



Asbestos Safety and Eradication Agency – Research update

Dr Georgia Khatib

The Asbestos Safety and Eradication Agency



:: **Oversee implementation of the**
Asbestos National Strategic Plan

This means:

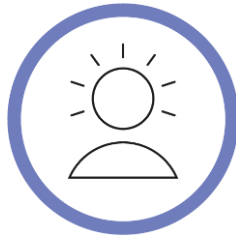
- coordinating national actions to improve asbestos awareness and the effective and safe management, removal and disposal of asbestos
- seeking that priorities and strategic actions across all jurisdictions are working towards a shared purpose



Our research function



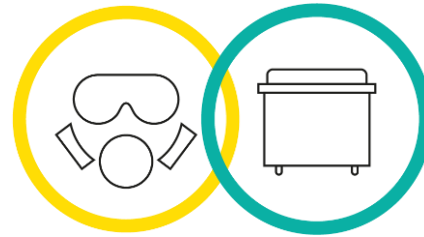
:: To commission, monitor and promote research about asbestos safety



Awareness



Identification
& management



Prioritised removal
& safe disposal



International



Research examples

PRIORITY 2

Identification
&
management

Focus on identification of legacy asbestos in-situ (particularly in the residential environment) and how we manage the legacy.

- ✓ **National residential asbestos heatmap**
- ✓ Improving asbestos disclosure at point of sale or lease
- ✓ **Technology for real-time and accurate asbestos identification and testing (Business Research and Innovation Initiative)**

PRIORITY 3

Prioritised
removal &
safe disposal

Using data to map and interrogate the amount of asbestos left in-situ, and examine options around removal and waste

- ✓ **Asbestos stocks and flows** – how much legacy asbestos is left, how much is going to waste
- ✓ **Quality, accessibility and consistency of asbestos assessments and registers**
- ✓ Asbestos illegal dumping: analysis of reduction strategies

Asbestos stocks and flows

1980



Australia's ACM stocks peaked at approximately 11 million tonnes.

2021

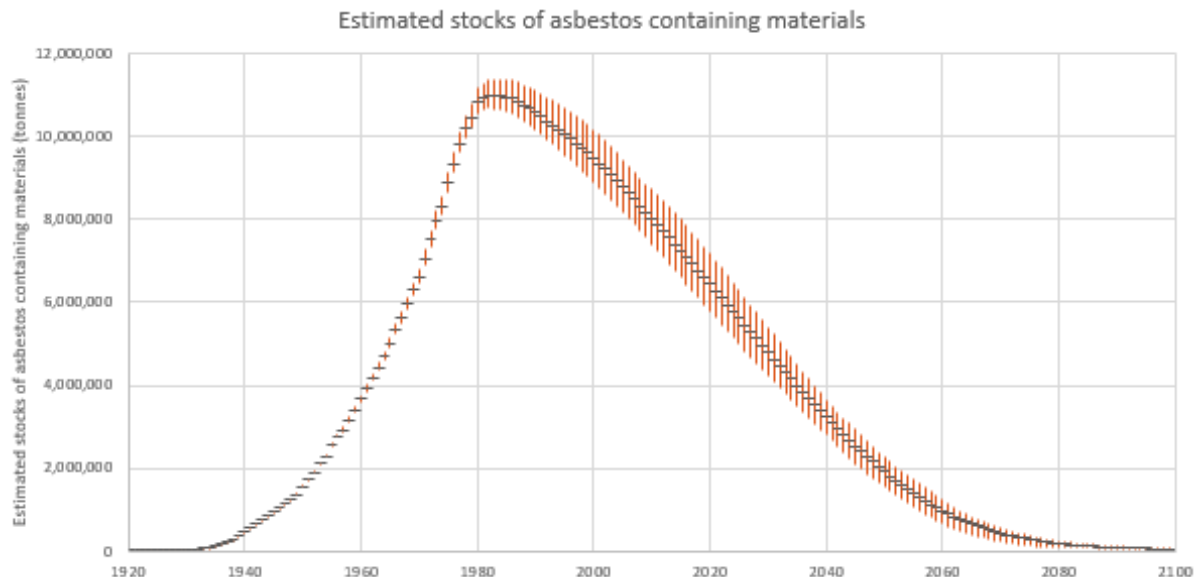


ACM stocks are estimated at approximately 6.4 million tonnes.

2030



ACM stocks are forecast at approximately 4.9 million tonnes. ACM flows are forecast to peak at approximately 167,000 tonnes.



**National
residential
asbestos
heatmap**



AI technology and legacy asbestos



:: We are using Artificial Intelligence (AI) technology for the first time to find solutions to manage Australia's residential asbestos legacy

- AI can fill the asbestos data and information gap in the residential environment
- This is more time-efficient and cost-effective than traditional asbestos assessment and testing home by home
 - > i.e. man-hours on foot, considering the more than 9.9 million dwellings in Australia
- **AIM:** to meaningfully compile all available asbestos data and information in the residential environment in a centralised format, using technology to maximise the value of this data and information, to fill in the gaps using a non-invasive research approach and expand our knowledge



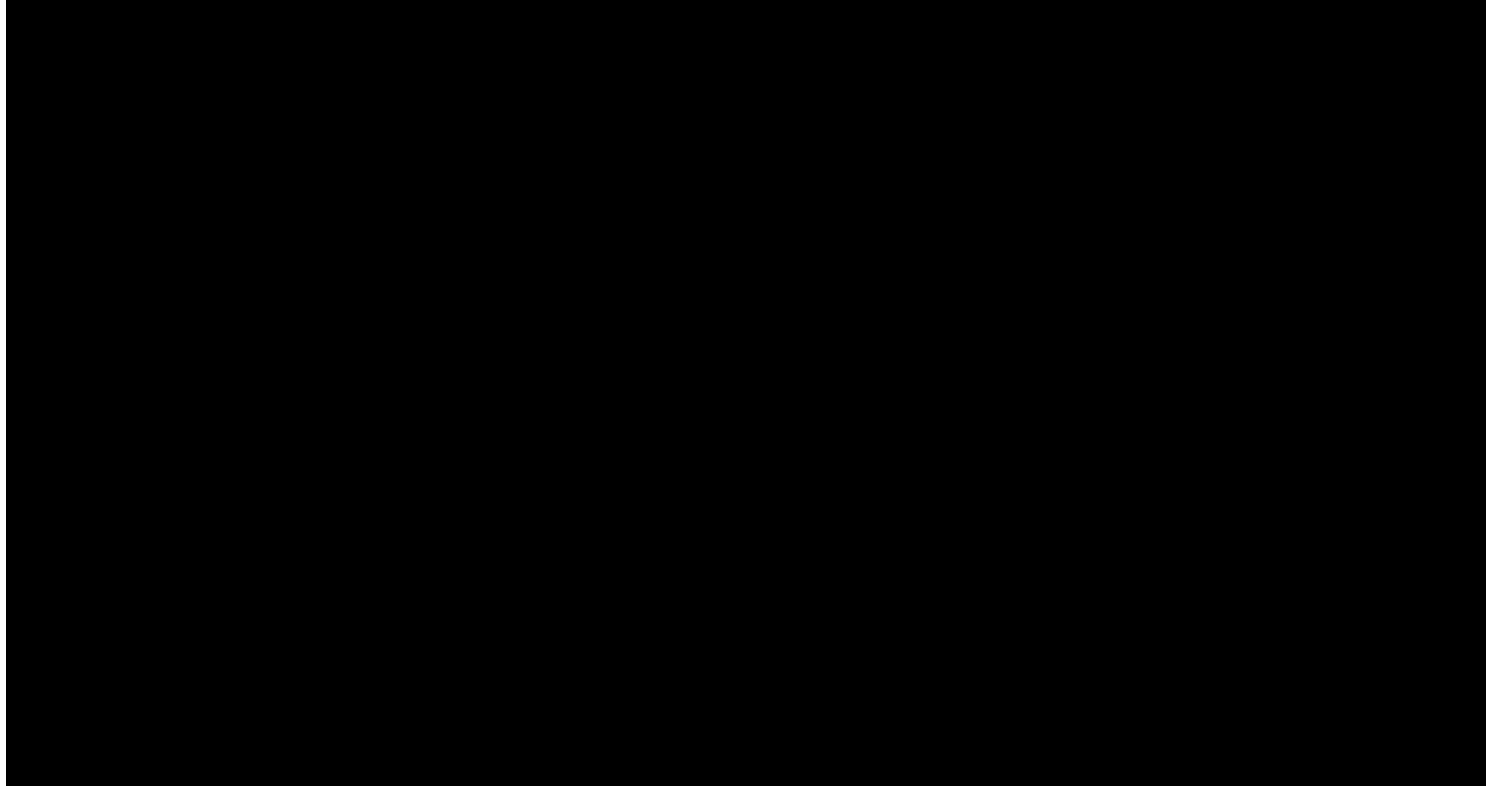
Research plan



:: A systematic approach, starting with what is feasible



Residential asbestos cement roof hotspots study



Stakeholder resource kit



:: To assist with implementation of the Asbestos National Strategic Plan

- Jurisdictional-focussed factsheets
 - > overarching national results
 - > local information at the state and local government level
- ASEA Report: The residential asbestos cement roofing legacy
 - > a brief history of asbestos cement roofing in Australia, including early importation and manufacture, and how this evolved with increasing demand
 - > information on product types, consumption, use and risk profiling
 - > strategies for managing legacy asbestos cement roofing, that can be applied in a planned systematic way



Asbestos in remote Indigenous communities

Can technology be used to advance the identification of asbestos in remote Indigenous communities?

In consultation with the National Indigenous Australians Agency (NIAA), we are scoping the use of:



Google Street view to detect ACM external wall cladding in structures, where available



Aerial and satellite imagery to detect ACM illegal dumping



Aerial and satellite imagery to detect ACM roofing



Google Street view – external walls




National residential asbestos heatmap



:: Developing the first national map showing the likelihood of ACM presence or absence in the whole-of-home

- Commenced November 2021
- Will be based on several input datasets that have been shared with the agency from government and non-government sources, as well as internally generated data
 - > commercial asbestos assessment data—lab testing or expert opinion on samples taken or observed in approximately 300 residential properties in NSW only
 - > government data—ACM status of approximately 136 000 government-owned or managed residential properties, across 6 jurisdictions (WA, NT, QLD, NSW, VIC, TAS)
 - > research data (i.e. roof hotspots study, LVAT study, ACM Check app)

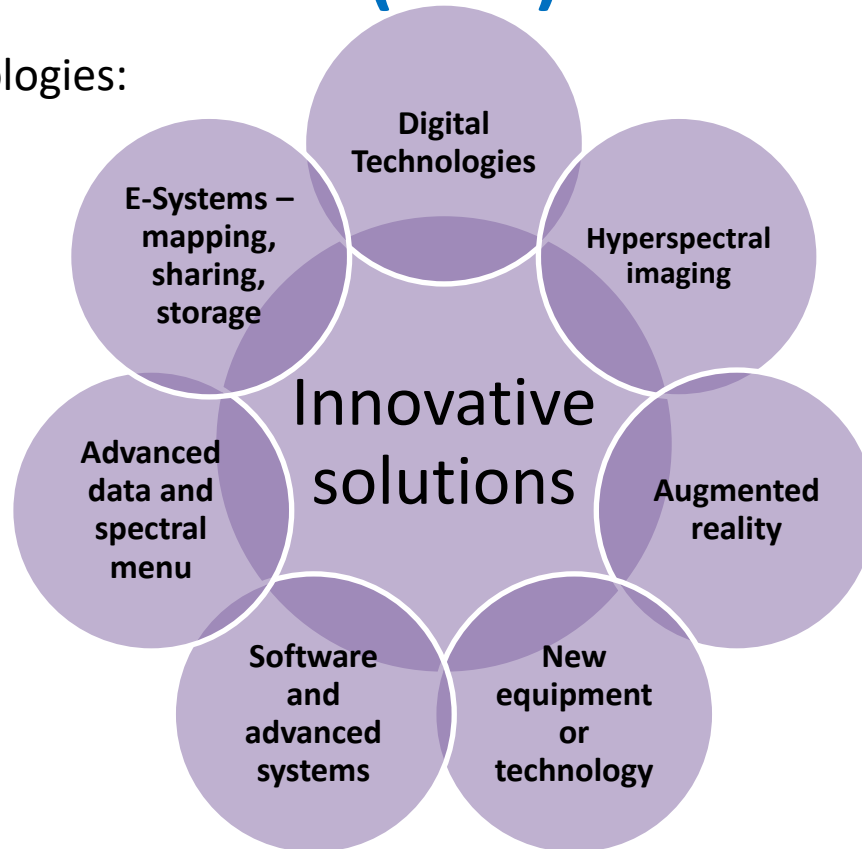


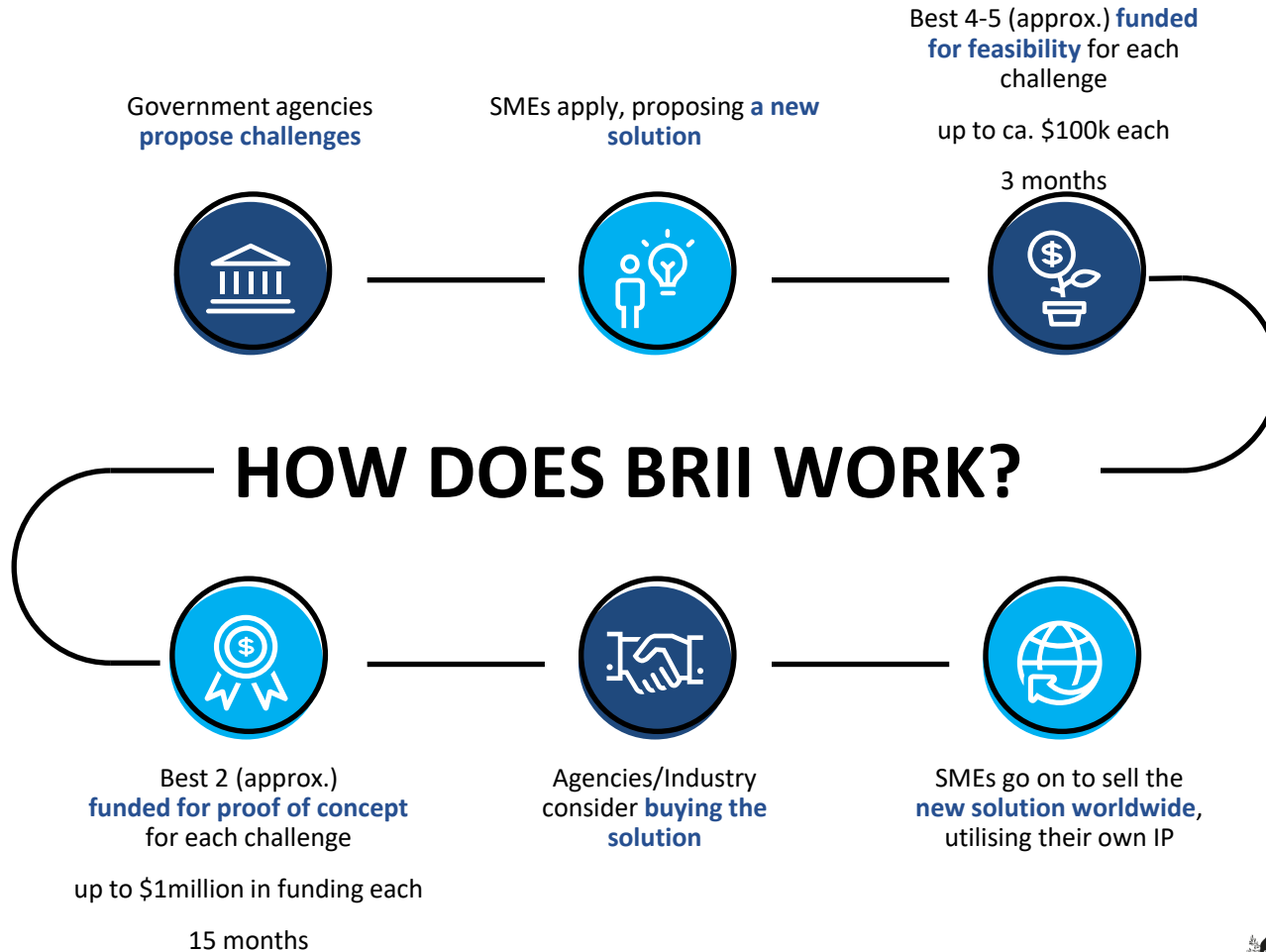
A close-up photograph of a roof gutter. The gutter is white and runs diagonally across the frame. Above it are dark, weathered roof tiles with some yellowish-orange spots, likely moss or algae. The background shows green foliage.

**Technology for
real-time and
accurate asbestos
identification and
testing**

Business Research and Innovation Initiative (BRII)

Possible technologies:





ASEA's BRII RegTech asbestos projects

- Active Environmental Solutions
 - ALERT: real-time monitoring and warning device for airborne asbestos
- Portable Analytical Solutions
 - microPHAZIR: in situ testing of 6 asbestos types in bulk and airborne filter samples
- Flawless Photonics Pty Ltd
 - Hand-portable in-situ real-time non-contact asbestos sensor
- Predictive Analytics Group
 - In situ detection of asbestos in wall panelling using microwave technology
- UACS Consulting Pty Ltd
 - Asbestos Vision: A smart phone app to identify asbestos and connect people



Asbestos assessments and registers



Quality, accessibility and consistency

- **SafeWork Australia** – *In response to the Boland Review of WHS Laws, is developing additional guidance to improve the quality of asbestos registers*
- **Victorian Asbestos Eradication Agency (VAEA)** – *developed a streamlined asbestos risk assessment model to ensure that all asbestos identified in Victorian Government buildings is described and graded consistently in a centralised asbestos register*
- **Quick-guide to residential asbestos assessments** – *as part of ASEA's Disclosure of Asbestos in Residential Properties campaign, guidance will be developed to assist home owners understand the importance of identifying asbestos in their properties and their role in asbestos safety*



Engage with us

Your expertise is
valuable

Always seeking
contacts to share
technical advice

Contribute to
ASEA research



Australian Government

Asbestos Safety and Eradication Agency

Contact us

Website | www.asbestossafety.gov.au

Email | enquiries@asbestossafety.gov.au

Phone: | 1300 326 148