



Getting the best from your investment in training an apprentice

A Competenz research paper – October 2015



Getting the best from your investment in training an apprentice

At Competenz we know apprenticeships work. However, we know too, that simply ‘pushing people through apprenticeships’ is not the answer.

A successful apprenticeship is about more than ticking off blocks of learning. Many things need to come together to turn out a competent tradesperson. They include careful recruitment, skilled and responsive supervision, varied work, a positive workplace culture, and opportunities to build a career.

Apprenticeships involve significant investments in time, money and expertise. Each four-year apprenticeship costs the taxpayer approximately \$12,000. Employers contribute up to \$8,000 in training fees, thousands of dollars in salaries, equipment and employment-related costs, and many hours of on-the-job supervision. We need to get this right.

So we asked employers in companies which train apprentices in the industries Competenz supports to tell us:

How do you get the best from your investment in training an apprentice?

Table of contents

Introduction	1
Summary: findings and actions	2
Background to this study	4
How we conducted our research	6
What we learned	11
How Competenz is responding	18
What best practice apprenticeship training looks like	20
The return on training an apprentice	25
Appendices	26
Acknowledgments	32

Enquiries

Kate Thompson | Communications Manager
09 539 9869 | k.thompson@competenz.org.nz

Our research partner



Competenz
SKILLS FOR INDUSTRY

www.competenz.org.nz

Introduction



For all the employers we work with at Competenz, including the people who feature in our case studies, training an apprentice is a big investment.

It's an investment you want to manage actively – in the way you do other investments – to gain the best result: a skilled, productive employee who adds value to your business as soon as possible. In return on investment terms (ROI), you're interested in maximising your investment benefits and minimising your investment costs.

So, how do companies like yours do these things, to get the best from an apprenticeship? Employers we work with are in the best position to answer this question, and in this report you'll find the views of 180 people who've generously contributed their views.

Increasing the benefits of your investment, reducing the costs

These 180 employers have identified some practical steps all companies can take to increase the return on their investment. These steps include:

- getting your apprenticeships off to the best start possible
- structuring your apprentices' work carefully to give them variety and increasing responsibility
- creating career opportunities for your apprentices – and talking about these opportunities early in the apprenticeship. Our Competenz team can help with all these activities.

Our employers have also shown us that small companies without a dedicated training team can do as good a job of training and retaining apprentices as larger ones. That's encouraging for a country of small businesses.

Thank you to everyone who gave us feedback. Thank you too for your commitment to building skills in your industries. The trades are in good hands.

Fiona Kingsford
CEO Competenz

Summary: findings and actions

This study covers apprenticeships in these industries: baking, engineering, fire protection, forestry, furniture, heating, ventilation and air conditioning (HVAC), plastics manufacturing, refrigeration and air conditioning and wood manufacturing.

The findings are relevant to **all** our apprenticeship-based industries, including those we did not survey. While every industry has its unique features and challenges, many aspects of apprenticeship training are common across industries.

This is a Competenz study: these findings relate to the industries we support. They do not necessarily represent the situation in industries that other industry training organisations support.

Findings

1. Employers' attitudes to training and retaining apprentices

- Many employers are altruistic and care about the long-term future of their industry
- Most employers, but not all, want to retain their apprentices when they graduate – and most succeed

2. Factors that help learners complete a quality apprenticeship

- Quality of work (e.g. variety and increasing responsibility) is the most important factor
- Employers' past experience managing apprentices makes a positive difference too
- Employers need to get apprenticeships off to a good start
- Career prospects and emotional support are likely to be important
- Company size does not make a difference
- The number of apprentices the employer is training does not make a difference

3. Factors that help employers retain an apprentice after they graduate

- Career opportunities are the most important factor. These opportunities can take many forms.
- Many other factors play a part in encouraging an apprentice to stay, including support on-the-job
- Company size does not make a difference

4. Recruiting an apprentice

- Companies rate the effectiveness of their recruitment practices lower than other training- and employment-related practices
- Companies think schools could do more to help them identify people suitable for apprenticeships

5. Other findings

- Companies may be good at helping learners complete an apprenticeship and poor at retaining graduate apprentices (and vice versa)
- Successful employers do a range of things well in the employment and training relationship, not just one thing. Page 20 explains what 'best practice' looks like.

How Competenz is responding

These findings validate many of the ways we currently work with companies to support apprenticeships, plus activities we have underway to improve our offer. We will continue this work.

The findings also highlight new opportunities to improve our offer. For example, we will develop a suite of best practice guides to help employers:

- recruit apprentices
- get apprenticeships off to a good start
- offer 'high quality work' (e.g. variety and increasing responsibility)
- have career conversations with apprentices.

Case study



Darren Kahukoti, who is in the final year of his sheet-fed offset apprenticeship, with Technical Manager Colin Lean

Logan Print

Specialist printer (labels), Gisborne
60 employees, 4 apprentices

A careful hiring policy, offering apprentices challenging work and career opportunities, and the personal touch have combined to see award-winning Logan Print put 18 people through successful apprenticeships in the past 16 years.

"We're careful who we take on," says Technical Manager Colin Lean. "Usually we look internally for our apprentices. We can check them out before we sign them up, and they're familiar with how we work, so they make faster progress."

Logans give their apprentices challenging work – from the start of their apprenticeship.

"They don't push a broom for their first year," says Colin. "They're using the latest equipment like our Heidelberg Speedmaster, and that's motivating."

At monthly training sessions Colin and his four apprentices work through 'active issues' – current jobs which are proving challenging. It's an opportunity for apprentices to problem-solve and gain knowledge they can use on-the-job.

Tracking apprentices' progress is important, and these regular sessions are one way Logans does this. The team discuss book work – and the need to keep on top of it – each month.

The support of Competenz account manager Malcolm Pearce and Colin's experience managing apprentices play a part too.

"In the past I've left our account manager and apprentices to meet on their own," says Colin. "Now I find it's better if I sit in. That helps me understand what our apprentices need to do to make progress, and we can work on a catch-up plan together if we need to."

If an apprentice falls behind, Logans works with Competenz to put support in place. Colin says the approach he takes is important. "I've learned not to be a dictator. Coaching works far better."

Taking a personal interest in apprentices is important – including at 6am. "One of our apprentices works nights, so I turn up early once a month to have some one-on-one time with him."

The company offers its apprentices career opportunities. Former apprentices fill the roles of Pre-press Operator and Finishing Supervisor. Colin, who completed his apprenticeship in 2000, is the company's Technical Manager.

If Colin makes supporting his apprentices sound easy, it's not. "Managing four apprentices is hard work. But if you take on an apprentice, you need to invest in them fully. People make the business."

It's this approach which has seen two Logans apprentices, Colin and Wayne Torrie, win the sheet-fed category in the Print Apprentice of the Year Awards in 2001 and 2010 respectively.

Background to this study

New Zealand has a skills shortage

At Competenz we talk to employers across New Zealand every day. Most tell us the same thing: it's hard to attract and retain skilled people.

Demographic trends are compounding the issue. The workforce in many New Zealand industries is aging. For example, in 2006, 54% of the mechanical engineering workforce was aged 40 and over. In 2013 that figure was 61%. The trend is similar in other industries too, including forestry, printing and wood manufacturing.¹

These are big numbers and they bring big challenges. These older people have built up skills during their careers. Who will replace those skills when they retire? Who will mentor younger people? And, if you are a small business owner, who are you going to sell your company to, so you can enjoy a comfortable retirement?

Bringing in skilled immigrants can help, but immigration introduces challenges like language and lack of familiarity with New Zealand practices. Hiring another company's qualified employees does not increase the pool of skilled people available to the industry.

Training an apprentice is a long-term, practical solution for employers

Apprentices gain skills that are directly relevant to the job they do and to their employer's workplace. The hands-on nature of on-the-job training reinforces learning. Apprenticeships build skills that lead to successful technical and management careers. On pages 3, 9 and 15 you can read about three people who began their working lives as apprentices and have gone on to run their own businesses or hold senior positions in their firms.

The New Zealand Apprenticeship scheme now allows apprentices of all ages. Many of the employers we deal with choose to take on 'mature apprentices'.

Overseas, apprenticeships are increasingly being seen as a way to address skills shortages. For example, the International Skills Standards Organisation (ISSO) is calling for governments across the globe to expand apprenticeships to lift productivity.²

'Tick the box' training is not enough

At Competenz we know apprenticeships work. However, we know too that simply 'pushing people through apprenticeships' is not the answer.

A successful apprenticeship is about more than ticking off blocks of learning. Many things need to come together to turn out a competent tradesperson. They include careful recruitment, skilled and responsive supervision, varied work, a positive workplace culture, and opportunities to build a career.

Apprenticeships involve significant investments in time, money and expertise. Each four-year apprenticeship costs the taxpayer approximately \$12,000. Employers contribute up to \$8,000 in training fees, thousands of dollars in salaries, equipment and employment-related costs, and many hours of on-the-job supervision. We need to get this right.

So we asked employers in companies which train apprentices in the industries Competenz supports to tell us:

How do you get the best from your investment in training an apprentice?

¹ Infometrics (based on Statistics New Zealand data)

² *World-Class Apprenticeships: are they the answer to the age of stagnation?* Tom Bewick, International Skills Standards Organisation 2015



Furniture apprenticeship training, Danske-Mobler, Auckland

How we conducted our research

Our project steering group

A steering group of eight Competenz employees has guided this project. All members of the steering group deal directly with employers and apprentices on a daily basis to build skills on-the-job. Their expertise and experience has helped:

- confirm the content of our survey and survey questions
- review our research findings and identify actions we need to take
- review this report.

1. Building our data sample

We started with a random sample of companies which signed up apprentices in 2008 and 2009, were still trading, and were still training or had recently trained apprentices. We excluded companies training an apprentice employed by the Apprentice Training New Zealand Trust.³

This sample gave us:

- a list of companies to contact with our survey
- a list of apprentices, with names and qualifications, for each company
- a 'hard measure' of the company's success in training these apprentices. Apprentices starting in 2008 or 2009 have had time to complete their qualifications, and the data confirmed whether they had indeed completed or withdrawn from their apprenticeships.

Using data for apprentices who started their workplace training at the same time also ensured (as far as possible) that all the learners had experienced 'similar training' in the sense of working towards the same qualifications in the same way, on- and off-the-job.

Industries covered

Baking, engineering, fire protection, forestry, furniture, heating, ventilation and air conditioning (HVAC), plastics processing, refrigeration and air conditioning, wood manufacturing

2. Designing our employer survey

Our researchers canvassed the relevant literature to understand the recruitment, training and employment factors that help learners complete an apprenticeship and help employers retain qualified apprentices. Appendix two contains a list of sources. We also ran a focus group with eight Competenz employees (our project steering group) who deal directly with employers and apprentices, to get their views.

Our researchers used this information to develop our survey. The survey contained 45 statements about recruiting, training and employing apprentices (*Example: We made sure the apprentices were given a good introduction to the business*). We asked respondents to rate each statement on a seven-point scale from 'strongly disagree' to 'strongly agree'.

Our steering group reviewed the statements to confirm they were relevant, comprehensive and worded appropriately.

³See appendix four



Engineering apprenticeship training, McConnell Dowell, Auckland

3. Surveying employers

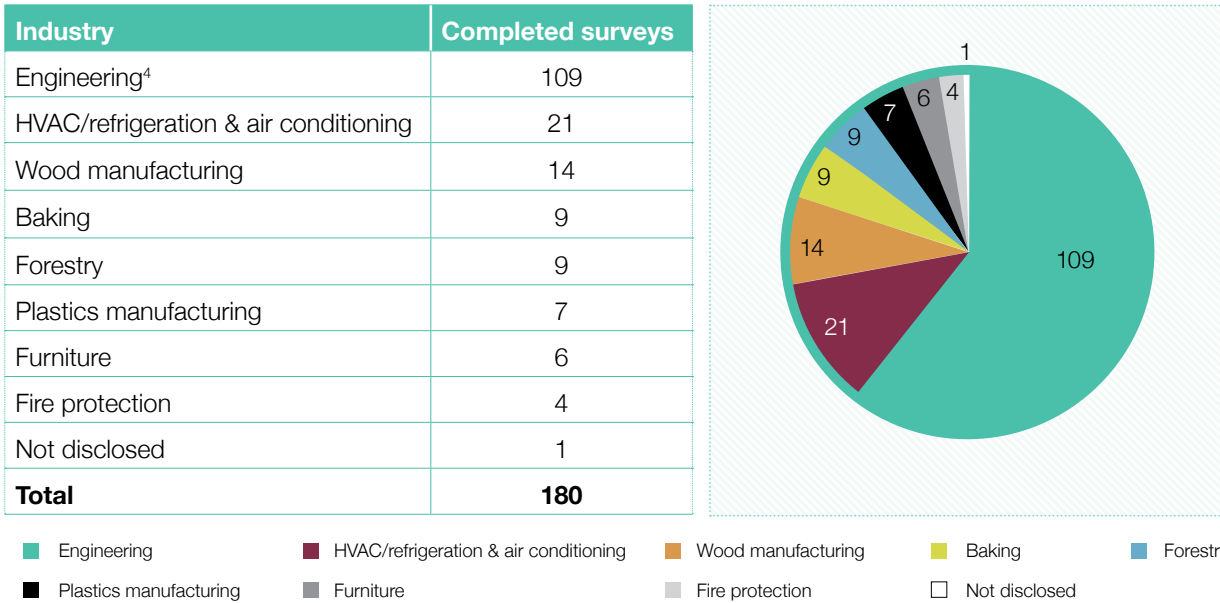
We asked our account managers to confirm the contact details of the person at each company who was in the best position to answer a survey about recruitment, training and employment practices in 2008 and 2009. We also asked them to advise this person that we would send a survey.

We surveyed employers in these two ways:

Survey method	Survey sample	Completed surveys	Survey period
Online survey	All employers in our sample	110	Two weeks from mid-June 2015
Telephone survey	Employers who did not respond to the online survey	70	First week of July 2015

We offered two randomly drawn incentives of \$100 to encourage employers to complete the survey. We offered our account managers the same incentive to encourage them to contact employers.

4. Employer responses



5. Statistical analysis

The analysis used two dependent variables:

- Apprentice completion rates (an objective variable, taken from our Competenz database)
- Apprentice retention rates (a subjective variable, reported by employer respondents).

Our researchers compiled descriptive statistics showing the distribution of responses to each of the 45 statements along the seven-point scale. They also carried out a factor analysis to identify the factors (e.g. quality of work, career opportunities) underlying the statements, and a regression analysis to identify the factors that explain the completion and retention outcomes. Appendix three explains what each factor covers.

The analysis also tested whether these features were statistically significant: the number of apprentices in the company, the company's size (in employee numbers), its industry and location.

We used a test of statistical significance of $P < 0.1$ for completing apprenticeships and a stronger test of $P < 0.5$ for retaining qualified apprentices.

⁴The core business of 73 of these companies was engineering. The remaining 36 companies employed and trained engineering apprentices, but their core business was not engineering (e.g. they were manufacturers).

6. Employer case studies

We carried out six in-depth interviews with companies in these sectors to build our understanding: baking, engineering, forestry, plastics manufacturing and printing. We also interviewed one of our Competenz account managers. You will find the case studies in this report.

Case study



Kevin Gilbert with apprentices Kieran Mackenzie and Hillary Faul

Gilbert's Fine Food

Baking, Dunedin
5 employees, 2 apprentices

As a former baking apprentice himself, Kevin Gilbert, owner of Dunedin specialty bakery Gilbert's Fine Food with his wife Esther, remembers what it's like to be learning on-the-job. It's that understanding that helps him get his apprentices off to a good start and, despite the small size of his business, offer them varied work and career opportunities.

"When you're starting out, you need to begin with something simple and feel you're achieving from week one," says Kevin. "So we take it gently early on. Here's a task – make the ciabatta. Then we'll get you onto another task. It's about building confidence and ownership in our apprentices."

Kevin sees training as much more than just ticking off unit standards. "Apprentices need to understand the 'why' as well as the 'how'. It's one thing to be able to make baked goods. It's another to understand why something works, like the laminating process where we alternate dough and butter. But if you understand the science you can fix things if they go wrong. And that's a valuable skill."

As a small employer, Kevin is unable to provide some of the structure, like formal career paths, available in larger companies. But he says there are "always other ways to do things".

"We can still give our people opportunities to keep building their skills and experience. For example, I get my more qualified people to supervise others, so they gain coaching skills. And I involve my team in business activities like food costing and budgeting to round out their technical baking skills."

What is the key to getting people through? "Support on-the-job." Kevin says this can be as simple as talking to apprentices to find out how they're going and asking regular questions to test their learning.

Support from Competenz account manager Tony Gunby is important too. "Tony visits regularly. I leave my apprentices to talk to him in private in case it's the boss – me – they want to talk about. But I always catch up with him after."

It's an approach that is working for Gilbert's. Kevin and Esther have built up a loyal team of employees. And they're looking forward to helping apprentice Kieran Mackenzie celebrate completing his apprenticeship in a few months' time.



Building skills on-the-job, Fletcher Aluminium, Auckland

What we learned

1. Employers' attitudes to training and retaining apprentices

Many employers are altruistic and care about the long-term future of their industry

Most of our respondents (85%) see training an apprentice as a contribution to their industry's long-term future. Many are also realistic. They expect some apprentices to move on at the end of their training, as many employers did themselves.

Most employers want to retain their apprentices when they graduate – and many succeed

Eighty-six percent of respondents wanted to retain their apprentices for the success of their business. In 2015 around 60% have successfully retained the apprentices they signed on in 2008 and 2009.

For some respondents (around 20%), training an apprentice is part of their business model and they are relaxed if apprentices move on when they finish training. There is an implied social contract here as well as an economic one. The company gains cost-effective labour; the apprentice gains skills in exchange.

2. Factors that help learners complete a quality apprenticeship

Quality of work is the most important factor in helping an apprentice complete

A quality apprenticeship offers a variety of work, increasing responsibility, and opportunities to carry out the full range of apprenticeship activities in the workplace. These features maintain apprentices' interest and create a pathway of learning from basic to advanced that reinforces apprentices' skills and gives them a sense of 'mastering' their trade.

A good start to an apprenticeship is critical

Employers need to get apprenticeships off to a good start. These factors all contribute to a successful apprenticeship: giving apprentices a good introduction to the business, setting clear expectations, checking regularly that employees are enjoying the work and, if they are not, finding out why.

Employers' experience managing apprentices makes a difference too

The more experience companies have employing apprentices, and the more it is a normal part of their business, the more likely apprentices are to complete. This makes sense intuitively: most employers who have trained apprentices in the past will have learned how to get the best from an apprenticeship (e.g. the value of setting clear expectations). This measure of 'experience' may be a proxy for other factors that contribute to a quality apprenticeship, like taking an active interest in apprentices' progress.

Career prospects and emotional support are likely to be important

These factors are close to statistically significant and would probably be significant in a larger sample. They are both factors that come through in our case studies.

To help learners complete an apprenticeship employers should...

- ✓ Offer varied work, with increasing responsibility
- ✓ Get apprenticeships off to a good start
- ✓ Draw on what they've learned from training apprentices in the past

These things make a difference too...

- ✓ Emotional support
- ✓ Career opportunities

Company size does not make a difference

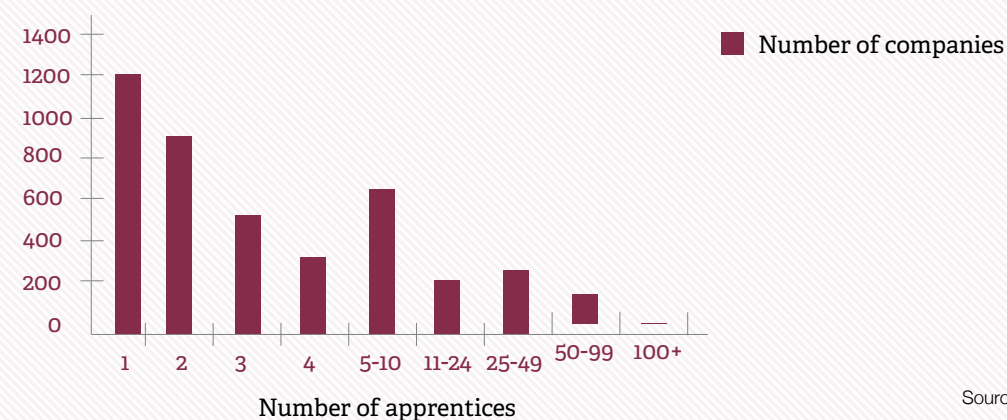
Small firms can do as good a job of training an apprentice as large ones, and some do a better job. Small firms can often offer learners the variety of work that contributes to a quality apprenticeship: the apprentice does 'a bit of everything'. In addition, many small firms are owner-operated: the people supervising apprentices have 'skin in the game' and a strong incentive to train them well.

This is a good news story for a country like New Zealand where over 30% of businesses in the apprenticeship-based industries Competenz supports employ between one and nine people.⁵ It is also good news for the New Zealand apprentice training system: the system is flexible enough to work well for firms of all sizes.

The number of apprentices the employer is training does not make a difference

Companies training only one or a small number of learners at a time are not at a disadvantage. Again, this shows that the apprentice training system is flexible. The diagram below shows that Competenz has significant experience in supporting companies training small numbers of apprentices at a time.

Distribution of Competenz apprentices by company size 31 August 2015



3. Factors that help employers retain an apprentice after they graduate

Career opportunities are the single most important factor

Employers should start talking about career opportunities early in an apprenticeship if they want to retain an apprentice. These conversations should canvas a wide range of options. Building a worthwhile career is about more than moving 'up the career ladder', and in smaller firms this type of career progression is limited.

Instead, employers need to think about the many ways qualified apprentices can continue to gain skills and experience. These include:

- further training. This might be complementary training in areas like business management, project management, competitive manufacturing and sales, or advanced trades training. Advanced trades training is appropriate 18 months to two years after the apprenticeship.
- getting involved in business activities (e.g. budgeting and job costing)
- supervising others to build leadership skills
- mentoring from a more senior person.

⁵ Estimate, based on Statistics New Zealand data 2014



Baking apprenticeship skills on show, Fine Foods Show 2014

Many other factors play a part in encouraging an apprentice to stay

These factors are all statistically significant: good supervision, support from co-workers, emotional support, a strong induction and pay. Appendix three shows what each factor covers.

These factors are likely to be important in helping apprentices **complete** their qualifications too.⁶ However, if they are absent, some apprentices may well ‘grit their teeth’ through the apprenticeship – and leave at the end of it. Employers who want to retain their apprentices should focus on all these factors from day one of the apprenticeship.

To retain qualified apprentices employers should...

✓ Offer career opportunities

These things make a difference too...

- ✓ Past experience training apprentices
- ✓ Getting apprenticeships off to a good start
- ✓ Skilled and responsive supervision on-the-job
- ✓ Support from co-workers
- ✓ Emotional support
- ✓ Pay levels

Company size does not make a difference

Small firms can do as good a job of retaining a qualified apprentice as large ones.

4. Recruiting an apprentice

Companies are least positive about the effectiveness of their recruitment practices

Recruitment practices do not play a statistically significant role in determining whether an apprentice completes their apprenticeship or stays with their employer. However, of all the factors in appendix three, recruitment is the area on which respondents rate themselves the lowest.

Our research revealed these recruitment practices and preferences:

- Eighty-four percent of respondents choose apprentices for their attitude, not just technical ability.
- Forty-nine percent prefer apprentices who are already working for them.
- Twenty-seven percent prefer mature people for apprenticeships over younger people.
- Fifty-three percent say the apprentices they sign up have ‘a good idea’ of the work they will be doing.

Companies think schools could do more to help them identify people suitable for apprenticeships

Only 12% of respondents believe schools do a good job here. This is consistent with feedback we receive from employers through other forums (e.g. breakfast meetings with our Competenz board members).

⁶ These factors were not statistically significant in our survey but are likely to be in a larger sample

5. Other findings

Completion and retention rates are not related

Companies may be good at helping learners complete their apprenticeships and poor at retaining them (and vice versa).

Respondents think successful employers do a range of things well in the employment relationship, not just one thing

For example, employers who rate the quality of their supervision highly also rate well the quality of their induction, emotional support and co-worker support. Pages 20 to 22 explain what ‘best practice’ looks like here.

Case study



Jacob Tyrrell-Baxter with fitting and machining apprentice Rohan Stent

A & G Price

Engineering, Thames
98 employees, 7 apprentices

For Thames-based engineering firm A & G Price, employing the right person as an apprentice, then training them well, not just ‘pushing them through’, are key to getting the best from an apprenticeship.

“We look for someone who really wants to do an apprenticeship,” says Machine Shop Operator Jacob Tyrrell-Baxter. “They need to show they’ve got a passion for engineering and they need to fit in.”

Recommendations from local Competenz account manager Roy Adams play a big part. “Roy knows the Coromandel. If he can’t find someone for us directly, he’ll know someone who might be suitable.”

A three-month trial lets the company observe employees before they sign them up for an apprenticeship. “We’ve had some duds. You can’t always tell till you get them on site. For the right person, the offer of an apprenticeship can be a carrot. We’ve just signed up a labourer from our machine shop.”

Once the apprenticeship is underway, the company relies heavily on Roy to develop a training programme that gives apprentices variety and challenge in their work. “Roy really steers our apprentices’ learning. Over the years he’s helped structure our training to get the best from it.

Before then we were jumping all over the place. He also does our assessments, sends us reports, and books the guys in for catch-ups.”

On-the-job support is important too. “When we put a new person on a machine, they’re trained by a qualified tradesperson. That person says when it’s OK for the apprentice to go solo, and they become a buddy for them to go to.”

The company tackles issues quickly. “A & G Price has a good reputation – for training and as a business – and we want to keep that. So we train people well – not just push them through.”

A & G Price’s managers recognise that some parts of an apprenticeship need extra focus. “Most apprentices leave bookwork to the last minute. It’s human nature,” says Jacob. “So I set aside an hour a week to get them together to follow up.”

And when apprentices finish their training? “We don’t have a formal career programme,” says Jacob. “But we try to fill roles internally. If they’re keen, there are plenty of opportunities.”

Case study



Trainee Sam Dixon with director Nathan Taylor

Mechanised Cable Harvesting

Forestry, Nelson region
8 employees, 1 trainee

New Zealand's forests offer some of the country's most scenic workplaces and a training ground which provides unique challenges. However, as the experience of Nelson-based Mechanised Cable Harvesting shows, careful recruitment and opportunities for trainees to master a range of work, take on increasing responsibility, and build a career are as important in our forests as they are in engineering workshops, printshops and bakehouses across the country.

"When we're recruiting, we look for people who have a good attitude and want to learn. They're easy to train," says director Nathan Taylor. "Plus forestry is becoming more mechanised and the training reflects that. So we recruit people who are comfortable with technology."

The company structures employees' work programmes to offer variety and responsibility.

"Our trainees learn most when they find their work interesting and challenging – so we give them plenty of opportunities to build a range of skills."

Formal job rotation is one way the company does this. Informal opportunities work well too.

"We encourage trainees to get familiar with equipment like the hauler when there's less production pressure," says Nathan. "And we make them responsible for looking after machinery like the Warratah [harvester]. Being given 'ownership' and responsibility for something is motivating."

Nathan agrees that trainees and apprentices benefit from a good start to their training.

"The early months are critical. We start trainees on the basics to build their confidence. They learn about tools and how to use them, and take responsibility for entry-level tasks like quality control."

On-the-job support is important throughout a training programme. Nathan encourages his trainees to ask questions – plenty of questions. "I tell them there's no such thing as a dumb question."

Opportunities for career development help keep trainees with the company.

"If trainees are willing to get stuck in, there are lots of opportunities, including further training. One of our trainees, Sam, is doing his level 3 health and safety training. And he runs our tailgate meetings where we review the past day's hazards and plan for the day ahead. So he's building up some real expertise in this area."

Nathan himself has completed further training, including National Certificates in health and safety and first line management.



Plastics manufacturing apprenticeship training, Profile Polymers, Hamilton

How Competenz is responding

Our research findings validate many of the ways we currently work with companies and apprentices to support apprenticeships, plus activities underway to improve our offer. We will continue this work.

These findings also highlight new opportunities to improve our offer. For example, we will develop a suite of best practice guides that focus on the factors that our research shows:

- make the greatest difference in training and retaining an apprentice: offering varied, responsible work, getting the apprenticeship off to a good start, and offering meaningful career opportunities
- employers feel least confident about: recruiting an apprentice.

To help employers offer apprentices varied work with increasing responsibility we will:

- develop a best practice guide
- continue to develop structured training plans with companies
- continue to visit workplaces regularly to review apprentices' work programmes and progress.

To help employers get apprentices off to a good start we will:

- develop a best practice guide
- continue to visit workplaces regularly to support apprentices' training.

To help employers offer apprentices career opportunities we will:

- develop a best practice guide
- continue to work with industry associations to promote training and career development at an industry level
- continue to develop and offer advanced trades qualifications and offer scholarships that fund this learning
- continue to develop and offer complementary business qualifications.

To help employers recruit capable apprentices, we will:

- develop a best practice guide
- continue to promote trade careers in schools, through the national Got a Trade campaign and through student work placements like the Gateway programme
- continue to build students' technical skills through our Tools4Work programme in schools
- continue to second apprentices to industry in partnership with the Apprentice Training New Zealand Trust (ATNZ). Appendix four contains more information.

Appendix five contains more information about the work we do to bridge the gap between schools and employers.

As we believe 'high quality learning' goes hand-in-hand with 'high quality of work', we are continuing to:

- improve our study materials (including eLearning) to make them more relevant to learners
- simplify our assessment processes
- lead our industries to develop qualifications which meet their changing needs.

Case study



Operations Manager Darren Davies with apprentices Sam Johnstone and Aaron Soper

RX Plastics

Plastics processing, Ashburton
165 employees, 12 apprentices

If you're a company, small or large, that wants to train an apprentice but can't justify a dedicated human resources or training team, take heart. According to Darren Davies, Operations Manager at award-winning plastics manufacturer RX Plastics, when you're building an apprentice's skills, "there's no substitute for managers and supervisors getting stuck in and taking responsibility."

"Training an apprentice is a big investment for a business, and managers need to take that investment seriously by putting in the time," says Darren. "It can take a lot of time to train someone well – but it's worth it."

Competenz plastics account manager John McGregor supports this view. "RX Plastics has a handful of really passionate guys. They're skilled and knowledgeable and they structure their training to give their apprentices variety and responsibility."

Setting clear expectations with apprentices is important too, says Darren.

"We tell our apprentices that we'll invest in them to build their skills, and support them along the way. But it's up to them to make the most of their learning."

This support at RX Plastics takes many forms. The company gives apprentices time to complete their book work. Apprentices' pay rises as they complete their unit standards, with the final increase being 'pretty significant'. The company holds informal graduations where successful apprentices receive their National Certificates at a company morning tea.

Regular site visits and reports from Competenz play a big part too. "John keeps us on our toes."

Losing trained plastics technicians to the 'big cities' is always a risk. The company manages this risk by giving apprentices opportunities to keep building their careers. Apprentices can continue their plastics training at level 5. Training in business skills like health and safety, competitive manufacturing and management rounds out employees' technical skills and makes them more useful to the business.

There are also opportunities to advance internally: the company's Production Manager, who holds a level 5 plastics certificate, started as a student 'cleaning up the factory after school'.

RX Plastics has won many industry awards, including Plastics Training Company of the Year 2014.

What best practice apprenticeship training looks like

Many features need to come together to get the best from an investment in an apprenticeship. This is what employers told us.



Treating an apprenticeship as an investment

- Your line managers have to put in the time – it's that simple.
- We train people well – we don't just push them through.
- An apprenticeship and where you did it should mean something.

If you take on an apprentice, you need to invest in them fully.



Companies' commitment to building skills in their industry

- *If we don't train, the industry will die.*
- *Yes, some apprentices move on, as I did. But some come back if we've treated them well.*

Someone gave me an apprenticeship so I'm doing the same.



Recruiting an apprentice

- *We hire on attitude. If someone has a passion for the trade and wants to learn, we take them on.*
- *We usually look internally. We can check them out, and they know how we work – so they make faster progress.*

Working to our values makes it easier to attract the right people.



Providing varied, responsible work for an apprentice

- *I get my apprentices working on real-life, challenging jobs so they learn to problem-solve.*
- *Our Competenz account manager's visits keep our apprentices on track and learning new things.*
- *Our apprentices don't push a broom. They use the latest equipment and that's motivating.*

Our Competenz account manager helps us structure our training to get the best from it. Without him we'd be jumping all over the place.



Getting an apprenticeship off to a good start

- *Apprentices have to meet our values from day one.*
- *You need to set clear expectations.*
- *Apprentices should begin with something simple so they're achieving from the start.*
- *I check in regularly to find out how they're going – especially early on.*

It's about building confidence and ownership.



Providing support and supervision on-the-job

- *We buddy apprentices with a qualified person.*
- *I ask questions to test their learning.*
- *One of our apprentices works nights, so I turn up early once a month to spend time with him.*
- *I set aside an hour a week to follow up on bookwork.*

I've learned not be a dictator. Coaching works far better.

Offering career opportunities

- We're a small firm but we can still give our team career opportunities. They supervise others and take on business activities like budgeting.
- We try to fill roles internally. If our apprentices are keen, there are opportunities.
- Training in business skills rounds out our apprentices' skills.
- We've developed a clear career path: apprentice to team leader to management.

We invest in advanced trades training to keep our team learning.

Other support

- Our apprentices' pay goes up as they qualify, so there's an incentive.
- We make health and safety top priority.

There are sausage rolls in the tearoom when an apprentice finishes!



Baking apprenticeship training, Rolleston Bakery

Case study



Warren Wong with apprentice Andrew Gouldstone

Designsteel

Engineering, Auckland
9 employees, 1 apprentice

The experience of small Auckland engineering workshop Designsteel in employing and training a sole apprentice is an encouraging one for a country of small businesses.

"Our last apprentice became a really good tradesman and stayed with us for eight years after he qualified," says manager Warren Wong. "Our current apprentice Andrew's doing really well too."

When it comes helping an apprentice learn, being a small firm has its advantages.

"We can give our apprentice lots of variety," says Warren. "We've got different work coming in the door every day, so Andrew gets to try bit of everything. And having just one apprentice at a time works fine."

Building skills in a logical way is important. The training plan Warren agrees with Competenz account manager Rick Oliver helps do this, and sets clear goals for Andrew's learning. Warren and Managing Director Brett Hollander support these goals by sequencing Andrew's jobs as they come in.

"We try to push our apprentices along, but not too fast, because they need to feel confident about what they're doing," says Brett. "Once they show they're capable we test them a bit more. So we started Andrew on marking out metal. Then he moved to drilling. Then welding with supervision. Now he's welding on his own."

Challenge is important. "Where budget allows, we're always looking out for 'tricky' jobs to round out Andrew's skills."

Past experience employing apprentices helps the company support their learners.

"Some young guys struggle on without saying anything," says Brett. "So we keep an eye on them and make sure what we're teaching's going in. And we keep them on top of their bookwork because that trips some apprentices up."

In return the company expects apprentices to do their bit.

"Apprentices need to look ahead and tell us if there's a piece of work they have to do as part of their training plan. And we tell them communication's important. They need to ask questions if they don't understand."

As a small company, formal career paths are limited. Designsteel compensate for this by increasing pay 'substantially' when apprentices qualify, and offering a range of work.

Now in the second year of his general engineering apprenticeship, Andrew is proving his worth. "He's already productive," says Warren. "We're keen to do the right thing by him and give him a good apprenticeship."

Case study



Rick Oliver

Competenz Account Manager,
Auckland and Northland
Engineering and related trades

Rick Oliver remembers what it's like to be an apprentice. As a qualified automotive engineer and experienced Service Manager, he also knows what it's like to train apprentices. Now a Competenz account manager supporting apprentices, Rick is in a unique position to help employers give learners the range of work, support and career opportunities our research shows they're looking for during their apprenticeship.

"Four years is a long time", says Rick. "If you're an apprentice, you want to learn as much as you can and know you're building a career. If you're an employer, you need to know the time and money you're putting in is turning out a top tradesperson. And you probably want to keep them once they qualify."

When it comes to giving apprentices variety and challenge in their work, Rick says this starts with the qualifications Competenz offers.

"We design qualifications in partnership with our industries to build a range of skills in a structured way, from basic to advanced," says Rick. "For engineering that means starting with health and safety, then learning about hand tools, then power tools, then specialised areas like fabrication."

The Competenz training plan agreed with companies and learners at the start of an apprenticeship plays an important part too.

"The tailored training plan bolts everything together – on-the-job learning, eLearning and block courses."

Regular visits from Rick keep learners on track and back up the support they receive in the workplace.

"Young apprentices grow up during their apprenticeships. If they're male, they'll have three girlfriends and four cars, and they'll vote for the first time. It's an important time in their lives, and taking a personal interest makes a difference."

Setting expectations from day one is important. "I tell apprentices it's their apprenticeship, not mine or their employer's."

Rick encourages employers and apprentices to think widely about career opportunities, and early in the apprenticeship.

"I explain the options available – maybe level 5 trades training or study in business areas like team leadership. And I suggest they look for projects and business activities that build on their trade skills."

Rick prompts apprentices to recognise the investment their employers make in their training.

"I tell them loyalty's important. They can repay the company by sticking around for a while at the end of their training. They're putting into practice what they've learned, and their loyalty encourages the company to take on more apprentices. Everyone benefits."

What is the return on an investment (ROI) in training an apprentice?

Every year thousands of companies invest in apprenticeships across New Zealand. They do this because they recognise that building their employees' skills will have a positive return for their business. The benefits over time in terms of greater productivity, quality, safety and employee loyalty outweigh the costs of the training.

Calculating the ROI of an apprenticeship

Calculating a formal return on investment (ROI) poses challenges, even for companies with sophisticated financial management systems. There are complex assumptions and measurements involved. In addition, returns are likely to differ by apprentice (e.g. based on individual attitudes and attributes) and across different apprenticeship-based industries (e.g. due to differences in markets for labour and final products). For these reasons, we have not attempted to calculate an ROI figure in this study.

ROIs in national and international studies

Instead, we have used the small number of New Zealand and international studies which have investigated the ROI of apprenticeships as a starting point for the research you are reading about in this report. Our aim has been to identify ways to **increase this ROI**.

Several of the studies we consulted have calculated an indicative ROI figure. Other studies have been qualitative, and talk about costs and benefits in more general terms. Appendix six lists some of these studies.

As apprenticeship systems, labour and commodity markets differ across industries and countries, we need to treat this research carefully when we apply the results to our Competenz industries. We can, however, see some common themes.

Three common themes

Theme one: the ROI on an apprenticeship for employers is generally positive and increases over time as employees become more productive

In the most relevant examples for Competenz, employers in five sub-sectors of the New Zealand motor industry covered their costs from the third year of the apprenticeships. In the fourth year and beyond they gained a positive return on their investment. The overall return over a five-year period was also positive.

A United Kingdom study in the same industry calculated an ROI of 150% to 300%. It recognised a productivity S-curve: low productivity growth in the first year of the apprenticeship, accelerating through the second and third years and tailing off in the fourth.

Theme two: employers can increase this ROI by managing their apprenticeship investment carefully

Employers can increase ROI by reducing costs or pushing these costs further out in the apprenticeship. They can also increase ROI by increasing benefits or bringing those benefits forward in the apprenticeship.

The report you are reading shows how employers can do these things. For example, to reduce costs, employers should recruit apprentices who are genuinely interested in the industry. These apprentices will be easier and cost less to train than people who ‘just want a job’.

To increase benefits, employers should give apprentices a wide range of tasks. This approach will help turn out versatile apprentices who become productive relatively quickly.

Theme three: the length of time companies retain qualified apprentices strongly influences the ROI

The report you are reading explains how employers can retain apprentices when they graduate. For example, setting out career options early in an apprenticeship will encourage apprentices to stay with the company that trains them.



Apprenticeship training in the fire protection industry, Fire Security Services, Auckland

¹ NZIER for MITO, adapting a Canadian study (2010) *Return on investment from MITO apprenticeship training in New Zealand*

² Ibid

³ The Institute of the Motor Industry (United Kingdom) (2014) *The ROI of apprenticeships*



On-the-job forestry training, Stewart Logging, Gisborne

Terms used in this report

Apprentice

Someone who is working towards a New Zealand Apprenticeship or its predecessor, a Modern Apprenticeship.

Apprenticeship

A structured programme of learning over three or four years.

Apprenticeships are available in these Competenz industries:

- General engineering
- Maintenance engineering
- Fitting and machining
- Machining
- Fabrication
- Metal casting
- Toolmaking
- Fire protection
- Locksmithing
- Heating, ventilation and air conditioning
- Refrigeration and air conditioning
- Forestry
- Furniture
- Solid wood manufacturing
- Pulp and paper manufacturing
- Glass manufacturing
- Plastics processing
- Baking
- Butchery
- Printing
- Packaging
- Signmaking



Butchery apprenticeship training, Countdown Meat and Livestock, Auckland
Credit: Simon Young (New Zealand Listener)

Sources

These are the papers we canvassed in our literature review.

- Bednarz, A (2014) *Understanding the non-completion of apprentices, occasional paper*, Adelaide: National Centre for Vocational Education Research (NCVER)
- Cully, M & Curtain, R (2001) *Reasons for new apprentices' non-completions*, Adelaide: NCVER
- Dickie, M, McDonald, R and Pedic, F (2011) *A fair deal: apprentices and their employers in NSW: integrated research report*, Sydney: NSW Board of Vocational Education and Training
- Hill, A & Dalley-Tim, L (2008) *Hanging in there: what makes a difference in the first year of an apprenticeship*, Youth Studies Australia, vol 27, no 1, pp36-42
- Kilpatrick, S, Falk, I and Hamilton, V (2002) *Issues of quality learning: apprenticeships and traineeships in rural and remote Australia*, Australian and New Zealand Journal of Vocational Education Research, vol 10, no 2, pp1-26
- Misko, J, Nguyen, N and Saunders, J (2007) *Doing an apprenticeship: what young people think*, Adelaide: NCVER
- O'Neill, S and Gish, A (2001) *Apprentices' and trainees' English language and literacy skills in workplace learning and performance: employer and employee opinion*, Adelaide: NCVER
- Smith, E, Comyn, P, Brennan Kemmis, R and Smith, A (2009) *High quality traineeships: identifying what works*, Adelaide: NCVER
- Smith, E, Walker, A and Brennan Kemmis, R (2011) *Understanding the psychological contract in apprenticeships and traineeships to improve retention*, Adelaide: NCVER
- Stromback, T and Mahendran, A (2010) *An analysis of factors contributing to apprenticeship and traineeship completion*, International Journal of Training Research, vol 8, no 1, pp63-79

We also used economic and demographic data supplied by Statistics New Zealand and Infometrics.



Locksmithing apprentice, City Locksmithing, Auckland

Factor analysis

This table shows what each factor covers (based on 31 of the 45 statements in our survey).

Factor	Items included
Work quality	<ul style="list-style-type: none"> During the course of their apprenticeship, we were able to ensure that the apprentices experienced a good variety of work in their trade We made sure that the apprentices were given greater responsibility as they progressed in their abilities Our apprentices were able to carry out the full range of on-the-job apprenticeship activities in our workplace(s)
Supervision quality	<ul style="list-style-type: none"> Our supervisors had enough time to answer questions from the apprentices Our supervisors had good skills in how to train apprentices to do their tasks Our supervisors had good skills in how to deal with 'people problems' Our supervisors gave each apprentice regular feedback on their progress
Co-worker support	<ul style="list-style-type: none"> Our other staff made an effort to make the apprentices feel welcome Our apprentices found their workmates helpful when they had questions Because of work pressures, our staff were often too busy to think about training the apprentices
Recruitment effectiveness	<ul style="list-style-type: none"> The people we signed up as apprentices had experienced the work before they started their apprenticeships The people we signed up as apprentices had a good idea of what they were getting themselves into We preferred people for apprenticeships who were already working for us For apprenticeships, we preferred 'mature' people who were clearly motivated over younger people with less certainty about their career direction
Performance of apprentices	<ul style="list-style-type: none"> We had some serious performance issues with our apprentices Our apprentices struggled with the literacy requirements Our apprentices struggled with the numeracy requirements
Experience of employer	<ul style="list-style-type: none"> We had a lot of experience with employing apprentices before we took on these ones Having apprentices was a normal part of our business at the time
Induction	<ul style="list-style-type: none"> We made sure the apprentices were given a good introduction to the business We made sure the apprentices understood what we expected of them If an apprentice was not enjoying the work, we made an effort to find out why
Emotional support	<ul style="list-style-type: none"> Our supervisors made sure the apprentices were getting on with their workmates We made the health and safety of our apprentices a top priority We did not tolerate any bullying of the apprentices If they were having personal problems, our apprentices had someone they could talk to confidentially
Pay level	<ul style="list-style-type: none"> We consistently paid our apprentices better than other employers As they progressed, we regularly increased the rate of pay of our apprentices We provided our apprentices with financial support for their costs of training (e.g. tools, travel to courses)
Career prospects	<ul style="list-style-type: none"> Once they qualified, we wanted to retain our apprentices for the success of our business Our apprentices had good opportunity to progress their careers within the company

The Apprentice Training Trust New Zealand (ATNZ)

ATNZ is New Zealand's largest employer of engineering apprentices. The Trust currently employs almost 400 apprentices which it seconds to around 200 companies across New Zealand. These apprentices are working towards apprenticeships in 13 industries including general and maintenance engineering, and refrigeration and air conditioning.

ATNZ makes it easy for companies to train apprentices and for learners to gain their skills. The Trust employs the apprentice and manages all aspects of the employment relationship (including recruitment and payroll). Through a service level agreement with Competenz, Competenz account managers visit apprentices in the workplace ten times a year to check on the employment relationship and apprentices' progress.



Engineering apprenticeship training, Aztech Engineering, Petone

Bridging the gap between schools and industry

We work closely with schools, our industries, individual companies and other educational organisations to encourage students to consider a trades career, prepare students for the world of work, and help companies identify suitable apprentices. These are the main ways we do this.

Promoting trades careers and apprenticeships

Our Competenz careers team visits 200 schools each year to promote apprenticeships in our industries.

We are a member of the consortium of seven industry training organisations behind the successful **Got a Trade? Got it Made!** campaign. This campaign, and Got a Trade Week, promote and celebrate careers in New Zealand's trades and service industries, and the benefits of learning on-the-job. www.gotatrade.co.nz

We also support careers expos and events in our industries across the country.



Preparing school students for apprenticeship study in the workplace

We support the vocational pathways learning of over 8,000 students in 200 secondary schools, preparing them for a career in apparel, butchery, engineering, forestry, furniture, journalism, printing and wood manufacturing.

Giving students opportunities to experience the workplace

We support student Gateway placements. Gateway is a formal arrangement between a school, a student and an employer for a student to spend structured time learning in an employer's workplace.

Our Competenz Discovery Tours during Got a Trade Week 2015 were an opportunity for employers to open their workplaces to students and jobseekers, to give them a taste of their industry.

Helping teachers prepare their students for the workforce

We support the annual Careers and Transition Education Association (CATE) Conference.

Around 130 teachers attended our Tools4Work Professional Development Days in 2014 where we shared resources and expertise to help them get students ready for the workforce.

Identifying suitable apprentices for our industries

Our Competenz careers team and account managers work with schools to identify students who would make suitable apprentices and connect them with companies wanting to train an apprentice.

We are an active member of the Auckland Māori and Pasifika Trades Training Initiative which supports apprenticeship placements for Māori and Pasifika people.

www.competenz.org.nz/schools



Calculating the return on investment (ROI) of an apprenticeship

These New Zealand and international studies investigate the ROI of apprenticeships. They are a mix of qualitative and quantitative studies. As apprenticeship systems, labour and commodity markets differ across industries and countries, we need to treat this research carefully when we apply the results to our Competenz industries.

New Zealand studies

- NZIER for MITO, adapting a Canadian study (2010) *Return on investment from MITO apprenticeship training in New Zealand*
- NZIER for HITO (Hairdressing Industry Training Organisation) (2010) *Making the most of a HITO apprenticeship*
- BERL for the Industry Training Federation (2011) *The economic costs and benefits of industry training*

International studies

- The Institute of the Motor Industry (United Kingdom) (2014) *The ROI of apprenticeships*
- Warwick Institute for Employment Research (2014) *The net costs and benefits of training: estimating the costs of apprenticeship training to employers*
- Ecorys, IES and IRS, for the European Commission (2013) *The effectiveness and costs-benefits of apprenticeships: results of the quantitative analysis*
- Hogarth T, Gambin L, Winterbotham M, Koerbitz C, Hasluck C, Baldauf B, Warwick for Institute of Employment Research (2012) *Employer investment in apprenticeships and workplace learning: the fifth net benefits to employers study*
- McIntosh, S University of Sheffield (2007) *A cost-benefit analysis of apprenticeships and other vocational qualifications*

Acknowledgments

We would like to thank the following people and organisations for contributing their time, experience and expertise to support this research project.

Our research partner, the University of Auckland

- Professor Peter Boxall, Associate Dean Research, Business School
- Jessica McLay, Statistical Consultant, Department of Statistics
- Kevin Chang, Statistical Consultant, Department of Statistics



Our research partner, MM Research Limited

- Sarah Major, Senior Researcher
- Steve Blank, Senior Researcher

The employers who took part in our online and telephone surveys

- 180 companies across New Zealand (baking, engineering, fire protection, forestry, furniture, heating, ventilation and air conditioning (HVAC), plastics manufacturing, refrigeration and air conditioning, wood manufacturing)

The people and companies which feature in our case studies

- Kevin Gilbert, co-owner Gilbert's Fine Food, Dunedin (baking)
- Jacob Tyrrell-Baxter, A & G Price Limited, Thames (engineering)
- Colin Lean, Technical Manager, Logans Print, Gisborne (printing)
- Darren Davies, Operations Manager, RX Plastics, Ashburton (plastics manufacturing)
- Nathan Taylor, Director, Mechanised Cable Harvesting, Nelson (forestry)
- Warren Wong, Manager, Designsteel, Auckland (engineering)

These Competenz employees and contractors

- Kate Thompson, Communications Manager, who led this project
- Our project steering group: Jim MacBride-Stewart (General Manager Industry Training), Marc Borland (Regional Manager), Matt Grimes (Sector Manager), Roy Adams, Brett Jobe, Adrian Lyne, Malcolm Pearce, Matthew Robinson, Leah Wood, (Account Managers)
- Rick Oliver, Account Manager, who features in a case study
- The 41 Competenz account managers who encouraged companies to complete the research
- Camila Guarnizo, Graphic Designer
- Deepika Sulekh, Marketing Coordinator
- Nathan Gallagher and the team who manage our learner database
- James Scott, Data Consultant



Wood manufacturing apprenticeship training, Red Stag Timber, Rotorua

www.competenz.org.nz