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# STAR Case Study

STREAMLINING UDI INSPECTION MANAGEMENT WITH POWER BI: A CASE STUDY

**STAR Case Study:** Streamlining UDI Inspection Management with Power BI: A Case Study

**Client:** Verdieu St Fleur, Southern California Edison (SCE)

## **Background (B):**

Southern California Edison (SCE) operates a vast electrical infrastructure, and the management of Underground Details Inspections (UDI) with pending E1 Notifications is critical to ensure the safety and reliability of their services. To meet regulatory requirements and improve operational efficiency, SCE recognized the need for a comprehensive Power BI dashboard specifically tailored to manage UDI inspections with pending E1 Notifications. This tool would empower management and districts to effectively oversee UDI inspections and prioritize pending notifications.

## **Objective (O):**

The primary objective of this project was to develop a robust Power BI dashboard that would serve as a central resource for managing UDI inspections with pending E1 Notifications. SCE aimed to provide its management and district teams with a powerful tool that would:

- **Enhance Visibility:** Offer improved visibility into UDI inspections, pending notifications, and their completion statuses.
- **Facilitate Efficient Decision-Making:** Provide comprehensive analysis features that enable more informed decision-making regarding UDI inspections and pending notifications.
- **Streamline Operations:** Optimize UDI inspection management processes, making it easier to prioritize and address pending items promptly.
- **Provide Insights into Backdowns:** Offer analysis of backdowns by various factors such as region, district, and inspector, providing valuable insights to optimize operations and compliance efforts.

By achieving these objectives, SCE aimed to enhance operational efficiency, strengthen compliance with regulatory requirements, and improve the overall management of UDI inspections with pending E1 Notifications.

## **Situation (S):**

Southern California Edison (SCE) required a comprehensive Power BI dashboard to manage Underground Details Inspections (UDI) with pending E1 Notifications. The objective was to provide management and districts with a powerful tool for overseeing UDI inspections effectively.

### **Task (T):**

The task assigned to Verdieu St Fleur was to create a robust Power BI dashboard specifically tailored for UDI inspections with pending E1 Notifications. This dashboard would serve as a vital resource for management and districts, enabling them to efficiently manage UDI inspections.

### **Action (A):**

Verdieu St Fleur took the following actions to accomplish this task:

1. **Create a Data Model:** Developed a data model within Power BI that could efficiently handle UDI inspection data and pending E1 Notifications.
2. **Calculations and DAX:** Implemented calculations and Data Analysis Expressions (DAX) in Power BI to perform various analyses on the dataset.
3. **Analyze Total UDI Inspections Pending:** Created an analysis module to track and report on the total number of UDI inspections that were pending.
4. **Analyze Total UDI Inspections Completed:** Developed an analysis component to monitor and report on the total number of UDI inspections that had been completed.
5. **Analyze Total Pending Notifications Prior to Inspection:** Provided an analysis tool to determine the total number of pending notifications before UDI inspections, establishing a connection between pending notifications and UDI inspections.
6. **Analyze Total Pending Notifications After Completed Inspection:** Created an analysis feature to assess the total number of pending notifications after UDI inspections had been completed, linking these notifications to UDI completion.
7. **Analyze Total Pending Notifications with Confirmation Comment:** Established an analysis mechanism to identify and report on pending notifications after completed inspections that included a confirmation comment. This required scanning the long text comments for specific phrases like "UDI confirmed condition still exists."
8. **Analyze Total Pending Notifications Without Confirmation Comment:** Designed an analysis module to identify and report on pending notifications after completed inspections that lacked a confirmation comment.
9. **Analyze Backdown by Region, District, Inspector, etc.:** Implemented an analysis tool to track and report on backdowns, allowing for insights into trends and patterns based on various factors such as region, district, and inspector.

### **Result (R):**

The outcome of Verdieu St Fleur's efforts was a highly effective Power BI dashboard tailored for managing UDI inspections with pending E1 Notifications. This dashboard provided the following benefits:

- **Enhanced Visibility:** Management and districts gained improved visibility into UDI inspections, pending notifications, and completion statuses.

- **Efficient Decision-Making:** The comprehensive analysis features enabled more informed decision-making regarding UDI inspections and pending notifications.
- **Streamlined Operations:** The dashboard streamlined UDI inspection management processes, making it easier to prioritize and address pending items.
- **Insights into Backdowns:** The analysis of backdowns by region, district, and inspector offered valuable insights for optimizing operations.

Verdieu St Fleur's work resulted in a powerful tool that significantly improved SCE's ability to manage UDI inspections and pending E1 Notifications, ultimately enhancing operational efficiency and compliance.