

One Belt One Road and Opportunities

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Remarks at Lingnan (University) College
Sun Yat-Sen University
MBA Program

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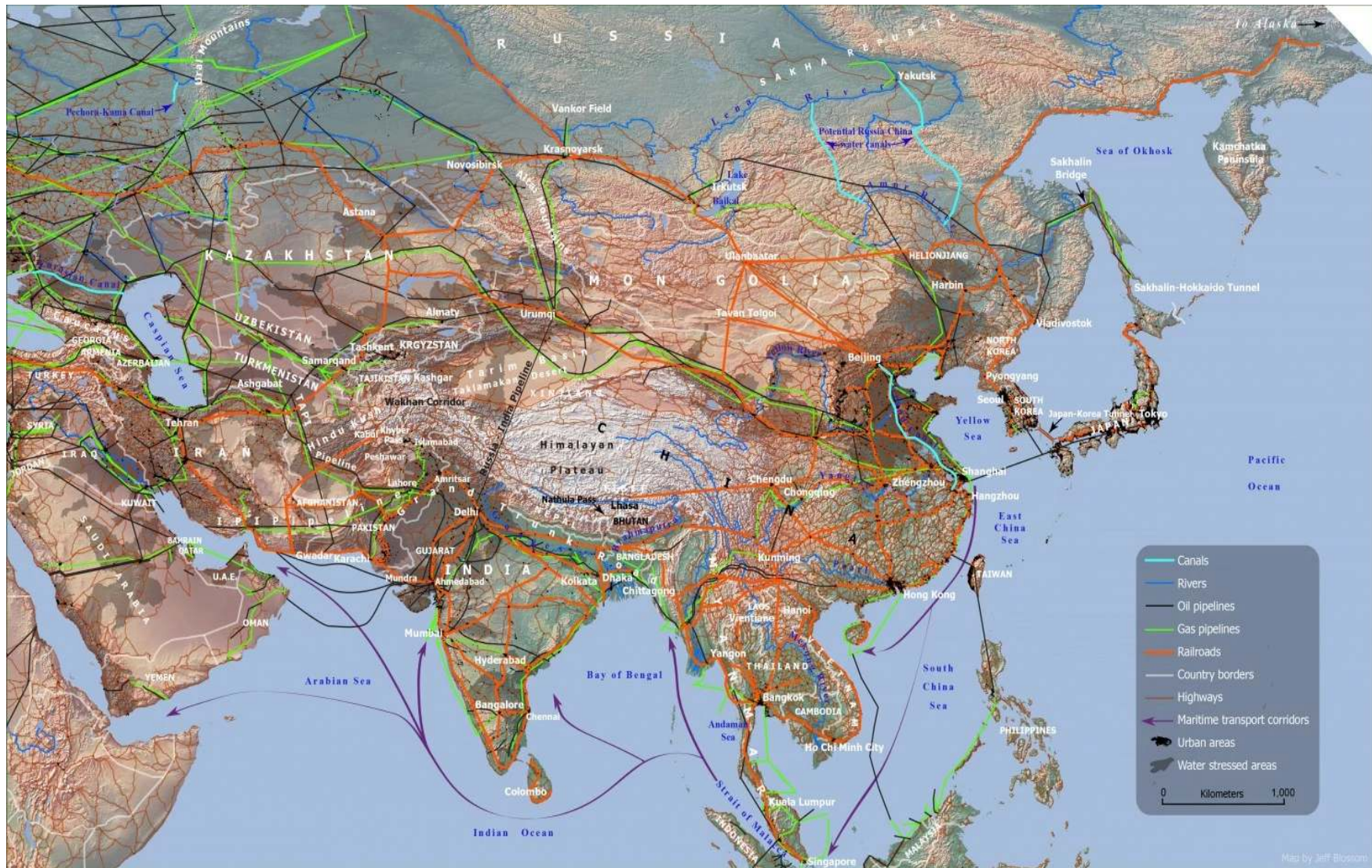
One Belt One Road

(65 countries and 4.4 billion people)



One Belt One Road:

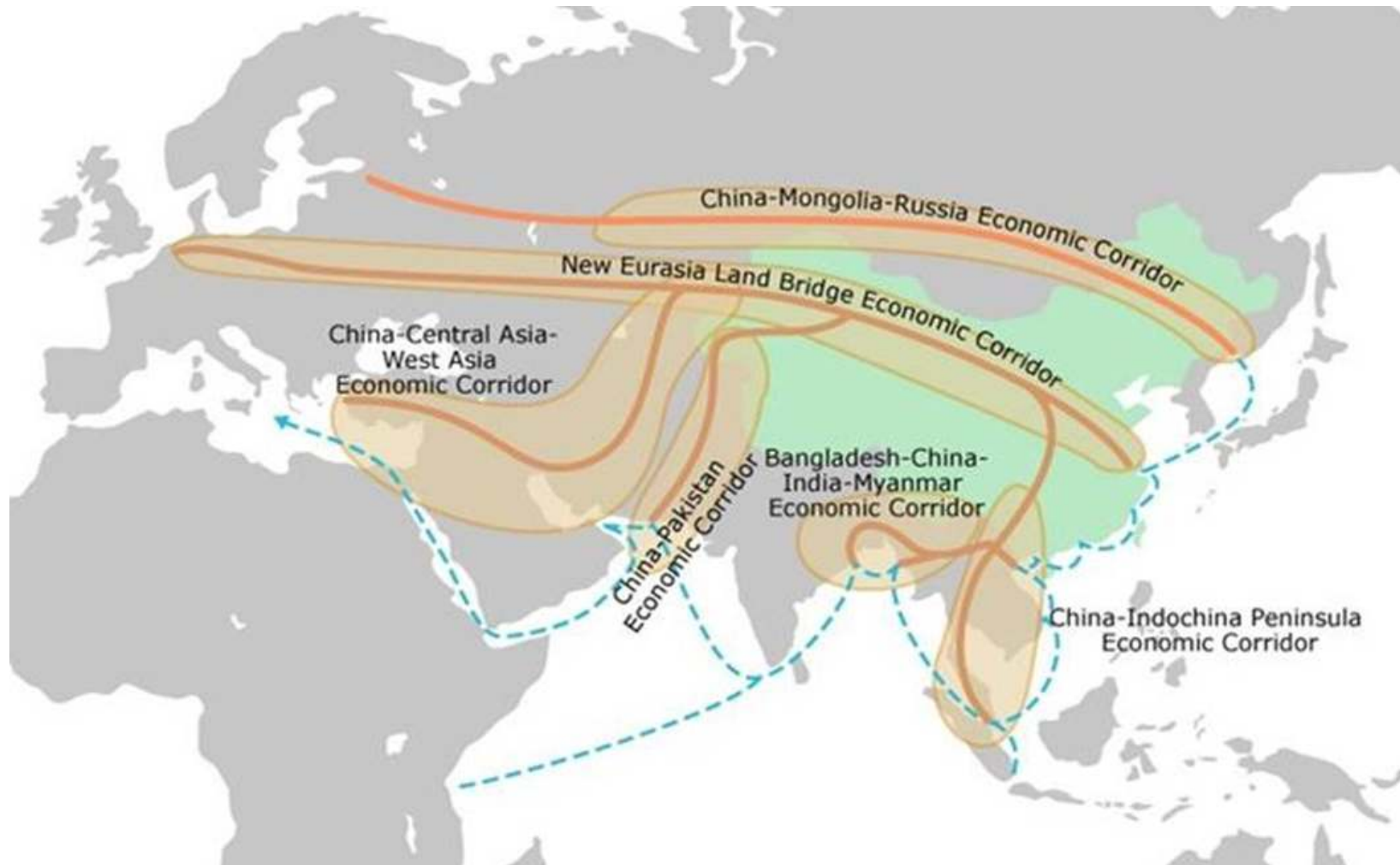
Railroads, Highways, Ports, Oil & Gas Pipelines



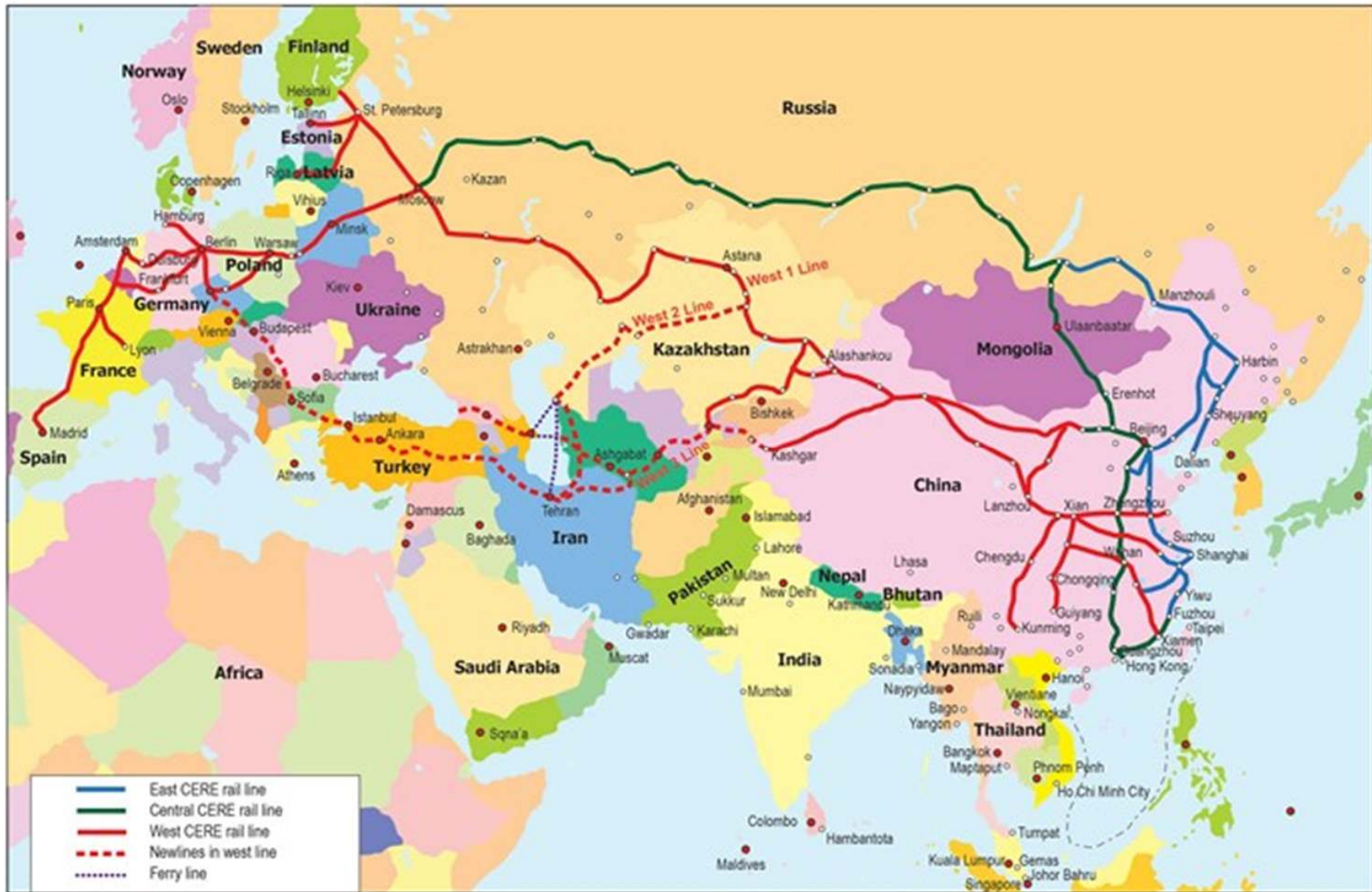
Key Numbers of Belt & Road Initiative

65 Countries	Connects 65 countries and estimated 4.4 billion people
30% of GDP	Accounted for over 63% of world population and 30% of GDP
3 Round	The 3rd round of China's opening up after development of Special Economic Zones and accession to WTO
40+ countries	Over 40+ countries and international organizations have signed cooperation agreements with China
5 key areas	The 5 key areas of cooperation are: policy coordination, facilities connectivity, trade, financial integration and people-to-people ties
6 Economic Corridors	Set-up 6 economic cooperation corridors: China Pakistan, New Eurasia Land Bridge, China-Mongolia-Russia, China-Central Asia-West Asia, China Indochina Peninsula, Bangladesh-China-India-Myanmar
US\$ 953 Billion	China's trade value with B&R countries reached US\$953 billion in 2016, 25.7% of China's total trade
8,158 Contracts	8,158 contracts were signed by Chinese enterprise in 61 countries in 2016

The Six Economic Corridors



China-Europe Railway Express Map



Source: CRC, NDRC

Port Coverage will shorten the voyage by 1,000-2000KM



Source: Wikipedia

Belt and Road (B&R) Summit – Beijing May 14 - 15

- Attended by 29 state leaders, 1,500 representatives from 130 countries and global organizations
- Estimated value of MOUs signed reached RMB 1,890 billion ^{*1}
- China announced injection of RMB 100 Bln into the Silk Road Fund.
- China Development Bank and China Export-Import Bank will provide RMB 250 Bln and RMB 130 Bln in loans dedicated to B&R projects.
- Chinese financial institutions are encouraged to expand overseas funds by RMB 300 Bln
- Note: In 2016, China obtained new contracts of US\$ 126 bn from B&R regions, delivering high growth of 36.5% YoY. According to BOCI estimate, new orders will increase at a 19% CAGR in the next 10 years. ^{*2}
- **China is set to hold the next summit in 2019.**

^{*1, *2}: according to BOCI estimate

List of MOUs Signed during B&R Summit

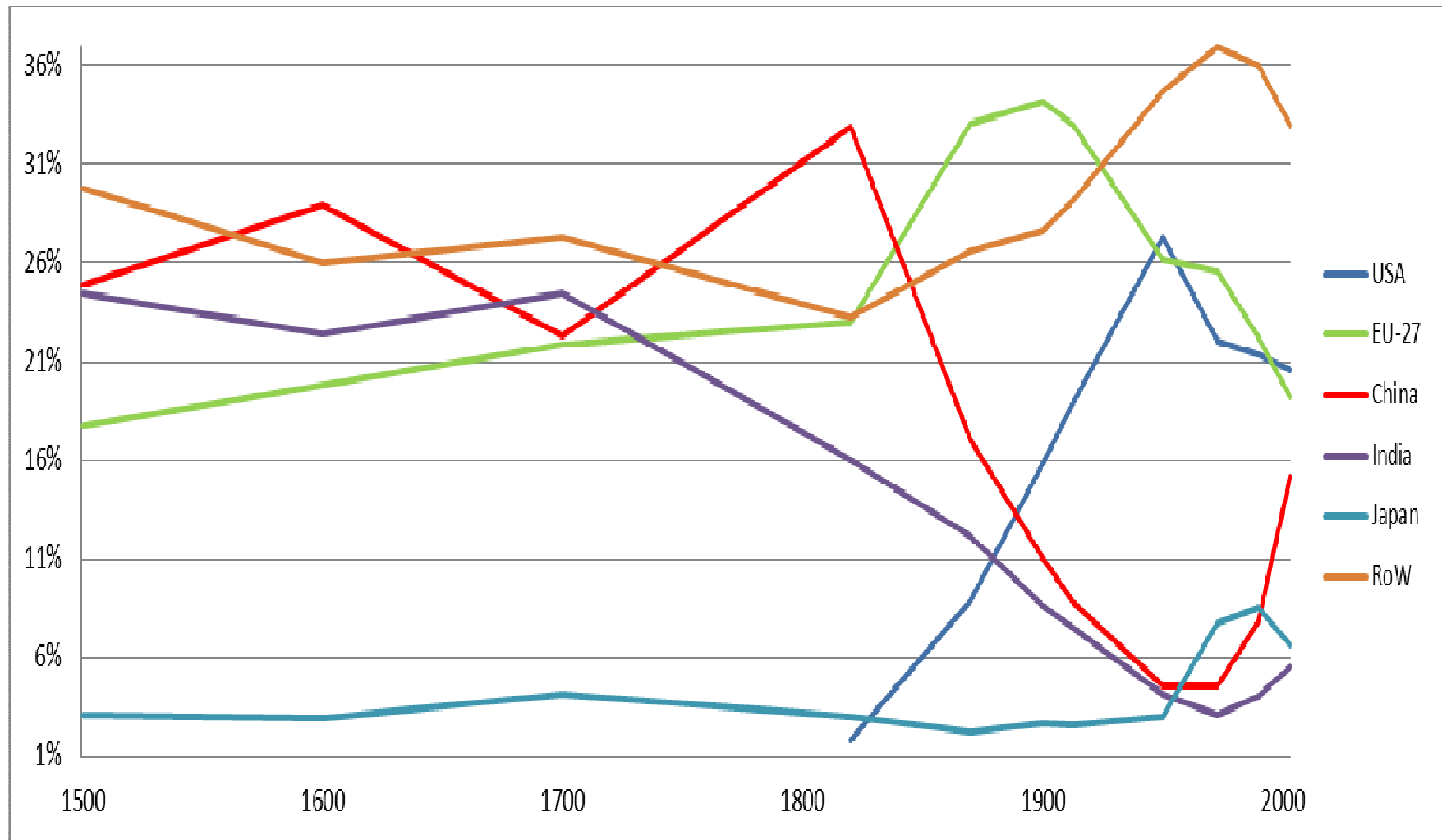
Country	Project	Investment (US\$ bn)	Chinese enterprise	Counterparty
Pakistan	Four hydropower projects along Indus River	50.0	-	-
Pakistan	Diamer-Bhasha Dam	12.0	-	-
Malaysia	2nd phase of East Coast Railway	2.1	CCCC	Malayan Railways Limited
Philippines	Pulangi V 250MW Hydropower Plant	10.0	CEEC	Pulangi Hydro Power Corporation
Timor-Leste	-	0.7	CRCC's key competitor	Government of Timor-Leste
Bangladesh	Digital Connectivity Project	0.7	CRCC's key competitor	Government of Bangladesh
Russia	Western Europe-Western China Highway	80.0	CCCC	Russian Highways State Company
Kazakhstan	2nd phase of Astana Light Metro	2.2	CRCC's key competitor	Local government of Astana
Saudi Arabia	Yanbu 5x660MW oil-fired plant	4.0	PowerChina	Saline Water Conversion Corp
Saudi Arabia	Energy projects	2.0	Norinco	-
Serbia	Belgrade industrials park and highway	7.4	CCCC	Government of Serbia
Serbia	Two highways	14.8	CCCC	Government of Serbia
Ethiopia	Transport projects	3.0	CCCC	Government of Ethiopia
Ethiopia	Dire Dawa Industrials park and highway	5.0	CRCC	Government of Ethiopia
Others	-	80.0	-	-
Sum (US\$)	-	274.0	-	-
Sum (RMB bn)	-	1,890.5	-	-

Policy Developments for OBOR Initiative

2013 B&R was unveiled	<ul style="list-style-type: none"> * Sep and Oct: The SREB and MSR were proposed by Chinese leader Xi Jinping during his visits to Central Asia and SE Asia, respectively * Nov: B&R was made a national strategy at the Third Plenary Session of the 8th Central Committee of the Communist Party of China (CPC)
2014 Being a major national strategic initiative	<ul style="list-style-type: none"> * Dec: B&R became one of the three major national strategic initiative in China's Central economic conference * Dec: Silk Road Fund was established
2015 Top design for B&R	<ul style="list-style-type: none"> * Feb: The leading Group for Advancing the Development of B&R was formed * Mar: NDRC, etc, issued an outline of "Visions and Actions" for the initiative * Nov: Central Leading Group for Comprehensive Deepening Reforms: to promote the integration of the initiative with the development strategies of the countries along the routes * Dec: Asia Infrastructure Investment Bank (AIIB) was launched
2016 Implementation in full swing	<ul style="list-style-type: none"> * Mar: B&R was included in China's 13th 5-year Plan * Dec: Central Leading Group for Comprehensive Deepening Reforms: to enhance China's soft competitiveness in the B&R Initiative
2017 Int'l cooperation lifetd to a higher level	<ul style="list-style-type: none"> * May: China host the Belt & Road Forum for Internationa Cooperation

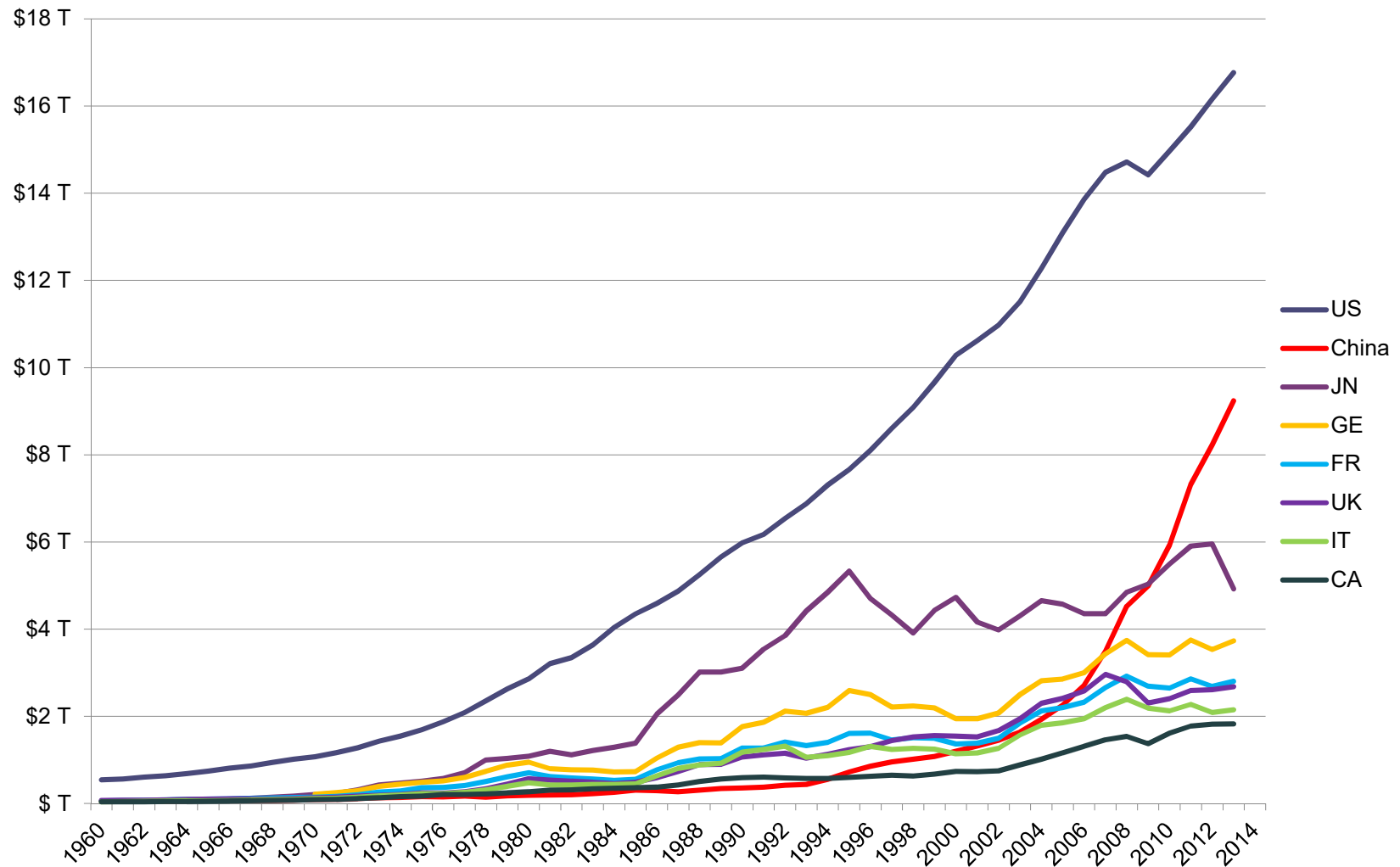
Share of World GDP (PPP) since 1500

(PPP 1990 International dollars)



Source: Angus Maddison

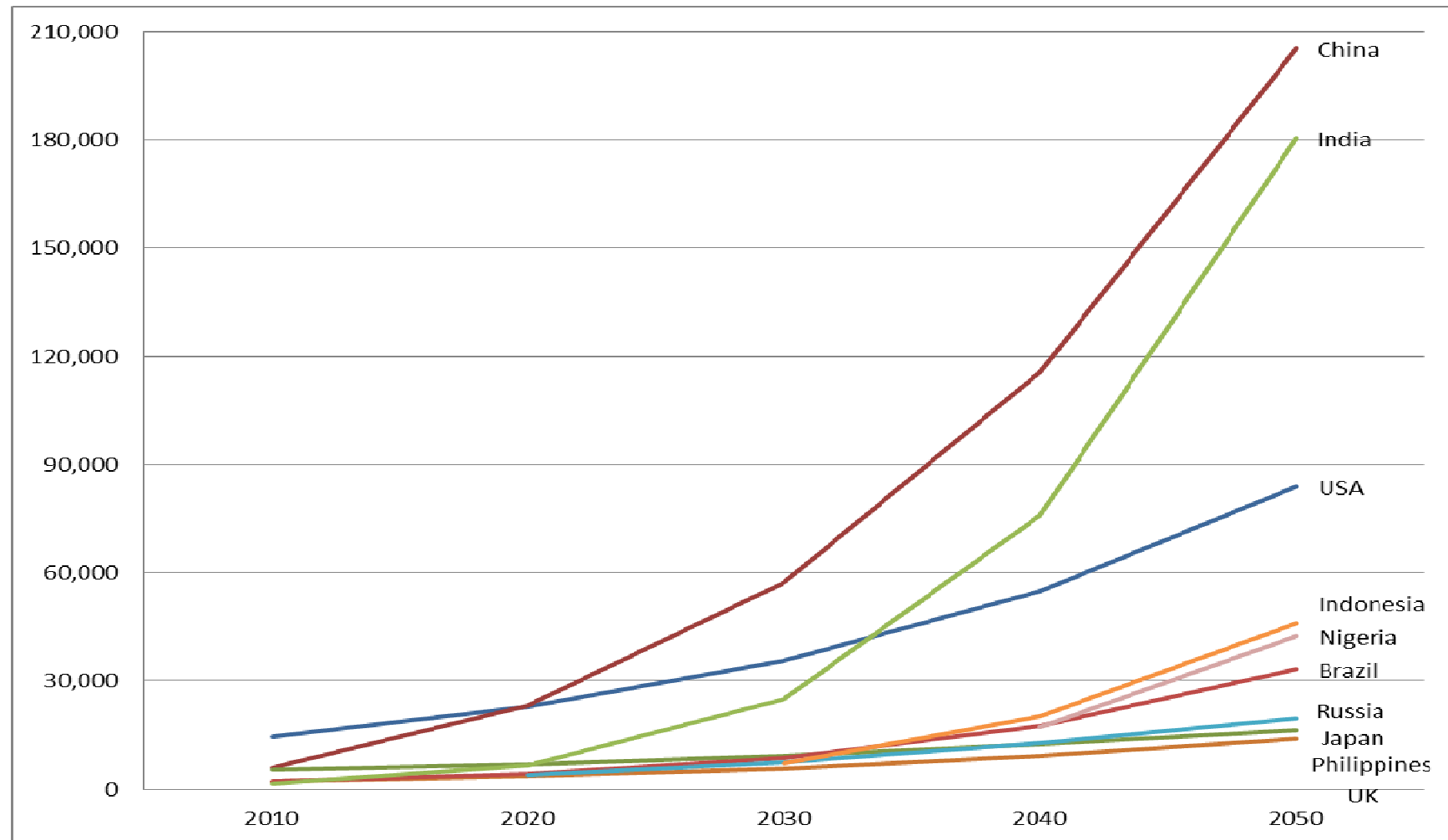
China and G-7 GDP



Source: World Bank

Top 10 Largest Economies in the World 2050

(Nominal GDP, USD billion)



Source: Citigroup Feb 2011

IMF Projection of GDP by 2019

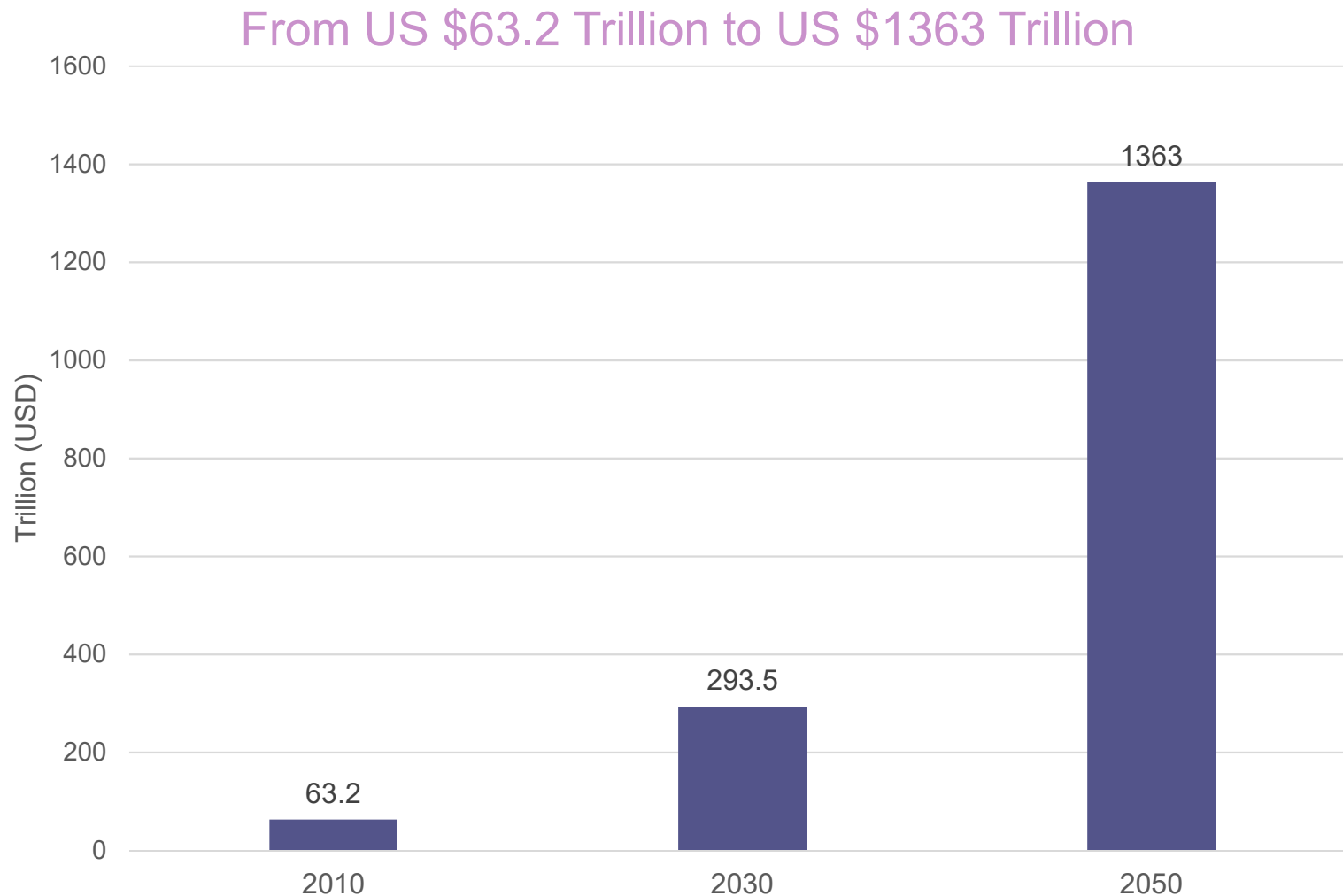
(Nominal GDP vs PPP GDP, \$ billions)

Rank	Nominal GDP		PPP adjusted GDP	
1	USA	22,148	China	26,867
2	China	15,519	US	22,147
3	Japan	5,433	India	11,044
4	Germany	4,558	Japan	5,527
5	UK	3,704	Germany	4,307
6	France	3,393	Russia	4,243
7	India	3,182	Brazil	3,828
8	Brazil	2,892	Indonesia	3,747
9	Russia	2,595	France	3,095
10	Italy	2,456	UK	3,037
11	Canada	2,122	Mexico	2,842
12	South Korea	2,097	Italy	2,408

Source: IMF, World Economic Outlook (WEO) Database, October 2014
Edition

Size of World Economy: 2010, 2030 and 2050

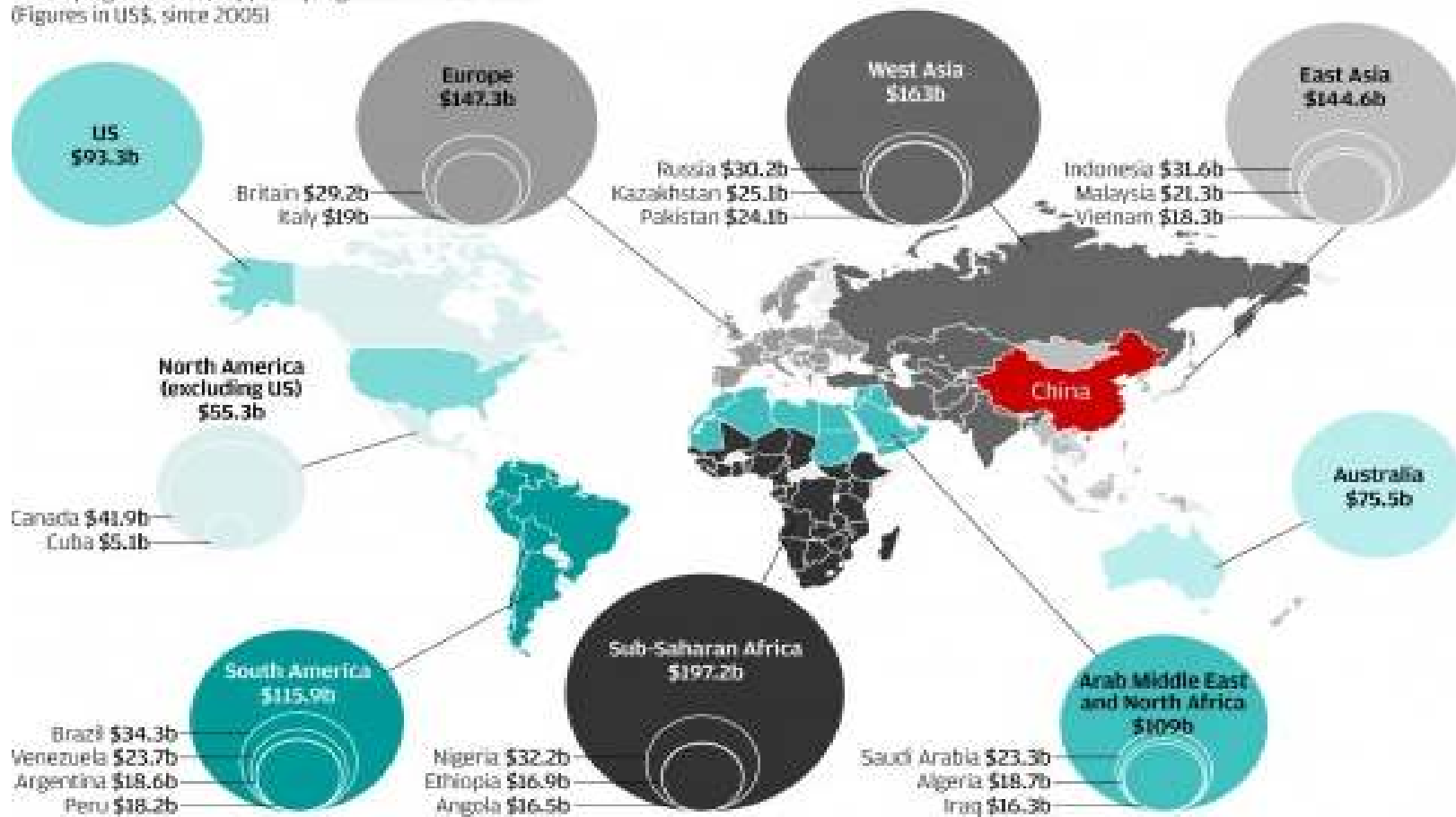
(Using 8% compounding. 1960-2010 actual = 7.98%)



Chinese Outbound Investments

China's worldwide reach

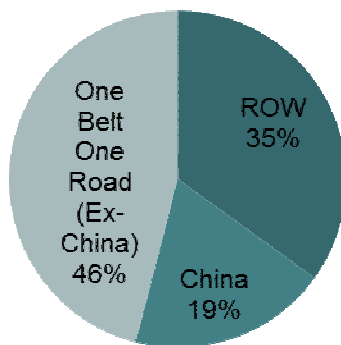
Rich countries, led by the US, are the major recipients of Chinese investment. In contrast, engineering and construction activity is concentrated in developing countries, topped by Nigeria and Venezuela (Figures in US\$, since 2005)



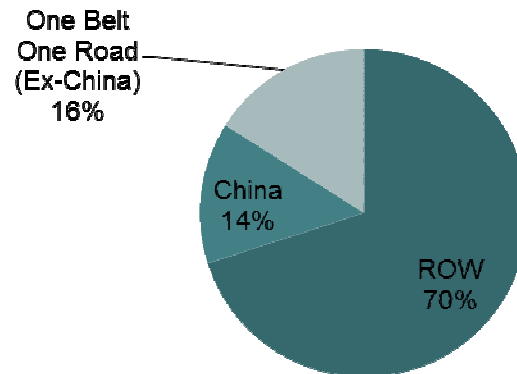
Source: American Enterprise Institute and Heritage Foundation

One Belt One Road Share of Global Population, GDP and Exports

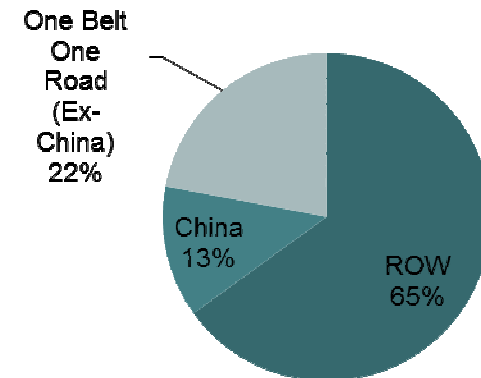
Share of Global Population (2014)



Share of Global GDP (2014)



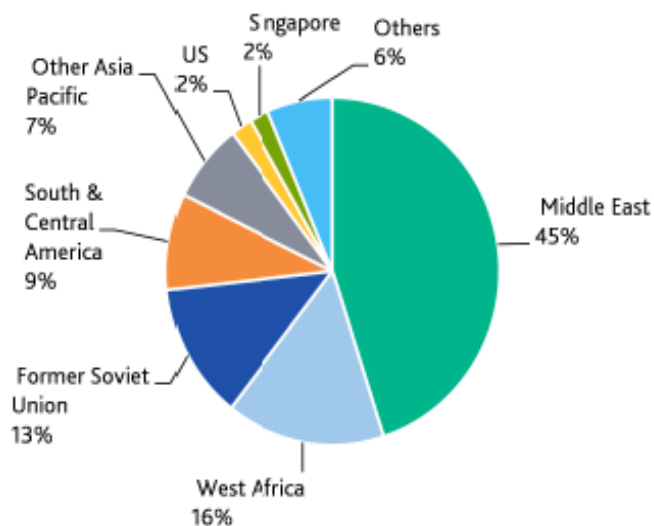
Share of Global Exports (2014)



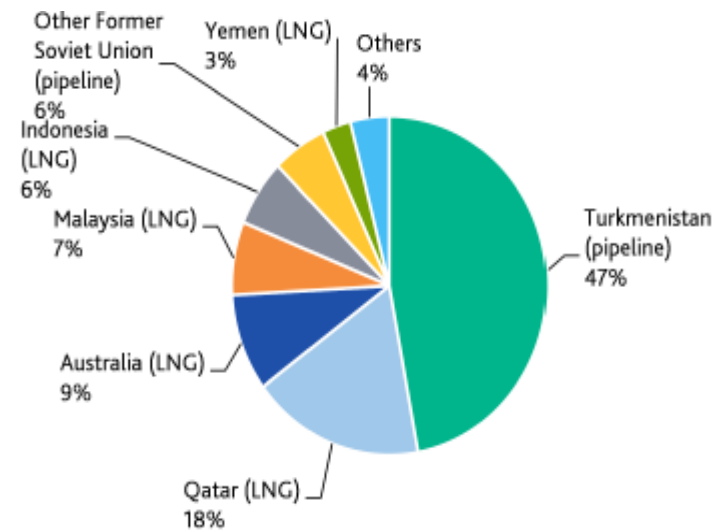
Source: Moody's, IMF, UN, China National Bureau of Statistics

Chinese Oil & Gas Imports, % of Total

Middle East accounts for almost half of China's crude oil and over half of gas imports,



Note: Data as of 2013



Note: Data as of 2013. Incl both pipeline and LNG

Source: Moody's, BP

Indicative Investment Needs for Regional Infrastructure by Regional/sub-regional Program and Sector

Program and Sector	CAREC*1	GMS*2	SASEC*3	The Pacific	Total*
Transport	37.5	44.1	56.8	2.1	140.5
Road	24.6	13.3	24.4	-	62.3
Rail	10.2	30.1	22.5	-	62.8
Air	1.4	-	4.4	0.7	6.5
Maritime	1.1	0.3	5.4	1.4	8.2
Logistics	0.2	-	-	-	0.2
Others	-	0.5	-	-	0.5
Trade facilitation	1.3	-	0.5	-	1.8
Energy	40.9	3.2	58.0	-	102.1
Info & Comm Tech	-	0.6	-	0.4	1.0
Other sectors	-	3.1	-	1.5	4.6
Total*	79.7	51.0	115.3	4.0	250.03
*1: Central Asia Regional Economic Cooperation					
*2: Greater Mekong Subregion					
*3: South Asia Subregion Economic Cooperation					

Source: Asia Development Bank "Meeting Asia's Infrastructure Needs"

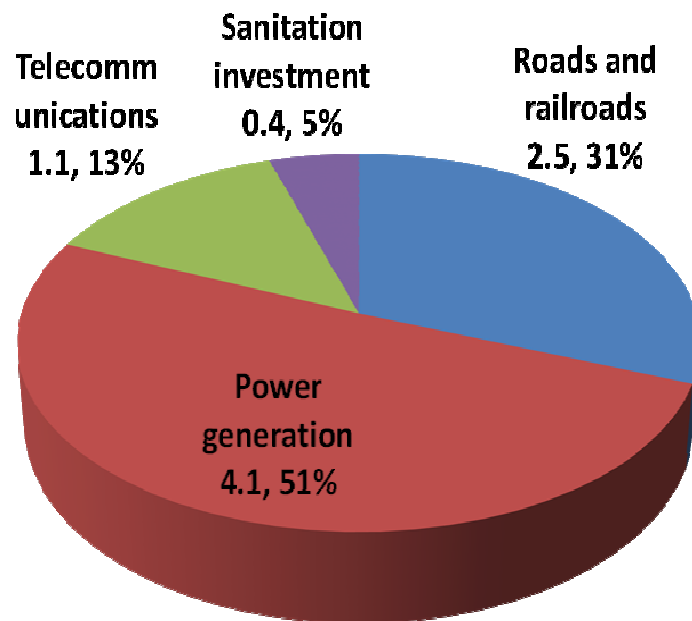
Projected Population and GDP and Infrastructure Investment Needs (Baseline Estimates) by Region, 2016-2030

Region	2015 UN Population Estimates (million)	2030 UN Population Projection (million)	2015 GDP per Capita (\$ in 2015 prices)	Projected Average GDP Growth (%)	2030 Projected GDP per Capita (\$ in 2015 prices)	Projected Infrastructure Investments 2016-2030		
						Investment Needs	Annual Average	Investment Needs as % of Projected GDP
Central Asia	84	96	4,495	3.1	6,202	492	33	6.8
East Asia	1,460	1,503	9,022	5.1	18,602	13,781	919	4.5
South Asia	1,744	2,059	1,594	6.5	3,446	5,477	365	7.6
Southeast Asia	632	723	3,838	5.1	7,040	2,759	184	5.0
The Pacific	11	14	2,329	3.1	2,889	42	2.8	8.2
Asia and the Pacific	3,931	4,396	4,778	5.3	9,277	22,551	1,503	5.1

Source: 2015 Revision of World Population Prospects, United Nations; World Development Indicators, World Bank; ADB estimates.

The Potentials of One Belt One Road

According to Asian Development Bank estimate in 2009, the 45 developing member countries (DMCs) in Asia will requires approximately **USD 8 trillion** infrastructure investment in the next decade to sustain its current grow momentum.



A new estimate in 2016, the 45 DMCs will need to invest **USD 26 trillion** over the 15-year from 2016 to 2030, or **US\$ 1.7 trillion per year**. Of the estimate, \$ 14.7 trillion will be for power, \$ 8.4 trillion for transportation, \$ 2.3 trillion for telecommunications, and \$ 800 billion for water and sanitation

Where to find US\$ 26 trillion financing for OBOR projects?

	Initial Capital
Asia Infrastructure Investment Bank	US\$ 100 Billion
BRICS Development Bank *1	US\$ 100 billion
Silk Road Infrastructure Fund	US\$ 40 billion
China Development Bank	
China Export-Import Bank	
China Export and Credit Insurance Corp (Sinosure)	
China Investment Corp (CIC)	
Bank of China	
*1 Initial subscribed capital = US\$ 50B	

At the B&R Summit in May, China announced injection of RMB 100 Bln into the Silk Road Fund, and China Development Bank and China Export-Import Bank will provide RMB 250 Bln and RMB 130 Bln in loans dedicated to B&R projects. In addition, Chinese financial institutions are encouraged to expand overseas funds by RMB 300 Bln

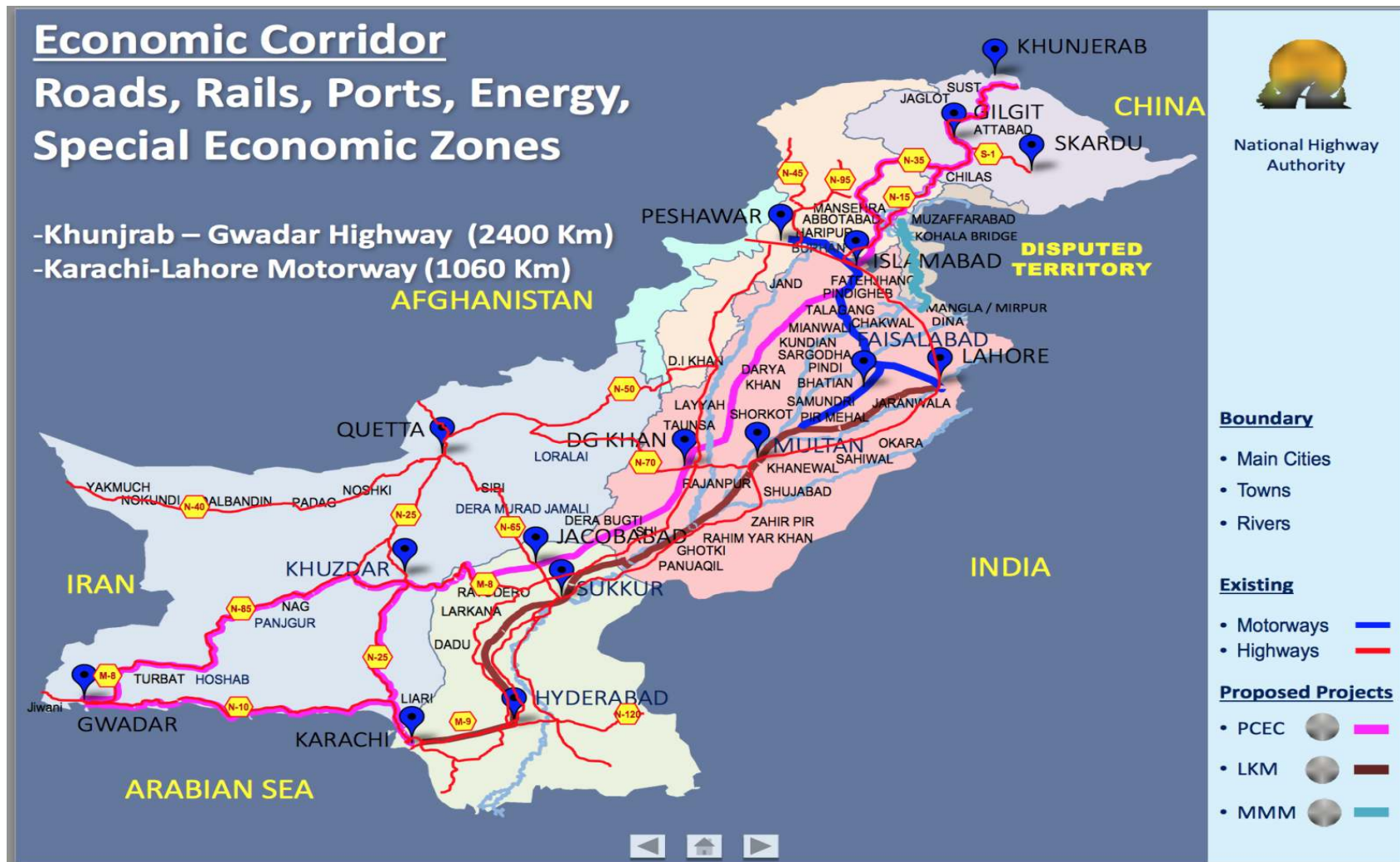
The “players” in One Belt One Road

Code	Company	Code	Company
	H-share Railway related		H-share Construction
1800 HK	China Communications Construction	1800 HK	China Communications Construction
1186 HK	China Railway Construction	1829 HK	China Machinery Engineering
1766 HK	CRRC Corp Ltd	1186 HK	China Railway Construction
1786 HK	CRCC High-tech Equipment Corp	3311 HK	China State Construction Int'l
3898 HK	Zhuzhou CRRC Times Electric	3996 HK	China Energy Engineering Corp
3969 HK	China Railway Signal & Comm.	1599 HK	Beijing Urban Construction Design
3311 HK	China State Construction Int'l		
0525 HK	Guangshen Railway Co Ltd		
			A-share Construction
	A-share Railway related	601186 CH	China Railway Construction
601766 CH	CRRC Corp Ltd	601800 CH	China Communications Construction
601186 CH	China Railway Construction	601668 CH	China State Construction Engineerin
600458 CH	Zhuzhou Times New Material	600068 CH	China Gezhouba Group Co
		601669 CH	Power Construction Corp
	Global railway vehicle producers		Global construction
ALO FP	Alstom	047040 KS	Daewoo Engineering & Construction
SIE GR	Siemens AG	012630 KS	Hyundai Development Co-Eng
7012 JP	Kawasaki heavy Industries	1801 JP	Taisei Corp
GE US	General Electric Co	1802 JP	Obayashi Corp
BBD/B CN	Bombardier Inc	1803 JP	Shimizu Corp
		1812 JP	Kajima Corp
		EN FP	Bouygues SA
		DG FP	Vinci SA
		BOKA NA	Boskalis Westminster

One Belt One Road: Announced Infrastructure Project List

Fields	Projects planned or under construction
跨境高鐵大項目 cross-border high speed rail	Eurasia Rail Central Asia Rail Pan-Asia Rail
基礎設施大項目 Infrastructure	Central Asia-China gas pipeline-Line D Upgrade of Indian railways Construction of Sri-Lanka Port
跨境油氣管道 Cross-border oil and gas pipeline	The west-East Gas Pipeline Ili, IV, and V Central Asia-China gas pipeline network (line D) China-Russia East Route and West Route natural gas pipeline
電訊和電力項目 Telecommunications and electricity power	Fiber optic link of the Myanmar-China, Tajikistan-China and Pakistan-China Submarine optical fiber cable in Southeast Asia Russia-China electricity power line channel, Southeast electricity power line channel

China-Pakistan Economic Corridor (\$46-62 Billion projects)



China-Pakistan Economic Corridor



China-Pakistan Economic Corridor



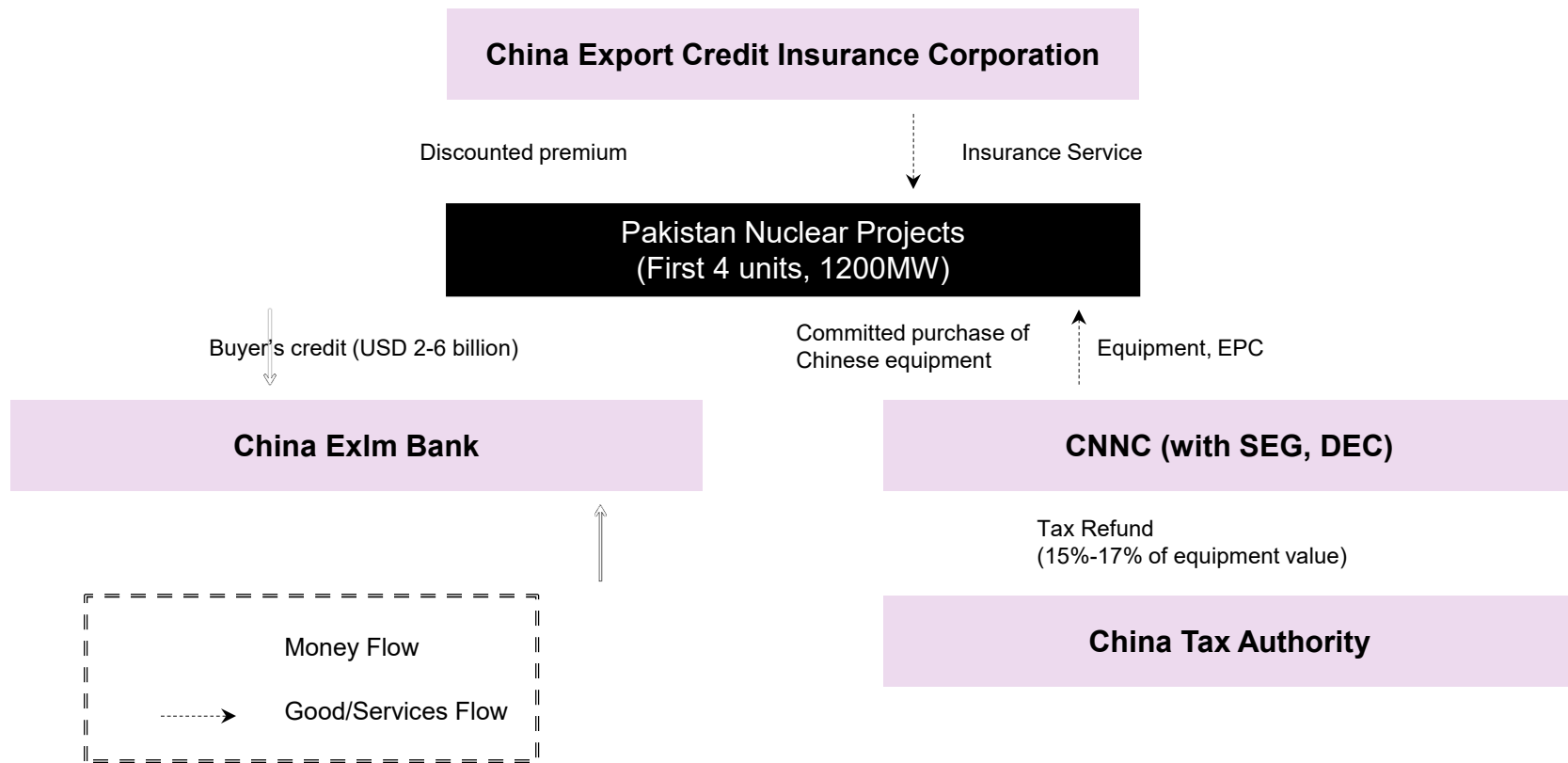
Gwardar Port (Arabian Sea) to China railroad



Gwardar Port: China Overseas Port Holding company (COPHC) to manage the port for next 40 years



One Belt One Road: An example of support from Chinese government to its nuclear export to Pakistan



Source: CNNC; Company media reports

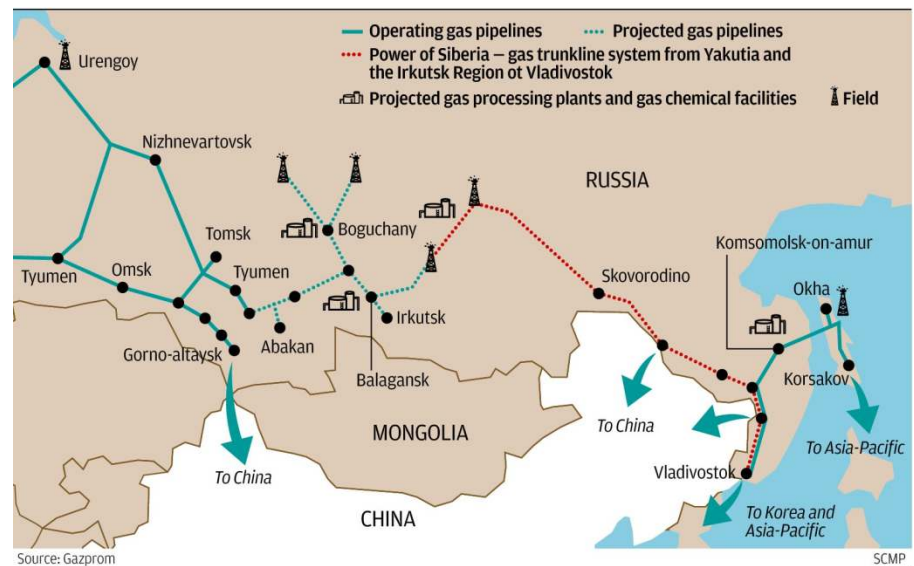
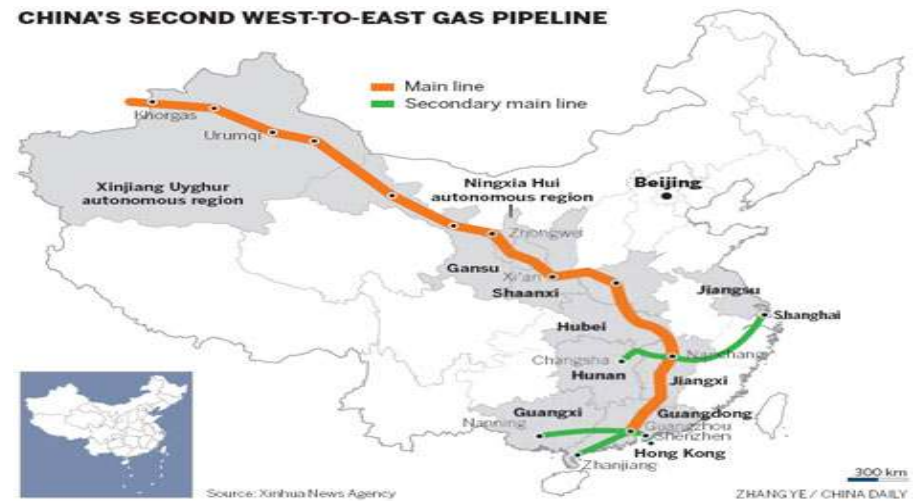
Colombo Port City Project

(China Communications Construction)

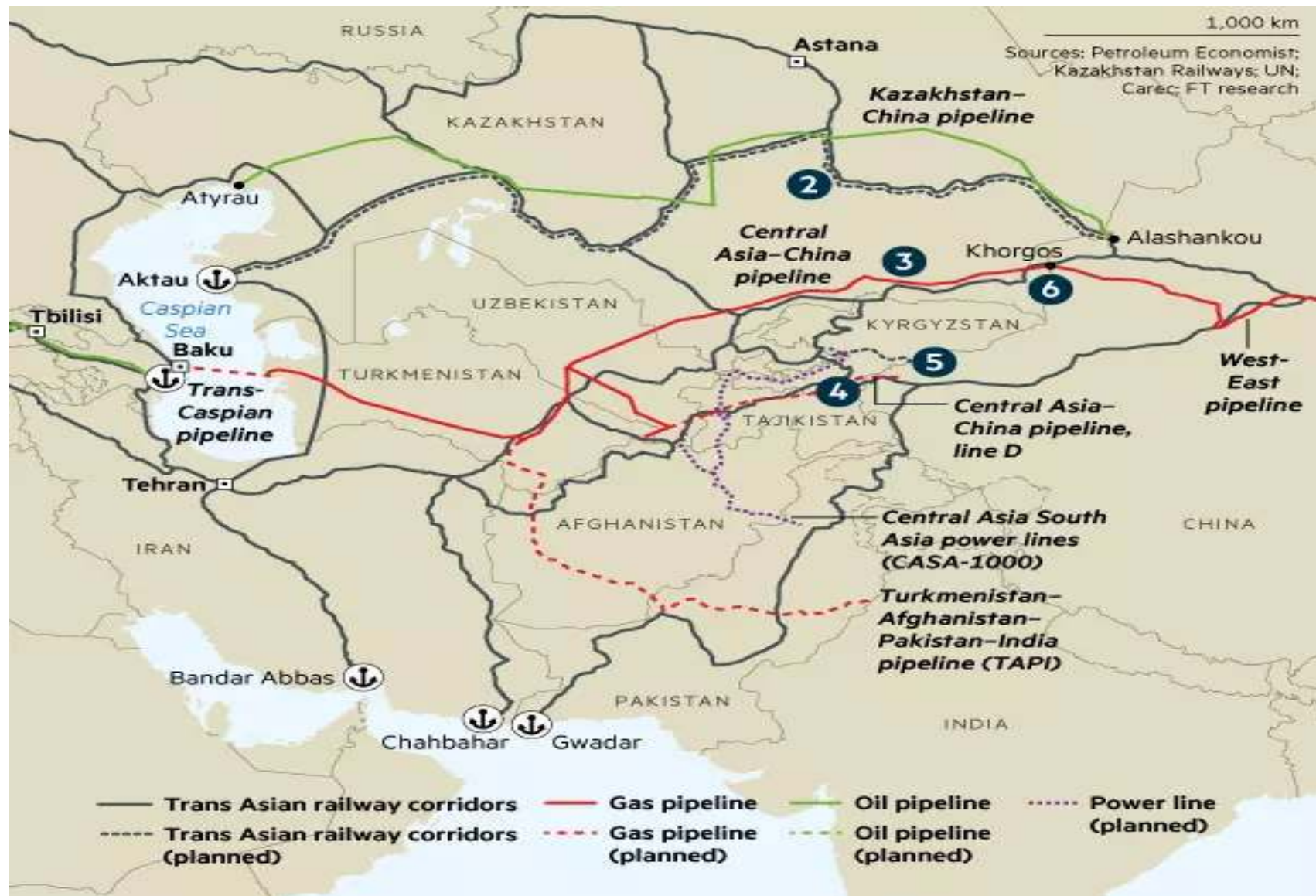


CCCC to reclaim 233 hectares. 20 hectares freehold, 88 hectares on 99-yr lease.
Sri Lanka 125 hectares

Turkmenistan – China, and Russia – China Gas Pipeline



China-Central Asia



Central Asia Gas Pipeline



Central Asia-China Gas Pipeline

China and Turkmenistan agreed on a framework to provide China with long-term supply of gas in 2006. The first pipeline was completed in 2009, second in 2010. Third in 2014. The three pipelines provide China with 55 billion cubic meters of gas from Turkmenistan.

Construction of a fourth pipeline is currently underway, connecting Beynew on the Eastern coast of Caspian Sea to Shymkent. From Shymkent, the gas will be directed to Turpan in Xinjiang. The 4th pipeline will provide China with additional 15 billion cubic meters of gas.

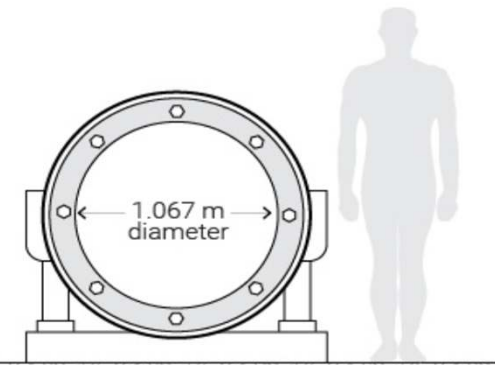
Turkmenistan-China pipeline

Pipe dimensions

55b

Capacity
(ANNUALLY)

The pipes' daily discharge capacity is equivalent to 62,800 Olympic-sized swimming pools

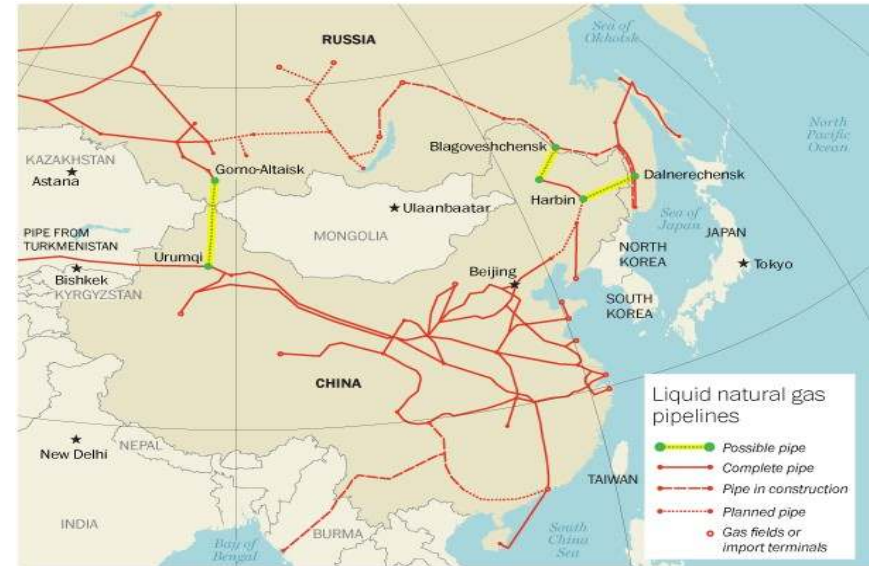


Central Asia oil and natural gas reserves

(2014 Estimates)



Russia and China signed a 30-year, US\$400 billion deal to deliver gas to China (May 2014)



Contract signed by Gazprom and CNPC (China National Petroleum Corp). The contract is to provide 38bn cubic meter meters of gas each year, beginning in 2018.

The 4,000 km pipeline that will bring gas to China will run through Vladivostok (Power of Siberia gas pipeline). Russia is expect to invest \$55 bn developing the project. China \$20 bn

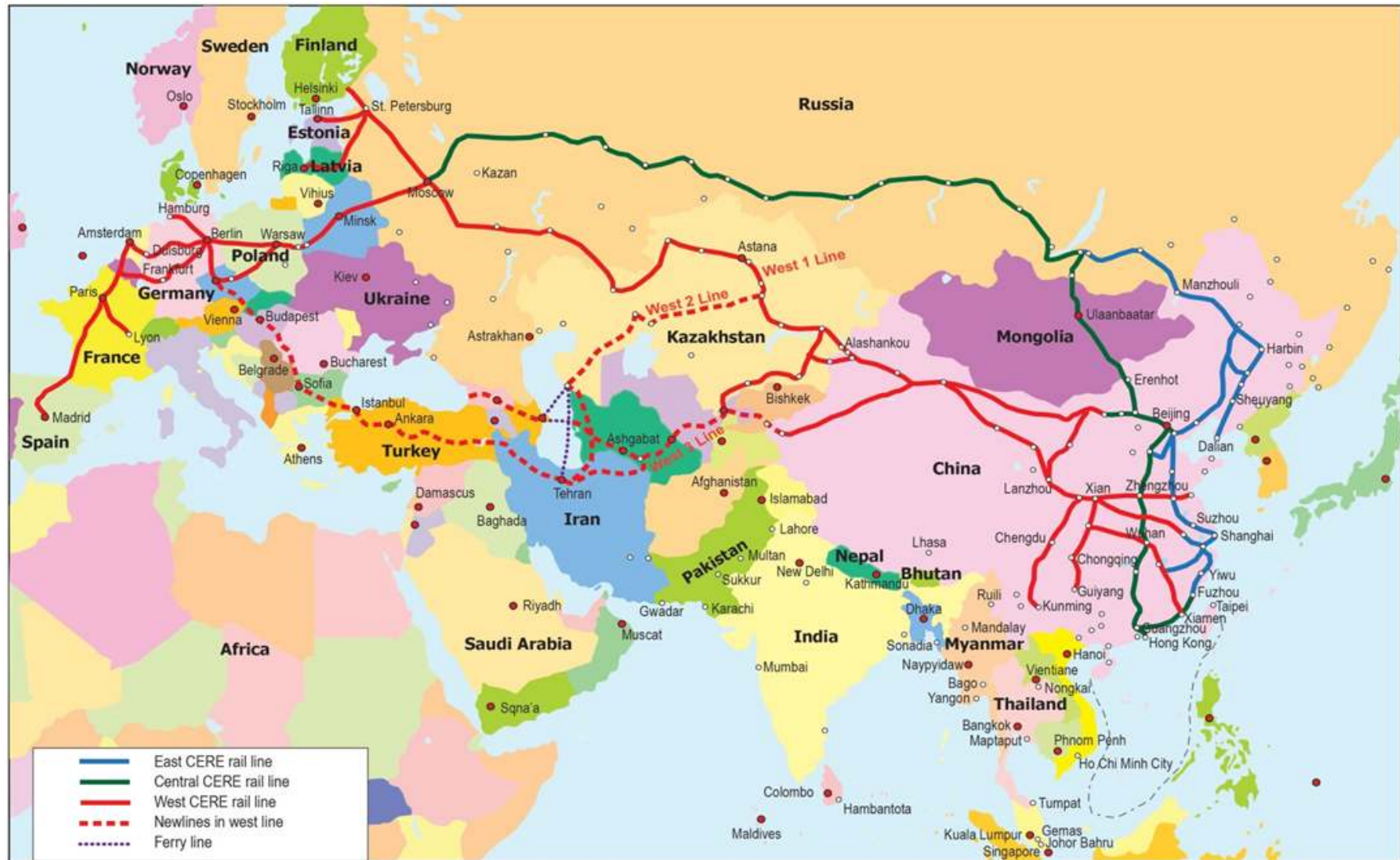
Source: https://www.washingtonpost.com/world/europe/china-russia-sign-400-billion-gas-deal/2014/05/21/364e9e74-e0de-11e3-8dcc-d6b7fed081a_story.html?utm_term=.567ccb77d06
<https://www.theguardian.com/world/2014/may/21/russia-30-year-400bn-gas-deal-china>
<http://www.gazprom.com/about/production/projects/pipelines/built/ykv/>

Kazakhstan-China Oil Pipeline (2798 KM)

Crude Oil from Western Kazakhstan to Dushanzi refinery (Alashankou-Dushanzi pipeline)



China-Europe Railway Express Map



Silk Road Redux: China is creating a rail container-freight network to revive trade routes to Central Asia and Europe

Silk Road Redux

China is creating a rail container-freight network to help revive ancient trade routes to Europe.



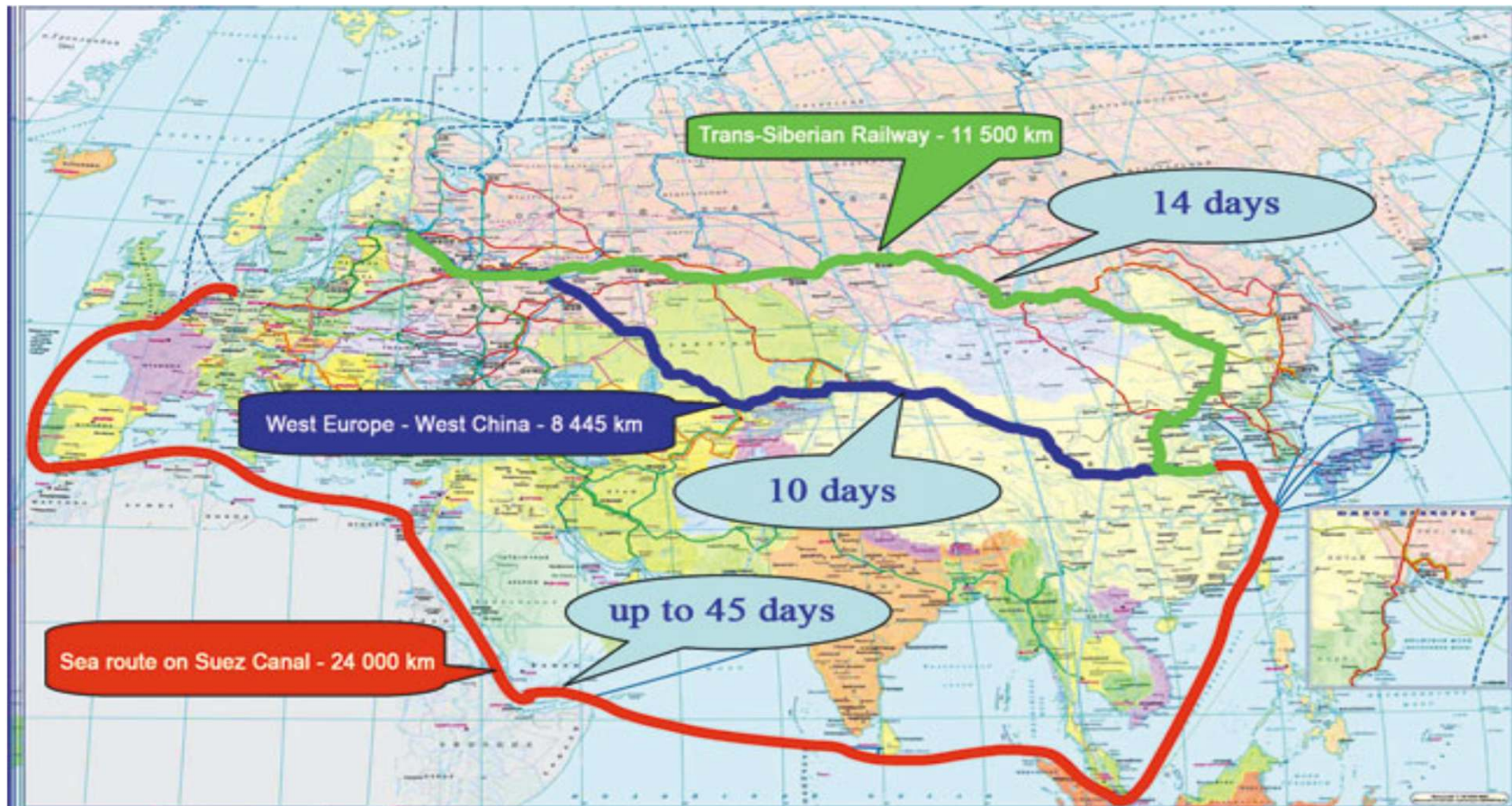
Note: Map data as of 2015. Doesn't include recent developments such as London-China freight service.

Source: National Development and Reform Commission

THE WALL STREET JOURNAL.

Western Europe-Western China Transport Corridor

St. Petersburg – Moscow – Nizhny Novgorod – Kazan – Orenburg – Aktobe – Kyzylorda – Shymkent – Taraz – Kordai – Almaty – Khorgos – Urumchi – Lanzhou – Zhengzhou – Lianyungang (8,445KM)



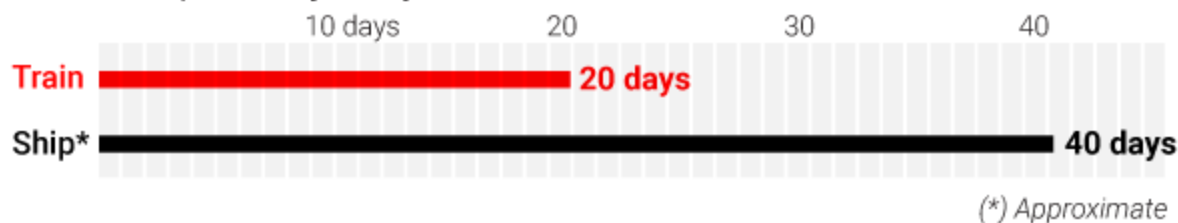
Yiwu 义乌 (China) – London Route

On January 3, 2017, the first train made the 12,000km, 18-day journey from Yiwu (Zhejiang Province, China) to UK, making London the 15th European city with direct rail links to China.

The route: Yiwu (Zhejiang Province) > Zhengzhou > Xian > Lanzhou > Gansu > Tibetan Plateau > Xinjiang > Kazakhstan (Almaty and Astana) > Russian (Yekaterinburg) > Tatarstan (Kazan) > Russia (Moscow) > Belarus (Minsk) > Poland (Warsaw) > Berlin > Eurotunnel (via Calais) > London.

The first London > Yiwu freight train was on April 10, 2017 (20-day journey, with 88 containers).

Time to complete the journey

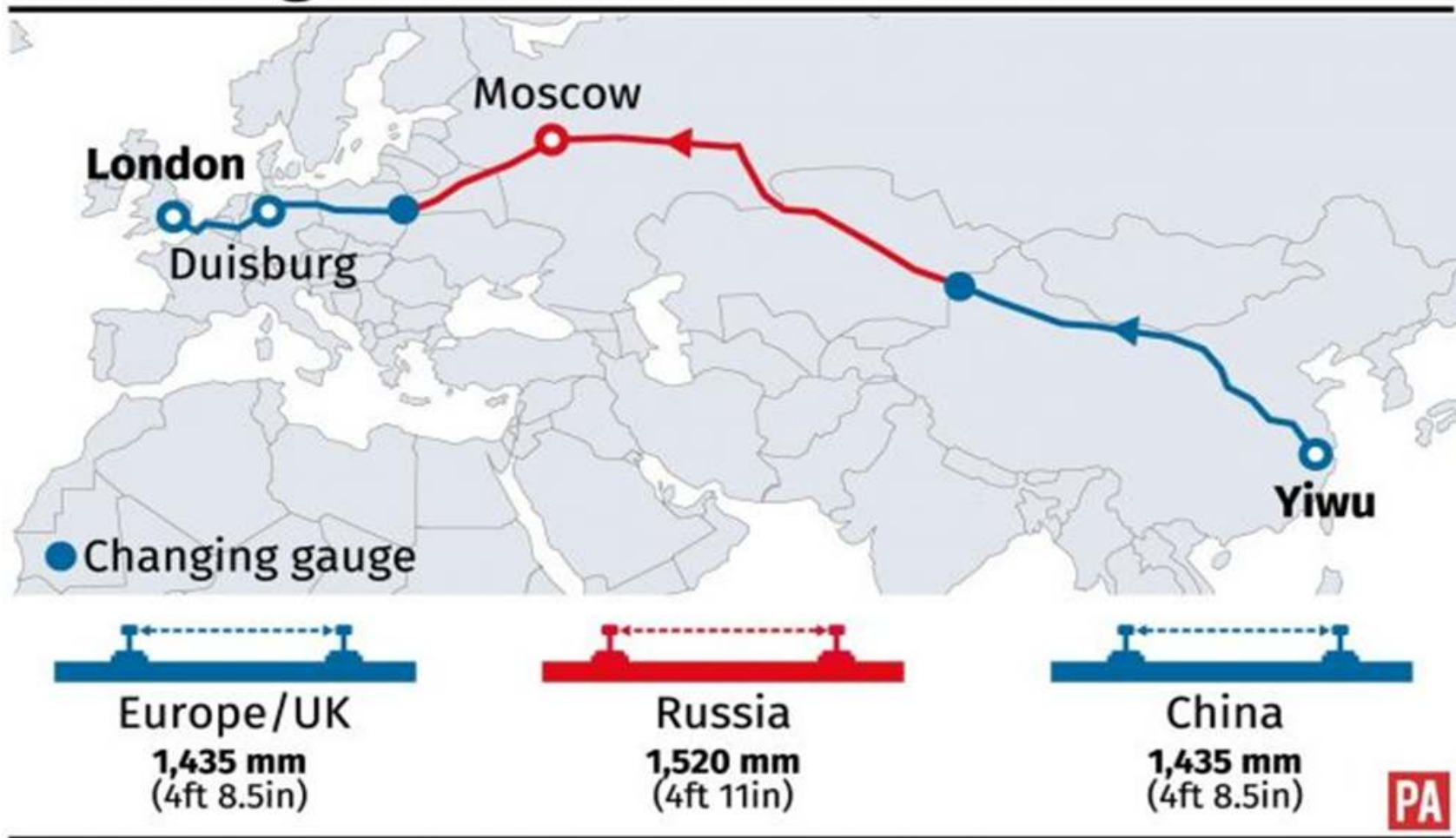


1. Introduction



Yiwu (China) – London Route

First freight train from China to UK

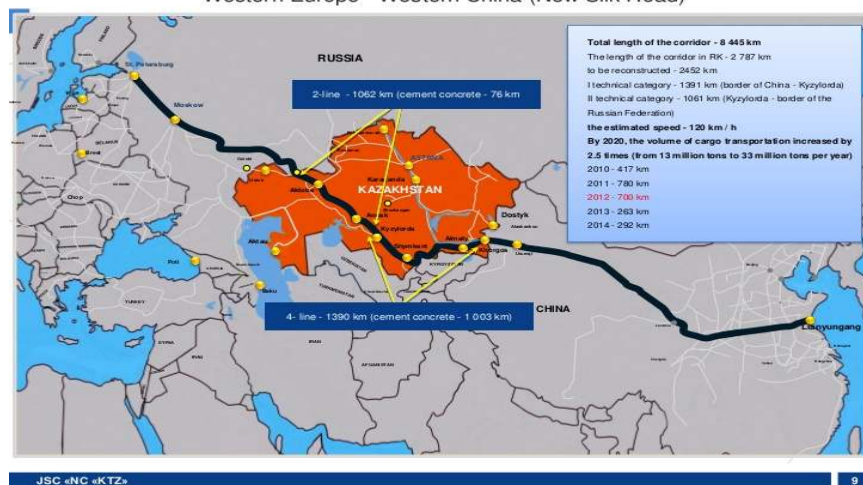


Iran - China Railroad



Western Europe – Western China Highway

International automobile corridor
Western Europe - Western China (New Silk Road)



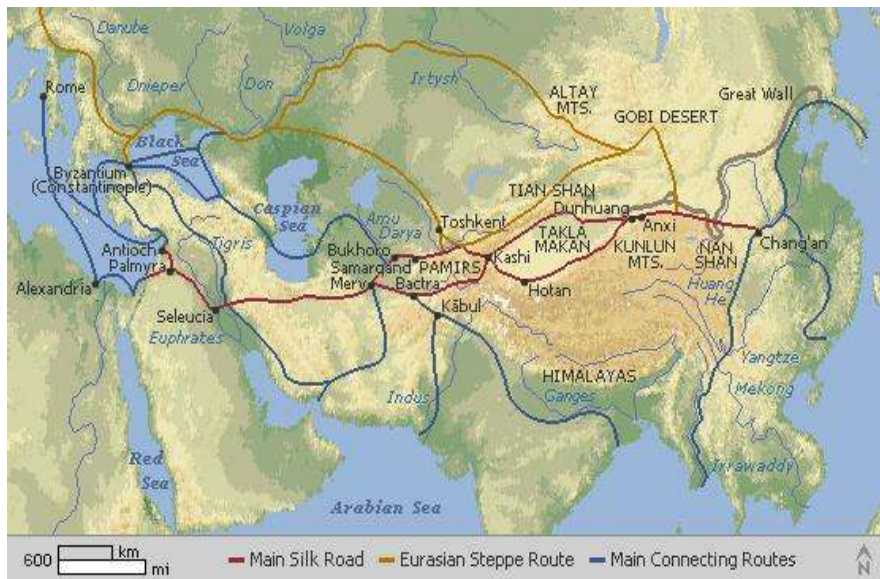
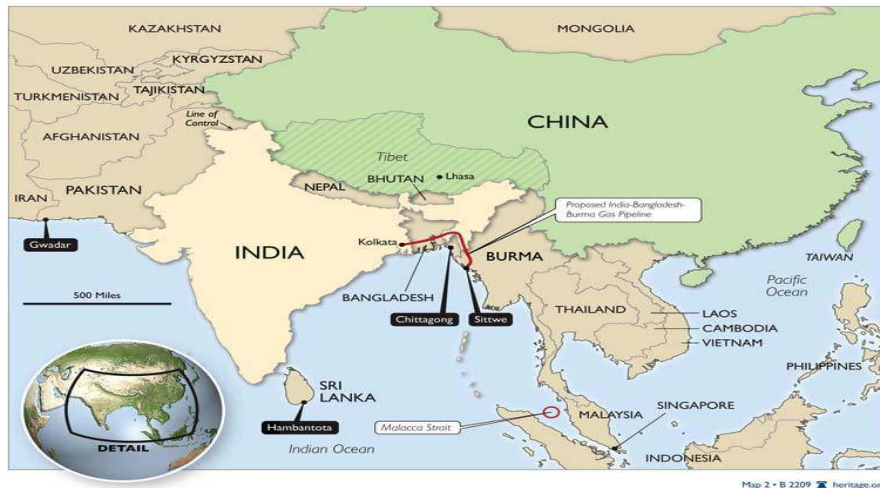
Khorgos (霍爾果斯) Gateway: The building of a new Dubai in China

Connects 27 cities in China with 11 cities in Europe

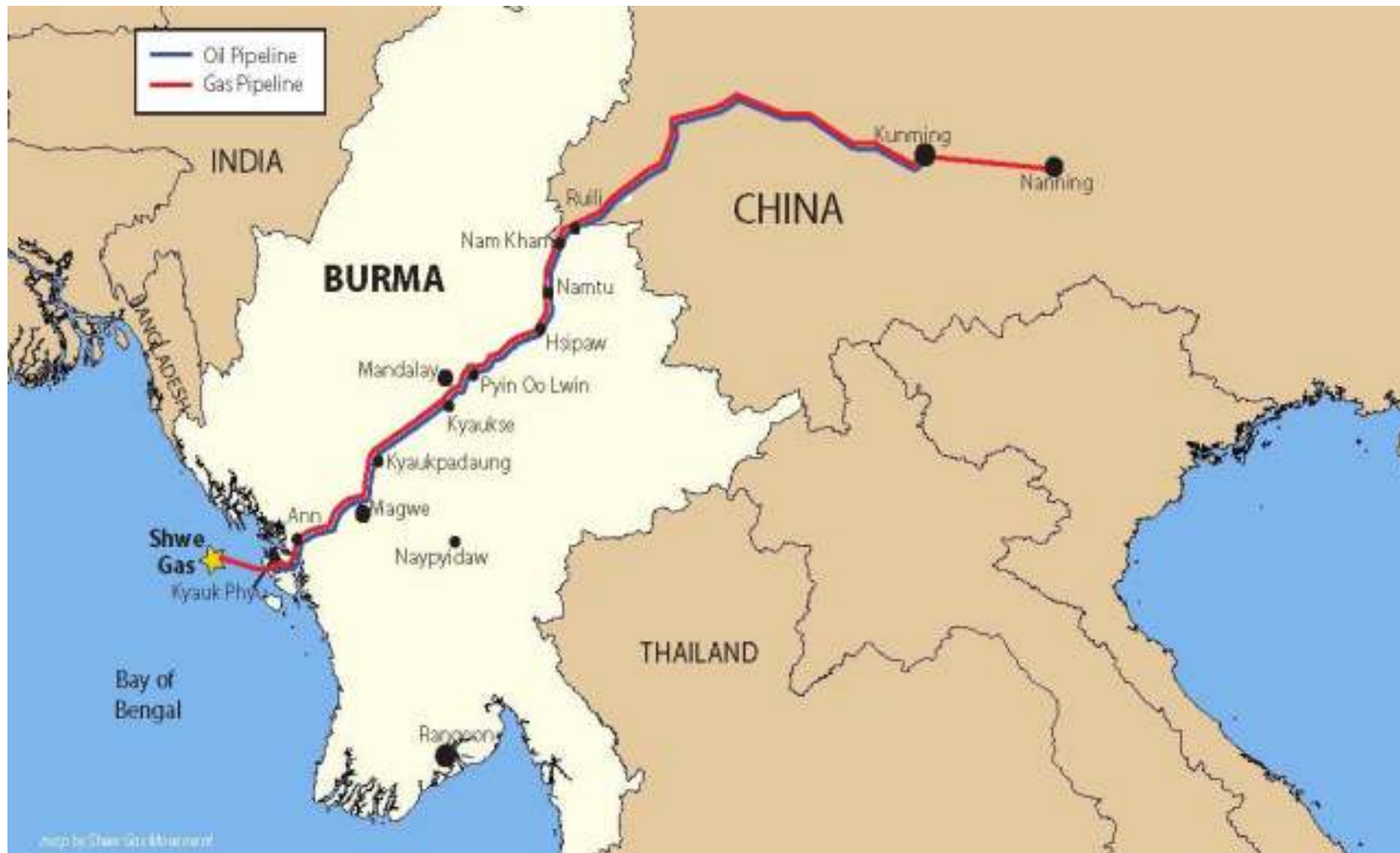


BCIM: Bangladesh-China-India-Myanmar Economic Corridor

Key Locations in India-China Region



Yunnan-Burma Railway



China-Indochina Peninsula Economic Corridor



Source: Wikipedia

Pan-Asian Railway



China-Thailand Railway



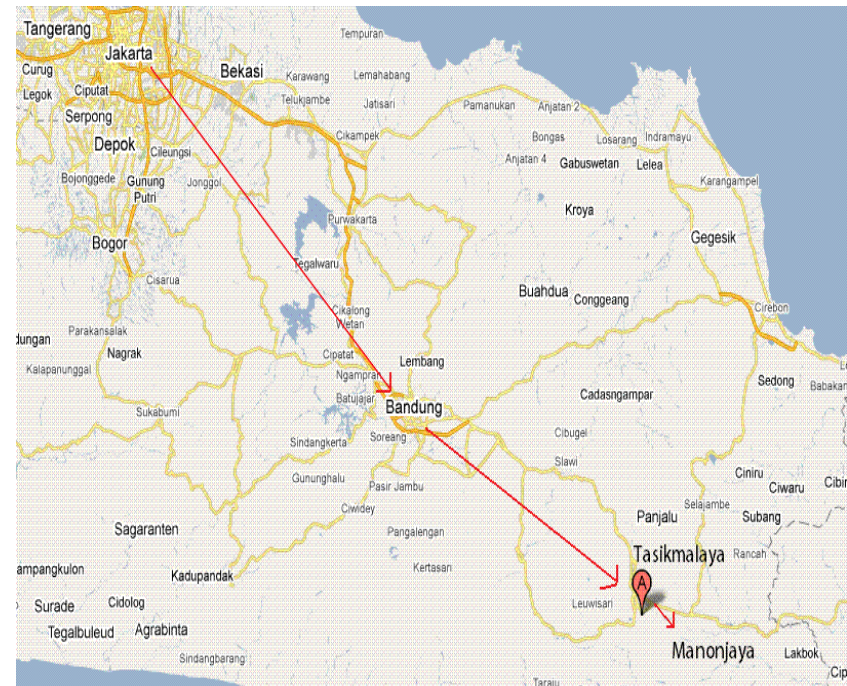
Jakarta-to-Bandung Rail Project: Distance: 150-km (93-miles)

A China Railway Group project

Est. cost: US\$ 5.5 Billion. CDB to provide 75% of financing, 40-yr loan, 10-yr grace period, 37% in RMB, remaining in USD

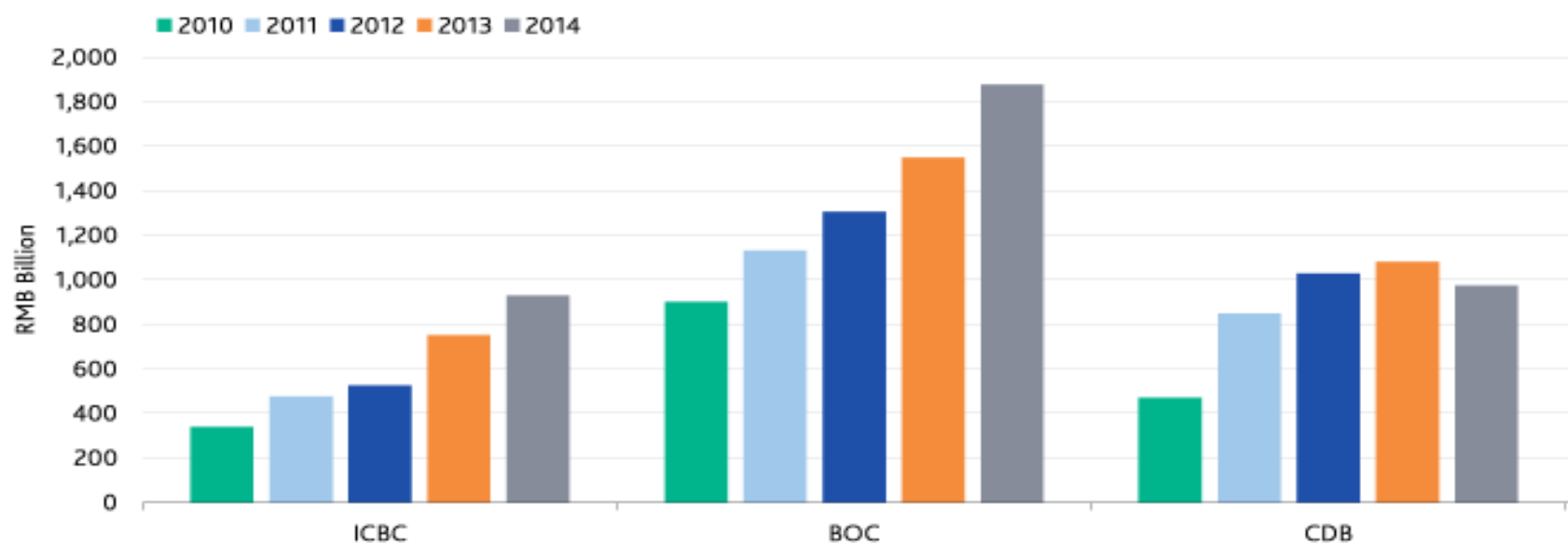
Consortium: Wijaya Karya, Jasa Marga, Perkebunan Nusantara, KAI (state railway operator).

Source: WSJ, JakartaGlobe



One Belt One Road: Chinese banks with existing international reach will benefit most

Overseas Loans, RMB Billion



Source: Company reports, Moody's

Bank of China: One Belt One Road bond issuance

June 24, 2015: Five branches, Five currencies

Total: US\$ 4.1 billion equivalent

Branch	Currency	Tenor	Size	Coupon
Singapore	S'pore Dollar	4-yr	S\$ 500mm	2.750%
HongKong	USD	3-yr	US\$ 1 Bil	2.125%
HongKong	USD	5-yr	US\$ 800mm	2.875%
HongKong	USD	10-yr	US\$ 500mm	3.875%
Taiwan *1	CNH	5-yr	CNH 1.5 Bil	3.950%
Taiwan *1	CNH	7-yr	CNH 500mm	4.050%
Taiwan *1	CNH	10-yr	CNH 500mm	4.150%
Taiwan *1	CNH	15-yr	CNH 500mm	4.400%
Abu Dhabi	CNH	2-yr	CNH 2 Bil	3.600%
Hungary	Euro	3-yr	Eur 500mm	3L +100

*1 Formosa Bond (domestic Taiwan)

Bank of China: Silk Road bond issuance

April 20, 2017: Five branches, Four currencies

Branch	Currency	Tenor	Size	Coupon
Sydney	Aust Dollar	5-yr	A\$ 800mm	Floating
Johannesburg	CNH	3-yr	CNH 1.5 Billion	4.88%
Luxembourg	Euro	3-yr	Eur 500mm	Floating
Dubai	USD	3-yr	USD 650mm	Floating
Macau	USD	5-yr	USD 750mm	2.88%
Macau	USD	10-yr	USD 300mm	3.50%

It is a Beautiful World !!



“The Best Way To Predict The Future Is To Invent It”
--- Steve Jobs

Guangdong-Hong Kong-Macau Greater Bay Area

56,500 sq km, 11 cities, 66.71mm people, US\$1.36 trillion GDP



Hong Kong – Zhuhai – Macau Bridge

Map of Hong Kong – Zhuhai – Macau Bridge



Hong Kong – Zhuhai – Macau Bridge

Projected completion date: end of 2017



Additional Readings:

Prospects and challenges on China's 'one belt, one road': a risk assessment report

From The Economist Intelligence Unit

https://www.iff.org.hk/docs/default-source/Default/ge-one-belt-one-road-report-engversion_economist.pdf?sfvrsn=2

China's One Belt, One Road: Will it reshape global trade?

McKinsey & Company

<http://www.mckinsey.com/global-themes/china/chinas-one-belt-one-road-will-it-reshape-global-trade>

Meeting Asia's Infrastructure Needs

Asia Development Bank

<https://www.adb.org/sites/default/files/publication/227496/special-report-infrastructure.pdf>

The five main projects of the Belt and Road Initiative

South China Morning Post

<http://multimedia.scmp.com/news/china/article/One-Belt-One-Road/index.html>

Alvin Chua bio

Alvin Chua has an extensive array of experience in international finance, both on the buy and sell sides, and in academia. He brings this knowledge to the role of Senior Advisor at the Center for Financial Stability.

Alvin is the Bank of China International (BOCI) Global Head of Sales, Trading and Research for the Fixed Income and Equity business. He is also a Managing Director. Alvin joined BOCI in June 2014, and is based in Hong Kong. Alvin is also an Adjunct Professor at Lingnan College/ Sun Yat-Sen University (Guangzhou, China); as well as a Taskforce Delegate to FGFS (Future of Global Financial System) of WEF (World Economic Forum).

Alvin started his career in 1987 with Merrill Lynch in New York, and joined Lehman Brothers in 1991 (also based in New York). In 1997, Alvin relocated to Hong Kong with Lehman Brothers.

In 1999, Alvin joined JP Morgan Chase in Hong Kong, and in 2001 joined Bank of America in Hong Kong. From 2009 through 2011, Alvin was a Senior Managing Director at Cantor Fitzgerald in Hong Kong.

Prior to BOCI, Alvin was Head of Asia for F&C Asset Management, a UK headquartered asset management company founded in 1868 (acquired by BMO Financial Group in 2014). Alvin rejoined F&C in February 2012, and was previously with F&C from June 2008 through April 2009.

Alvin received his undergraduate degree from the University of Texas at Austin, and his MBA from the Booth School of Business at the University of Chicago. He was a US registered Certified Public Accountant (CPA) and Certified Management Accountant (CMA).

In addition to Adjunct Professor at Lingnan College/ Sun Yat-Sen University, Alvin has also guest lectured at: Institute of Global Economics and Finance (Chinese University of Hong Kong), Centre for Asset Management Research & Investments (National University of Singapore), Taiwan Academy of Banking and Finance (Taipei), Tsinghua University (Beijing), Jiao Tong University (Shanghai), National Taiwan University (Taipei); and guest speaker at various seminars & events in Asia.



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