



# We are looking for new approaches that can drive improvements to our services and risk management

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**Analytics and Innovation**

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Biosecurity Strategy  
and Reform Division

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Department of Agriculture,  
Water and the Environment

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# About us

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The Research & Innovation Section leads a centralised research and innovation capability to guide and support the identification, development, and implementation of innovative technologies and approaches:

## Innovation Ideas

Engage with stakeholders and share our stories to identify bold new ideas.

## Innovation Pilots

Test innovative technologies that are available now and can change how we work today.



## Biosecurity Innovation Programs

- **Biosecurity Innovation Program** - invests \$5m on technologies and approaches to enhance the capacity of our national biosecurity system
- **Science Innovation Program** - invests \$1.7m in projects identified through various community of practices.

## Biosecurity Risk Research

Through our partnership with the Centre of Excellence for Biosecurity Risk Analysis (CEBRA) at the University of Melbourne, undertakes a range of targeted research projects that help inform regulatory activities such as risk analysis.

# Our Biosecurity Innovation Program (BIP)

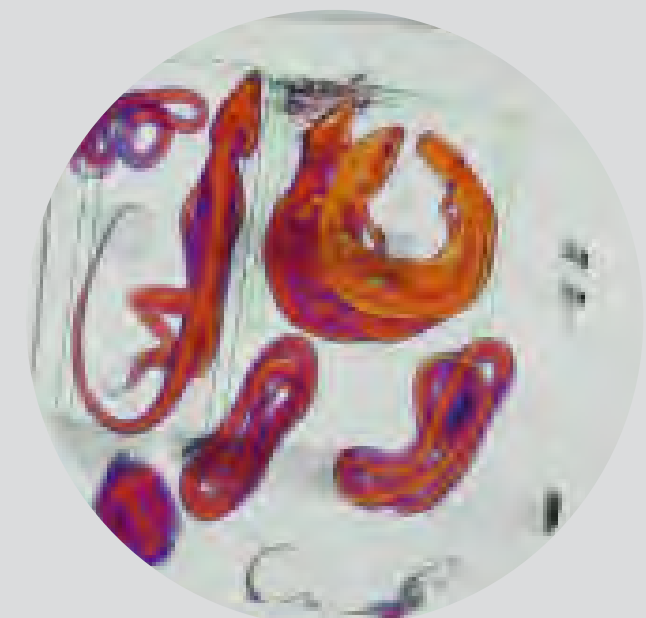
**Invests in new technologies and approaches to enhance Australia's biosecurity system – with applications open to the public.**

## Our focus

The Program assists in identifying, developing and implementing innovative technologies and approaches to improve biosecurity risk management.

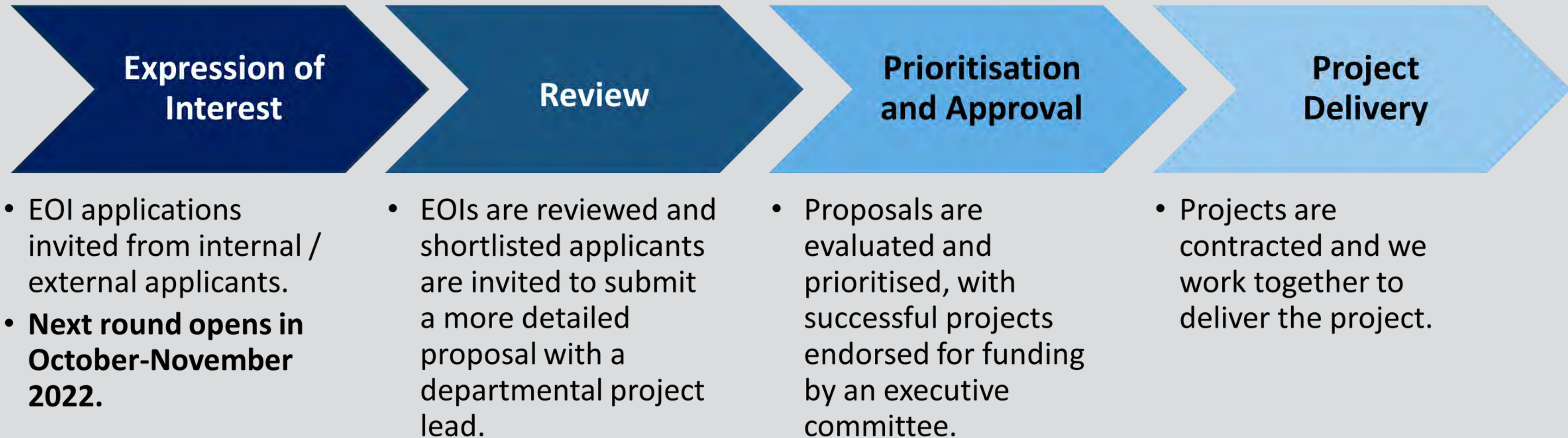
Focuses on technologies that address emerging biosecurity challenges, assist with screening of goods and travellers, and that improve early detection beyond ports.

It supports collaboration between industry and government and helps Australia maintain our favourable pest and disease status and our access to export markets.



# How to apply for BIP funding

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# Some of our BIP projects underway...



## Rapid diagnostics at PIC@PEC

Building our diagnostic capability



## eDNA for biosecurity identification

Testing eDNA technology to detect pests, parasites and diseases



## Brown Marmorated Stink Bug App

Mobile identification of brown marmorated stink bug



# Our Innovation Pilots initiatives

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We're piloting new ideas and novel approaches to help make tasks safer and more efficient.

## Our focus

This program of work generates and pilots ideas using technology available now to optimise how we work today.

Pilots are run in short, sharp cycles to test ideas in the field which involves pilot design, sourcing assets and supporting pilot activities right through to evaluation & final recommendations.

If you have any ideas contact [innovationpilots@awe.gov.au](mailto:innovationpilots@awe.gov.au)



# Some of our Innovation Pilots underway...



## Realwear Smartglasses

Testing our livestreaming capability in numerous areas



## Large scale aerial imagery

Investigating aerial systems for surveillance of feral pigs and buffalo



## 'temi' the telepresence robot

Discovering new ways of doing things without the need to be physically present



## Boston Dynamic's 'Spot' the robot

Exploring our robotic capability to work more efficiently and safer



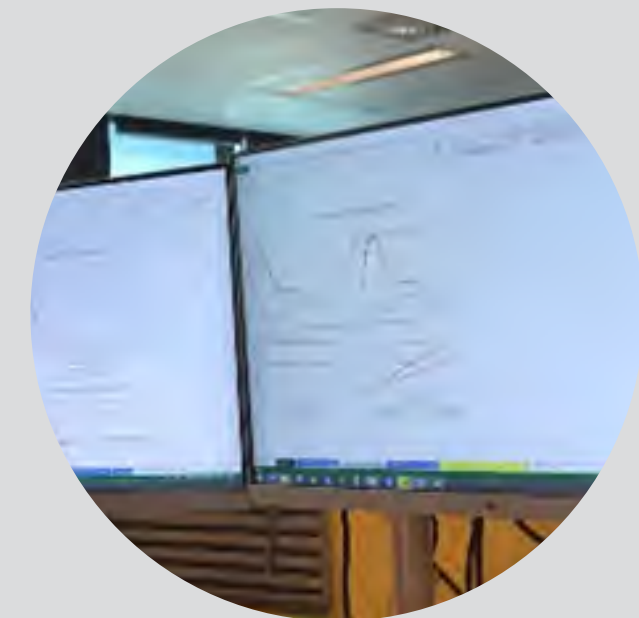
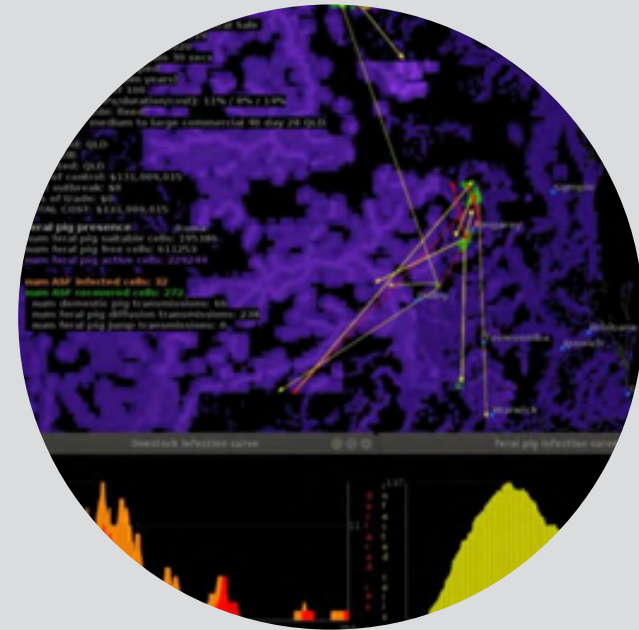
# Our Risk Research Program

Through the Centre of Excellence for Biosecurity Risk Analysis (CEBRA), we undertake targeted research to ensure biosecurity regulatory standards, procedures and tools are underpinned by world-class research.

## Our focus

CEBRA's research activities help ensure that governments are leaders in biosecurity risk management by undertaking collaborative research that informs a range of regulatory activities.

This includes risk analysis (the assessment, management, and communication of biosecurity risk), setting of regulatory interventions, inspection activities and surveillance.



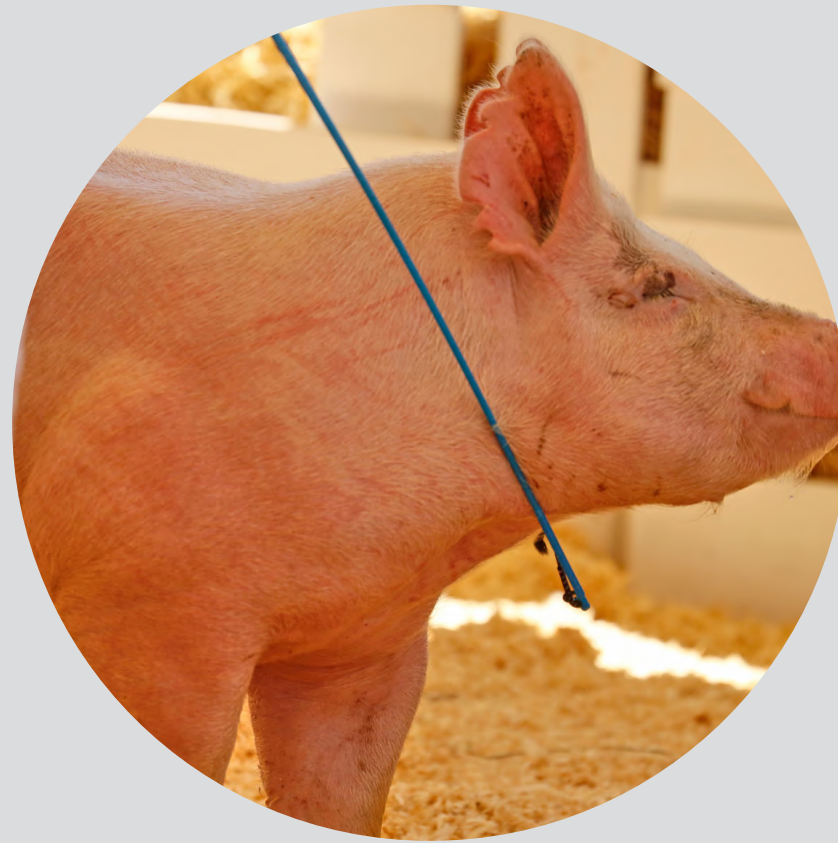


# Some of our completed Risk Research projects...



## Compliance-based intervention scheme

Rewards importers of selected plant products who demonstrate consistent compliance



## Australian Animal Disease Spread Modelling Framework

A decision support tool to assist with policy and response strategies for emergency animal diseases



## Value of Australia's biosecurity system

A model that puts a dollar figure on how much value the national biosecurity system provides by protecting assets



# Innovation - from research to reality

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**There are many examples in our work where research projects and innovation initiatives interconnect and help to provide an end-to-end solution to key challenges the department is facing. One example is biofouling management.**

Biofouling is one of the major pathways for translocation of marine pests.

The department is currently developing new biofouling requirements to better manage this biosecurity risk.

Our team have been working with the Marine Biosecurity Unit on several projects to help us work more efficiently and effectively in this space.

From world-class research with CEBRA to piloting remotely operated vehicles, its an exciting journey to be a part of.



# Our biofouling journey....

## INNOVATION PILOT



### Remotely Operated Vehicles

Testing the effectiveness of ROV's to conduct biofouling inspections

## RESEARCH



### CEBRA

Developing automated image analysis approaches to assess biofouling

## INNOVATION PROJECT



### Maritime Pathway Risk Decision Support Tool

Machine learning to provide forecasts on the level of a vessel's biofouling



# Keep in touch

## Email address

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