

BUSINESS COUNCIL OF MONGOLIA



NETWORKING RECEPTION

22 JUNE 2017

Co-hosted by





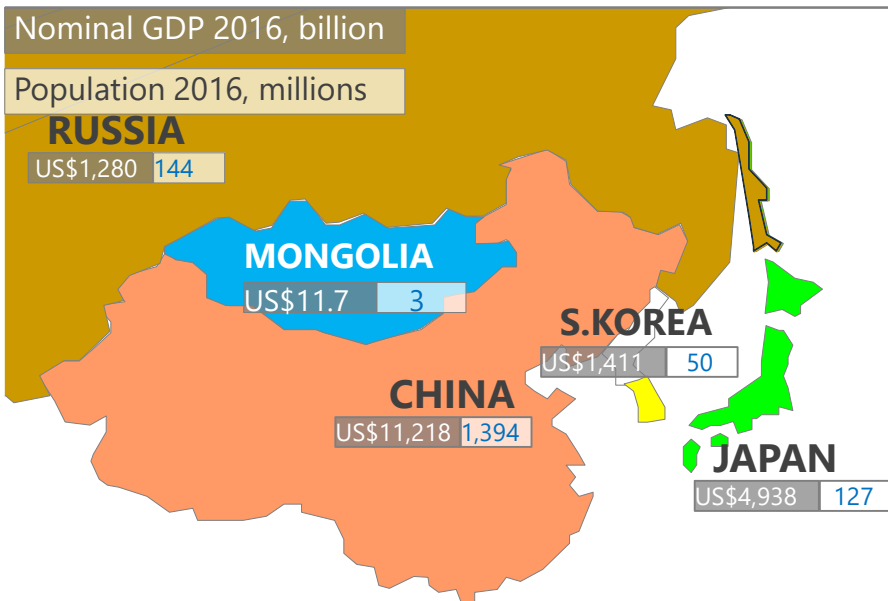
CONNECTIVITY TO OPEN MARKETS

INVESTMENT OPPORTUNITIES

Bayanjargal BYAMBASAIKHAN
Founder, NovaTerra LLC



MONGOLIA OVERVIEW



Leading land per capita
(1.7mln km2 – 3mln people)



Rich mineral resources



Abundant wind and solar resource



Stable democracy

2017 The Government of Mongolia resolved its debt issues reaching a **\$5.5 billion** agreement with the IMF EFF.

2016 Mongolia hosted 11th Asia-Europe Meeting

2015 Secured **\$4.4 billion** PF deal with 20 leading banks to finance Oyu Tolgoi underground development.
Presidents of Mongolia, China and Russia signed an agreement for development of Mongolia-Russia-China Economic Corridor.

Source: Government of Mongolia, International Monetary Fund



INVESTMENT PIPELINE

Mining (capex)

- \$10bln+ Oyu Tolgoi (copper and gold)
- \$5bln+ Tavan Tolgoi (coking coal, coal)
- \$1bln+ Tsagaan Suvarga (copper and molybdenum)

Energy (capex)

- \$1.3bln CHP5 450MW
- \$1.2bln TTPP 450MW
- \$800mln Egiin Hydropower plant 315MW
- \$30bln Coal to Gas
- \$2bln Coal to Liquids

Infrastructure (capex)

- Railroad (\$5bln)
- Roads
- Power plant transmission/distribution
- Urban heat/power plant, roads, water, other utility lines
- New Airport

Heavy industry (capex)

- Oil refinery (\$1.3bln)
- Coal to synthetic natural gas plant (\$1-2bln)
- “Bayangobi nutag” Industrial park (\$1.55bln)
- Copper concentrate smelting and refining plant (\$2.33bln)
- Metallurgical plants

Mongolia - Renewable Energy Heaven

Wind Power



- Potential to be a major wind power producer in the region
- Good-to-Excellent wind power resources are equivalent to 1TW

Solar Energy



- 300 clear/sunny days per year with an average sunlight duration of 2,250-3,300 hours. 1,400 kWh/m² annually with solar intensity of 4.3-4.7 kWh/m² per day.

Hydro Power



- 6.5GW potential (56.2 billion kWh annual production)



ENERGY STORY – NEW MILLENNIUM REVOLUTION IN MONGOLIA

- Before 2000, nomadic herders used candles to light their homes where they had limited or no access to modern electricity services.
- Starting from the new millennium, the Government of Mongolia began the **National 100,000 Solar Ger (Yurt) Electrification Program**.
- As a result, herders now have access to electricity as they listen to radio, watch television using satellite dishes and use various electronic devices, which keep them connected to a wider world. Their children watch Disney channel like the ones in the US.





YEAR 2013: SALKHIT - FIRST INDEPENDENT POWER PRODUCER

- USD 122 million
- 50 MW =18,000ha forest
- 168.5 GWh/year =100,000 households
- 180,000 t CO2

MONGOLIA'S 1ST

- Power plant connected to the system since the 1980s
- Independent power producer
- Limited recourse project finance deal (Energy)
- Utility-scale renewable energy power plant
- Power purchase agreement



NEW RENEWABLE SOURCES IN 2017: 10MW SOLAR & 50MW WIND



- Darkhan Solar PV
- USD 17.5 million
- 14.2 GWh/year
- 10MW
- 14,746 t CO₂



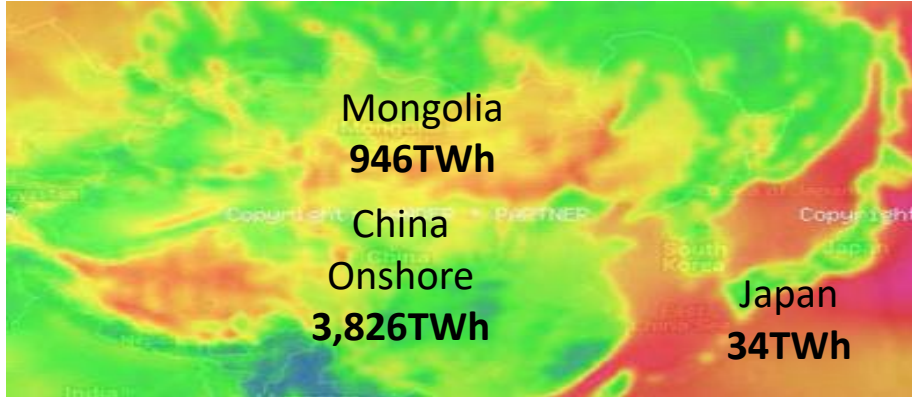
- Tsogttsetsii Wind Farm
- USD 125 million
- 200 GWh/year
- 50MW
- 230,000 t CO₂



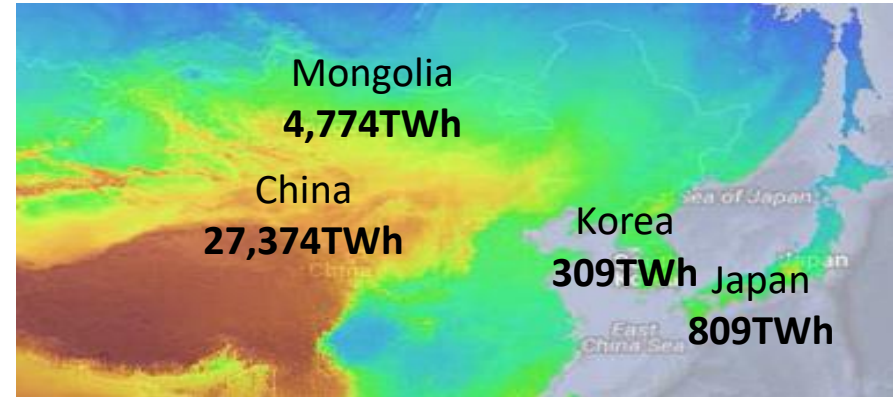


MONGOLIA'S ENERGY ENVIRONMENT

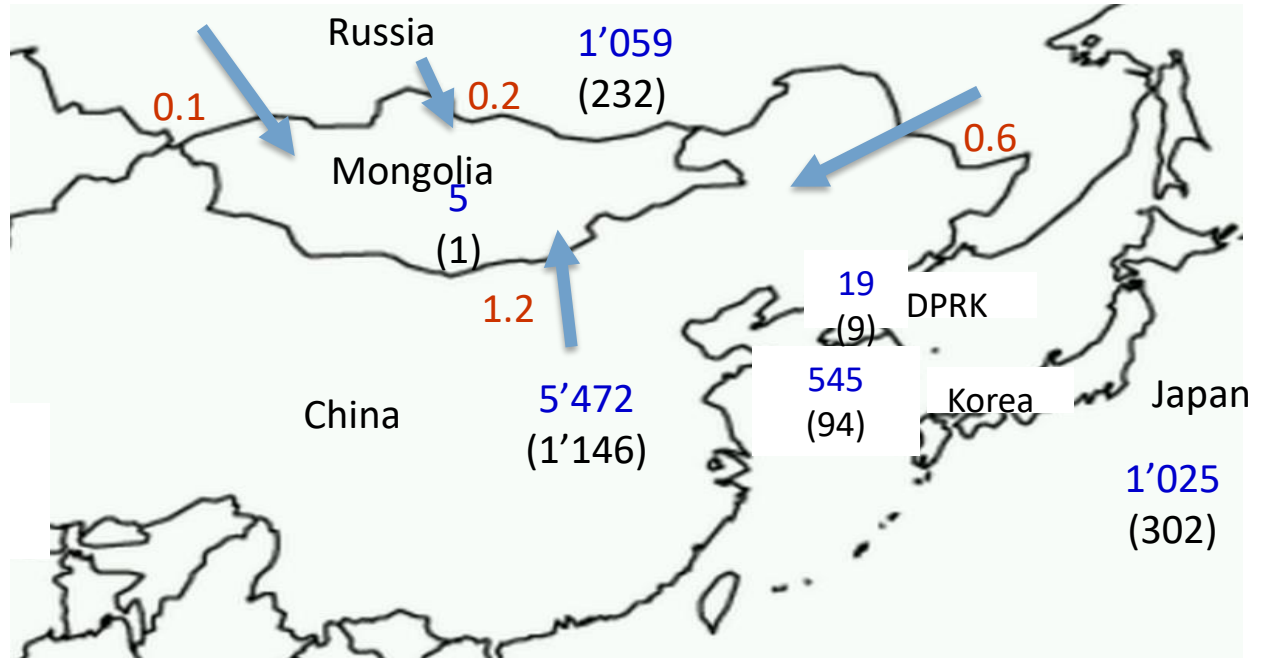
Wind potential



Solar potential



Installed capacity, electricity productions in 2016



5 production in 2016 (TWh)
(1) installed capacity (GW)

→ Cross border trade (TWh)



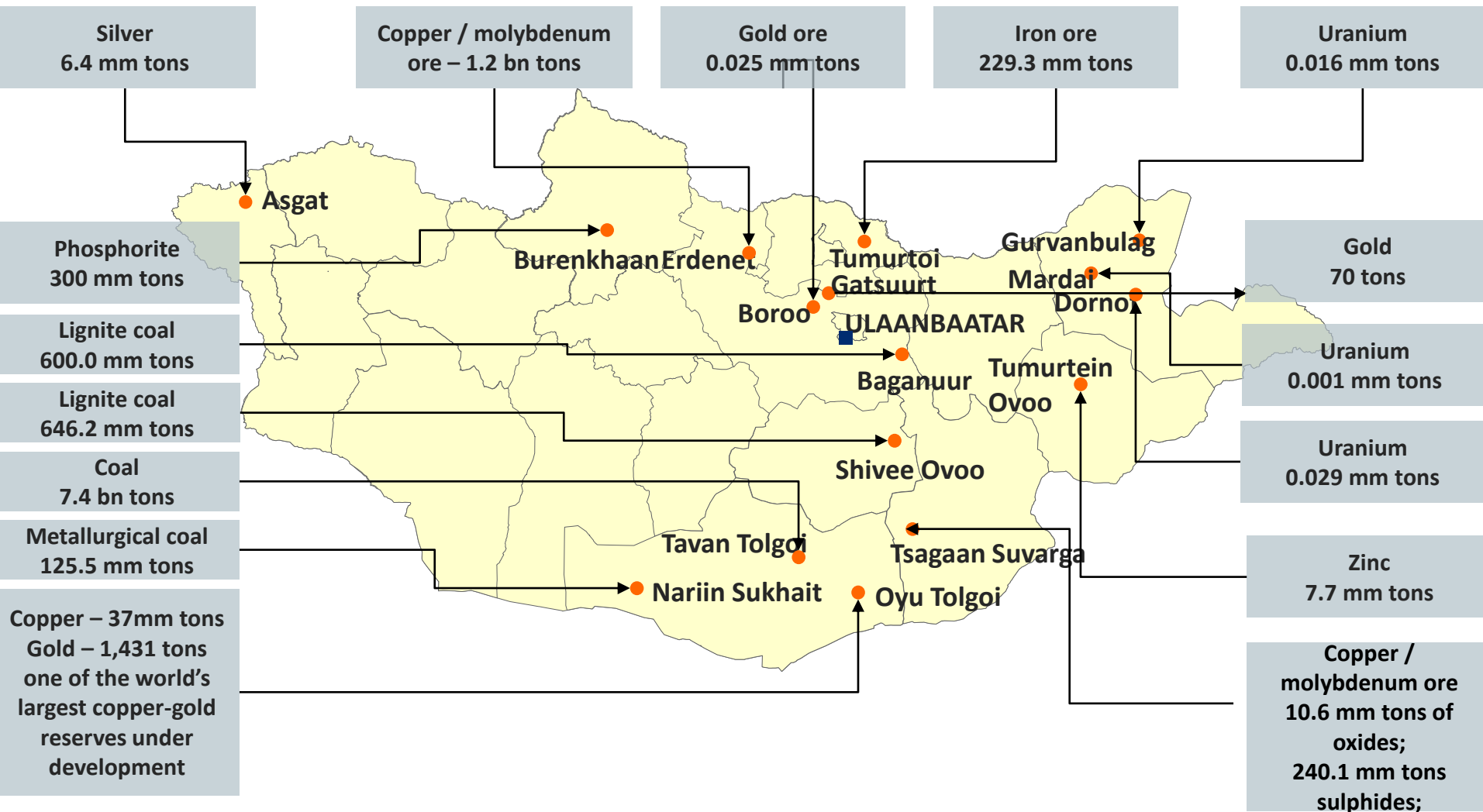
MONGOLIA'S ENERGY REVOLUTION IN NEXT DECADES

Northeast Asia Power System Interconnection





MINING STORY

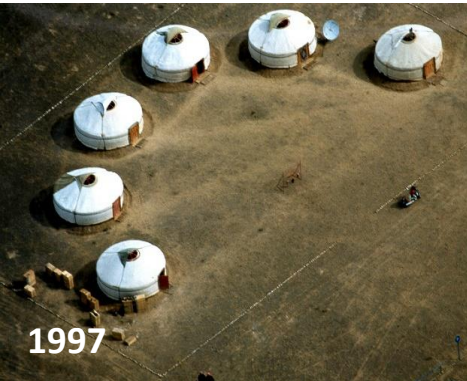


Mongolia has vast and diverse under developed mineral deposits, providing the economy with significant long-term upside potential



THE OYU TOLGOI STORY

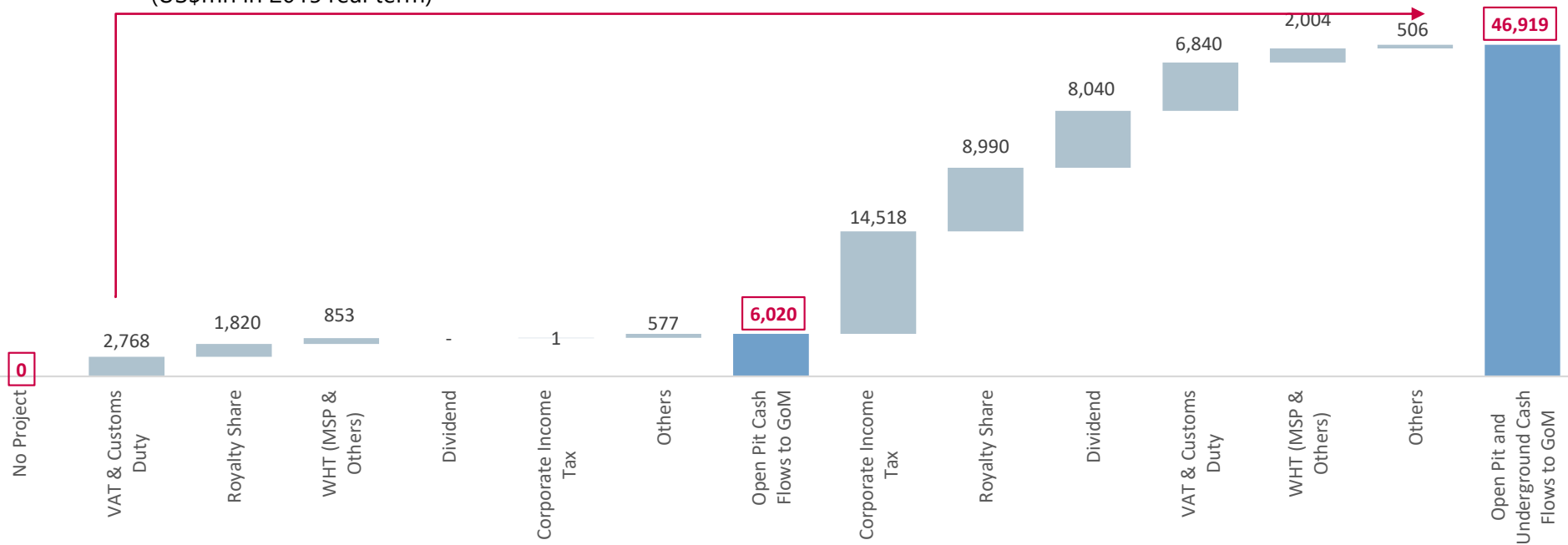
- **OT is a world class copper and gold mine managed by Rio Tinto.**
- **Reserve: Copper -25 million tons, Gold - 1020 tons, Silver - 6144 tons**
 - ✓ OT Investment Agreement – Oct 2009
 - ✓ OT Underground Mine Development Plan – May 2015
 - ✓ OT Underground Mine Project Finance Approval – Nov 2015
 - ✓ OT Underground Development 2016 - 2021





OT Cash Flows

(US\$m in 2015 real term)



Project Valuation (NPV) by Project Phases

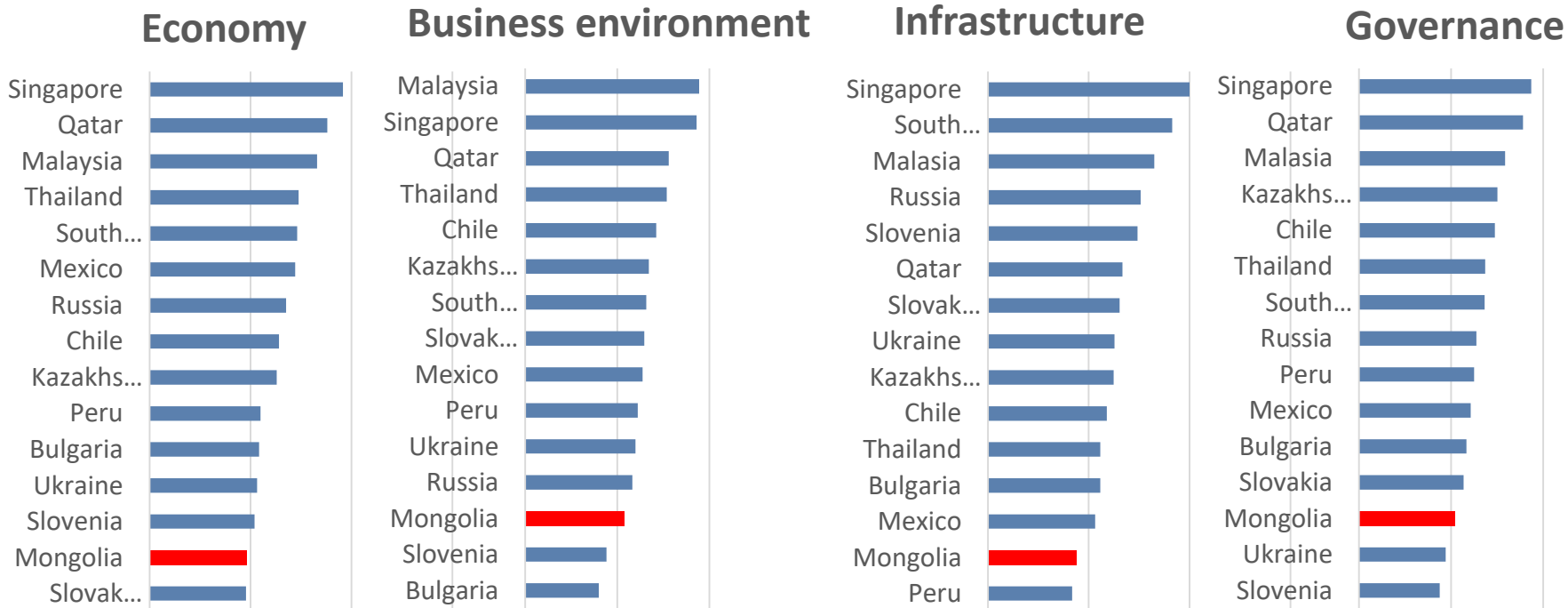
(US\$m in 2014 real term)





MONGOLIA'S COMPETITIVENESS INDEX COMPARED TO 14 COUNTRIES

Weakest indicators



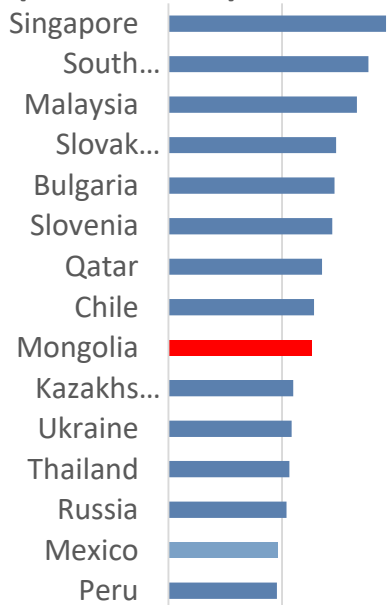
Cause: political influence



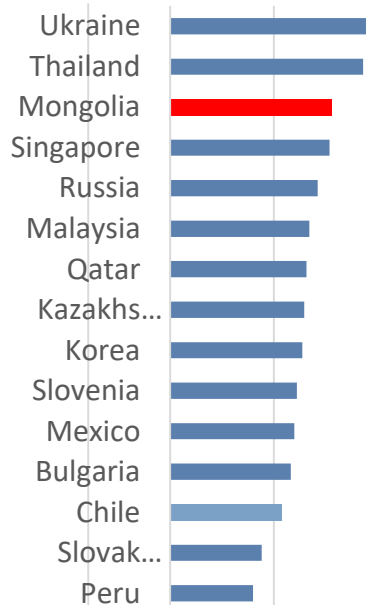
MONGOLIA'S COMPETITIVENESS INDEX COMPARED TO 14 COUNTRIES

Strongest indicators

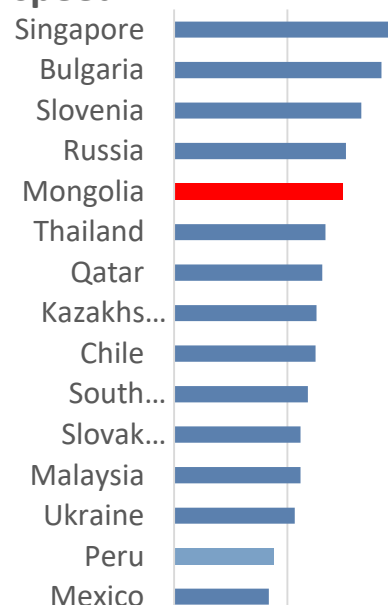
Connectivity (Telecom, IT)



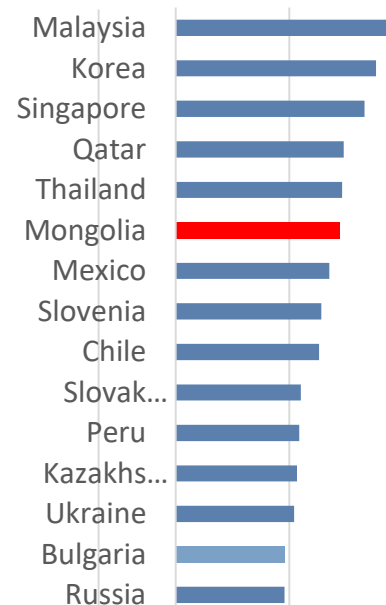
Mobile phone costs



Internet bandwidth speed



Green technology solutions



Market oriented growth

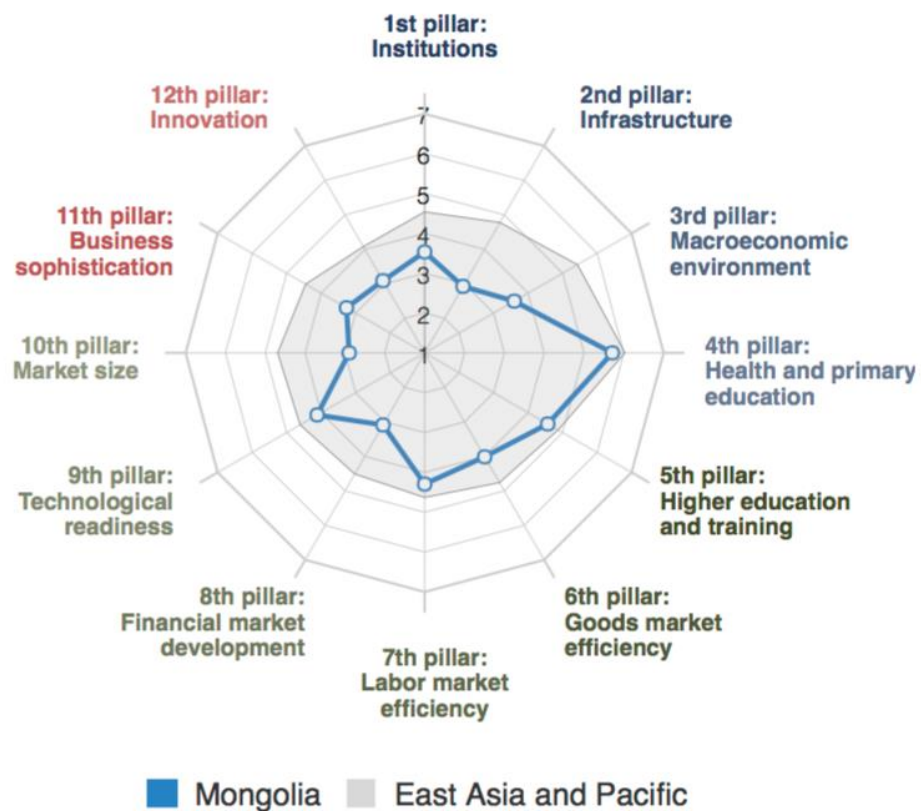


REGIONAL COMPETITIVENESS

The near-term outlook for the Region remains robust and globally the strongest (GPD %)

	2016	2017	2018
 Mongolia	1.0	-0.2	1.8
Asia	5.3	5.5	5.4
 China	6.7	6.6	6.2
 Japan	1.0	1.2	0.6
 Korea	2.8	2.7	2.8
 India	6.8	7.2	7.7
 Singapore	2.0	2.2	2.6
 Australia	2.5	3.1	3.0
ASEAN	4.8	4.9	5.1
APD Small States	3.4	3.4	3.8

Regional Competitiveness Index





REGIONAL CONNECTIVITY | SCOPE

Commonwealth of Independent States (11 countries)

Key countries include

- Kazakhstan
- Uzbekistan
- Ukraine
- Kyrgyzstan

Russia

Mongolia

China

South Asia (8 countries)

Key countries include

- India
- Pakistan
- Bangladesh
- Nepal

Southeast Asia (11 countries)

Key countries include

- Indonesia
- Thailand
- Malaysia
- Vietnam
- Singapore

Regional connectivity from the OBOR initiative will

directly affect 3.8 billion people with

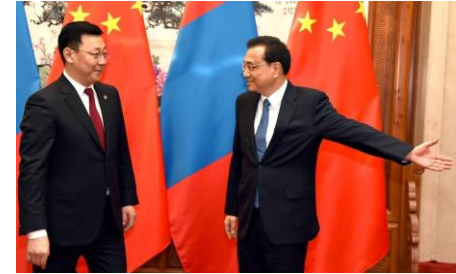
a collective GDP of US\$22 trillion



MONGOLIA'S FOREIGN POLICY

PM J.Erdenebat attended International Economic Forum in June 2017, St.Petersburg, Russia

- Supported Asia Super Grid Project, designed to establish an electrical power transmission network connecting Asia and Europe.



PM J.Erdenebat met with leaders of China during the Belt and Road Forum in May 2017, Beijing China

- Signed 21 cooperation documents



Meeting between Presidents of China, Russia and Mongolia in June 2016, Tashkent, Uzbekistan; July 2015, Ufa, Russia

- China-Mongolia-Russia Economic Corridor Program initiative to build infrastructure, railway, highway, pipelines and transmission lines



PM Saikhanbileg' s visit to Tokyo in Feb 2015

- Economic Partnership Agreement Mongolia-Japan (tariff exemptions on 96% of trade)



Indian PM Modi' s visit to Mongolia in May 2015

- US\$1bln credit line to develop infrastructure





Panel discussions and companies

KEYNOTE: J. ERDENEBAT
PRIME MINISTER OF MONGOLIA

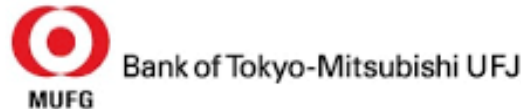
I. REGIONAL ECONOMIC INTEGRATION: FROM ECONOMIC NECESSITY TO POLITICAL REALITY



II. NORTHEAST ASIA POWER SYSTEM INTERCONNECTION



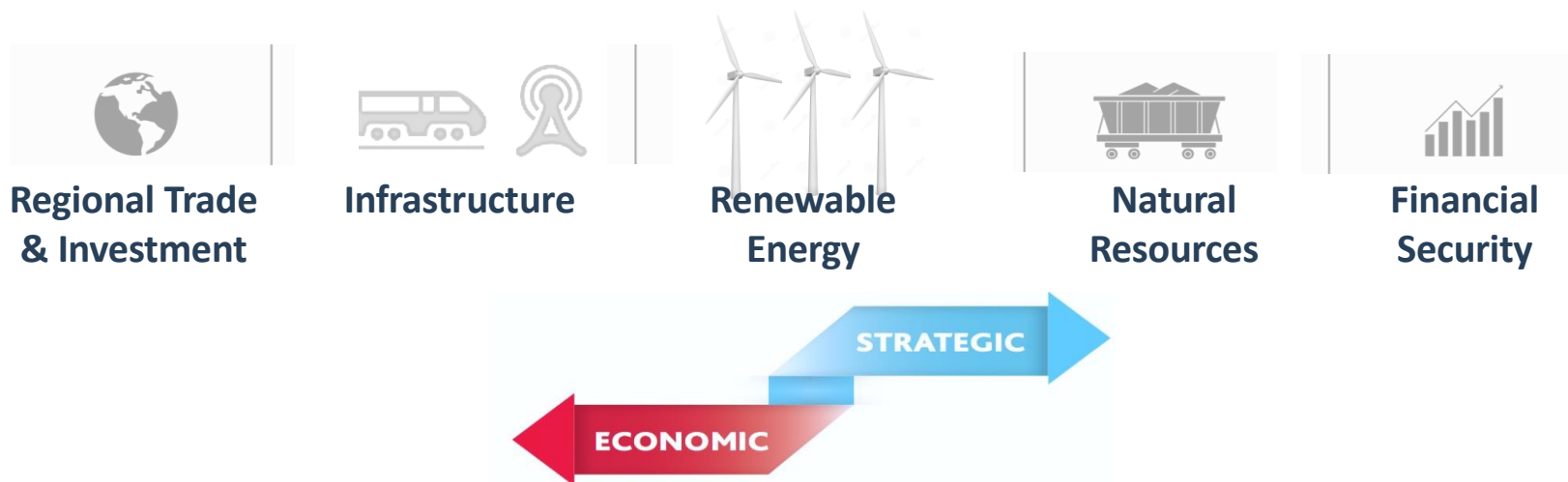
III. OVERCOMING ASIA'S INFRASTRUCTURE INVESTMENT GAP



IV. ENVIRONMENTAL, SOCIAL AND GOVERNANCE PERFORMANCE AS COMPETITIVE ADVANTAGE



Unlock ultra-scale infrastructure, mining and power projects in Mongolia



Regional economic cooperation to increase Mongolia's and Asia's competitiveness



US\$26 trillion (US\$1.7 trillion per year)
needed for developing Asia's
infrastructure from 2016-2030



\$US100 billion to be financed



\$US40 billion to be financed
\$US15 billion expected

Silk Road Fund
丝路基金

Additional financings underway

- **US\$502 billion** into 62 Belt-Road countries
- To funnel investments worth **US\$313 billion**
- China-Mongolia-Russia Economic Corridor

THANK YOU



bbyambasaikhan@novaterra.mn



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