



# Creating a Food and Fibre badging system

Stakeholder report and recommendations

September 2022

# Contents

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<b>Executive summary</b> .....	<b>3</b>
<b>Introduction</b> .....	<b>6</b>
Context.....	6
Setting the scene.....	6
<b>Research</b> .....	<b>8</b>
Research questions .....	8
Research components.....	8
<b>Findings</b> .....	<b>10</b>
Overview .....	10
Part A: Testing the value proposition .....	10
Part B: Designing a system for learners and employers .....	21
Part C: Designing the model that sits behind the system.....	26
<b>Recommendations</b> .....	<b>31</b>
<b>Appendices</b> .....	<b>33</b>

## Executive summary

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### Introduction

Industry stakeholders have long discussed the desire for a sector-wide badging system. This feedback has been consistently received by the Food and Fibre CoVE (FFCoVE) and reflected in discussions with stakeholders, including the project steering group for the FFCoVE micro-credential project. Short, bite sized learning meets the needs of learners in the sector, who are time-poor, juggling learning alongside employment, family and the challenges of living rurally.

A carefully designed badging system should enable learners to gain recognition for the completion of module-sized learnings. Badges can be associated with micro-credentials that are awarded to learners promoting engagement, participation and achievement in both non-formal and formal learning.

### Research

The research had two components. In-depth interviews were undertaken with stakeholders across the sector (N = 16), and desk research on existing badging systems was conducted. The findings and recommendations in this report were informed by both aspects of the research. These findings are grouped into the following categories:

- **Part A:** Testing the value proposition
- **Part B:** Designing a system for learners and employers
- **Part C:** Designing the model that sits behind the system.

### Key findings

There is instinctive appeal amongst stakeholders for a sector wide system that:

- **Recognises current non-formal learning opportunities** and aligns them more closely to the formal framework, improving the transition and staircasing between non-formal and formal learning
- **Improves transferability across food and fibre industries**, allowing employees to transition more easily from one industry to another
- **Connects together the diverse training being offered** in the sector onto a cohesive framework, creating more flexible learning pathways for learners and reducing duplication of short learning opportunities
- **Creates a means of employers validating** what employees have achieved in their work
- **Lifts the capability levels of learners** across the food and fibre sector by making learning pathways more visible and accessible, and therefore increasing the uptake of learning opportunities.

The research produced strong evidence that stakeholders believe a badging system could contribute to meeting the objectives above. However, there appears to be good reasons that a badging system does not already exist. While stakeholders can see its value, considerable challenges will need to be overcome to develop, implement and sustain a successful sector-wide badging system.

The research identified these components where stakeholders didn't agree, and each will require further clarification:

- Is the purpose of the badging system mainly for talent attraction or skills growth?
- Should the system include formal, non-formal or both?
- Are we badging existing skills gained through experience (RPL), participation in training courses, or both?
- What levels is this aimed at?
- How will we reduce / control complexity?
- Who should run it?

In critiquing the badging system's actual ability to meet these objectives, the biggest challenge is that we do not have strong evidence that employees and employers will see value in such a system. That is, we do not have strong evidence that addressing the objectives listed above will provide significant benefits to employers and / or learners. As the key audience for this system, whether their needs can be met needs to be clarified. It is also not clear that a badging system is the best way to deliver on each of these objectives. If we can find strong learner and / or employer value propositions for any of the various options for what a badging scheme could look like then the answers to the questions above should flow from that.

The research however was informative on the aspects of a potential badging system required to meet the above objectives. Should the FFCoVE wish to proceed with the next stage of research and development, the following factors should be taken into account:

- **The system needs to sit on top of a skills and competency framework** – this framework should be the backbone of the system and it is expected that this framework will be developed by industry stakeholders (i.e. Muka Tangata) before a badging approach is overlaid.
- **Buy-in is critical** – for the system to be successful, there needs to be strong buy-in from learners and employers (who are arguably the most important stakeholder in terms of recognising the value of and utilising the badging system).
- **Strong collaborative leadership and management are needed** – to build and maintain a system that spans all food and fibre sectors. Industry peak bodies are critical stakeholders who need to endorse and drive the use of the system.
- **Clear roles and responsibilities need to be established** – to ensure consistency the roles of ownership, quality assurance, gatekeeper, endorser, verifier and promoter need to be defined and agreed upon. This includes FFCoVE, Muka Tangata, peak bodies, Food and Fibre Ako and other providers.
- **The focus audience of the system needs to be agreed on** – whether the primary focus of the system should be for those in work (including induction), with some scope for secondary focus areas (such as attraction).
- **The general consensus indicated that there could be common badges at entry and management level** – assuming that there is learner and employer demand at all levels.

An important aspect to note is that a badging system will not solve everything that is being requested. A common theme across the research was that stakeholders and industries had their own specific issues they would like to address – but not all of these can be channelled into / be solved by the badging system.

## Recommendations

The following recommendations follow a two-stage process:

### Stage 1

- Undertake a robust discussion of these findings to ascertain whether a badging system is the right solution to meet the objectives stated, or whether alternative solutions should be considered.
- Conduct further research to test the idea with employers and employees to determine their needs and potential engagement in a system
- Make indicative plans for the implementation of a BAU system, including determining roles and responsibilities (e.g. ownership, management, endorsement) and funding.
- Develop a business case and estimate the potential cost of the system

At this point there should be a go / no go milestone with input from a range of affected stakeholders.

### Stage 2

- Design a pilot system using the findings and guidelines from this research alongside input / feedback from the potential users of the system (as above).
- Evaluate the implementation of the pilot
- Refine plan for the implementation of a BAU system, including determining roles and responsibilities (e.g. ownership, management, endorsement) and funding, and work through this will affected stakeholders.

## Introduction

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### Context

Industry stakeholders have long discussed the desire for a sector wide badging system. This feedback has been consistently received by the Food and Fibre CoVE (FFCoVE) and reflected in discussions with stakeholders, including the project steering group for the FFCoVE micro-credential project. Short, bite sized learning meets the needs of learners in the sector, who are time-poor, juggling learning alongside employment, family and the challenges of living rurally.

*“This is long overdue and has huge potential.”*

A carefully designed badging system would enable learners to gain recognition for the completion of module-sized learnings. Badges can be associated with micro-credentials that are awarded to learners for promoting engagement, participation and achievement in both non-formal and formal learning.

The FFCoVE Taking Stock work has concluded that:

*The trend in qualifications is clearly towards recognising shorter chunks of learning, and the world has gone outcomes-based in terms of qualifications frameworks and regional meta-frameworks. Modular, stackable, and granular credentials are seen as more fit for purpose in a world of lifelong learning, career change and upskilling. Digital badging and micro-credentials are increasingly available as part of formal systems, to offer “just in time” learning that carries lower opportunity costs to existing workers.*

While this research stemmed off the back of a micro-credential focussed project, during the research it emerged that there is a wider appetite for badges to recognise formal qualifications and skills. The wider learning eco-system should also be considered as the suitability of a food and fibre wide badging system is assessed.

### Setting the scene

The micro-credential project steering group directed the focus of the research work based on the following characteristics and challenges they identified in early discussions on the topic. These characteristics and challenges informed the research that was then undertaken.

#### Characteristics of a good badging system

The project steering group identified four key areas that could define the characteristics of a good badging system. These characteristics form the foundation of a badging system and were used to inform the research questions for this work. These characteristics were that the badging system should:

1. Have recognition / status, using language meaningful to employers
2. Adhere to a national standard; consistent taxonomy / levels, identifiable assessment
3. Be quality assured; by a governing body
4. Be transferable across sectors; allowing for both core skills and areas of specialisation.

#### Challenges in designing a good badging system

While it is clear that sector stakeholders feel there could be real benefits to developing a badging system, it would not be an easy exercise to execute. Six key areas of challenges were identified by the

project steering group to avoid when designing a badging system. The key challenges that could affect the success of the system were noted as:

1. Buy-in – if employer and employee recognition and buy-in is not built appropriately, there could be a lack of perceived value in the system
2. Scope – the system being overly complex for employees and employers; or if it doesn't support the goal of avoiding overlap and duplication across providers
3. Leadership – the owner of the system not presenting a unified vision across the stakeholder groups involved
4. Platform – a lack of a suitable platform to maintain records and therefore manage quality and consistency
5. Alignment – a lack of alignment with the broader qualification system; a disjointed system
6. Funding – if access to sustainable funding is difficult; ensuring the cost is not borne by learners.

## Research

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### Research questions

The following research questions were created to be addressed during the stakeholder interviews:

1. Why do we need a food and fibre badging system?
2. What is the value to different stakeholders – learners, employers, providers, and industry?
3. Who is this badging system intended for? (i.e. primary audience)
4. What could the role of formal vs. non-formal learning be within the system?
5. How would quality and consistency be managed within the system?
6. What are some possible pathways within the system? (e.g. badges by level, skill, industry, etc.)
7. What are the roles and responsibilities of the organisations associated with the badging system? Specifically, who will develop, own, endorse, and manage the system?
8. What are possible funding options?

### Research components

The research consists of the following two parts:

- In-depth interviews with stakeholders
- Desk research on badging systems.

### Stakeholder interviews

In-depth interviews with industry stakeholders to understand their perspectives of and expectations for a list of key factors of the badging system. A total of 29 stakeholders across 25 organisations in the food and fibre sector were approached, and half of them (N=16) were available to be interviewed. Below listed the organisations the stakeholders were interviewed from:

- DairyNZ
- eCampus
- Forest Industry Contractors Association
- Food and Fibre CoVE
- Kedron consulting
- Ministry for Primary Industry (fisheries)
- Muka Tangata
- New Zealand Apples & Pears
- Primary ITO

- QCONZ
- Scarlatti.

At the time of writing (July 2022), an interview with Te Pūkenga is yet to take place. It is noted that this is a significant gap in the research as they are a key stakeholder and this should be addressed before the next stage of work is undertaken.

A stakeholder interview guide was developed to inform and prompt the discussions. Refer to Appendix A on page 33 for more details.

### **Desk research**

This involved research to collect information on existing badging systems. Ten institutions that were / are employing badging systems or similar were investigated (listed below), along with platforms providing associated services (e.g., issuing the badge, conducting remote assessment). Refer to Appendix C on page 36 for more details.

- AucklandOnline
- British Poultry Training
- Charles Darwin University Northern Institute
- Dale Carnegie training
- EduBits
- European Badge Alliance
- ForgeRock University
- GoHort
- IBM credentials
- Pragmatic Institute.

## Findings

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### Overview

Findings from the research can be grouped into the following categories that make up this section of the report.

- **Part A: Testing the value proposition**
  - The overall value of the sector having a badging system (for learners, their employers, providers, and industry)
- **Part B: Designing a system for learners and employers**
  - Creating a learner-centric and employer-centric system
  - What can be learnt from previous attempts to create a badging system within the food and fibre sector
  - The inclusion of formal and non-formal learning within the system
  - Quality assurance and consistency
  - Potential pathways within the system
- **Part C: Designing the model that sits behind the system**
  - Potential ownership models – who should own, manage, gatekeep and endorse
  - Possible roles and responsibilities
  - Opportunities for funding the system.

### Part A: Testing the value proposition

*Why do we need a food and fibre badging system? What is the value to different stakeholders – learners, employers, providers, and industry bodies?*

#### Overall value to the sector of having a badging system

Industry stakeholders have long discussed the desire for a sector wide badging system. This feedback has been consistently received by the FFCoVE since its formation and reflected in discussions with a range of stakeholders, including the micro-credential project steering group. Short, bite sized learning meets the needs of learners in the sector, who are time-poor, juggling learning alongside employment, family and often and the challenges of living rurally.

Desk research on badging systems has demonstrated how these can effectively operate, although previous attempts in the food and fibre sector have had challenges. It is important to understand the value that stakeholders are seeking from the system, and aim to offset the challenges or barriers encountered by other badging systems.

## Defining the objectives of the badging system

It was noted that the concept of a badging system is currently wide, and some work is required to narrow this definition and ensure industry stakeholders are aware of what it could entail and what the overall objective of the system is.

*“I think the definition of badging is something that has a fair degree of latitude in it. And just coming to understand where the value sits and lies is probably the key challenge in front of us.”*

While it is important to ensure the badging system is learner-centric, there was a general consensus from stakeholders involved in the research that the needs of employers are equally important. Without employers recognising the value of badges on the system, any potential value is likely to be lost. The instinctive appeal a sector wider badging system holds has been translated into the following five objectives that the badging system should address:

- 1. Recognise non-formal learning and bring it closer to the formal learning system**
  - Create a means of recognition for non-formal learning
  - Improve the transition / staircasing between non-formal and formal learning.
- 2. Improve transferability across food and fibre industries**
  - Allow employees to transition more easily from one industry to another
  - Use a consistent system where badges sit on a system that is recognised by pan sector employers.
- 3. Connect together the diverse training being offered in the sector onto a cohesive framework**
  - Create more flexible learning pathways for learners and employers
  - Reduce duplication of short learning opportunities
- 4. Create a means of employers validating what employees have done**
  - Simplify the way employers can check the skills of a potential employee.
- 5. Lift the capability levels of learners in the food and fibre sector**
  - Make learning pathways more visible and accessible
  - Increase the uptake of learning opportunities.

The four tables below have outlined the evidence, benefits, alternative solutions, and critique of these five objectives.

- Table 1 outlines quotes from the stakeholder interviews that contributed to the identification of the objectives.
- Table 2 outlines the benefits of achieving each of the objectives (i.e., for learners, employers, providers, and industry.)
- Table 3 outlines the alternative solutions that the industry may initiate to meet the objectives.
- Table 4 critiques the badging system against each of the objectives.

Table 1: Supporting quotes for the defined objectives

Objective	Evidence
<p><b>1. Recognise non-formal learning and bring it closer to the formal learning system</b></p> <ul style="list-style-type: none"> <li>- Create a means of non-formal recognition</li> <li>- Improve the transition / staircasing between formal / non-formal learning.</li> </ul>	<p><i>“In terms of badging, it’s probably, for me, a slightly bigger picture, it’s around defining informal and non-formal learning, and then giving it a place.”</i></p> <p><i>“There are little sections of the system that are doing amazing pieces of work and that are really valuable for people but they’re not being appropriately recognised or they don’t go anywhere.”</i></p> <p><i>“It’s really trying to provide a tool that the formal qualifications doesn’t have but still have some quality assurance and something that the learner feels ‘oh, I’ve done something.’”</i></p> <p><i>“I guess it’s a way of starting people on the staircase because it offers a staircase to learning. You can choose to only climb up one stair, you only get one badge ... but then you can keep people climbing the staircase one stair at a time and so it’s a very accessible, approachable kind of system, in theory.”</i></p> <p><i>“And there was a particular skill that they needed to learn that wasn’t in the big qualification, but there was a small packet of learning off to the side that they could do, and then they could use those – they could bring those credits into their larger qual.”</i></p> <p><i>“And then as you move up, or sideways, and you learn different skills, and you learn a bit more, you might say, ‘Well – I actually want to do that higher, I want to do a Diploma now.’ And then you can take all those badges and it can be utilised as some form of Recognition of Prior Learning (RPL) or Recognition of Current Competency (RCC) against the stuff that you actually know.”</i></p>
<p><b>2. Improve transferability across food and fibre industries</b></p> <ul style="list-style-type: none"> <li>- Allow employees to transition more easily from one industry to another</li> <li>- Use a consistent system where badges sit on a system that is</li> </ul>	<p><i>“Why don’t we create a series of badges or micro-credentials that are designed to help people transition from one industry to another?”</i></p> <p><i>“I think we can probably have qualifications that can lead to many qualifications. You get started, a little bit like a degree I suppose, you get started and then you think, ‘I’m going to specialise into dairy.’ And you can move like that. At the beginning of things, of the pathway it could be quite generic, and then it gives into where it needs to.”</i></p> <p><i>“There should be ways of learning life skills and core competencies that can be applied right across.”</i></p>

Objective	Evidence
<p>recognised by pan sector employers.</p>	<p><i>“They can’t tell you straight off the bat where they want to be. But if they can do little bits of learning that translate to some or many industries, (a) they are more familiarised with what the breadth and depth of the industry is, but (b) they can find out where they’d like to be.”</i></p>
<p><b>3. Connect together the diverse training being offered in the sector onto a cohesive framework</b></p> <ul style="list-style-type: none"> <li>- Create more flexible learning pathways for learners and employers</li> <li>- Reduce duplication of short learning opportunities</li> </ul>	<p><i>“One of the reasons I strongly support the badging system is the human need to collect a set.”</i></p> <p><i>“The beauty of [badging] the non-formal stuff, for me, is that actually it would fill a gap in the market, because there isn’t really a framework to tie together non-formal stuff.”</i></p> <p><i>“The big thing for any sort of badging is going to be, can we also recognise not just learned skills, but the wider experience and skills that people have got ... all those other things that sit outside of formal or non-formal learning but contribute to your skillset as a person.”</i></p>
<p><b>4. Create a means of employers validating what employees have done</b></p> <ul style="list-style-type: none"> <li>- Simplify the way employers can check the skills of a potential employee.</li> </ul>	<p><i>“It’s portable, it shows your employer and future employers the fact that you can learn to a given level, if you like, and that you’ve been taught and assessed – I’ll put that in loose terms – assessed against some criteria of one form or another.”</i></p> <p><i>“The concept of putting that information behind the badge to enable an employer to get a sense of what a qualification means, that’s really valuable as well.”</i></p> <p><i>“Somebody can do it in their own time, online, simple as, or straightforward as, and then all their boss has to do is eyeball that and go, yep. Then tick the right box, or punch the right card, or do whatever, and then they can load it in. It’s got to be built round really a straightforward process, that’s the way.”</i></p> <p><i>“It can be you’ve attended something; it can be used in such a wide variety of ways that I think anything to do with badging you need to focus on the why and the value that it will add to the person who gets it but almost more importantly to the employer recognising what it is.”</i></p>
<p><b>5. Lift the capability levels of learners in the food and fibre sector</b></p>	<p><i>“There will be an element of investment in people. And then I guess those people in horticulture enterprises are one of the scarcest of all the scarce workforces at the moment. So, if you can be seen to do anything that’s keeping people, that’s good news.”</i></p>

Objective	Evidence
<ul style="list-style-type: none"><li>- Make learning pathways more visible and accessible</li><li>- Increase the uptake of learning opportunities.</li></ul>	<p><i>"A whole different system of training designed for people working from mid-career people, mid-career to late career."</i></p> <p><i>"I think people should have the ability to access training for themselves, and it should be visible, and it should be accessible, should be culturally safe."</i></p>

Table 2: Benefits of the badging system to stakeholders

Objective	Benefits to:			
	Learners	Employers	Providers	Industry
<p><b>1. Recognise non-formal learning and bring it closer to the formal learning system</b></p> <ul style="list-style-type: none"> <li>- Create a means of non-formal recognition</li> <li>- Improve the transition / staircasing between formal / non-formal learning</li> </ul>	<ul style="list-style-type: none"> <li>• Increased ease of transition between learning opportunities</li> <li>• Improved recognition of skills and experiences gained in a non-formal learning environment.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved recognition of the training and learning occurring in the work place.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved staircasing into formal learning from non-formal learning (potential).</li> </ul>	<ul style="list-style-type: none"> <li>• Improved staircasing into formal learning from non-formal learning (potential).</li> </ul>
<p><b>2. Improve transferability across food and fibre industries</b></p> <ul style="list-style-type: none"> <li>- Allow employees to transition more easily from one industry to another</li> <li>- Use a consistent system where badges sit on a system that is recognised by pan sector employers.</li> </ul>	<ul style="list-style-type: none"> <li>• Greater employment opportunities across industries within the food and fibre sector.</li> </ul>	<ul style="list-style-type: none"> <li>• Better able to recognise learning that employees have done previously.</li> <li>• Able to ease skills shortages in the industry (potential).</li> </ul>	<ul style="list-style-type: none"> <li>• Continuation of learning / training is more likely with better transferability across industries.</li> <li>• Increased value of training courses provided.</li> </ul>	<ul style="list-style-type: none"> <li>• Continuation of learning / training is more likely with better transferability across industries.</li> <li>• Improved retention.</li> </ul>
<p><b>3. Connect together the diverse training being offered in the sector onto a cohesive framework</b></p>	<ul style="list-style-type: none"> <li>• Less confusion in the market.</li> <li>• Clearer career pathway.</li> </ul>	<ul style="list-style-type: none"> <li>• Less confusion in the market.</li> <li>• Where employers are levy payers, reducing duplication</li> </ul>	<ul style="list-style-type: none"> <li>• Less confusion in the market.</li> <li>• Reduced cost from less duplication.</li> </ul>	<ul style="list-style-type: none"> <li>• Less confusion in the market.</li> <li>• Reduced cost from less duplication.</li> </ul>

Objective	Benefits to:			
	Learners	Employers	Providers	Industry
<ul style="list-style-type: none"> <li>- Create more flexible learning pathways for learners and employers</li> <li>- Reduce duplication of short learning opportunities</li> </ul>		<ul style="list-style-type: none"> <li>reduces the cost to industry.</li> </ul>		
<p><b>4. Create a means of employers validating what employees have done</b></p> <ul style="list-style-type: none"> <li>- Simplify the way employers can check the skills of a potential employee.</li> </ul>	<ul style="list-style-type: none"> <li>• Easier to document or display skills and experiences.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved understanding of the skills of a potential employee.</li> <li>• Improved efficiency and quality in recruitment.</li> </ul>	<ul style="list-style-type: none"> <li>• Adds value to learning when it is more visible to employers.</li> </ul>	<ul style="list-style-type: none"> <li>• Employees and employers are more effectively recognising skills.</li> </ul>
<p><b>5. Lift the capability levels of learners in the food and fibre sector</b></p> <ul style="list-style-type: none"> <li>- Make learning pathways more visible and accessible</li> <li>- Increase the uptake of learning opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved capability levels.</li> <li>• More likely to progress in role and industry.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved capability and motivation levels of employees.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased uptake of learning opportunities by learners.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved capability across the industry.</li> <li>• Improved efficiency and productivity across industry.</li> </ul>

Table 3: Examples of alternative solutions

Objective	Alternative solutions to a badging system
<p><b>1. Recognise non-formal learning and bring it closer to the formal learning system</b></p> <ul style="list-style-type: none"> <li>- Create a means of non-formal recognition</li> <li>- Improve the transition / staircasing between formal / non-formal learning</li> </ul>	<ul style="list-style-type: none"> <li>• Create a framework / roadmap that includes all non-formal and formal learning</li> <li>• Map out pathways for learners between non-formal and formal and do a better job of staircasing.</li> </ul>
<p><b>2. Improve transferability across food and fibre industries</b></p> <ul style="list-style-type: none"> <li>- Allow employees to transition more easily from one industry to another</li> <li>- Use a consistent system where badges sit on a system that is recognised by pan sector employers.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify skills that are transferrable between industries</li> <li>• Include more transferable skills within current training / qualifications.</li> </ul>
<p><b>3. Connect together the diverse training being offered in the sector onto a cohesive framework</b></p> <ul style="list-style-type: none"> <li>- Create more flexible learning pathways for learners and employers</li> </ul>	<ul style="list-style-type: none"> <li>• Create a shared calendar of learning opportunities so that the providers are aware of existing training and can engage and collaborate with each other.</li> </ul>

Objective	Alternative solutions to a badging system
<ul style="list-style-type: none"> <li>- Reduce duplication of short learning opportunities</li> </ul>	
<p><b>4. Create a means of employers validating what employees have done</b></p> <ul style="list-style-type: none"> <li>- Simplify the way employers can check the skills of a potential employee.</li> </ul>	<ul style="list-style-type: none"> <li>• A combination of conventional CV and reference checks</li> <li>• Provide improved evidence (e.g., listing learner outcomes on a certificate).</li> </ul>
<p><b>5. Lift the capability levels of learners in the food and fibre sector</b></p> <ul style="list-style-type: none"> <li>- Make learning pathways more visible and accessible</li> <li>- Increase the uptake of learning opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure at the conclusion of every learning opportunity, awareness of staircasing opportunities is provided</li> <li>• Introduce pan-sector marketing for courses that deliver transferrable skills.</li> </ul>

Table 4: Critique of objectives

Objective	Critique of objective
<p><b>1. Recognise non-formal learning and bring it closer to the formal learning system</b></p> <ul style="list-style-type: none"> <li>- Create a means of non-formal recognition</li> <li>- Improve the transition / staircasing between formal / non-formal learning</li> </ul>	<ul style="list-style-type: none"> <li>• Will the badging system add more value to the current formal recognition system?</li> </ul>
<p><b>2. Improve transferability across food and fibre industries</b></p> <ul style="list-style-type: none"> <li>- Allow employees to transition more easily from one industry to another</li> <li>- Use a consistent system where badges sit on a system that is recognised by pan sector employers.</li> </ul>	<ul style="list-style-type: none"> <li>• Will the badging system be flexible enough to suit the training environment and meet the needs of different industries as well as be consistent enough to allow transfer within the sector?</li> <li>• Will the awarding of the badges be consistent enough to ensure the skills facilitated suit the context / operational environment of different industries?</li> <li>• Are there sufficient people transitioning between industries to warrant this?</li> </ul>
<p><b>3. Connect together the diverse training being offered in the sector onto a cohesive framework</b></p> <ul style="list-style-type: none"> <li>- Create more flexible learning pathways for learners and employers</li> </ul>	<ul style="list-style-type: none"> <li>• Will a badging system be able to capture the nuances of the training and learning activities that are already happening in different settings? How complex will the badging system need to be to achieve that? Where is the cut-off point?</li> <li>• What would be the drivers for providers and peak bodies to reduce duplication?</li> </ul>

Objective	Critique of objective
<ul style="list-style-type: none"> <li>- Reduce duplication of short learning opportunities</li> </ul>	
<p><b>4. Create a means of employers validating what employees have done</b></p> <ul style="list-style-type: none"> <li>- Simplify the way employers can check the skills of a potential employee.</li> </ul>	<ul style="list-style-type: none"> <li>• Will the badging system be enough to change the way prospective employers verify applicant’s credentials? (e.g., conventional CV and reference check).</li> <li>• If employers do not currently verify qualifications or achievements, will they bother to check badges?</li> <li>• Will employers know how to distinguish the skills related to their industry from each badge?</li> </ul>
<p><b>5. Lift the capability levels of learners in the food and fibre sector</b></p> <ul style="list-style-type: none"> <li>- Make learning pathways more visible and accessible</li> <li>- Increase the uptake of learning opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>• Will badges alone be appealing enough to increase uptake of learning?</li> <li>• Could targeted marketing solutions for individual courses achieve this objective?</li> </ul>

## Part B: Designing a system for learners and employers

*What role could formal vs. non-formal learning have within the system? What are some possible pathways within the system?*

Ensuring the badging system meets the needs of learners, and their employers, is a key success factor in creating the system. Stakeholders were asked about some key design principles of the badging system – the inclusion of non-formal learning and formal learning, the pathways that should exist within the system, and the role of evidence collection, and what this means for the verification role and conversely consistency and quality assurance. There was significant variation in responses, and it should be noted that the stakeholders interviewed were not equally distributed across organisations, so some were more likely to bring a formal learning perspective and others a non-formal perspective.

Stakeholders also had differing backgrounds across the different food and fibre industries e.g. dairy, forestry, horticulture and aquaculture. While there are similarities across the industries and areas where badges could be shared (e.g. health and safety, vehicles and machinery, animal welfare or land management), the way the learning eco-systems currently differ quite significantly. The design of the system would need to reflect the needs of these different industries.

### Previous badging in the food and fibre sector

Several previous badging systems have been trialled in the sector. Information on the challenges and barriers that these systems were presented with should be reviewed.

#### MACO

The MACO system was developed to recognise the skills gained by New Zealand Young Farmers (NZYF) members as they moved through regional and national roles within the organisation, creating a version of a ‘super dooper CV.’ Initial funding was provided by peak bodies, with the framework being developed by NZYF. Progress was stalled with the development of the Primary Industry Capability Alliance (PICA) which was seen as a possible long-term owner / manager of the piloted framework. Funding from peak bodies moved to PICA, however, PICA’s priorities became focused on talent attraction, and the MACO framework was discontinued.

#### GoHort

The GoHort online taster courses offer short and sharp learning modules to allow learners to learn about the fruit and vegetable industry. The focus of the courses is attraction – to help people transition into the horticultural sector, and the digital badges allow them to access and display their achievements in an easy and timely way.

*“It was more about the learners getting a taste for the industry.”*

*“Colleagues around the country have been using it in different ways – they’ve been using the taster programs and some pre-employment stuff for local folks.”*

Although the feedback about the courses is mostly positive, some aspects that did not meet the expectations include:

- Lower acceptance of the digital badges compared to the number of people who accessed the courses

- There is no record or formal process in place to document employment outcomes after achieving the badge.

*“We ended up with about 700 people accessing badges. We had a lot of people that did the micro-credentials but didn’t go through to achieving the badge.”*

*“But I guess it’s fair to say that people probably haven’t picked up on the usefulness of the badge as much as we would’ve liked.”*

*“One of the traps that we fell into that it was really, really hard for us to report against actual outcomes in terms of employment. We lost track of people after they’d done the badge.”*

Similar to the taster courses, another badging training course in the apples and pears industry on different market access protocols has pointed out the importance of having a proper pastoral care mechanism to follow up with learners, and check whether they have actually gone through the assessment and completed the courses.

*“So we got through to the end and thought, ‘Oh yeah cool, look at all these people that have done it.’ You go through and look at the actual outcomes from each individual module and we were well down – we had probably 20% of the people that had enrolled actually completed them. So we’re going through a crazy situation at the moment now trying to get people to finish off the modules that they completed.”*

## What the badging system should look like

Stakeholders were asked about some key design principles of the badging system – the following section records the range of views received. Significant diversity of thought is a key finding – particularly reflective of stakeholders’ own roles and involvement within the industry (vs. some pan-sector perspectives) and personal history in the formal or non-formal learning environment.

### The system needs to sit on top of a skills and competency framework

First and foremost a skills and competency framework is needed to sit behind the badging system. It is expected that this framework will be developed by industry stakeholders (i.e. Muka Tangata) before a badging approach is overlaid. Without this link to an existing framework, the badging system could become confused, overly complex or have gaps.

### Inclusion of formal and non-formal learning in the system

One of the most commonly reported features of the potential badging system was the recognition of currently unrecognised non-formal learning across the sector. To be a ‘complete’ system, stakeholders were asked whether they felt it was important to include both formal and non-formal micro-credentials in the system. There are various pros and cons to doing this, and as such the responses from stakeholders were also varied.

#### *Benefits of including formal learning within the badging system*

- The formal learning across the sector is already privy to quality assurance processes (application, approval, assessment, review). Starting with these micro-credential badges would provide a disciplined framework that could be built upon for non-formal badges.

*“You’d have a protocol, the protocol would be applied in the formal space initially, the same protocol but in the context of informality or non-formality would be applied, but you’d just have to – it’s not looser, but it’s just applied in the context.”*

- Improving the transition between formal and non-formal learning has been a long-time goal for the sector. Incorporating both into the same system (with say, different coloured badges representing formal vs. non-formal learning) brings those things closer together.
- The digitalisation of formal achievement could be a benefit, with a learning passport or ‘super dooper CV’ making it easier for learners and their employers to visually access the badges and the corresponding metadata behind the badges. E-campus has been digitalising formal micro-credentials with good success in recent times.

*“With the badge we can get it as soon as the institutes, the other ITPs, say that you’re graduated, we can issue it straightaway. There’s no delay getting it to NZQA and instead of just being words typed on a CV... from an ease and getting something stood up quickly I think it’s very sound.”*

#### *Limitations of including formal learning within the badging system*

- NZQA already has systems in place for the certification of formal micro-credentials. Some stakeholders thought including formal learning could replicate NZQA’s Record of Learning, so this was pointless.
- A ‘super dooper CV’ may have limited value – if employers don’t check CVs, they may be unlikely to review a badge online either.

*“[Regarding digitalisation of formal qualifications] my hesitancy is that I don’t know that it adds lots and lots of value so that’s my only concern.”*

#### **Quality assurance and consistency**

Applying a level of quality assurance and consistency to the system has been one of the biggest challenges discussed by stakeholders to date. For non-formal badges, without the rigour of the formal system, there is a significant risk that the badges could lack the mana required for employers, learners and industry to see their value. Two other important factors in ensuring quality and consistency in the achievement of badges were brought up regularly throughout the research. The role of theoretical badges vs. practical badges, and the role of verifiers and assessors.

#### *Ways that quality assurance could be maintained for non-formal badges:*

- Implementing specific criteria for a badge to be included in the system (e.g. must have clear learner outcomes, must be an enduring course, a role of attendance must be taken / someone is responsible for checking off the requirements of the badge, etc.)
- Badges could be colour-coded differently according to whether they had an assessment / evidence component or not – badges could still be awarded for attendance at a workshop for example, but this would be reflected in the style of the badge and the metadata that sits behind it.
- The flexibility of the design and the use of the badges should allow them to be scaled up or down. They could recognise bite-sized learning but also be stacked into something bigger, such as a macro-badge.

*“So, yeah, the design of the badge itself – and you could use colours, fonts, imagery, shape, you know, anything to kind of differentiate.”*

*“The design of the badges should be simple and visually appealing, with people encouraged to finish a pathway.”*

Note that quality assurance could also be maintained for formal badges. The metadata that sits behind the badge could provide an employer with more information on what the formal badge entailed – for example in the dairy sector, there are three strands to the Level 3 Certificate in Agriculture. It could be explained through the badge what strand the learner had completed. With this in mind, a mock up registration form for the courses to use for a badge application was developed for reference (refer to Figure 2). Note that this is just an example and is not a proposal.

#### *Role of verifier vs. assessor*

One of the most challenging aspects of the badging system will be the verification / assessment of non-formal learning, where achievement needs to be recorded (vs. attendance only badges). A number of suggestions and possibilities were made, but many of these solutions would take significant time to implement and drastically widen the scope of the badging system work. For example, verifying employers to be suitable assessors, creating a “Master Farmer” programme (similar to a “Master Builder” programme), etc. Challenges that were raised include:

- What sort of verification process would be required of an employer – and whether this be too difficult to encourage wide adoption
- What is the incentive for an employer to be a verifier – e.g. they may not need to ‘sign off’ that their employee can complete a task to receive a badge, if the employer is satisfied that it has been achieved (i.e. the benefit to the employee is that they can add it to their CV, which may have little interest to their current employer).
- Who would the verifier / assessor be for the higher-level badges (e.g. leadership skills) – if a learner was self-employed?

#### *Role of theory badges vs. practical badges*

Stakeholders mostly agreed there was a time and place for both theoretical and practical badges. In some cases, only one or the other may be needed, or in some cases, both might be needed. It was noted that employers are likely to value practical badges the most, and these tend to be more important at the lower levels. A possible solution could be to assign an expiry date to theoretical badges so learners need to keep their knowledge up to date or refreshed, or complemented with a corresponding practical badge.

*“Being able to implement the theory well in practise is a very important part of being good at your job. And that’s the stuff that I think employers would really value. And I think employees would value as well if they got a sense that their employers were saying, ‘Yes, this person can do a good job.’”*

*“[Practical badge] I guess very important at lower levels, and not very important at the higher levels.”*

*“I say have an expiry date on the theory.”*

#### **Potential pathways within the system**

Several potential pathways are possible. Stakeholders were asked which of the following options they felt was most suitable.

Table 5: Possible pathways

Potential pathway	Discussion
<b>Level</b>	<ul style="list-style-type: none"> <li>– Lower levels, middle levels, higher levels.</li> <li>– May or may not be consistent with NZQA levels (i.e. Level 2, 3, 4, 5, 6)</li> <li>– Would allow for lower-level cross-sector use, e.g. health and safety, vehicles and machinery, animal welfare, land management could be shared by multiple industries.</li> <li>– Industry-specific production skills at the middle level would be specific to each industry (e.g. milking efficiencies, orchard pruning).</li> <li>– Would allow for higher level cross-sector use, e.g. leadership, business management, people management could be shared by multiple industries.</li> <li>– Some commentary that the badging system should actually just focus on the lower level as employers are less likely to invest in training for people who are new to the industry and at risk of leaving. Badging provides opportunities to help these people learn, progress, and demonstrate skills.</li> </ul>
<b>Skill</b>	<ul style="list-style-type: none"> <li>– Skills based badges were mentioned by several stakeholders. For example, a badge indicating a learner can shear 200 sheep, 250 sheep, or 300 sheep.</li> <li>– This would look slightly different to other badges where they are linked directly to a learning opportunity – a skills-based badge may not be linked to the completion of a learning activity / assessment.</li> </ul>
<b>Industry</b>	<ul style="list-style-type: none"> <li>– Pathways are specific to each industry, e.g. there is a dairy pathway, a horticulture pathway, a forestry pathway.</li> <li>– This would keep the various industries still siloed and wouldn't solve the challenge of increasing transferability between industries.</li> </ul>
<b>Role</b>	<ul style="list-style-type: none"> <li>– Number of years or experience level, role description</li> <li>– This could be challenging to identify badges according to role across the different industries. Even within the industry there is some variation in the capability level of people in similar roles.</li> </ul>

Levels seemed to make the most sense to the stakeholders; although several mentioned the benefits of using skills-based badges, so it may be that a combination is needed.

*“At the entry level, if you like, when you kick off, that’s generic. Then there’s the industry specifics, that becomes more vertical. Still transferrable, but more specific. Then back to a more generic thing when you start coming into supervision, management and things like that.”*

*“If you can build a system that recognises the generic stuff as being just that. Food and fibre generic. Whether you ultimately learn to do machine safety in the forestry industry or in the dairy industry doesn’t matter, the fact is that you’ve learnt to operate machinery safely. It’s more a case of proving that you can think and operate machinery safely than the machine you’re operating. That’s just something your employer needs you to do. The industry needs you to be able to do the safety bit. Then [you] build in the context.”*

*“I think this badging thing is really about supporting that first 6, 12, 36 months in terms of the practical skills that people gain.”*

*“Biosecurity is an example where there are levels of knowledge or skills – there may be a general knowledge biosecurity badge that everyone needs to do, whereas a more specific one could be about implementing a biosecurity plan which would need someone to understand specific levels of responsibility for implementation. I don’t think you’d always need to hardwire it into the NZQA levels but you’d need to demonstrate to industry that the badge means a person is operating a specific level in terms of their career progression and their role.”*

## Part C: Designing the model that sits behind the system

*What are the roles and responsibilities of the organisations associated with the badging system? Specifically who will develop, own, endorse and manage the system?*

### Potential ownership models

Stakeholders were asked about which organisation should develop, own, endorse and manage the badging system. There was significant variation in responses, and it should be noted that the stakeholders interviewed were not equally distributed across the respective organisations. However, Muka Tangata was the most frequently mentioned organisational “home” for the system.

*“It probably sits best with the WDC because the WDC is going to be doing workforce development plans on a regular basis. So you can argue that the definition of some of these badges could be updated on a regular basis through that process or alongside that process.”*

*“If we’re on the qualification framework, my view would be that they would fall under Muka Tangata in terms of the standard setting in moderation scenarios. And the assessment process would probably be guided by Muka Tangata as well.”*

*“Probably the WDC – if this sits outside of NZQA which I think we’re agreeing that it does, then it needs to be quality assured in some way, shape or form because otherwise, then you’ll have any badge that anyone likes on there and it just won’t have any mana at all.”*

*“Maybe the WDC does, because they’re responsible for standard setting and obviously funding, well supporting funding and the proposal of funding. Te Pūkenga can’t do it because they look after way too many organisations. And I think from the polytech’s perspective they’re delivering, they’re not putting a stamp on the quals are they really.”*

While several people mentioned the Food and Fibre CoVE as a potential home, this was ruled out by most stakeholders, due to it being a research body, with a limited lifetime.

*“Not the CoVE, because it potentially doesn’t live past three or four years. But the other reason is I think that CoVE’s job is about the next new thing. You also require an entirely different level of skill, resource, and funding, etc, to run these things as business as usual. So it probably doesn’t sit with them in the long-term.”*

Most stakeholders mentioned the role the peak bodies would play, but not in an ownership capacity.

*“It’s got to be driven out of the peak bodies, right? There’s no ifs, buts or maybes.”*

*“The biggest challenge is going to be getting these peak bodies, they have to absolutely be across this and love it and talk about it and endorse it and do all that stuff, and fund it.”*

*“Industry bodies, I think we could provide an endorsement. But I don’t think we’ve got the capability to monitor and run those things on an ongoing basis either at this point.”*

*“I think industry needs to make a contribution if they really want what they want.”*

*“Success and failure of any system is industry acceptance.”*

Te Pūkenga was also mentioned as a potential owner.

*“Te Pūkenga because they have access to TEC funding, you give it to them and you say, we need a suite of micro credentials from five credits to 40 credits, industry might top it up a little bit and we can put it on your NZQA record of learning, and we’ll put them on your LinkedIn profile and all those sorts of things. That is the place it should sit but making that a priority piece of work within Te Pūkenga right now, I think will be really challenging.”*

*“It needs to sit with someone who can drive it, because if we sat there and said the badging is for industry and so industry needs to own it, you won’t get momentum, because there isn’t one organisation ultimately responsible for it. So, I think there needs to be an organisation that holds sole responsibility and actually has it built within the systems and the way that they actually tick over. If this is around delivery of training, or providing training, then a training provider or collective of training providers, they need to have that responsibility.”*

Primary ITO / Food and Fibre Ako was mentioned as potential owners by a couple of stakeholders.

*“I’m probably going to say Primary ITO. They deliver the training for the Food and Fibre sector, along with others. Obviously you’d need to work in collaboration with that.”*

Table 6 summarises the potential ownership models.

Table 6: Potential ownership models

Organisation	Current responsibilities	Pros to ownership	Cons to ownership
<b>Food and Fibre CoVE</b>	Funded to ensure excellence in educational provision for the food and fibre workforce.	<ul style="list-style-type: none"> <li>– Responsible for vocational excellence across all types of learning (which fits with the proposed model)</li> </ul>	<ul style="list-style-type: none"> <li>– Has a limited lifetime (less than four years left)</li> <li>– Seen as a research body which is project based, not an organisation that can own business as usual activities.</li> </ul>
<b>Muka Tangata</b>	Funded to advise on qualifications, standards and quality assurance to meet the needs of the food and fibre sector.	<ul style="list-style-type: none"> <li>– Responsible for standard setting and quality assurance which are important factors for the system</li> </ul>	<ul style="list-style-type: none"> <li>– In set up phase currently</li> <li>– Current focus is on formal programmes of learning – how would the non-formal fit into this?</li> <li>– Potential tension with NZQA if seen to be duplicating</li> </ul>
<b>Peak bodies</b>	Funded to conduct research, develop resources, advocate and provide extension activities for their respective industries / workforces.	<ul style="list-style-type: none"> <li>– The peak bodies are the link to employers (the main audience for the system) and therefore are an important channel</li> </ul>	<ul style="list-style-type: none"> <li>– Not a central place – many peak bodies to coordinate.</li> </ul>
<b>Te Pūkenga</b>	Funded to deliver formal training across the range of industries in the food and fibre sector.	<ul style="list-style-type: none"> <li>– Responsible for the delivery and recognition of training across the sector</li> <li>– Geographical scalability</li> </ul>	<ul style="list-style-type: none"> <li>– In set up phase currently</li> <li>– Currently funded to deliver formal training; not sure how non-formal training would fit</li> </ul>
<b>Primary ITO / Food and Fibre Ako</b>	Funded to provide formal programmes of work-based training across many parts of the food and fibre sector.	<ul style="list-style-type: none"> <li>– Responsible for the design and delivery of the work-based training for a wide range of industries</li> </ul>	<ul style="list-style-type: none"> <li>– Currently funded to deliver formal training; not sure how non-formal training would fit</li> </ul>

## Roles and responsibilities

The following roles and responsibilities were outlined by stakeholders during the research. Each of these need to be assigned accordingly:

- An overall owner of the badging system who:
  - Links the badging system to a wider learning framework
  - Identifies pan sector opportunities for the system
  - Endorses the system
  - Advocates for funding of the system
  - Seeks feedback and continuous improvement of the system
- A gatekeeper who:
  - Reviews applications and approves badges to be brought onto the system
  - Maintains the system on an ongoing basis (process and functionality)
- Representatives from the industry who:
  - Are involved in regularly reviewing the current badges on the system (check content and currency)
  - Identifies gaps to inform future badge design
  - Endorses and promotes the badging system amongst their workforce
  - Identifies opportunities for the badging system to be linked to other initiatives across the industry.

*“It would be hard to grow this incrementally, unless you hung it off an organisation like Young Farmers or ITO trainees, or a readymade audience, as opposed to relying on it growing in the marketplace.”*

*“If it’s not recognised by industry, it’s meaningless. So, I think we need to understand what does industry want, and what does it mean for them, and are they prepared to come on board and recognise it as something when they’re employing or developing their staff capability... it’ll only be as successful as industry allow it to be.”*

With the above in mind, a mock-up diagram is drafted to outline the potential key responsibilities of each role and where it sits in the badging system (refer to Figure 1 on page 34).

## Opportunities for funding

Accessing funding for the badging system is mostly to do with the development and management of the system – the application, approval, review, promotion and pastoral care that is involved in maintaining the system.

While most stakeholders agreed it was important to continue advocating for funding changes at government level, most assumed the training itself is likely to still be funded the same way it currently is (i.e. formal learning is TEC-funded and non-formal learning is funded through peak body extension activities).

The badging charge itself should be minimal – the cost of the badge should be inclusive of the training the learner is undertaking. It seems that this is feasible based on eCampus’s experiences to date. The small charge for administering the badge could be charged to providers / peak bodies or those who want the badges to be out in the market.

*“So if we use the example of Fonterra then maybe Fonterra has a training course and you get a badge at the end of it and, you know, Fonterra foots the bill.”*

The biggest cost will be in the setup, maintenance, reporting, review of badges (e.g. annual) etc. etc.

*“It’s possible that the government could fund some of this but I think the majority would have to come from industry because I think the government would probably say, “well, we fund the Tertiary Education Commission. You’ve got micro credentials so what are you doing all this badging stuff for?”*

Potential funding options were identified as:

- TEC (but see notes above)
- Peak bodies – requiring some ‘skin in the game.’ This would also support the idea that they are also responsible for driving, promoting and endorsing the badges
- Sustainable Food and Fibre Futures fund
- Ministry for Primary Industries
- A combination of different funding sources.

## Recommendations

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The following recommendations follow a stepped process with a go / no-go point after each activity is evaluated.

1. Undertake a robust discussion of these findings to ascertain whether a badging system is the right solution to meet the objectives stated, or whether alternative solutions should be considered.
2. Conduct further research to test the idea with employers and employees to determine their needs and potential engagement in a system. This could involve:
  - Mocking up prototypes for different audiences (learners, employers across different levels, industries etc.) to illustrate what the badges could look like, and the information that would sit behind each badge
  - Developing options for different kinds of badges (e.g. skills-based badges, attendance-based badges, micro-credential / assessed badges)
  - Talking through with employers and employees the different options and what they would get / not get out of the different badges / scenarios
  - Deciding on a threshold for what success could look like (i.e. some consensus from learners / employers across industries, to make sure a food and fibre wide system is appropriate).
3. Develop a business case and estimate the potential cost of the system
4. Design a pilot system using the findings and guidelines from this research alongside input / feedback from the potential users of the system (as above).
5. Evaluate the implementation of the pilot
6. Plan for the implementation of a BAU system, including determining roles and responsibilities (e.g. ownership, management, endorsement) and funding.

### Below provides a list of must-haves to make the badging system successful

- The badging system, and the badges that sit within the system, are meaningful and have mana for learners and their employers
  - The value proposition of the badging system is justified and appealing to learners and employers
  - Clear learner outcomes are reflected in each badge and this is held in the metadata for employers to access
  - The process of obtaining and reviewing badges is simple for learners and their employers (i.e. the platform)
  - Badges are reviewed regularly, with quality assurance being a top priority.
- Staircasing opportunities between badges are evident
  - Learners are encouraged to progress on with additional badges within a pathway

- The transition between non-formal and formal learning is more seamless
- Where possible, badges achieved in one pathway are transferrable or recognised for other pathways (e.g. a learner moving into another food and fibre industry maintains this recognition).
- Industries work collaboratively to contribute to and promote the badging system
  - Industry and providers genuinely believe the value in the badging system and actively promote it to their audience
  - Industry contributes and supports the development and maintenance of the badging system (e.g., through financial support or providing skills)
  - Industry continues to advocate for changes to the funding system.

## Appendices

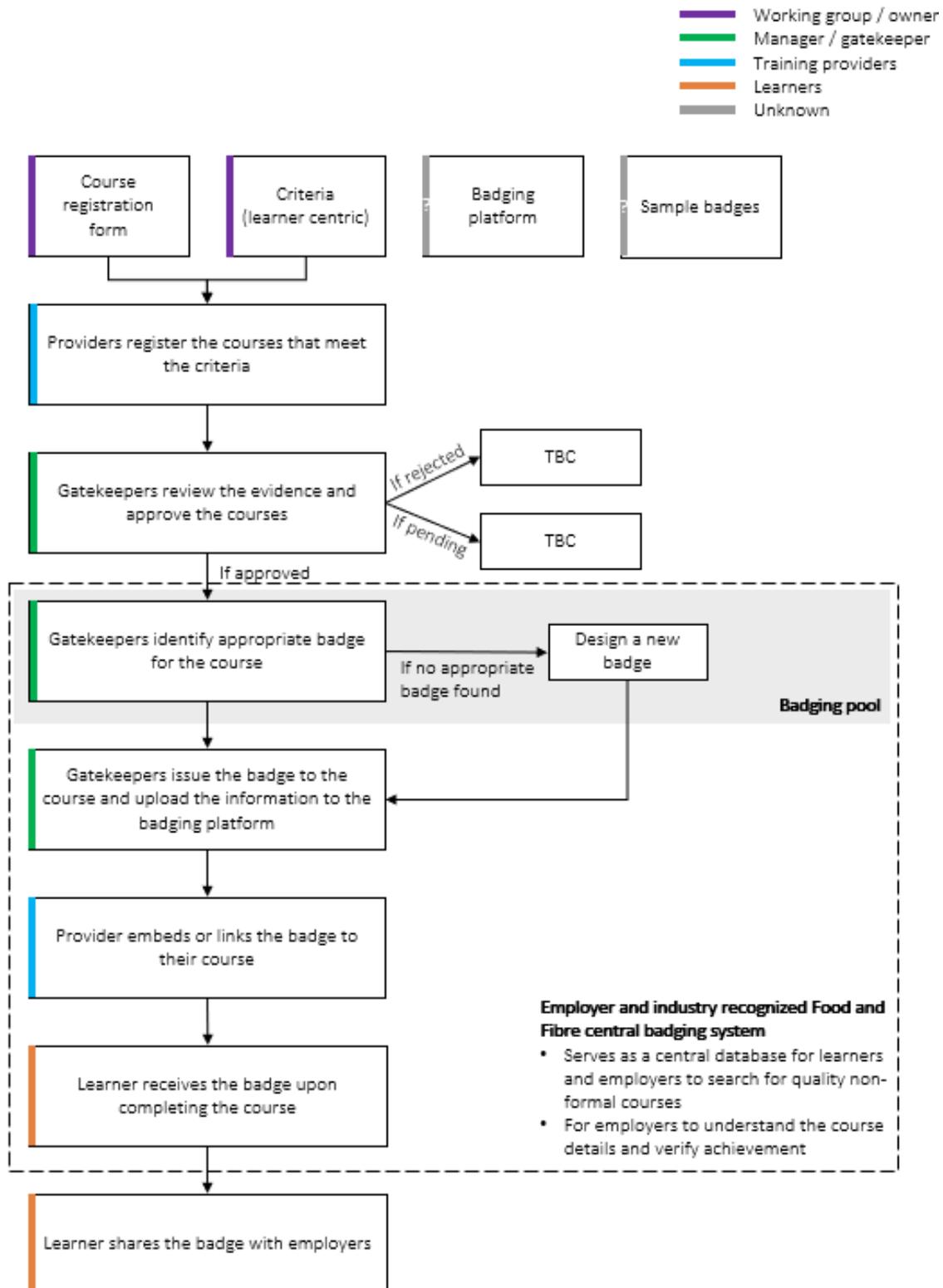
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### Appendix A: Stakeholder discussion guide

Questions that will prompt the stakeholder discussion on the badging system are listed below:

1. Do you see the value of having a Food and Fibre badging system, and why?
2. Do you agree that the primary focus of the badging system at this stage should be the retention and upskilling of existing learners?
3. Do you see the benefits of starting with formal courses and developing a process that non-formal courses could feed into later, even though people may argue that the biggest issue is that non-formal micro-credentials are not receiving recognition?
4. How to enable the badging system to be adopted by the sector, especially if the badging system is developed and managed by one central organisation?
  - a. In this case, what are the roles and responsibilities of the providers and endorsement organisations? What are their levels of autonomy?
5. How can we get both employers and employees on board?
  - a. What role do you see employers play in this system?
6. We are hoping to form different pathways for different groups of badges – how do you think we should structure the pathways (e.g., by sector? By skill? By level? Should core skills such as health and safety contribute to multiple pathways that may lead to different sectors)?
  - a. What do you think of having macro badges that are worth credits?
7. What do you think of courses that are theory-based with no to minimum practical components? Do you see the value of having a theoretical badge and a practical badge to complement each other?
8. All of these being discussed, what else or what do you think is the key to ensuring that the badging system is credible?
  - a. Assessment (who will be developing and managing the assessment criteria, and who has the authority to evaluate the assessment results and issue badges?)
  - b. Endorsement (who needs to endorse the badges?)
  - c. Accreditation?
  - d. Any other ideas?
9. Is there anything else you want to comment on?

## Appendix B: The badging framework mock up (EXAMPLE DRAFT)



- Approved courses should be review every three years
- There should be some kind of segmentation (e.g., stacking and pathway) as the badging pool grows

Figure 1: Roles and responsibilities flow chart

## Example course registration form

Provider name					
Course name					
Targeted sector	<input type="checkbox"/> All <input type="checkbox"/> Dairy <input type="checkbox"/> Sheep, beef, and deer <input type="checkbox"/> Horticulture <input type="checkbox"/> Fishing <input type="checkbox"/> Forestry <input type="checkbox"/> ....				
Time needed to complete					
Cost	<input type="checkbox"/> Free <input type="checkbox"/> Partially free <input type="checkbox"/> Self-pay	Level	<input type="checkbox"/> Entry level <input type="checkbox"/> Experience <input type="checkbox"/> Advanced	Type	<input type="checkbox"/> Theoretical <input type="checkbox"/> Practical <input type="checkbox"/> Hybrid
What learners will demonstrate upon completing this course (understanding, skill, etc)? <i>No more than 100 words</i>					
Please tick relevant skill tags below. <i>No more than 5</i>					
Please detail the course criteria in bullet points. <i>No more than 5</i>					
Is the learning outcome of learners being assessed (Y/N)? If yes, by whom and in what shape or form?					
If applicable, please outline the background and experience of the course instructor(es)					
If applicable, please link the course webpage below:					
Please provide any extra evidence related to this course.					

Figure 2: Course registration form mock up

## Appendix C: Desk research on the existing badging systems

### Digital badging systems

Badges are used by both public and private training / assessment institutions as a way to recognise learners' achievement in a specific skill segment. In most cases, the badging system is unique to the organisation, and the badges are awarded digitally via a certification platform that supports the sharing and verification. The use of these badges is mostly upskilling and increasing employability. Current badges do not associate with formal qualifications and credits unless they are delivered and assessed by a qualified academic institution and reported.

Key findings of existing badging systems:

- **Assessments are compulsory to achieve the badge:** Although course completion is not always required, some forms of assessment are a must to prove learning achievement and earn the badge.
- **Remote assessment is widely supported:** To accommodate learner needs, courses researched generally provide learners opportunities to undertake assessments or provide evidence remotely, either with or without a system in place for verification and supervision to prevent misconduct.
- **Badges can be stacked within one institution:** Some organisations offer learning pathways or macro-badges that allow learners who completed a set of badges to claim a higher level of badge. One course badge can contribute to different learning pathways.
- **Digital badges can be shared easily:** Digital badges claimed can be distributed on various social media platforms and can be added to the CV. The badge image contains metadata that allows the employers to verify the badge in real-time and view the specific information about the achievement (e.g., course content and assessment criteria)
- **Badges are free for learners:** although the course and the assessment might be paid, no fees are required from learners to obtain the badge itself or access the badge platform after being awarded the badge.
- **Endorsement is more common than accreditation:** Endorsement from organisations or individuals can be added to the badges to increase user confidence. Most badges gained through non-formal courses do not associate with / lead to formal qualifications.
- **Credly could be a potential platform to host badges:** Credly is a well-established platform to distribute certification badges. The majority of New Zealand based badging systems (GoHort, EduBits) and international organisations (ForgeRock University, IBM credentials) in this desk research were found to be using their service to manage badges. It should also be noted that although different badge platforms are being used or built worldwide, almost all use the Open Badges Infrastructure (OBI) developed by Mozilla and the MacArthur Foundation in 2011 and managed by IMS Global Learning Consortium.
- **Working with eCampus NZ may be a good starting point:** eCampus NZ offer both their own learning courses as well as services to help design and develop the course. Micro-credentials mostly fit into the latter category. Ara, Toi-Ohomai, NMIT, NorthTec, UCOL, WelTec & Whitireia, Otago Polytechnic, and EIT all offer credentials through eCampus NZ.

## Skill passports

Similar to the badging system, another approach used to document training records for learners in the primary sector is skill passports. The two existing examples are

- **Poultry Passports** (administering over 6,600 Poultry Passports)
- **Lion Training Passport** (compulsory for Lion Egg producers since Jan 2021), inspired by Poultry Passports and administered in a very similar process.

The Poultry Passports ensures common levels of training for each role within the poultry meat sector. The initiative was established in 2008 through The Poultry Meat Training Initiative (now British Poultry Training) in response to the inconstancy of training and training records being recognised as the biggest non-compliance issue during audits carried out in the industry assurance schemes. The system was established and managed by a consortium made up of poultry companies representatives (e.g., British Poultry Council, National Farmers Union).

There is no legal requirement to have a Poultry Passport; however, it is becoming increasingly important for flock keepers to demonstrate training and continuous professional development to comply with assurance scheme standards.

### How it works

- There are four levels of Poultry Passports being developed according to roles in the sector (e.g., level 1 includes specialist and single skill positions, while level 4 covers management roles). Each level of the passport has a set of mandatory training requirements that need to be met through completing courses (those that are approved by British Poultry Training)
- Organisation / individual purchases the passport (1 credit (£20) / person/ year, free credits when buying in bulk), and the Scheme Administrator (Poultec Training) will select the most appropriate level according to the job role for each person.
- Individuals attend and complete the approved training courses to meet the requirements in the passport and obtain evidence of completion
- Notify the Scheme Administrator directly or through HR department to update the passport.

### Comparison between badging systems and Poultry Passports

- **Purpose:** one of the key reasons for developing a badging system is to recognise non-formal training in the industry, while the aim of the Poultry Passports is to streamline and ensure the minimum training standards in the sector. Poultry Passports contributes to the recognition and quality assurance of the training courses within the sector, but this is more like a by-product. Both systems, however, contribute to upskilling the workforce and ultimately increase the quality of products produced.
- **Target audience:** Poultry Passports focus on on-job training, targeted at poultry companies and their members rather than individuals.
- **Accreditation:** For courses, credits appear to be an important factor in the badging system (e.g., whether to badge formal courses, and how non-formal micro-credentials can be linked to credits). Whereas for Poultry Passports, whether courses are approved by British Poultry Training for a specific job role is the most critical factor and likely to affect buy-in.

- **Compulsory:** Lion Training Passport is designed to reflect part of the Lion Code of Practice and operated through British Lion Scheme, which is compulsory for Lion egg farmers and associated with audits. The Poultry Passports are also a must under certain assurance scheme standards (e.g., Red Tractor scheme).
- **Scale:** The Food and Fibre badging system is envisaged to be used across the primary industry, while the Poultry Passports and Lion Training Passport is targeted specifically at sub sectors (e.g., poultry meat sector and egg sector). They do, however, adopts a same system and software and could potentially be adapted to other sectors within the industry.