Garlock Active Product Monitoring

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Problem Background
Garlock is a company that produces sealing technologies that are used in high-risk fields such as nuclear and space applications. Garlock would like to minimize the risk of product failure for its customers by remotely monitoring sensors installed in their products. This project provides a means to monitor and analyze real-time sensor data in order to spot potential problems early.

Sensor Dashboard
The sensor dashboard presents a quick overview of all of a company’s installed sensors and the overall health of their Garlock products.

The color of a sensor indicates the sensor’s current health.
Charts provide an at a glance summary of the most recent sensor readings.
Clicking a sensor brings up a more detailed view (shown on the left).

Process
Process Model: Scrum
Scrum matched two key needs of our project: mitigating requirements volatility, and strong customer engagement. While a vague perception of the end product existed, the problem domain was new to both the team and sponsor. The sponsors responded positively to the Scrum workflow.

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<thead>
<tr>
<th>Sprints</th>
<th>Weeks / Sprint</th>
<th>Velocity σ</th>
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<tbody>
<tr>
<td>7</td>
<td>2</td>
<td>1.25</td>
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Architectures
Sensors send readings to a central API that stores data in remote locations. The data is analyzed and presented on the dashboard to Garlock customers.

Technologies

Reflection
Overall, our team was very pleased with this project. We found Scrum to be a useful tool; the ability to decide where the project would progress every two weeks allowed us to mitigate many risks and adapt the product to Garlock’s needs. We really enjoyed working on this project with Garlock and are excited to see it in the field.