

UCSI University Seminar

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Diplomacy, the Global Development Initiative, the Global Security Initiative, and the Global Civilization Initiative

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1.0 Diplomacy

2025 is the 80th Anniversary of the Founding of the United Nations .
The UN is the greatest achievement of global diplomacy in human history. The Preamble of the UN Charter states that “We, the peoples of the United Nations, determined to save succeeding generations from the scourge of war, -----”

In my opinion, This encapsulates the ultimate objective of Diplomacy as peace on earth for for all humankind. The oft-quoted saying of Winston Churchill “ To jaw jaw is always better than war war” must embody the desired practice of diplomacy in seeking peace and avoiding war through negotiation.

Ironically, 2025 also witnesses the continuing war in Ukraine. genocide continues unabated in Gaza. The unprovoked bombing of Iran by Israel and USA and that by Israel of Qatar are in total violation of the UN Charter. Now USA is deploying war ships in the Caribbean Sea and is attacking ships of Venezuela and Columbia.

Diplomacy is impotent against such acts in violation of the UN Charter, as they are carried out by powerful nations.

The use of brute force is but an important facet of the self-centered and selfish isolationism by USA and some of her Western allies that threatens to destroy the multilateral rule-based order with the United Nations as its core.

USA cannot accept the truth that it no longer dominates the world. In particular, it must, by hook and crook, try to stop the inevitable rise of China by demonizing China with lies and falsehood repeatedly through its government agencies and its media.

Chinese Foreign Minister Wang Yi has recently called it “Microphone Diplomacy”!

USA also willfully applies economic sanctions and tariffs to all nations on earth, threatening to damage the social, economic and environmental well-being of the world and to keep developing countries firmly in the poverty trap.

Diplomacy as created by England since the Industrial Revolution of 1776 and practised ever since by Anglo-Saxon countries and their allies including Japan has always been based on brutal self-interest with their gunboats enforcing their will on all and sundry, commonly called “gunboat diplomacy”.

With the rise of the Global South led by China's three Global Initiatives, namely the Global Development Initiative in 2021, the Global Security Initiative in 2022, and the Global Civilization Initiative in 2023. I see hopeful signs that Diplomacy as envisaged by the UN Charter will become the genuine means to end wars and conflicts.

2.0 The Global Development Initiative

Fortunately, despite all sanctions and tariffs, China continues her spectacular rise from poverty in the 1980s to becoming the 2nd largest economy in the world.

China will become the largest economy of the world in the next decade. China is leading the Global South to defend the rule-based multilateral order of the world against the isolationism of USA and some of her allies.

China is opening up her vast market to the Global South; has reduced tariffs on all imports from Africa to zero. Through her visionary Belt and Road Initiative and her Global Development Initiative, China is helping other South countries to achieve the UN Sustainable Development Goals.

2.1 UN Sustainable Development Goals

The United Nations General Assembly in 2016 unanimously adopted the UN Post 2015 Development Agenda with its 17 Sustainable Development Goals for all member nations to achieve by 2030.

SUSTAINABLE DEVELOPMENT GOALS



In my opinion, the 17 SDGs are too comprehensive and all-embracing for most developing countries with limited resources and human capital to achieve by 2030.

For high income developing countries like Malaysia, they should concentrate on achieving the first five important SDGs, namely:

SDG No.1 No Poverty;

SDG No.2 Zero Hunger;

SDG No.3 Good Health and Well Being;

SDG No.4 Quality Education;

SDG No.5 Gender Equality.

However, I am afraid even the above five SDGs are beyond the reach of most developing countries. They must then devote all their resources to achieve SDG No.1 “No Poverty”. Poverty is the root cause of all the social, economic and environmental ills in any nation, region and the world.

The G20 Summit Meeting in Rio, Brazil, November 2024 established the Global Alliance Against Hunger and Poverty. This emphasizes the lack of progress in global poverty eradication just 6 years before the SDG deadline of 2030. This vindicates China's priority in poverty eradication. In my opinion, the Global Alliance Against Hunger and Poverty would need the committed support of China to get off the ground!

The World Bank Report Four Decades of Poverty Reduction in China: Drivers, Insights for the World, and the Way Ahead dated 2022 also vindicates China's success in poverty eradication. The Report urges the developing world to learn from China. In fact, China is sharing her spectacular development success with the rest of the world through her visionary Belt and Road Initiative BRI.

2.2 China and Poverty Eradication

In my opinion, China's spectacular rise has been anchored by first eradicating poverty. China has been able to lift 800 million of her population in the most remote regions out of poverty by 2021. This is a feat unparalleled in the history of the world. China has thus been able to take care of all the basic needs of her population, like clothing, food, housing, and transport (衣食住行) as well as access to education, basic medical services, and gainful employment even in her remotest rural regions. In the process, China has been improving her environment, turning desert into grassland, forest and farmland, cleaning up her rivers and lakes, and conserving her wetland, thus protecting its flora and fauna. As the Chinese people have become more prosperous, they are able to devote resources to improving their quality of living, as per Chinese saying (琴棋书画) or “music, chess, book, painting”.



China has strengthened biodiversity conservation as a national strategy through long-range planning and top-level design, specifying the primary responsibilities at all levels, and improving long-term conservation mechanisms led by the government and facilitated by enterprises with public participation.



Zhongwei, a city in northwest China's Ningxia Hui Autonomous Region, has been in a battle against the Tengger Desert since the 1950s. Back then, the distance between the desert and the city was five km. A breeze would bring dust and sand from the desert into residents' homes. Now, the distance between the desert and Zhongwei has expanded to 25 kms. The success has been due to scientifically using straw "checkerboards".



China's experience has proved that large-scale afforestation under the guidance of science is one of the important means to cope with global climate change, protect biodiversity and achieve sustainable development. For China, afforestation is one of the best ways and effective means to achieve carbon neutral by 2060. The Saihanba Forest Farm is the world's largest man-made forest, a 750-square kilometer barrier situated 300 kilometers north of Beijing saving the Chinese capital from desertification.



Scientists in China have developed more than 200 new strains of high-yield, saltwater-tolerant rice. The research team hopes the crops will eventually be grown in boggy swamps and coastal areas, and feed as many as 200 million people. Recent tests were conducted in diluted salt water that has roughly 10% of the level of salt naturally found in sea water. The inventor was the late Professor Yuan Rongping, who was Academy of Sciences Malaysia Mahathir Award Winner.

In China's spectacular poverty eradication success, villages in remote regions have been the main beneficiary. They have become prosperous and many of their micro and mini industries have become integral parts of China's domestic supply chain and through broadband internet, have even become part of China's global supply chain.

In my opinion, one of the most important factors in the uplift of villages in China has been the return of university-trained youth to their home villages. They have applied their knowledge, their commercial and financial skills and urban work experience to revive agriculture, horticulture and traditional cuisine and set up profitable production chain with modern branding and packaging. They have beautified their villages, emphasized their custom and culture, their song and dance to make them thriving tourist destinations.

In contrast, villages in most developing countries are in sharp decline due to lack of education and job opportunities for their youth, forcing them to go to cities in search of work. Their villages are ageing and their social, economic and environmental conditions are worsening day by day.

Governments in Belt and Road countries are conscious of the urgent challenge of arresting rural-urban migration and have devoted much attention and effort to try to meet the challenge without much success.

I believe a solution will be for villages and villagers from Belt and Road countries to learn directly from their counterparts in China.

2.3 Proposal for Belt and Road Friendship Villages Forum

I led a Malaysian delegation to Ningxia 6-9 June 2025 to explore the possibility of establishing a Friendship Villages Forum of Belt and Road countries along the lines of Ningxia International Friendship Cities Forum. The nine-member Malaysian delegation comprised representatives from AETDEW, the Malaysia-China Friendship Association (PPMC), University Tunku Abdul Rahman (UTAR) and villages from Perak State.

The main objective of the Belt and Road Friendship Villages Forum will be for villages in Belt and Road countries to learn about the successful experience of Chinese villages in poverty eradication and apply it to uplift their own villages.

The Belt and Road Friendship Villages Forum will have Ningxia and Malaysia as the twin hubs.

Ningxia has thousands of years of close relations with the Land Silk Road through Central Asia since the Han Dynasty and the Tang Dynasty. Ningxia is the hub for the China-Arab Industrial Fair.

Malacca in Malaysia was the most important port associated with the seven epic voyages of Admiral Zheng He to S.E. Asia, Indian Ocean, Arabia and East Africa in the Ming Dynasty.

We are arranging for a return visit of a Ningxia Delegation to Malaysia in 2026 to advance the Belt and Road Friendship Villages Forum.

吴苑乡村大舞台





2.4 The Belt and Road Initiative

The Belt and Road Initiative (BRI) was announced by President Xi Jinping in Kazakhstan and Indonesia in 2013 on the Land Silk Road Economic Belt in the former, and the 21st Century Maritime Silk Road in the latter.

Spanning thousands of miles starting from the Han Dynasty, the ancient Land and Maritime Silk Roads embodied the spirit of cooperation, mutual learning, and mutual benefit among the peoples of China, the Indian Subcontinent, Central Asia, the Middle East, and Europe in the Land Silk Road; and among the peoples of China, Southeast Asia, the Indian Ocean, the Arabian Sea, and East Africa through the Maritime Silk Road.

The foundation of China's success in eradicating poverty is its extensive and inclusive physical and virtual infrastructure. Ultra-modern highways, high speed rail, ports, airports and 5G broadband internet assure that the most remote villages are becoming part of China's global supply chain. There is an old Chinese saying often quoted by President Xi Jinping: "To get rich, build roads first" (要想富先修路).

China's physical and virtual infrastructure development is anchored by China's world-leading scientific, engineering, and technology achievements and innovations

(1)High-Speed Rail Networks; (2) Cross-Sea Bridges;(3)Multi-Purpose Water Resource Dams and Reservoirs; (4) South-North Water Diversion; (5) Tunneling Technology;(6) Broadband 5.5G network; (7) Supercomputers; (8)Aerospace Development of Rockets, Spacecraft, Mars Rover and Space Station;(9) Modern Intelligent Mega Airports;(10) Modern Autonomous Ports; (11) Shipbuilding and Marine Transportation; (12) Rare Earth and New Materials; (13) Commercial Aircraft; (14) Solar Photovoltaics, Wind Turbines, Nuclear Power and Thorium 4th Generation Reactors; (15) Robotics and Humanoid Robots; (16) Drones; (17) Electric Vehicles and Energy Storage Batteries; (18) Short Messaging Systems; (19) Open-source AI Platforms.



The Three Gorges Project is primarily a Flood Mitigation Project. Disastrous Floods in Yangtze River occurred about once a decade. The 1998 flood was considered the worst flood in 40 years in China . It resulted in 3,704 dead, 15 million homeless and US \$26 billion in economic loss. The Three Gorges Project also provides 22,500 Mw of renewable hydro power, the largest in the world. Total Project Capital Cost US \$22.5 Billion



(World Bank funded Xiaolangde Hydro Project ,Yellow River, Louyang, China)

The Yellow River used to be “China’s Sorrow” due to severe floods. Due to many dams upstream and over drawdown of its water, it ran dry at the delta in Shandong.



The Baihetan Dam is a large hydroelectric dam on the Jinsha River in Sichuan. It is the second largest hydropower plant in the world. The power station is equipped with 16 generating units each having a capacity of 1 gigawatt, the world's largest turbines. Baihetan hydropower station became fully operational on 20 December 2022..

High and dry: the south-north water diversion project



The region around Beijing known as the North China plain is home to nearly

35%
of the country's population and nearly

40%
of its arable land but has only

7.2%
of its water

— Diversion route



Guizhou Province has built nearly 30,000 bridges since the late 1970s and is now home to half of the 100 tallest bridges in the world. Due to the large number of bridges, their types, and the complex technologies used in construction, Guizhou is known as "the museum of world bridges." The Beipanjiang Bridge is world record holder, over 565 meters above a valley, equivalent to the height of a 200-story building,



The 36km-long Hangzhou Bay Bridge is the second longest ocean-crossing bridge in the world, spanning across the Hangzhou Bay on the East China Sea connecting Shanghai and Ningbo.



The Hong Kong–Zhuhai–Macau Bridge is a 55-kilometre (34 mi) bridge–tunnel system consisting of a series of three cable-stayed bridges, an undersea tunnel, and four artificial islands. It is both the longest sea crossing and the longest open-sea fixed link in the world.



China had overtaken South Korea in 2021 to become world champion of annual shipbuilding order volume. the global order volume of new ships in 2021 was 45.73 million compensated gross tons (CGTs), of which South Korea received 17.35 million CGTs, accounting for 38 percent, second only to China's 22.8 million CGTs. Photo: Lianyungang carrying 69,000 tons of LNG at Tianjin LNG terminal in December 2021.



China's homemade “Fuxing” entered commercial service in July 2017 between Beijing and Shanghai with speed of 350 km an hour. This is the world's highest speed. The high-speed rail network in China is the world's longest with a total length of 42,000 kilometres by the end of 2022. The 600km an hour Maglev was launched in Qingdao in July 2021.

10 Speed: 352km/h



HUAWEI P9 Plus
LEICA DUAL CAMERA



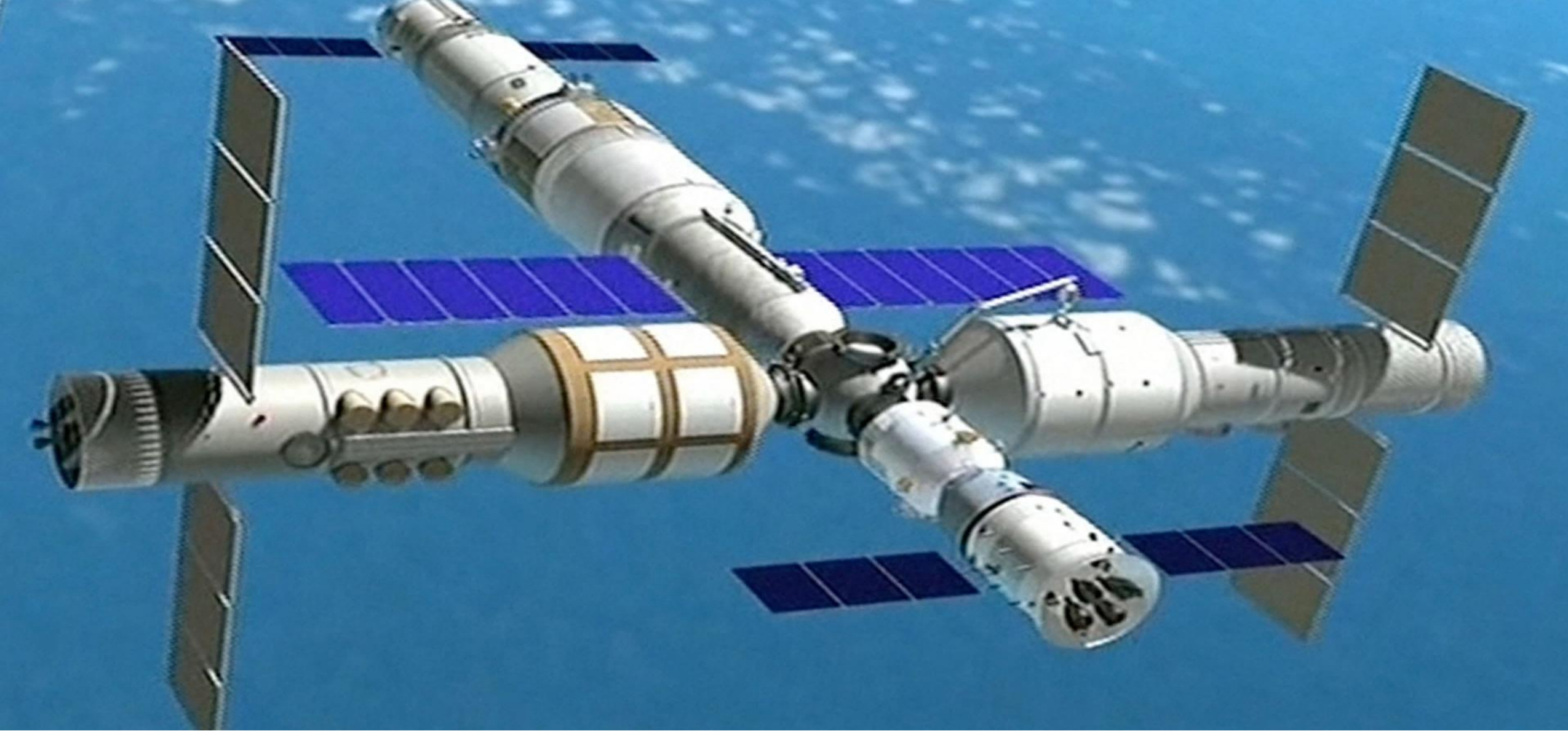
China has built world's biggest Daxing airport in Beijing with seven runways. The new airport begun opearation in 2019 with 4 runways and a 700,000 m2 terminal, the world's largest single-building airport terminal



The BeiDou Navigation Satellite System is a Chinese satellite navigation system. In June 2020, the 55th BeiDou satellite was successfully launched. It provides full global coverage for timing and navigation. In 2015, it was generating a turnover of US\$31.5 billion per annum and to reach \$64 billion in 2020 and will be worth US\$160.0 billion by 2025, and US\$467 billion by 2035. According to Nikkei, in 165 countries, China's Beidou eclipses US GPS.



The Sunway TaihuLight is officially ranked as the fourth most powerful supercomputer in the world, however researchers claim its latest AI demonstration puts it on a par with the US Frontier, which currently tops the list.



The Tiangong space station is a permanently crewed space station operating in low earth orbit between 340 and 450 km above earth. it has a pressurised volume of 320 m³, one third the size of the International Space Station. It was completed in November 2022



The Comac C919 is a narrow-body airliner developed by Chinese aircraft manufacturer Comac. the first prototype had its maiden flight on May 2017. In September 2022, it received its CAAC type certificate, and the first airliner was delivered to China Eastern Airlines in December 2022. China's air fleet size will reach 10000 by 2040, 22 percent of the global passenger aircraft fleet. China will take delivery of 9,084 passenger planes at or above the 50-seat class in the next two decades by 2040, valued at approximately US\$1.4 trillion.



The world's biggest drone maker is DJI China. The global drone market is expected to grow from US \$30.6 billion in 2022 to US \$55.8 billion by 2030. DJI dominates more than 70% of that market.



The molten-salt concentrated solar power plant is located in Dunhuang, Gansu Province. The 100MW power plant works by using 12,000 mirrors that concentrate the sunlight onto a receiver at the top of a solar tower, which then heats the molten salt.



China is the world leader in wind power generation, with the largest installed capacity of any nation on land and 200000 MW on the sea. Wind power remained China's third-largest source of electricity at the end of 2021, accounting for 7.5% of total power generation.capacity to reach a total capacity of 281000MW.



China has built in 2022 the world's first waterless reactor, which generates electricity in the desert and is extremely safe. This water-free nuclear reactor is called molten salt reactor. Its coolant and fuel are molten salt and it is fueled by liquid thorium. Uranium nuclear reactor waste must be stored for more than 100,000 years, radioactive waste produced by molten salt reactors only 300 years of storage. Molten salt reactors can also use the waste from nuclear reactors as fuel.



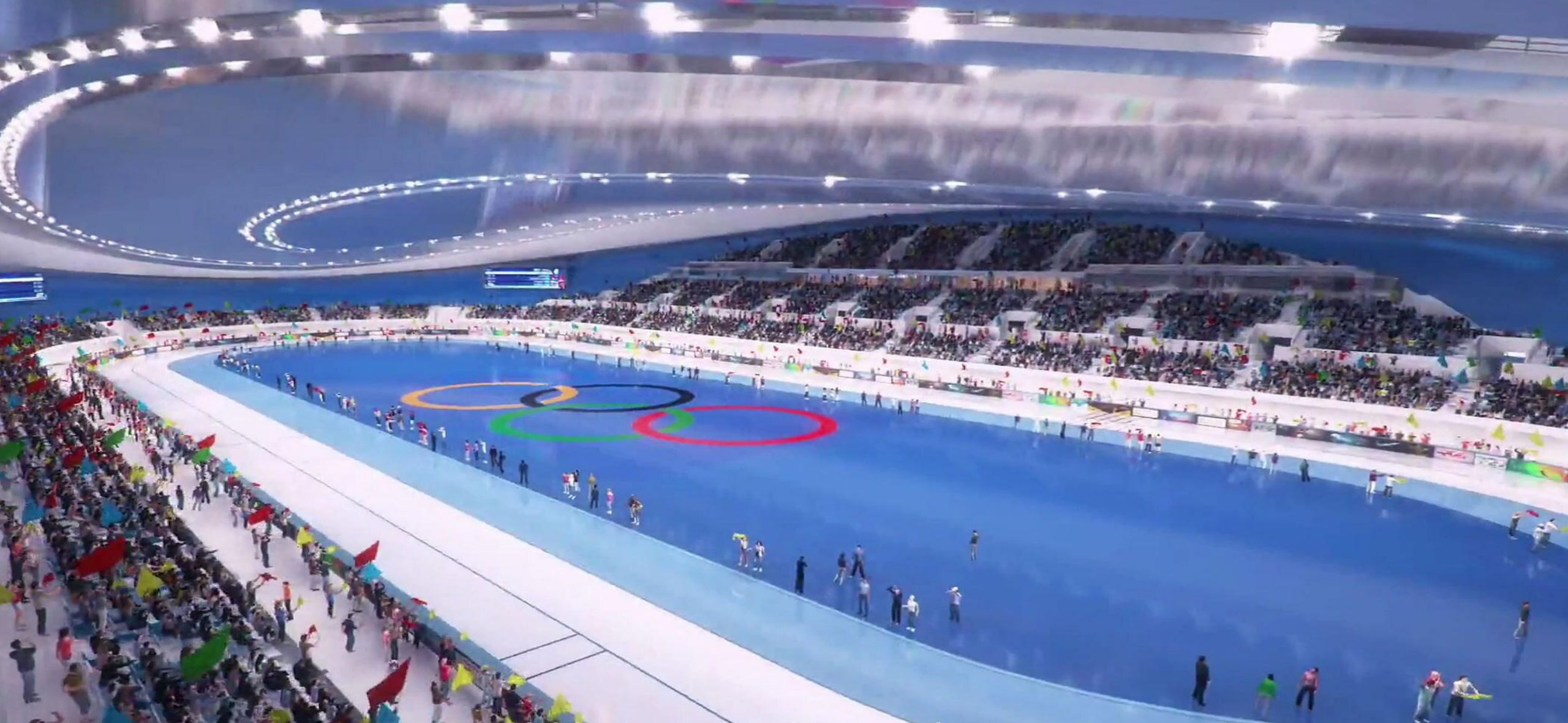
Humanoid Robot Dance in 2025 Chinese New Year Eve Gala. China has become a global leader in automation. From 2018 to 2020, a sales increase is between 15 and 20 percent on average per year for industrial robots. Within a year, sales in China surged by 27 percent to 87,000 units in 2016. China has more industrial robots than next four countries put together. As of September 2020, there were 381,000 units of industrial robots globally, China at 140,500 units.



China Mobile and Huawei have together built the highest elevation 5G base station on this planet at 6500 meters at Mount Everest. Over 700,000 5G base stations have been set up in China by end 2020, connecting more than 180 million terminal devices. One million base stations are planned to be built in 2021, while their number is expected to reach almost five million by 2025. The projected value of investments between 2021 and 2025 is USD 800 billion. They are expected to increase the number of 5G users in China to 1.28 billion and create the largest data network in the world,



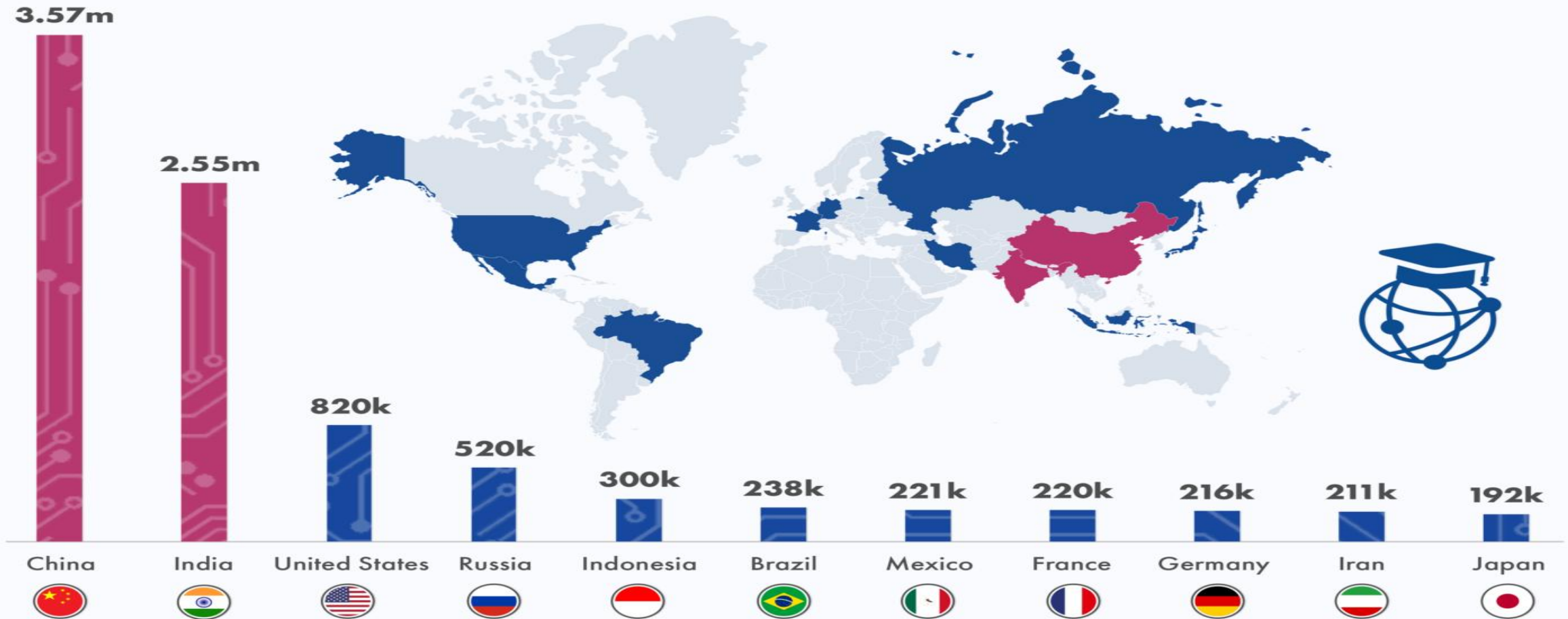
The electric vehicle industry in China is the largest in the world, accounting for around 57.4% of global production of electric vehicles (EVs) and around 500,000 exports in 2021. The battery industry is closely related to the EV industry as batteries constitute around 1/3 of the cost of EVs and around 80% of lithium-ion batteries in the world are used in EVs. Chinese electric vehicle (EV) battery makers dominated the global market in 2022, with six companies featuring among the world's top 10 players and accounting for a 60.5 per cent share amid a doubling of EV sales in China. China has the most electric vehicle (EV) charging stations in the world — over 1.2 million in 2019 — China is looking to add around 600,000 more.



Beijing 2020 Winter Olympics are the first to use natural CO₂ as a refrigerant to cool the skating venues, instead of synthetic hydrofluorocarbon refrigerants, saving up to 26,000 tonnes of carbon.

Top Countries by Number of STEM Graduates

Graduates in Science, Technology, Engineering, and Mathematics in 2020



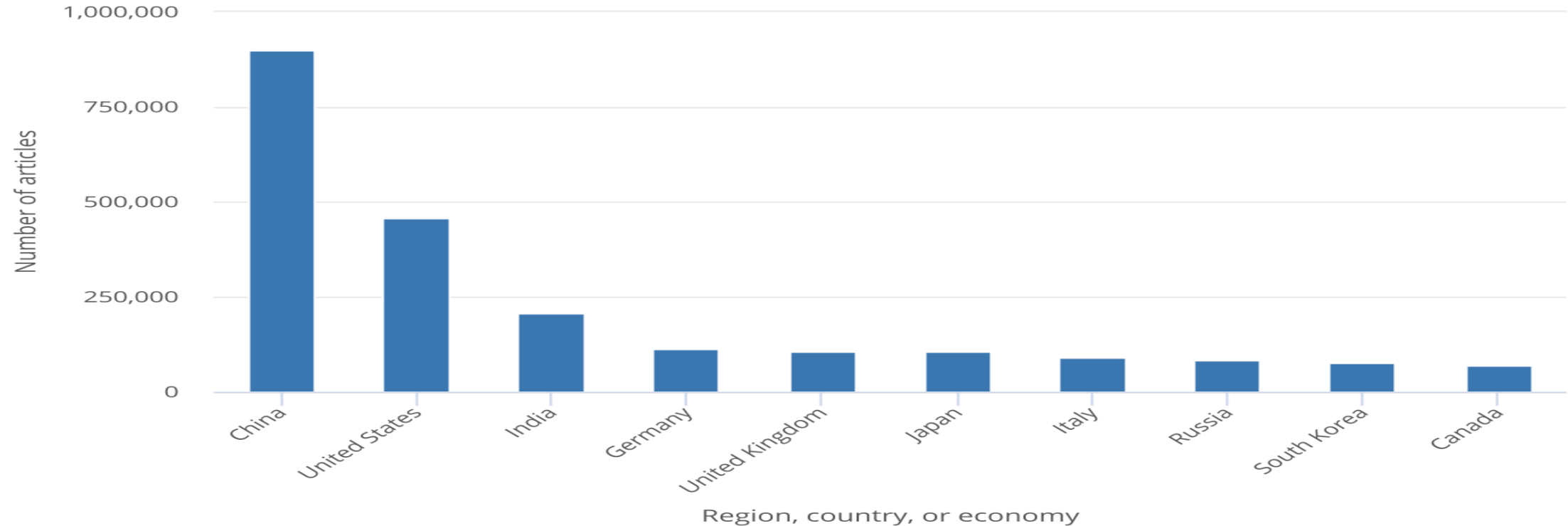
@CSETGeorgetown

Source: OECD and the statistical yearbooks of Russia, Indonesia, Iran, India, and China

 **CSET** CENTER for SECURITY and EMERGING TECHNOLOGY

Science, Engineering and Technology Prowess Depends on Educated Human Capital

Figure PBS-2
S&E publications for 10 leading regions, countries, or economies: 2022



Note(s):
Article counts refer to publications from a selection of conference proceedings and peer-reviewed journals in S&E fields from Scopus. Articles are classified by their year of publication and are assigned to a region, country, or economy on the basis of the institutional address(es) of the author(s) listed in the article. Articles are credited on a fractional count basis (i.e., for articles produced by authors from different regions, countries, or economies, each region, country, or economy receives fractional credit on the basis of the proportion of its participating authors). Data by all countries, regions, and economies are available in Table SPBS-2.

Source(s):
National Center for Science and Engineering Statistics; Science-Metrix; Elsevier, Scopus abstract and citation database, accessed April 2023.

The Australian Strategic Policy Institute (ASPI) "Critical Tech Tracker" finds China is beating the United States in 37 of 44 critical technologies

Technology	Lead country	Technology monopoly risk
Advanced materials and manufacturing		
1. Nanoscale materials and manufacturing	China	high
2. Coatings	China	high
3. Smart materials	China	medium
4. Advanced composite materials	China	medium
5. Novel metamaterials	China	medium
6. High-specification machining processes	China	medium
7. Advanced explosives and energetic materials	China	medium
8. Critical minerals extraction and processing	China	low
9. Advanced magnets and superconductors	China	low
10. Advanced protection	China	low
11. Continuous flow chemical synthesis	China	low
12. Additive manufacturing (incl. 3D printing)	China	low
Artificial intelligence, computing and communications		
13. Advanced radiofrequency communications (incl. 5G and 6G)	China	high
14. Advanced optical communications	China	medium
15. Artificial intelligence (AI) algorithms and hardware accelerators	China	medium
16. Distributed ledgers	China	medium
17. Advanced data analytics	China	medium
18. Machine learning (incl. neural networks and deep learning)	China	low
19. Protective cybersecurity technologies	China	low
20. High performance computing	USA	low
21. Advanced integrated circuit design and fabrication	USA	low
22. Natural language processing (incl. speech and text recognition and analysis)	USA	low
Energy and environment		
23. Hydrogen and ammonia for power	China	high
24. Supercapacitors	China	high
25. Electric batteries	China	high
26. Photovoltaics	China	medium
27. Nuclear waste management and recycling	China	medium
28. Directed energy technologies	China	medium
29. Biofuels	China	low
30. Nuclear energy	China	low
Quantum		
31. Quantum computing	USA	medium
32. Post-quantum cryptography	China	low
33. Quantum communications (incl. quantum key distribution)	China	low
34. Quantum sensors	China	low
Biotechnology, gene technology and vaccines		
35. Synthetic biology	China	high
36. Biological manufacturing	China	medium
37. Vaccines and medical countermeasures	USA	medium
Sensing, timing and navigation		
38. Photonic sensors	China	high
Defence, space, robotics and transportation		
39. Advanced aircraft engines (incl. hypersonics)	China	medium
40. Drones, swarming and collaborative robots	China	medium
41. Small satellites	USA	low
42. Autonomous systems operation technology	China	low
43. Advanced robotics	China	low
44. Space launch systems	USA	low

ASPI is an Australian thinktank often in the employ of US Department of Defence, now the Department of War. In comparing the critical technologies one by one ASPI has misled USA to try to maintain their lead in the few technologies and to prevent China from widening their lead in others by tariffs and sanctions.

To me, China has been using all the critical advanced technologies as well as all the traditional technologies and merging them into an ecosystem for all engineering, industrial and manufacturing sectors from R&D, commercialisation, design, engineering, construction, operation and maintenance. China has employed AI to improve the efficiency of this ecosystem that will be unbeatable by the rest of the world. China has become "world factory with Chinese characteristics" and "world market with Chinese characteristics."

Nothing symbolizes the Land Silk Road Economic Belt more than the China-Europe freight rail service, replacing camels with trains. By February 2024, this China-Europe train service has connected 120 Chinese cities with 219 cities in 25 European countries. The China-Europe freight train service has completed 90,000 train trips, transporting more than 8.7 million containers of goods worth more than US\$380.0 billion. It is truly a lifeline for land locked countries in Central Asia, Eastern Europe and even Western Europe.

Nothing symbolizes the 21st Century Maritime Silk Road more than the fleet of Chinese container ships that is the world's largest fleet, plying the seven seas and making landfalls into ports in the developing world that are equipped with intelligent loading, unloading and port management systems supplied by China.

The BRI has delivered fruitful outcomes and won widespread support and participation in the developing world. It has created jobs, improved physical and virtual infrastructure, and promoted common development, social and economic uplift in developing countries. **The BRI has also brought many direct and tangible benefits to the peoples of participating countries by improving agriculture and horticulture by scientific methods, building hospitals, clinics, houses, stadiums, schools and colleges etc. BRI has enhanced people-to-people exchange and interaction by China offering thousands of scholarships to Belt and Road developing countries and building Confucius Institutes and Lupan Workshops in these countries.**

BRI has truly laid the solid foundation of the Global Development Initiative, announced by President Xi in 2021.

Laos-China Railway

Part of six international economic corridors under China's Belt and Road Initiative (BRI)



Lane Xang bullet train at the Vientiane Railway

Laos section

Opening date: December 3

- Main stations
- ▶ Max speed:
160 kmh passenger trains
120 kmh freight trains
- ▶ 10 passenger stations
22 freight stations
- ▶ 75 tunnels, 167 bridges
- ▶ Standard gauge, 1.435 m

Overview

Cost: \$6 billion
70% covered by China
30% by Laos

Construction started
in Jan 2017

Owned and operated by
the Lao-China Railway
Company (LCRC)





NOW OPEN

JAKARTA-BANDUNG HSR

LAUNCHES COMMERCIAL OPERATION

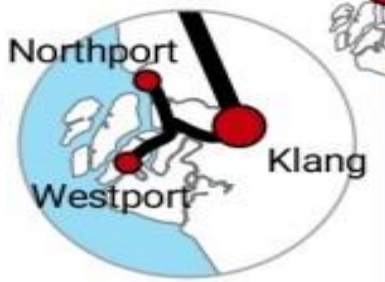
EAST COAST RAIL LINK (ECRL) PROJECT

> A **665km** rail line

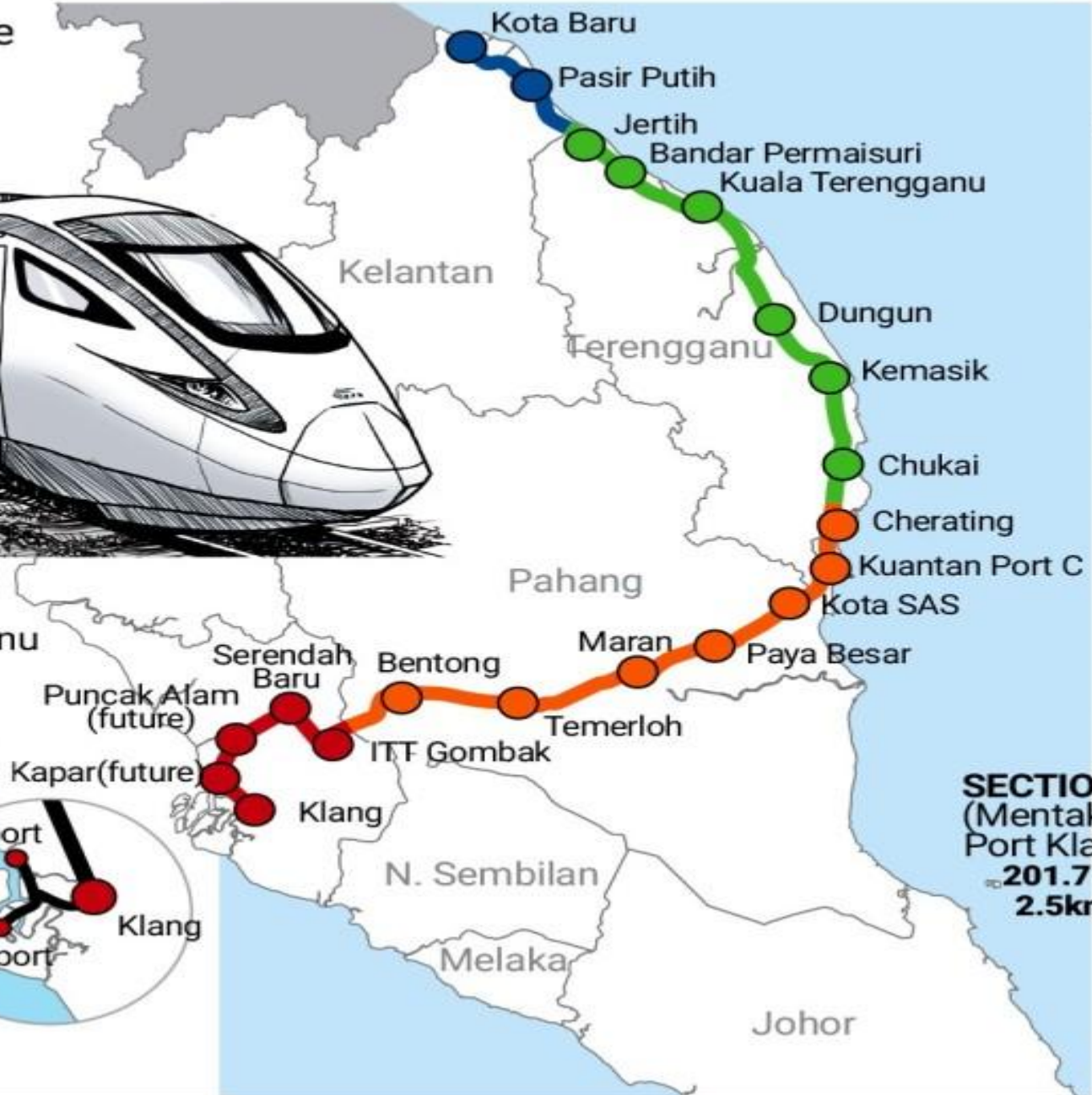


LEGEND

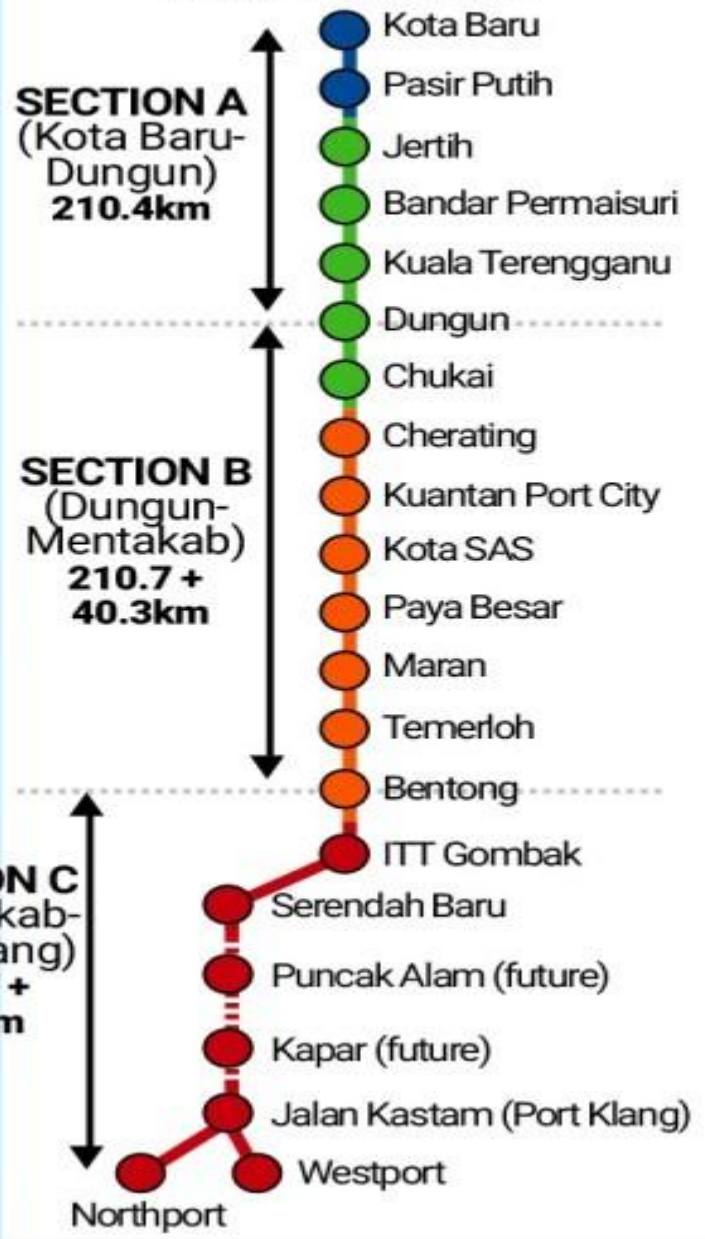
- Station in Kelantan
- Station in Terengganu
- Station in Pahang
- Station in Selangor



Interconnectivity
to ports



ECRL Stations





THE PAN-ASIA RAILWAY NETWORK

Central Route

Kunming → Yuxi → Mohan →
Vientiane → Bangkok → Kuala Lumpur
→ Singapore

Western Route

Kunming → Dali → Baoshan → Ruili →
Yangon → Bangkok → Kuala Lumpur
→ Singapore

Eastern Route

Kunming → Yuxi → Mengzi → Hekou
→ Hanoi → Ho Chi Minh → Phnom
Penh → Bangkok → Kuala Lumpur →
Singapore



HELSINKI
ST. PETERSBURG
RIGA
MOSCOW
HAMBURG
AMSTERDAM
LONDON
BERLIN
DUISBURG
PARIS
PRAGUE
MILAN
MADRID
WARSAW
MINSK
ISTANBUL
TEHRAN
ALASHANKOU
KASHGAR
URUMQI
CHITA
HARBIN
SHENYANG
DALIAN
LIANYUNGANG
SHANGHAI
CHENGDU
CHONGDING
GUIYANG
YIWU
XIAMEN
SHENZHEN
HONG KONG

2.5 Proposal for South-South Institute for Infrastructure Maintenance(SSIIM)

Infrastructure projects abound in all developing countries that are designed, manufactured and constructed according to Chinese engineering and technology.

Chinese construction corporations complete infrastructure projects in developing countries typically in three to five years. Indigenous engineers in developing countries have to operate and maintain these costly infrastructure assets typically in twenty to forty years.

It is thus urgent that China must help to train these indigenous engineers and technicians in the operation and maintenance of infrastructure assets as an integral part of BRI.

ISTIC under my chairmanship conducted many training workshops in Malaysia, India, Pakistan, Nairobi, Khartoum, and Abuja on the maintenance of infrastructure.

Malaysia is fortunate to have good physical infrastructure assets that are in good operation and maintenance. These training workshops were very popular. The partner of ISTIC was the Institution of Engineers Malaysia (IEM).

I have therefore proposed SSIIM, registered as a program of AETDEW in Malaysia, to continue the maintenance of infrastructure program.

As China leads the world in engineering standards, project design, equipment manufacture, project construction and project operation and maintenance through the application of artificial intelligence and related digital technologies, **SSIIM must have China's participation in the provision of trainers, training manuals and training kits etc in order for engineers and technicians in Belt and Road countries to keep abreast of engineering and technological progress.**

Through the voluntary participation of Chinese AETDEW Fellows and their organisations, AETDEW/IEM training workshops in operation and maintenance of railway systems and big data centres have been held in Malaysia in 2024 and 2025. More training workshops on operation and maintenance of skyscraper and highrise building facilities and other engineering sectors are being planned.



Sustainable Railway Training Workshop in IEM 2024



Site Visit to East Coast Rail Link



Renewable Energy for Big Data Centre Training Workshop in Southern University College Johor Bahru 2025

The most encouraging development is with the Xiaomi-led Next Generation Intelligent Hardware Technology Industry-Education Integration Community in China. I led an AETDEW delegation to witness the launch of the China Community in Guiyang May 2024.

AETDEW signed MOU with the China Community in Guiyang. AETDEW will be helping the China Community to set up AI and Allied Technology Training Institutes in universities in Indonesia and Malaysia in 2025. Eight other training institutes will be set up in Asia, Africa and Latin America in the next five years.

These Training Institutes will be funded by Xiaomi Corporation and equipped by Xiaomi state-of-the art hardware and software, trainers and training manuals etc.



新一代智能硬件技术行业产教融合共同体

成立大会



新一代智能硬件技术行业产教融合共同体

成立大会

联盟战略合作





In current AI era, I believe employment opportunities will increasingly be for TVET graduates in Belt and Road countries. It is most important that AI is taught from primary and secondary schools, through tertiary education institutions to life-long professional training centres.

AETDEW has started AI Literacy training workshop for ASEAN school teachers in Sri Bestari Private School, Kuala Lumpur with 4 AETDEW Fellows from China as expert trainers. ISTIC is a co-sponsor of the training workshop.

I have been active in follow-up action with respect to the establishment of the Consortium for AI Education for the Global South and the Malaysia-China AI School Teacher Exchange Scheme.

SRI BESTARI PRIVATE SCHOOL
KINDERGARTEN • PRIMARY • SECONDARY







1.3 The Capability Levels of Tools from different eras

The Evolution of Washing Tools

Hand washing
Manual washing machine
Top-loading automatic washing machine
Front-loading automatic washing machine

ISTIC

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3.0 The Global Security Initiative

3.1 The Needham Dilemma

At the start of the eighteenth century, China was the leading civilization on earth and seemed set to continue in this role. China had the largest population, an advanced system of administration, the largest trade and the greatest wealth. China in 1820 represented one third of the whole world economy. China had used her great inventions of paper, printing, the compass and gunpowder to great effect. No nation could seriously rival China's armed services, including navy.

And yet, Europe quickly caught up and overtook China. The question as to why China did not remain pre-eminent is called the "Needham Dilemma". Professor Needham posed the question "the essential problem is why modern science had not developed in Chinese civilization but only in Europe"

Professor Joseph Needham was the greatest scholar of the history of science and technology in China and initiated the massive 27-volume “Science and Civilization in China”.

What is less well known is the fact Professor Needham was instrumental to put Science into UNESCO. UNESCO was supposed to be UN Education and Cultural Organisation. Professor Needham successfully lobbied UNESCO founding Director General Professor Julian Huxley to include Science into UNESCO name and agenda. He was the first UNESCO Assistant Director General for Science.

CHINA SHIPS 5 times BIGGER than COLUMBUS. NO CONQUEST
7 voyages led by a Muslim. 20,000 soldiers. Gave gifts, Opened trade



ZHENG HE SHIP

COLUMBUS SHIP

The Song dynasty of China (960-1279AD) witnessed huge scientific developments, a flourishing of the arts and a rise in trade guilds, using paper currency; public education; and social welfare. The Song Dynasty, along with its predecessor, the Tang Dynasty (618-906AD), is considered a defining cultural epoch in the history of China. **The eight outstanding Song innovations : (i) Movable Type Printing; (ii) Paper Money; (iii) Gunpowder; (iv) The Compass; (v) Water Driven Astronomical Clock ;(vi) The Armillary Sphere; (vii) The Star Chart; (viii) Solar Calendar.**

Song ship building industry laid the foundation of China's oceanic trade and diplomacy through the Yuan Dynasty to the apex of Admiral Zheng He (1371-1433 AD) seven epic voyages to S.E.Asia, Indian Ocean, Arabia and East Africa in the Ming Dynasty with 200 ships and 20000 crew members. By comparison, Christopher Columbus voyage to the New World consisted of 3 ships with his flagship Santa Maria about one-fifth the size of Zheng He's fleet ship.

Unfortunately, the Song Dynasty overemphasized civilian administration and neglected its military. The Song Dynasty was subjected to frequent attacks by nomadic tribes from the North. It was ultimately conquered by the Mongolian Kublai Khan of the Yuan Dynasty (1271-1364AD). After Zheng He's last voyage (1433AD), the Ming Emperor ordered the total destruction of all his ships and closed the coast of China from oceanic trade.

In Scotland, James Watt improved the steam engine in 1760AD and ushered in the first industrial revolution with his steam engines powering factories, locomotives and ships. Britain overtook Portugal, Spain and Holland in colonizing the developing world for raw materials and human slaves. Britain led the West including Japan to reduce China to semi-colonial status for more than a century from the first opium war (1839-1842AD) to the end of the Second World War in 1945.

There are many scholars who discussed the Needham Dilemma. One of the most famous was Professor Ho Peng Yoke who authored and co-authored several volumes of “Science and Civilization in China”. He was the first Director of the Needham Research Institute in Cambridge. Professor Ho was born in Ipoh and educated in St Michael’s Institution, Ipoh.



In my opinion, China’s culture was steeped in Confucianism which decreed absolute obedience to the Emperor, however brutal and corrupt, as he carried the mandate of heaven.

3.2 China Looking Seawards

After the hundred years of humiliation, China has realised that military power is essential for her national security and well-being of her people. China has built a blue ocean navy to assure her territorial integrity and counter any military challenge from abroad.

China has land border with 14 countries. China has agreed on the delineation of border by treaty with all her land neighbors with the exception of India. Land security on the Land Silk Road Economic Belt is assured collectively by the Shanghai Cooperation Organization.

The Global Security Initiative is widely regarded as a military and defence initiative. However, energy security and food security are also very important. In China's case, the continued supply is dependent on freedom of navigation of the high seas for global commerce and trade.

China is today one of the world's dominant forces in the global maritime industry. In terms of fleet size, China commands one of the largest merchant fleets globally, encompassing bulk carriers, container ships, LNG tankers, oil tankers and cruise ships, all built by China. Key shipping routes like the Asia-Europe and Asia-North America sea lanes are critical to China.

China has heavily invested in developing state-of-the-art port facilities, with 7 of the top 10 busiest ports in the world located in China. Chinese ports are at the forefront of technological innovation, with increasing levels of automation and digitalization.

China's port development strategy is closely linked to its Belt and Road Initiative (BRI), which seeks to enhance connectivity between Asia, Europe, and Africa.

Chinese port operators have extended their influence globally, acquiring stakes in foreign ports such as Piraeus, Greece; Gwadar, Pakistan; Cancay, Peru; Hambantota, Sri Lanka; Darwin, Australia; Kyaukphyu, Myanmar; Doraleh, Djibouti; and Kuantan, Malaysia.

China's rising naval might and her dominance of global maritime trade has been much maligned by the West. They raise alarm and fear at China's so-called imperialist ambition to colonize Belt and Road countries militarily and economically.

In my opinion, China's Global Security Initiative must be explained to the common people of the Global South as China's contribution to their social, economic and environmental uplift. It is underpinned by Chinese values in her relations with Belt and Road countries, such as trustworthiness (信), sincerity (诚), and wisdom (智).

3.3 Proposal for an Alliance of Port Cities in 21st Century Maritime Silk Road

US President Trump has repeatedly declared he will re-occupy the Panama Canal militarily and the Pentagon has hinted that US Navy is planning to stop and board cargo ships in the Straits of Malacca. These measures are obviously aimed at preventing China from receiving vital supplies by sea.

I suggest that China seriously considers forming an alliance of port cities in the countries along the 21st Century Maritime Silk Road to encounter the above threats against freedom of navigation in important sea lanes for commerce and trade. As in the Shanghai Cooperation Organization for the Land Silk Road Economic Belt, security of the sea lanes is the collective responsibility of the countries along the sea lanes.

4.0 The Global Civilization Initiative

Chinese President Xi Jinping proposed the Global Civilization Initiative in 2023. This is the third global initiative of President Xi.

President Xi called for respecting the diversity of civilizations, advocating the common values of humanity, valuing the inheritance and innovation of civilizations, and strengthening international people-to-people exchanges and cooperation.

He said in spite of differences in histories, cultures, political systems and development phases, countries around the world share common aspiration for development, peace and prosperity.

4.1 Fusion of One Belt One Road Civilisations Education Curriculum Project

To assure the achievement of the Global Civilization Initiative, it is most important for the common people, children, and youth of all countries, including China, to appreciate the contributions of other civilizations to their own.

There is no better place to start than to know, understand, and appreciate the civilizations in Belt and Road countries. The “Fusion of One Belt One Road Civilisations Education Curriculum” Handbook for schoolteachers and students in Belt and Road countries was one such effort.

The Fusion of One Belt One Road Civilisations Education Curriculum Project was initiated by me when I was the chairman of the Global Council of the Inter-Academy Partnership Science Education Program (IAP SEP).

The Project took four years to complete. It was essentially a Malaysia-China Project.

The Fusion of One Belt One Road Civilisations Education Curriculum Handbook is divided into two Parts.

The First Part covers the Land Silk Road, telling the story of the great Muslim Moroccan traveller Ibn Battuta (1304-1369AD). This Part was carried out by the Southeast University, Nanjing, China. The Second Part covers the Maritime Silk Road, telling the story of the seven epic voyages of the famous Chinese Admiral Zheng He (1371-1435 AD) from China to Southeast Asia, Arabia, and East Africa. This Part was carried out by curriculum experts from the Ministry of Education, Malaysia.

The Handbook emphasizes the scientific, engineering and technological achievements in Belt and Road civilizations. Its lessons cover water resource installations for irrigation in the desert like water wheel and the karez underground irrigation system; Chinese and Islamic building systems; water clocks; navigation aids for land and sea travel; Chinese and Arab ships, monsoon wind, and the spices.



[One Belt One Road Fusion of Civilisations Education Curriculum Chinese version](#)

[One Belt One Road Fusion of Civilisations Education Curriculum English version](#)

The 170-page Handbook in English and Chinese can be downloaded from the links above.

4.2 Shortcomings in Belt and Road Civilizations Narratives

In telling the stories of the Land Silk Road Economic Belt from the Chinese perspective, main focus has been on China's westward ventures from her heart land, such as the diplomatic mission of Zhang Qian (195-114 BC) in the Han Dynasty to Tajikistan, and Xuanzang (602-664 BC) in the Tang Dynasty seeking Buddhist scriptures from India. In fact, no Chinese merchants ventured out of Central Asia to Europe until the Mongol invasion of Eastern Europe in the 13th century. If it were not for the Sogdians in Central Asia trading between China and Europe, the Land Silk Road would not have become a reality. The Sogdians have a long history of ties with China. A Western Liao chieftain from Ningxia did establish a kingdom in Central Asia that spread as far as Samarkand.

I recommend that the narrative for the Land Silk Road Economic Belt should cover the epic campaign of Alexander the Great (356-323BC) from Macedonia, Greece to India. He left behind in Central Asia enduring elements of Greek and Persian cultures and philosophies. It was also the Abbasid Caliphate (750-1517AD) originating from Central Asia that ushered in the Golden Age of Islam. Through the great Translation Movement, it preserved classical Greek, Roman, Hebrew, Persian, Indian, and Chinese texts and translated them into Arabic. The success of the Translation Movement was also due to the acquisition of paper making and printing technology from China by the Abbasid Caliphate. This subsequently sparked the European Renaissance. The contributions of the Ottoman Empire (1300-1922AD) of Turkey to the culture and civilization of the Land Silk Road Economic Belt must also be acknowledged.

There were not too many famous travelers from outside China whose exploits are adequately covered in the Chinese narrative of the Land Silk Road Economic Belt. The only exception is Marco Polo.

Ibn Batutta is seldom mentioned. In 335AD, Ibn Battuta of Tangier, Morocco, then 21 years old, set out to explore the world. His travels spanned 25 years and 75000 miles. He visited Andalusia, Mekah, Egypt, Persia, Turkey, Central Asia, India, S.E.Asia, Maldives and China, Ibn Battuta was unique with respect to the Land and Maritime Silk Roads. He travelled by land all the way to India, then took ship to China. His ship was blown off course by storm to Maldives, and then sailed to China landing in Quanzhou. He visited Guangzhou, Hangzhou and Beijing.

As the great majority of Belt and Road countries are Islam, the glaring omission of the contribution of Ibn Battuta must be corrected. The neglect of Ibn Battuta is also symptomatic of the neglect of the contribution of Islam to Chinese civilization.

The greatest tribute to Ibn Battuta today is the Ibn Battuta Mall in Dubai. It is a unique living, shopping and entertaining Ibn Battuta Museum.

I am contacting the Ibn Battatu Mall to explore the possibility of a travelling Ibn Battuta exhibition for museums in Belt and Road countries.



President Xi Jinping acknowledged both Ibn Battuta and Marco Polo in his speech in Indonesia in 2003 announcing the 21st Century Maritime Silk Road.

The Chinese preoccupation with the Land Silk Road Economic Belt is perfectly understandable as throughout history, China has been a land-based empire with her centres of political, economic and cultural gravity in inland cities.

South East Asia was associated with China through the Maritime Silk Road. The most outstanding historical events were the seven epic voyages of Chinese Muslim Admiral Zheng He to Southeast Asia, Indian Ocean, Arabia and East Africa in the Ming Dynasty.



VOYAGES OF ZHENG HE (1405–33)

— Main fleets

..... Secondary fleets

FIRST VOYAGE
(1405–07)

THIRD VOYAGE
(1409–11)

FIFTH VOYAGE
(1417–19)

SEVENTH VOYAGE
(1431–33)

SECOND VOYAGE
(1408–09)

FOURTH VOYAGE
(1413–15)

SIXTH VOYAGE
(1421–22)

Reset

View all voyages





The Statues of Ibn Batutta and Marco Polo in Quanzhou

4.3 More Needed to be Told about the 21st Century Maritime Silk Road

The most significant role of Admiral Zheng He (Sambao) must be highlighted. His first voyage began in 1405AD and the last voyage ended in 1433AD. During the seven voyages, Zheng He built his fleet from Nanjing/Taicang in Jiangsu Province.

He visited more than 30 countries. Zheng He promoted peace, commerce, trade and social and cultural exchanges. He never occupied a square inch of all the countries he visited. Zheng He was a great diplomat.

The three port cities most associated with the seven epic voyages of Zheng He are: Nanjing/Taicang; Malacca, Malaysia; and Samarang, Indonesia.

Malacca was the most well known port associated with Zheng He's seven epic voyages. Zheng He visited Malacca five times during his seven epic voyages.

Semarang (三宝壟) in Central Java, Indonesia is the only foreign city in the world named after Admiral Zheng He ("Sambao"). Zheng He landed there five times during his seven epic voyages.

In all the above three places, there are temples and museums in honour of Zheng He who is venerated by inhabitants of different religions and ethnicities.

I have been advocating a comprehensive Narrative about the 21st Century Maritime Silk Road starting with the travels of Zheng He and Ibn Battuta, as part of a comprehensive Narrative of the Fusion of Civilizations of the Land Silk Road Economic Belt and the 21st Century Maritime Silk Road.

This Narrative should be suitable as curriculum for schools. It should be accompanied by a series of AI enabled virtual reality displays, suitable for exhibition in museums in Belt and Road countries for the edification of all common folks.

The Chapters can be (i) Zheng He and Nanjing/Taicang; (ii) Zheng He and Malacca; (iii) Zheng He and Samarang; (iv) Zheng He and the Arab World; (v) Zheng He and East Africa.

Then (vi) Battuta and the Indian Subcontinent; (vii) Battuta and Maldives (viii) Battuta and Quanzhou and Guangzhou;

Then (ix) 21st Century Maritime Silk Road and the Pacific; and (x) 21st Century Maritime Silk Road and Latin America and the Caribbean.

4.4 The Influence of Islam on Belt and Road Civilizations

I consider Ningxia Hui Autonomous Region most appropriate as the Hub in China for the study of Islamic Influence on the Land Silk Road Economic Belt as it is a Region of with a large Muslim population.

I would also suggest Ningxia as the Hub in China for the Global Civilization Initiative, as Ningxia throughout its history has been a cauldron for fusing Confucianism, Taoism and Buddhism; Han, Tibetan, Mongolian and Manchurian Cultures; and Central Asian, Greco-Persian cultures; and Islam religion.

In recent decades, Ningxia is the host of the China-Arab States Expo. The seventh China-Arab States Expo opened in Yinchuan in August 2025. Marking a historic first, all 22 Arab countries took part, alongside delegations from China's 31 provincial-level regions.

4.5 The Contribution of Global Events of More Recent Centuries to the Fusion of Belt and Road Civilizations Narrative

While acknowledging the historical contributions of Belt and Road civilizations, we must highlight more recent Global events that have greatly impacted the Global South, like the immense suffering and humiliation under Western (including Japan)) oppression since the first industrial revolution of 1776 as well as the two World Wars. **Above all, the Fusion of Belt and Road Civilization Narrative must record the more recent rise of the Global South, like China's eradication of poverty and her social, economic and environmental development, and China's great contribution to the Global South through her BRI projects and programs. We must also remember the great progress in social, economical and environmental development being made by the Belt and Road countries.**

5.0 Confucianism and Islam Dialogue

During his April 2025 State Visit to Malaysia by Chinese President Xi Jinping, Prime Minister Datuk Seri Anwar Ibrahim hosted a state dinner for him. In his welcome speech, Datuk Seri Anwar remarked “--- the Global Civilization Initiative (is) unprecedented, unique in the leadership of the world today. That initiative offers a timely reminder that respect for difference is not a barrier to harmony, but its precondition.” President Xi Jinping of course agreed.

Thus began the Malaysia/China joint agenda for the dialogue of Confucianism and Islam and their impact on Chinese and Islamic Civilizations.

I do not think Malaysian civilization is so Islamic as to be the international anchor for the Dialogue between Islamic Civilization and Confucianism. Malaysia is a multi-ethnic, multi-religious and multi-cultural country. Malaysian civilization is a fusion of Indigenous, Malay, Chinese, India, Arabic, Portuguese, Dutch, English and Japanese cultures through its history as well as the fusion of Islam, Buddhist, Hindu and Christian religions.

In my opinion, Malaysians have lived in harmony within Malaysia and have forged friendly relations with most nations on earth has been to a great extent due to the mutual respect, understanding and tolerance of all peoples as per her national ethos “Unity in Diversity” and international ethos “Prosper Thy Neighbours”.

Further, I do not agree that Chinese civilization is so Confucianism as to be the anchor for the Dialogue between Islamic Civilization and Confucianism. Throughout Chinese history, her civilization has also been greatly influenced by Taoist and Buddhism. It has also absorbed other foreign religions and philosophies like Islam, Catholicism, Christianity, Hebrew, Hindu as well as Democracy, Imperialism, Capitalism, Socialism and Communism.

Thus Chinese civilization has always welcomed other civilizations and cultures in the evolution of her current national and international ethos of “Common Destiny of Peace and Prosperity for Humankind”.

I sincerely believe China and Malaysia can jointly demonstrate to the rest of the world on how to build a multipolar world with diplomacy replacing conflict.

Thank You