



Australia's National  
Science Agency

# Position Description

## Director - Manufacturing

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Information for applicants

Join CSIRO, Australia's innovation catalyst.

# Introduction

CSIRO has transformed as an organisation, in the same way the manufacturing industry has identified it needs to transform moving forward. CSIRO has two key themes from our new approach to rolling strategy: the six Challenges and Domain + Digital. These elements are captured and represented in our new Challenges and Digital Transformation Program, with the six Challenges described as:

- Food security and quality
- Health and wellbeing
- Resilient and valuable environments
- Sustainable energy and resources
- Future industries
- A secure Australia and region

Advanced manufacturing underpins each of the CSIRO Challenges.

CSIRO Manufacturing is focused on creating opportunity for Australia from the fourth industrial revolution (Industry 4.0). We are aware that compared to our OECD peers, Australia has captured a third less value from digital innovation, offering a significant opportunity to positively transform Australia's economy and society. The majority of Australia's manufacturing industries are small to medium enterprises (SMEs). Our SMEs know they will be digitally disrupted but many do not yet have a plan for digital transition and upskilling. Our team are working to form deeper innovation relationships with our customers and partners in order to help increase the productivity and effectiveness of Australia's manufacturing industries.

The CSIRO Manufacturing team consists of approximately 400 staff located across Australia with the majority of our researchers based in Clayton, Victoria.

CSIRO is looking for a motivated, balanced, and self-aware leader with a strong customer focus to lead its Manufacturing Business Unit.

The successful candidate will have a track record in advanced manufacturing related research and organisational leadership. In combination with their leadership team, they will be able to develop and execute an agile strategy to maximise impact from science through addressing international sustainable development goals and through providing competitive advantage to existing and future industries in Australia's manufacturing sector.

The development and maintenance of an appropriately focussed and balanced research portfolio will be a key aspect of implementing the strategy. In alignment with CSIRO's aspiration to act as a catalyst for innovation, they will also be a successful collaborator who is able to develop and promote partnerships across CSIRO and its external partners and customers that accelerate and add value to the research outcomes. The successful candidate will also be accountable for driving operational discipline across the business unit with strong focus on HSE (Health, Safety & Environment), culture and performance, workforce planning including staff development and succession, project delivery and financial performance. The Director is an active member of the CSIRO Leadership Team making a strong contribution to improvements in organisational performance, systems, and culture, right across the organisation.

I welcome your interest in this role.

**Dr Anita Hill**  
Executive Director



## About CSIRO

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) is one of the world's largest and most successful publicly funded research and development organisations with locations across Australia and internationally. CSIRO is committed to complementing its world-class science capabilities with outcome-focused research that will generate economic, environmental and social benefits for Australia in a global context.

## Our purpose

### **Solving the greatest challenges through innovative science and technology**

Our short purpose statement complements our 1949 legislation (the Science and Industry Research Act) and our Portfolio Budget Statement. The advantage of this short statement is that it can be easily recalled.

## Our promise

### **Unlocking a better future for everyone**

A better future for our community, our economy, our planet.

Our Promise is an extension of our Purpose and Positioning. It is the tangible benefit that we deliver through our purpose.

It is also the “why” – why do we solve Australia's greatest challenges? To unlock a better future for everyone.

The work we do delivers triple bottom line benefit (community, economy and environment), and our Promise is one expression of that.

## Our position

### **Australia's innovation catalyst**

### **Australia's national science agency**

Our position is how we are differentiated from everyone else. No other organisation can say that they play these pivotal roles for Australia.

We have additional key messages around our positioning, which you can find in the FAQ section.

# Our personality

**Bold** change-makers, not satisfied by the status quo

**Imaginative** problem solvers, on a quest for discovery

**Driven** by impact, to make the world a better place

Defining the 'personality' traits of CSIRO helps us communicate our organisation. It guides the tone, language and identity of our communications, and can also guide our behaviour and how we engage with our stakeholders.

# Our capability

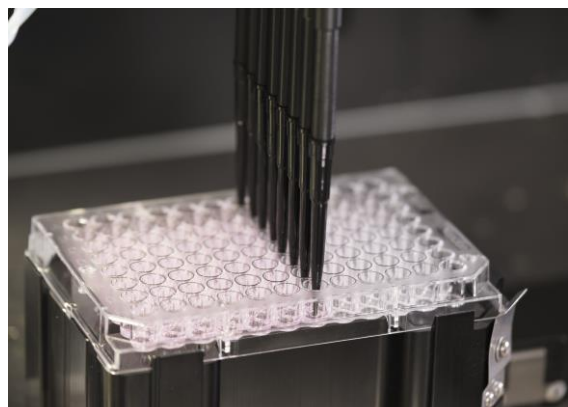
- **We are helping reinvent manufacturing.** Manufacturing remains a key driver in the Australian economy, but needs to transition to a more innovative, economically viable, high technology sector. We're helping our customers make this transition, using advanced materials, systems and processes to deliver products that meet the needs of customers and global markets.
- **We are creating value for our customers.** Working with customers we are developing new products and processes that support productivity gains, boost sustainability and help capture emerging opportunities in local and global markets.
- **We are accelerating the creation of new industries.** By developing and exploiting disruptive technology platforms, we're supporting the creation of new businesses and industries for Australia and the world.



# Manufacturing's structure

Structurally, Manufacturing is set up to manage its science capabilities and science projects through four research programs:

- Biomedical Manufacturing
- Advanced Fibres and Chemical Industries
- Industrial Innovation
- Metal Industries



## Research Infrastructure

CSIRO Manufacturing has staff working predominately across four locations across the country. These locations range in size from major sites such as Clayton, to intermediate sites such as Parkville, Waurn Ponds and Lindfield.

### CSIRO Manufacturing Laboratory Locations and Capabilities

LOCATION	LABORATORY	CO-LOCATIONS	CAPABILITIES
Lindfield		National Measurement Institute	<ul style="list-style-type: none"> <li>• Physics</li> <li>• Engineering</li> <li>• Characterisation</li> </ul>
Parkville			<ul style="list-style-type: none"> <li>• Cell and Molecular Biology</li> <li>• Crystallography</li> </ul>
Waurn Ponds		Deakin University	<ul style="list-style-type: none"> <li>• Fibre chemistry</li> <li>• Fibre physics</li> <li>• Engineering</li> <li>• Characterisation</li> </ul>
Clayton	Wark and Rivett Laboratories		<ul style="list-style-type: none"> <li>• Cell Biology</li> <li>• Chemistry</li> <li>• Materials Science and Engineering</li> <li>• Characterisation</li> </ul>
Clayton	Building 75, Monash University	Monash University	<ul style="list-style-type: none"> <li>• Stem Cell Biology</li> <li>• Animal Facilities</li> </ul>
Clayton	Monash Medical Imaging	Monash University	<ul style="list-style-type: none"> <li>• Imaging</li> </ul>
Clayton	Melbourne Centre for Nanofabrication	ANFF Victorian Universities	<ul style="list-style-type: none"> <li>• Nanofabrication</li> </ul>
Clayton	New Horizons Building	Monash University	<ul style="list-style-type: none"> <li>• Chemistry</li> <li>• Polymer Engineering</li> </ul>
Clayton	Bushells Laboratory		<ul style="list-style-type: none"> <li>• Flexible Electronics</li> <li>• Metal Processing</li> <li>• Inorganic Chemistry</li> </ul>

# Collaboration

CSIRO Manufacturing's researchers collaborate with other areas of CSIRO and other research institutions and facilities as well as connect with industry partners across government and the private sector.

## Active Integrated Matter (AIM)

Active Integrated Matter (AIM) is one of the 10 Future Science Platforms (FSPs) being run by CSIRO. Offering a new technology platform combining materials, robotics, and autonomous science, underpinned by processing and sensing technologies, CSIRO's AIM FSP will lead ground-breaking advances at the interface of big data, advanced autonomous systems and materials science. The innovation developed in CSIRO's AIM FSP will support the fourth wave of the industrial revolution—industry 4.0—providing global solutions and positioning early adopter industries ahead of the pack.

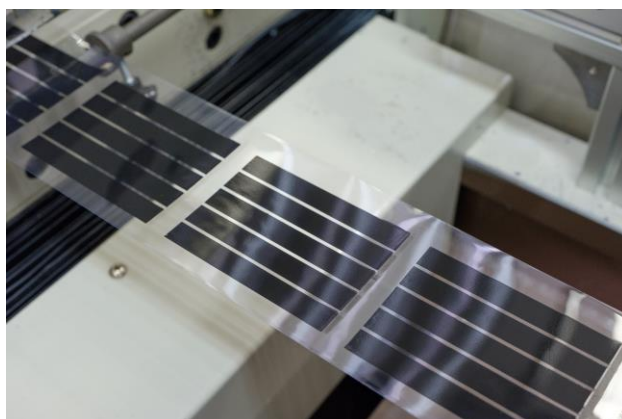
### The Challenge

A number of mega-trend forecasts predict dramatic changes in the world by 2030. These will be wide-ranging; from personalised food and therapeutics to increased extreme weather events and human-free autonomous manufacturing and maintenance environments, known as 'dark factories'. There will be an increased expectation for better products that are cheaper and more environmentally sustainable. Growing demand for customised products will require the development of sophisticated autonomous processes and maintenance systems.

For individual companies, this may seem daunting. How can you innovate fast enough to stay ahead of the competition?

The 2030 vision of CSIRO's AIM FSP is to work with our partners and collaborators to harness the scientific advances presented by big data, advanced autonomous systems, and materials science to provide a competitive edge for early adopters of these next-generation technologies. AIM will provide the tools needed to tackle global challenges, capitalise on trends, and ensure preparedness for future population, climate, and environmental scenarios.

The CSIRO AIM FSP is hosted by CSIRO Manufacturing.



# Our strengths and achievements

Manufacturing measures success as impact achieved through the successful delivery or transfer of research to companies and other end-users, including:

- Increases in competitiveness, productivity, and market share for industry partners.
- Reduction in pollution or a more efficient use of resources in the environment.
- End-user benefits of new technologies that includes safety, health outcomes and a prosperous manufacturing sector supporting new and existing jobs.



## About the role

The Director will be responsible for organisation-wide leadership of CSIRO Manufacturing research and development. This will involve direct leadership of a core business unit and the fostering of linkages to other relevant parts of the organisation. The role demands global market knowledge and domain expertise to sharpen CSIRO Manufacturing's business. The role will be expected to build on CSIRO's track record in driving commercial outcomes and delivering national impact in this area.

### Initial Priorities

- Revise the strategy and capability plans for CSIRO's manufacturing research regarding current and emerging industry, environmental and socioeconomic drivers;
- Develop networks and partnerships that will underpin and resource an innovation system for CSIRO's manufacturing technologies;
- Lead the development and delivery of science-based solutions that address
  - Innovation for existing industries
  - Creation of new industries
  - Industry de-risking facilities supporting export growth





# Manufacturing

## IMPACT STRATEGY ON A PAGE

### GOAL



By 2030 we will have developed the scientific and engineering innovations to transition Australian manufacturing into a globally connected, economically viable, high-technology sector; creating the jobs of the future, export growth, and investment in the nation's manufacturing industry and increasing the value of the sector.

### IMPACT AREAS

Transitioning the manufacturing sector

Catalyse the creation of new industries and businesses for Australia

### IMPACT STATEMENTS

**Develop and grow the existing biomedical industry:** Work collaboratively with existing companies in the Australian biomedical industry to develop new and innovative devices, materials and processes, while also improving productivity and efficiency, which leads to growth, global competitiveness and economic and environmental benefits by 2025.

**Chemical manufacturing and process technologies:** By 2025, increase the adoption of sustainable, innovative and efficient manufacturing technologies that produce cleaner, high yielding products, by existing firms and supply chains in the chemical, polymer, energy, industrial biotechnology and agriculture sectors.

**Advanced and innovative material technologies:** Create a sustainable competitive advantage for our commercial collaborators in the defence, transport, mining, energy, health and electronics sectors through advanced materials, materials processing and agile manufacturing technologies that will deliver a cumulative benefit of more than \$2bn by 2025.

**Scaling up the titanium metal industry:** Develop innovative and robust technologies and processes, in collaboration with Australian and global firms and supply chains, in order to scale up titanium metal production and identify new potential markets by 2025.

**New devices, products and processes through new companies in the biomedical industry:** Develop new novel and innovative devices, products, and processes, delivered through new companies in the Australian biomedical industry, which will meet emerging market demands for medical and pharmaceutical products and services by 2025, creating investment and economic opportunities.

**Carbon fibre manufacturing industry in Australia:** Collaboratively participate in the establishment of a carbon fibre manufacturing industry in Australia, which will provide new investment, businesses, R&D infrastructure and capability opportunities.

**Developing flexible and sustainable business models:** Develop and strengthen CSIRO's engagement with Australia's entrepreneurial and Tech start-up sector by 2025 through flexible and sustainable business models that aim to provide partners with timely scientific, technical and logistic support in order to build new commercial opportunities.

**Technologies developed by CSIRO's the Lab 22 Innovation Centre:** Increase new opportunities for Australian manufacturing companies through the uptake of productive and high in value add technologies developed by CSIRO's new manufacturing and product development facilities.

### INTERNAL PROGRAMS

### ROLES

### OTHER BUSINESS UNITS

### ROLE KEY

○ = Lead ○ = Support

### PROGRAMS

High Performance Metal Industries

Industrial Innovation

Advanced Fibres and Chemical Industries

Biomedical Manufacturing

### OTHER BUSINESS UNITS

Data61

Mineral Resources

Food and Nutrition



# Key result areas and duties

## Impact science leadership

- Undertake long term science impact planning to address national challenges and to build capacity to innovate for science discovery;
- Lead CSIRO Manufacturing to develop and realise its science vision in partnership with key stakeholders and science partners;
- Deliver timely, accountable and focused outcomes to government, industry and society through application of world class R&D;
- Develop an R&D environment characterised by science excellence, creativity, innovation and flexibility.

## Capability leadership

- Strive for “Zero Harm” (physical and psychological) through a commitment to a healthy, safe and environmentally sustainable workplace;
- Attract, develop and retain world class talent which will meet current and future needs;
- Empower staff with sufficient autonomy to pursue innovative science and encourage the creative exchange of ideas;
- Model appropriate and professional behaviour in the workplace and manage people matters proactively;
- Ensure the Leadership Team provides the highest standard of capability leadership;
- Lead and champion change initiatives as needed.

## Engagement and partnerships

- Develop and maintain strategic relationships with key stakeholders, clients and partners to ensure alignment of CSIRO Manufacturing activities with the needs of the nation;
- Drive commercial outcomes through the transfer of manufacturing research advancements into commercial benefits;
- Undertake high level national/international level representation of CSIRO Manufacturing to expand the opportunities for science discovery and new business;
- Provide trusted advice to government, industry and the community, with a focus on providing high level advice to Government;
- Build strategic alliances within CSIRO to collaboratively execute the strategy across lines of business including cross-CSIRO initiatives.

## Resource Leadership

- Lead and manage CSIRO Manufacturing’s financial resources, people, infrastructure and other assets to ensure their effective and efficient use;
- Secure a pipeline of opportunities aligned with national priorities that delivers a sustainable financial future;
- Ensure effective management of physical infrastructure and resources in an environmentally sustainable way;
- Ensure best practice governance and management of commercial activities and intellectual property.

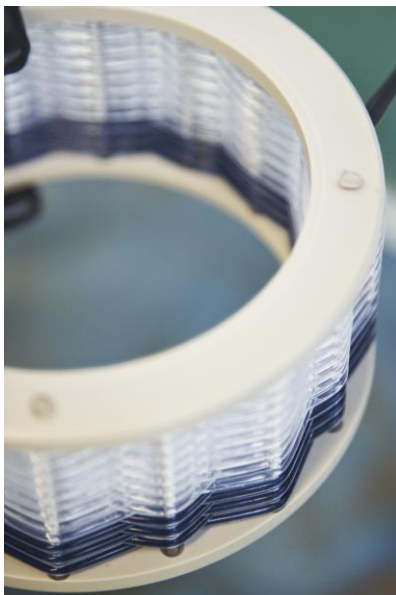
# Key capabilities

## Behaviours

- Leading change through vision and values
- Articulating a compelling vision
- Influencing/cultivating networks
- Decision making/judgment
- Establishing strategic direction
- Entrepreneurship
- Generous, inclusive collaboration
- Expanding and advancing opportunities.

## Experience

- Research leadership and management (at least 7 years) of a significant scientific R&D capability;
- Domain knowledge including knowledge of global markets and emerging trends;
- Created, or partnered with, commercial companies to exploit new directions and breakthroughs in a field of research;
- Success in commercialising and delivering science solutions to clients or counterparties;
- International reputation and worldwide technology commercialisation credibility in a relevant science area;
- Management of multi-million dollar, multi-disciplined research operation.



## Organisational knowledge

- Broad knowledge of CSIRO Manufacturing's science domains and portfolios;
- Deep working knowledge of the global and national challenges and opportunities in the research portfolio of Manufacturing;
- Broad knowledge of CSIRO's strategy, structure and operating model;
- In-depth knowledge and understanding of national and international innovation systems (universities, industries, governments, philanthropic foundations, publicly funded research agencies, and CSIRO's unique role);
- Relevant stakeholder networks.

## Personal attributes

- Ability to navigate complexity
- Credibility
- Resilience
- Emotional intelligence
- Collegiate approach
- Ability to foster team play
- Agility in strategy and implementation
- Ability to optimise diversity.

## CSIRO is a values-based organisation

You'll need to demonstrate behaviours aligned to our values of:

- Integrity of excellent science
- Building trust and respect each day
- Initiative to explore new horizons
- Delivering on commitments
- Safety and sustainability.

# Selection criteria

1. Established credibility and respect in a domain relevant to CSIRO Manufacturing e.g.
  - Advanced manufacturing
  - Industry 4.0
  - Sustainable manufacturing and key technologies such as sensors and data analytics, advanced materials, smart robotics and automation, additive manufacturing (3D printing), augmented and virtual realitywith evidence of effective leadership of world-class research capability commensurate with the scale of the business.
2. Demonstrated knowledge of, and experience with, emerging global trends in the relevant research markets.
3. Evidence of strong engagement skills and strategic relationship management that expands growth opportunities, drives commercial outcomes, and delivers national impact.
4. Demonstrated ability to attract, retain, empower and develop world class talent and to promote wellbeing and foster creativity and innovation.
5. Demonstrated track record in leading a complex, multi-site business including managing financial and physical resources and creating a safe and healthy workplace.
6. Established track record of building, driving and embedding cultural change and effective change management.
7. Strong leadership skills that demonstrate the ability to unite capability and to promote cross-organisation collaboration to transform CSIRO's delivery to national and international challenges in the manufacturing domain.



## Conditions of employment

An attractive senior salary package will be offered to the successful candidate. Four weeks annual recreation leave, and 15 days Sick Leave and Carers' Leave apply.

Relocation and immigration assistance will be provided to the successful candidate where required. This position is for an initial three-year term, with an opportunity to renew if mutually agreeable.

The preferred location for this position is Melbourne.



# Contact

For further information about this role please contact:

Dr Anita Hill – Executive Director, CSIRO Future Industries

[anita.hill@csiro.au](mailto:anita.hill@csiro.au)

Mrs Dominica Walsh – Executive HR Manager, CSIRO Future Industries

[dominica.walsh@csiro.au](mailto:dominica.walsh@csiro.au)

All applications should be sent to Dominica Walsh on the email address above.

## How to apply

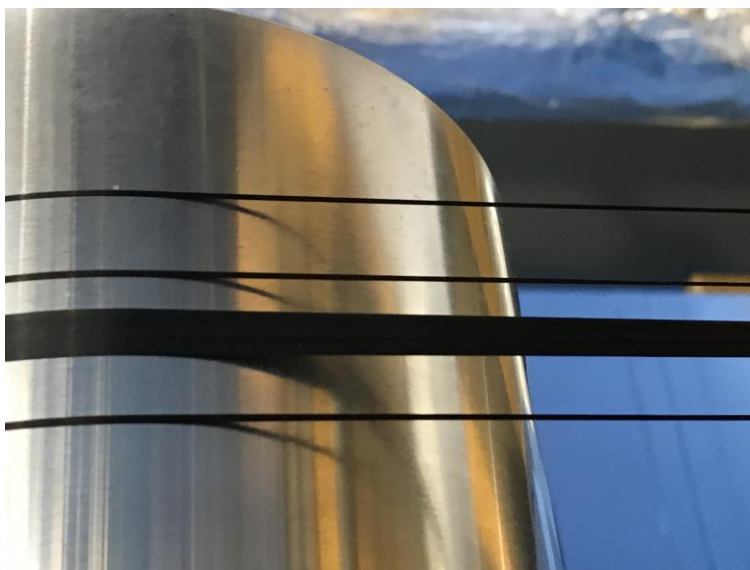
As part of their application, candidates are requested to provide the following in Microsoft Word format.

- **Curriculum Vitae**
- **Contact details for three Referees**

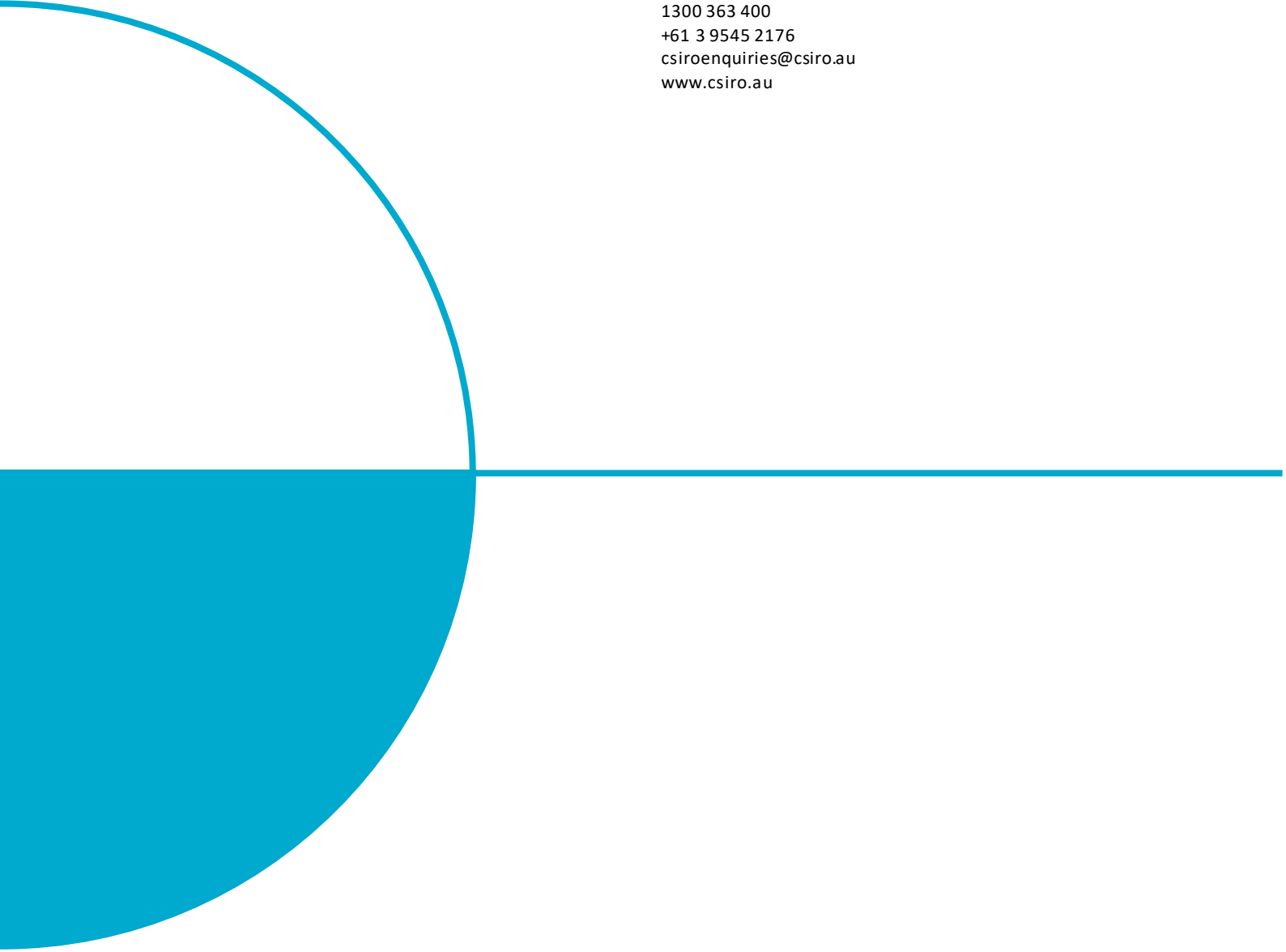
Referees will only be contacted after prior consultation with the candidate. It is the candidate's responsibility to ensure that their referees are willing to provide reports when contacted by the CSIRO.

- **Date of commencement**

An indication of the earliest date on which the candidate could commence in the position.



CSIRO may use executive search agencies to assist in identifying, qualifying and shortlisting candidates for this role. On behalf of the CSIRO and as part of the application and appointment process, candidates may be requested to provide proof of their identity, undergo psychometric testing, give permission for verification of their tertiary qualifications and apply for an Australian Federal Police check.



**As Australia's national science agency and innovation catalyst, CSIRO is solving the greatest challenges through innovative science and technology.**

CSIRO. Unlocking a better future for everyone.

**Contact us**

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