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## ***Mining and Natural Resources***

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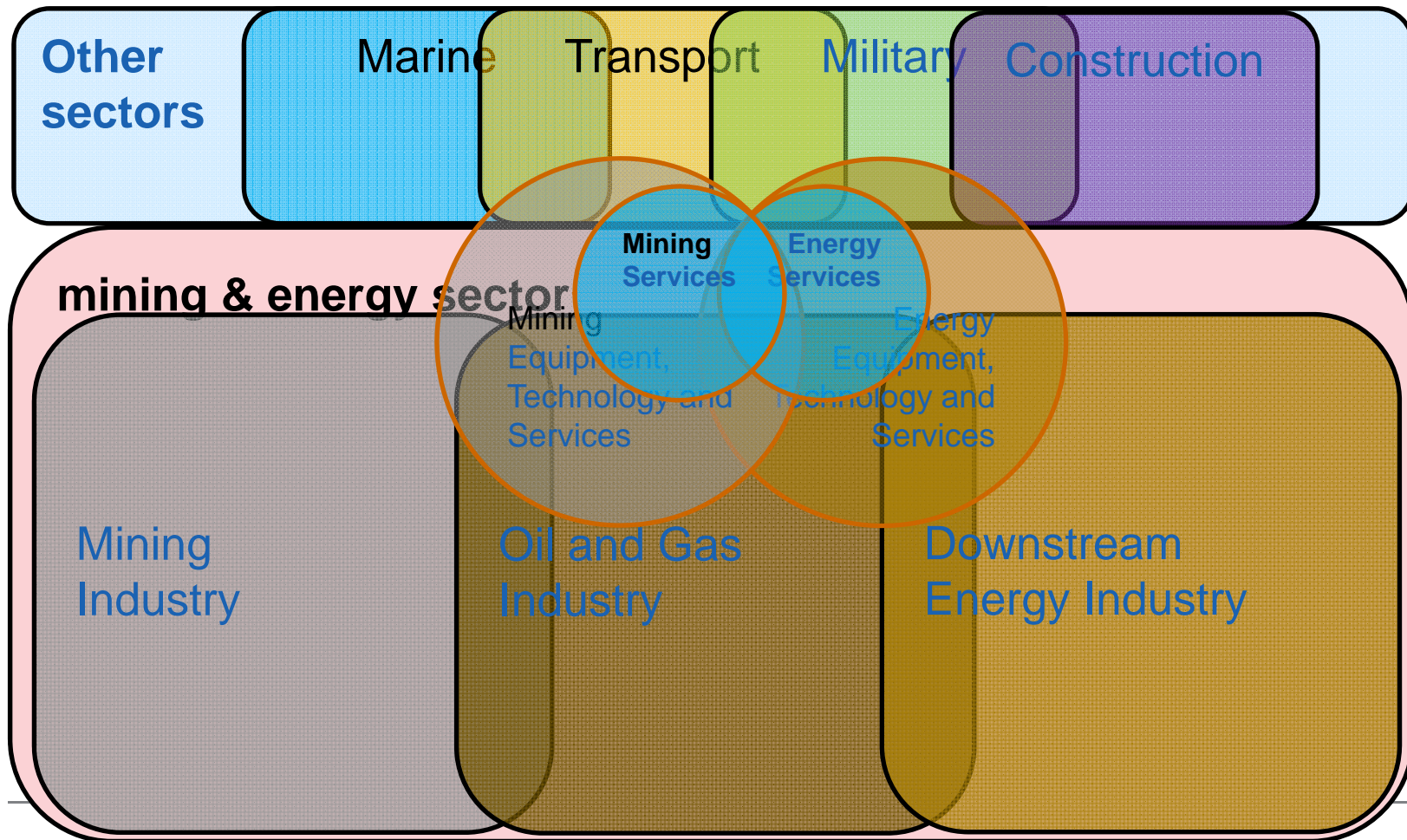
*seek* LIGHT

# Key Message:

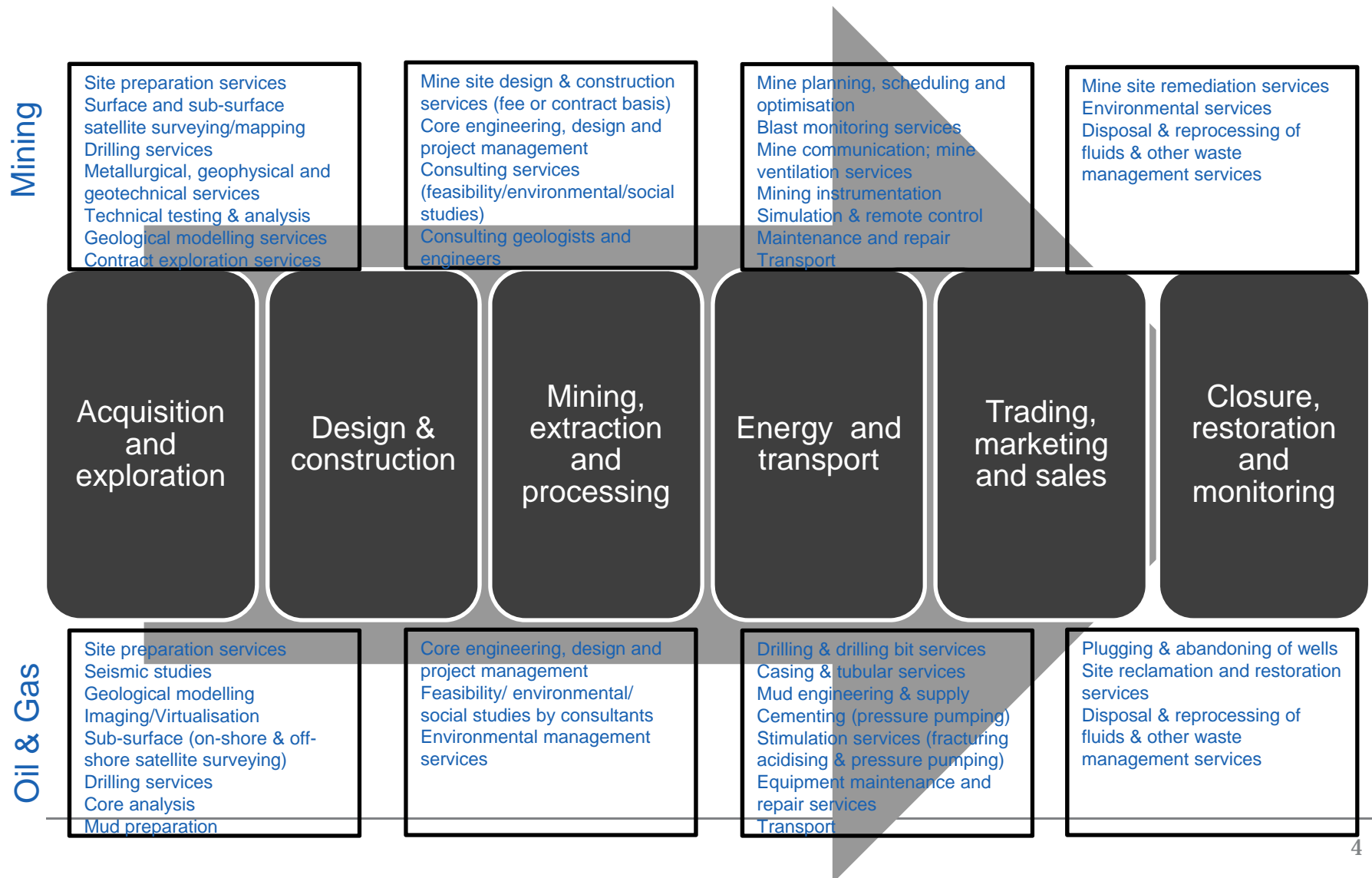
## Importance of services value-addition

- (1) Boosting efficiency of production to ensure a strong supply side, to meet the regions' growing demand for mining and energy resources, requires more focus on efficiency of **mining and energy services inputs**;
- (2) The factors driving competitiveness in mining and energy services inputs are mainly policy-driven;
  - **International connectivity** is vital as is **domestic regulatory efficiency** (but the STAR data base shows clear evidence of trade, investment and regulatory restrictions still in place)
- (3) Getting the services side right can be make or break for competitiveness in all other sectors, including extractive industries;
  - this is why the Philippines' initiative for a new APEC Services Cooperation Framework, to be announced by APEC Leaders in November is so fundamental
  - I focus on services growth examples from Australia, Chile and Papua New Guinea

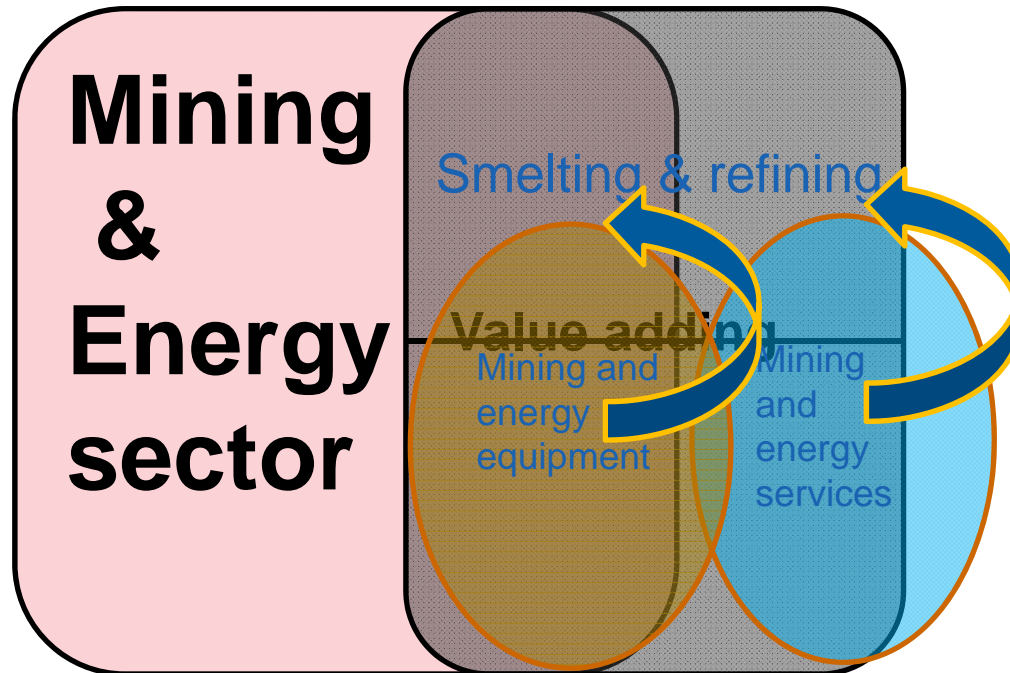
# Mining and energy industry ecosystem



# Services value-addition along the mining and energy value chain



# Role of services in upgrading value-add



In Australia, for every \$1 of mining revenue, 40¢ is spent on goods and services\*

\*Source: Reserve Bank of Australia

# Drivers of services competitiveness

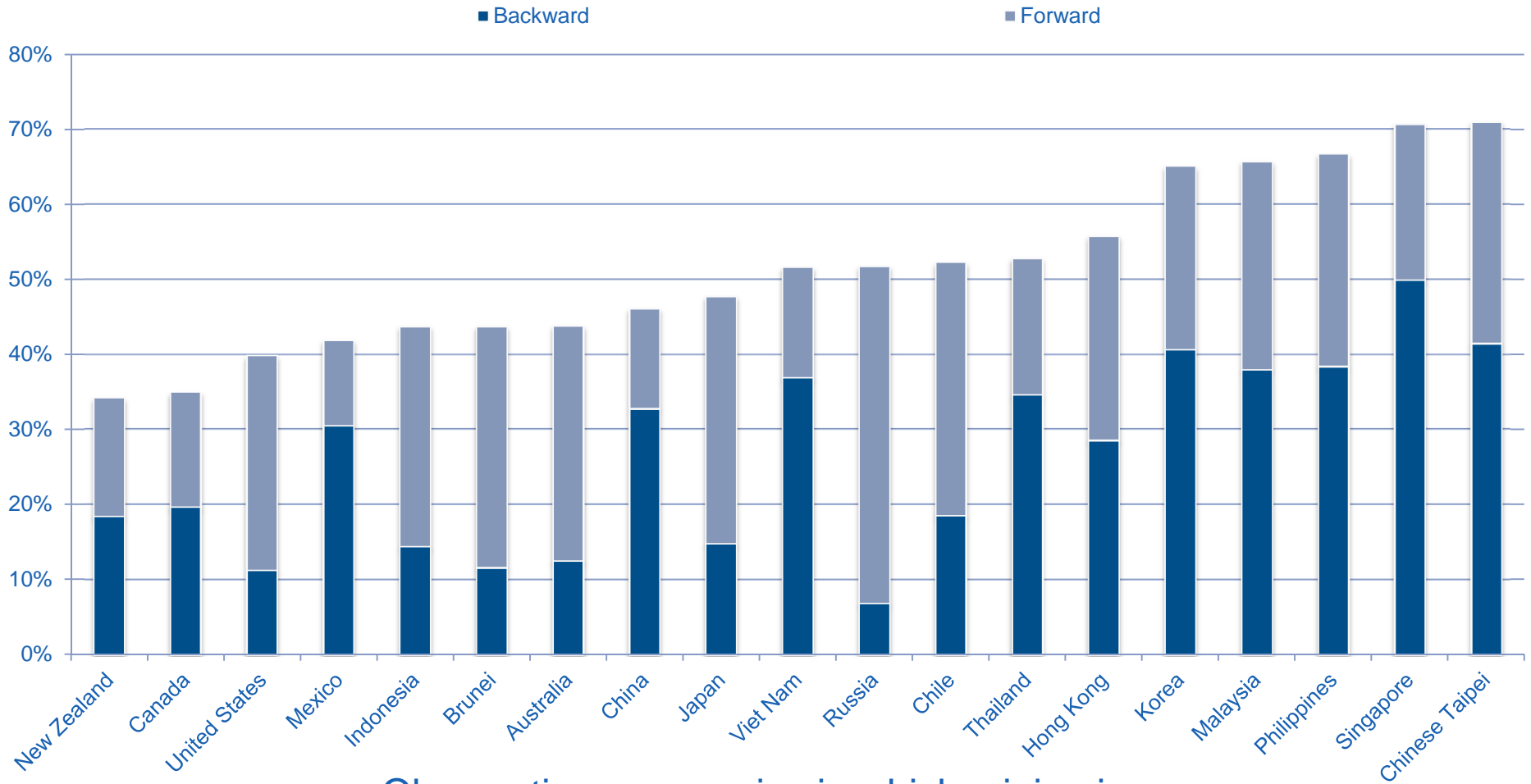
(largely policy driven)

1. **Human Capital** (access to talent, education, skills, ideas, customer focus)
  2. Investment in **Intangible Assets** (corporate IP including business methodologies) & supportive environment for collaborative services **Innovation**
  3. Access to **Digital** and other knowledge-economy **Infrastructure**
  4. Quality of **Institutions** (complexity, rigidity, independence) & **Efficiency of Domestic Regulation** (reduce compliance burdens & allow firms flexibility to adapt to change)
  5. Global and Regional **Connectivity** with the market (trade & investment reform, ability to move people, ideas and data, standards, technical interoperability, mutual recognition, seamlessness of regulation, export promotion)
  6. Deliberate **Policy Focus** (statistics, inter-agency coordination, national services strategies and services competitiveness roadmaps)
  7. Organised **Services Business Advocacy** and Public-Private **Stakeholder Consultation**
-

# Measures impacting mining & energy services

- Restrictions on FDI (joint venture requirements, restrictions on legal form of establishment or quotas on the number of foreign operators)
- Restrictions on the movement of professionals/specialists across borders to supply services
- APEC's STAR data base sets out initial business-friendly descriptions of applied regimes affecting mining services and oil and gas services
- These restrictions impact on opportunities to access and integrate into global and regional mining and energy services value chains (GVCs)

# GVC participation rate as % of gross exports 2009

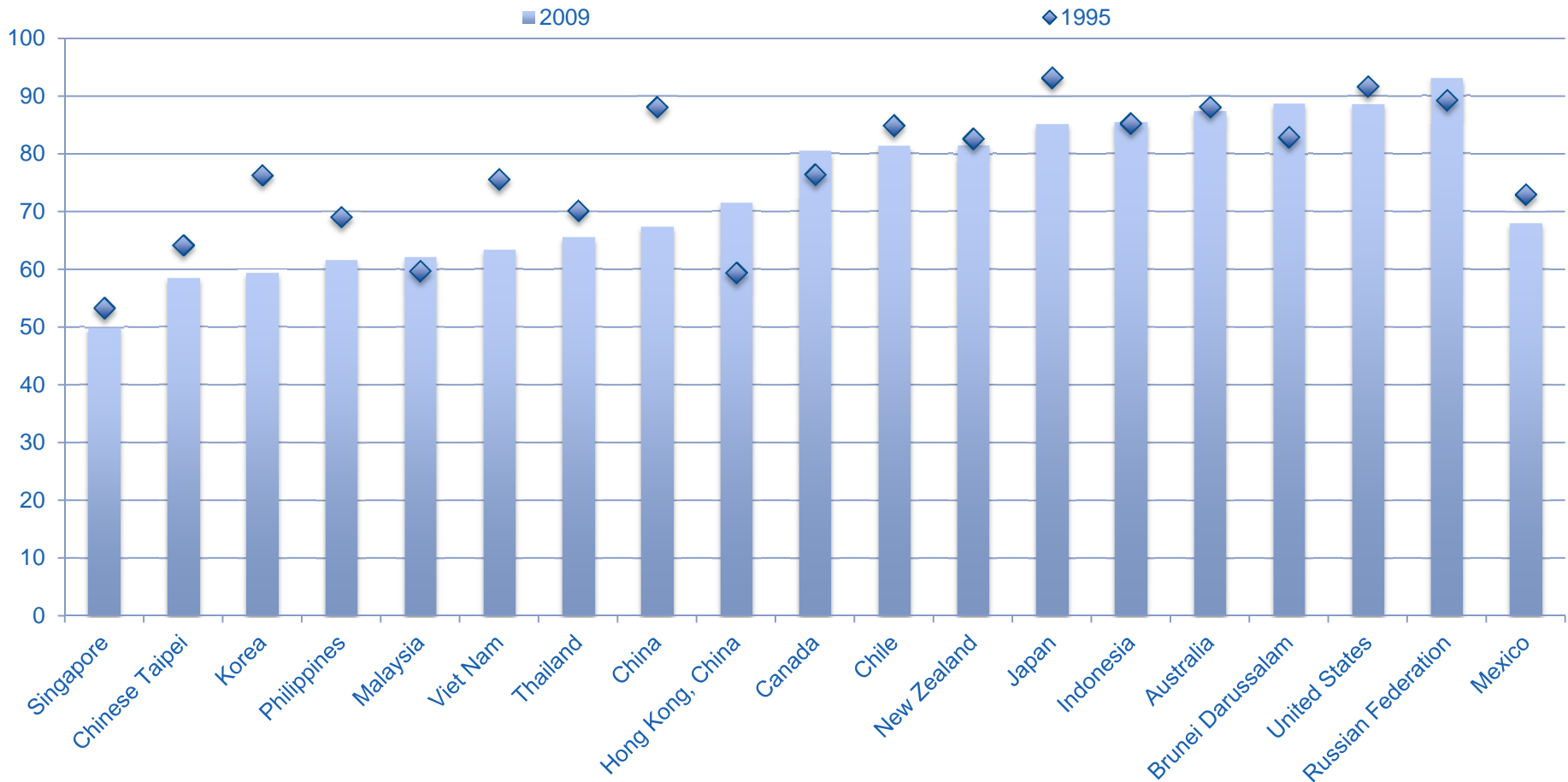


Observation: economies in which mining is important tend to have stronger forward than backward linkages into global value chains

Source: OECD/WTO TIVA data



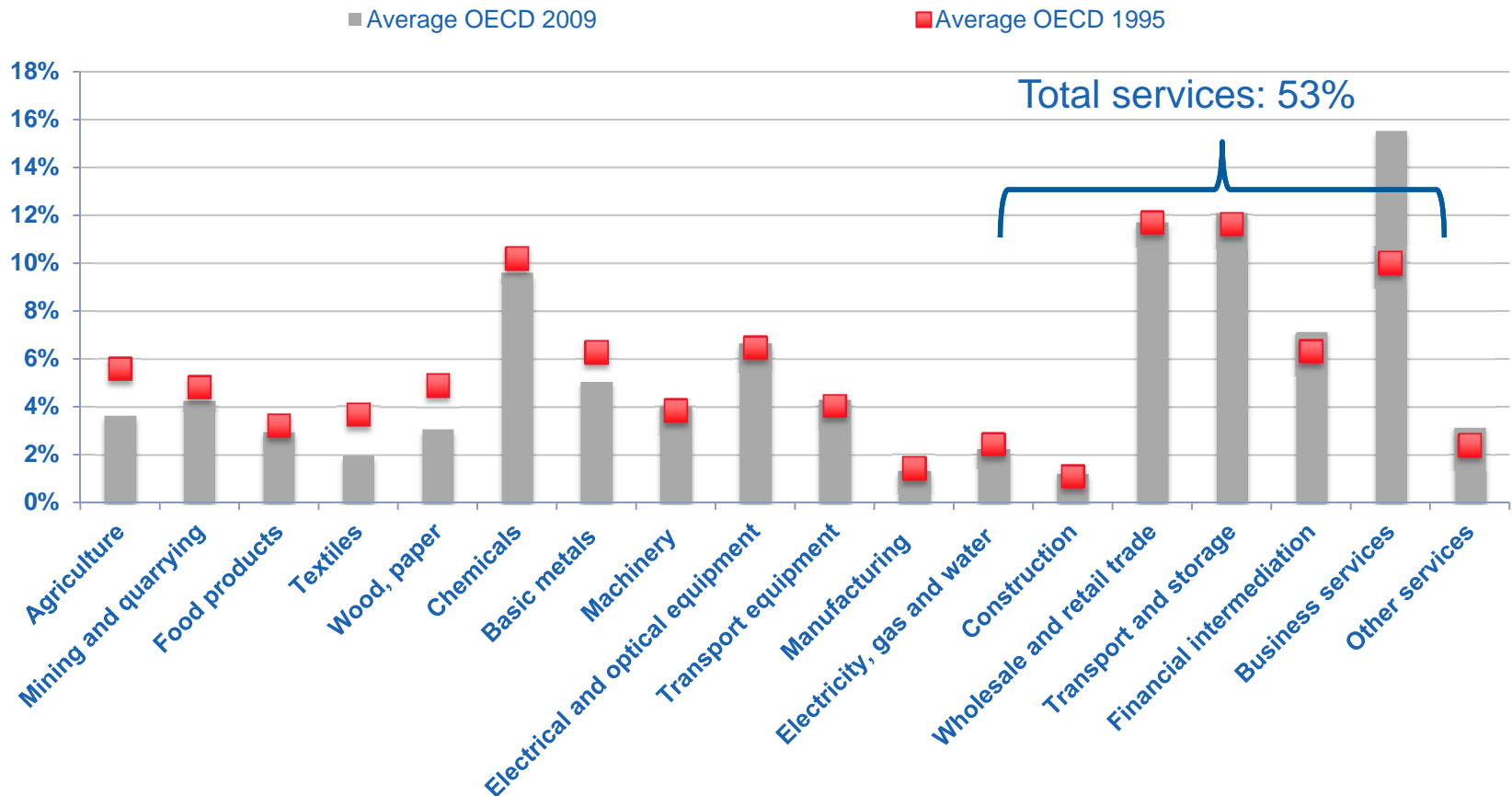
# Domestic value added as a % of gross exports



Question: Do economies for which mining is important tend to have higher shares of domestic value added in their exports? (OECD average 70% / APEC average 74%) And to be experiencing less decline in DVA?

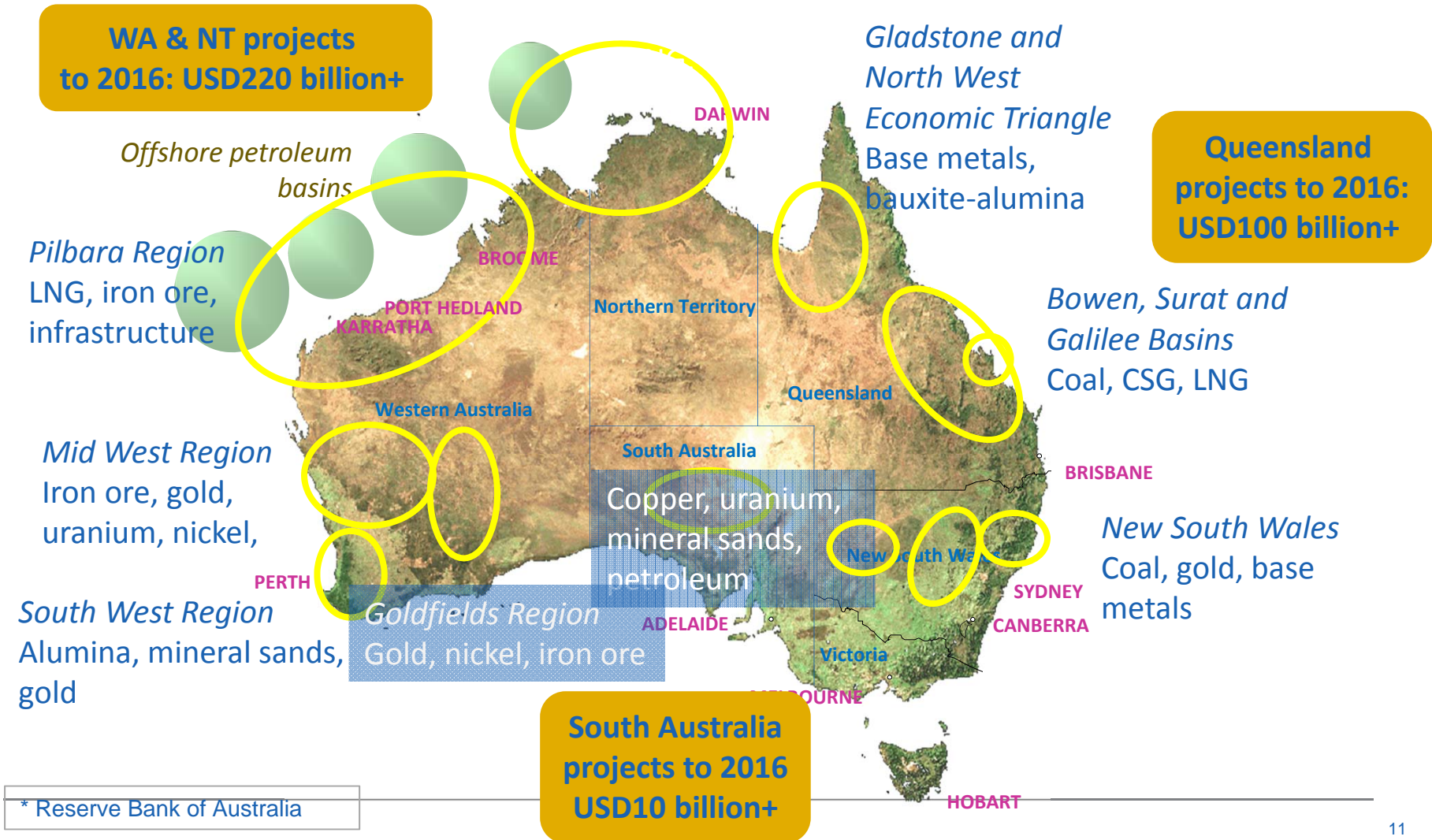
Source: OECD/WTO TIVA data

# sector shares of exported domestic value added (TIVA data for OECD countries)

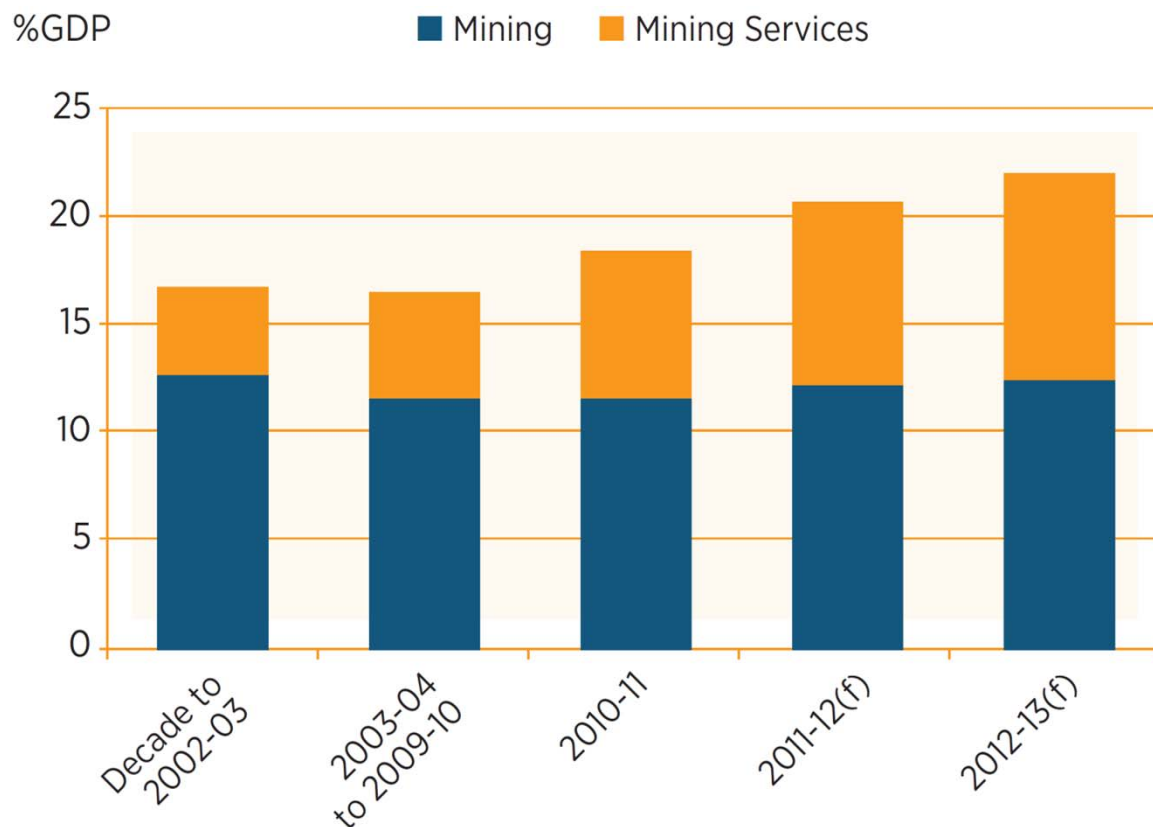


Answer; The evidence is not clear; and in any case don't assume this would be good for competitiveness?

# Australia has just seen the largest mining investment wave since the 1800s gold rushes



# What is less well known is that the mining equipment, technology and services (METS) grew faster than mining itself



## 2010-2013

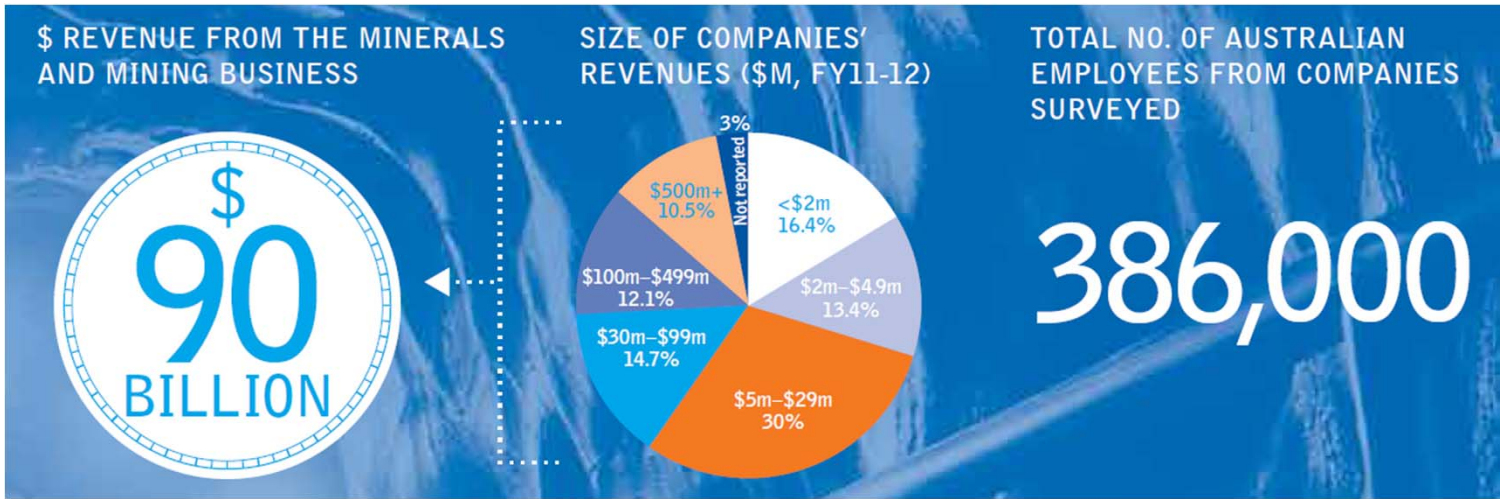
*METS* output grew at 15 to 20% a year

*METS* contribution to Australia's *GDP*

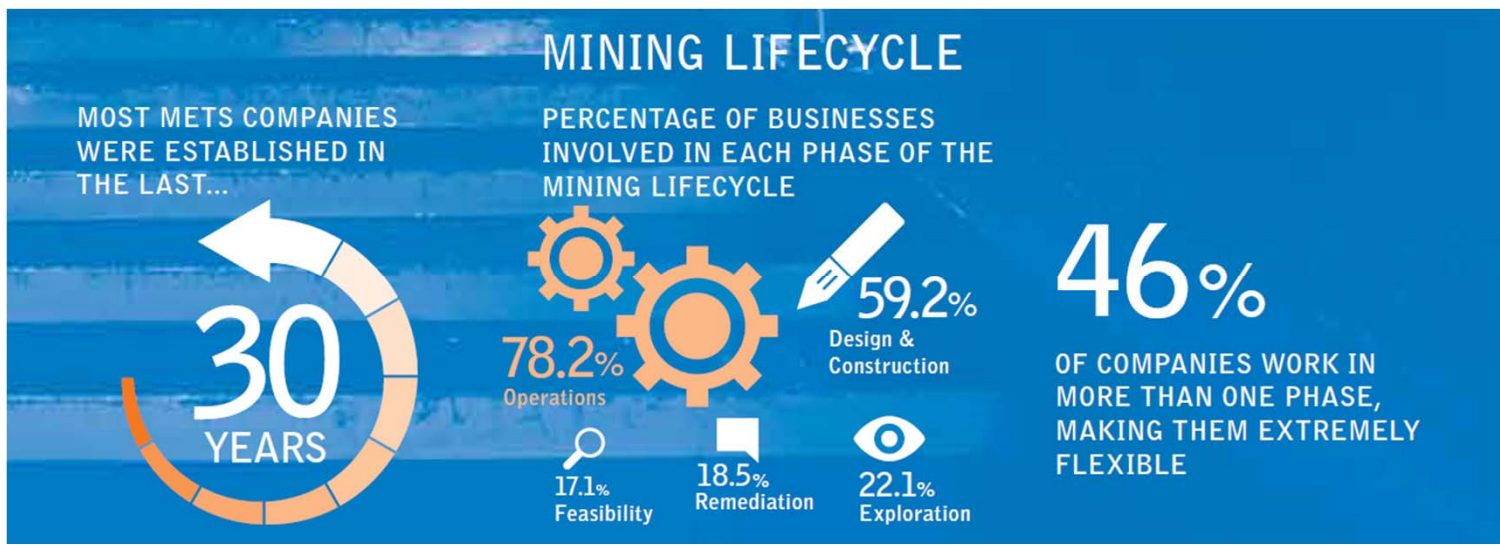
- 6.7% in 2010-11
- 9.4% in 2012-13

# METS is now a very important industry sector to Australia

30% OF REVENUE FROM EXPORTS



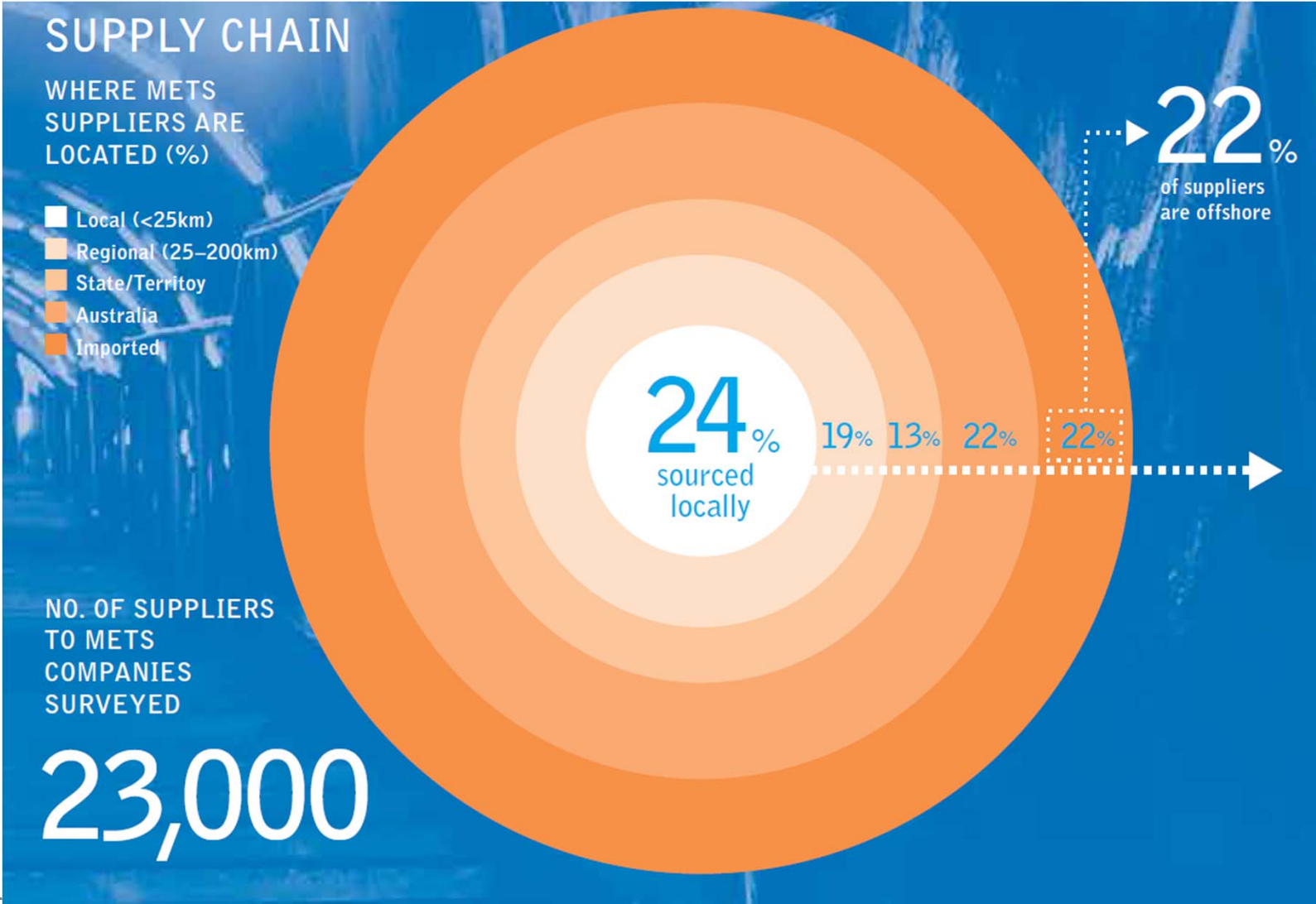
40% OF MINING REVENUE SPENT ON GOODS AND SERVICES



Sources: Austmine, Reserve Bank

**METS = Mining Equipment, Technology and Services**

# ...with deep links into the local economy



Source: Austmine

# Mining & energy services firms are located all over Australia, not only in the mining areas

## Western Australia MEServices firms

34 EPCM / engineering / construction

26 consulting

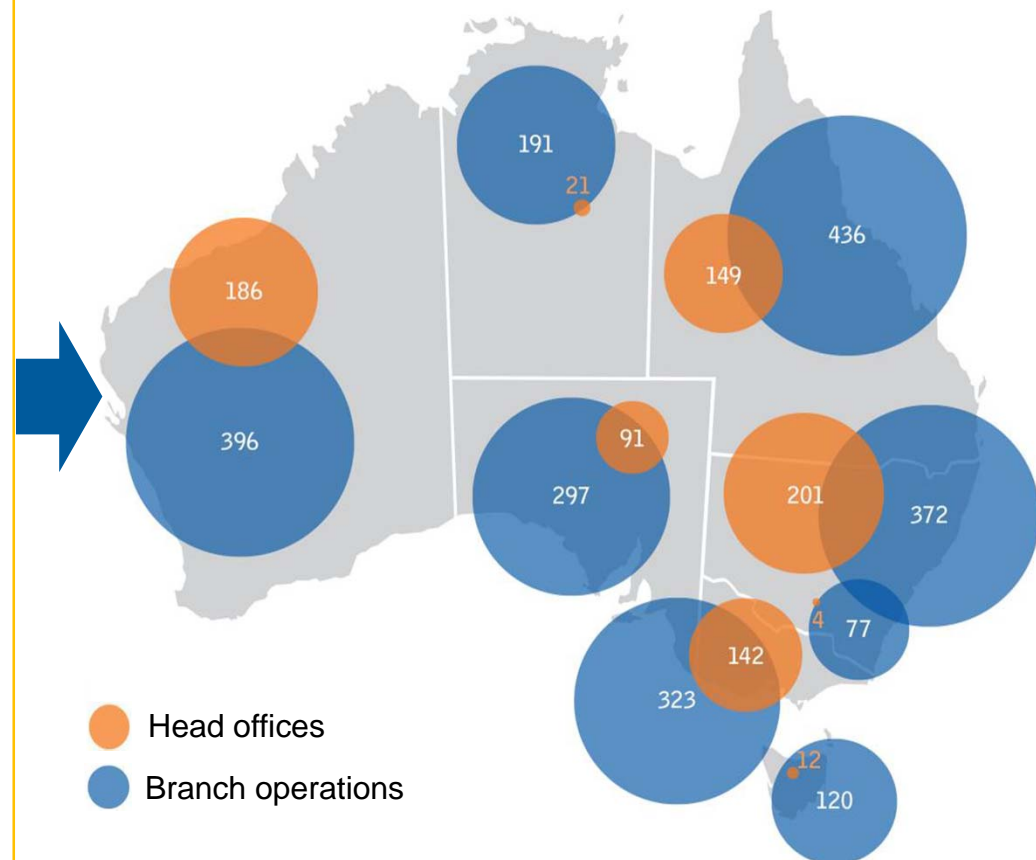
27 contract mining

10 IT developer/ equipment provider

10 technology development/application

15 other professional services

18 other

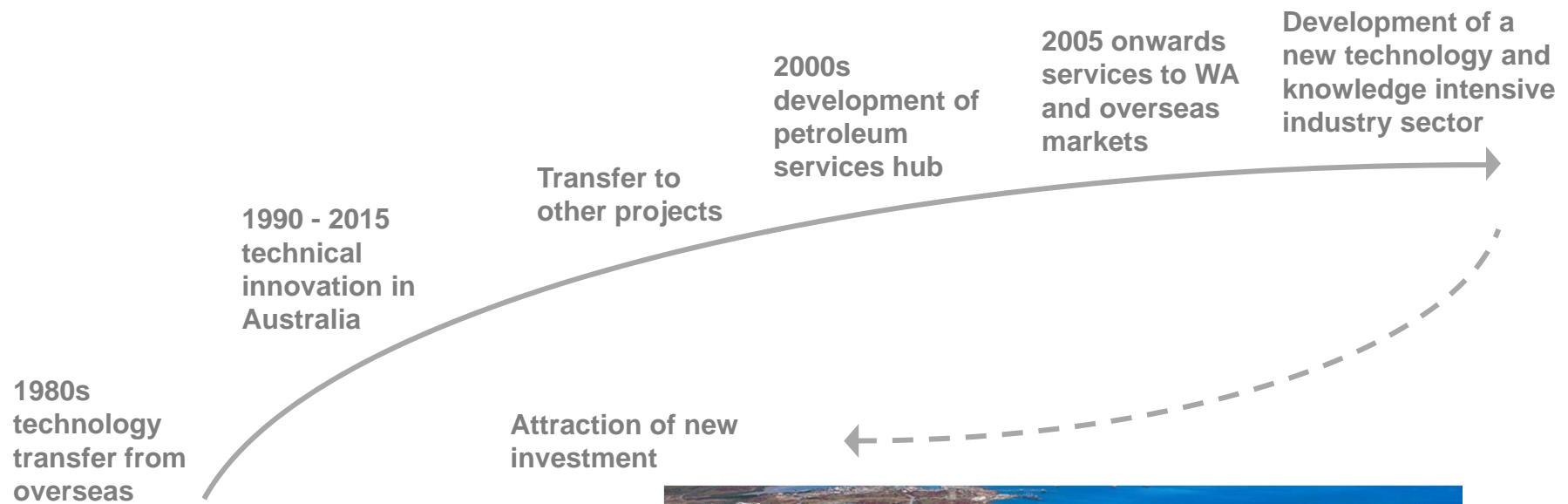


Source: Austmine 2013

# The METS sector is responsible for a major diffusion of knowledge and technology

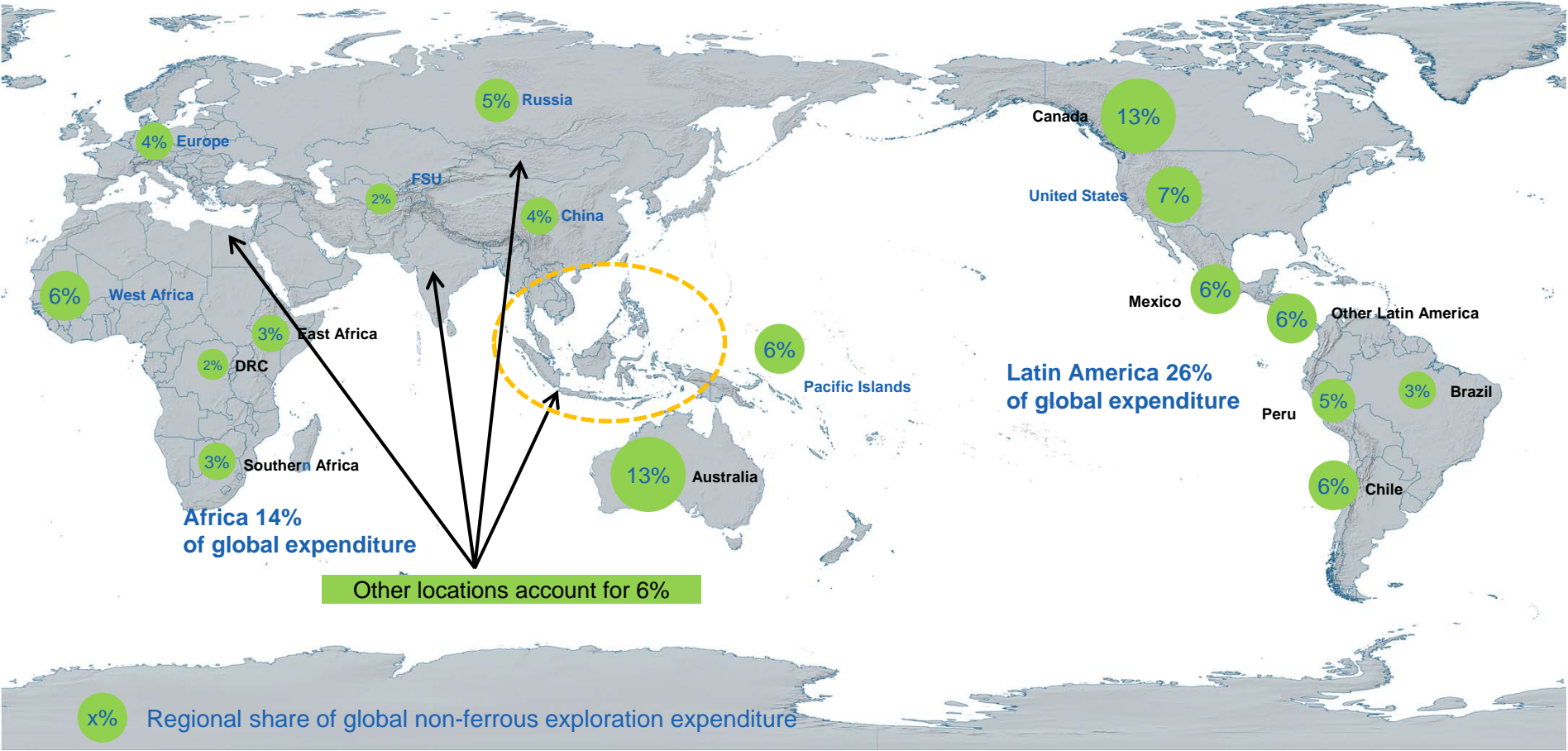
## *NORTH WEST SHELF EXAMPLE*

*Application and development of technologies previously not available in Australia*



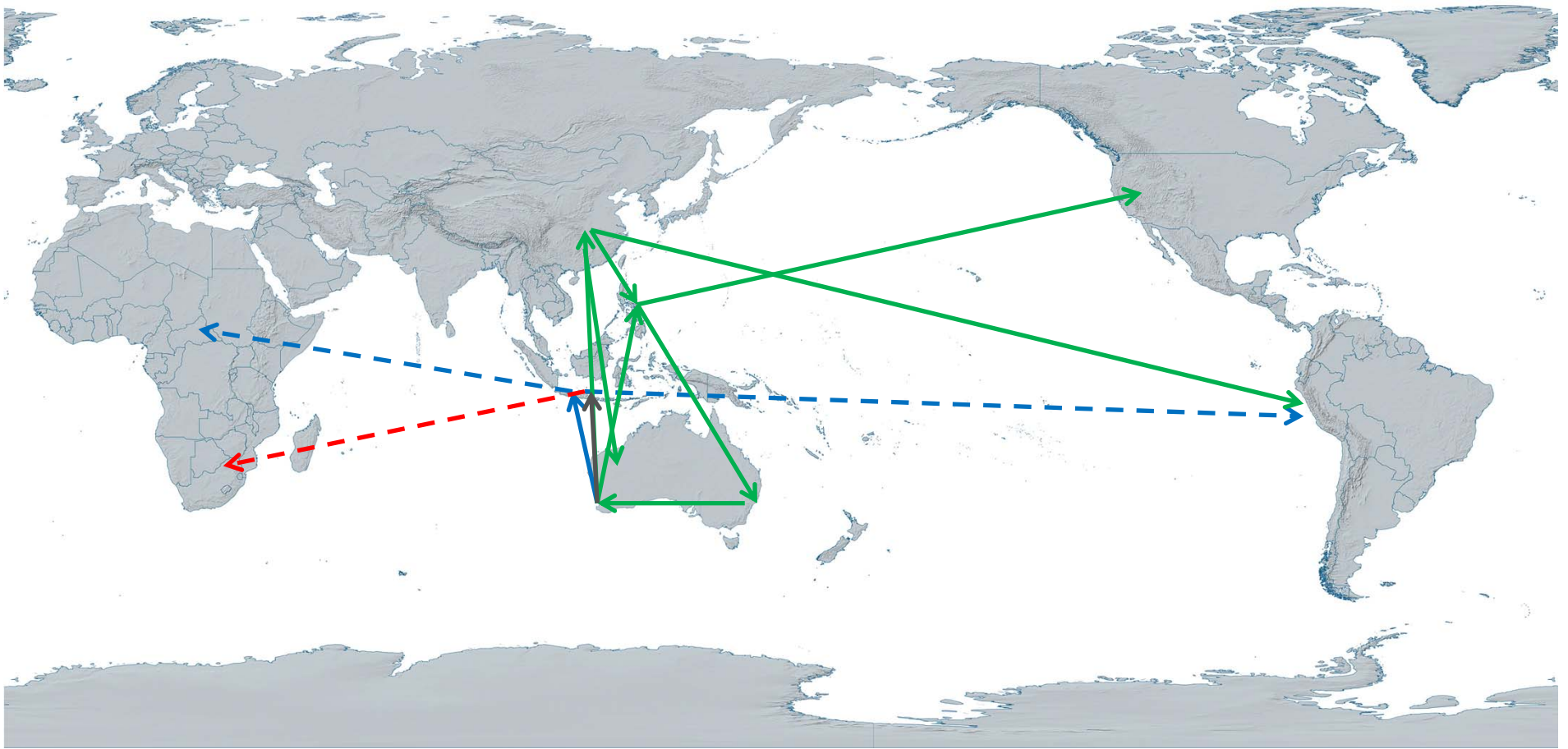


# Offshore opportunities: global investment destinations for mining technology services eg non ferrous exploration



Source: SNL Metals and Mining World Exploration Trends 2014

**This global market generates opportunities for multiple locations of solution-oriented skill sets in exploration services value chains**





## Chile is moving towards a new stage: mining services

- To face local challenges:
  - ✓ New environmental standards.
  - ✓ Productivity and increasing of costs.
- To export to other mining countries.

**Rodrigo URQUIZA**  
**Chilean Copper**  
**Commission**

APEC Symposium on  
mining and energy  
services, Perth  
June 16-18, 2015



# Chile's Mining National Program

- Target: strengthen mining industry **and** suppliers' productivity, competitiveness and innovation to boost Chilean development.
- Long term goal, but starting today:
  - To have, at least, 250 Chilean supplier companies at world class standard by 2035.
  - To export US\$10b in goods and services intensive in knowledge and technology.



## Local Services success story: Anitua Group, LIHIR Island



**Lihir is the world's 3<sup>rd</sup> largest gold mine – located in a remote volcanic island crater & part powered by geothermal energy**



Founded in 1989 by a group of Lihir Island landowners to expand business alongside the Lihir mine

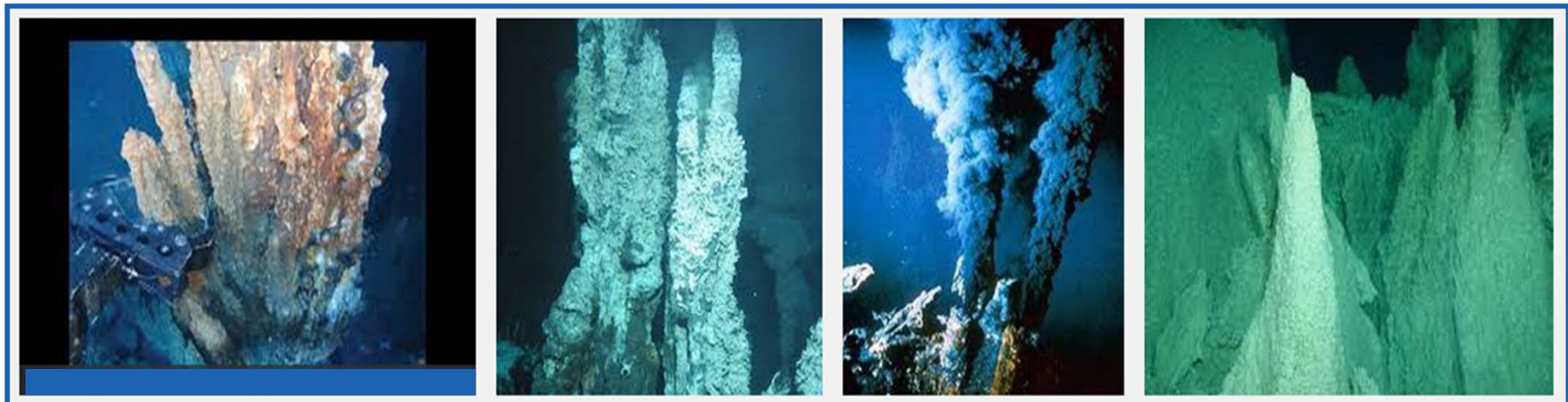
Now a diverse group of specialist companies working throughout PNG in: contract mining, road & civil construction, mine site support, quarrying, mine training, design & project management, property investment & management  
Employ over 1500 people on Lihir Island and another 2000 throughout PNG

Anitua group has recognised international standards, especially in safety and training  
Strengths: local experience/cultural knowledge, trained staff & strong management

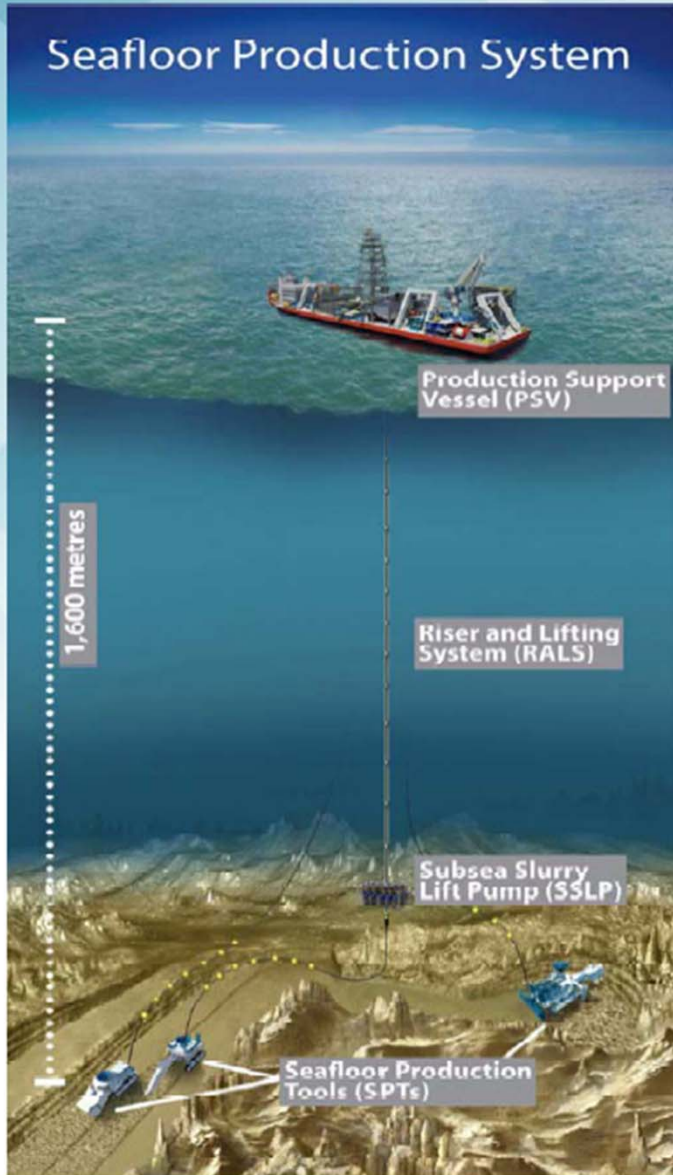
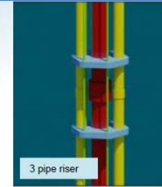
**WORLD FIRST -**      **LEADING EDGE**  
**DEVELOPMENT**  
**SOLWARA 1 MINE**



- The world's first offshore, deep sea mining lease in 2011 – Solwara 1 prospect in the Bismarck Sea. This will be a sea-floor production system at a depth of 1600m, with no anticipated land-based support
- The contract for the Production Support Vessel is let to a shipyard in China.
- The Seafloor Production Tools are in various stages of manufacture (UK) as is the Riser & Lift system (USA). All of these pieces of high-tech equipment are very services intensive



# Seafloor Production System



Alluvial mining is not forgotten: upgrading with a view to doubling alluvial mining exports by 2020





# Mining and Energy; an engine for growth, but fundamentally dependent on efficient mining and energy services inputs

