C40: Internet of Connected Devices

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Medical devices are changing every aspect of healthcare. From diagnosis to treatment, these devices provide essential information, but handling all the data can be a challenging chore that distracts doctors, nurses, and caregivers from treating the patient. Direct Supply would like to remove obstacles by gathering all information together via an internet of connected devices where the data is processed and ready for analysis in real time. Simplification of the system and operator time savings will lead to smooth interactions between caregiver and patient, the best, most accurate treatment, and cost reduction through increases in productivity. Applying machine learning will allow doctors to gain even greater insights from patient data and flag complications even before they are noted by professionals.

The purpose of the project was to build an interface between a clinical measurement device and a small data collector used to save and store readings from the device. Direct Supply wanted to understand the technical complexities involved in building a small embedded-computer product that collects data from an Internet of Things (IoT) connected clinical device. Additionally, Direct Supply wants to understand factors that influence clinical readings. This information will be used to develop further experiments that can lead to better living environments for elderly individuals. The data that is collected is be analyzed for trends through machine learning.