

## Executive Summary

Honeywell International Inc. is a technology and manufacturing based multinational conglomerate, focusing in four major spaces: Aerospace, Home and Building Technology, Performance Materials and Technologies, and Safety and Productivity Solutions with global headquarters are in Charlotte, North Carolina. The scope of this internship project was relevant for multiple global branches specifically for the magnetic sensor product family. During the internship I worked with the product marketing team under the Electronic Sensing (ES) division (subdivision of the SIoT department: Sensing and Internet of Things). This department handles creating marketing initiatives and strategies at a product family and product line level to help enable the sales department and other sub-departments within the marketing department to work efficiently together to help continuously increase profits for the firm.

For the ES, data analytics is performed for the entire division as a whole. These analytical functions are performed on a high level which is visualized on Salesforce dashboards created by the finance department. While this proves to be important to get a large picture of Honeywell's performance in a financial sense, the marketing team struggled to efficiently derive insights into specific product's performances and further develop marketing strategies on a product family, product line and Stock Keeping Unit (SKU) level. Along with this, I realized that Salesforce would not be the best visualization tool from a market strategy perspective. While the Salesforce dashboards are user friendly, they have certain limitations. For instance, the current dashboards created, displayed a snapshot representation of present time product performance but no trend/patterns were visualized, making it difficult for the marketing team to derive analytical insights.

To deal with these problems, I decided to divide both the goals of my project into two major sections: (1) static data analysis (utilizing sales data before 2020) (2) dynamic data analysis (utilizing sales data for the year 2020 which dynamically appends on a weekly basis). On the static sales data, I performed deep level marketing analytics for the magnetics product family specifically, using powerful analytical tools such as Microsoft Excel pivot tables. The project I worked on was aimed at analyzing the magnetics product family thoroughly and drilling to deeper levels of detail i.e. product lines and material numbers. After noticing a 22% revenue drop in semi-annual sales from 2019 to 2020, I created marketing steps and solutions to rationalize SKUs. I also decided to give a fresh outlook for the analytics performed at Honeywell, by assessing the SKUs on an end application basis. I conducted numerous interviews to find end-based application data and applied useful marketing tools such as the BCG Growth Matrix and GMROI matrix, in order to design the foundation for future marketing strategies in order to increase the company's profits. (2) I also decided to introduce an easier and more relevant visualization tool for the marketing team. So, once I learned which analytical derivations were useful based on the past data, I created a dynamic Tableau dashboard for the present data (2020) which appends on a weekly basis.

The new recommendations were accepted by the team and have been integrated into Honeywell's current analytical solutions. By creating the relevant analytical Tableau dashboard, each team member would earn time savings of nearly 83.33% per dashboard component. Since team members were responsible for the maintenance and analysis of data in Microsoft Excel, the time savings would directly result in overall cost savings for the company through employee compensation. Additionally, an approximate value of \$770,000 was calculated to be saved by carrying out the marketing steps for rationalizing SKUs in the future.