



COCHILCO
Ministerio de Minería

Gobierno de Chile

Mining in Chile, some proposals to face the future in a collaborative way

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 @CochilcoChile

AGENDA

01

Chile and the
mining

02

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challenges -
new vision

03

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04

Oportunities
for
colaborations

05

Final remarks



01

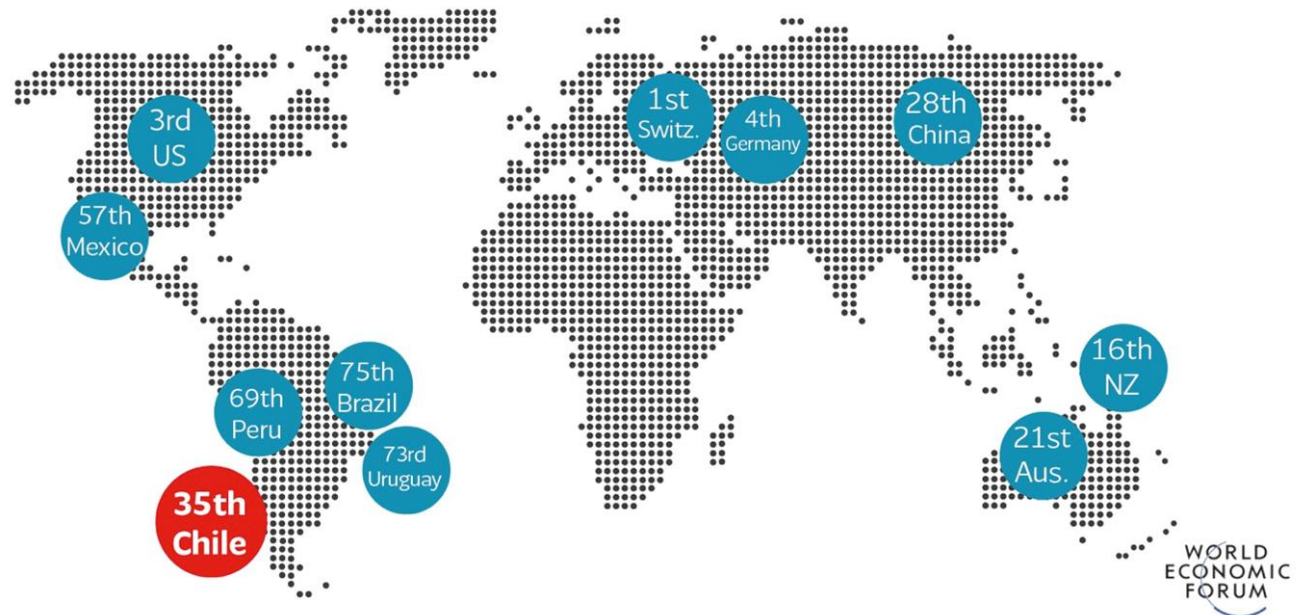
CHILE AND THE MINING

• Chile, a leader in Latin America

- Higher PIB per cápita in **Latin America**.
- Strong presence of **FDI** (~7% GDP)
- Foreign Investment Regime: **3°** in the world (EIU 2015-2019)
- Global Competitiveness: **35 among 140 countries** (WEF, 2016)

Competitiveness Strengths:

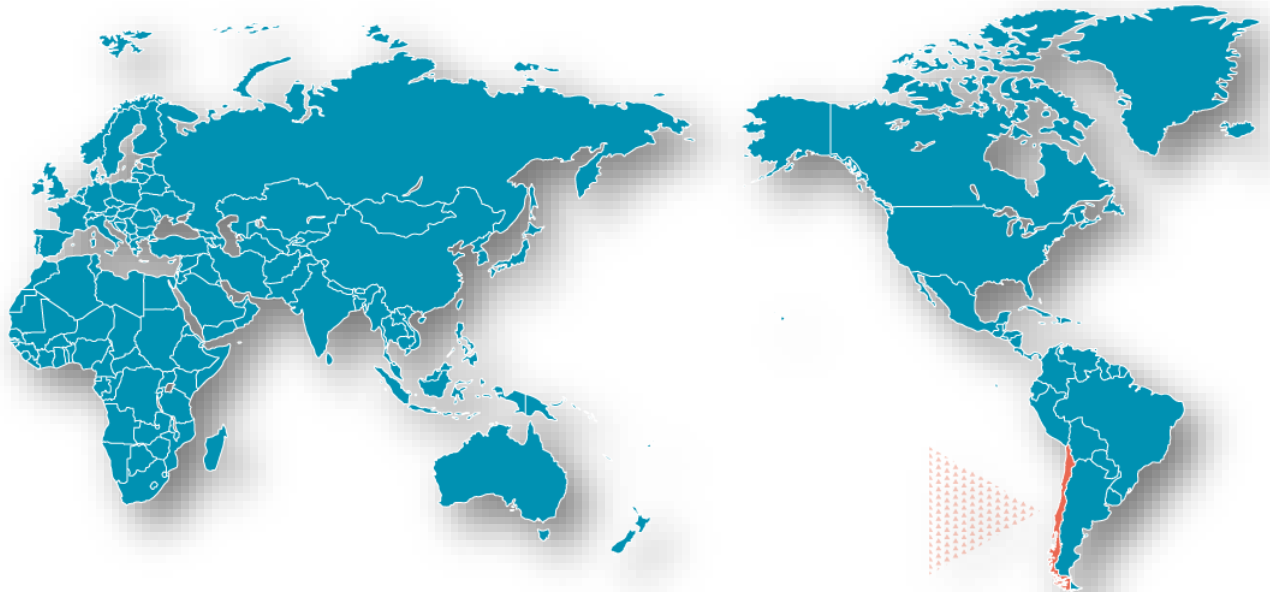
- *Solid institutions*
- *Macroeconomic stability*
- *Workforce*
- *Financial development*



• A connected country

Access to several markets

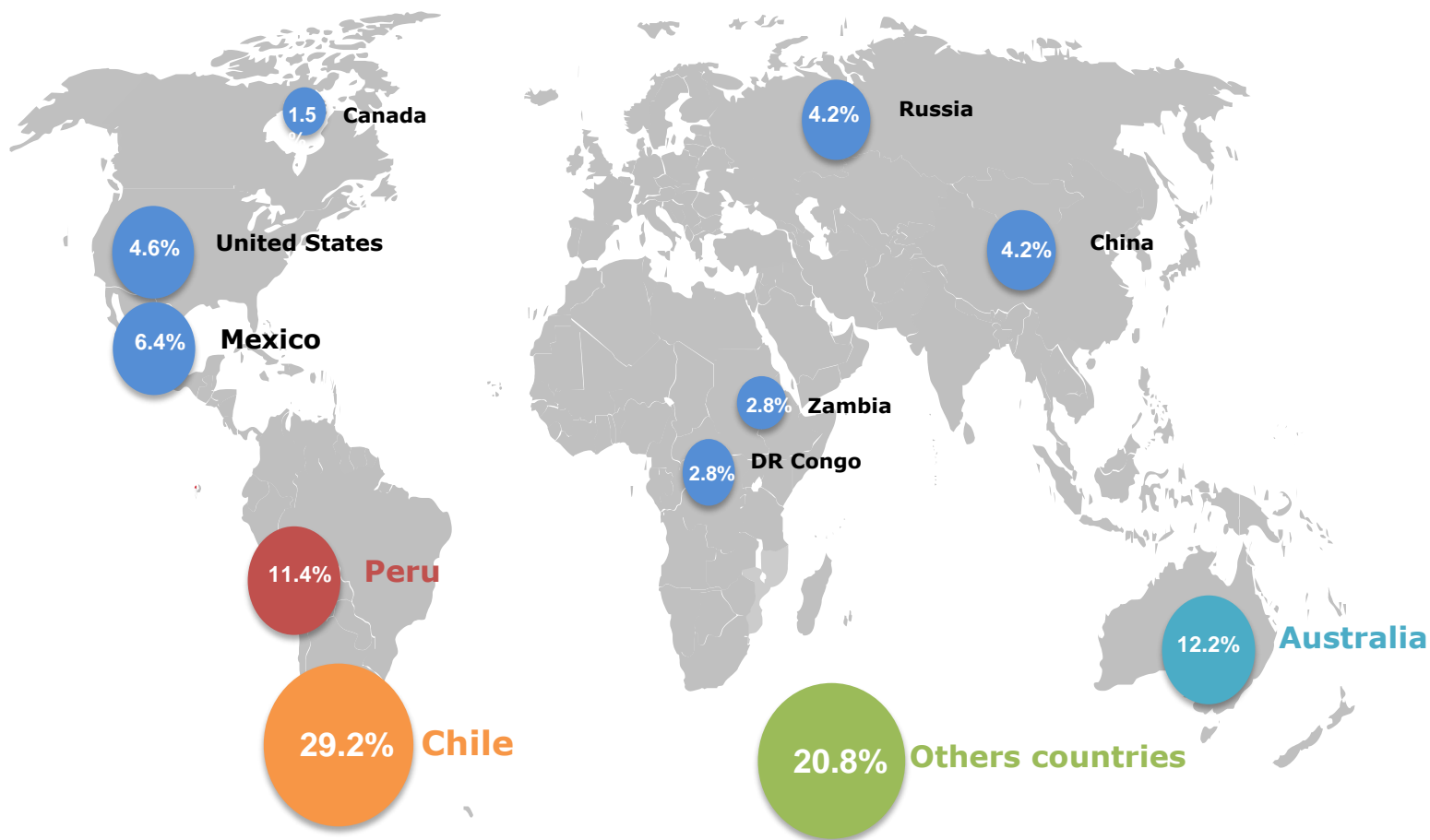
- ✓ **85%** of Global GDP.
- ✓ **93,8%** of exports markets.
- ✓ **65%** of world population.



Double taxation agreements with **25 countries**

Investment protection treaties with **76,4%** of world GDP.

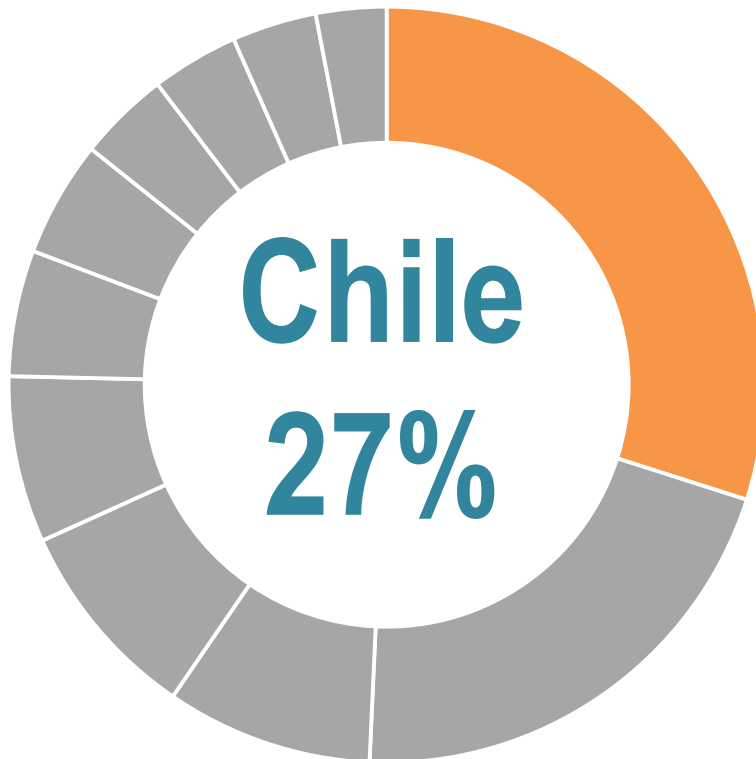
• Most important world mining reserves



- Main copper reserves.
- Important gold, silver, molybdenum and potassium reserves.
- Main lithium reserves.

- ## World copper production

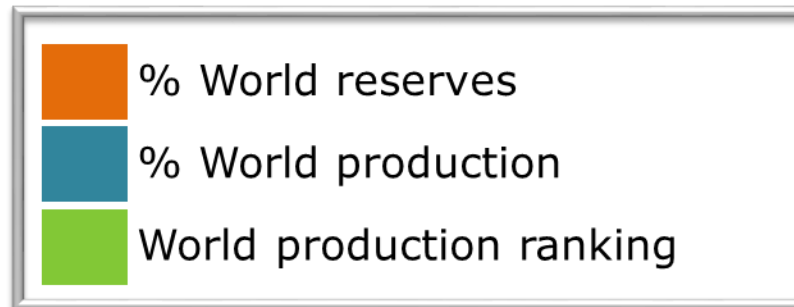
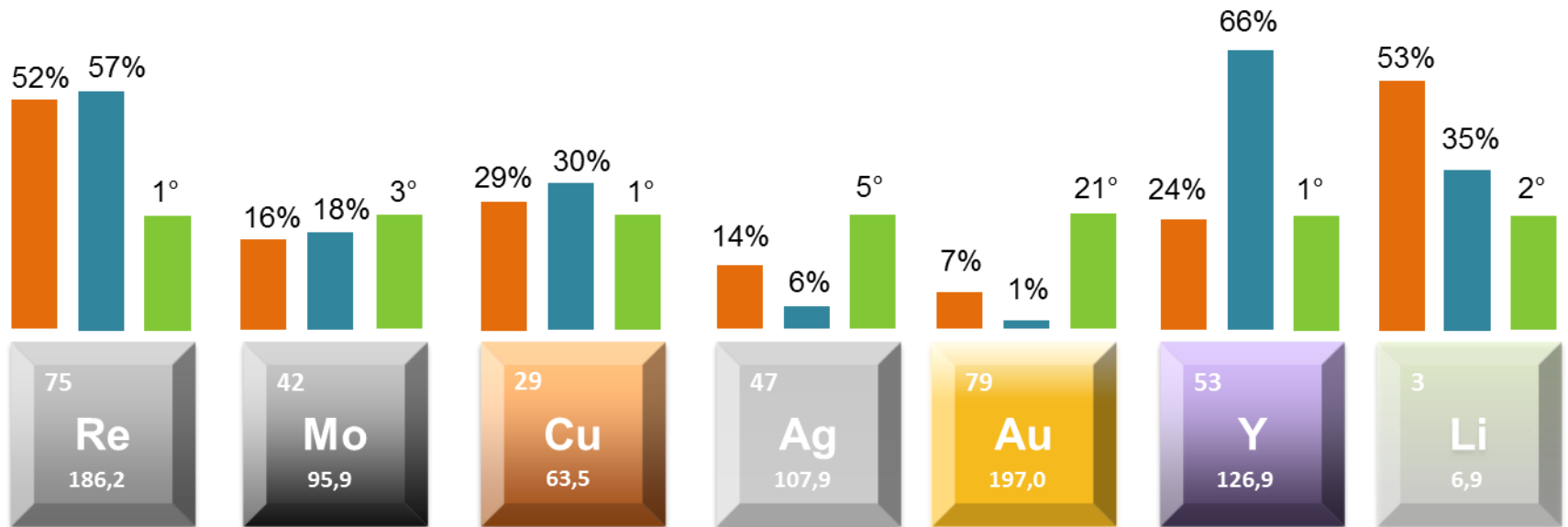
Worldwide production of copper in metric tons.



Country	2015	2016
Chile	5,764	5,545
Peru	1,705	2,365
China	1,669	1,821
USA	1,373	1,454
Congo DR	1,039	987
Kazakhstan	566	984
Australia	957	927
Zambia	754	828
Russia	720	740
Canada	697	711
Indonesia	580	620
Others	4,008	3,641
Total world	19,265	20,623

Source: World Metal Statistics, COCHILCO

- Mineral endowment

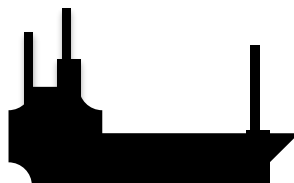


MINING IN CHILE



EXPORTATIONS

57% 2003-2016



FOREIGN INVESTMENT

18%
2005-2015



Tax Revenue

18,4% 2003-2016



Mining represent
13% of GDP 2003-2016

Source: Banco Central de Chile, INE and FMI

* Quarter December 2015 -February 2016 (INE)

PRODUCTION CHAINS

2003

US\$ 16.100 MM

On goods and services



■ Intermedios

78%

Purchases in domestic industry

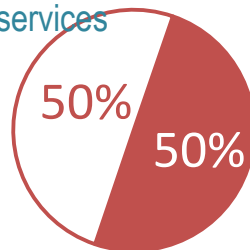


🛒 National 🛒 Direct Import

2013

US\$ 47.039 MM

On goods and services



■ Intermedios

75%

Purchases in domestic industry



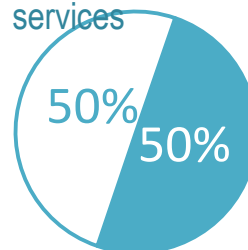
🛒 National 🛒 Direct Import

2015

* Cochilco's estimate

US\$ 40.118 MM

On goods and services



■ Intermedios

75%

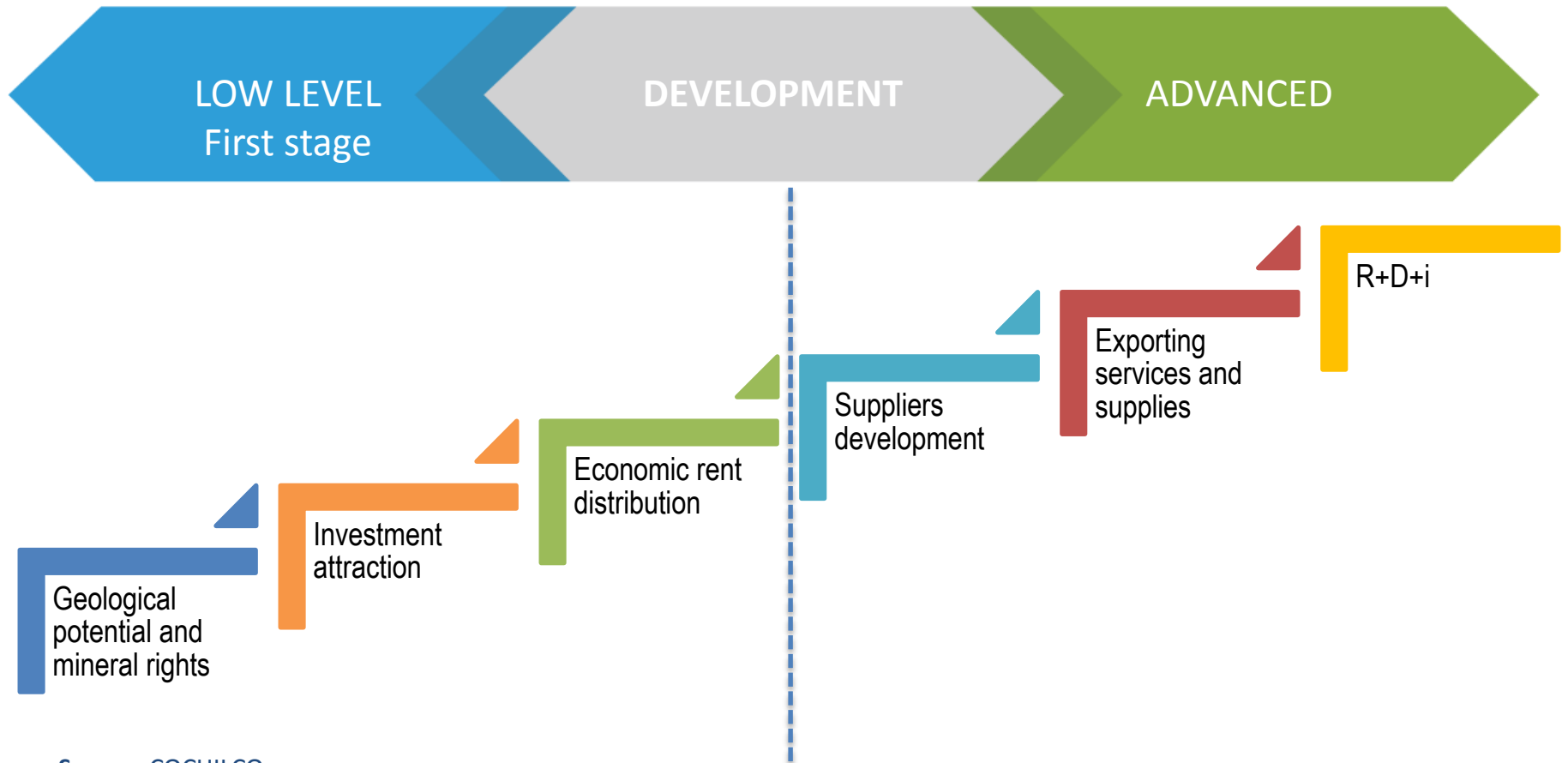
Purchases in domestic industry



🛒 National 🛒 Direct Import

TREND ON MINERAL POLICY

Mineral policy based on economic development



Source: COCHILCO

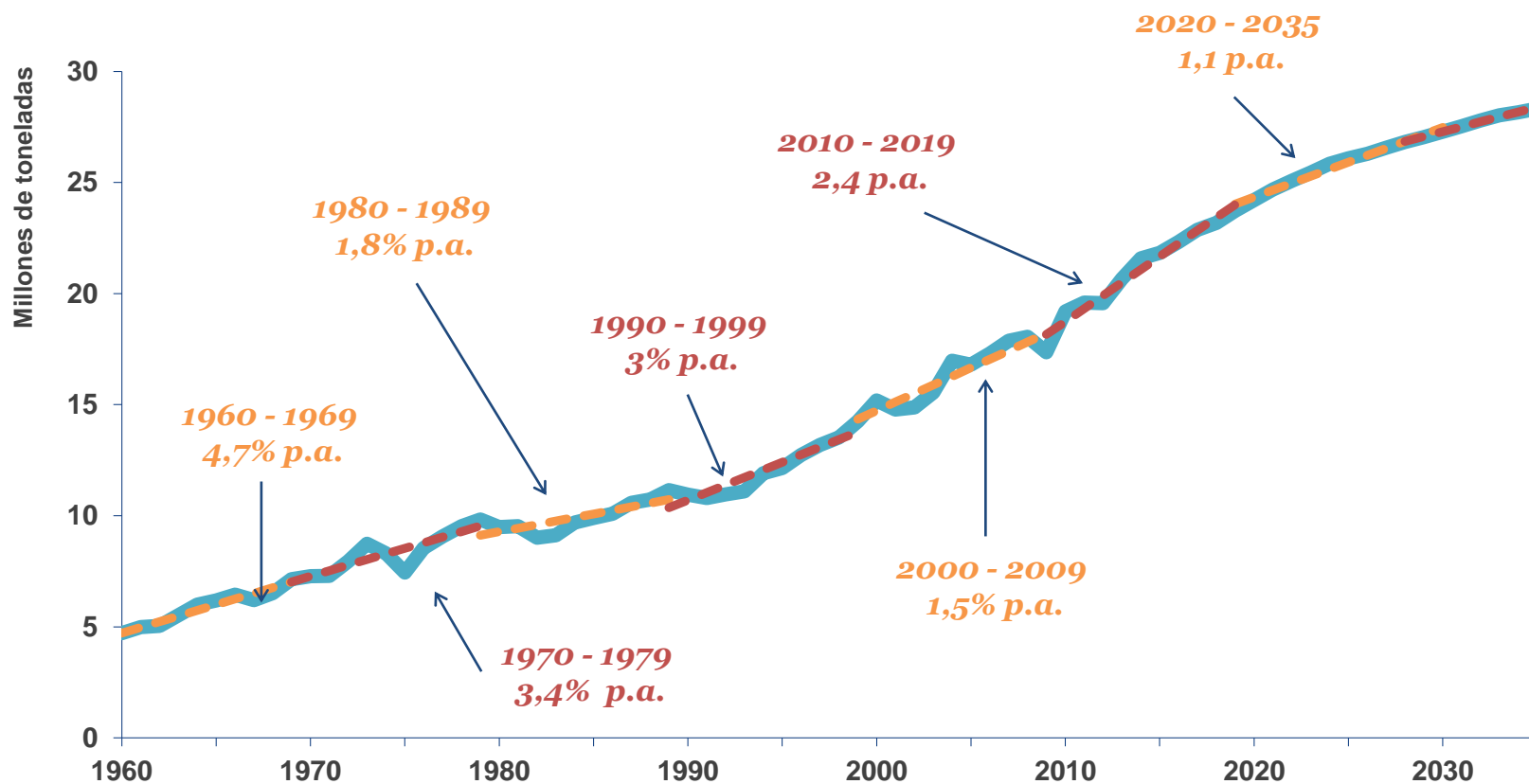


02

NEW CHALLENGES - NEW VISION

COPPER DEMAND

1960-2015; Forecast 2016-2035



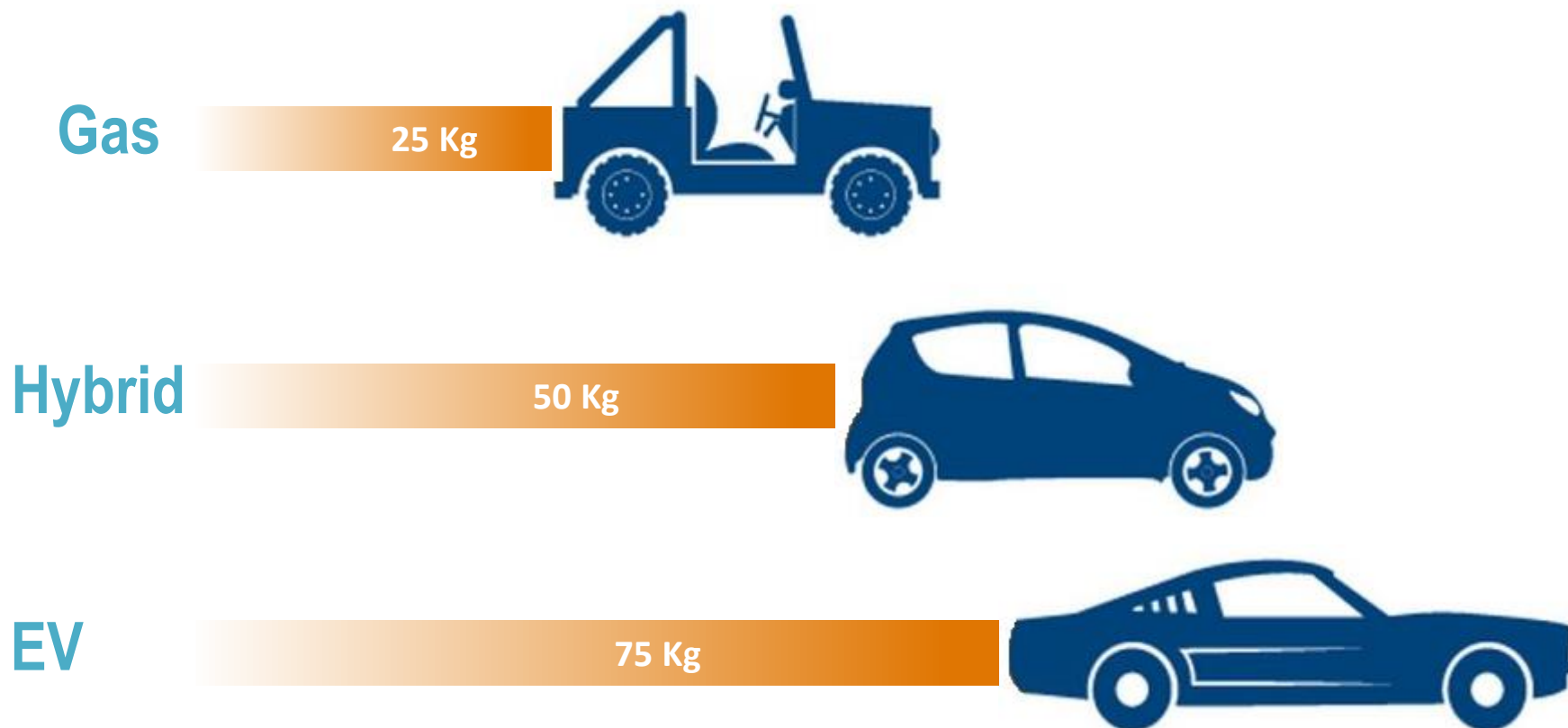
Fuente: Cochilco - Wood Mackenzie

MINERALS IN THE FUTURE



COPPER IN THE FUTURE

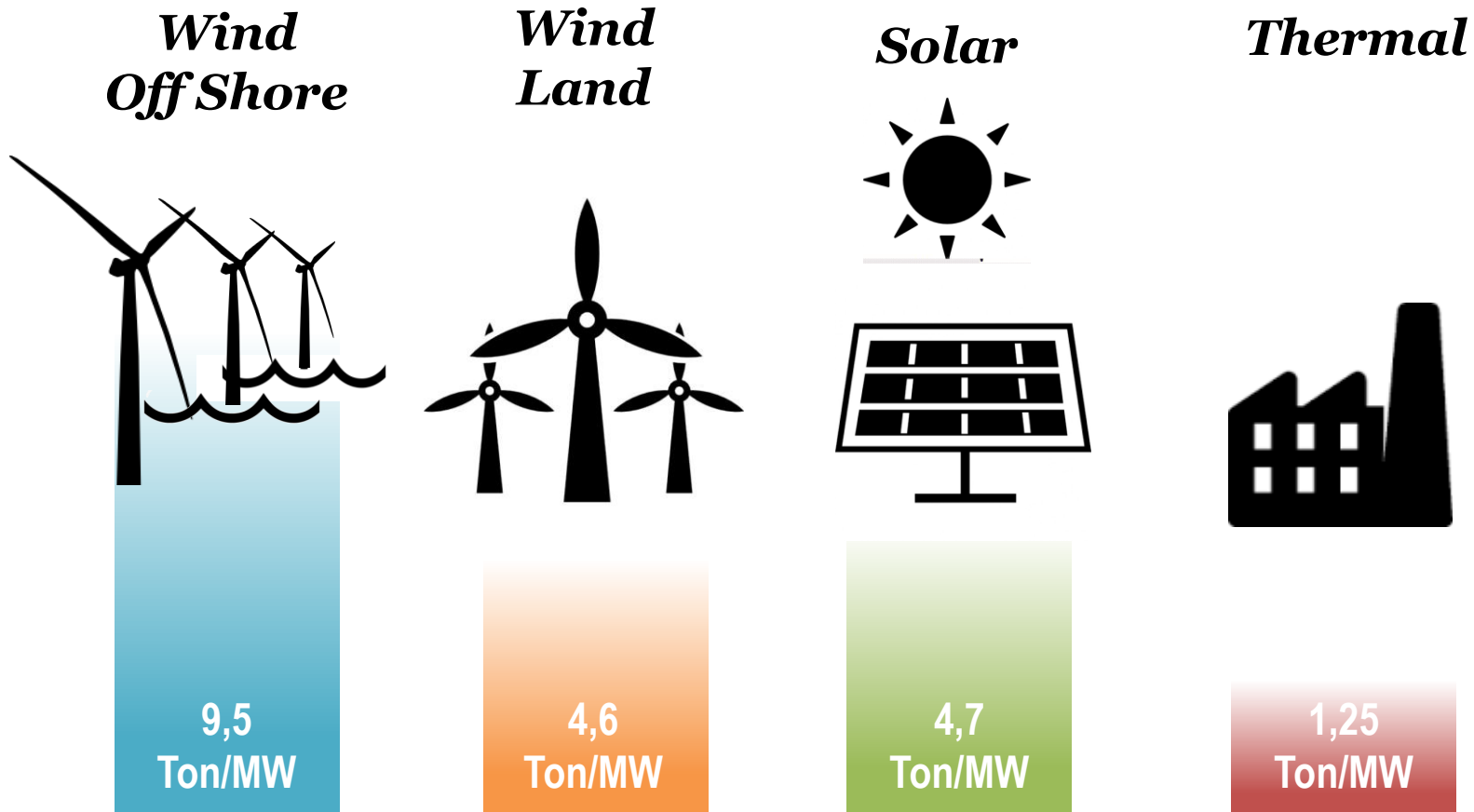
Copper use intensity



Fuente: Visual Capitalist, U.S. Global Investors

COPPER IN THE FUTURE

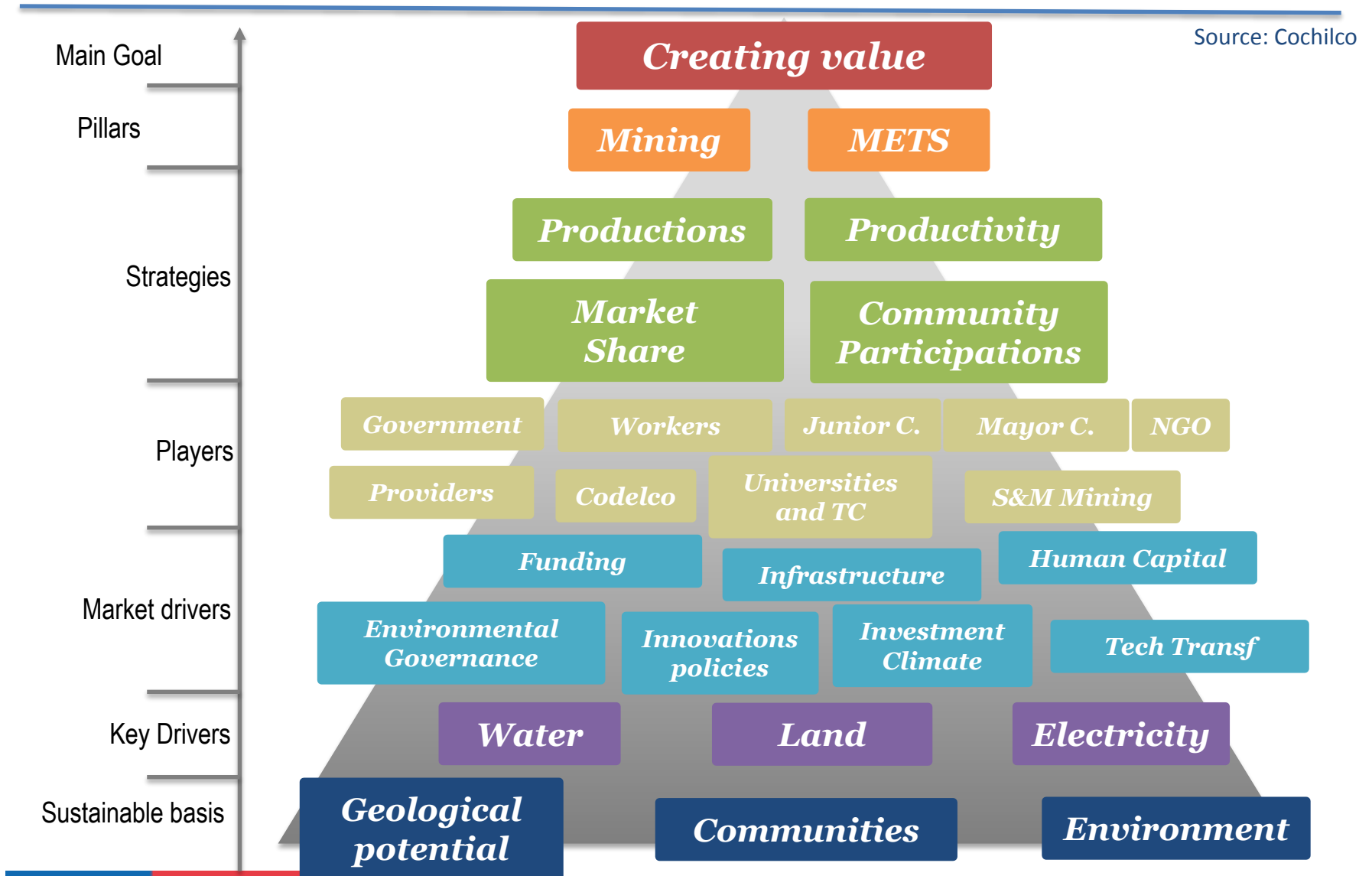
Copper use intensity



Fuente: Varias no oficiales

NEW MODEL PROPOSAL

Source: Cochilco





03

GLOBAL RISK

FUTURE MINING BARRIERS

Source: Cochilco

Technical Challenge

- *Location*
- *Deepness*
- *Ore grade*
- *Costs*
- *Capex*
- *Productivity*

Environment

Communities

Regulatory Framework

Local

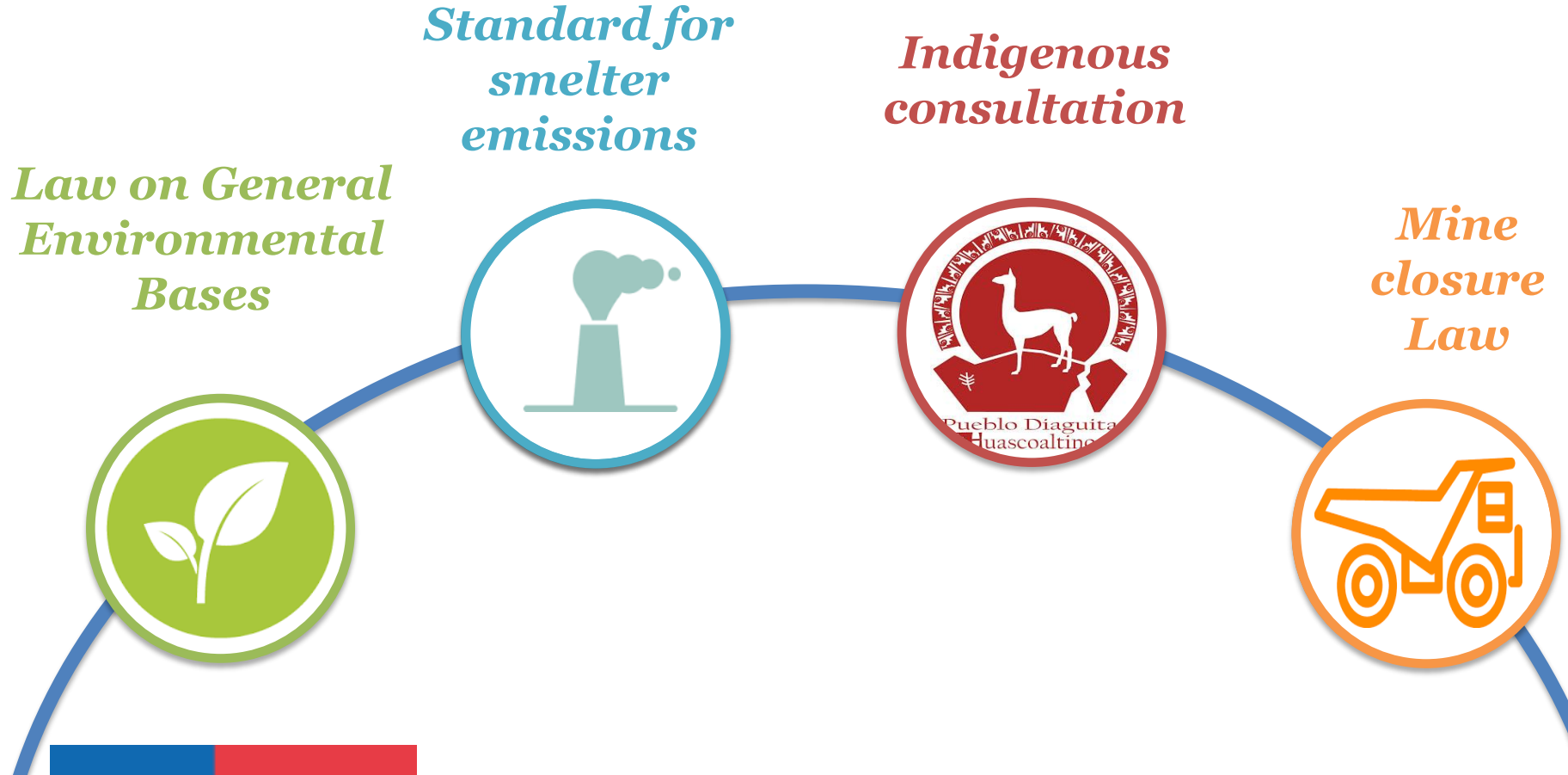
International

*Technical Solution
I+D+i*



REGULATORY FRAMEWORK (local)

Chilean laws to increase environmental protection, community involvement and social acceptance



INTERNATIONAL REGULATIONS



**European Union responsible
trading strategy for minerals
and metals from conflict
affected and high risk areas**

COMBATTING
CONFLICT MINERALS



MHB: Materials
Hazardous Only in
Bulk



Source: COCHILCO

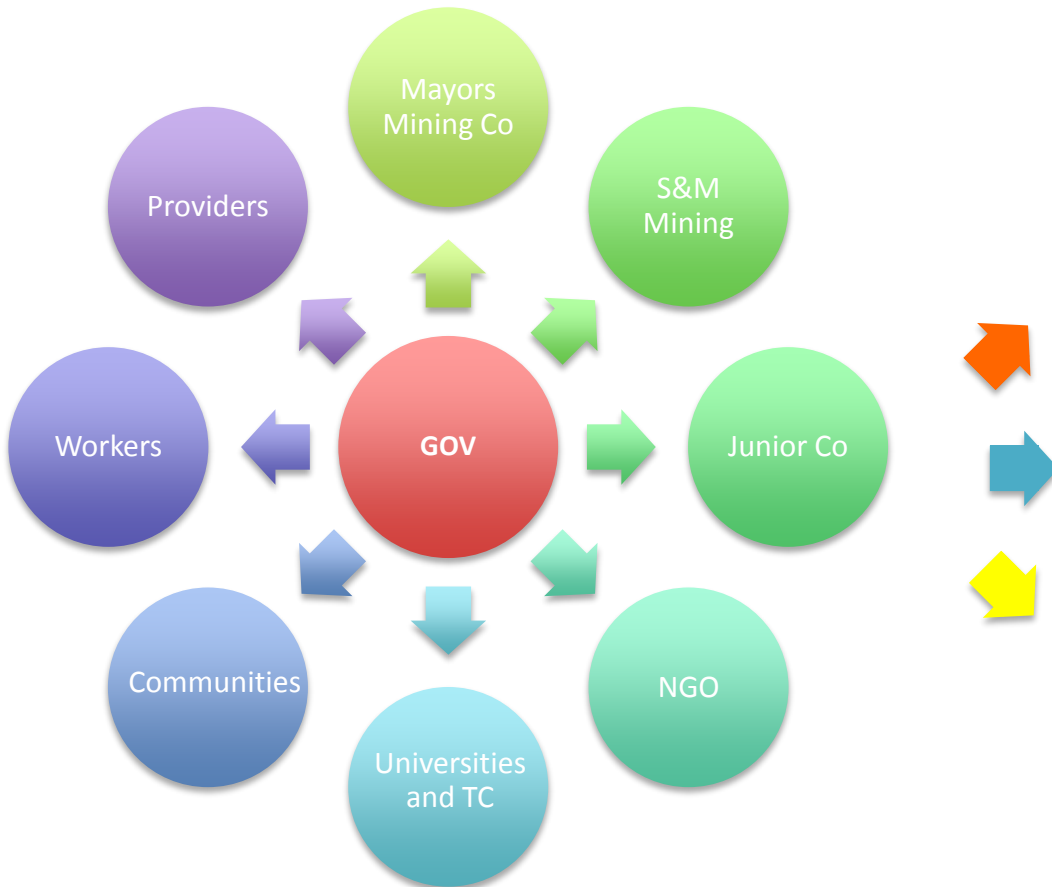


04

OPPORTUNITIES FOR COLLABORATION

THE FUTURE IS COLABORATIVE

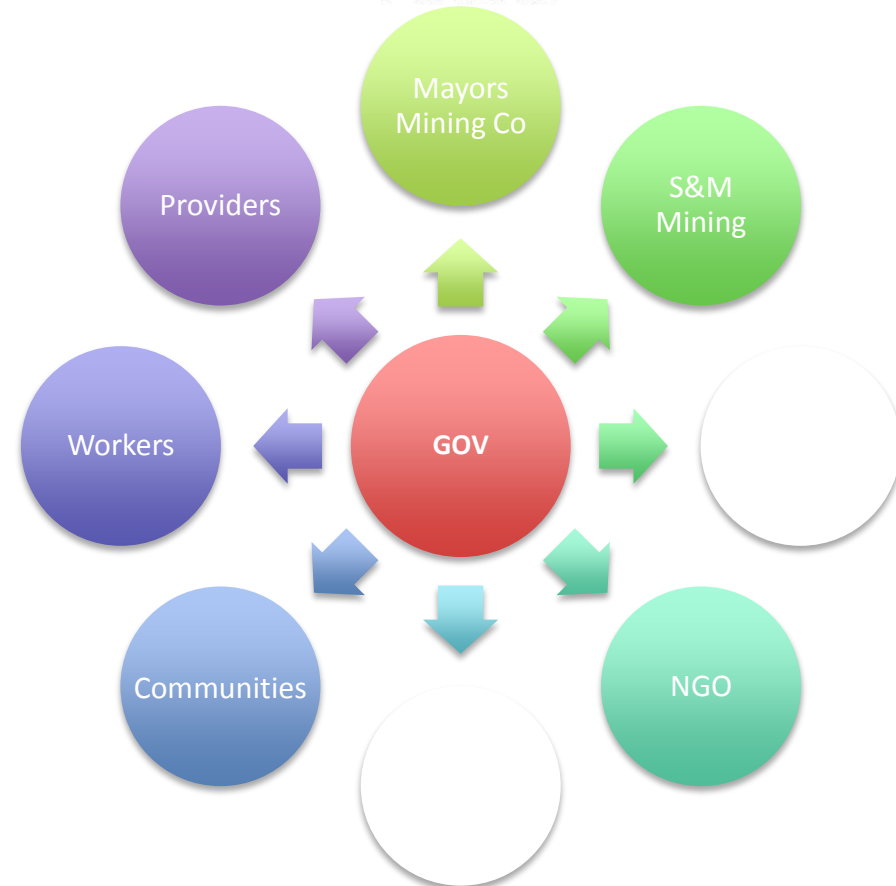
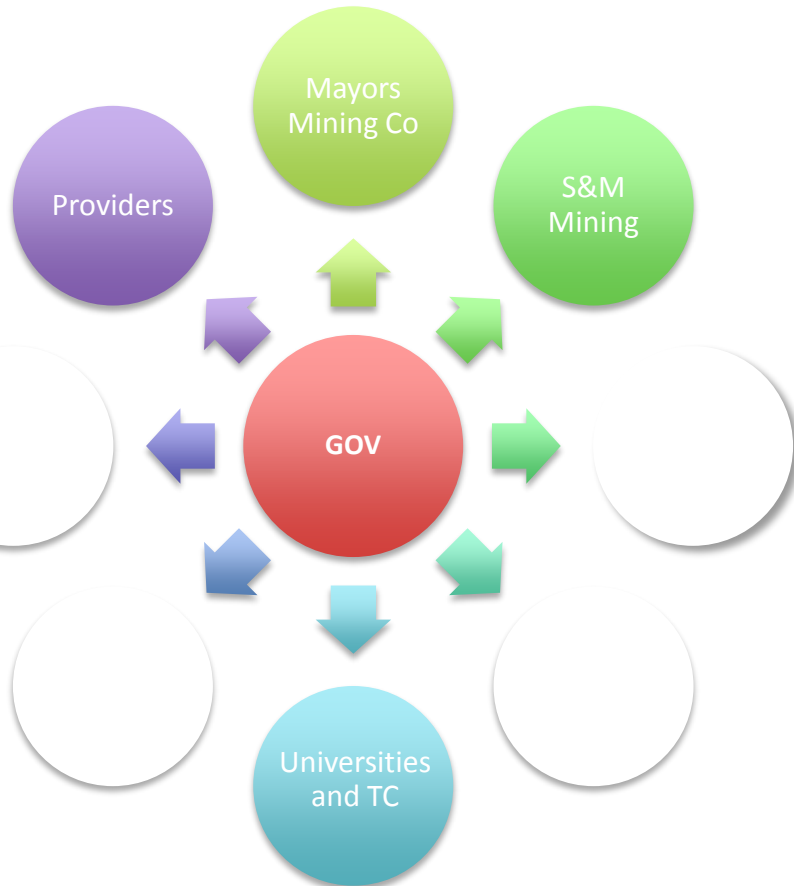
LOCAL DIMENSION



GLOBAL DIMENSION

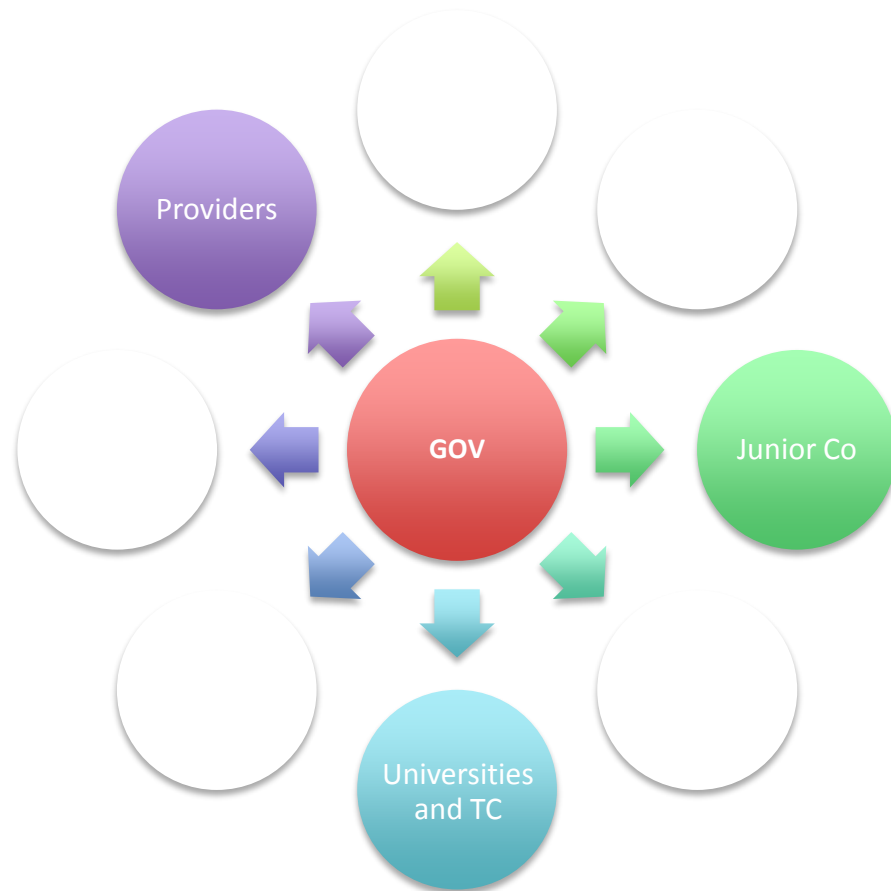
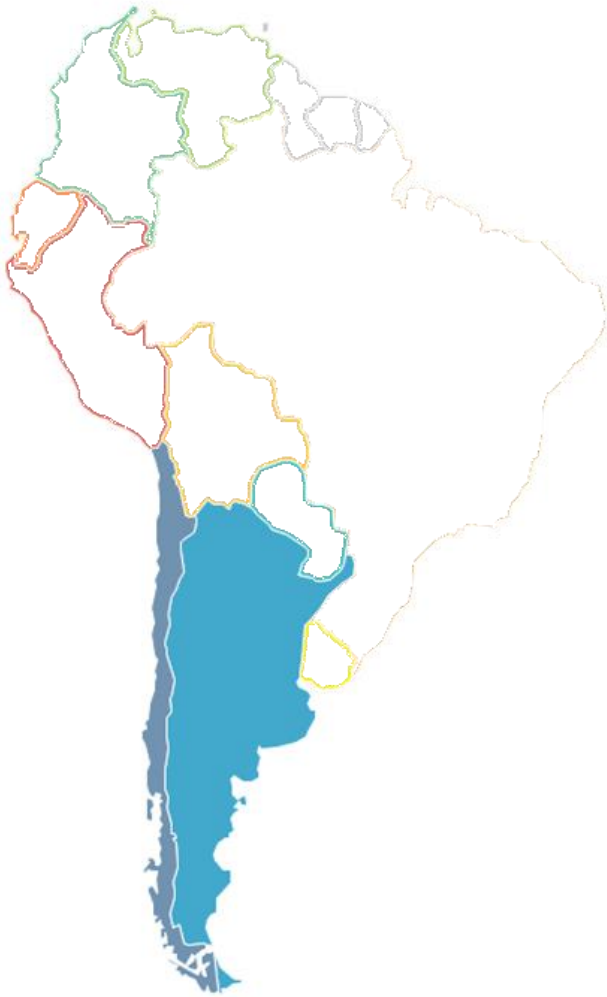


INTERNAL INITIATIVES



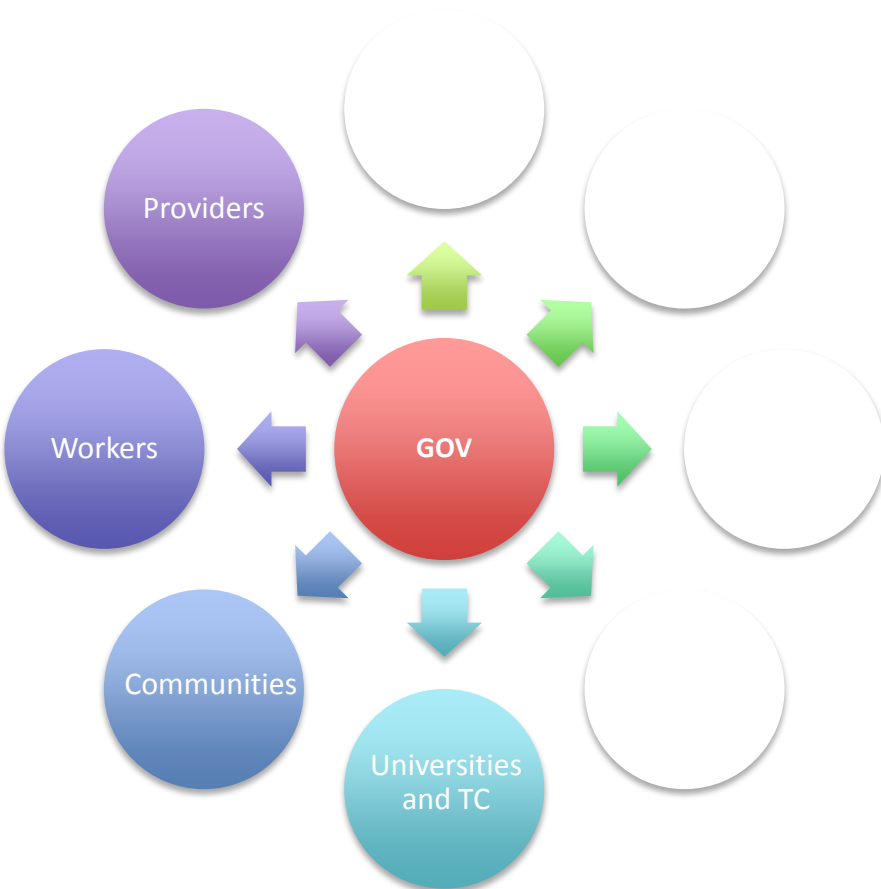
BILATERAL COLABORATIONS

**Treaty between Chile and Argentina on
Mining Integration and Complementation**



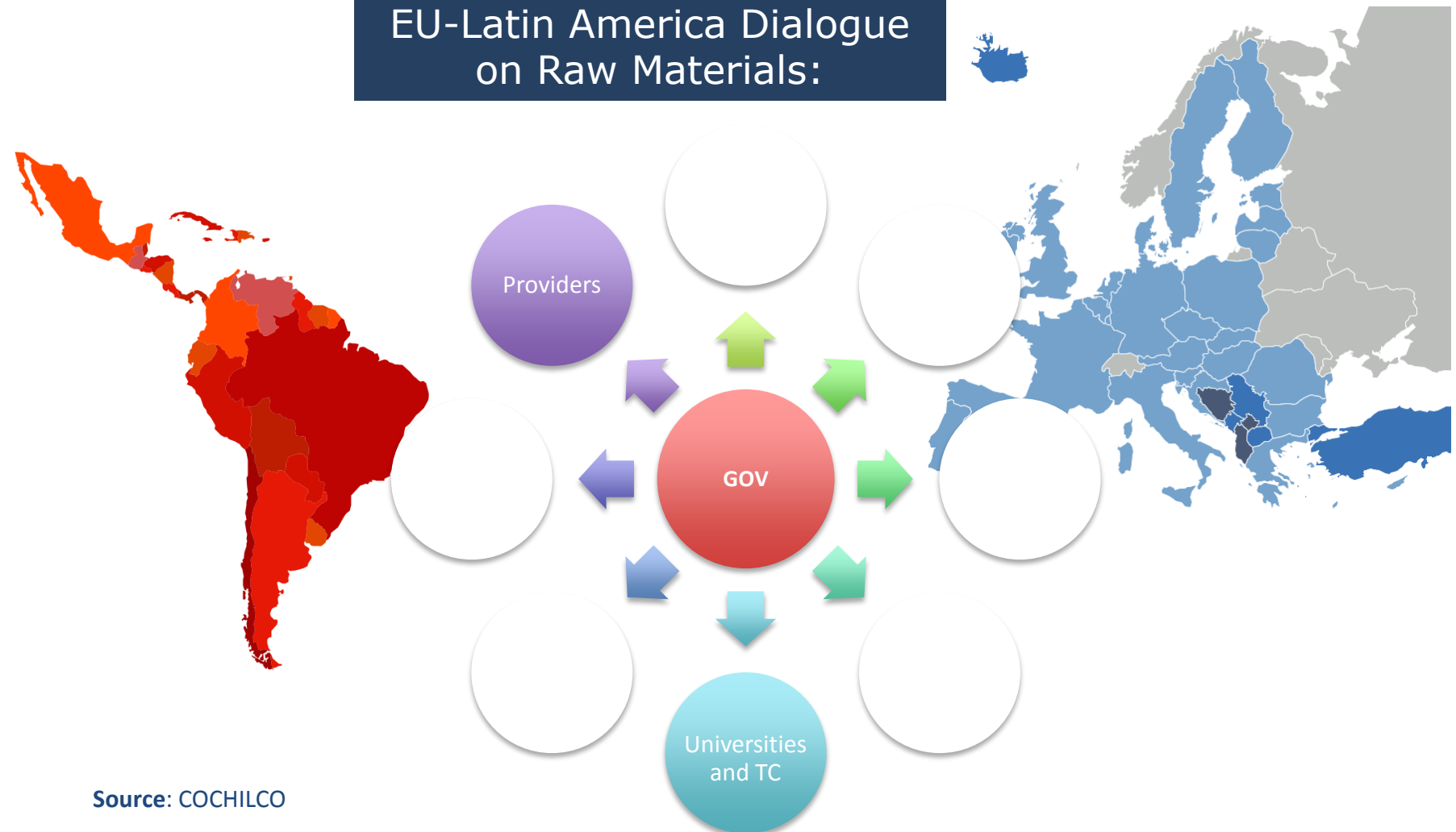
MULTILATERAL

- The Pacific Alliance



MULTILATERAL

EU-Latin America Dialogue on Raw Materials:



Source: COCHILCO

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05

FINAL REMARKS

FINAL REMARKS

Chile

- Has the potential to keep being leader in mining, and mining has the potential to keep being the engine for the Chilean economy.

Future

- The demand is not the problem, but the supply.

Challenges

- As time passes, will be more difficult to develop mining project

Proposal

- The collaboration is a way to face the challenges, but with focus in common interest

THANK YOU!

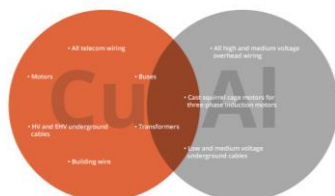
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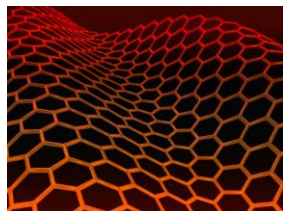
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MARKET RISK

Aluminium



Graphene



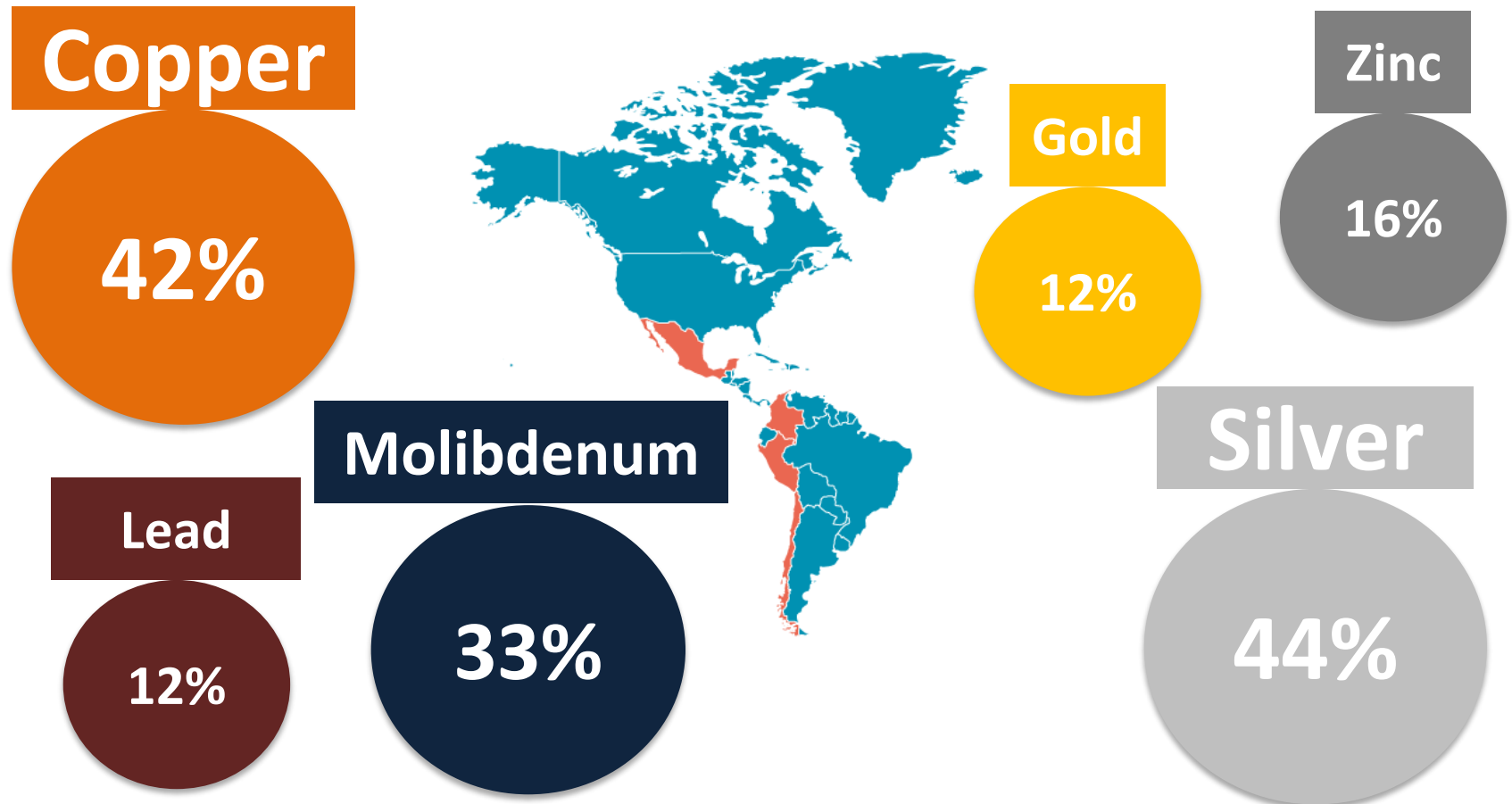
Substitution



Oversupply

- A great mining potential...

World mine production (2016)



COMMUNITIES

1

*Identification
of actors and
area of
influence*

2

*Early
consultation
and
participation*

3

*Company's
reputation*

4

*Knowledge of
community's
culture*

FACTORS THAT DETERMINES THE RELATION

*Expectation
and benefits
distribution*

5

*Development
of local
capacities*

6

*Natural resources
availability and
distribution*

7