Improving Product Quality at Cook Medical

**Background**
- **Cook Medical**
  - Invents and manufactures lifesaving medical devices for healthcare systems globally
- **Cost of Poor Quality**
  - Cost associated with producing poor-quality products/services
- **Project aim**
  - Calculate the Cost of Poor Quality at Cook Medical from four metrics: CAPAs, Complaints, Recalls, and Nonconformances
  - Allow Cook to identify areas for quality improvement through CoPQ analysis

**Approach**
- **Datasets**
  - Provided by Cook Medical
  - Date Range: January 2022 onwards
- **Procedure**
  - Utilize Qlik for analysis
  - Data cleaning
  - Create interactive and insightful dashboards
  - Provide intuitive visualizations and comprehensive analytics

**Product Pipeline**
- **Customer**
  - The customer places an order with Cook Medical. The desired products are entered into a database.
- **Workorder**
  - The workorder leaves production and is in the customer’s hands.
- **Manufacturing**
  - Manufacturing for the workorder begins.
- **Sales**

**slick**

**Cost of Poor Quality**
- **Nonconformances**
  - Financial implications
  - Data validation and cleaning
  - Consider both direct and indirect cost
  - Develop mathematical equation for cost associated
- **Complaints**
  - Goal: Calculate cost based on manufacturing costs of products affected
  - Confirmed & Reported complaints considered
- **CAPAs**
  - CAPA = Corrective And Preventive Action
  - CAPA Triggers = The source of initial CAPA Investigation
  - Total number of days CAPA was open considered for cost assessment
- **Recalls**
  - Number of products recalled by specific ID
  - Calculated estimated monetary loss due to these recalls

**Total Cost of Poor Quality**
- The total Cost of Poor Quality involves a combination of all costs considered, including nonconformances, complaints, CAPAs, and recalls.
- Cook can use these metrics to gauge the performance of each of their product lines.

**Recap**
- Calculated the Cost of Poor Quality of each metric
- Reported our findings to Cook Medical
- Created a dashboard combing the results of all the metrics

**Future Work**
- Data Collection:
  - Collect missing data
  - Improve data labeling
- Using the results from all the metrics to lower CoPQ

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**Product Family**

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<thead>
<tr>
<th>Product Family</th>
<th>Cost CoPQ ($)</th>
<th>CAPA Triggers</th>
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<tbody>
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<td>COPQ</td>
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