

## Delivery Log Report - Log ID: ab762f5d

### ■ Estimation vs Actual Data

Total Time (min): Estimated 4.0, Actual 4.2

Distance (km): Estimated 35.0, Actual 36.2

Average Speed (km/h): Estimated 21.0, Actual 19.0

Fuel Consumption (L): Estimated 16.0, Actual 17.2

Cost (\$): Estimated 160.0, Actual 168.0

Travel Time (min): Estimated 0.8, Actual 0.75

Waiting Time (min): Estimated 0.15, Actual 0.16

### ■ AI Feedback & Recommendations:

#### ### \*\*Summary of Key Insights\*\*

The analysis of estimated and actual delivery performance reveals some discrepancies that highlight potential areas for improvement.

#### ### \*\*Detailed Comparison\*\*

A comparison of the estimated and actual performance metrics is as follows:

- **Total Time:** The actual total time of **4.2 min** exceeded the estimated **4.0 min** by 0.2 minutes, indicating a slight delay.
- **Distance:** The actual distance traveled was **36.2 km**, which is 1.2 km more than the estimated **35.0 km**.
- **Average Speed:** The actual average speed of **19 km/h** was lower than the estimated **21 km/h**, suggesting slower travel.
- **Fuel Consumption:** The actual fuel consumption of **17.2 L** was higher than the estimated **16.0 L**, indicating increased fuel usage.
- **Cost:** The actual cost of **\$168** surpassed the estimated **\$160** by \$8, reflecting the higher fuel consumption.
- **Travel Time:** The actual travel time of **0.75 min** was slightly less than the estimated **0.8 min**, showing a minor improvement.
- **Waiting Time:** The actual waiting time of **0.16 min** was marginally higher than the estimated **0.15 min**.

#### ### \*\*Possible Reasons for Variations\*\*

Several factors could have contributed to the deviations between the estimated and actual performance:

1. **Traffic Congestion or Unexpected Delays:** Unforeseen traffic conditions or unexpected delays could have impacted the total time.
2. **Driver Behavior and Route Deviations:** Drivers may have taken alternative routes or driven less efficiently than planned.
3. **Inaccurate Fuel Consumption Estimates:** The initial fuel consumption estimates might not have accurately reflected actual usage.
4. **External Factors:** Weather conditions, roadblocks, or construction could have impacted the journey.

#### ### \*\*Recommendations for Improvement\*\*

To enhance future estimations and improve delivery performance, consider the following recommendations:

1. **Enhance Route Optimization Models:** Incorporate more detailed and real-time data into route optimization algorithms.
2. **Incorporate Real-Time Traffic Data:** Utilize real-time traffic information to adjust routes and travel time estimates.
3. **Adjust Fuel and Cost Prediction Methods:** Refine fuel consumption and cost estimation models by considering more variables.
4. **Train Drivers for Better Efficiency:** Provide drivers with training on efficient driving practices, route planning, and fuel management.

By addressing these areas and implementing these recommendations, logistics operations can become more efficient and cost-effective.