Biometric & Thermal Scanning Implementation Project for KraftHeinz

Aiding Best Practice Achievement Through Implementation Documentation

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ABSTRACT

Covid-19 has disrupted the lives of so many people around the globe since 2019, temporarily closing businesses, imposing virus prevention measures, and restricting people's ability to carry out their normal daily activities. The Ministry of Primary Industries (MPI), a New Zealand governing body set a requirement for all food and beverage manufacturers to measure personnel temperatures when entering sites. This requirement saw the rapid implementation of temperature scanning at KraftHeinz using security guards across New Zealand and Australia. This project aimed to assist with the planning and implementation of a biometric and thermal scanning security solution with the production of a Biometric and Thermal Scanning Implementation Playbook defining and mapping best practice measures. Scrumban a project management method was used to guide the delivery of an Implementation Playbook, Training Plan, Network Diagrams, and supportive communications to end-users.

Keywords: Covid-19, Security, Biometric, Scrumban

1. INTRODUCTION

KraftHeinz is a food and beverage manufacturer that has been in operation since 1777. They have grown to produce over 200 different brands, from over 40 countries, employing around 38,000 staff, for global supply (KraftHeinz, n.d.; KraftHeinz, n.d.).

Figure 1 - KraftHeinz Project Poster

In 2020 MPI introduced the temperature checking requirement (MPI, 2020; MPI, 2021), in which KraftHeinz promptly actioned with the use of security guards armed with temperature scanning guns, to see the continuation of manufacturing export globally.

Long term this is a costly and labour-intensive solution to continue, which is where KraftHeinz sought out a more efficient cost-saving alternative. They will be using one vendor, Optic Security, to implement and manage Invixium thermal and biometric scanning devices within a Gallagher security solution to manage site access. This system will tighten security with a high-technology fingerprint and thermal scanning security system across eight sites within Australia and New Zealand.

The author's role was to assist the project owner in joining multiple systems with the design of a best practice streamlined security solution managed by one vendor, reducing the current temperature scanning costs. Whilst also mitigating the risk of Covid-19 virus transmission (MPI, 2021), ensuring employee safety by preventing any personnel with a temperature above 37.9˚C from entering a manufacturing site.

The system will enhance high-temperature audit capability with digital records and enable easier future implementations on other sites with thorough planning and best practice documentation in the Implementation Playbook and Training Plan.

2. APPROACH

The following methods were used to ensure the project met stakeholder needs and achieved high-quality results for industry and academic deliverables.

2.1 Project Management

The author followed four project management phases from within a project lifecycle (Galante, 2021), without the Initiation phase as the project was already underway when the author joined the team. The phases planned for were:

- **Planning** – scheduling, best practice research, requirements gathering, network configuration and mapping.
- **Execution** – system installation and testing, user training and enrolment, and system go-live.
- **Monitoring** – system maintenance, troubleshooting and user support.
- **Closure** – final documentation, quality assurance, deliverable sign-off and presentation.

2.2 Scrumban

The author researched and followed a Scrumban project management methodology to increase task visibility with the project owner and track deliverables during the project. It was chosen to match the project owner's flexible agile project management style.

Scrumban is an amalgamation of Scrum (agile), and Kanban (lean), project management frameworks (Reddy, 2015). It uses flexible sprints and retrospectives (Banijamali, 2016), with work in progress limitations to improve workflow and reduce workload pressures (Stellman, 2019). It utilises non-prescriptive team roles, cadence monitoring with easy task tracking and early bottleneck prevention within a visualisation board, enabling greater progress visibility.

2.3 Quality Assurance

A defining of quality assurance measures was written in the project planning phase with guidance by Virginia Tech's Quality Management Planning Template, to ensure deliverables were of a high quality and met stakeholder expectations during the project closure phase. Measures were defined in a quality assurance table, listing the deliverable, quality standard, quality checking activity, frequency of measurement and who was responsible for assuring deliverables met the required standard (Virginia Tech, n.d.).

2.4 Risk Management

Potential risks were identified using a Structured What-If Technique (Clarkson, 2012) and rated with a likeliness scale to determine their probability of occurring (Nikolić, 2013). They were then mapped using a Microsoft Risk Assessment Template to identify the Triggers and Consequences, ranking them with a quantitative Exposure measure, then planning Mitigation and Contingency strategies to ensure effective avoidance measures were catered for.

2.5 Project Delivery

The project started with the author gathering requirements from stakeholders, then researching MPI regulations and temperature scanning requirements, followed by best practice system implementation requirements and network mapping. The author scheduled the different requirements for the systems implementation and tracked their personal time expended on deliverables.

The project suffered significant scope expansion do to a poorly defined scope by an external contracted project manager. With their replacement, the system implementation in the execution phase was pushed back by two to three months with the inclusion of the previously unforeseen requirements. The author continued with documenting best practice and monitoring phase measures and assisting with the systems planning and communication to stakeholders.

3. OUTCOMES

The project concluded with quality assurance sign-off of the following deliverables.

Industry Deliverables:

- Biometric and Thermal Scanning Implementation Playbook
- Training Plan
- Logical and Physical Network Maps for one location
- Data Flow Diagrams
- Draft Personnel Communications and Frequently Asked Questions list

Academic Deliverables:

- Academic Report
- Project Poster
- Poster Short Paper
- Scrumban Methodology Essay
- Panel Presentation

4. CONCLUSION

The author gained valuable experience within this multi-vendor project whilst working remotely due to Covid-19 restrictions. They learnt that scope creep can cause significant delays in project implementation, projects with multiple vendors can suffer communication misinterpretations, and they gained valuable experience using the Scrumban methodology to manage tasks within a project.

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