The Internet of Things & Crisis Management

Overview
We were given a project by our sponsors over at PTC to improve campus safety by using the Internet of Things and the ThingWorx platform. The scope of the project is to present a technologically solution to address safety concerns on the Penn State main campus by using the ThingWorx platform from data gathering and management to visualization.

Objectives
• Build a list of possible campus safety situations that could be improved with ThingWorx and IoT technologies
• Choose the best solutions and design an implementation on the ThingWorx platform that will leverage the selected IoT technologies most likely including a smartphone app prototype to ingest data related to campus safety scenarios
• Implement a proof-of-concept solution using the ThingWorx platform and examples of selected IoT technologies

Secondary Goals
• Expand proof-of-concept to include feedback of analyzed data to sensors, devices, and/or people. Hardware may be purchased using the project budget to support the physical/visual demo.

Approach
For this new ThingWorx Learning Factory project, we utilized a variety of different types of IoT devices including smart phones, sensors, alarms, etc. and the ThingWorx platform to create a campus safety solution. Specifically, we created an application that aggregate real-time data reported by students and devices, analyzes that data, and enables the immediate communication of important safety information to the entire campus.

Outcomes
The project has so been a success with the iOS application and the web admin application working perfectly and reporting real-time data. In summary, project Blue Light was successful in leveraging IoT technology and the ThingWorx platform to create an application that addresses safety concerns across the Penn State Main campus.