**Decision Support and Reflective Learning Document**

**Decision Support**

1. **Intended Users**:
   * **Sales Managers**:
     + Use predictive insights to set sales targets and forecast inventory needs.
   * **Marketing Analysts**:
     + Identify seasonal trends and high-performing product lines for campaign planning.
   * **Business Executives**:
     + Analyze deal size and regional performance for strategic decisions.
   * **Supply Chain Teams**:
     + Plan inventory based on predicted sales patterns.
2. **How the Dashboard Supports Decision-Making**:
   * **KPIs**:
     + Help evaluate overall performance and profitability.
   * **Predicted vs. Actual Analysis**:
     + Highlights discrepancies, helping managers fine-tune forecasting models.
   * **What-If Parameter**:
     + Enables dynamic scenario planning (e.g., adjusting deal sizes or discounts to project revenue impact).
   * **Drill-Down Functionality**:
     + Provides granular insights (Year > Quarter > Month), enabling data-driven interventions at different levels.

**Future Recommendations**

1. **Additional Data Sources**:
   * Include demographic data to understand customer segmentation.
   * Add competitor pricing to evaluate market positioning.
2. **Feature Enhancements**:
   * Integrate AI-powered anomaly detection for real-time alerts on unusual sales patterns.
   * Expand What-If scenarios to include external factors like inflation or supply chain disruptions.

**Reflective Learning**

1. **Key Skills Strengthened**:
   * Mastery of Power BI tools, including data cleaning, interactive visualization, and DAX calculations.
   * Understanding of regression modeling and predictive analytics.
2. **Challenges Faced**:
   * **Data Cleaning**: Ensuring consistent data formatting and handling missing values.
   * **Integration of Datasets**: Relating multiple datasets for visualization.
   * **Visualization Design**: Balancing simplicity and detail to ensure usability.
3. **Approach to Challenges**:
   * Utilized Power BI’s Power Query for transformations and external tools (e.g., Python) for model validation.
4. **Additional Resources**:
   * Online tutorials on DAX functions and Power BI best practices.
   * Research articles on regression analysis for better prediction interpretation.
5. **Impact on Understanding**:
   * This project deepened my appreciation for data-driven decision-making, demonstrating how effective visualization can simplify complex datasets.
6. **Areas for Improvement**:
   * Explore real-time data integration.
   * Enhance storytelling skills to convey insights more effectively.