

Minerals Down Under Flagship



UNCOVER

A national opportunity

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MINERALS DOWN UNDER FLAGSHIP
www.csiro.au



CSIRO Flagships



BIOSECURITY



CLIMATE ADAPTATION



DIGITAL PRODUCTIVITY
AND SERVICES



ENERGY



FOOD FUTURES



WATER FOR A
HEALTHY COUNTRY



MINERALS DOWN
UNDER



FUTURE
MANUFACTURING



SUSTAINABLE
AGRICULTURE



PREVENTATIVE HEALTH



WEALTH FROM OCEANS

Exploring in a changing world....

CHALLENGES

Declining discovery rates

Declining ore quality

Productivity challenge: costs

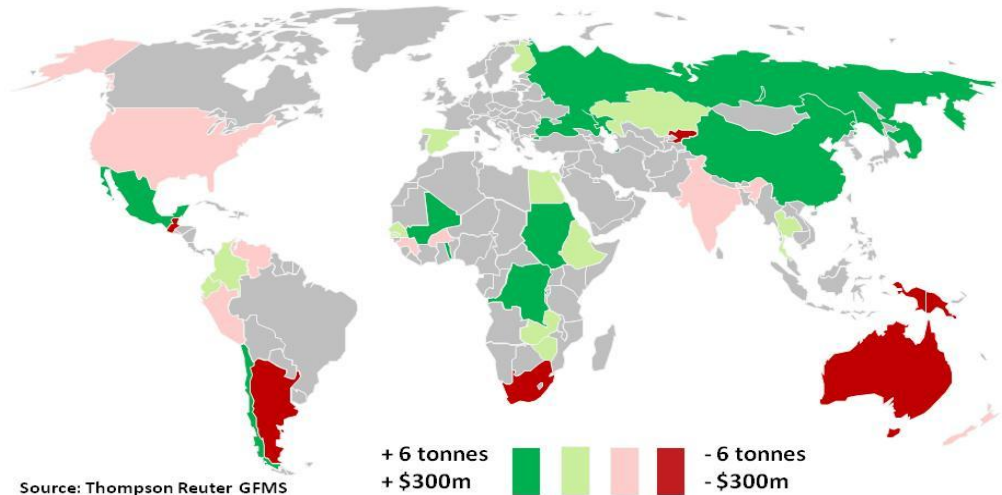
Deeper mining environments

Social benefit

Environmental performance

IMPACT

▮ Australia's share
Change in gold production: 2012 - 2013



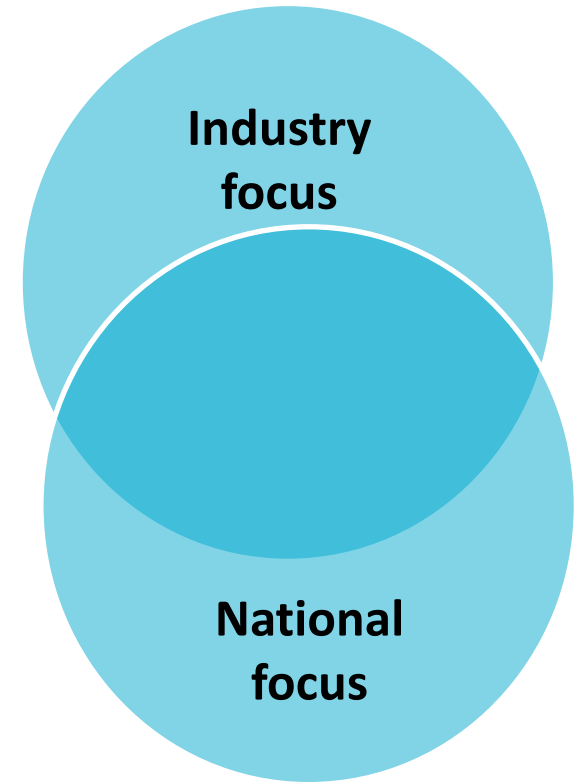
Innovation for the nation...

Industry drivers

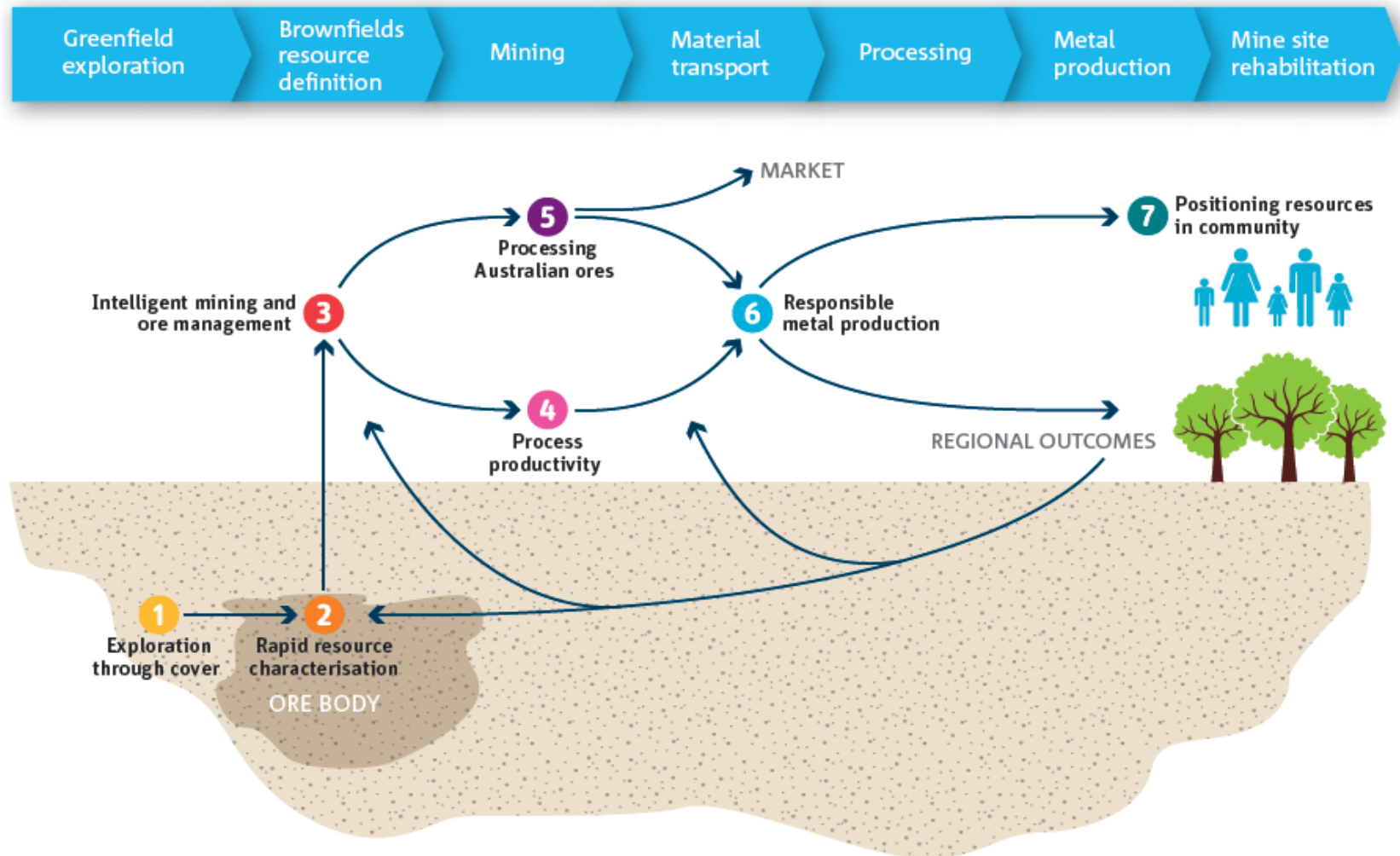
- shareholder value
- *global* resource opportunities
- balance technical, social and sovereign risk

National drivers

- maximise benefit from *Australian endowment*
- compete on global markets
- underpin national prosperity
- balance resource utilization
- manage social pressures



Exploration under cover links to the value chain...



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EXPLORATION THROUGH COVER Minerals Down Under

★ The Challenge

Exploration
investment



Cost-efficient
discovery



Exploration
success



New greenfield
opportunities

Major CSIRO initiatives linked to UNCOVER...



Discovering
Australia's
Mineral
Resources

Intelligent
Mining and
Online
Analysis

Advanced
Processing
Technologies

Sustainable
Metal
Production

Australian
Mineral
Futures

Exploration through
cover

Rapid resource
characterisation

Intelligent mining &
ore management

Process productivity

Processing
Australian ores

Responsible
metal production

Positioning resources
in community

Detection
Technologies
Under Cover

Footprints of
Mineral
Systems
Under cover

Mineral
systems
linked to
Brownfields
Exploration

Geological
controls on
downstream
performance

Advanced resource characterization

Analytical Spatial Information Services Stack –
National Data Platform

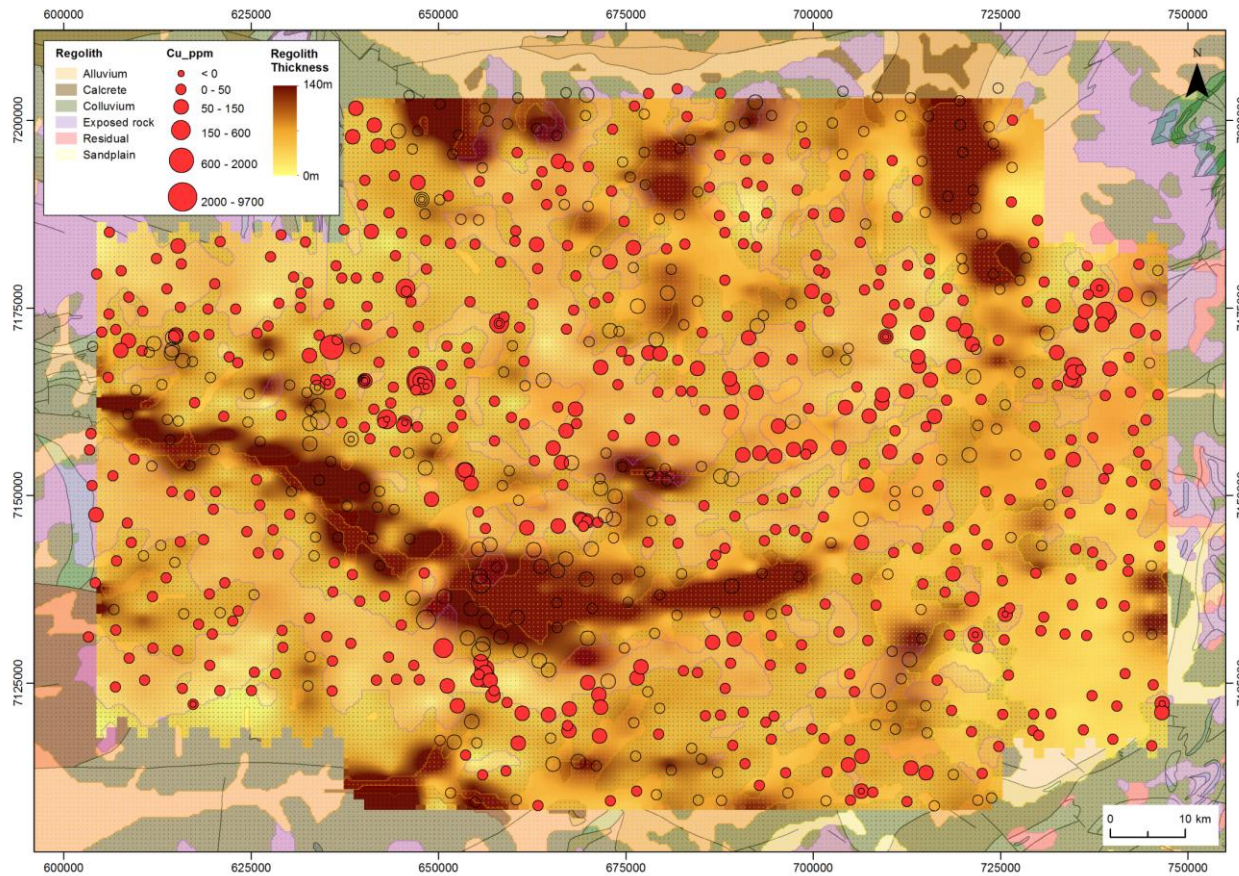
UNCOVER....

- A national challenge that matters
- Australia is well placed
 - Industry, government and innovation network
 - recognized globally, aligned interests
- Greenfields opportunities
 - Don't forget the new brown fields search space
- Power of geography to focus & empower local action
 - Regional exploration concepts
 - Tools for regions
 - Target access
 - Relevant data

Partnerships!

An example – the Capricorn Orogen...

Linking regolith and geochemistry with geophysics to underpin exploration workflows that work in the Capricorn



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A challenge for the week!

It's much easier to do something...

...if you know what you want to do!

1. What innovation is required?
2. How will work be coordinated?
3. Who will lead partnerships?
4. How will UNCOVER be resourced?