



Virtual Picker – Workforce Training Enhancing Profitability and Employment in the Horticulture Industry

Workforce Training &
Innovation Fund
Showcase





Costa & Mushrooms

- Costa is Victoria's biggest mushroom grower, producing 8 million individual mushrooms each week at its facility in Mernda, north of Melbourne.
- The mushrooms double in size every 24 hours and are all hand picked by more than 300 harvesters.
- Mushroom picking requires a high degree of skill, including dexterity, speed and knowledge about what to pick, and when.
- It can take several months to train a picker to a competency level where they are both productive and able to ensure the quality of the mushroom is maintained when it is picked.

The Challenge

- Approximately half of all new starters don't make it through the initial six weeks of training. This can be due to a number of factors, including lacking the skill required to operate at the preferred harvesting efficiency.
- This is costly for both the company and the employees who don't make it.
- It is hard to pick suitable workers in advance – “Different people have different strengths, and we can't see that until we see them in action.”
- VR technology allows for a much quicker assessment of new trainees and to lift the skills and productivity of workers.



The Project

\$1.6 million funding from the Victorian Government's Workforce Training & Innovation Fund has enabled collaboration between Costa Group, Melbourne Polytechnic and the not for profit Food and Fibre Gippsland to create an innovative and engaging training program.

A program that that significantly improves 'speed to competence' of fresh produce harvesters, including:

- Developing new harvesting competency training units.
- Developing a virtual reality (VR) harvest training tool for the Victorian horticulture sector, with an initial focus on mushroom harvesting.



Project Benefits

- A training environment that mirrors the harvesting operations of the mushroom farm but does not impact business output.
- Allows potential employees to fully understand the job and skill requirements before committing to the role, allowing prospective harvesters to 'try before they buy'.
- The majority of mushroom pickers are first-generation migrants from Vietnam, China, Malaysia, Philippines, Myanmar and India. English is their second language, and this is a key consideration when developing a training program.
- Reduced worker turnover, workplace injuries, food waste.
- Ability to adapt the technology to other horticultural crops.
- Formal recognition of the development of skills and knowledge.



Key Learnings

- Importance of stakeholder relationships.
- Need for detailed project planning and scoping process.
- Regular project review and steering group meetings.
- Understand and research technology, including its opportunities and limitations.
- Importance of engaging experienced staff in the design process and regular testing.
- Ability to develop an onboarding program not reliant on English language.





Developing the Technology

- Accurately representing harvesting technique in VR is crucial.
- Incorporate haptic technology such as 'index controllers' to hone technique and most importantly experience what the work is like.
- The input of experienced mushroom harvesters has proved invaluable to help make the VR as realistic as possible, including clarifying technique and the visual representation of mushroom size, look and feel.
- Need to teach and incorporate the ideal biomechanics of how the hand is used for mushroom harvesting.
- Having the VR designers spend time with the harvesters was a positive influence on the design and build of the VR content.



The VR Product

Six VR training topics being developed including:

Module 1 - Mushroom Selection

Module 4 - Mushroom Cutting

Module 2 - Identifying Disease

Module 5 - Working the Mushroom Bed

Module 3 - Mushroom Harvesting
Technique

Module 6 - Time Trial



Thank you

