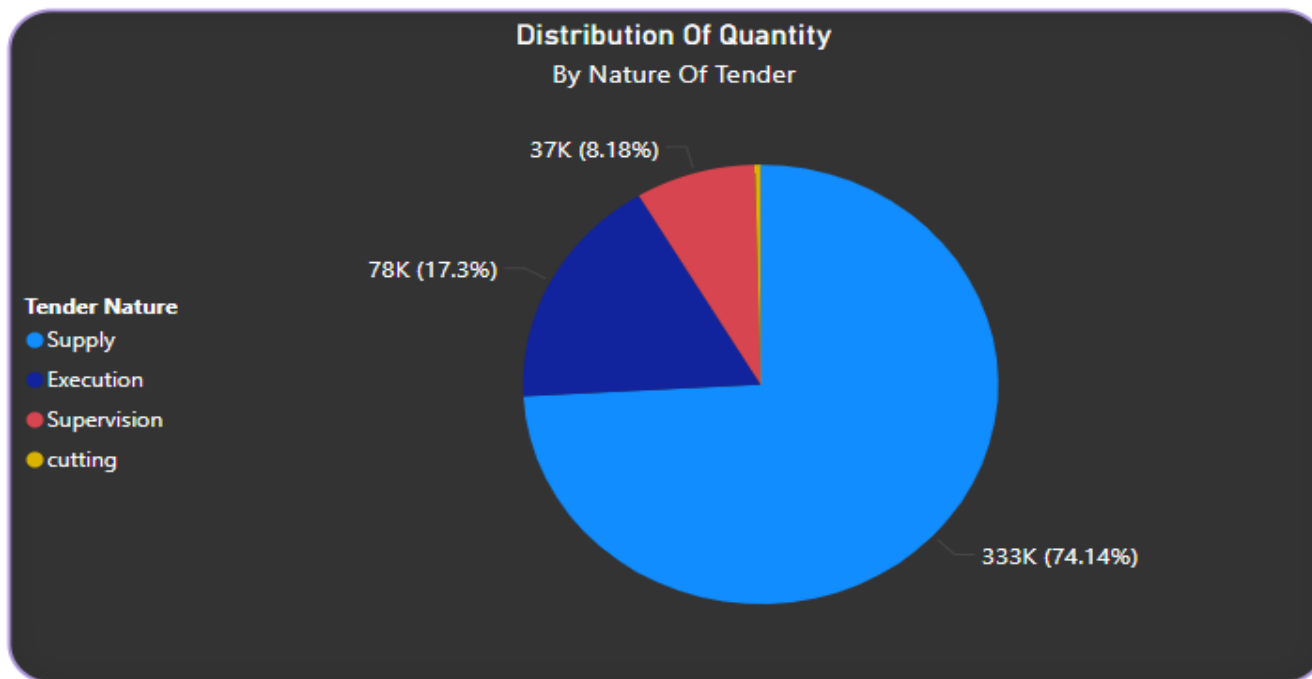
## Quantity Distribution:

- **Company B** leads in quantity, securing 41.73% of the total units (187,206 units), followed by **Company C** (32.3% with 144,901 units) and **Company A** (21.01% with 94,267 units). Together, these top three companies dominate 94.04% of the total quantity, showcasing their strong presence in the market.
- Companies D, E, and L have significantly smaller quantities, collectively accounting for only 5.96% of the total market share.



# Tender Analysis

The **"Supply"** category leads with 74.14% of the total quantity (332,614 units), followed by **"Execution"** (17.3% with 77,621 units) and **"Supervision"** (8.18% with 36,710 units). **"Cutting"** holds the smallest share at just 0.38% with 1,700 units.



# Regional Performance

## Top-performing Regions:

- **West Central Railway** has the highest L1 Price of ₹116,233,848, securing **7 tenders** with **48 bids**, demonstrating strong competitiveness.
- **East Coast Railway** secured **12 tenders** with **17 bids**, with an L1 Price of ₹72,996,633, indicating a high success rate in its bids.
- **Southern Railway** secured **7 tenders** with **24 bids**, with an L1 Price of ₹59,478,193.

## Regions with Lower Success Rates:

- **South East Central Railway** secured **3 tenders** from **5 bids**, despite an L1 Price of ₹54,778,510, reflecting a lower win rate.
- **Delhi Metro Rail Corporation (DMRC)**, with an L1 Price of ₹949,900, won **1 tender** from **1 bid**, suggesting a specialized focus with limited success in the bidding process.

Railway Regions	L1 Price	Tenders Won	Bids Won
West Central Railway	116,233,848.00	7	48
Southern Railway	59,478,193.00	7	24
Western Railway	88,392,479.00	8	24
East Eastern Railway	35,583,731.00	8	19
East Coast Railway	72,996,633.00	12	17
South Western Railway	31,396,393.00	5	17
Eastern Railway	66,708,350.00	4	16
North Frontier Railway	37,896,804.00	6	15
North Eastern Railway	28,374,022.00	5	14
Centrail Railway	37,498,040.00	3	13
North Central Railway	46,104,410.00	5	13
South East Central Railway	54,778,510.00	5	13
South Eastern Railway	27,618,167.00	3	5
EASTERN RLY	13,207,800.00	1	3
South Central Railway	348,205,555.00	1	3
Northern Railway	7,519,390.00	1	2
Delhi Metro Rail Corporation	949,900.00	1	1
North Western Railway	17,082,516.00	1	1
Total	1,090,024,741.00	83	248

# Pricing Trends

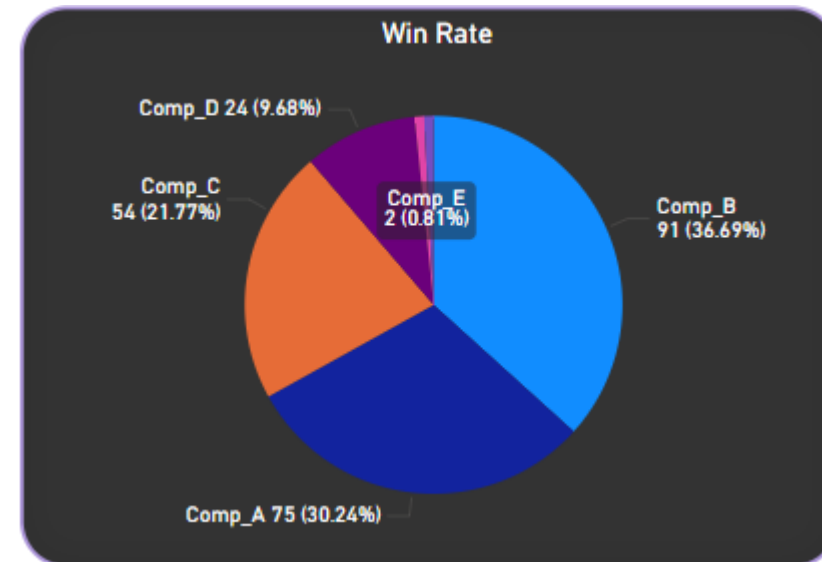
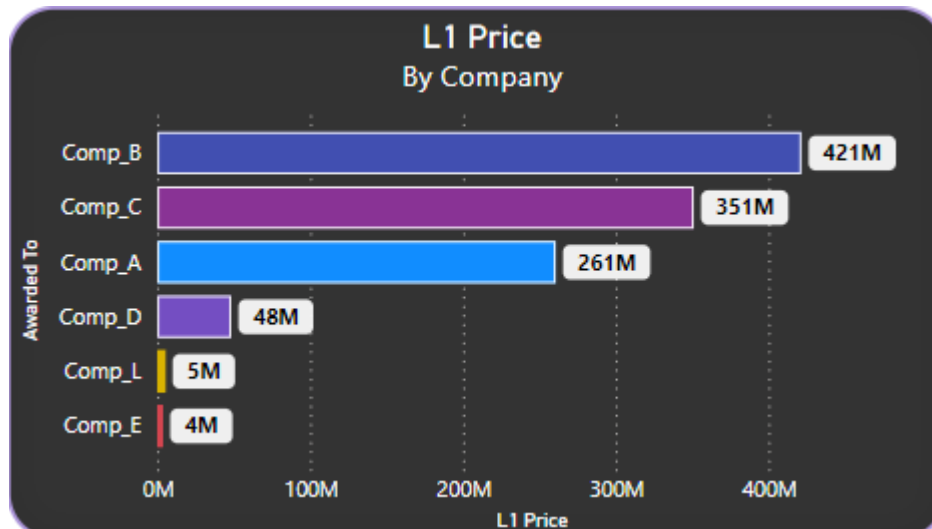
## Group 1: High Performers (Comp B, Comp C, Comp A)

- **L1 Price:** ₹1,032, Billion (94.7% of total L1 Price)
- **Basic Amount:** ₹875 Million (94.8% of total Basic Amount)
- **Tenders Won:** 77 (92.8% of total tenders won)
- **Bids Won:** 220 (88.7% of total bids won)

## Group 2: Low Performers (Comp D, Comp L, Comp E)

- **L1 Price:** ₹57 Million (5.3% of total L1 Price)
- **Basic Amount:** ₹48 Million (5.2% of total Basic Amount)
- **Tenders Won:** 6 (7.2% of total tenders won)
- **Bids Won:** 28 (11.3% of total bids won)

**Comp B** has the highest share of the total L1 Price (38.6%), while **Comp C** holds 32.2% and **Comp A** has 23.9% of the total L1 Price. This indicates that **Comp B** is leading with high-value tenders.



# Competitor Analysis

## High Performers:

### 1.Comp B:

1. **L1 Price:** ₹421,352,641
2. **Basic Amount:** ₹357,061,642.42
3. **Tenders Won:** 32
4. **Bids Won:** 91
5. **Insight:** **Comp B** leads the market with the highest L1 Price, securing 32 tenders and winning 91 bids, contributing significantly to the overall success.

### 2.Comp C:

1. **L1 Price:** ₹350,967,989
2. **Basic Amount:** ₹297,631,555.91
3. **Tenders Won:** 22
4. **Bids Won:** 54
5. **Insight:** **Comp C** is also a strong contender with a substantial L1 Price, winning 22 tenders and 54 bids, indicating its competitiveness in the market.

### 3.Comp A:

1. **L1 Price:** ₹260,633,073
2. **Basic Amount:** ₹220,874,934.74
3. **Tenders Won:** 23
4. **Bids Won:** 75
5. **Insight:** **Comp A** is a consistent performer, securing 23 tenders and winning 75 bids, maintaining a competitive position with moderate L1 Prices.

## Low Performers:

### 4.Comp D:

4. **L1 Price:** ₹48,270,582
5. **Basic Amount:** ₹40,906,312
6. **Tenders Won:** 6
7. **Bids Won:** 24
8. **Insight:** **Comp D** secures fewer tenders and bids, with a relatively lower L1 Price, indicating less competitiveness in comparison to the top performers.

### 5.Comp L:

4. **L1 Price:** ₹5,222,682
5. **Basic Amount:** ₹4,425,720.14
6. **Tenders Won:** 1
7. **Bids Won:** 2
8. **Insight:** **Comp L** exhibits minimal success, with only 1 tender and 2 bids won, contributing a very small share of the market.

### 6.Comp E:

4. **L1 Price:** ₹3,577,774
5. **Basic Amount:** ₹3,032,015.80
6. **Tenders Won:** 1
7. **Bids Won:** 2
8. **Insight:** Similar to **Comp L**, **Comp E** also performs poorly, winning only 1 tender and 2 bids, suggesting a lack of competitiveness in the market.

# Recommendations: Strategic actions for business objectives

- 1.Focus on Supply Tenders:** Supply tenders represent **74.4%** of total quantity. Prioritize these tenders to maximize bid wins.
  - 2.Adjust Pricing Strategy:** Align pricing closely with competitors like **Comp B** (32 tenders, 91 bids) and **Comp C** (22 tenders, 54 bids) to remain competitive while ensuring profitability.
  - 3.Bid Aggressively on High-Volume Materials:** Competing for high-volume materials will improve bid success rates and market share, especially in supply tenders.
  - 4.Enhance Execution and Supervision Bids:** With **17.3%** of quantity in Execution tenders and **8.18%** in Supervision tenders, increasing focus on these areas can capture further opportunities.
- These actions can lead to an estimated 10% increase in bid success.**



# Conclusion: Summary of findings and next steps

## Findings:

- **Tender Nature:** **Supply tenders** account for **74.4%** of total quantity (333K), followed by **Execution** (17.3% or 78K) and **Supervision** (8.18% or 37K).
- **Competitor Performance:** The top competitors are **Comp B** (32 tenders won, **91 bids won**) and **Comp C** (22 tenders won, **54 bids won**). Their strong performance indicates the effectiveness of their pricing strategies.
- **Pricing Trends:** **Comp B** leads in total L1 Price (**421.35M**), followed by **Comp C** (**350.97M**) and **Comp A** (**260.63M**).
- **Regional Performance:** **West Central Railway** and **Southern Railway** stand out with **7 tenders won** and **48 bids** (West Central) and **7 tenders won** and **24 bids** (Southern Railway), respectively.

## Next Steps:

1. Prioritize **Supply tenders (74.4% of total quantity)** and focus on high-demand materials to improve success in this category.
2. Adjust pricing strategies to match the competitiveness of **Comp B** and **Comp C**, who have secured the highest number of tenders and bids.
3. Explore additional opportunities in **Execution** and **Supervision** tenders (accounting for **17.3%** and **8.18%** of total quantity).
4. Focus efforts on high-performing regions like **West Central Railway (48 bids won)** and **Southern Railway (24 bids won)**, and analyze competitors' strategies in these areas.

**Implementing these actions can lead to improved bid win rates, increased market share, and optimized resource allocation.**



**Thank You!**  
**For your time. I look forward to your feedback.**

**Best Regards,  
Jay Bourasi**