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Structural transformation through local value addition

Isabelle Ramdoo
Deputy Director
Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF)

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Introduction

There is no structural transformation without industrialization

But we are living in a changing world

And underpinned by **extractive resources**

“Future-proofing” structural transformation:

Where do we start and what to focus on?

State of play: A comparison of industrial exports, 2023

Wide disparities in current levels of capabilities. Gaps across countries seems to be widening with levels of technologies, not closing

Share in the world Economy in 2022 (%)

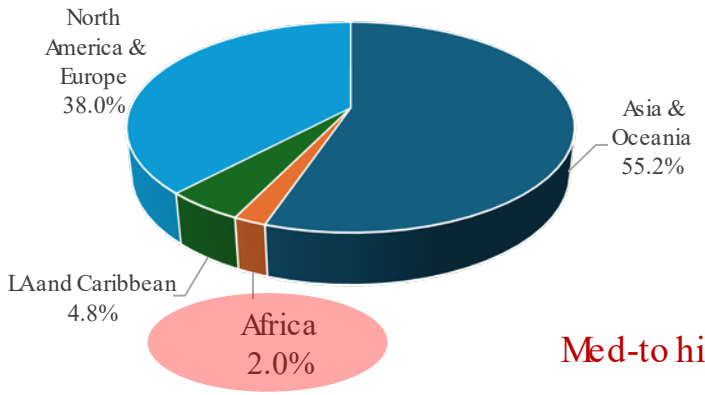
	Asia &Oceania	Africa	LAand Caribbean	North America & Europe
Population	59.8	17.9	8.3	14.1
Area	29.8	22.1	15.1	33.1
GDP	41.3	3.2	6.3	49.2
CO2 emissions	75.5	2.3	3.5	18.5
Industrial Value Added	53.9	2.9	5.5	37.7
Manufacturing Value Added	55.2	2	4.8	38
Manufacturing Exports	47.9	1.3	4.5	46.3
Med-to high tech Exports	48.2	0.8	4.1	46.9

Ranking:

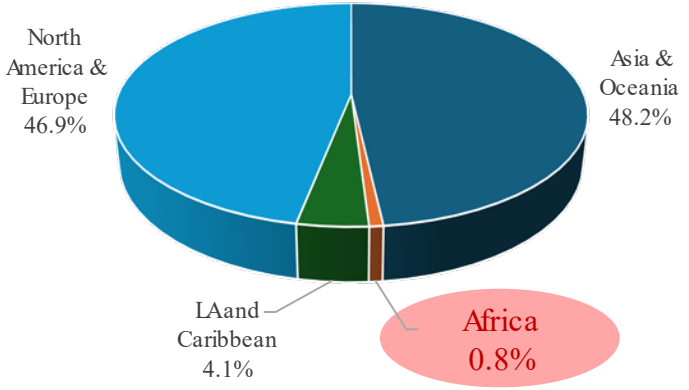
- 1st
- 2nd
- 3rd
- 4th

Regional comparison by type of activity

Manufacturing Value Added, %



Med-to high tech Exports, %



Energy and digital transition are highly mineral intensive
An (lucrative) opportunity not to be missed

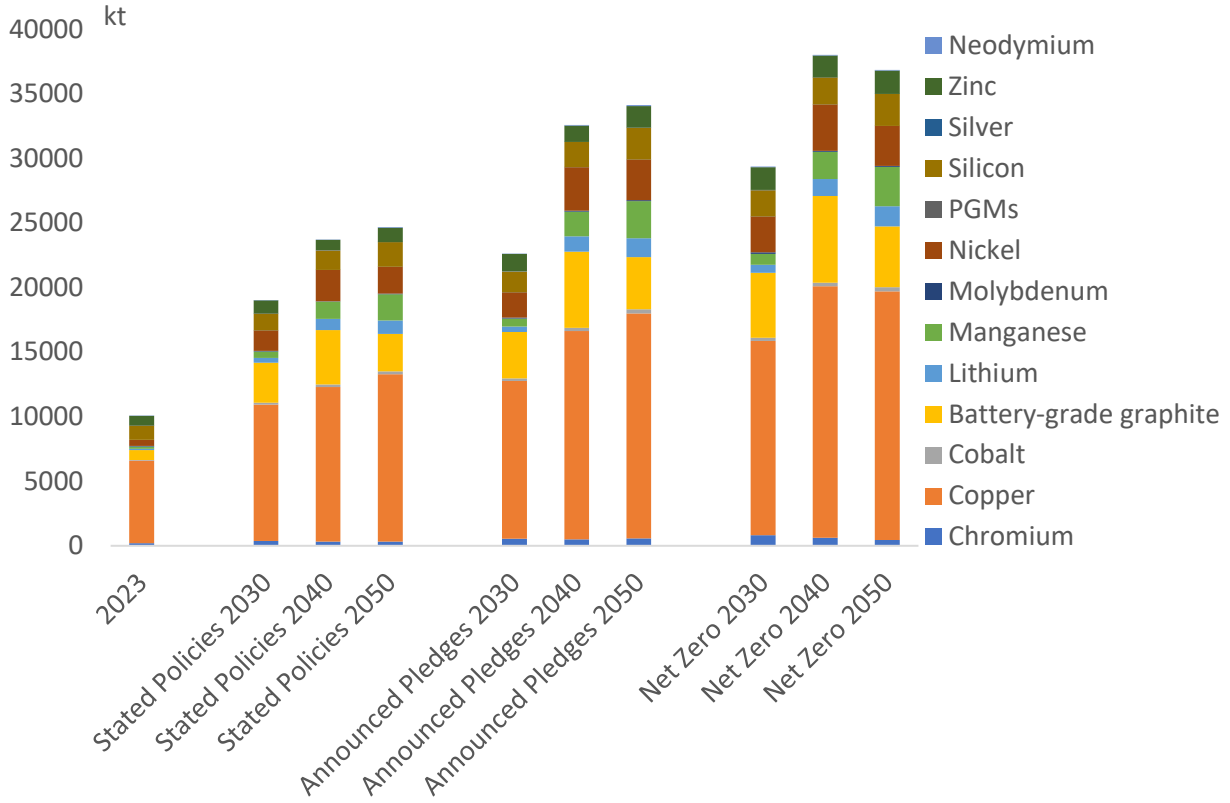
Dramatic **demand increase** expected for all key metals and minerals

- Solar PV, wind power, batteries, electromobility, semiconductors, (smart) grids, data centers, additive manufacturing, robotics and others
- Technological and process innovation, economies of scale, substitution and recycling key to decrease primary production

Supply side due to remain highly concentrated at both production and refining stages

CM market estimated to double to **USD 770 billion** by **2040**, providing significant economic opportunity (in addition to other metals)

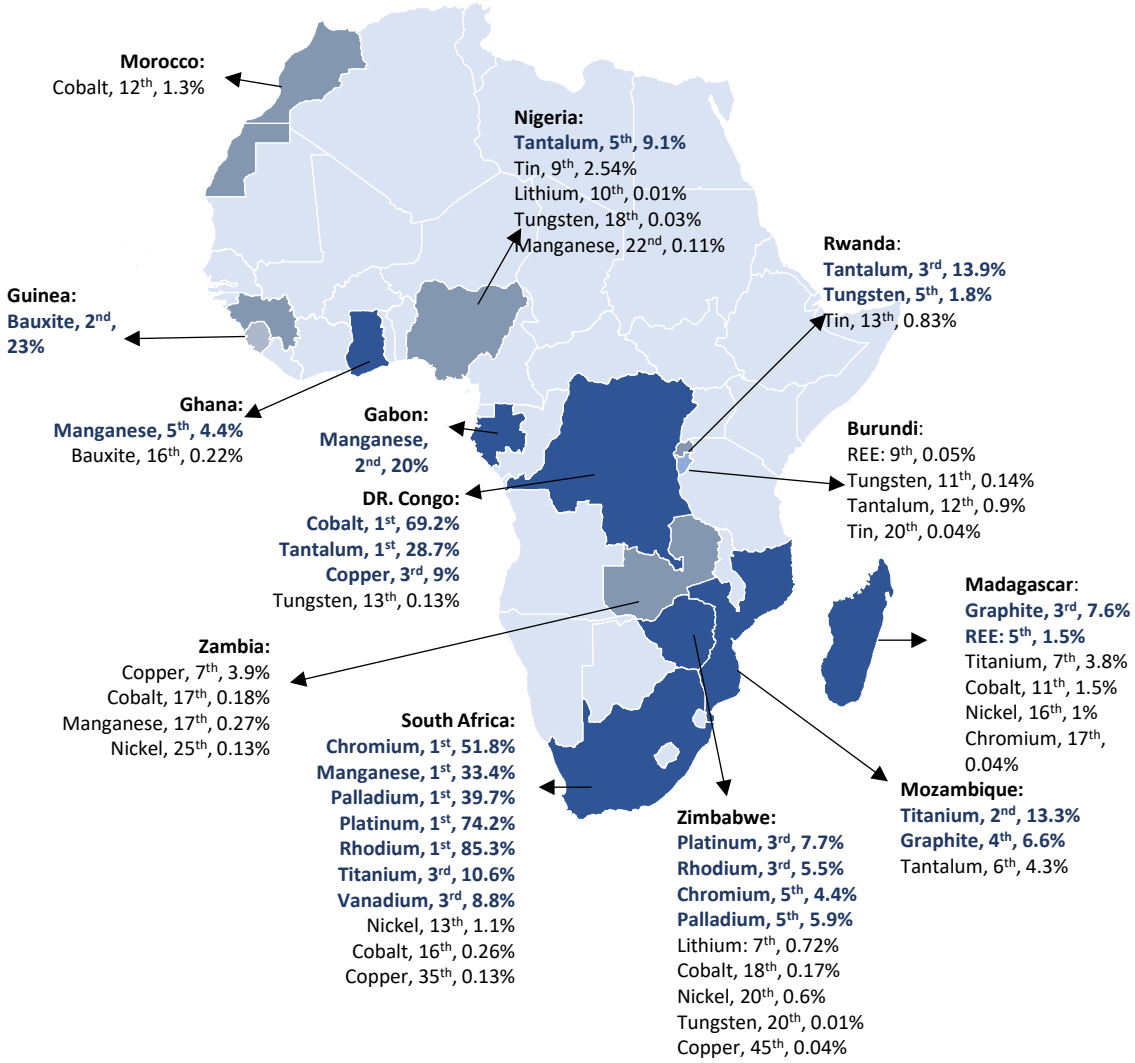
Critical mineral demand projections for clean technologies

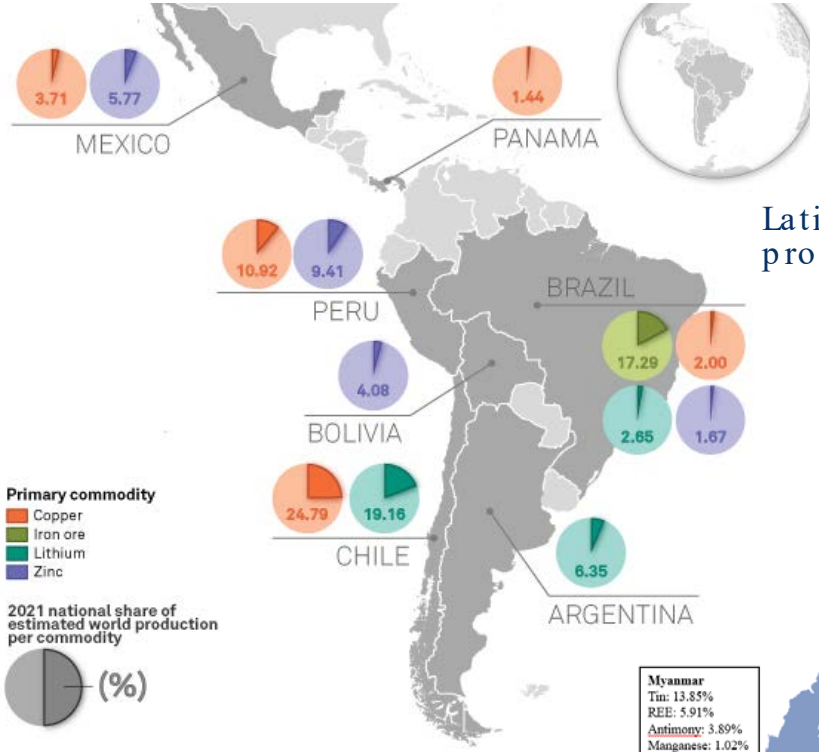


Source: IEA, 2024

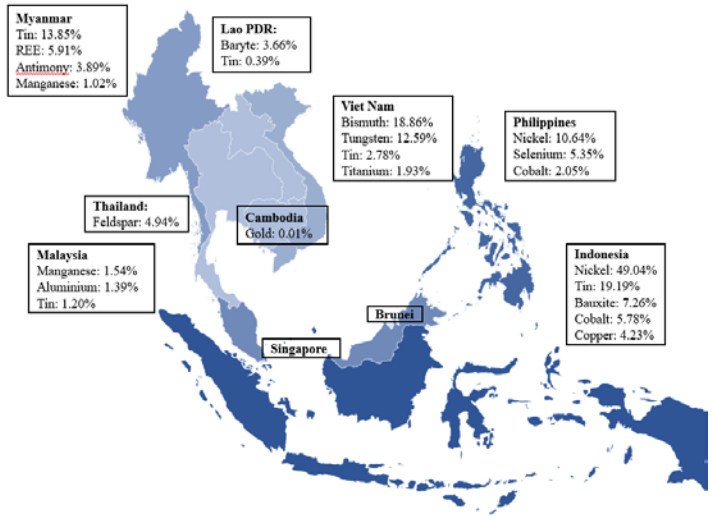
Developing countries are well endowed in key minerals in high demand

Share of African countries compared to global production





Latin America's share in global production

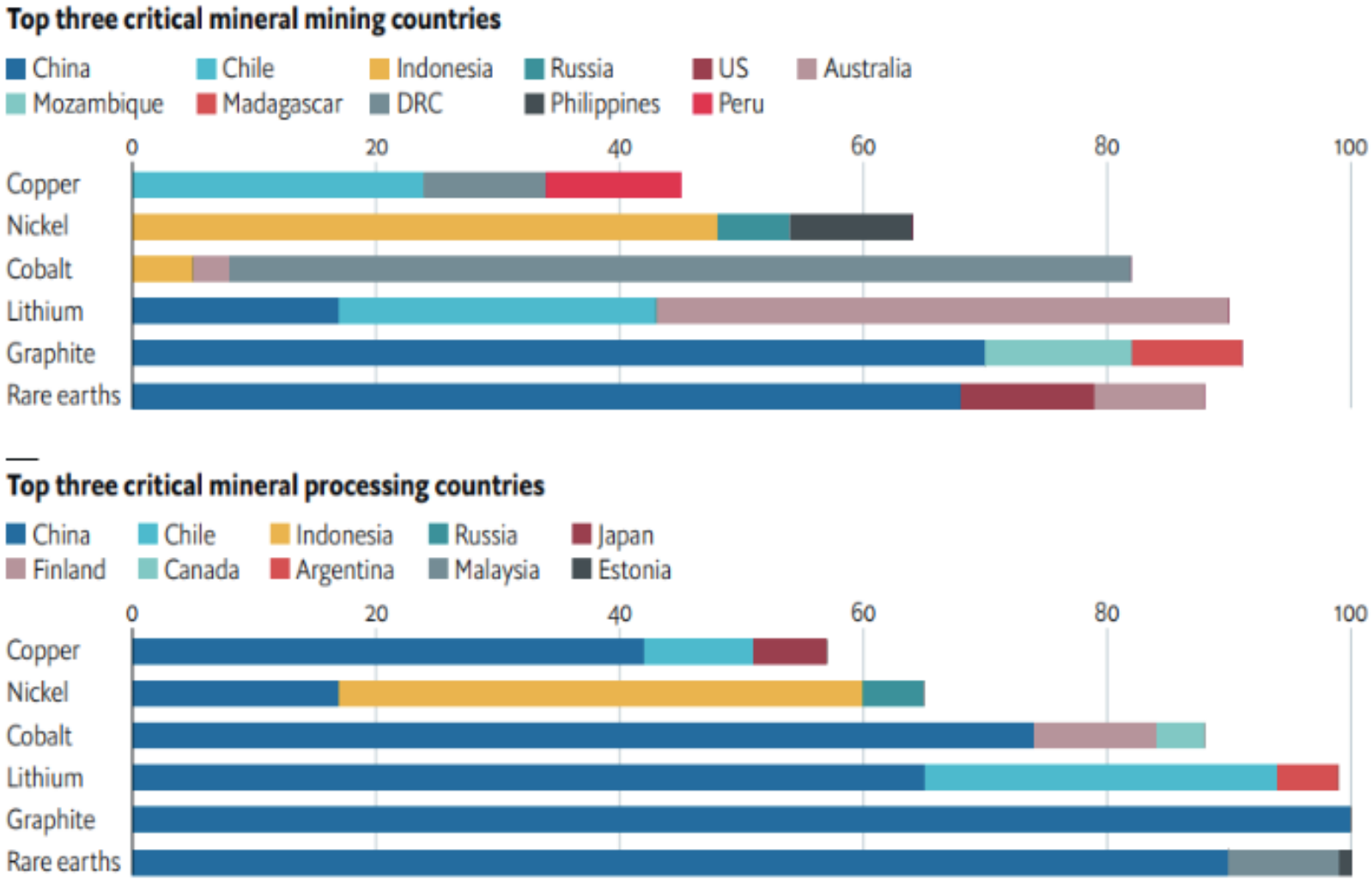


S.E Asian countries as a % of global production

Source: S&P Global, 2022

Degree of concentration increases along the value chain:

Trading unprocessed is both a leakage and a risk



IEA, 2023

Despite challenges, a renewed opportunity for (re)defining pathways

Vital concerns about **climate change** require a different model of industrial development

1

The **5th IR** require 'digital preparedness'

2

A 'whole of economy approach'

01 **Capitalize on rising demand for minerals and metals to add value locally and regionally**

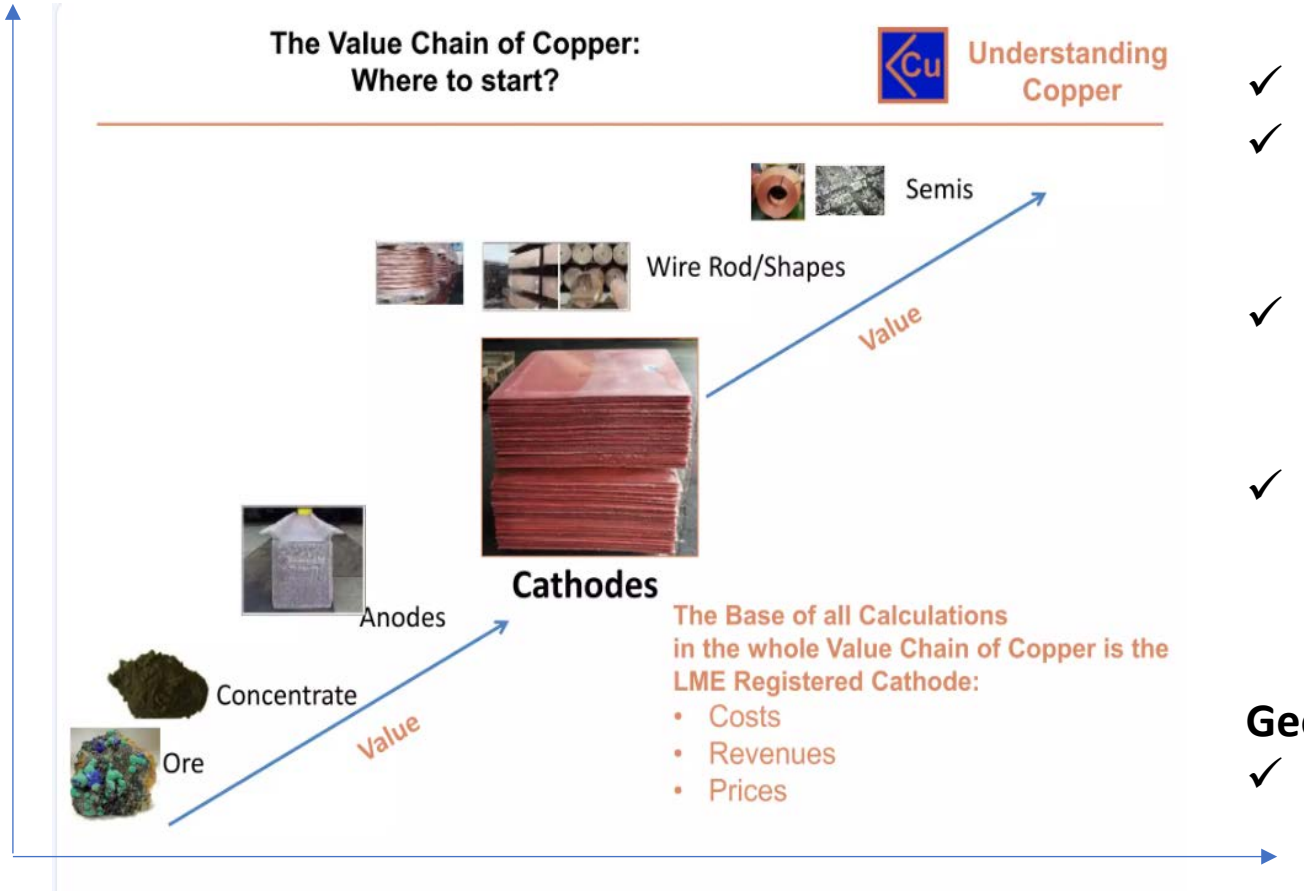
Enter key segments of clean tech and digital supply chains 02

03 **Seize the green and digital windows of opportunity to invest in manufacturing of RE, clean and digital tech**

Embrace sustainable infrastructure and construction methods 04

- Don't forget to **fix 'ecosystem'** of industries: improve governance, productivity, business environment, adequate policy support to industries
- Investment in different industrial sectors **are not necessarily sequential** – they can be conducted simultaneously

1. First things first: Mineral value addition (beneficiation)



Direct economic impacts:

- ✓ Higher VA products fetches higher prices; boost export revenues
- ✓ Creates jobs and other business opportunities
- ✓ Boost fiscal revenues: beneficiation increases ore grade resulting in better market prices and translates into heightened profit margins for mining operations.
- ✓ Expanded market opportunities: higher-grade ore products are more appealing to global markets. It widens the pool of potential buyers.
- ✓ Could potentially reduce transportation costs: concentrated ores are less bulky and can help optimize shipping costs

Geopolitical implications:

- ✓ De-risking strategy to become supplier of choice amidst geopolitical tension

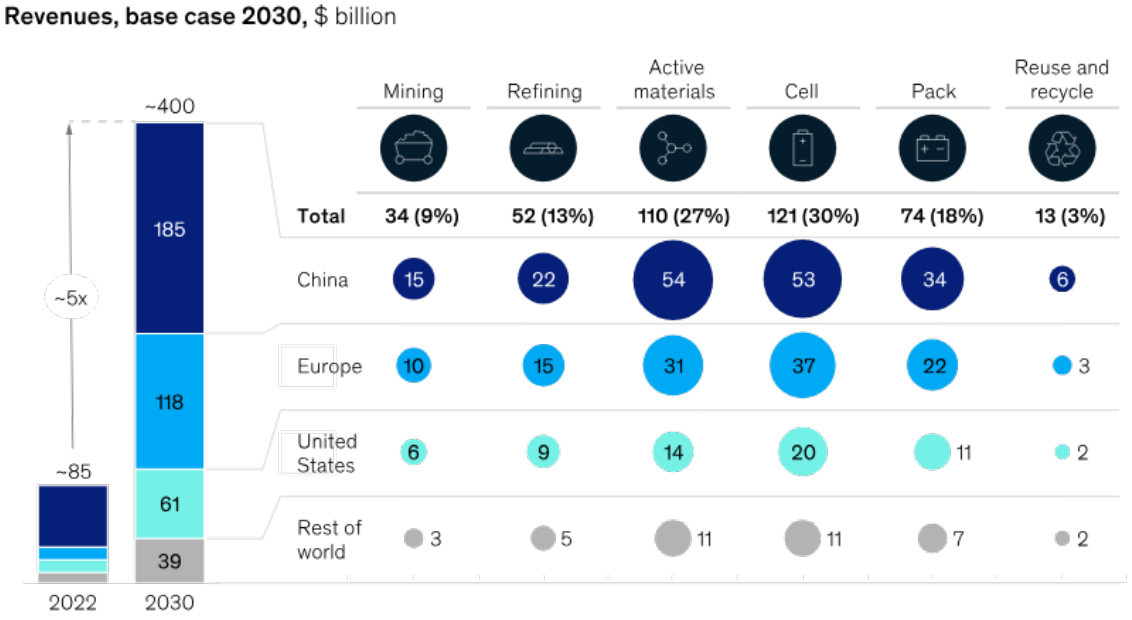
2. Move into technology supply chains

- Focusing just on the mineral value chain in only ‘moving the needle’.
- Not sufficient to enhance productivity and shift **economic structures** durably.
- Structural transformation require moving into manufacturing at the same time, capitalizing on key global dynamics

Seize the green moment

Seize the digital moment

And entering into segments of supply chains



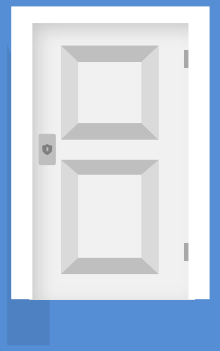
Source: McKinsey, 2022

Li-ion battery value chain can provide revenue of over USD 400 billion by 2030

How to go about it? Three complementary policy levers

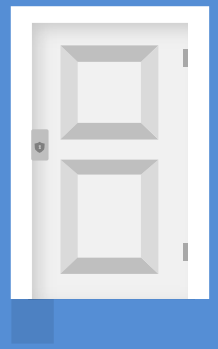
Successfully moving downstream requires domestic supply and demand side policies, regional policies and global partnerships

National policies



- ✓ **Regulatory:** Local content, tariffs and trade, IP, quality and sustainability standards
- ✓ **Fiscal** incentives
- ✓ **State intervention**: buy local incentives, public procurement, subsidies, grants and financing mechanisms
- ✓ Infrastructure development, RD&I, Human capital
- ✓ Exports key but so is **domestic adoption** of energy transition and digital transformation technologies

Regional coordination

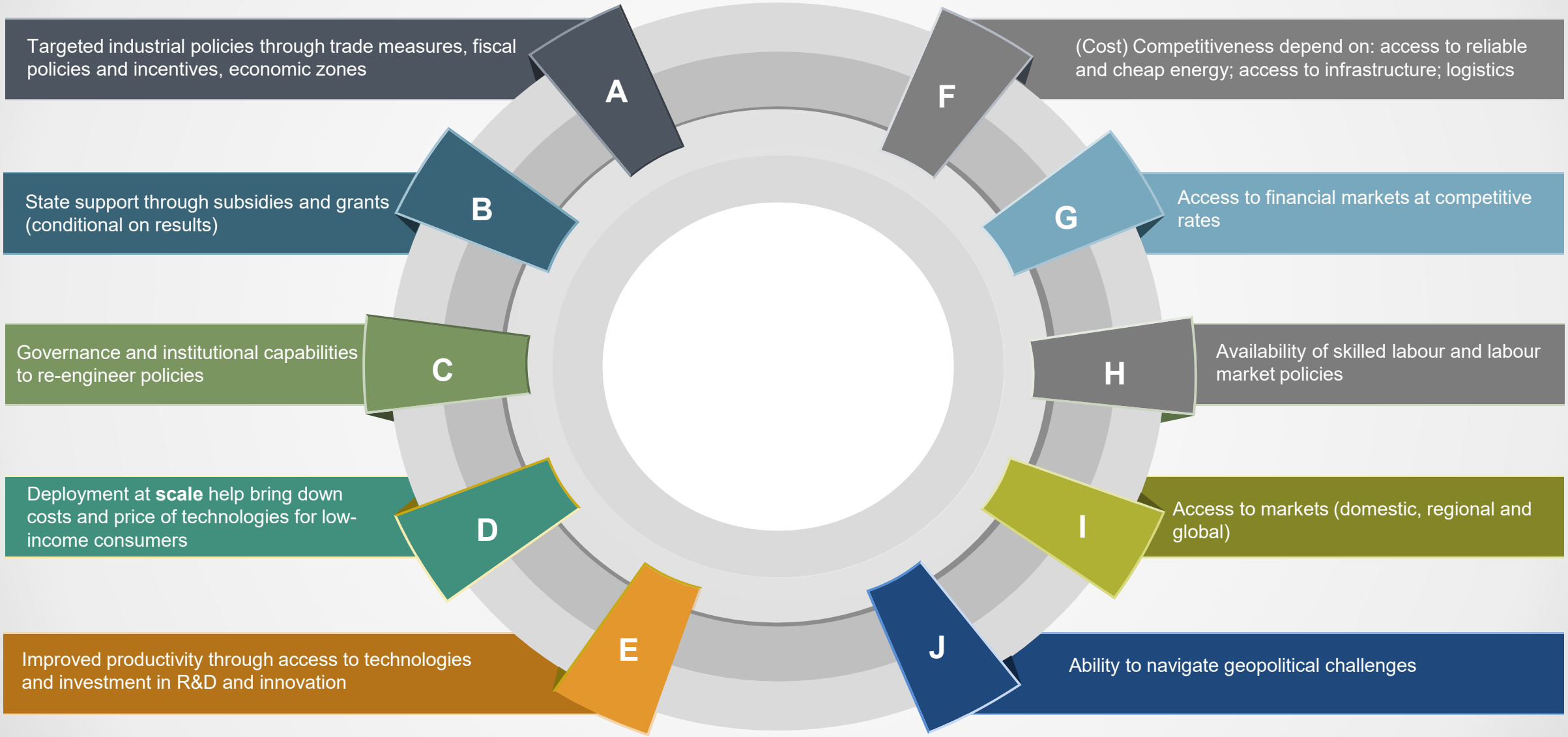


- ✓ Countries won't do it alone: markets and scale are too small
- ✓ Regional cooperation is key: policy alignment, collaborative frameworks, integrated supply chains, market access and expansion, financial and institutional support needed
- ✓ Need to identify strategic sectors to build at the regional level
- ✓ Tap into regional and continental trade frameworks to support tech industries

Global partnerships

- ✓ Global supply chains are complex: no country or region can be self-sufficient
- ✓ Important lever to attract **investment** in high-tech and high capital sector
- ✓ Can provide **access to finance** at better rates
- ✓ Can support **R&D efforts** and innovation
- ✓ In current geopolitical context: key to **secure market access**

Critical success factors: the ecosystem of structural transformation



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@IGFMining
Secretariat@IGFMining.org

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