Felix Situ

Mark Edin

11/6/17

Dear Professor,

The following is a proposal for our Recommendation Report topic.

The Development of Machine-Controlled Stacklight

**Introduction:**

For every industrial business, phenomenal logistics and immediate safety notifications are crucial to ensure the safety of its employees and to maximize profit. To minimize the number of casualties, workers must be warned of a disaster as soon as possible to prepare for evacuation. A common tool used to alert others of possible accidents are stacklights. As the name suggests, they are composed of different colored lights stacked vertically upon one another, with each light displaying a unique symbol, similarly to highway patrol lights.   
 At this moment, only humans can use the stacklights to alert others of impending incidents. However, it is problematic to rely solely on them, due to their imperfection. Mark Edin’s family company aimed to improve the use and accessibility of stacklights. They proposed a stacklight that allows machines to become the controller and to communicate with each other without human interactions. This would also allow machines that originally lacked communication abilities to create a network of production. In a factory setting, safe and productive machinery provides an effective and safe labor environment. Whenever an experiment fails, possibly leading to an incident, the machine will flash the stacklight’s customizable colored lights. Machines detect material defects in emergency situations faster than humans ever could. The company’s new product was already tested and provided logistical and safety solutions in a factory setting.

**Background**:

These machine-controlled stacklights are currently not for sale. The company C-Labs currently faces the decision whether to further pursue the development and production of these stacklights. Our goal of the project is to research and provide a Recommendation report that evaluates multiple options for the stacklight’s future. We believe that the possible production of these machine-controlled stacklights would become beneficial and profitable for the company. The United States Department of Justice have recorded approximately 13 industrial-related deaths every day, and each incident could potentially cost businesses millions of dollars in lawsuits and factory downtime. The best method to avoid industrial-related deaths is to prepare its workers to evacuate as soon as possible. A machine will always detect its own failures faster than any human could. By allowing machines to immediately alert workers of dangerous situations, yearly industrial deaths will decline dramatically.

**Research Methods**:

My primary source regarding the stacklights derives from phone interviews with C-Labs members. **(Explain More)**

Other sources I encountered includes articles regarding stacklights purposes in Brownfields and Greenfields.

I also included statistics from the United States Department of Labor that details the number of annual industrial incidents. This information supports the development of machine-controlled stacklights to reduce human casualties.

**Timeline**:

Complete by: Objective

November 5th: Meeting in Library

November 6th: Complete draft for proposal

November 8th: Meeting in Baker

November 14th: Interview with C-Labs

November 15th: Conference with professor

November 24st: Recommendation Report formatting draft

November 27th: Final Recommendation Report editing

November 28th: Recommendation Report turn in

**Conclusion:**

The safety of its workers is every business’s priority. Industries will suffer massive blows in their reputation and budget if their workers collided with a disaster. The purpose of this report is to inform C-Labs that it is essential to develop their machine-controlled stacklights. Their lights allow anyone to understand whenever a machine beyond their understanding becomes dangerous. This product will ensure a safer environment within the industrial environment.

Work Cited

Edin, Mark B. “Stacklight Research Call.” 7 Nov. 2017.

Dariol, Matteo. “What's the Difference Between.” *Machine Design*, 22 May 2017, www.machinedesign.com/industrial-automation/what-s-difference-between-brownfield-and-greenfield-iiot-scenarios.

Onyx Industries Inc. “Stack Light Engineering Reference Guide.” 23 Sept. 2012, pp. 1–4.

“UNITED STATES DEPARTMENT OF LABOR.” Occupational Safety and Health Administration,

www.osha.gov/oshstats/commonstats.html.