**Dashboard 1 for Job and Shipment Trends**

Q1. How much revenue does the company generate from its job bookings?

The company’s job-booking revenue is derived from *Quote Price × Quote Quantity*.  
From the visualization, top-performing agents such as Malik Hampton and William Christensen contribute the highest booking revenues, with Malik’s volume exceeding 1.17 million and Christensen’s over 1.04 million units.  
Overall, the organization generates multi-million-dollar revenues from job bookings, largely driven by high-volume agents and major urban locations.

Q2. How many jobs does each sales agent book?

Based on the *Lead Generation by Location and Agent* table:

* Malik Hampton: ≈ 1,176,200
* William Christensen: ≈ 1,041,000
* Brian Wheeler: ≈ 959,700
* Zaniyah Hall: ≈ 896,200
* Jaquan Saunders: ≈ 804,000
* Kaelyn Clements: ≈ 322,800

Thus, Malik Hampton books the *highest* number of jobs, while Kaelyn Clements books the *fewest*.

Q3. How many jobs have not yet shipped or have only partially shipped?

The *Late Shipment Trend* table shows multiple records with a Ship Late Trend = 5, indicating delayed or unshipped jobs.  
All such entries correspond to jobs that have *not yet shipped or are only partially completed*.  
Hence, the company currently faces several shipment delays as indicated by these records.

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**Dashboard 2 for Invoice Trends**

Q1. Which sales class generates the highest invoice amounts?

From the *Total Invoiced Amount by Sales Class* visualization:

* Debit Smart: $350,788,870
* Credit Smart: $344,090,396
* Credit NoSmart: $184,128,205
* Debit NoSmart: $170,761,447

The Debit Smart class generates the *highest total invoice amount* (≈ $350.8 million).

Q2. How many invoices are generated for a time period?

The *Customer Invoice Trends* scatter plot reveals high invoice density between March and August 2013, where hundreds of invoices were generated monthly.  
Invoice activity was most intense during this period, indicating peak operational and sales performance.

Q3. What is the total amount invoiced for a time period?

From the *Invoice Amounts by Date and Location* table, aggregated invoice amounts per date range from $180,000 to over $1.1 million.  
Weekly invoiced totals during mid-2013 consistently reach the $2–3 million range, confirming strong revenue flow during that interval.

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**Dashboard 3 Financial Performance**

Q1. Determine the location and the machine which have the highest overall machine and labor cost. Also determine which location has the lowest budget overhead cost.

The Labor Cost vs Machine Cost bubble chart shows a strong positive correlation between both costs.

* Locations/machines in the upper-right quadrant (≈ $16M Machine Cost and $30M+ Labor Cost) represent the highest overall operational cost combinations.
* The smallest bubbles, near the lower-left region (≈ $8M Machine and $15M Labor), represent locations with the lowest overhead costs.  
  Identifying these extremes allows management to isolate high-cost facilities for cost-optimization.

Q2. Which location is seen to have higher forecast amount in comparison to the actual amount on the basis of time period?

The Actual vs Forecasted Amount chart shows that during early time periods (≈ March–September 2013), forecasted amounts exceed actuals.  
This pattern indicates overestimation of financial performance during the early phase, while later periods (2014–2015) show actual amounts catching up or surpassing forecasts — signaling operational recovery and improved forecasting accuracy.

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Summary  
The project demonstrates how integrated visualization across operational, invoicing, and financial datasets can yield a unified view of enterprise performance.

* Sales and shipment dashboards expose productivity and efficiency gaps.
* Invoice dashboards reveal cash-flow concentration across classes and time periods.
* Financial dashboards diagnose cost behavior and forecast realism.

Overall, the analysis supports data-driven decision-making, identifies bottlenecks, and promotes financial transparency across the organization.  
  
Learnings -

* Data relationships between operations, invoicing, and finance reveal interdependencies (e.g., shipment delays affecting cash realization).
* Using MicroStrategy metrics (DateDiff, Sum, Rank, etc.) enabled hands-on learning of *data wrangling, aggregation, and hierarchical metric design*.
* Visualization interactivity (e.g., hover-tooltips, drill-downs) enhanced interpretability and diagnostic precision.

To deepen this analysis further:

* Integrate predictive models (e.g., regression or forecasting) to estimate future sales or shipment delays.
* Include profit margin and customer segmentation metrics to link revenue with cost and customer behavior.
* Combine all dashboards into a unified executive scorecard to track KPIs in real time.
* Implement data refresh scheduling and filter interlinking across datasets for automation and continuous monitoring.