Snapshot Report

Remote Operations (Gamification)

Project Code
2021-1136

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Project Description

The primary objective of this project is to produce a successful training method to enable operational staff to be more effective when operating a beef scribing saw.

There are two high level goals to be addressed:

1. Short term - Improving output quality from staff through training resulting in greater yields.
2. Long term - Improving safety through increased staff competence and process automation.

The short-term goal was addressed by creating a learning and engagement tool that addresses current staff competency levels by delivering an engaging game style that is compelling for users and teaches them to scribe accurately at production level throughput.

Using the learning-based approach as a natural pathway to automation we can achieve the long-term goal of automation by taking advantage of the learnings and development that the application provides.

Project Content

The following points were considered for the project approach and methodology.

- Learning outcomes
- Workplace health and safety
- User experience
- Gamification

The methodology chosen was in 3 parts with the later addition of the game. The first 3 parts are:

1. Show
2. Practice
3. Try

1. Show

Have a video as part of the learning environment that allows the user to:

- View the whole process from start to finish.
- Scrub the timeline to watch/re-watch different parts of the video.

2. Practice

- Allow the user to practice in a free environment that allows them to learn each step at their own pace.
- Have the video available to aid their learning.

3. Try

Once the user feels confident to attempt the process in full, they can do so with minimal (by displaying the steps) help. They must complete the exercise in the correct order then receive visual feedback on their performance.

Gamification

This is taking what they have learnt in the previous stages i.e., how and where to scribe correctly, then increase participation by making the learning experience fun and engaging with an element of competition.

Project Outcome

While still at a proof-of-concept stage there was enough positive response from internal users to suggest that value was being realised especially with the gamification of the learning. The game function was developed last in the cycle and as the project progressed it became an intrinsic part of the learning process that increased engagement and thereby increased the user's knowledge and skill regarding the process.

The next steps would be to make the app available to interested industry parties for operator evaluation then based on that feedback the app would be completed. While the current web app addresses the short-term goal, there is the opportunity to take what has been developed and move that on to more advanced use cases that address the long-term vision.

Development has been done using a platform that provides the opportunity to port the application to other technologies such as Virtual Reality and automation. This provides the flexibility to take what we have and develop a VR application or a gamified robotic cutting system that can be controlled fully or partially by a remote operator.

Benefit for Industry

There are several benefits that align with AMPC's strategic plan touch points. These include:

- Training
  - Carcase Primal Profitability Optimisation, by facilitating accurate and timely processing.
  - Attraction, offering modern technology solutions for staff makes it an attractive option for future employees.
  - Retention, by providing modern, engaging training that is a positive experience for employees.
- Automation
  - Development, by developing tasks that require higher skills and intellect.
  - Removing staff from dangerous operations via Hands-Off processing.
  - Safety and Wellbeing, via reducing the high-risk nature of processing operations.

Useful resources

Current version of the application.

Please note it is a proof of concept and has not been tested in all browsers. We would recommend using Chrome, but it should work in all browsers.

Copy and paste the link into your browser.

https://ampctest003.z8.web.core.windows.net/