1. **What specific data quality issues led to the "Garbage In, Garbage Out" problem in this case study?**

The specific data quality issues that led to the GIGO problem in this case study were:

+ **Inaccurate Sales Data:** Incorrect sales entries, such as underreporting of sales or duplicate data, affected the accuracy of demand forecasting.

+ **Outdated Data:** The system relied on old sales data without considering recent trends or new product launches, leading to inaccurate forecasts.

**+ Inconsistent Data Entry:** Different stores used varying product codes, which led to data fragmentation and made it hard to accurately assess demand for specific products.

**+ Missing Data:** Some smaller stores failed to report sales data, resulting in incomplete datasets​.

1. **How did the company address these issues to improve the accuracy of its demand forecasts?**

The company took the following steps to improve the accuracy of its demand forecasts:

+ **Data Cleaning:** They launched an initiative to clean historical sales data, remove duplicates, and correct inconsistent product codes across stores.

+ **Data Validation Processes:** A new validation system was introduced to flag significant data discrepancies at the point of entry, ensuring that only reliable data was processed.

+ **Real-Time Data Integration:** The BI system was upgraded to integrate real-time sales data, ensuring that forecasts were based on the most recent market conditions.

+ **Training Staff:** Store employees were retrained on standardized data entry practices to reduce human errors and ensure consistent reporting​.

1. **What long-term strategies should the company implement to prevent data quality issues from recurring?**

To prevent data quality issues from recurring, the company should implement the following long-term strategies:

+ **Ongoing Data Governance:** Establish a data governance framework that includes regular audits, monitoring of data quality, and protocols for addressing discrepancies.

+ **Automated Data Cleaning:** Use automated data cleaning tools to regularly review and correct inaccuracies in real-time.

**+ Standardization of Data Entry:** Ensure all stores use uniform product codes and reporting practices through strict data entry policies.

+ **Continuous Employee Training:** Provide ongoing training for staff to reinforce best practices in data entry and management.

1. **How could the BI system be further improved to provide more actionable insights?**

The BI system could be further improved by:

+ **Advanced Analytics and Predictive Models:** Incorporating machine learning models to improve the accuracy of forecasts by considering complex variables such as market trends, weather patterns, and economic indicators.

+ **Dashboard Customization:** Allow decision-makers to customize dashboards for real-time insights tailored to specific regions or products.

+ **Integration of External Data:** Using external data sources, such as competitor pricing or macroeconomic data, could provide a more comprehensive view of market conditions and improve forecasting accuracy​.