

# About the Manufacturing and Technology sector

---

## What's the work like?

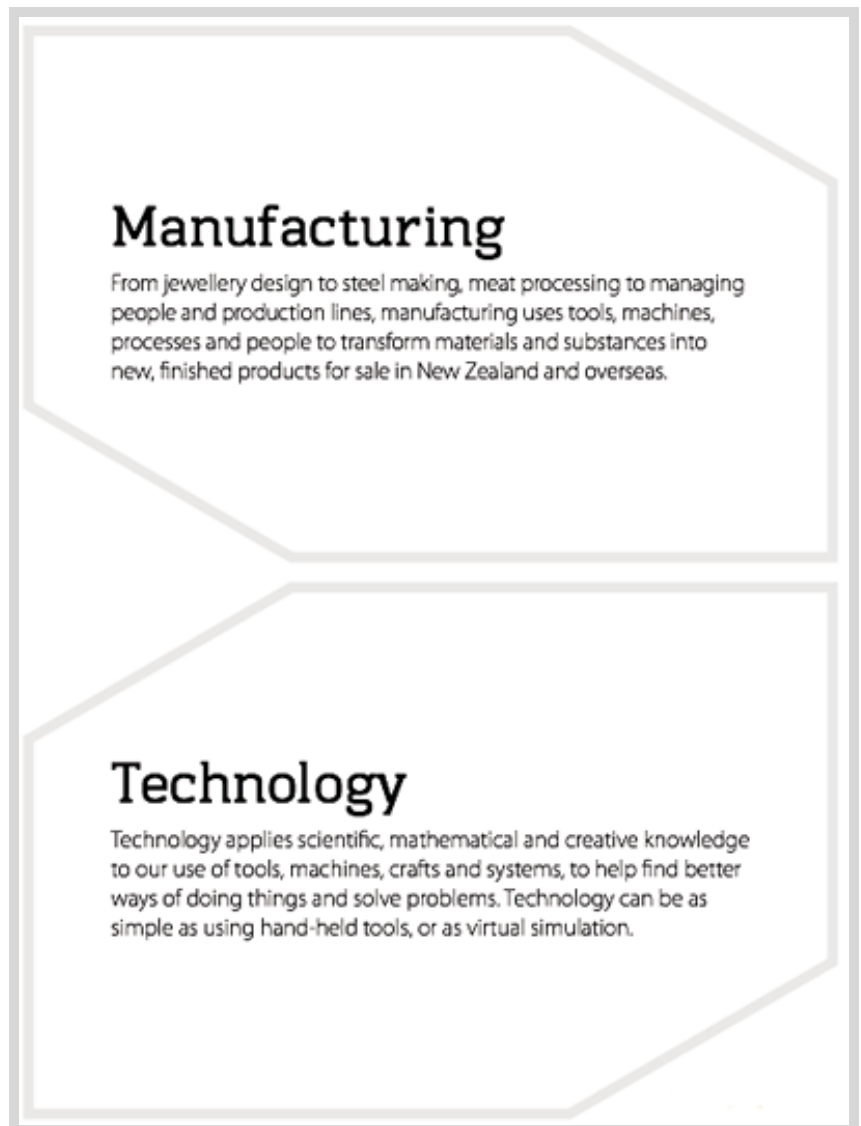
From hands-on production and assembly to cutting-edge research, from massive machines and busy production lines to individual crafts or computer design, this sector covers a range of working styles and options. You might be working with huge lumps of metal or delicately assembling tiny component parts, so small you can't even see them, like in nanotechnology. Whatever you do, you'll be working indoors most of the time, with tools, machinery, and equipment, or maybe a computer. You could be producing things in their millions, or making or designing individual one-offs. You might be fabricating, installing, fixing, or maintaining systems, or doing a job involving lots of thinking,

planning, or making calculations. Some roles are highly creative. Many are methodical, detailed, and precise. Generally in this pathway there's a very clear end point to the job you're doing and you'll know exactly what part you played in it. You'll be able say "I had a hand in that. It couldn't have happened without me."

## What's great about this sector?

There's a mixture of skilled jobs across the sector, something to suit everyone. Careers in technology, engineering, and science are among the most exciting, varied, and rewarding possible. In the engineering industry in particular, people have the highest job satisfaction of all jobs.

These jobs offer opportunities to travel, to make new discoveries, to work with creative, like-minded people, and to make a practical difference to the world around you.



In manufacturing, chances are you'll be turning raw materials that aren't worth much on their own into useful products worth many more times as much as the original raw material. And you get to do it by doing stuff, working with materials and machines, solving real problems by applying your learned skills to the task. In this sector there will be opportunities to move up the career ladder or across industries.

## Why is this sector important?

This sector is a big employer – the second largest in New Zealand. It is also a big earner for our economy, making up almost half of all the country's export income. The government has identified this sector as a priority area for growth, so the future is bright.

Technology, and telecommunications in particular, are fast-changing and expanding industries and key to New Zealand's future. With a shortage of skilled workers in these industries, people who work and study for a career in the technology sector are in hot demand.

# Will this sector suit me?

---

“I started as a packer, moved onto fabrication and **now I lead the production team.**”

Paul, Foreman, Food Manufacturing



## What qualities will I need?

We're looking for people who are interested in making things work. You might be skilled with your hands, inquisitive, and able to think outside the box, and be keen to ask questions. At the same time, you'll have an eye for detail and good ability to concentrate. You may have design skills, technical skills, manual skills, computer skills, science skills, or creative skills, and you'll be comfortable using science and technology. You'll enjoy being part of a hard working team and get on well with your work mates, yet able to work on your own. You'll understand and respect the need for safety.

## What key competencies do employers look for?

Employers will be matching your key competencies to their workplace.

### USING LANGUAGE, SYMBOLS, AND TEXTS

- You'll need to have readable handwriting and be able to understand and follow written instructions, procedures, simple tables, and graphs.
- You'll manage basic measurement tasks and will know how to enter and extract basic information on computers.

### MANAGING SELF

- You'll be reliable.
- You'll arrive at work on time and in a fit state to work safely and well.
- You'll let the right people know when you can't be at work or when something has gone wrong.
- You'll be willing to listen carefully to instructions and have the confidence to ask questions when you don't understand.

### THINKING

- You'll be able to recognise problems and understand what to do or who to ask to get them solved.

## RELATING TO OTHERS

- You'll know how to show respect to others, especially more senior and experienced people, and get along with your workmates.

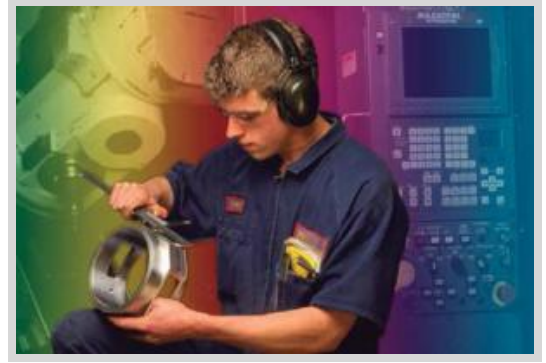
## PARTICIPATING AND CONTRIBUTING

- You'll work in a team and recognise your part within it.
- You'll respect the contribution of others and you will use your skills in the team to create products and solutions to problems.

# Jobs in Manufacturing and Technology

“It blows me away each time we roll out a finished aircraft. **It’s awesome to be able to say ‘I helped build that beautiful machine’ – just awesome.**”

Dwayne Griffiths, 21, Pacific Aerospace



## WHAT WORK COULD I DO? »

Find out what type of work you could do, and what roles you could end up in if you took the Manufacturing and Technology pathway.

## JOB PROFILES FOR THE MANUFACTURING AND TECHNOLOGY SECTOR »

Browse listings of jobs, link to information on the Careers New Zealand website, and see what level of qualification you might need for different jobs in this sector.

There are a huge number of roles and occupations available in this sector, ranging from entry level through to high level.

NCEA level 2 is the minimum you need for entry level jobs or apprenticeships. This gives you a good foundation in the skills and competencies you will need to go further. For other roles, you’ll definitely need to further your education after school by undertaking tertiary study, or training on the job.

More information about all the roles listed here can be found on the [Careers New Zealand website](#), along with key information about the job, what it pays, and current opportunities. To find out the pay, prospects, and study costs of a number of jobs, you can also check out the [Occupation Outlook](#).

The asterisks in the following table show the level (or levels) of qualification usually associated with the role.

Sometimes you need a specific qualification to get into a job, but in many areas you can work towards higher qualifications by learning on the job. Check out the [job profiles on Careers NZ](#), or talk to your careers advisor to find out more.

	2	3–4–5	5–6	7	8–10
	NCEA LEVEL 2	CERTIFICATE	DIPLOMA	DEGREE	POSTGRADUATE DEGREE
<a href="#">Aeronautical Engineer</a>				*	*
<a href="#">Aircraft Maintenance Engineer</a>		*	*		
<a href="#">Architect</a>				*	*
<a href="#">Architectural Technician</a>			*	*	
<a href="#">Automotive Electrician</a>	*	*			

Automotive Mechanic	*	*			
Baker	*	*			
Bicycle Mechanic	*				
Biochemist				*	*
Biomedical Engineer				*	*
Biomedical Technician (Mechanical and Electronic)			*	*	
Biotechnologist				*	*
Boat Builder	*	*			
Boiler Attendant	*	*			
Brewer	*	*	*	*	
Butcher	*	*			
Cabinet Maker	*	*			
Chemical Engineer				*	*
Chemical Production Operator	*	*			
Chemist				*	*
Civil Engineer				*	*
Civil Engineering Technician/Draughtsperson			*	*	
Clothing Designer	*	*	*	*	
Clothing Marker/Cutter	*	*	*		
Clothing Pattern Maker	*	*	*		
Computer Systems Technician		*	*		
Crane Operator		*	*		
Dairy Products Maker	*	*	*		
Database/Systems Administrator		*	*	*	*
Electrical Engineer				*	

Electrical Engineering Technician			*	*	
Electrician		*			
Electronics Engineer			*	*	
Electronics Trades Worker	*	*			
Energy and Chemical Plant Operator	*	*			
Engineering Machinist	*	*			
Environmental Engineer				*	
Fabrication Engineer	*	*			
Food and Beverage Factory Worker	*				
Food Technologist			*	*	*
Fork-Lift Operator		*			
Furniture Finisher	*	*			
Game Developer			*	*	
Glass Processor	*	*			
Graphic Pre-Press Worker	*	*			
Importer/Exporter	*		*	*	
Industrial Designer				*	*
Industrial Spray Painter	*	*			
Information and Communication Technology Manager			*	*	*
Jeweller	*	*	*	*	
Joiner	*	*			
Lift Technician	*	*			
Light Technician	*	*	*	*	

Line Mechanic		*			
Locksmith		*			
Marine Engineer		*	*	*	
Meat Inspector		*			
Meat/Seafood Process Worker	*				
Mechanical Engineer				*	*
Mechanical Engineering Technician			*	*	
Medical Laboratory Scientist				*	
Metal Worker	*	*			
Panelbeater	*	*			
Picture Framer	*				
Plastics Technician		*	*		
Plastics Worker	*	*			
Print Finisher	*	*			
Printer	*	*			
Product Assembler	*	*			
Production Manager			*	*	
Programmer			*	*	
Project Manager			*	*	
Pulp and Paper Mill Operator	*	*			
Purchasing/Supply Officer	*	*	*	*	
Recycler/Dismantler					
Refrigeration/Air-conditioning Technician	*	*			
Saw Doctor	*	*			
Science Technician			*	*	



Screen Printer	*	*			
Sewing Machinist	*	*			
Software Architect			*	*	*
Systems Analyst				*	*
Tailor/Dressmaker	*	*	*	*	
Technical Writer				*	
Telecommunications Engineer			*	*	
Telecommunications Technician		*			
Toolmaker		*			
Tyre Technician	*				
Upholsterer	*	*			
Vehicle Body Builder/Trimmer	*	*			
Vehicle Painter	*	*			
Watchmaker and Repairer	*	*			
Water/Waste Water Treatment Operator		*		*	
Web Developer			*	*	
Website Administrator				*	*
Welder	*	*			
Winemaker		*	*	*	
Wood Machinist	*	*			
Wood Processing Work	*				