# Careers in Space

## Career Practitioner & Educators Webinar

Australian Space Agency

Australian Centre for Career Education

# Acknowledgement of Country

The Australian Centre for Career Education acknowledges that the lands that we work and live on are the traditional lands of the Aboriginal People.

We acknowledge that their connection to these lands has endured for thousands of years and continues still today.

We pay our respect to their Elders past and present.

# Natalie Maharaj

Project Manager,
Australian Centre
For Career Education

Australian Centre
for Career Education

# Session Outline

**Introduction**
*Kerrie Dougherty OAM, Senior Heritage and Outreach Officer, Australian Space Agency*

**Workforce Insights**
*Sybilla Wilson, Assistant Manager – Inspire Program, Australian Space Agency*

**ASA Keynote**
*Katherine Bennell-Pegg, Australian Astronaut Candidate, Australian Space Agency*

**Early Career Guest Presenter**
*Tori Tasker, Senior Space Technology Officer – Human Spaceflight, Chief Technology Office - Australian Space Agency*

**Early Career Guest Presenter**
*Lachlan Mackie, Mechatronics Engineer, Skykraft*

**Industry Resources for Educators and Students**

**Where to next?**

**Q&A, Final Words**

Australian Space Agency

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# Australia in Space

Kerrie Dougherty OAM
Senior Heritage and Outreach Officer

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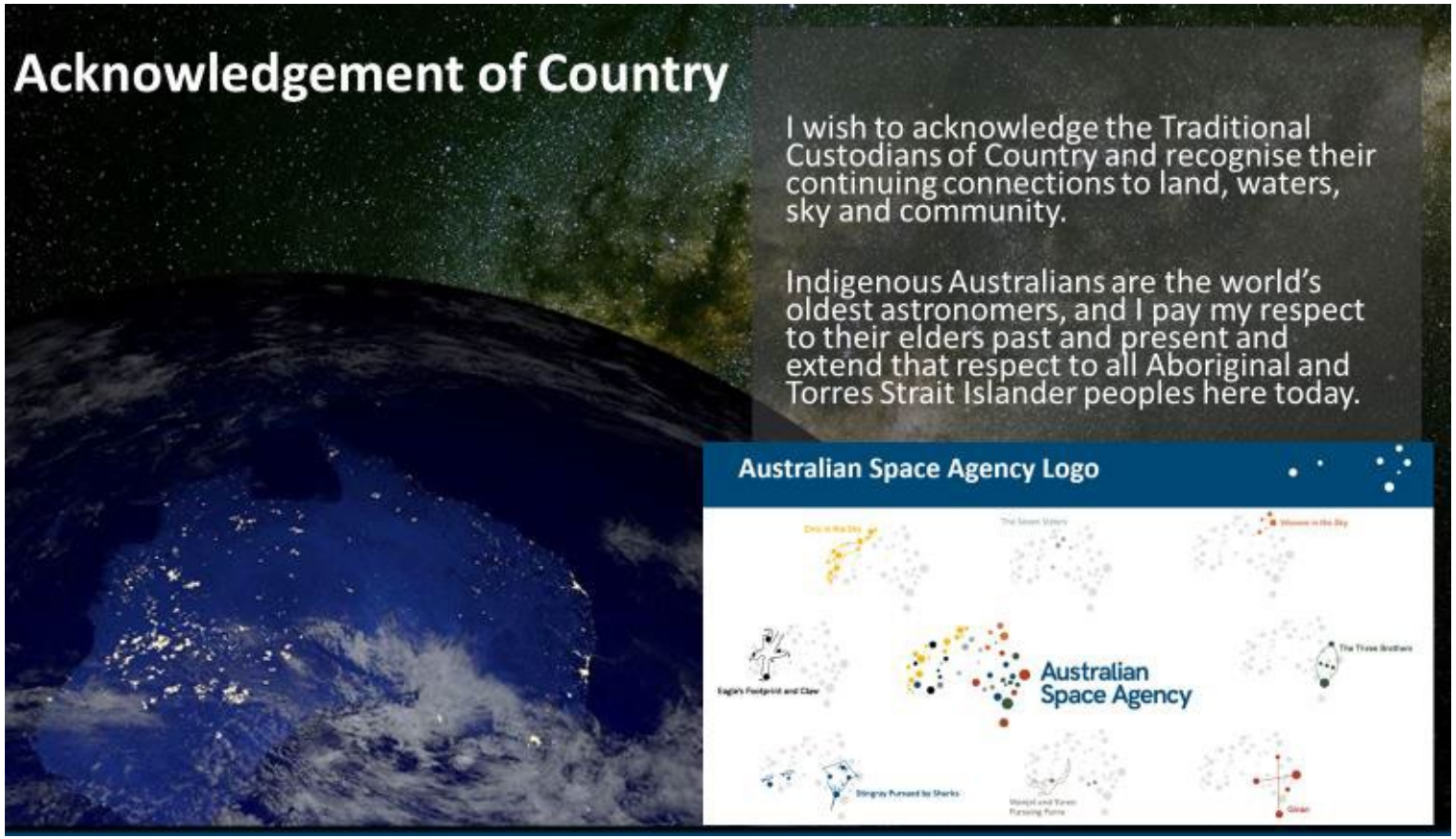
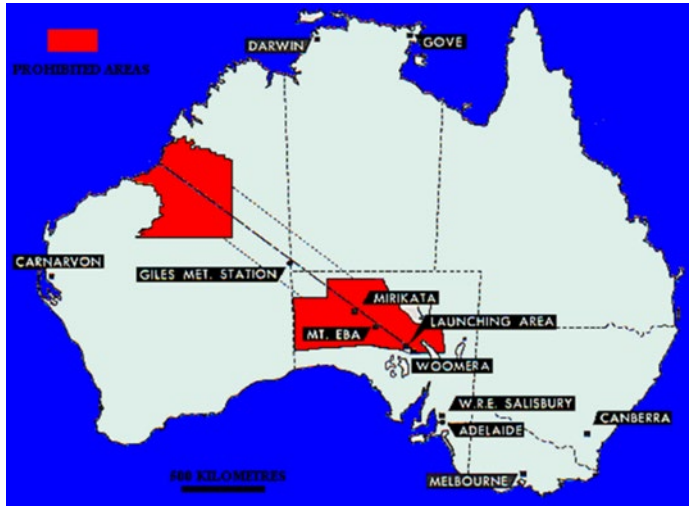
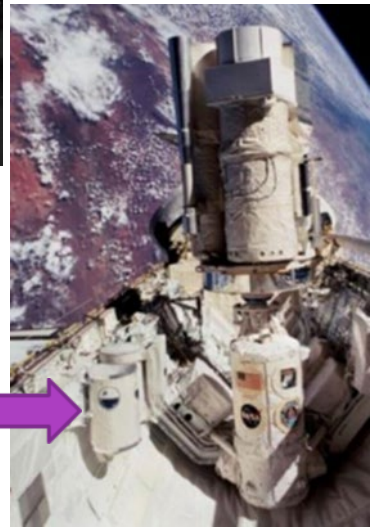
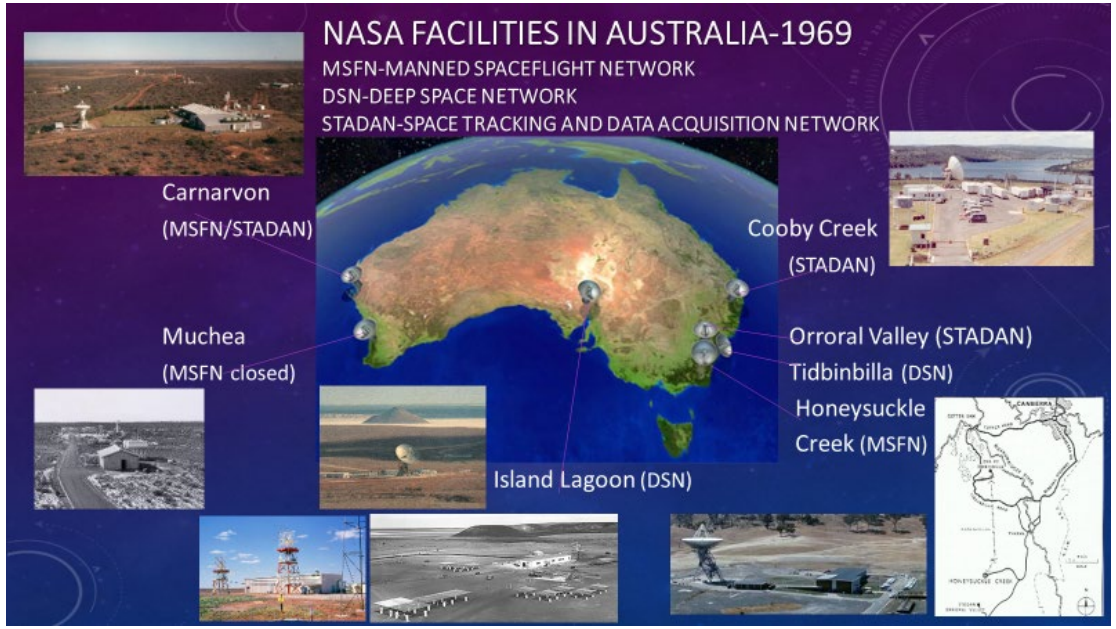
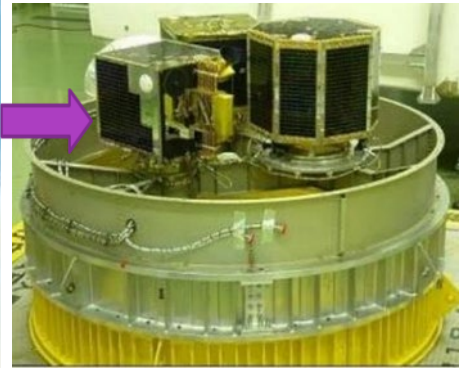
Twitter:
**spacecurator**
@KerrieDougherty

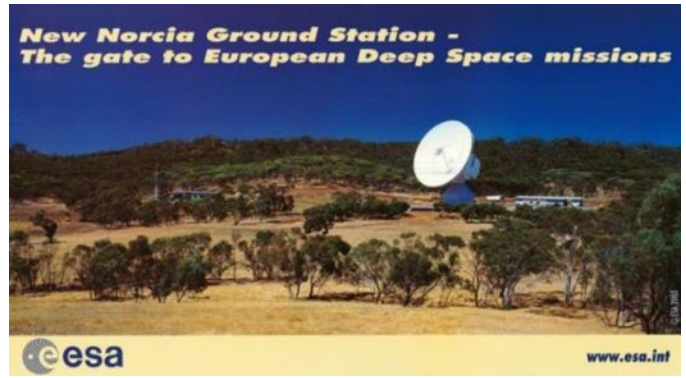






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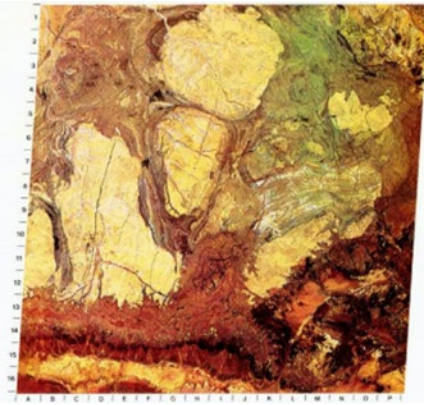
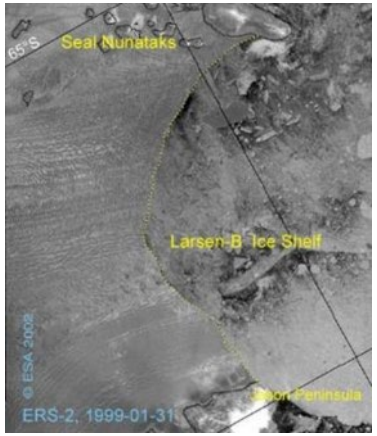
UNITED NATIONS
Committee on the Peaceful Uses of Outer Space


intelsat







Australian Space Agency

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# Why does SPACE matter?

## EVERYDAY LIFE

Space technologies are seamlessly integrated into the modern world

## SUSTAINABILITY

Space technologies play a key role as we pursue a more sustainable Earth

## INSPIRATION

Space inspires us all, pushing the boundaries of what is possible

***Click on the images*** *to explore how space positively impacts life here on Earth*

## SAFETY

Space technologies help keep Australia in safe hands

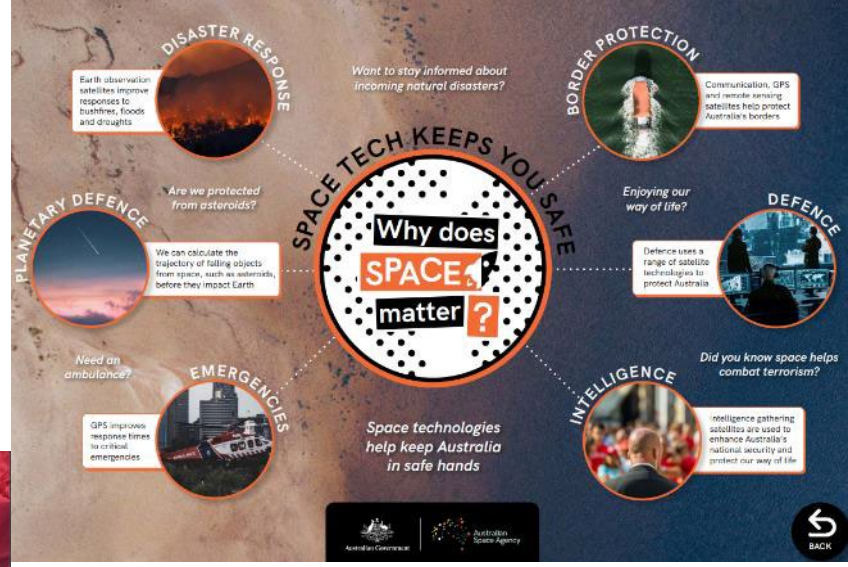
## HEALTH

Space environments and tech create opportunities to improve health on Earth

Australian Government | Australian Space Agency


Why does SPACE matter?
SPACE IS PART OF EVERYDAY LIFE
ONLINE SHOPPING
Communication satellites and GPS make it easy to shop anywhere, anytime
STAYING CONNECTED
Want WiFi in the sky?
Satellites provide phone and internet access in planes, boats and remote areas
E-BANKING
Want to transact online?
Transferring funds is instant and secure, with the help of GPS and communication satellites
NAVIGATION
Need directions?
Find your way, avoid traffic and drop a location pin - all using GPS
NEWS/ENTERTAINMENT
Watching live TV?
Live broadcasts are available due to communication satellites
WEATHER
Not sure what to wear?
Weather satellites help improve accuracy of the forecasts
Space technologies are seamlessly integrated into the modern world
BACK


Why does SPACE matter?
SPACE INSPIRES US TO GO BEYOND
NEW TECHNOLOGY
Space takes our tech further, challenging us to solve problems in innovative ways
Do you think there is life outside our solar system?
EXPLORATION
Australia has a vital role in future missions to the Moon, Mars and beyond
PHILOSOPHY
Can space bring new perspectives?
Studying the universe gives us valuable perspective, prompting us to ponder our position in the cosmos
Are you interested in STEM?
EDUCATION
Space makes us "think bigger" and develops knowledge of science, tech, engineering and maths
INTERNATIONAL RELATIONS
Want to work with other countries?
Space activities promote cooperation across the globe
ARTS & CULTURE
Have you got a fave space song?
Celestial and Sci-Fi themes have inspired film/TV, music, games, literature, fashion and art for decades
Space inspires us all, pushing the boundaries of what is possible
BACK


Why does SPACE matter?
SPACE TECH KEEPS YOU SAFE
DISASTER RESPONSE
Earth observation satellites improve responses to bushfires, floods and droughts
Want to stay informed about incoming natural disasters?
BORDER PROTECTION
Communication, GPS and remote sensing satellites help protect Australia's borders
PLANETARY DEFENCE
Are we protected from asteroids?
We can calculate the trajectory of falling objects from space, such as asteroids, before they impact Earth
Enjoying our way of life?
DEFENCE
Defence uses a range of satellite technologies to protect Australia
EMERGENCIES
Need an ambulance?
GPS improves response times in critical emergencies
INTELLIGENCE
Did you know space helps combat terrorism?
Intelligence gathering satellites are used to enhance Australia's national security and protect our way of life
Space technologies help keep Australia in safe hands
BACK

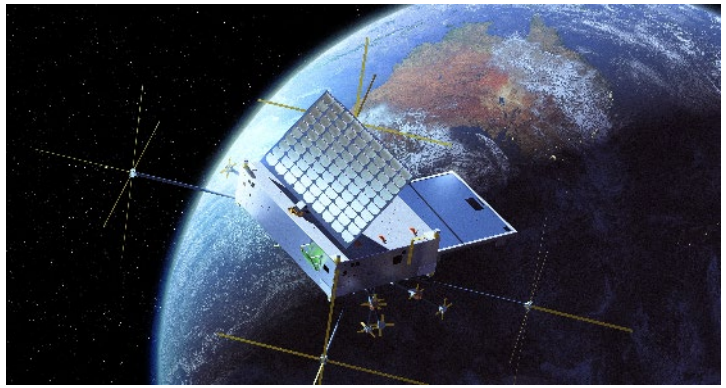

Why does SPACE matter?
SPACE IS KEY TO SUSTAINABILITY
CLIMATE CHANGE
Satellites monitor changing environmental conditions of our oceans, land and atmosphere
Want a better environmental footprint?
CLEAN ENERGY
Space tech forecasts energy production and identifies the best locations for renewable energy
WILDLIFE CONSERVATION
Can space benefit land and marine wildlife?
Satellites collect and relay sensor data to track wildlife, which helps manage and protect their habitats
Want to depend less on fossil fuels?
TRANSPORT PLANNING
Satellites help us map and maintain roads, which reduces fuel consumption
SMARTER FARMING
Did you know space helps our farmers?
Agricultural equipment can be remotely controlled with the help of satellites to maximise farm productivity and efficiency
ZERO HUNGER
Want to use less petrol?
Satellites sense soil moisture and vegetation and land characteristics to help increase crop yield
Space technologies play a key role as we pursue a more sustainable Earth
BACK


Why does SPACE matter?
SPACE HELPS KEEP US HEALTHY
AIR QUALITY
Satellites monitor pollution to inform how we protect the air we breathe
Need a doctor in the outback?
REMOTE HEALTHCARE
Satellites help connect people in remote communities to doctors and specialists
MEDICAL BREAKTHROUGHS
Will space data help us here on Earth?
Space research has spawned medical innovations including pacemakers and better artificial limbs
Want to live a healthier lifestyle?
WEARABLE DEVICES
Tech developed to monitor astronaut wellbeing, like smart watches, can help promote better health
TREATMENTS & CURES
Can health solutions originate in space?
We learn about our bodies by testing and managing effects of space environment on astronauts
PREVENT PANDEMICS
Concerned about diseases spreading?
Satellites monitor migration, weather conditions and vaccine rollout to slow the spread of disease
Space environments and tech create opportunities to improve health on Earth
BACK

The Australian Space Agency works to establish our national space sector to ensure long-term industry growth, the development of critical space technologies, and to foster international collaboration. The Agency is focused on bringing the Australian space sector together with the civil, defence and science sectors to take advantage of Australia's unique capabilities and to improve our lives on Earth.

*61% of new jobs will require STEM qualifications. The Australian Government has set a goal to generate 1.2 million tech-related jobs by 2030. Space can play an important part in achieving this, with many opportunities for young Australians to contribute.*

- Launch, rockets, and hypersonics is the fastest growing subsector at 13.6%.
- Defence (Space) subsector is growing at 7.5%
- Position, Navigation, and Timing subsector is growing at 7.8%
- Earth Observation subsector is growing at 6.2%
- There were almost 17,000 employees in the space sector in 2021
- The average wage in the space sector was $107,000 in 2021
- The total investment pipeline for the Australian civil space sector is worth approximately A$3 billion.
- 20% of Australia's space research industry is female. 37% in Australia’s space, spatial and surveying workforce



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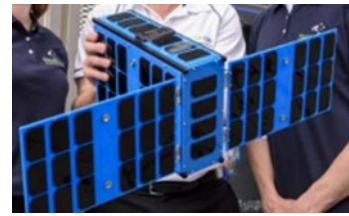
The size of the Australian space sector was **$4.5bn AUD** (or $3.4bn USD) in turnover in financial year 2021. This equates to a contribution of approximately **0.2%** towards the Australian Gross Domestic Product (GDP).

The Australian space sector is approximately 1/60*th* of the size of the US, 1/6*th* the size of the UK, 1/3*rd* the size of India, 4/5*th* the size of Canada, and almost 3 times larger than New Zealand, when compared on a straight $ to $ comparison.



Highlight of the largest space projects in Australia right now:

1. The square kilometre array in WA (via CSIRO), receiving a total **$0.67bn** or **~23**% of sector investment to date. https://www.skao.int/en

2. The Satellite Based Augmentation System (SBAS) (via Geoscience Australia), receiving **$0.28bn** or **~9%** of sector investment to date. https://www.ga.gov.au/scientific-topics/positioning-navigation/positioning-australia/about-the-program/southpan

3. Establishing SmartSat CRC, receiving **$0.25bn or ~8%** of sector investment to date. The majority of investment comes from industry, but federal government contributing a significant portion. https://smartsatcrc.com/

4. Grant to the Australian Space Manufacturing Network (industry-led network of 31 space companies) to manufacture launch vehicles and satellites, receiving **$0.11bn or ~4%** of sector investment to date. This is split approx. 50/50 across industry and government investment.

5. National Positioning Infrastructure Capability (NPIC), receiving **$99m or ~3%** of sector investment to date. https://www.ga.gov.au/scientific-topics/positioning-navigation/positioning-australia/about-the-program/national-positioning-infrastructure-capability

# Workforce Insights

Sybilla Wilson,
Assistant Manager
Inspire Program,
Australian Space Agency

Australian Space Agency

# Workforce Insights

***The Australian space sector will benefit from a broad range of skills, including:***

- **Technical skills** (e.g. engineering, design, software, programming, computer, robotics, cyber)
- **Operational skills** (e.g. data analysis, navigation, satellite control, remote operation, situational awareness, technicians, space safety)
- **Support skills** (e.g. visualisation, communication, management, regulation, law, space medicine, sales and marketing)
- **Downstream skills** (data science, AI and machine learning, image processing)
- **Soft skills** (communication skills, decision making & problem solving, leadership)

# Workforce Insights

- VET qualified skills with the highest demand are **manufacturing** related skills, some VET training options include: **robotics**, **electronics**, **communications engineering** and **computer systems engineering** and capabilities developed for the **aerospace** and **defence** industries
- Australian Government's goal for 1.2 million tech jobs by 2030
- University qualified skills with the highest demand are **systems engineering**, **project management** and **software skills**
- University programs in fields such as **aerospace engineering**, **space science** and **astronomy** provide students with the theoretical knowledge and practical skills needed to design, build and operate space-based systems

# Workforce Insights

- Vocational training programs in **management**, **electronics** and **computer science** can produce skilled workers that can play a role in building and supporting the launch of satellites and other space-based systems.

- A broad range of non-STEM professionals will be needed to contribute to technology intensive sectors, including space. Examples include **law**, **economics**, **finance**, **business** and **advisory services**

- Australia's strengths: **autonomous robotics** and **remote sensing**, **astronomy** and **astrophysics research**.

# Workforce Insights: SA Highlight

***This study found that within five years:***

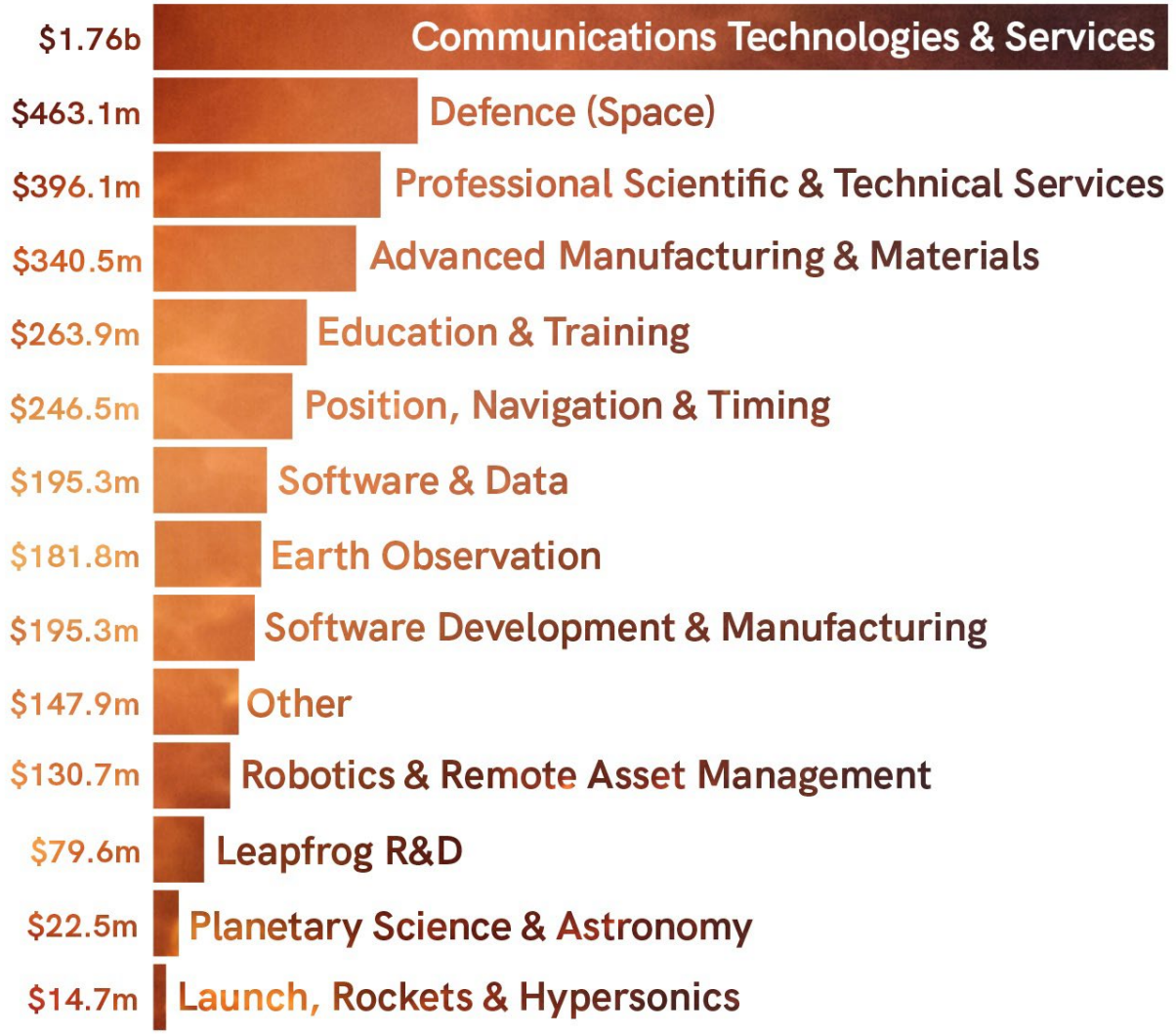
- Requirements for people with VET based space skills will grow more than 12 fold
- 106 additional new VET based space skills will be required – a 176% increase above the current number of skills
- University based space skills requirements will increase by 2.4 times and 28 new skills will be required – a 14% increase above the current number of skills

# Workforce Insights: Skill Shortages

- **Engineers** (including space systems, electrical, electronic, avionics, mechanical, propulsion, computer hardware, software, robotics)
- **Scientists** (atmospheric and space, planetary, rocket propulsion, astrophysicists, earth observation, chemists, geologists, materials)
- **IT and data specialists** (data scientist and analysts, software and intelligent game developers, cybersecurity)
- **Technicians** (electrical, avionics, automation and robotics, assembly, engineering technologists)

# Workforce Insights

*Communications Technologies and Services* also contains the most participants, with **1 in every 4 (150/608)** of the space-related organisations operating in this subsector. This dominance in market structure is not unique to Australia, but in fact reflective of most space sectors globally.



# Education Insights

## Space Systems Engineers

Design, build and test spacecraft, launches and ground-based systems.

Specialty areas include **Analysts, System and Subsystem Leads** and **Subsystem Architects** for:

- Mechanical, structures and mechanisms
- Thermal
- Propulsion
- Guidance, navigation and control
- Operations, Fault Detection Isolation and Recovery (FDIR) and Software
- Assembly, Integration and Test
- Systems
- Mission systems

**Further specialty areas include:**

- Aerothermodynamics
- Operations
- Payload types such as radar and optical

### Study pathways

**At Australian Universities, study:**

**Bachelor of Engineering** (Honours) (Mechanical)

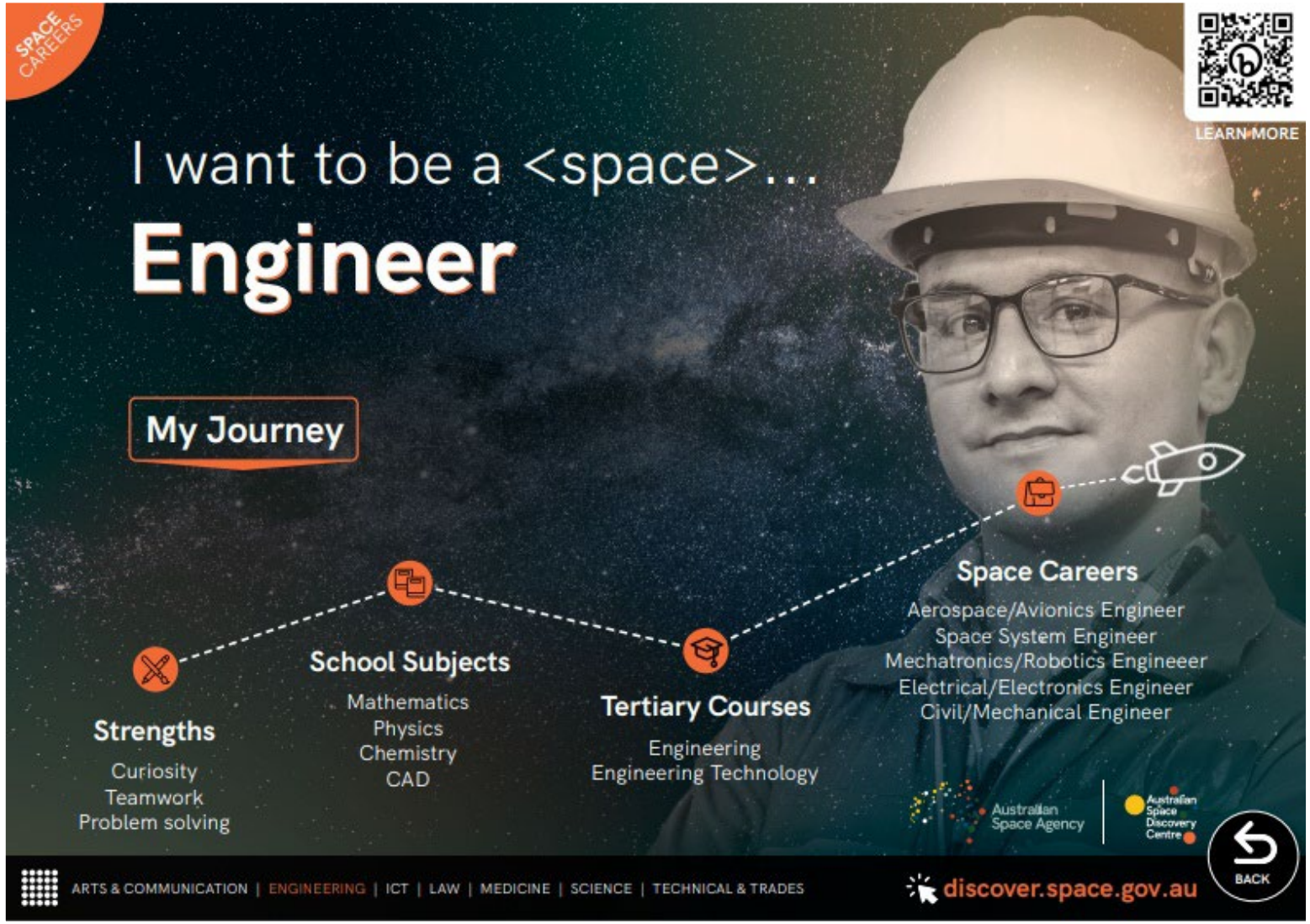
**Bachelor of Engineering Honours** (Mechanical and Mechatronic)

**Bachelor of Engineering** (Mechanical and Advanced Manufacturing)

**Bachelor of Engineering Technology** (Systems and Security) / **Bachelor of Science** (Physics)

**For higher level industry and research jobs, postgraduate aerospace engineering study at Masters and/or PhD level is recommended.**

MEDIAN AUSTRALIAN SALARY:
Entry Level $90,000
Experienced $145,000

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# Education Insights

## Electricians and Electrical Technicians

Construct, install, test and repair electrical systems, equipment and components.

MEDIAN AUSTRALIAN SALARY:
Early Career $69,000
Experienced $118,000

### Study pathways

**At TAFEs across Australia, study:**

Certificate III in Electrotechnology Electrician (UEE30820) and undertake an apprenticeship to become a licensed electrician.

Certificate IV in Electrical Instrumentation (UEE40420)

Diploma of Electrical Engineering (UEE50420)

Diploma of Applied Technologies (22460VIC)

Associate Degrees in Electrical Engineering

***Katherine Bennell-Pegg***

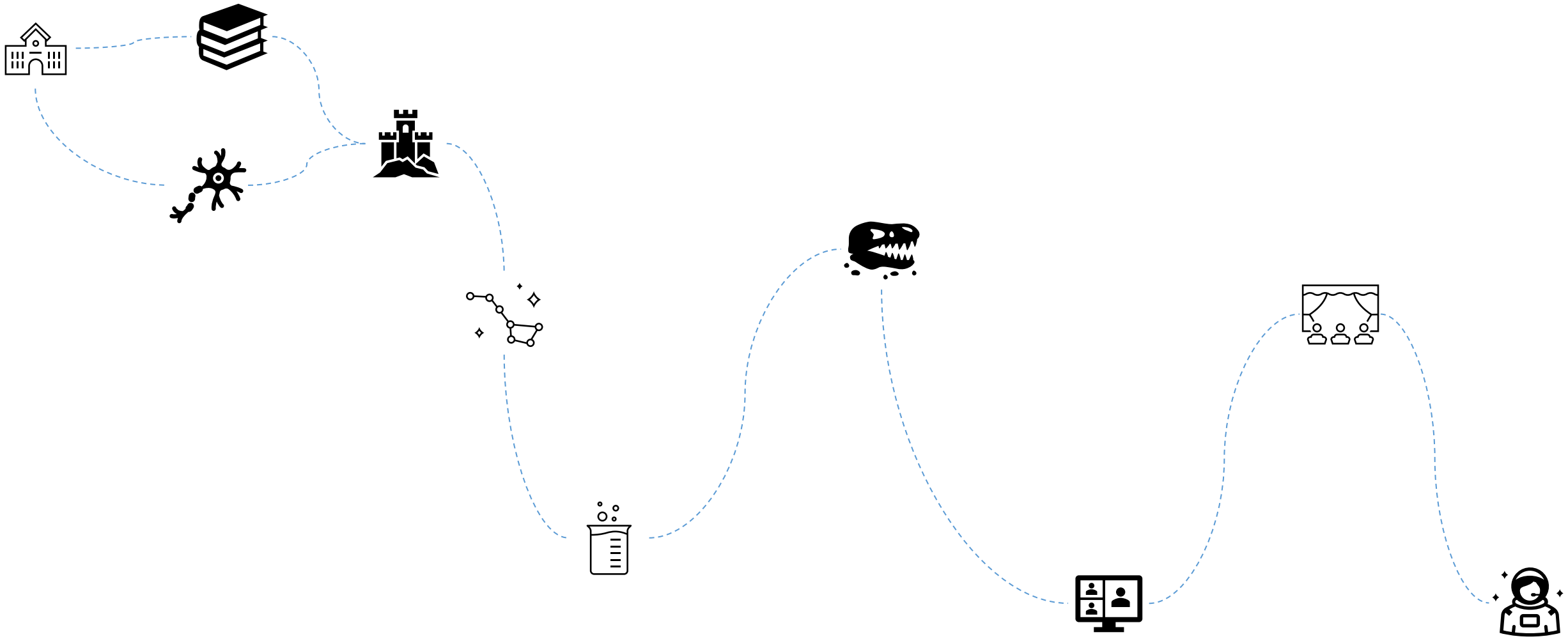
*Australian Astronaut Candidate*
*Inspire Program, Australian Space Agency*

*https://youtu.be/_LUbjQYpJFs*

Australian Space Agency

# Tori Tasker

Assistant Director,
Space Technology –
Human Spaceflight a/g



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# Lachlan Mackie
# Mechatronics Engineer

SKYKRAFT

- What is a Mechatronics Engineer?
- What does Skykraft build?
- What do I do at Skykraft?

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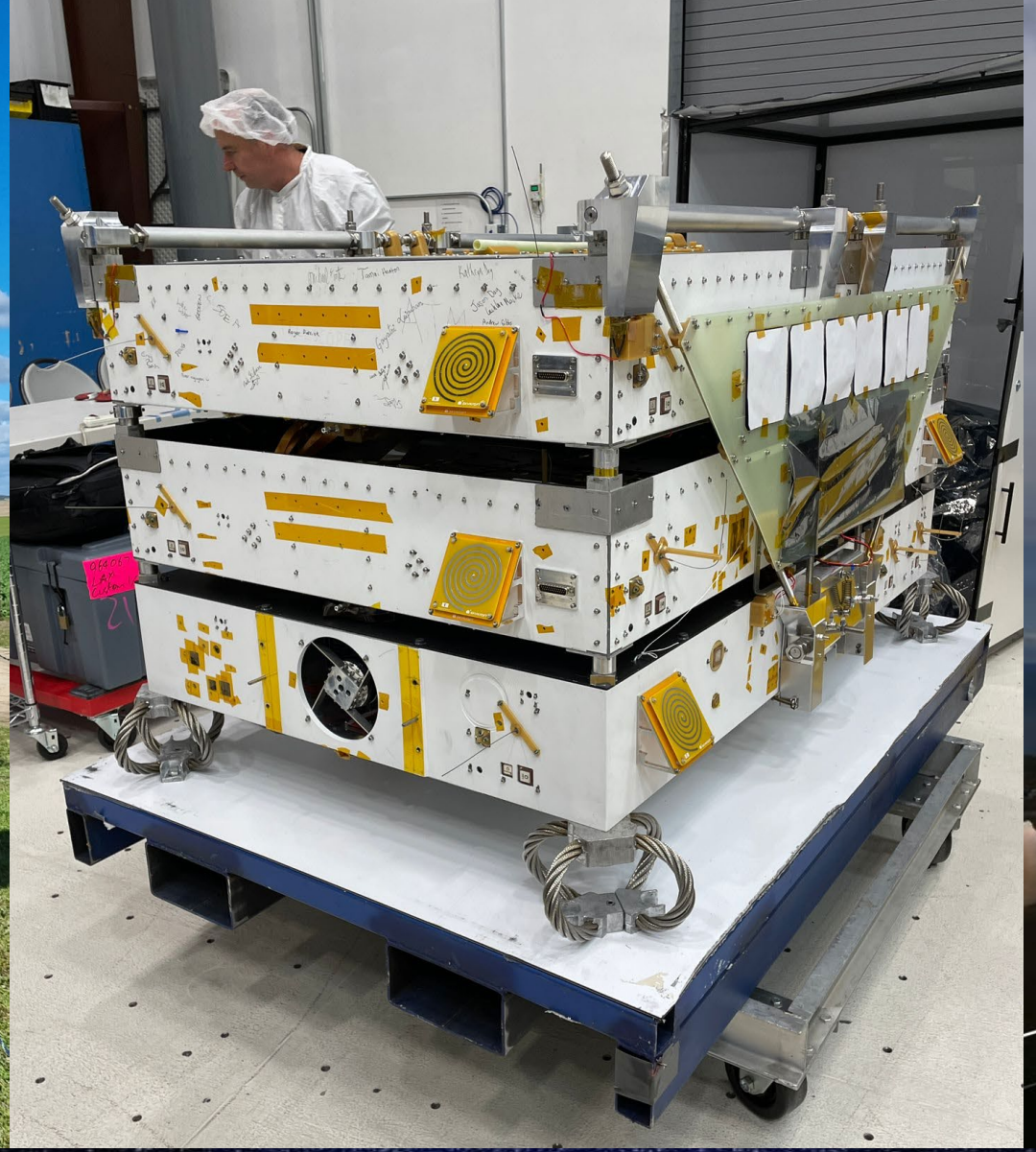


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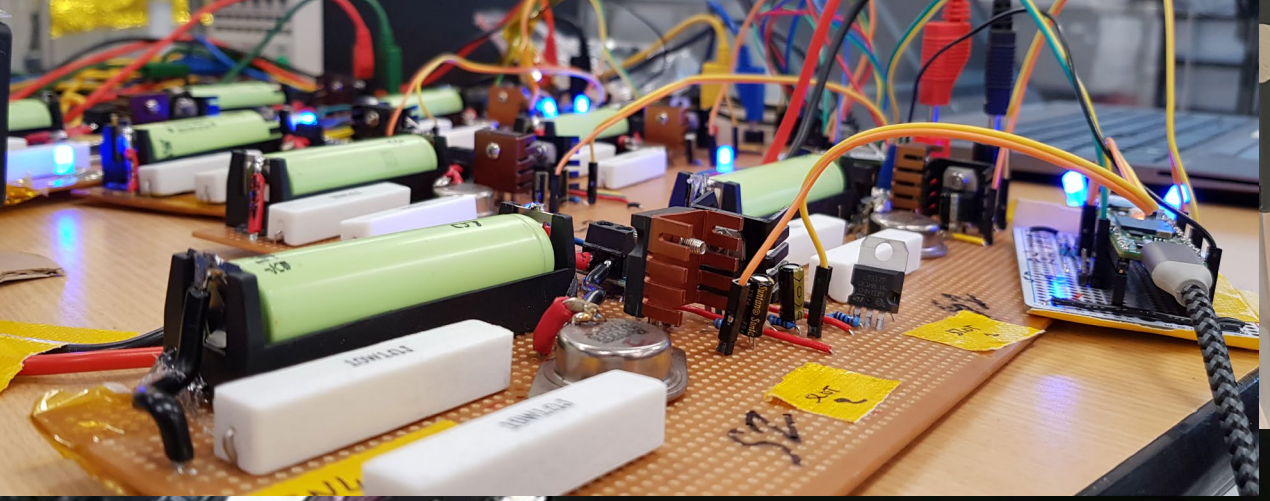

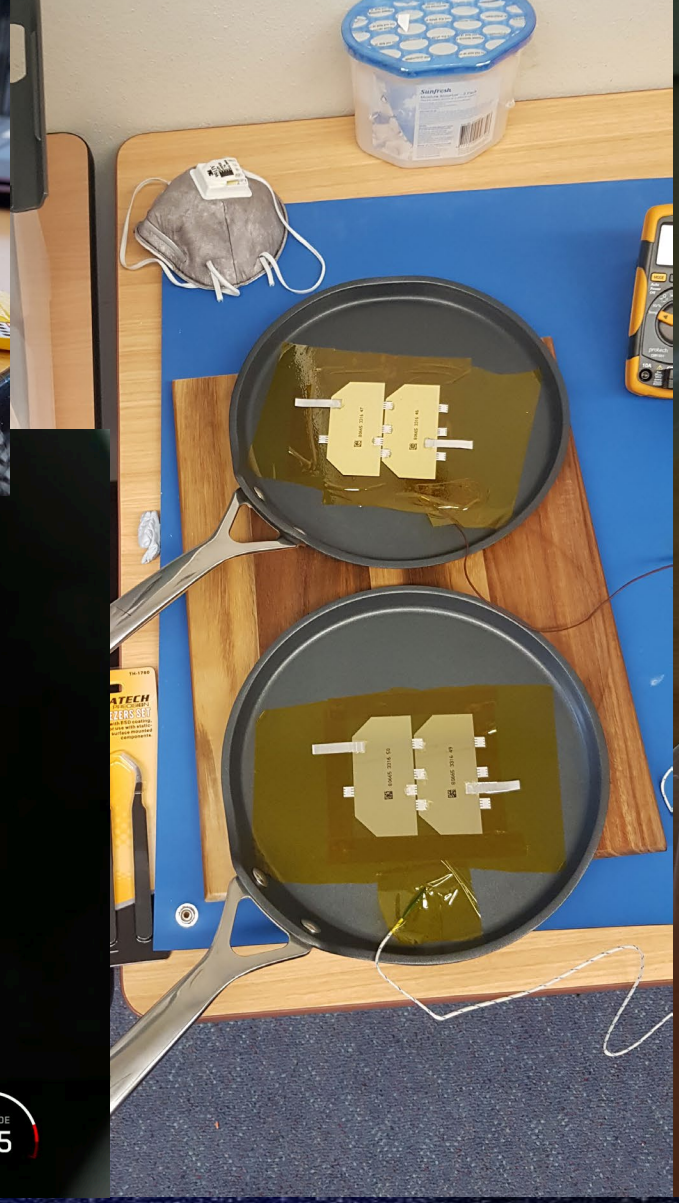

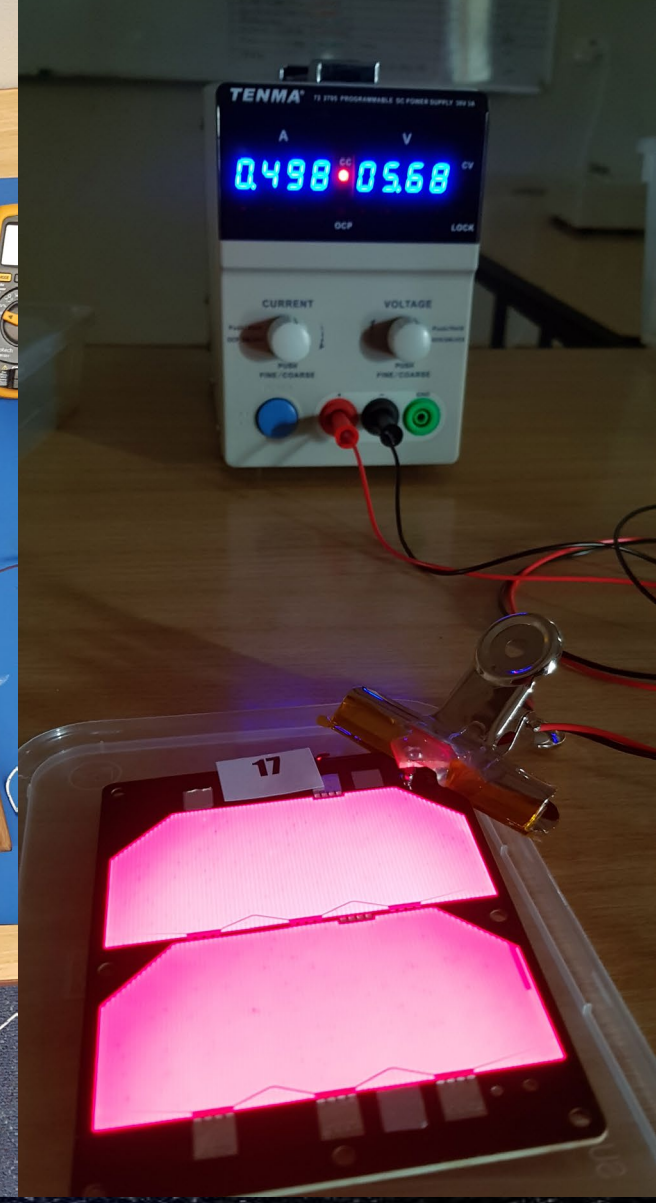



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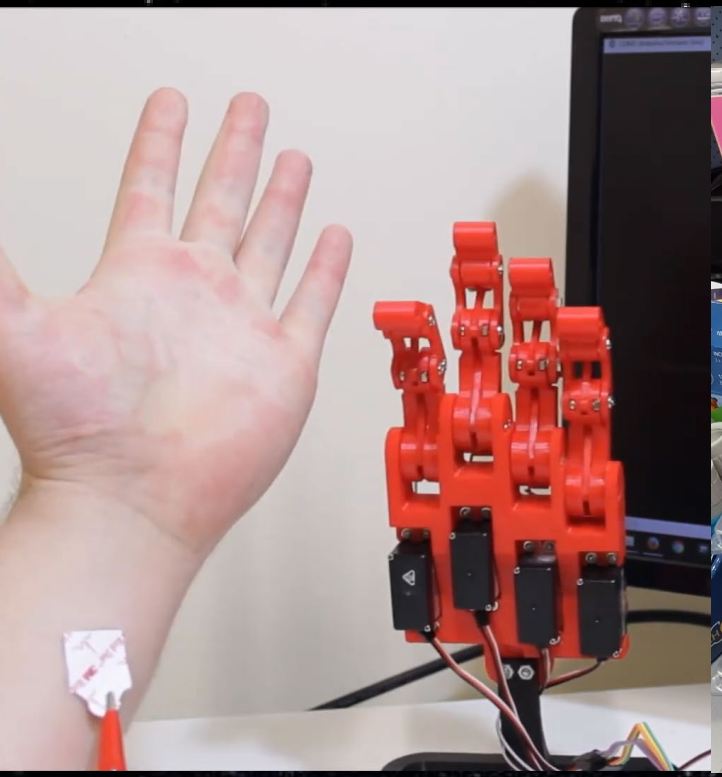
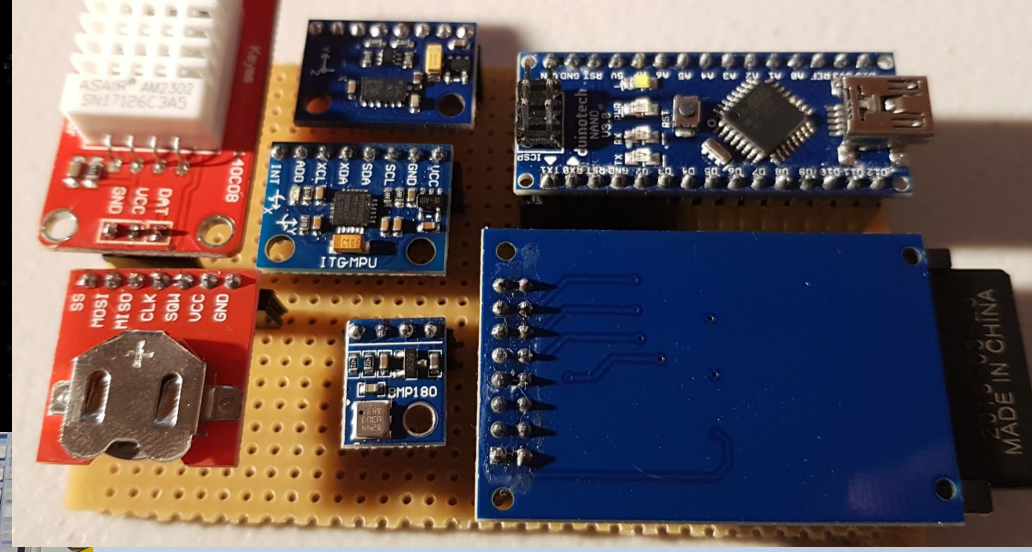
# How did I get here?

- Pathways
- University clubs
- Personal projects
- Portfolio website
- Networking
- University Degree

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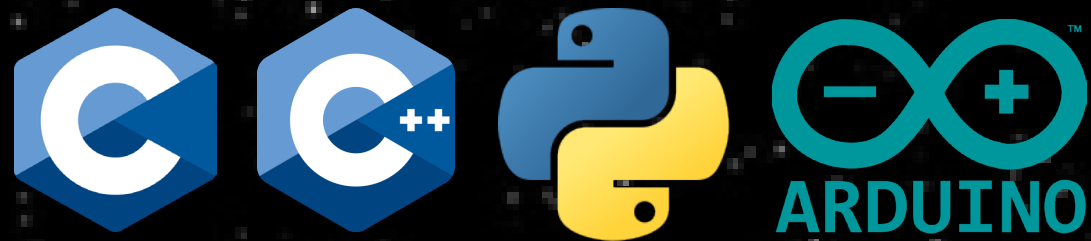
# Advice for students looking to get into Engineering

- Start now.
  - Grab an Arduino.
  - Grab a 3D printer.
  - Learn to solder.
  - Make fun projects.
  - Join a “Maker” club, a STEM Club, a Hackerspace.
  - Learn CAD don’t worry about if it’s the correct tool, learning something is better than nothing.
  - Learn: C, C++, Python.
  - Build a project portfolio website.
  - Freelance.
- Apply for internships and or get a job in a related field.
  - Defence Industry Internship Program (DIIP)
  - Jaycar/Altronics
  - Camping Stores
  - Arts and Crafts Stores
  - Fabrication shops



# Advice for students looking to get into Engineering

- Develop soft skills:
  - Speaking and Listening
  - Teamwork
  - Problem solving
  - Critical thinking
  - Decision Making
  - Flexibility and Adaptability
  - Focus on being a well-rounded person rather than being too specific.
- Places you can learn these skills
  - Playing sports
  - Working on projects with others
  - At STEM Clubs, Maker Spaces and Hackerspaces. e.g: https://www.hackmelbourne.org/


FOOTBALL AUSTRALIA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SKYKRAFT

# Roles

Engineering:

- Electrical, Mechanical, Software, Aerospace, Systems, Power, Radio.

Business:

- Marketing & Social Media
- Finance
- Project Managers
- Team Leads
- Business Development

Internships:

- Apply at: www.skykraft.com.au/team
- Defence Industry Internship Program (DIIP): https://diip.com.au/student-information/about-the-program/

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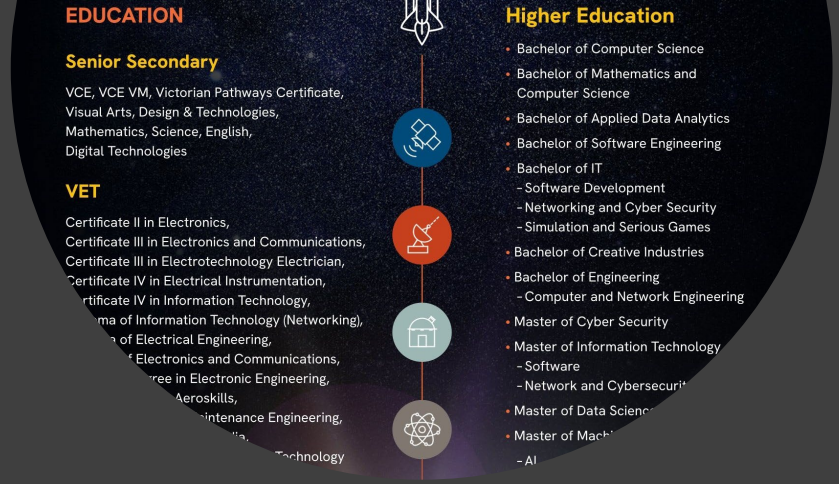
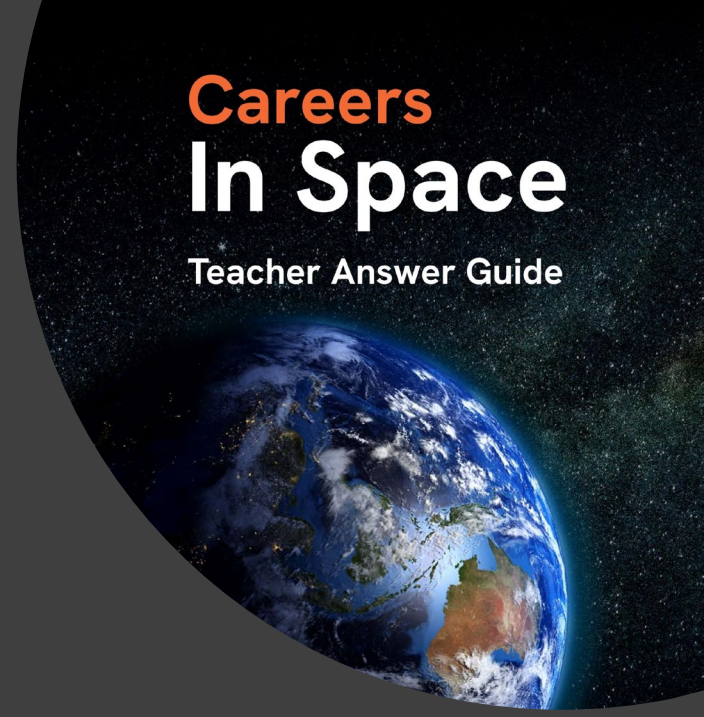
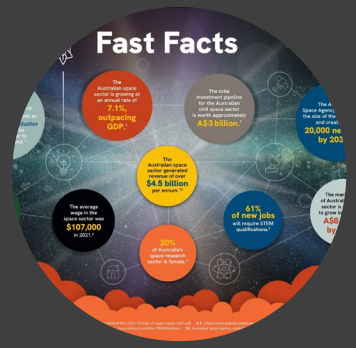







## Useful Links

**Australian Apprenticeships Pathways**
Information Service for students, job hunters and employers considering career options.
https://www.aapathways.com.au/

**Labour Market Insights**
Labour market insights can help you make decisions about study and training, your first job, or the next step in your career.
https://labourmarketinsights.gov.au/

**myfuture**
myfuture provides resources to explore career pathways and tools to develop self-knowledge to help with career decision-making.
https://myfuture.edu.au/

**Australian Space Discovery Centre**
There are many exciting career paths to follow right here on Earth. Space law, medicine, design and manufacturing, robotics and data analysis. The Australian space discovery centre has a range of skills to support our growing space sector.
https://www.industry.gov.au/australian-space-discovery-centre/pathways-career-space

**RMIT**
Careers in space aren't all about astronauts in spacecrafts. In fact, if you want to make the world a better place, space is the perfect sector to start.
https://www.rmit.edu.au/study-with-us/science/discover-science/facts-everyone-should-know-about-careers-in-space

**Careers with STEM**
Australia's space sector is taking off, and there are loads of ways you could be a part of it.
https://careerswithstem.com.au/a-to-z-of-space-jobs/#gsc.tab=0

**C4 Space**
SA Space Industry Skills Dev
https://www.c4space.com.au/s

**Indeed Career Guide**
Benefits and skills for a career in Space
https://www.indeed.com/career-advice/finding-a-job/careers-in-space-science

**Australian Space Agency – Careers in Space**
This booklet will help you explore the many differe types of careers that Australia's space industry has offer and the skills and study pathways to get there.
https://www.indeed.com/career-advice/finding-a-job/careers-in-space-science

**Australian Space Agency and the Australian Space Discovery Centre – A Space for everyone**
Discover the journey of professionals and their Strengths, School Subjects, Tertiary Courses, Space Careers and more!
https://www.industry.gov.au/sites/default/files/2022-11/careers-in-space-booklet.pdf

**Australian Space Agency – International Lunar Base Interactive Quiz**
You have been chosen to participate in the next phase of lunar settlement. Here you will undergo a quiz to determine your roles and interests before embarking on a journey to your new home on the Moon!
http://space-aus-career-tool.s3-website-ap-southeast-2.amazonaws.com/

**Australian Centre for Career Education– Industry Resources**
View and download resources designed in collaboration with industry experts. Click on each resource to access more information for both teachers and students!
https://ceav.vic.edu.au/resources/industry-resources/

# Educator and Student Resources

Australian Centre for Career Education

# Fast Facts

Australian Space Agency

Around **300** new qualified scientists and **900** engineers, as well as **800** non-STEM graduates, are required to be trained each year to meet this demand.[7]

The Australian space sector is growing at an annual rate of **7.1%, outpacing GDP.**[2]

The total investment pipeline for the Australian civil space sector is worth approximately **A$3 billion.**[3]

The Australian Space Agency aims to triple the size of the space sector and create up to **20,000 new jobs by 2030.**[1]

The Australian space sector generated revenue of over **$4.5 billion** per annum.[10]

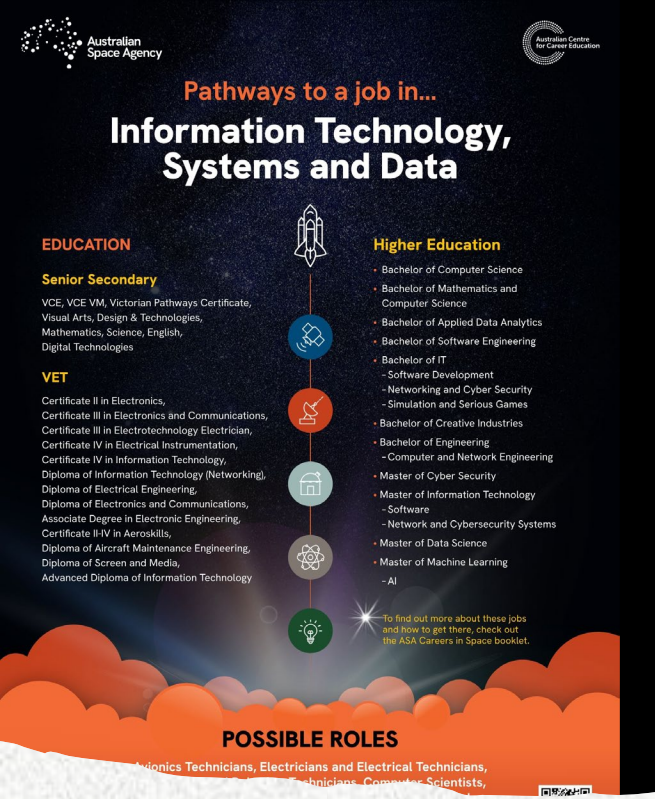
**30,000 people** could be working in the Australian space sector by **2030.**[5]

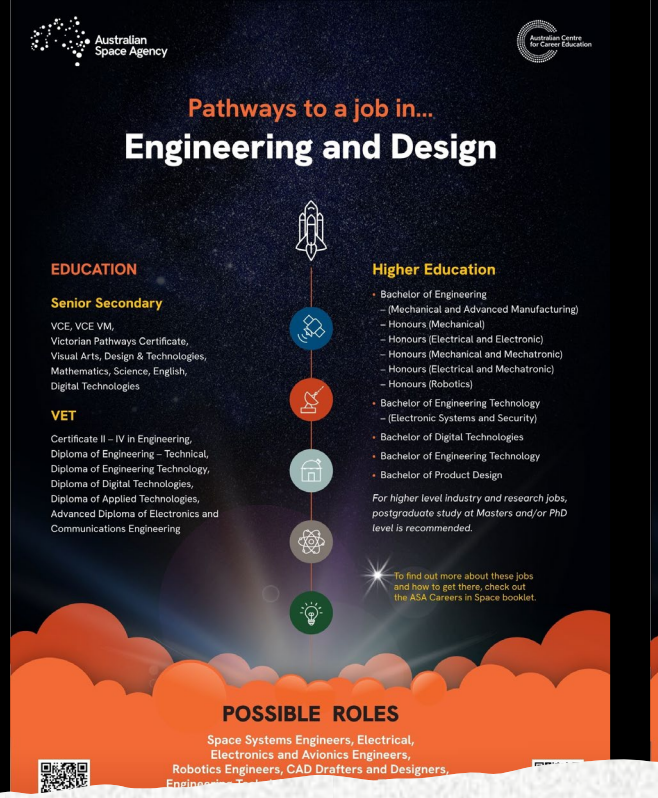
The average wage in the space sector was **$107,000** in 2021.[6]

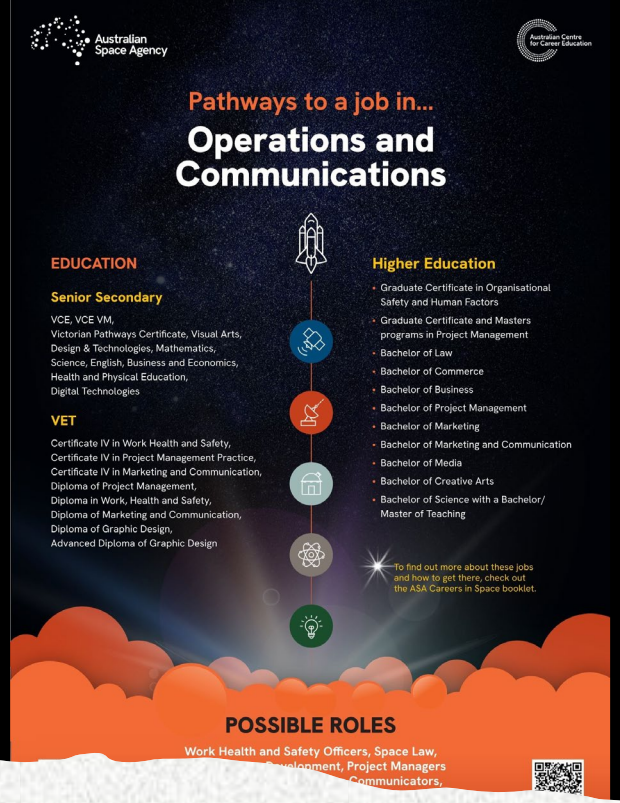
**61% of new jobs** will require STEM qualifications.[8]

The market size of Australia's space sector is estimated to grow by more than **A$8 billion by 2030.**[4]

**20%** of Australia's space research sector is female.[9]





# Career Pathway Posters

# Useful Links

### Australian Apprenticeships Pathways

Information Service for students, job hunters and employers considering career options.

https://www.aapathways.com.au/

### Labour Market Insights

Labour market insights can help you make decisions about study and training, your first job, or the next step in your career.

https://labourmarketinsights.gov.au/

### myfuture

myfuture provides resources to explore career pathways and tools to develop self-knowledge to help with career decision-making.

https://myfuture.edu.au/

### Australian Space Discovery Centre

There are many exciting career paths to follow right here on Earth. Space law, medicine, design and manufacturing, robotics and data analysis. The Australian space discovery centre has a range of skills to support our growing space sector.

https://www.industry.gov.au/australian-space-discovery-centre/pathways-career-space

### RMIT

Careers in space aren't all about astronauts in spacecrafts. In fact, if you want to make the world a better place, space is the perfect sector to start.

https://www.rmit.edu.au/study-with-us/science/discover-science/facts-everyone-should-know-about-careers-in-space

### Careers with STEM

Australia's space sector is taking off, and there are loads of ways you could be a part of it.

https://careerswithstem.com.au/a-to-z-of-space-jobs/#gsc.tab=0

### C4 Space

SA Space Industry Skills Demand Study

https://www.c4space.com.au/sa-skills-demand-study/

### Indeed Career Guide

Benefits and skills for a career in Space.

https://www.indeed.com/career-advice/finding-a-job/careers-in-space-science

### Australian Space Agency – Careers in Space

This booklet will help you explore the many different types of careers that Australia's space industry has to offer and the skills and study pathways to get there.

https://www.indeed.com/career-advice/finding-a-job/careers-in-space-science

### Australian Space Agency and the Australian Space Discovery Centre – A Space for everyone

Discover the journey of professionals and their Strengths, School Subjects, Tertiary Courses, Space Careers and more!

https://www.industry.gov.au/sites/default/files/2022-11/careers-in-space-booklet.pdf

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Australian Centre for Career Education

Australian Space Agency

# Useful Links Poster

# Interactive Student Workbook

## *Coming Soon*

*Be inspired by written and video case stories from employees in the Space sector*

### 4c. Chloe Leclerc

**Role:** Chief Marketing Officer
**Organisation:** Fleet Space
**Qualifications:** Master's degree in International Business

**Employability Skills:** Multilingual, Research, Written & Verbal Communication, Leadership, Collaboration, Technology

My journey began in communications at the AIRBUS Aviation manufacturing plant in China. Returning to Europe, I joined the AIRBUS Headquarters, assuming responsibility for global communications activities, then transitioning to overseeing product marketing for satellite-based earth observation services. This role honed my ability to translate intricate technical knowledge and services into actionable strategies, catering to a diverse range of commercial sectors.

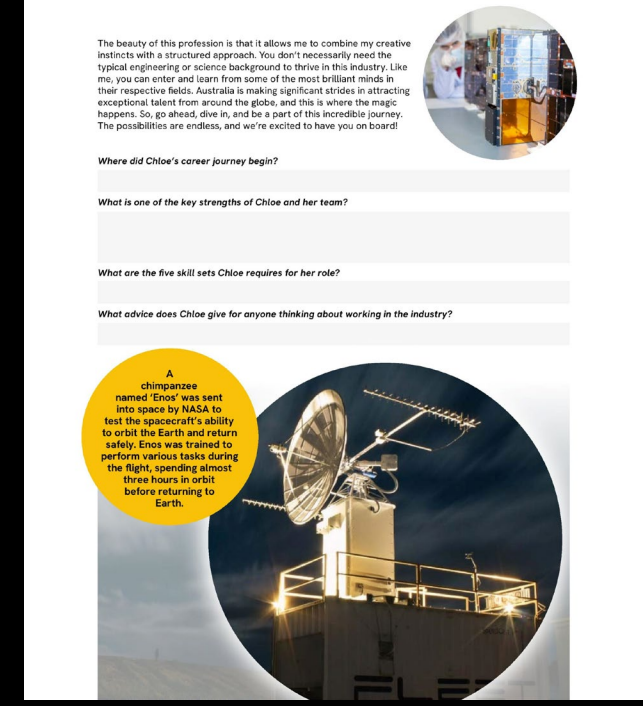
My next venture led me to the position of Head of Marketing and Business Development. Here, I expanded my focus to include satellite telecommunications and navigation, blending satellite data with Artificial intelligence capabilities. When I relocated to Australia, I observed the dynamic nature of the local space industry and recognised an opportunity to contribute my expertise to benefit the country I now call home. This realisation motivated me to apply for the role of CMO at Fleet Space Technologies.

As I kick off my day with a cup of coffee, I dive into the latest industry news and trends. This info helps us make smart decisions, adjust our strategies, and spot new opportunities in the market. Market research is a big deal for me and I believe this is a key value added from a marketing department. We dig into customer insights, conduct research, and keep an eye on industry trends.




As the CMO at Fleet Space Technologies, I am responsible for driving our marketing strategy and managing our reputation, and also contribute to decision making processes that impact the entire organisation. One of my key strengths lies in leading a diverse team. Within this team, we have individuals from various backgrounds and experiences, each bringing their own valuable perspectives. This diversity of thought enables us to think outside the box and approach challenges from different angles. I absolutely love my current job as the CMO at Fleet Space Technologies. Anything can happen. It's a fast-paced environment where new priorities can pop up any time. Whether it is my direct marketing team, or the leadership team I am part of, I'm surrounded by some of the smartest, most talented people.

Strategic thinking is at the heart of everything I do. It's all about developing and executing marketing strategies that align with our business goals and drive growth. Analytical skills come into play here. Creativity is another key skill that I rely on daily, it is what helps us make a lasting impact.



The beauty of this profession is that it allows me to combine my creative instincts with a structured approach. You don't necessarily need the typical engineering or science background to thrive in this industry. Like me, you can enter and learn from some of the most brilliant minds in their respective fields. Australia is making significant strides in attracting exceptional talent from around the globe, and this is where the magic happens. So, go ahead, dive in, and be a part of this incredible journey. The possibilities are endless, and we're excited to have you on board!

***Where did Chloe's career journey begin?***

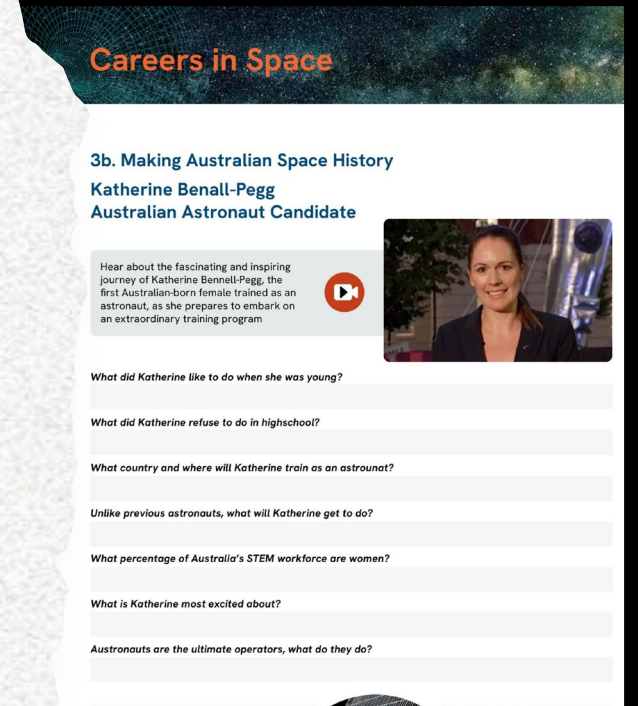
***What is one of the key strengths of Chloe and her team?***

***What are the five skill sets Chloe requires for her role?***

***What advice does Chloe give for anyone thinking about working in the industry?***

**A chimpanzee named 'Enos' was sent into space by NASA to test the spacecraft's ability to orbit the Earth and return safely. Enos was trained to perform various tasks during the flight, spending almost three hours in orbit before returning to Earth.**





## Careers in Space

### 3b. Making Australian Space History

**Katherine Benall-Pegg**
**Australian Astronaut Candidate**

Hear about the fascinating and inspiring journey of Katherine Bennell-Pegg, the first Australian-born female trained as an astronaut, as she prepares to embark on an extraordinary training program



***What did Katherine like to do when she was young?***

***What did Katherine refuse to do in highschool?***

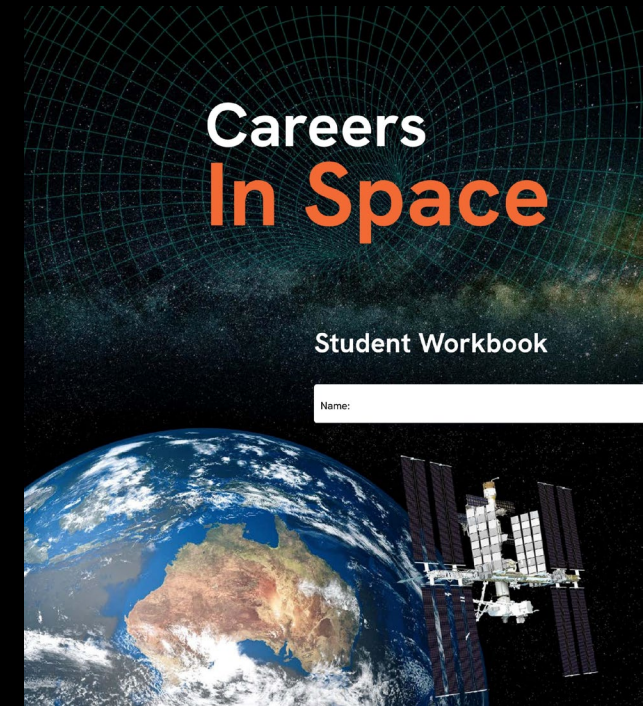
***What country and where will Katherine train as an astrounat?***

***Unlike previous astronauts, what will Katherine get to do?***

***What percentage of Australia's STEM workforce are women?***

***What is Katherine most excited about?***

***Austronauts are the ultimate operators, what do they do?***

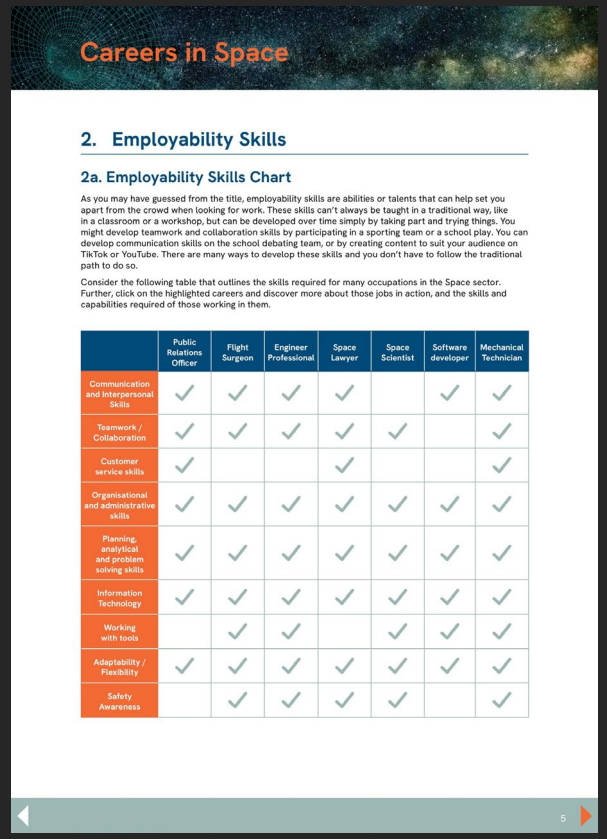


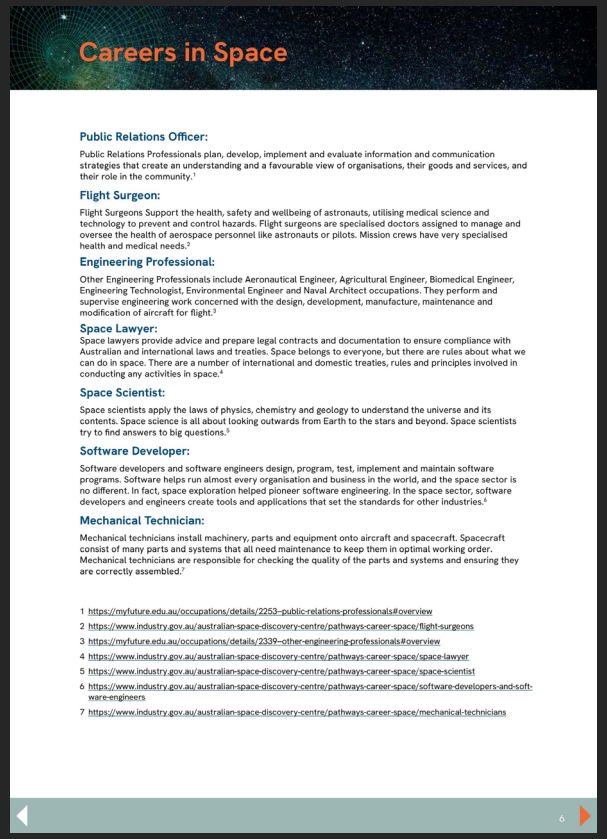
# Careers In Space

## Student Workbook

Name:

# Interactive Student Workbook Employability Skills Chart




Employability skills required for occupations in the Space Sector

# Interactive Student Workbook
# Australian Space Milestones

## Discover more about Australia's involvement in space exploration





# Interactive Student Workbook Study Table

*Some of the possible education and training pathways available to jobs in the Space Sector*

## Careers in Space

### 5. Study Table

Use this table to discover more about possible pathways to a career in the Australian Space Sector. Choose 8 jobs from the ASA Careers in Space booklet https://www.industry.gov.au/sites/default/files/2022-11/careers-in-space-booklet.pdf and use the job information from the booklet and also www.myskills.gov.au to help you find the information and complete the table. Information for the first job in the table has been completed for you. The Careers in Space booklet can help you find out more about where your passions and interests can take you in the Australian Space Sector, and www.myskills.gov.au can help you find nationally accredited courses to start your journey. Remember that these are just *some* of the possible pathways that are out there, and they don't take into account your specific wants and needs. For a more detailed pathways discussion, speak to your school's Career Department.

| JOB | DESCRIPTION | SPECIALTY AREAS | FURTHER SPECIALTY AREAS | STUDY PATHWAYS | | | MEDIAN AUSTRALIAN SALARY | |
|---|---|---|---|---|---|---|---|---|
| | | | | VET Pathway (Certificate level courses, Diploma, Adv. Diploma, etc.) | Bachelors Degree/ Honours | Post Graduate Study (Masters, PhD) | Entry Level | Experienced |
| **Space Systems Engineers** | *Design, build and test spacecraft, launches and ground-based systems.* | *Analysts, System and Subsystem Leads and Subsystem Architects* | *Aerothermodynamics, Operations, Payload types such as radar and optical* | ***Visit www.myskills.gov.au and search for a relevant course. This can become a pathway into a University Degree if you choose.*** *Cert II-IV in Engineering, Cert IV in Electrical Equipment and Systems, Diploma of Engineering – Technical, Advanced Diploma of Instrumentation and Control Engineering* | *Bachelor of Engineering (Honours) (Mechanical), Bachelor of Engineering Honours (Mechanical and Mechatronic), Bachelor of Engineering (Mechanical and Advanced Manufacturing)* | *Aerospace Engineering study recommended for higher level industry and research jobs* | *$72,000* | *$140,000* |
| | | | | | | | | |

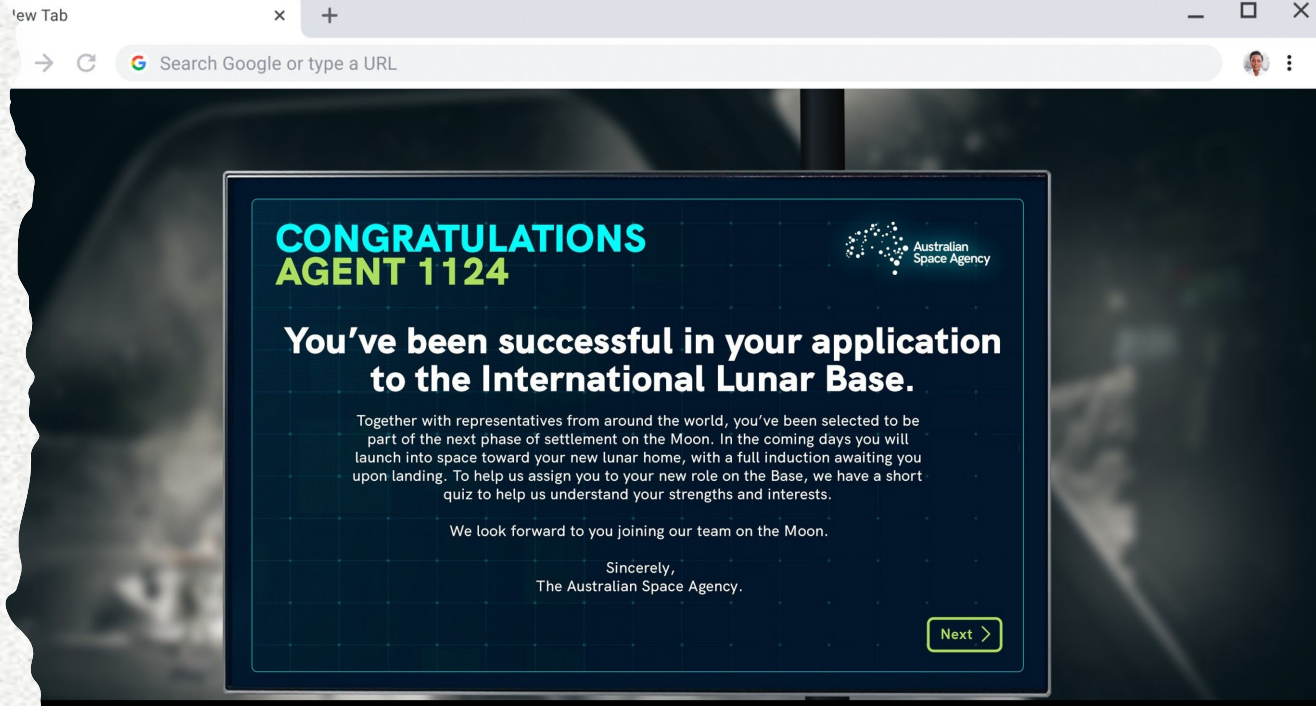


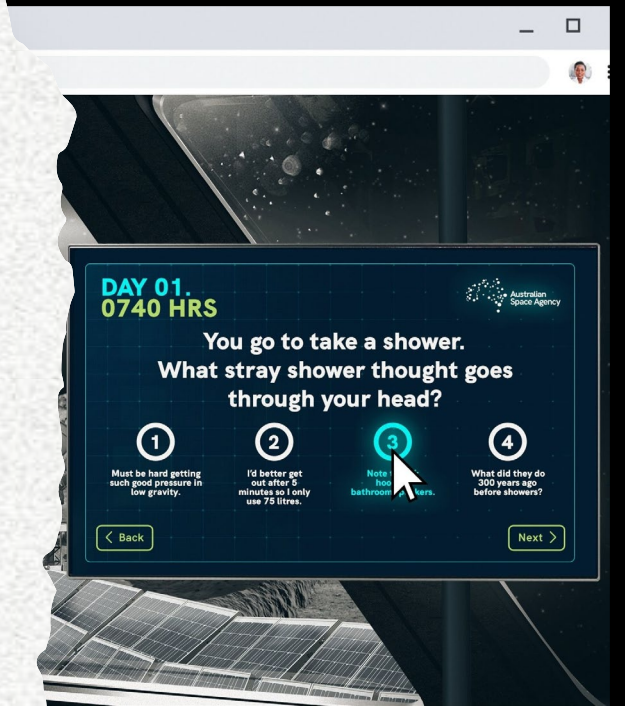


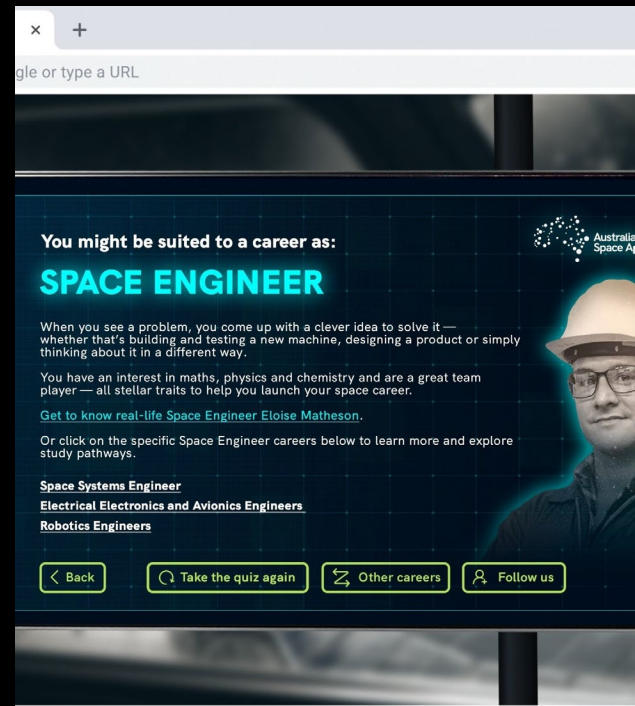

# Interactive Student Workbook

## Jobs in Space Quiz

Find out what career you might be suited to in the Space Sector



# Where to next?

- Access the Career Practitioner Resources
- Download the student workbook – Coming soon
- Look out for an email with information and opportunities from organisations participating in the program
- Get in touch with ACCE for further Information

projects@ceav.vic.edu.au

Australian Space Agency

Australian Centre for Career Education

# Questions?

# Thank you.

Please complete our brief survey.

For more information on ACCE Membership and Member Events please email membership@ceav.vic.edu.au

Australian Centre for Career Education

Australian Space Agency