XPRIZE Wildfire

NSW Competitor Briefing

28th July 2023

NSSN

Briefing Objectives

Introduce XPRIZE Wildfire

Let NSW competitors know how NSW can assist

Encourage NSW entries

Agenda

Welcome	**NSW Smart Sensing Network -** Peter Runcie, Natural Hazards Theme Lead
XPRIZE Wildfire Competition Overview	**Minderoo Foundation** – Rania Poullos, Fire Shield Mission Lead
NSW Innovation Networks	**NSW Smart Sensing Network** – Peter Runcie **NSW Connectivity Innovation Network** – Genie Tan, COO **NSW Space Research Network** , David Reynolds, Business Development Manager
Industry Network	**IoT Alliance Australia** - Frank Zeichner, CEO
NSW Government	**NSW Office of the Chief Scientist and Engineer** **-** Scott Colefax, Manager – Bushfire Response R&D Mission **Investment NSW** **-** Jessica Saladine, Senior Associate, Defence and Aerospace NSW
Q&A	

Minderoo Foundation

MINDEROO
FOUNDATION
FOR A FAIRER FUTURE

XPRIZE WILDFIRE

AU $16 MILLION DOLLAR PRIZE POOL

Track One

Space-Based Detection & Intelligence

Track Two

Autonomous Wildfire Response

Presenting Sponsor

MINDEROO FOUNDATION

PG&E

GORDON AND BETTY MOORE FOUNDATION

END DESTRUCTIVE WILDFIRES

Globally, Extreme Wildfire Events (EWEs) are becoming more frequent.

- EWEs burn bigger, at a higher intensity, and can quickly sprawl out of control.
- Represent only around 3% of all wildfires, but account for **80% of total associated fire-damages**
- Increasingly contribute to global greenhouse gas emissions and worsening health impacts from pollutants.

These destructive wildfires wreak havoc on ecosystems worldwide

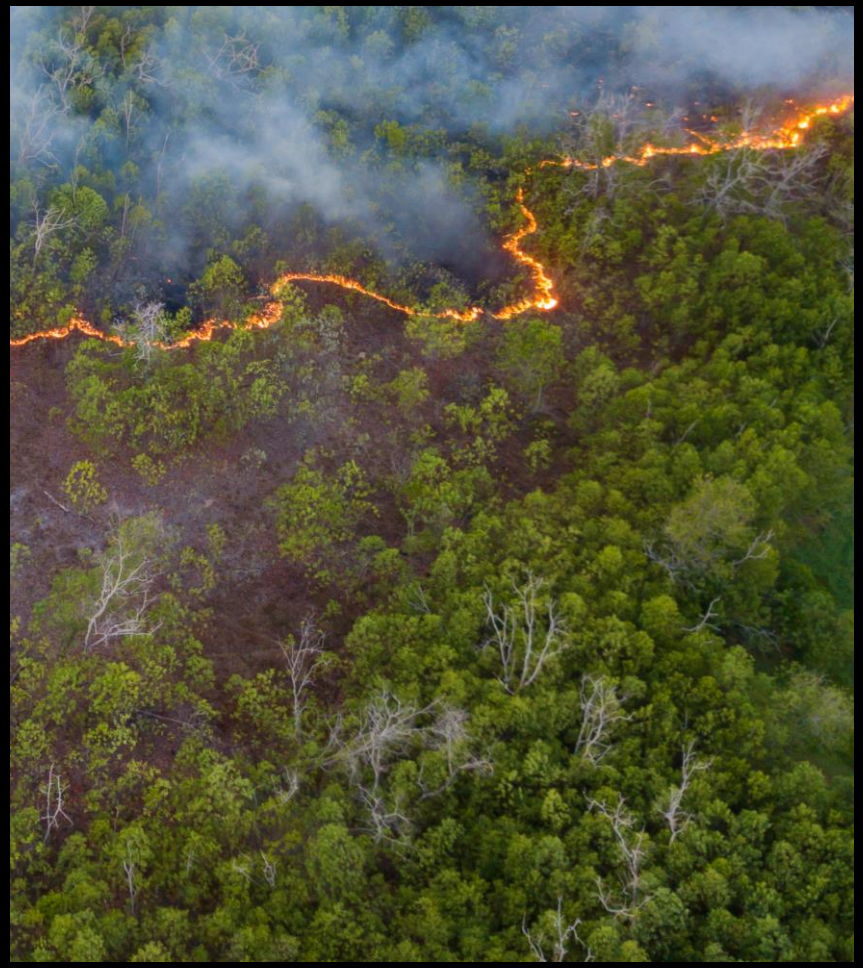
- Especially in the expanding Wildland-Urban Interface, where homes, businesses, and major infrastructure are most at risk, and **where wildfire control and suppression activities are increasingly outperformed.**

THE COMPETITION

The XPRIZE Wildfire Competition will incentivize teams from around the world to innovate firefighting technologies that could put an end to destructive wildfires.

Along **two** complementary tracks, teams will **transform** how fires are detected, managed, and fought.

- **US $10 Million prize purse**
- **US $1 Million Lockheed Martin Accurate Detection & Intelligence Bonus Prize**
- **4-year competition**



HOW TO WIN

Track A: Space-Based Detection & Intelligence

In the Finals, teams have one minute to accurately detect all fires across a landscape larger than entire states or countries, and 10 minutes to precisely characterize and report data with the least false positives to two ground stations.

Track B: Autonomous Wildfire Response

In the Finals, teams have 10 minutes to autonomously detect and suppress a high-risk fire in a 1000 km^2, environmentally challenging area, leaving any decoy fires untouched.

The $1M Lockheed Martin Accurate Detection Intelligence Bonus Prize incentivizes innovations in accurate and precise detection of wildfires.

PLEASE JOIN US

Create a team to compete, donate, or learn more about how to get involved at **xprize.org/wildfire**

NSSN

NSW Smart Sensing Network

Peter Runcie

Natural Hazards ands Smart Cities Theme Lead

NSW Smart Sensing Network

NSSN

Our Vision

NSW is a recognised global leader in smart sensing.

Our Mission

To translate world-class research in smart sensing into compelling solutions that create value for the economy, environment and society of NSW and beyond.

Proudly funded by

NSW GOVERNMENT

NSSN

Members

Australian National University

THE UNIVERSITY OF SYDNEY

MACQUARIE University
SYDNEY·AUSTRALIA

WESTERN SYDNEY UNIVERSITY

UNSW SYDNEY

Charles Sturt University

UNIVERSITY OF WOLLONGONG AUSTRALIA

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

UTS

NSSN

1. Ageing – smart sensing for an ageing population

2. Bushfires – smart sensing for bushfire prevention, response & mitigation

3. Water – smart sensing for a drought-proof NSW & ACT

4. Smart Places & Buildings – technology for vibrant, safe & sustainable spaces

5. Clean Tech – smart sensing for a low-carbon and circular economy

REMIT

Linking the NSW/ACT smart sensing ecosystem

- Help organisations find collaborators
- Events – thematic workshops, industry networking events
- Thought Leadership – eg: Bushfire and Flood Inquiries
- Lead/support project and funding submissions
- Managing complex, multi-party initiatives
- NSSN Grand Challenge Fund

NSW Connectivity Innovation Network

Connectivity Innovation Network XPrize Briefing

28 July 2023

Genie Tan
Chief Operating Officer

Connectivity Innovation Network

- Established in late 2021, the CIN is co-hosted by UTS and the University of Sydney. It brings together government, industry and academia to solve connectivity challenges in NSW, particularly remote and regional areas

- We have 23 members including 7 universities and 16 industry members

The **Vision** of the Connectivity Innovation Network is to enhance Australia's connectivity for emergency & government services and communities, by leveraging academic, industry and government expertise to drive technical innovation.

UTS THE UNIVERSITY OF SYDNEY

CIN Executive Team

Ian Oppermann

Director

Read More

Joe Zhu

Co-Director

Read More

Jay Guo

Technical Director

Read More

Yonghui Li

Co-Technical Director

Read More

Genie Tan

Chief Operating Officer

Read More

Khimji Vaghjiani

Chief Innovation Advisor

Read More

Our Goals

1. **Collaboration**
   Establish a network of industry and research partners to collaborate and solve connectivity challenges facing NSW
2. **Innovate**
   Leverage world-class research capabilities of NSW universities to create cutting edge technologies and solutions
3. **Demonstrate and learn**
   Rapidly prototype and demonstrate solutions using research based solutions.
4. **Commercialisation**
   Establish strong links with industry partners, end users, academics and entrepreneurs to progress the technical and commercial readiness levels of promising solutions

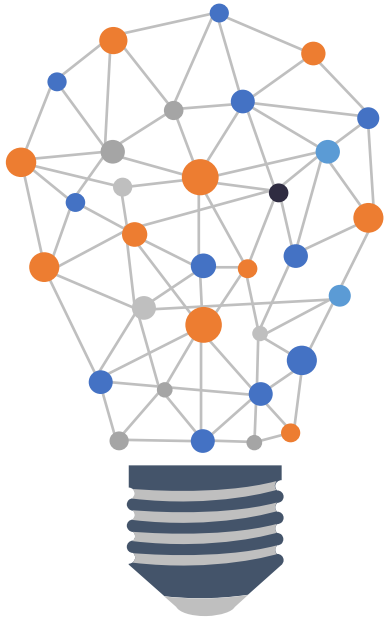
Emerging Connectivity Themes

Power Resilience

Leveraging alternate power and backhaul technologies, thereby strengthening resilience of terrestrial based networks during emergency events

Sensors

Developing scalable technologies to enable pervasive sensing



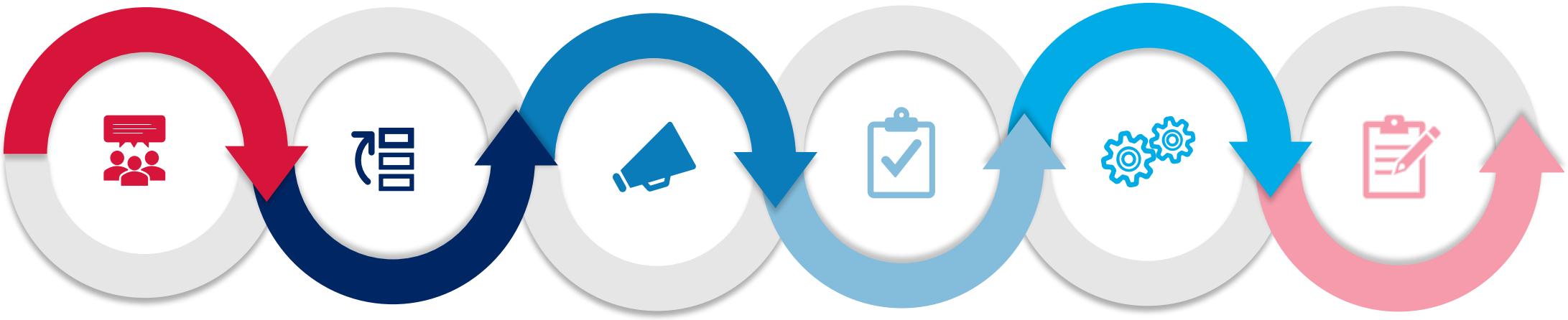
Data Sharing. Privacy and Security

Create platform technologies to facilitate privacy/security-preserving data sharing between government agencies

Ubiquitous Connectivity

Innovate in both terrestrial and non-terrestrial communications technologies to realise ubiquitous connectivity

Problem statement to project impact



Integrated Planning Meetings

- High level problem statements from major stakeholders
- Identification of other potential funding sources

Prioritisation

- Level of impact
- Multi-agency impact
- Urgency
- Alignment with CIN foci
- Potential leverage of funding

Call for Project Proposals

- Level of impact
- Time to impact
- Feasibility
- Alignment with CIN foci

Project Selection

- Feasibility
- Track records
- Path for adoption
- Planning
- Potential for funding leverage

Project Execution

- Milestones
- Budget
- Policy compliance

Project Assessment

- Technical goals reached
- Adoption stage
- Impact Roadmap

Current Memberships

UTS UNIVERSITY OF TECHNOLOGY SYDNEY

UNSW SYDNEY

UNIVERSITY OF WOLLONGONG AUSTRALIA

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

THE UNIVERSITY OF SYDNEY

Charles Sturt University

Southern Cross University Sydney

nbn

tpg TELECOM

MOTOROLA SOLUTIONS

WORLD DATA exchange

Apteco

Kalinda IT

DANDELIONS

amalgamotion

GME

SENSTRA

TELEAUS

commtel

pivotel. connected everywhere

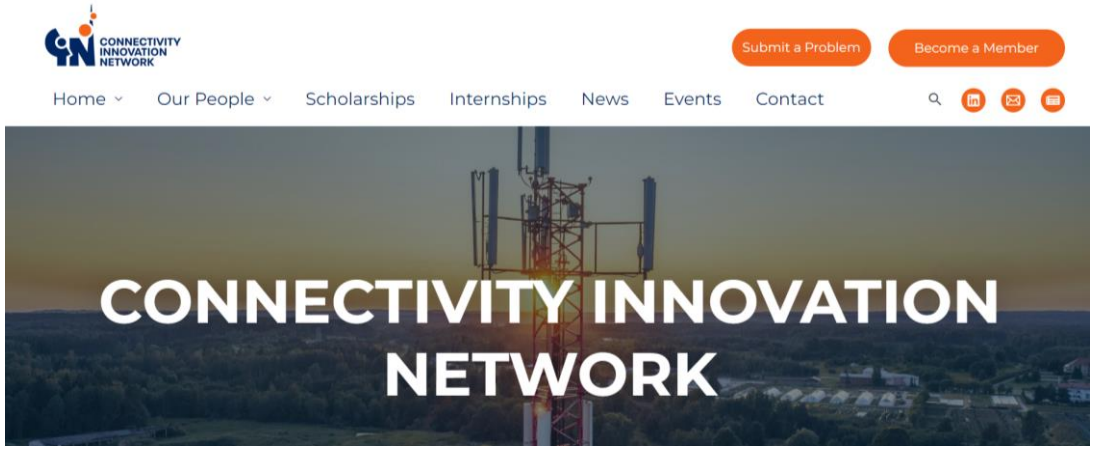
bai communications

zetifi

CONNECTIVITY INNOVATION NETWORK

Contact Us & Keep in touch

Website:
(submit problem statements, inquiries, read news stories, subscribe to newsletter)
https://www.connectivityinnovationnetwork.com/



LinkedIn profile:
https://www.linkedin.com/company/connectivity-innovation-network/

Connectivity Innovation Network

Fostering collaboration between Industry, Government and Academia to solve connectivity challenges in New South Wales.

Telecommunications · Ultimo, NSW · 323 followers · 8 employees

Thank you

Email contact: admin@connectivityinnovationnetwork.com

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PO Box 123, Broadway NSW 2007

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w: www.connectivityinnovationnetwork.com

Supported by NSW Telco Authority

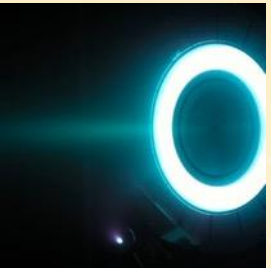
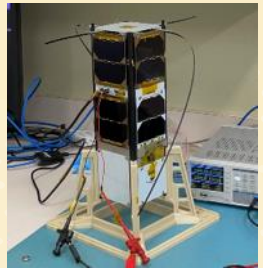
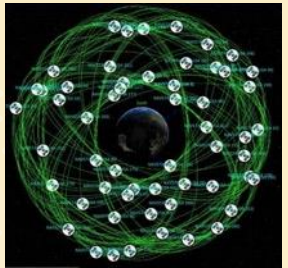
Telco Authority

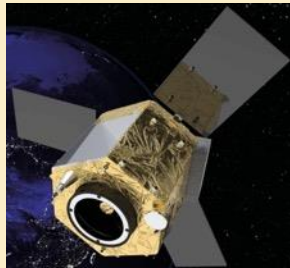
NSW Space Research Network

Welcome

NSW Space Research Network

NSW Space Research Network



Context

- SRN's mission is to foster collaboration
- Enable emerging participants to Space
- The Space Research Network begins conversations that result in funded projects.

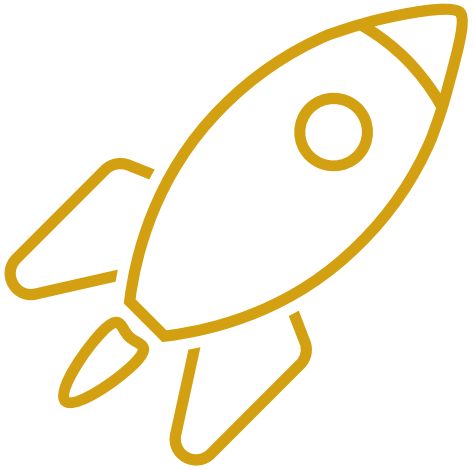
NSW Space Research Network

Australian Civil Space Strategy Capability Priorities

Research Pilot Projects

NSW Space Research Network

- Emerging research and new technologies
- Collaboration between at least two SRN Partner Organisations, and can include industry
- Up to $150k available per project

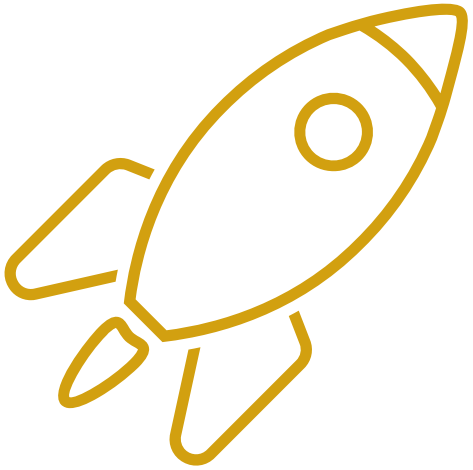


Seed Projects Program

NSW Space Research Network

- Directly pays universities to address industry needs

- Seed projects form the basis for future funding submissions to:



Australian Space Agency
Australian Research Council (ARC),
SmartSat CRC,
And any other source of research funding

How can we help?

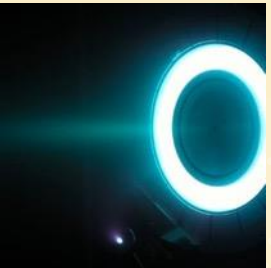
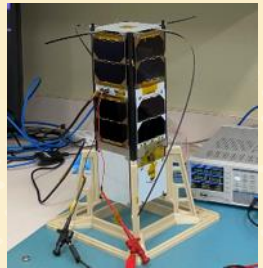
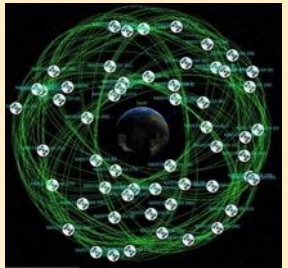
NSW Space Research Network

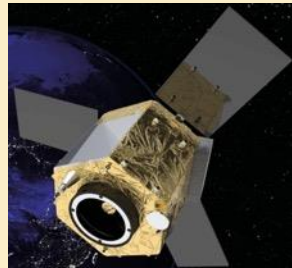
- The SRN is a nimble organisation that seeks to help wherever it can.
- Fill out our Request for Facilitation form:
- Or email David.Reynolds@srn.org.au

Thank you

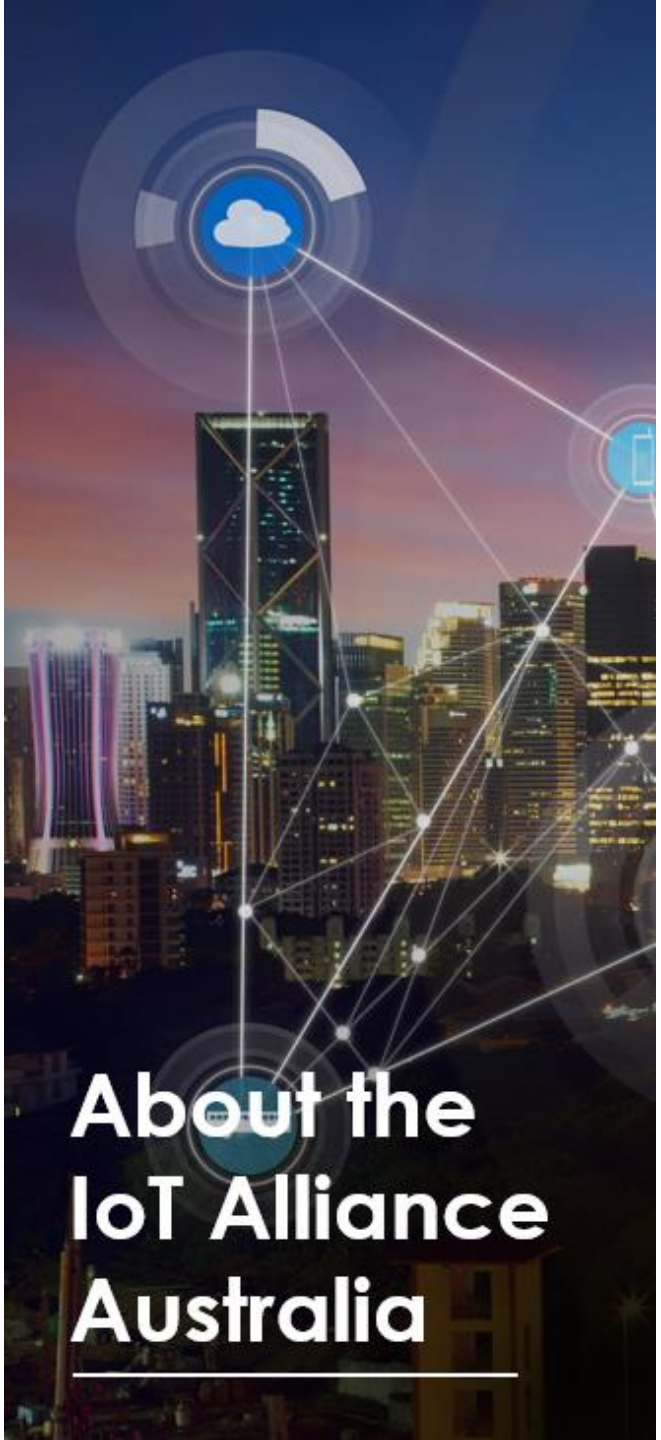
NSW Space Research Network

NSW Space Research Network



IoT Alliance Australia



Australia's peak IoT industry body

Vision: A Data Smart Australia

Mission: to build a better society through trusted, accessible, automated data

Sustainability

Productivity

Trusted Technology and Data

Scaling the impact of the Australian IoT eco-system

Advocating for the IoT industry and good IoT policy

Building capability and promoting good practice

Building trust and creating awareness through open and honest communication

NSW Office of the Chief Scientist and Engineer

Office of the Chief Scientist & Engineer

NSW Bushfire Response R&D Mission

Accelerating the adoption of innovative technologies to improve bushfire resilience, response and recovery

Office of the NSW Chief Scientist & Engineer

Objectives: enable the development and application of science, engineering and technology to improve the economic, environmental and social conditions of the citizens of NSW.

OCSE has four key functions:

1) Independent policy advice

2) Research support

3) Industry development

4) Outreach and engagement

NSW Bushfire Response R&D Mission

Tackling the complexities in preparing for, and responding to, such extreme bushfires

The Mission's vision is to:

- accelerate innovation to better prepare and respond to future bushfires,
- protect first responders and communities, and
- establish NSW as a global centre of bushfire-related research, innovation, and technology.

NSW Bushfire Response R&D Mission

NSW and XPrize

NSW and XPrize

- Connection to existing data sources and information and networks
- Early advice about the applicability of proposed technology
- Matchmaking of ideas with NSW based companies and technologies
- Initial point of contact between NSW agencies and teams.

Contact Us

Email us at

bushfiremission@chiefscientist.nsw.gov.au

Learn more at

chiefscientist.nsw.gov.au/rdnsw/bushfire-response-rd-mission

Useful links

chiefscientist.nsw.gov.au/rdnsw/bushfire-response-rd-mission/bushfire-contacts-directory

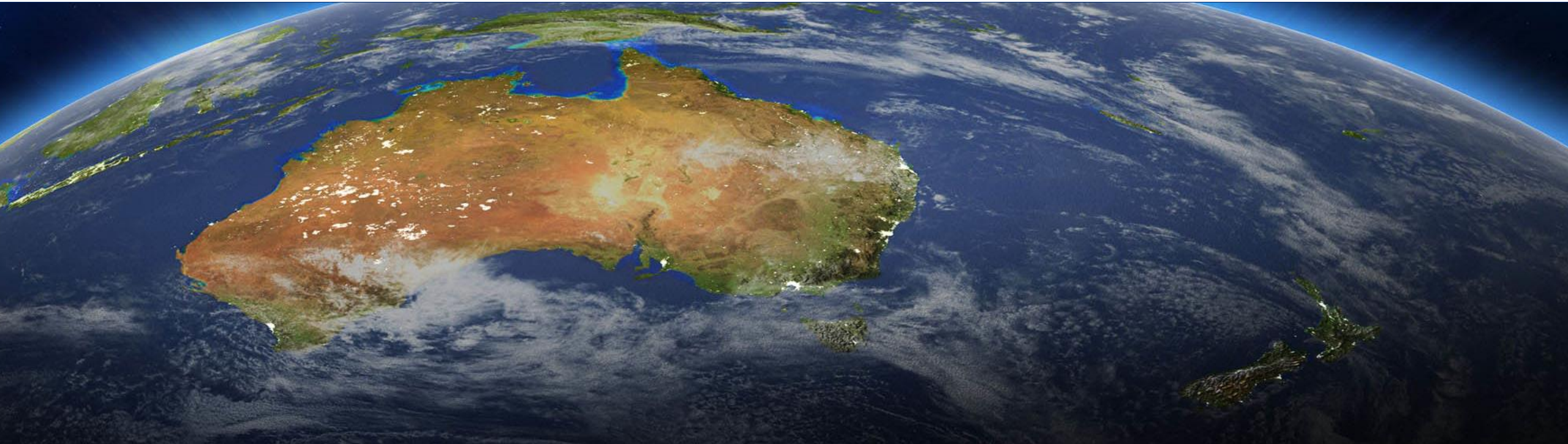
SCAN ME

Investment NSW

NSW Space to Grow

Jessica Saladine

Senior Associate – Defence and Aerospace, Investment NSW



Q&A

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XPRIZE Foundation
https://www.xprize.org/prizes/wildfire