



CASE STUDY

Effective Management of Defects in Manufacturing

Summary

Our client a global CPG giant has multiple fabric & home care products related manufacturing plants. They use different types of equipment during the manufacturing process at these plants; any defect in the equipment can hamper the entire production line leading to shipment delays. They were looking for a solution to more effectively manage and handle defects in the manufacturing equipment.

Vertex worked closely with the client to build an automated solution that is still in use at several locations, our solution allows seven of the client's plants to track the defects for different equipment and accommodates 14 different departments / processes under each of these plants.

Business Challenge

The client had an older application of SharePoint built for keeping track of defects identified in the production line equipment that would lead to manufacture of faulty products. The application was intended to be used by the respective department in charge of maintenance.

However, for issuing notification to the concerned departments, they were depending on manual processes. Progress tracking for a ticket raised was a concern that affected production. The out dated existing application also had scalability issues preventing large scale roll outs to multiple manufacturing plants.

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Vertex Solutions

Vertex worked closely with the client to design and build an enterprise level solution leveraging on the capabilities of SharePoint for submitting and tracking manufacturing equipment defects. A single system was developed for 7 different plants which delivered an enhanced and scalable defect handling system that could be easily extended to other plants and departments with minimal effort.

- A Real-time and Off-time defect identification in the equipment and machinery.
- A defect form that includes relevant data fields such as defect type, date found, equipment name, etc., to make it easy for users to quickly record and submit the defect. The form displays the data values specific to a plant and department combination.
- Defect categorization and status tracking – Based on the type of defect, the form provides the users the capability to tag multiple lines, area, equipment and component selection to a single defect and tag them to concerned departments for quick resolution. The form also provides a cloning feature which provides all the previously created defects for a particular department in a dropdown menu, thus helping in faster entry and tagging.
- Defect closure and analysis – The system helps in effectively tracking the progress of resolution- for each defect recorded and acts as a single point of reference for all the departments to conduct root cause analysis and take proactive measures.
- Reports – Each plant home page provides a feedback form for users to submit their comments, suggestions or recommendations if any.

Business Value

- Timely and effective decision making on handling defects in production equipment through automated solution.
- Provides hollistic view into the defect types, frequency of occurrence and resolution.
- Quick turn around on defect management decisions.
- Timely collaboration on defect analysis and closure.

Solution Highlights

- **Easy Navigation** – Vertex created a global home page and also plant specific home page. The Global home page provides links to the plant specific home page on a map interface. Users can also access the plant home page by selecting the corresponding region in the top bar of the global home page.
- **Defect Handling** – Each plant home page provides links to the 13 departments and an option for users to add a defect, specific to that plant and department using a simple form.
- **Dynamic Defect Form** – The form includes relevant data fields such as defect type, date found, equipment name, etc, to make it easy for users to quickly submit the defect. The form displays the data values specific to a plant-department combination.
- **Handling multiple line items** - The form provides users the capability to tag multiple line, area, equipment and component selection to a single defect, thus saving time and effort which may have gone into creating multiple defect items.
- **Cloning** – While entering any defect, the form provides all previously created defects for a particular department in a drop down menu. This allows the users to complete the form quickly by re-using past data. Users can also include a hyperlink to any previously attached files for that defect.
- **Feedback Form** – Each plant home page provides a feedback form for users to submit their comments, suggestions or recommendations, if any.
- **Reports** – We modified the Excel based report templates provided by the previous system to accommodate 6 additional plants and 12 additional departments. Each plant home page has an option for users to generate reports.
- **Restricted Access** – The user groups are specific to each plant to control user's access to data.