**Purdue Project Level 4**

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This section of the Purdue Model project addresses Level 4, which focuses on the business side of the operation. At this level, we added enterprise-level systems to ensure smooth management and analysis of data and operational processes.

First, we added an Enterprise Resource Planning (ERP) system. The ERP system consolidates and manages business processes, such as inventory management, procurement, finance, and human resources. By integrating data from the operational side (such as SCADA and Historian) with business functions, the ERP enables more informed decision-making based on real-time data from the water filtration process. The ERP is connected to the corporate network to facilitate communication between different departments and users throughout the organization.

In addition, we introduced a Database Management System (DBMS). The DBMS is responsible for storing and managing large volumes of data from the SCADA system, the Historian, and other business systems. This database serves as the central repository for all data, ensuring that the data is organized, easily retrievable, and secure. The DBMS is also connected to the ERP system, allowing seamless data flow between the business processes and the operational data, thus facilitating better reporting and analysis.

The third addition is the Business Intelligence (BI) tools. These tools are essential for transforming raw data from the DBMS into actionable insights. BI tools allow for the creation of visual reports, dashboards, and predictive analytics that help decision-makers understand trends, performance metrics, and other key indicators. By connecting the BI tools to both the ERP and DBMS, the system ensures that business leaders have access to real-time data and historical trends for informed strategic decisions.

**COSTS:**

Oracle ERP - $10,000 - $50,000

DBMS – MySQL: Free!

BI Tools – Power Bi: $1,000 - $5,000