Valet Vehicle Report

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An Analysis of the RR Valet Operation

Questions to be Answered

- **Is the expansion of the valet operation having any impact?**
- **Is it worth the "extra headache"?**
  - Consider factors such as customer complaints, signage issues, space management, and staffing increases.
- **Is the increased number of valet vehicles significant?**
- **What is the margin of change between Post-Hybrid and Pre-Hybrid Valet periods?**

Thinking for the Future

- **Should the valet operation be increased to a complete 100% capacity?**
- **Should it be scaled back to pre-expansion levels (e.g., 400-500 vehicles)?**

Data Overview

For this analysis, the primary focus was on addressing missing values in the "Location" column, as these were the only missing entries of significance. A total of six missing values were identified, of which five were manually corrected based on contextual information, and one row was removed entirely due to insufficient data.

The dataset includes 12,377 valeted vehicles recorded over an eleven-week period, spanning from **September 1st, 2024**, to **November 16th, 2024**. A key milestone during this period is **October 21st, 2024**, marking the launch of the **RR Hybrid Valet Operation**.

This report examines the impact of the hybrid valet operation by comparing the number of valeted vehicles before and after the start date. The analysis categorizes the time frame into two distinct periods:

- **Pre-expansion**: Before the hybrid valet launch.
- **Post-expansion**: After the hybrid valet launch.

Table 1: Weekly Vehicle Counts

Week of	Weekly Vehicle Count
Sept. 1st	1085
Sept. 8th	1111
Sept. 15th	1072
Sept. 22nd	1118
Sept. 29th	1047
Oct. 6th	1053
Oct. 13th	1053
Oct. 20th	1190
Oct. 27th	1202
Nov. 3rd	1276
Nov. 10th	1169

Visualizing the Numbers

Weekly Valet Trends
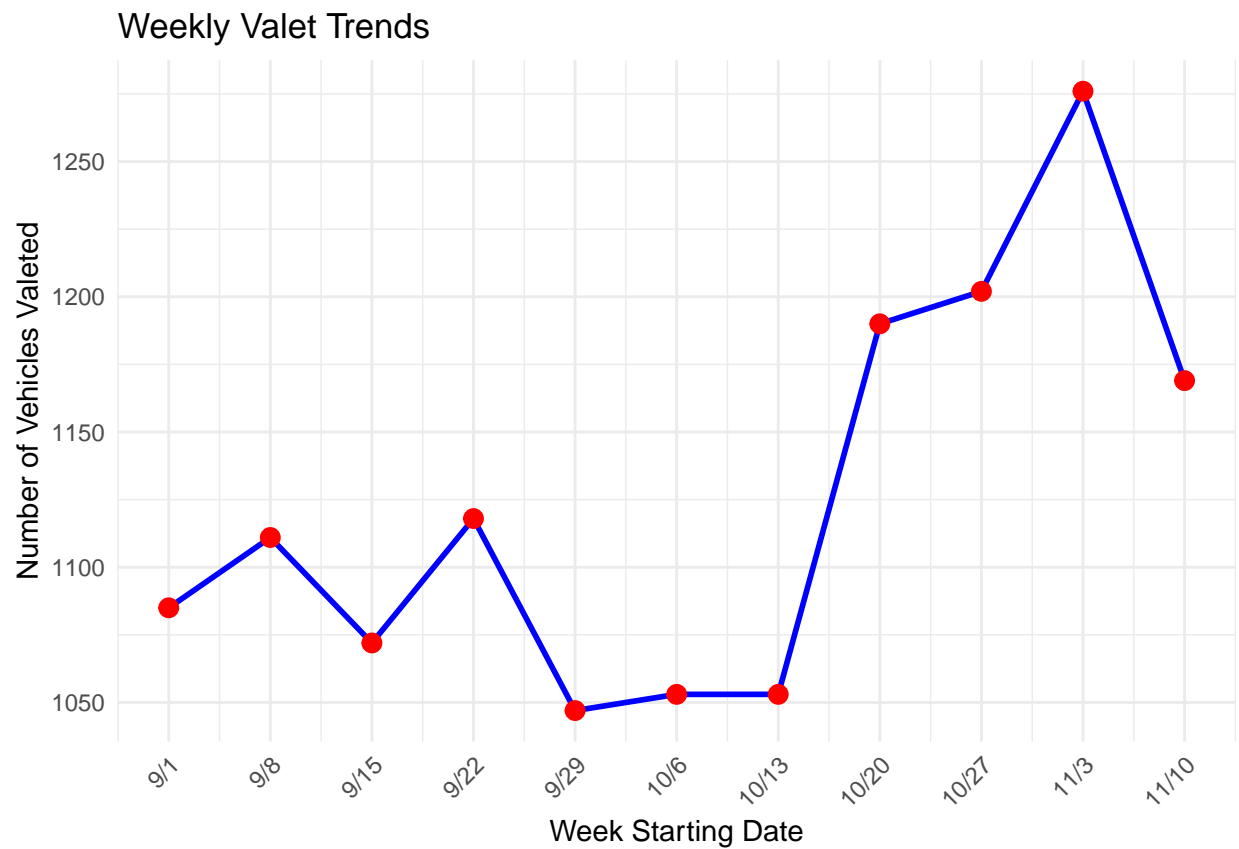
Table 2: Weekly Vehicle Counts by Location

| Week of	ED	WW
Sept. 1st	553	532
Sept. 8th	501	610
Sept. 15th	405	667
Sept. 22nd	518	600
Sept. 29th	498	549
Oct. 6th	459	594
Oct. 13th	456	597
Oct. 20th	571	619
Oct. 27th	563	639
Nov. 3rd	556	720
Nov. 10th	520	649

Number of Vehicles Valeted
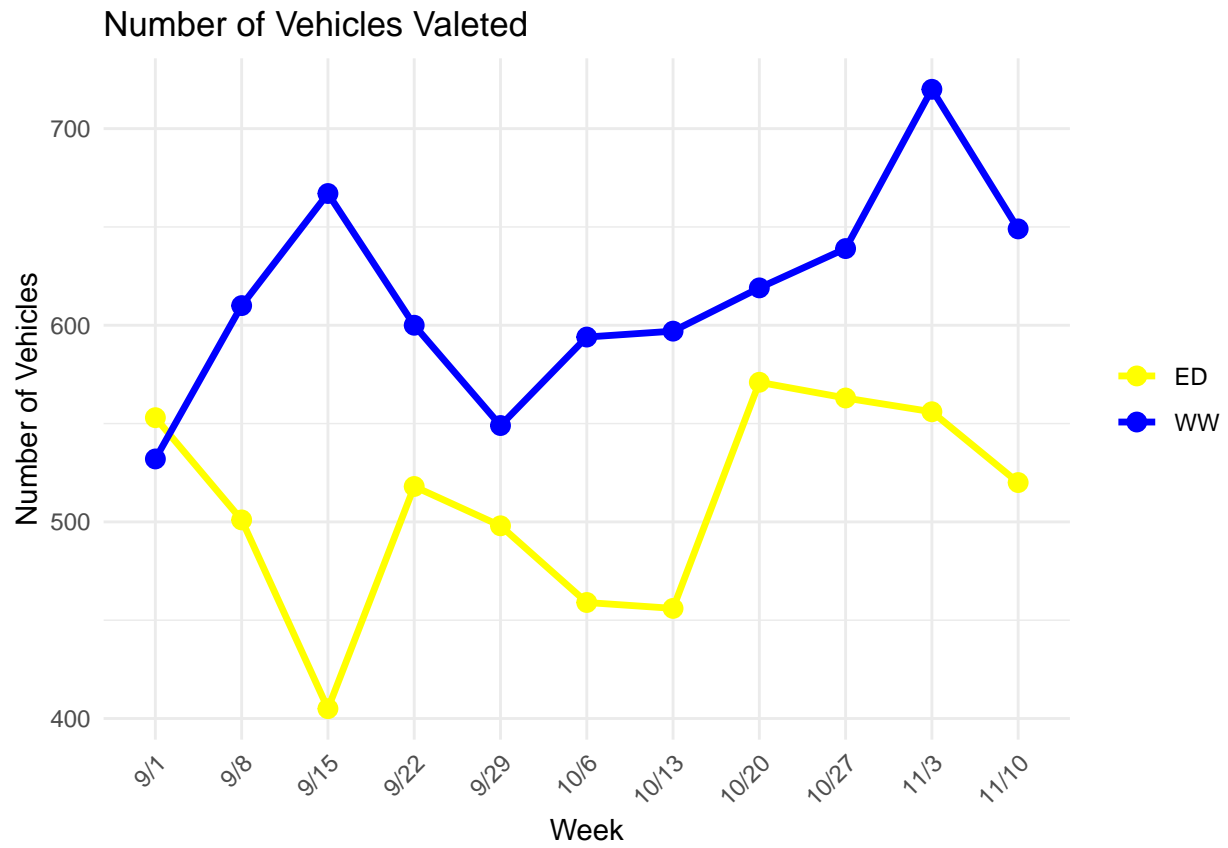
Testing for Significance

Normality was tested using Shapiro-Wilk test and both results indicate the data does not significantly deviate from normality. A t-test is an appropriate method to test for significance.

Table 3: Summary of Two-Sample T-Test Results

Statistic	Value
t-value	5.9176
Degrees of Freedom	9
p-value	0.0002241
Mean (Post-Expansion)	1209.25
Mean (Pre-Expansion)	1077.143
95% Confidence Interval	[81.61, 182.61]
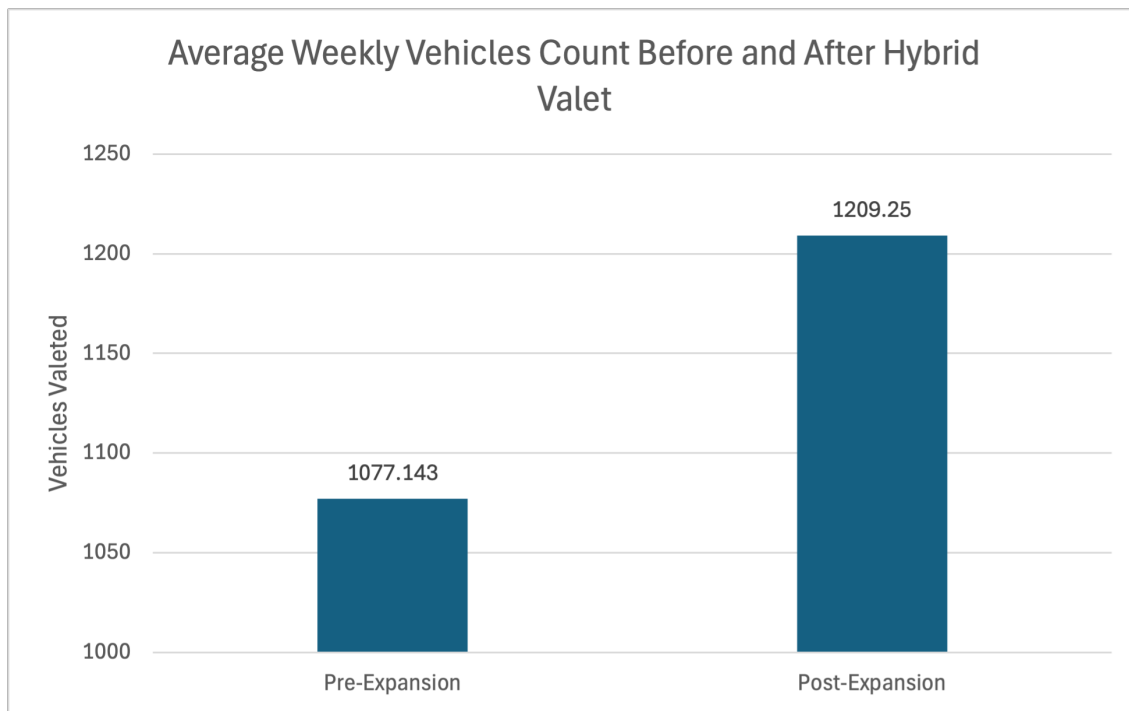
Caveat and Opportunities for Further Analysis

While this report highlights significant findings from the current data, it is important to note that the time period covered is relatively short. As such, these results should be interpreted with caution, particularly when drawing conclusions about long-term trends. The data, however, provides a solid foundation and reveals opportunities for deeper analysis into valet operations.

Recommendations for Future Analysis

1. **Expand Data Collection**

   - Additional data from ongoing valet operations is necessary to confirm and strengthen the observed trends.
   - Historical data from the pre-hybrid valet period would provide a valuable comparison to better contextualize the current findings.

2. **Explore Key Valet Trends**

   - Analyze peak times to understand when valet services are busiest.
   - Investigate potential holiday and seasonal trends that may impact demand.

3. **Staffing Analysis**

   - Assess staffing levels relative to demand patterns to optimize resource allocation.

4. **Incorporate Self-Parking Data**

   - Compare self-parking usage and trends with valet operations.
   - Evaluate the impact of hybrid valet on self-parking demand.
   - Examine turnaround times for both valet and self-parking to identify potential inefficiencies.

Conclusion

The current findings underscore the value of further analysis and the importance of a comprehensive dataset. Expanding the scope of data collection and addressing the outlined areas for future research will not only refine the conclusions but also provide actionable insights for improving valet operations.