

Making of a Superpower

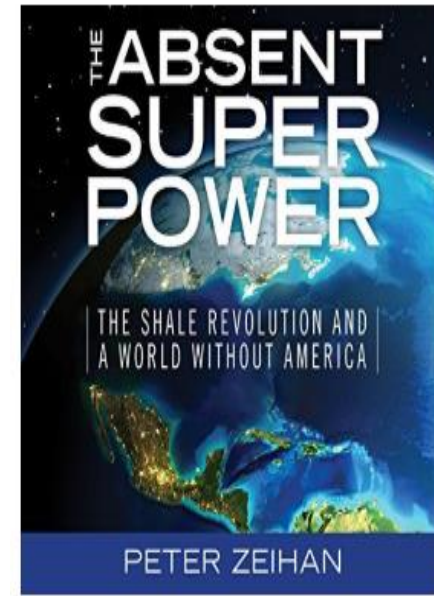
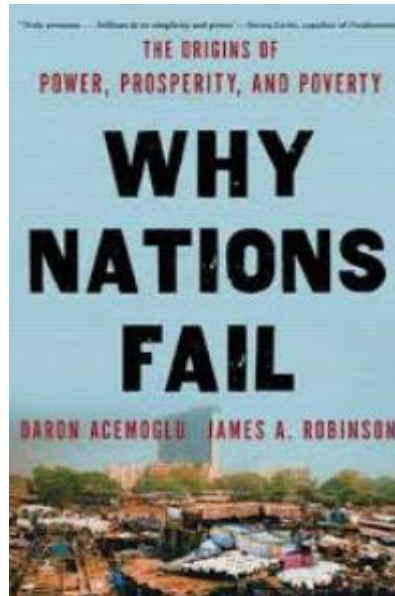
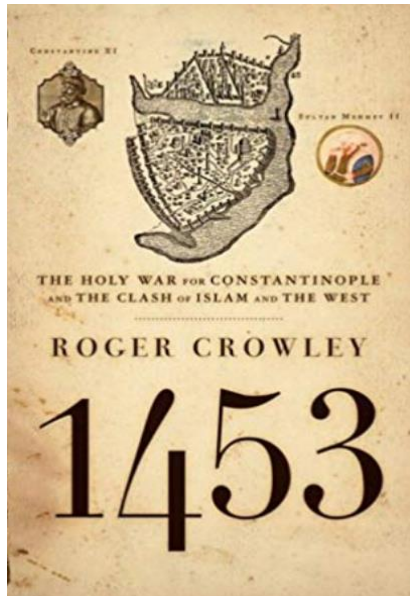
Why Certain Countries Rose to Dominate the World

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Based Largely on Knowledge Extracted from These Great Books



**How do some nations gain
tremendous power &
dominate the world?**

Trading Routes & Naval Power Creates a New Superpower

1300-1650

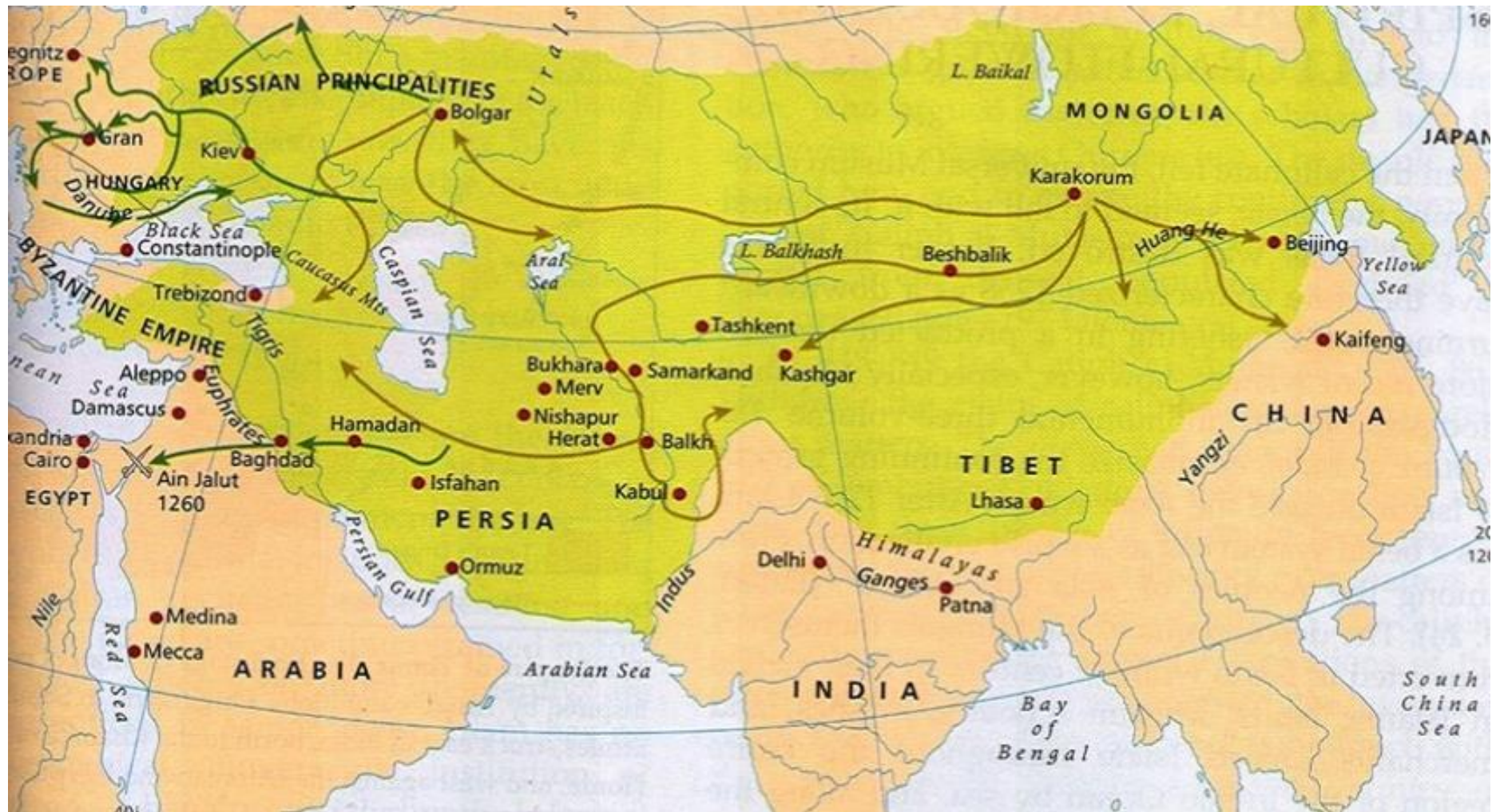
Established Trade Route: **The Silk Road**



Shrinking Byzantine Empire by 1250



The Mongolian Empire: 16m Sq. Miles



Osman Gazi Establishes Ottoman Empire in 1299 after Mongol Destruction of 1296



The Black Death

- 1347-48 saw a huge de-population in Byzantine Empire & most of Europe
- Weakness gave encouragement to Ottoman principalities (Baylik) & they expanded their sphere of influence

Constantinople in 1453

- Constantine XI was the 88th Roman Emperor
- The City had 12-miles of wall to protect it



Young Sultan Mehmed II

- Started rule at age 19 in 1451
- Initiated building a naval force with aim to take Constantinople
- April 6, 1453 siege of Constantinople started with an army of ~200,000



Transportation of Ships Overland to the Golden Horne



Modern Technology: Cannons



Hungarian Canon Maker: Orban



Constant Blasts from Long-Range Cannons

The power of gunpowder to shatter castles



Mehmed II Conquers Constantinople on May 29, 1453



A Watershed Moment

- Center of Eastern Orthodox church moved to Russia
- Islam spread within Europe
- Greek Christians living in Turkey fled to Italy, bringing rich culture + knowledge & books!
 - Unlocked knowledge accelerated the Renaissance that was already underway

Sea of Marmara



Sea of Marmara

(Smallest Sea in the World 4380 Sq. Miles)



EUROPE

Major Rivers



Ottomans Naval Expeditions

occupied European cities
&
**Dominated all land &
sea trade routes
between Europe &
Asia & the Black Sea
to Mediterranean**

Battle of Leponto 1577



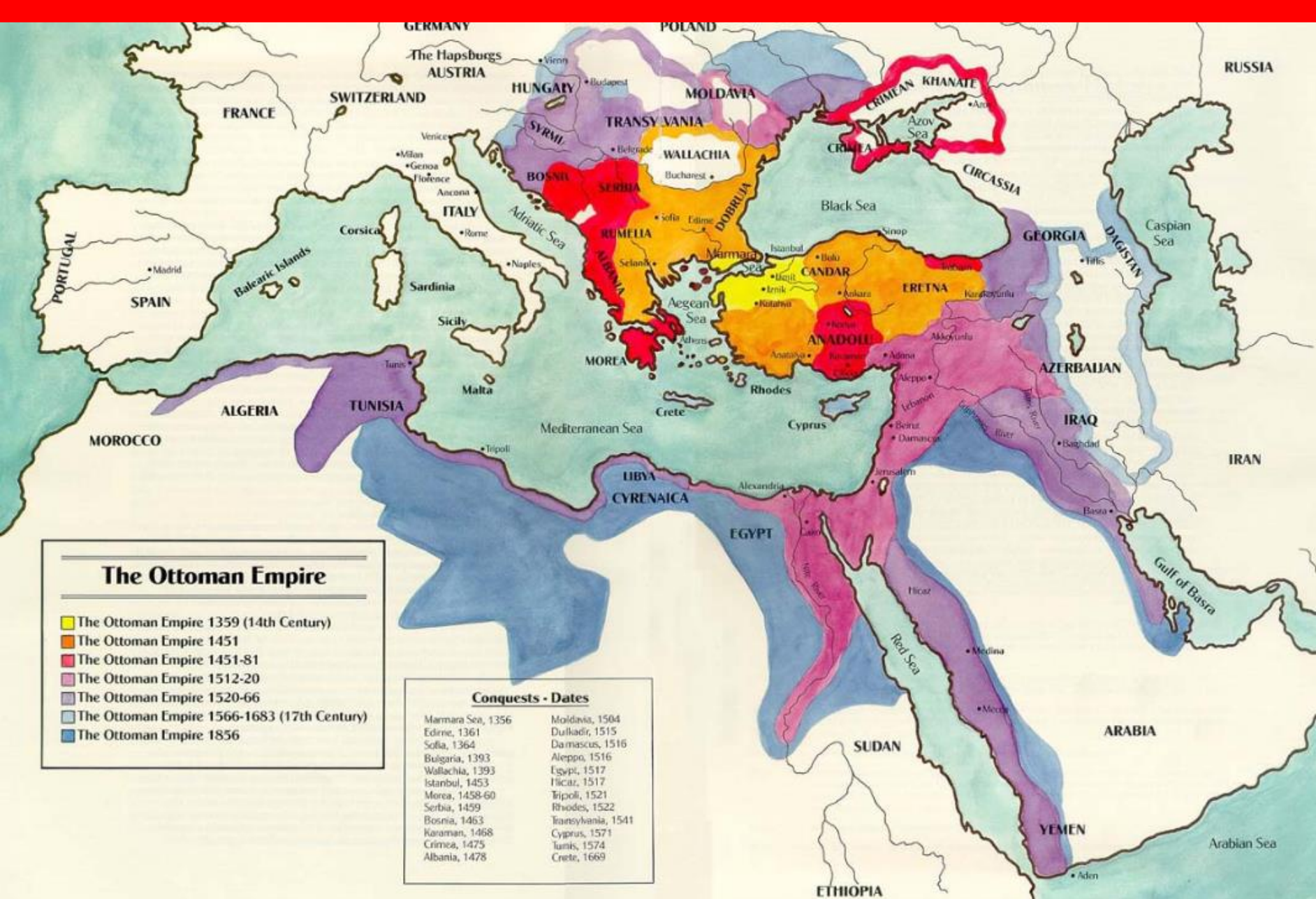
Lesson Learnt: Naval Power Delivers





Some of Naval Victories of Ottoman

- Macedonia 1373
- Venetian Morea 1423
- Duchy of Athens, Morea 1460
- Genoese colonies 1461-62
- Venetian wars 1463-79
- Crimea 1475
- Georgia 1479
- Albania 1497
- Montenegro 1499
- Venetian wars 1499-1503
- Adriatic coast (Italian) 1503
- Syria 1516; Algeria 1517
- Egypt 1517
- Rhodes 1522
- Dalmatia, Croatia 1527
- Slavonia, Bosnia 1527
- Tunisia + Naxos 1537
- Siege of Nice (Duchy of Savoy)
- Algiers, Naples 1541-1552
- Tunis 1560, 1574
- Canary, Lundy, Shetland Islands 1627-31



Spices From East

- Europeans traded heavily with east
- Mongols revived & provided security along land routes
- Ottoman empire capitalized on spice trade & became very rich

Pepper, ginger, nutmeg, cinnamon, cloves, mace, cumin & saffron were highly desired luxury items

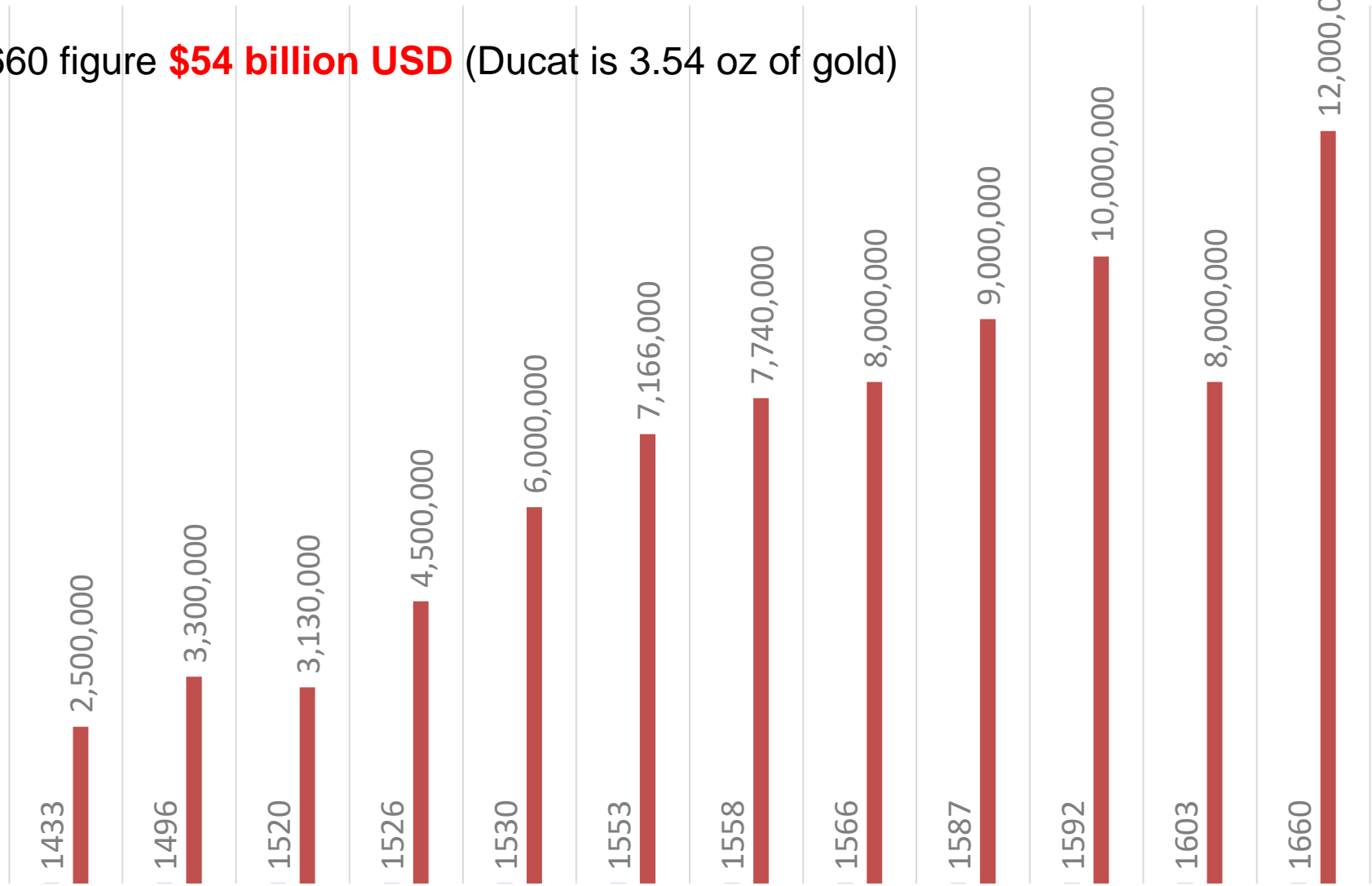


Revenue from Silk Road

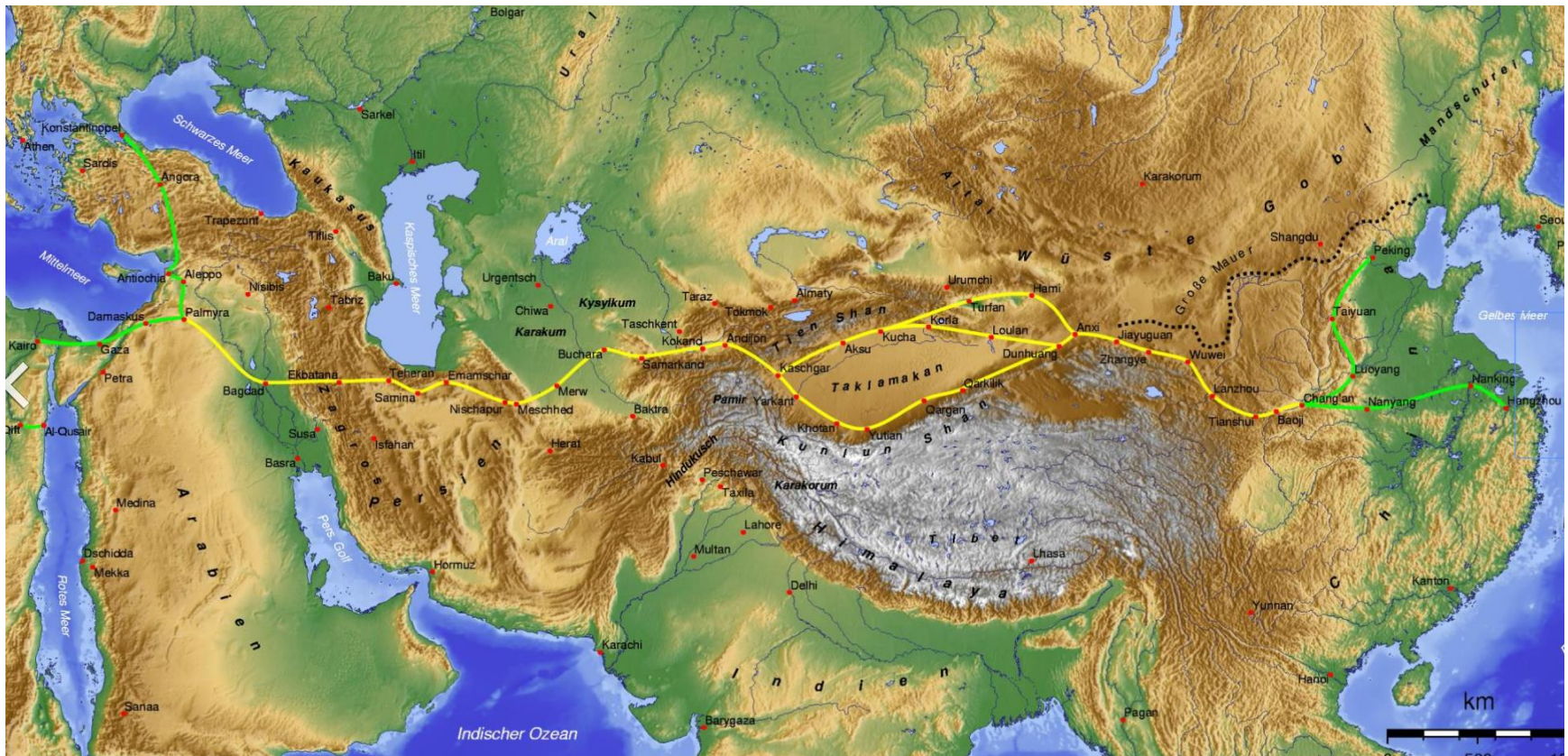
- Traded gold, jewels, silk, perfumes, timber, iron tools, textiles, carpets, opium, dried fruits, furs, wax, indigo, linen, rice, sugar, Syrian soap
- Controlled most of land routes connecting Europe & Asia + control over Red Sea & Black Sea
- Ottomans' dominance in Black Sea was significant - excluded Italian powers from trade routes
- **Taxes collected:** 10% of all Ag products, 20% from all mines, sheep tax, merchants & artisan tax plus more

OTTOMAN GDP (DUCATS)

1660 figure **\$54 billion USD** (Ducat is 3.54 oz of gold)



Europe's Appetite for Spices Was Huge & Silk Road was the Trade Route



1299 - 1922

Benefiting from most strategic location on the planet, Europe's longest river, three manageable seas, & most profitable trade routes of the time, Ottoman rose to Superpower status



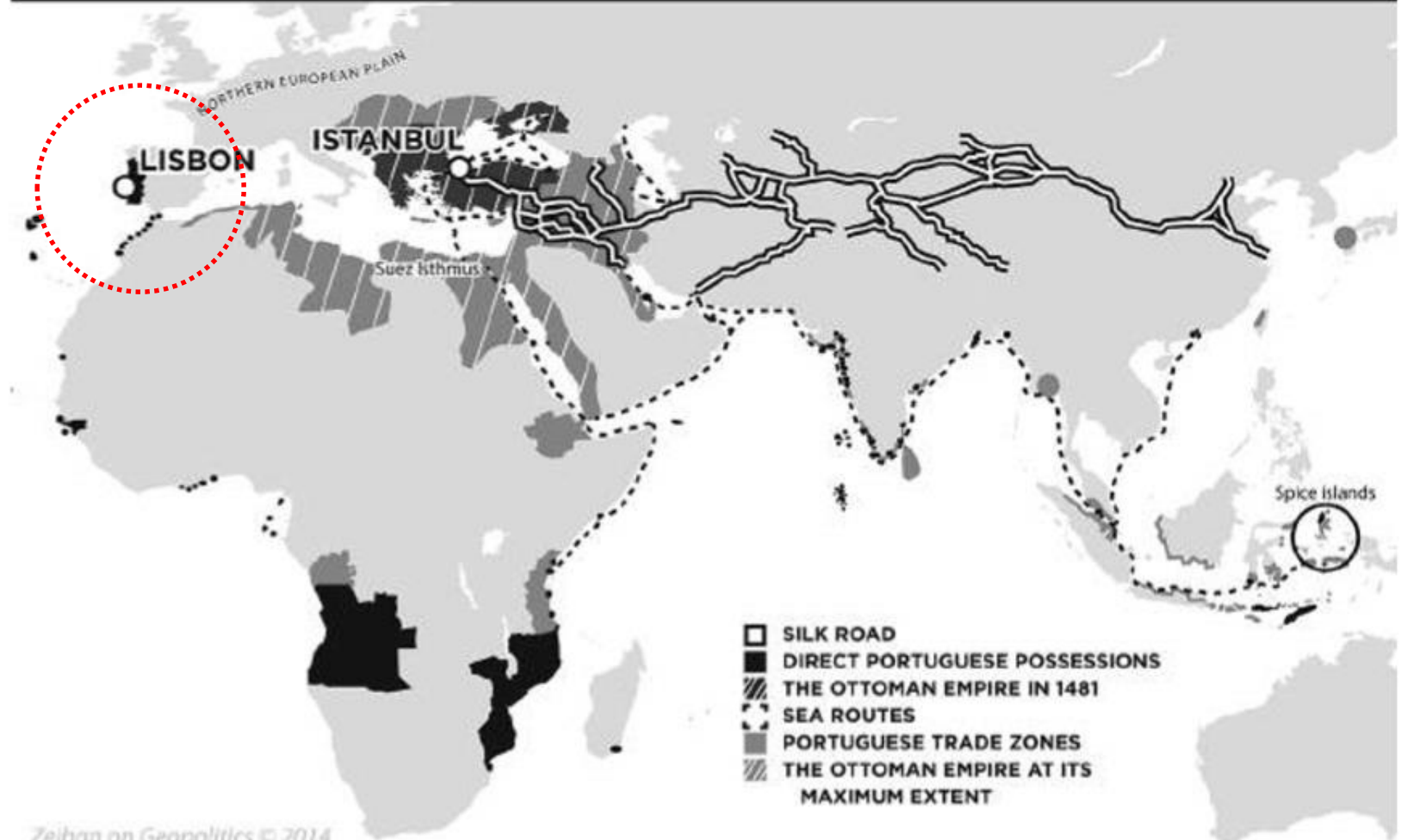
Need for Innovation

*From Poorest Nation to a New
Superpower*

1500-1700

Who Suffered? The Most Remote & Poorest State in Europe

THE OTTOMAN EMPIRE, PORTUGAL, AND THE SILK ROAD



Iberian Peninsula Had to Innovate

- New European startup had to innovate & change the rules of the game to survive
- Four innovations pulled together created new dynamics in Europe & started a new era

1: Dry Compass

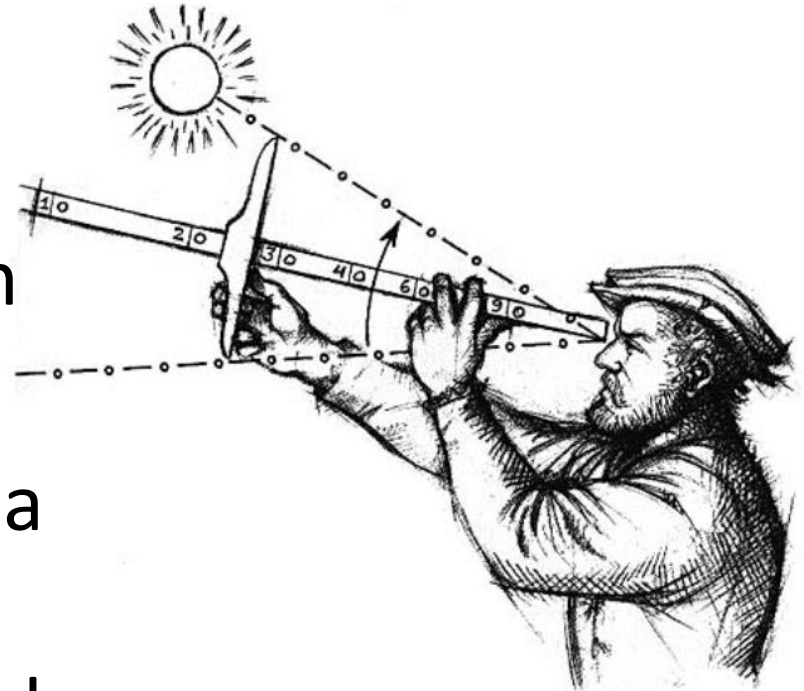


14th century

- Six months were cloudy & rainy in Europe – until a compass made it possible to know direction with observing stars & sun
- Improvements on Chinese compass created a dry compass

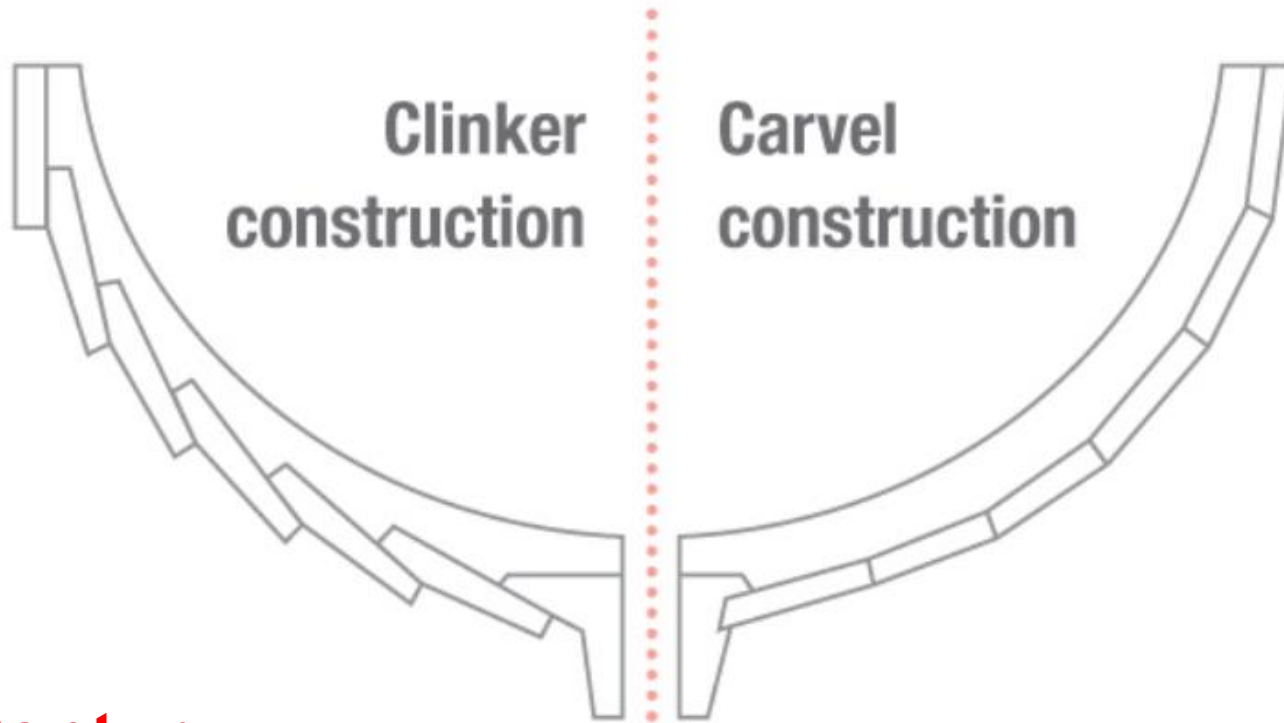
2: Cross Staff/Backstaff

- Tells you the latitude so determine location by examining the angle from fixed objects
- Combined with compass a captain can determine location out of site of land



**15th century
& 1594**

3: Innovation in Boat Building Originated in Iberia



15th Century

Carvel Construction 15th Century Iberia

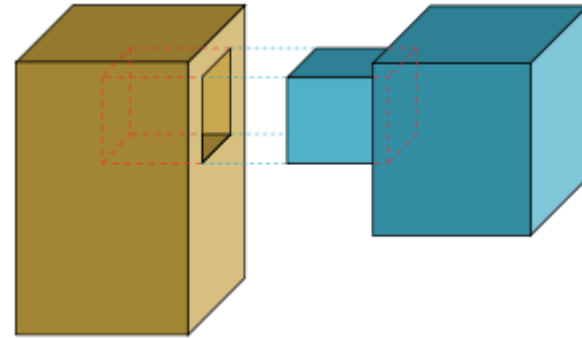
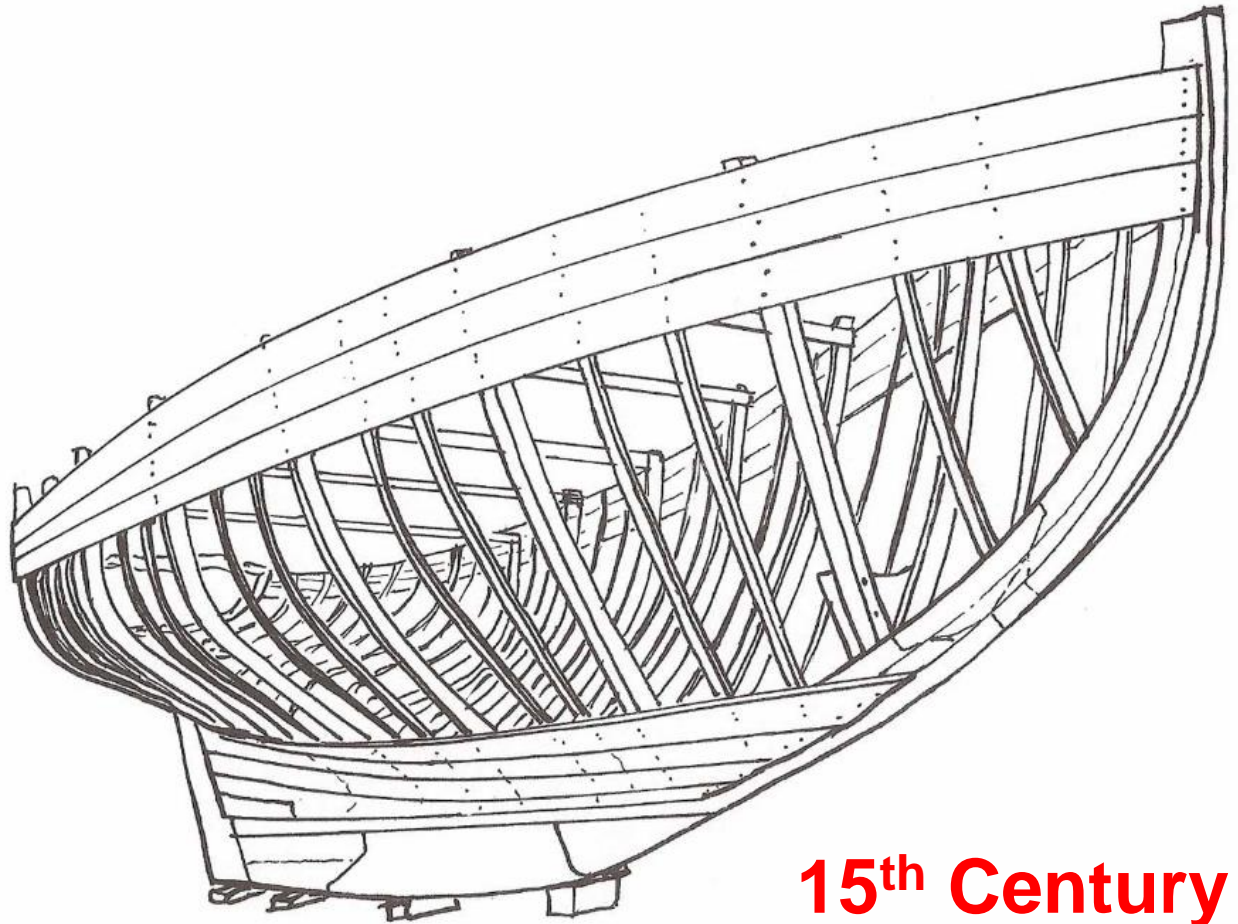


Diagram of a mortise (on left) and tenon joint



Lighter, Faster Ships

Faster, safer ships could carry more cargo but required far more skillful workers



15th Century

4: Moving Guns to Lower Decks with Gun Ports: Lethal & Formidable



~1500 AD

Four Innovations = Deepwater Navigation

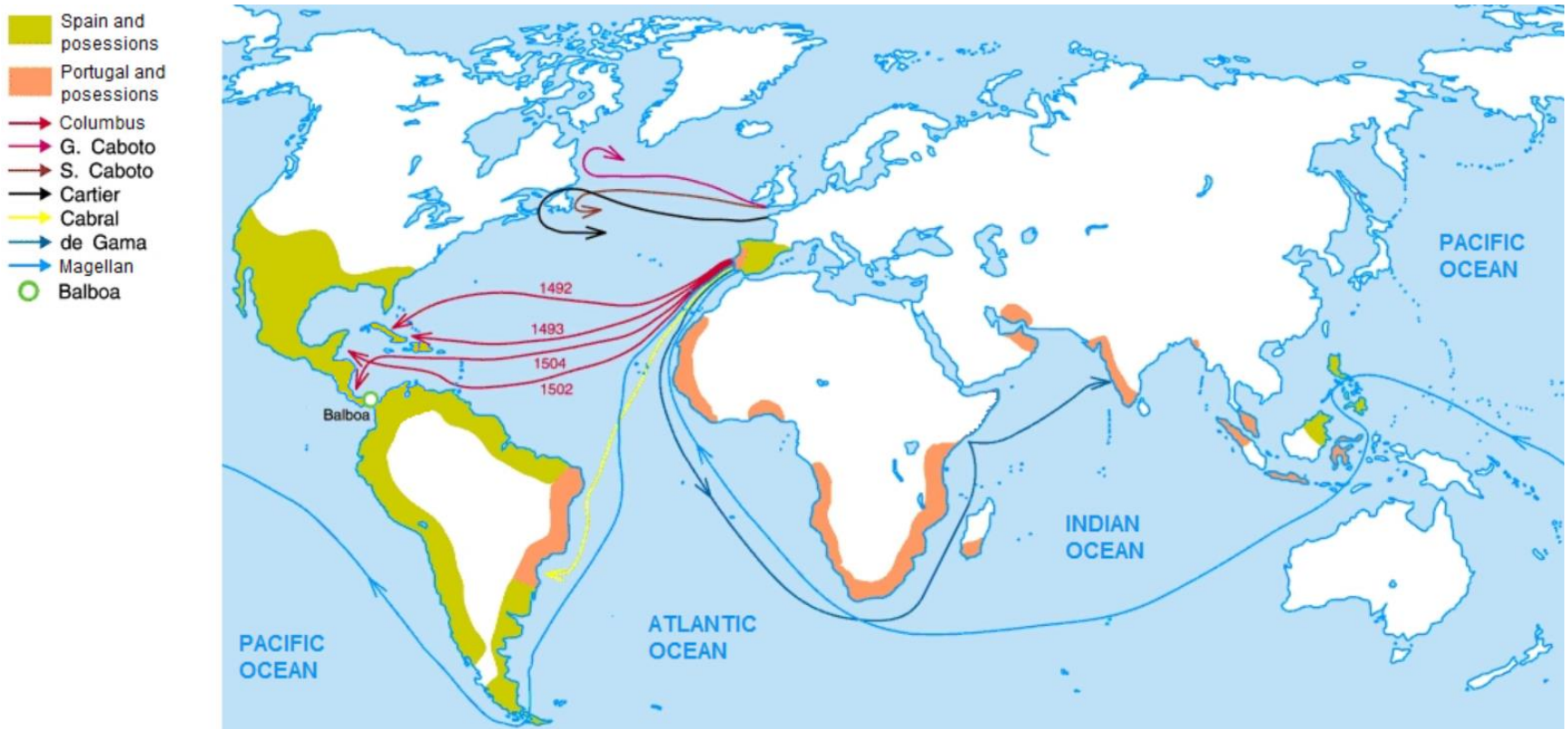


Unification of Power

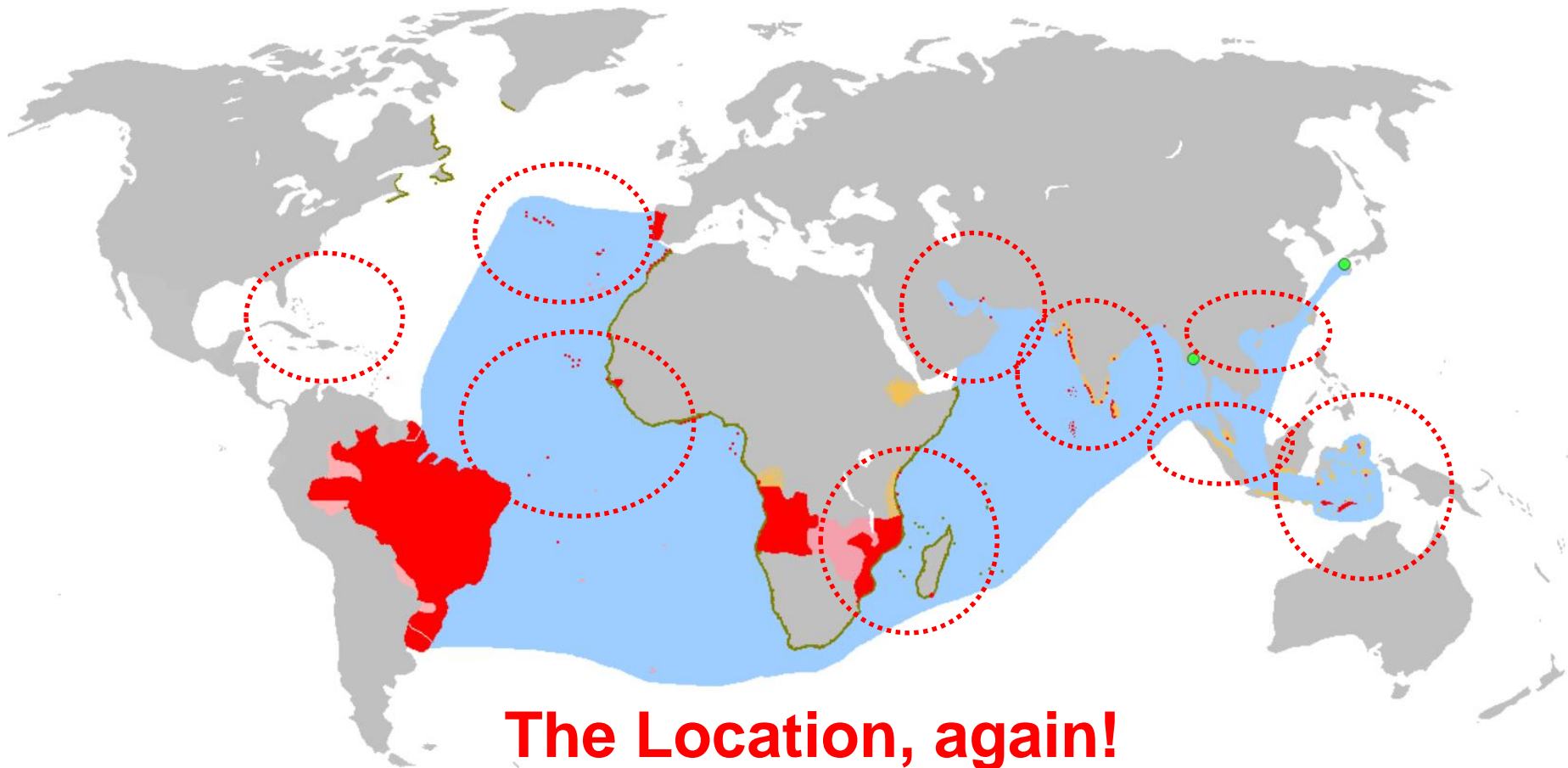
- After Ferdinand & Isabella united the Castile-Leon & Aragon crowns in 1492 to form the Spanish kingdom



Spain & Portugal had to change the game & bypass Ottomans, Italians, French & Pirates

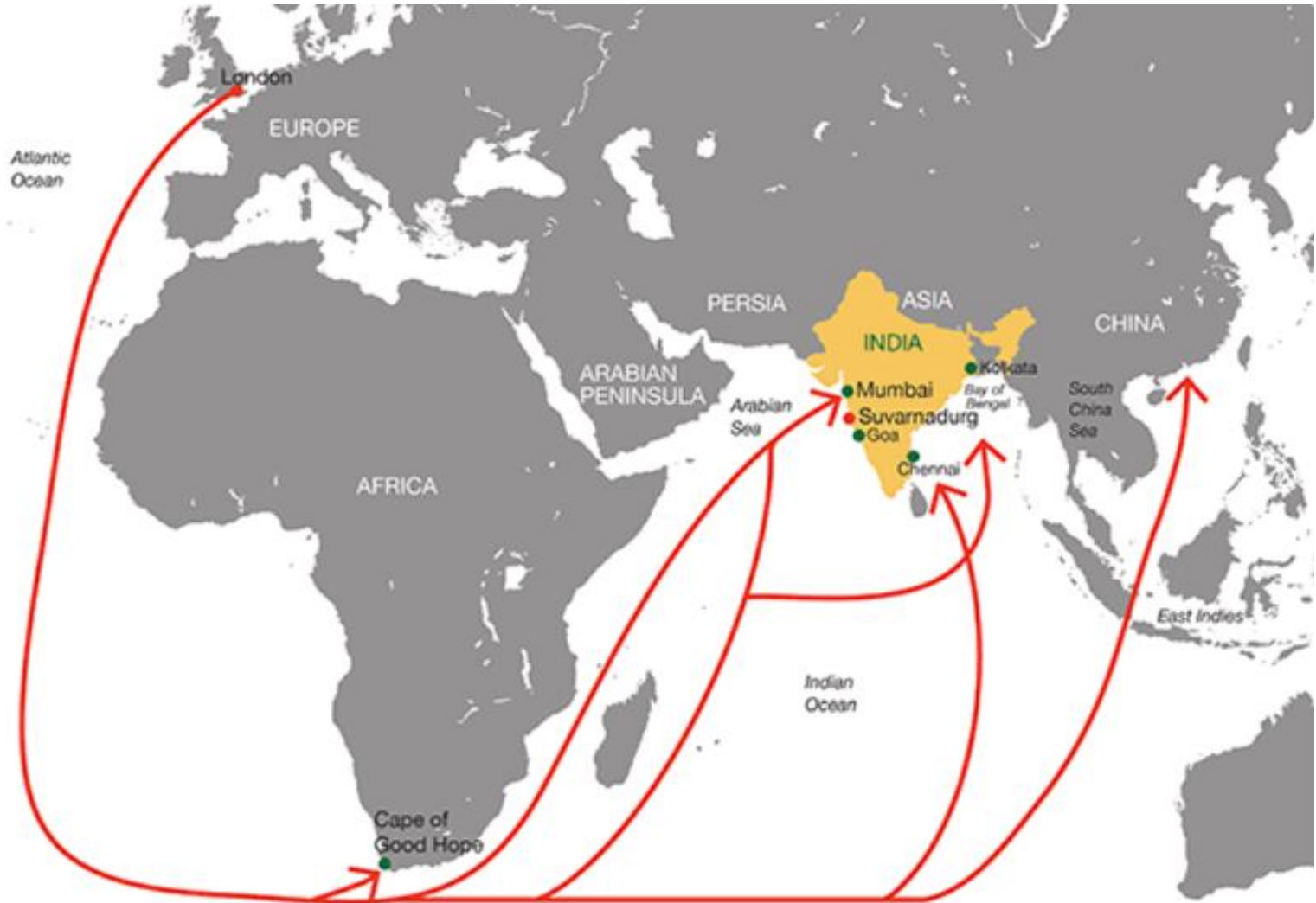


While Spain focused on controlling the Mediterranean, the Portuguese Empire expanded to new world & Asia

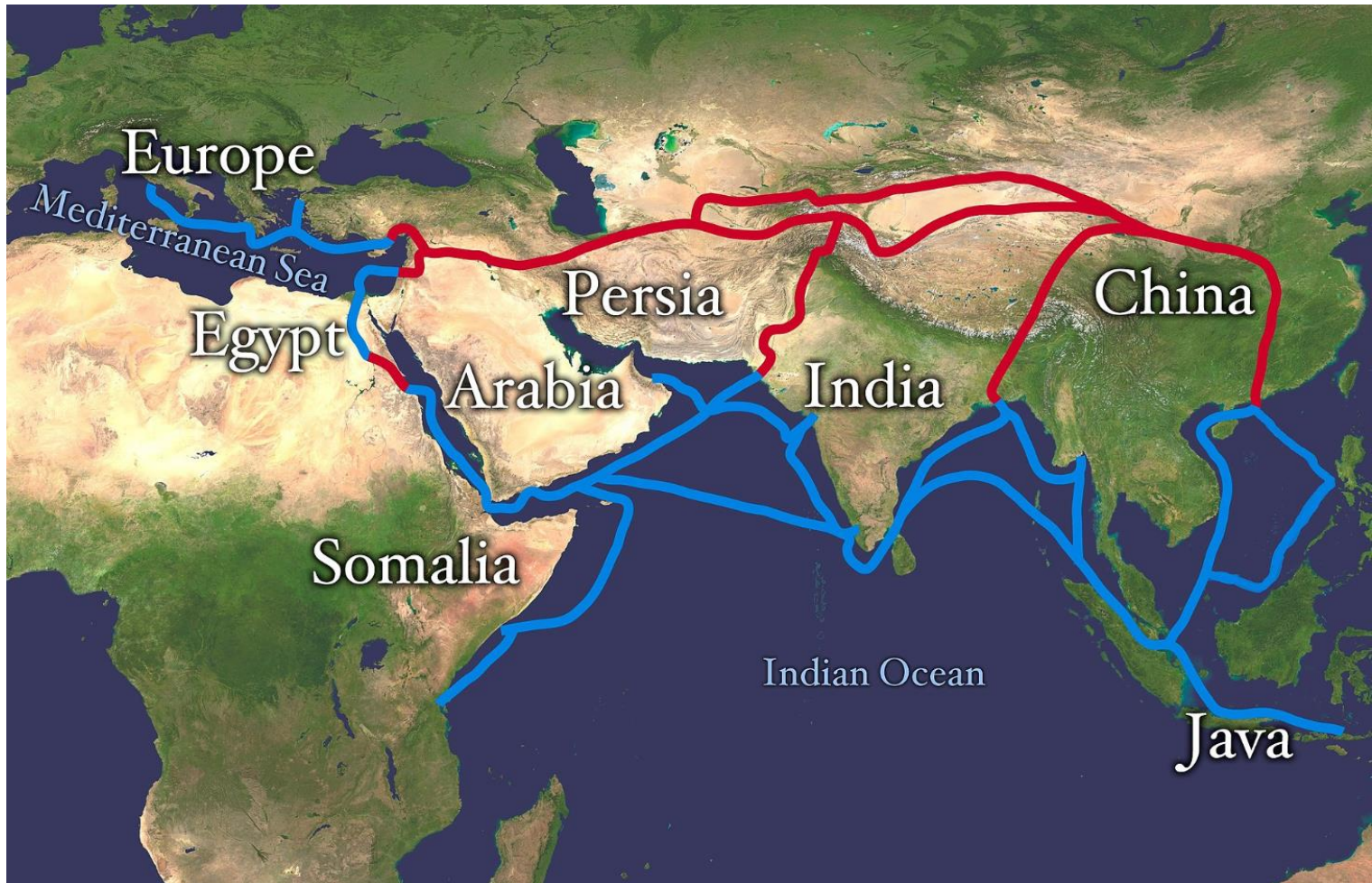


The Location, again!

Colonization & Tremendous Wealth



New Silk Route & Spice Trade



Habsburg Spanish Empire

- Habsburgs took over Spanish throne in early 1500s, at a time when Habsburgs ruled Holy Roman Empire
 - Most of Germany, Austria, eastern France, Netherlands, Switzerland, northern Italy, Bohemia, "Royal" Hungary, as well as southern Italy (Sicily and Naples)
- Habsburg-Spanish imperial empire was at its height under Charles V & his son, **Philip II in the 1500s**, when Spanish troops were on Rhine River, in South America, in Philippines (named after Philip II), in Albania, & elsewhere

Hapsburg Spanish Empire: 1547



Power & Wealth Created a New Global Superpower

- The **Spanish Empire** also known as "Spanish Monarchy" was one of the largest empires in history became one of first global empires in world history



King Phillip II of Spain

The Spanish Armada: 130 Ships 1588

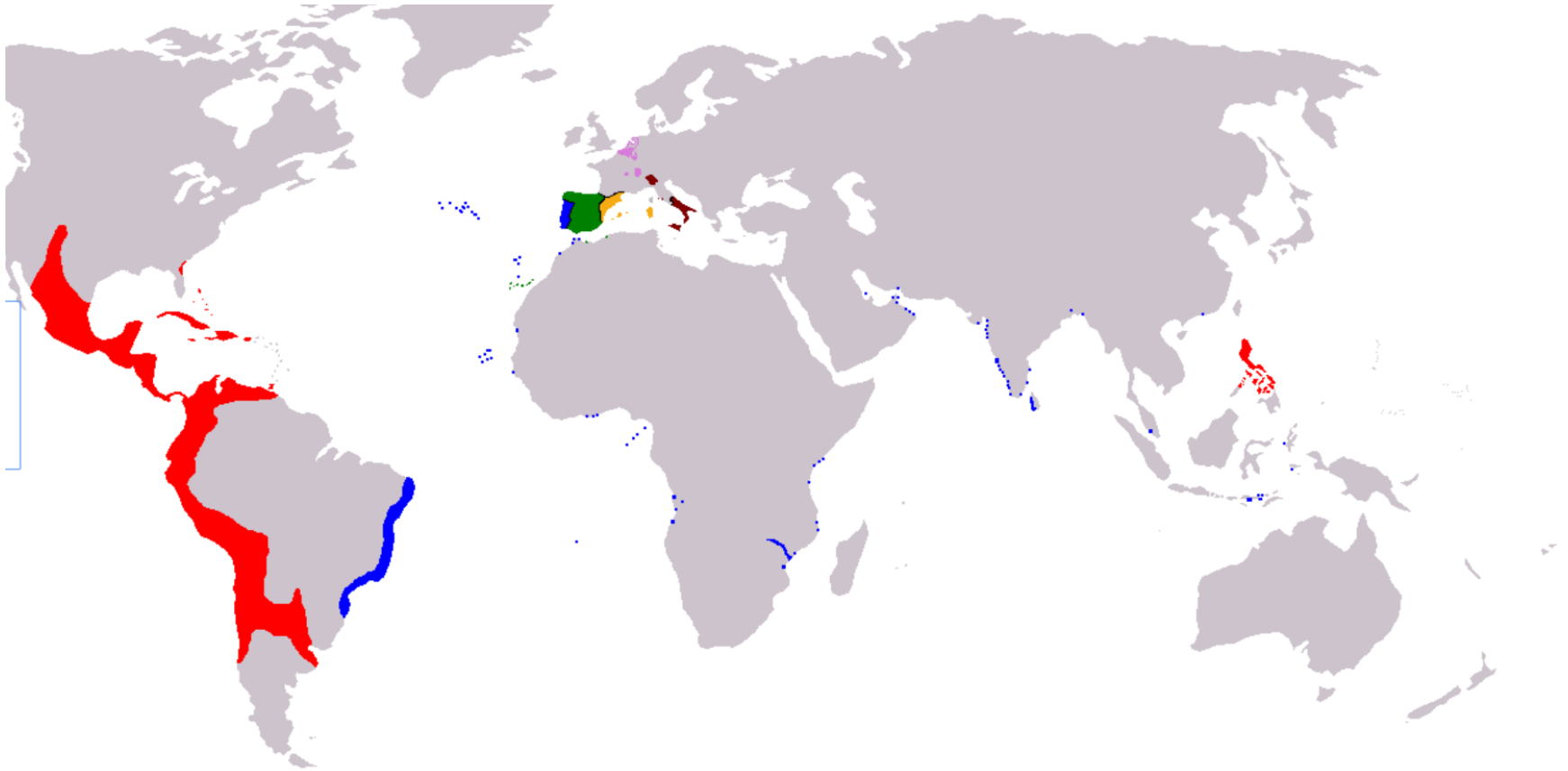


World Exploration & Colonization

- Spain became world's wealthiest & most powerful country in 1500s
 - Silver from Peru poured in
 - Colonization brought enormous wealth
- Before Spain, no one country in human history ever came close to that kind of influence
 - China comes closest, but its influence, while almost absolute in southeast Asia for centuries (until the Portuguese and Spanish showed up), had little impact outside of its region



Philip II's realms in 1598, administrative structure during the Iberian Union, 1580-1640.



Spain (and Portugal) were the first states to be able to truly project their power around the globe, and extend economic relations (i.e., trade) globally as well

First True Superpower

- Spanish Empire left a huge cultural, urban & architectural legacy in Western Hemisphere
- Hundreds of towns & cities in Americas were founded during Spanish rule
- Tangible heritage: universities, forts, cities, schools, cathedrals, hospitals, missions, government buildings & colonial residences, many still stand today
- Over 470 million native speakers today, Spanish is the second most spoken native language in the world

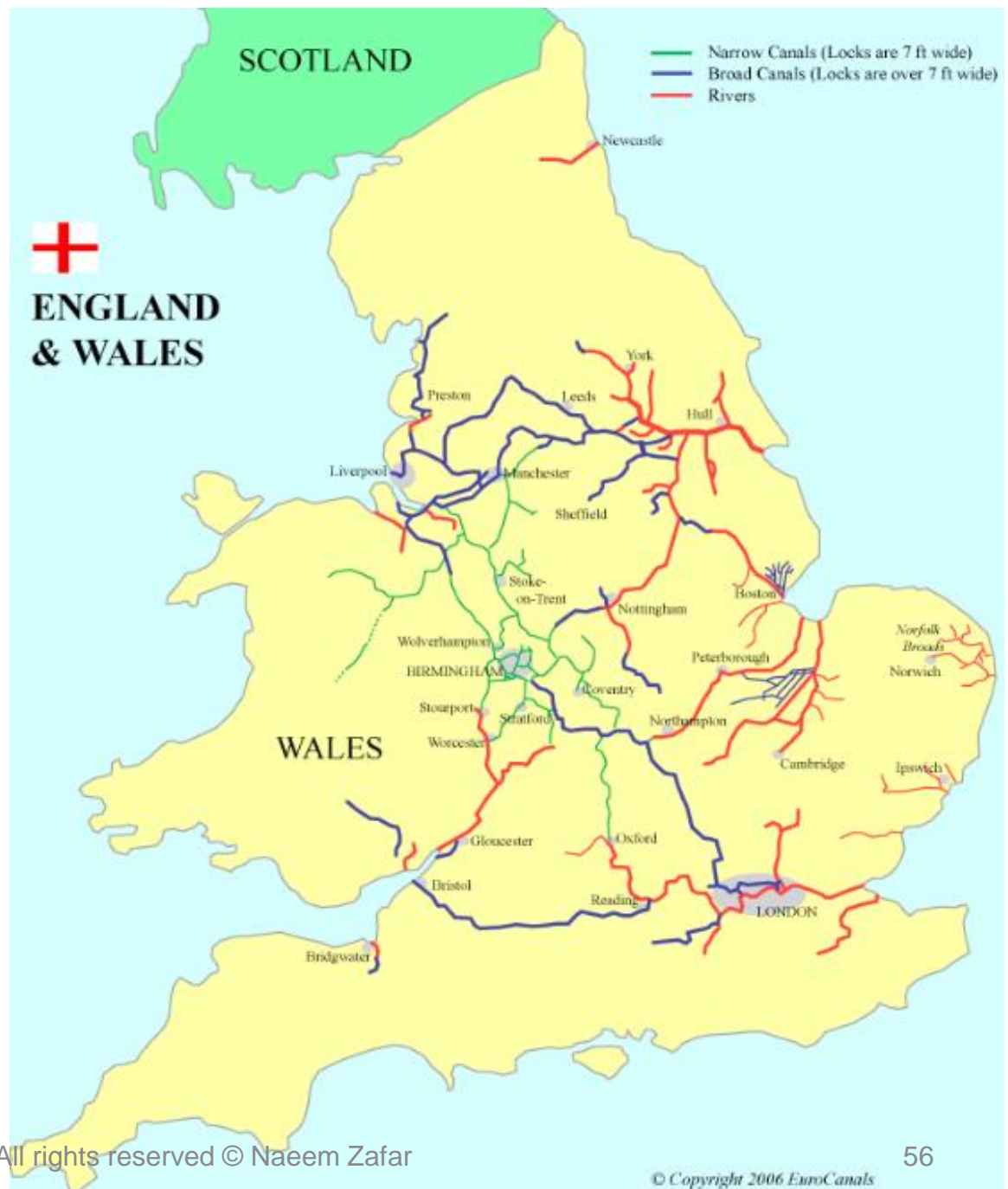
Location + Innovations Adopted to Create a New Superpower

1700-1900

Technology + Location

- Deepwater navigation diffused from previously land-locked Iberians to a people who were already at home on the water!

England:
A Tiny Island:
good lands with
river system
that empties in
the North Sea



The North Sea: Most Dangerous, Frigid, Tidal-extreme, Storm-wrecked



**An island
nation that
wrestled with
a tough sea
developed
the most
potent navy**



Why Navy

- Navies offer a flexibility that no land-bound power can match
 - Land forces at the time & place of their choosing
 - Keep ahead of military competitors through agility
 - Relocate economic & military pressure to ally of choice

A Super Power Emerges

- Britain (post 1707 unification of Scotland & England) took Deepwater Navigation to a new level
 - Did not have to maintain a big army being an island
- Navy, established in 1600s, strengthened to protect shipping routes from the colonies



Supremacy at Sea

- But little island nation did not have the resources to go it alone Against the Spanish
 - Crown had to grant dispensation to lords & aristocrats to seek resources
 - East India company was born!
 - To pursue various interests in greater good of English Nation



British East India Company

With Royal Dispensation in 1600



Private Company with a Standing Army of 200,000 & Own Currency



Royal Navy Started in 1546



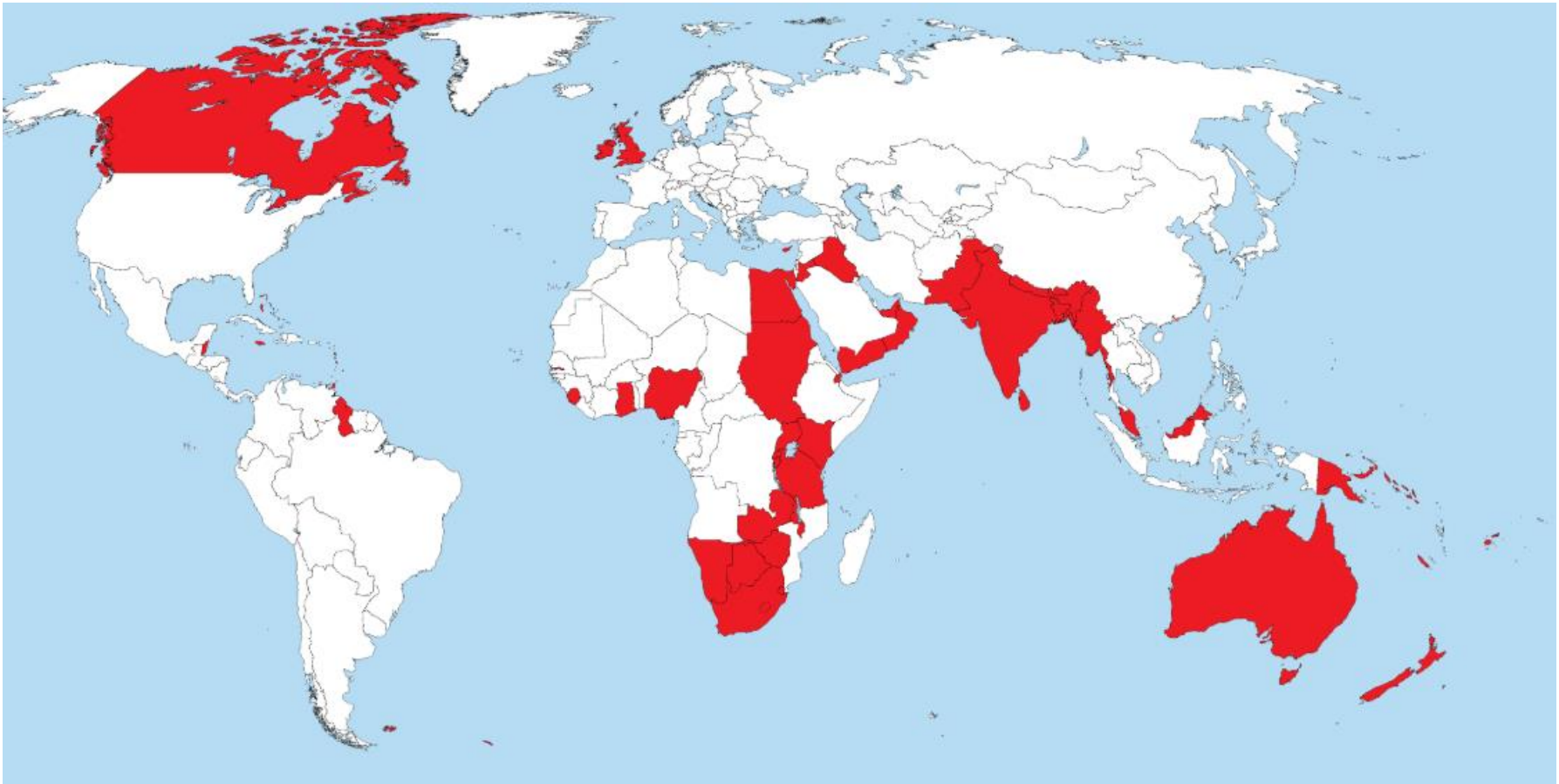
Sir Francis Drake
1588



Admiral Horatio Nelson,
1758–1805

The British Empire

- Profits did not just go to royal coffers (unlike Spain...) but also into new stakeholders



Private Investors & Stakeholders

- Stakeholders had an incentive to develop trading routes & not just plunder (unlike Spain)
- This gave way to **industrialization**
 - Unlike Deepwater navigation which developed in response to economic need, industrialization was an outgrowth of **opportunity**

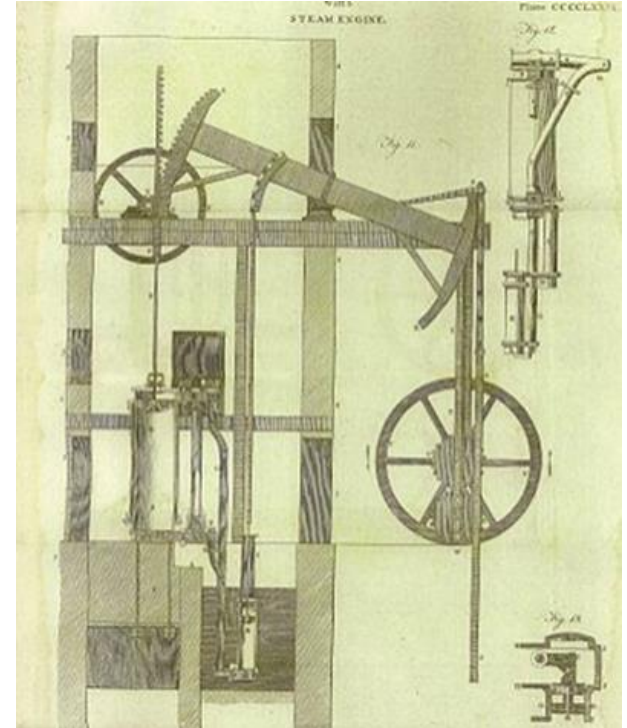
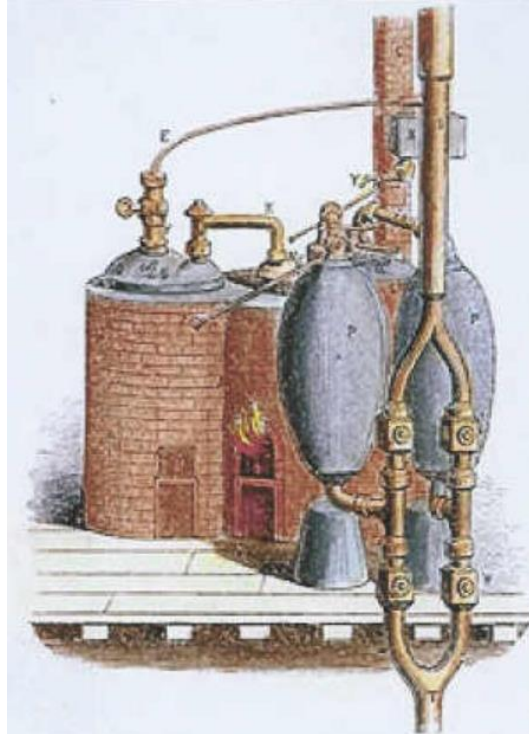
Industrialization

- Everything until now had to be done by
 - Wind, muscle or water
- Converting muscle power to steam power changed the rules of the game

Steam Engine: Invented to pump water out of coal mines



Thomas Savery: First to invent steam powered engine 1712



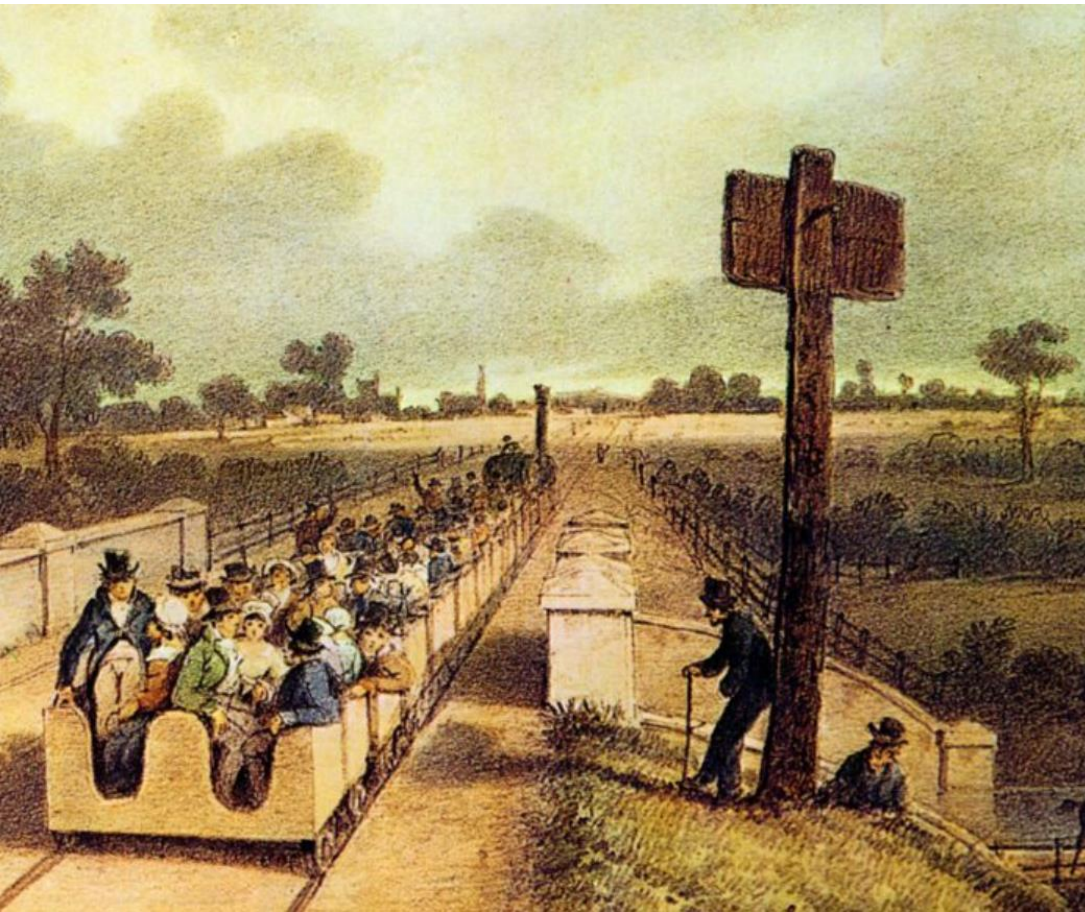
James Watt
Perfected the Steam Engine 1781

Transportable Power: 1805

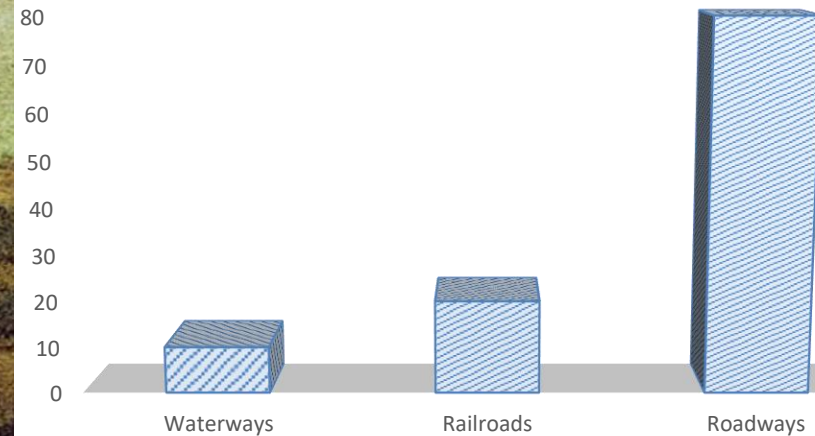
- Unlike wind & water, one can transport coal & steam engine to where it was needed
 - Transport
 - Smelting
- Steel production took off
 - Railroads
 - Larger steam ships & locks
 - Reduce traffic time
 - Dry ports

Manchester-Liverpool

First Railway 1830



OPERATING COSTS

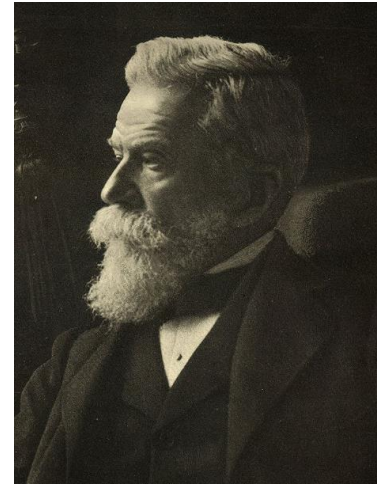


Chemicals Enabled New Industries



John Roebuck
Sulfuric Acid 1746

Ernest Solvay
Sodium Carbonate 1791



Glass, dyes, toothpaste,
washing detergent, steel,
paper, medication, fertilizer

Evolution of a Chemical Industry

- Discovery of bleaching powder by Charles Tennant that spurred the creation of the first great chemical industrial enterprise

Charles Tennant's St. Rollox Chemical Works in 1831, then the biggest chemical enterprise in world



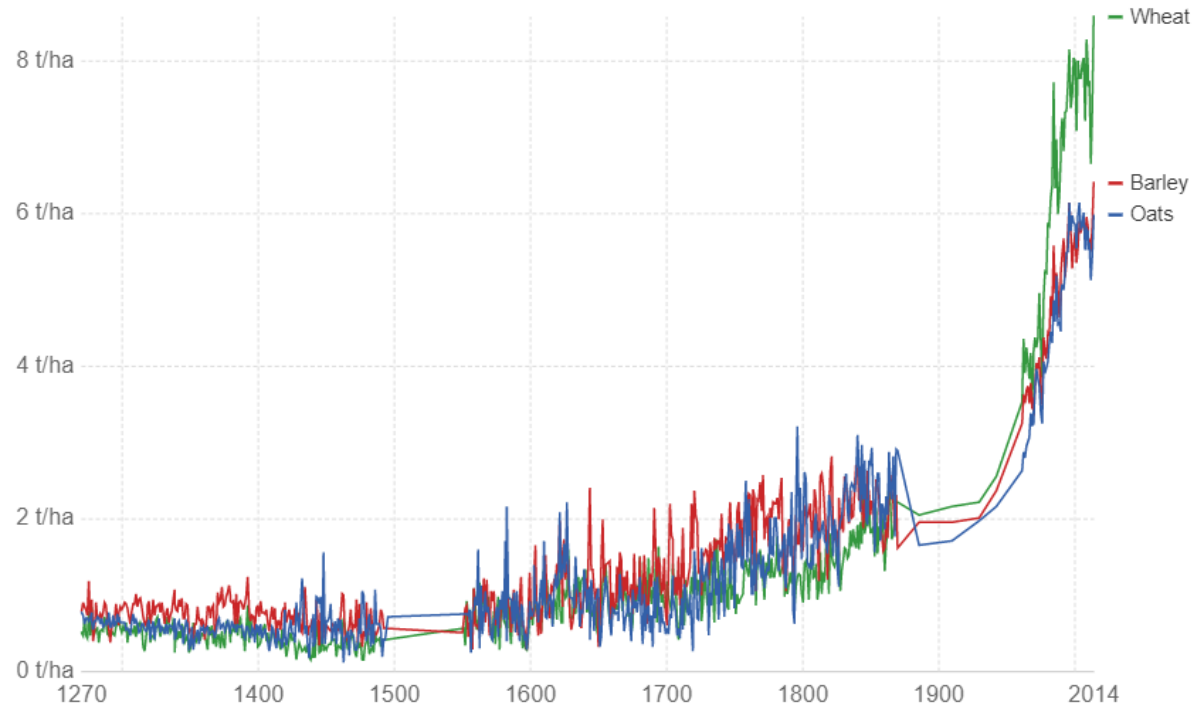
Fertilizers Revolutionized Farming

- Land under cultivation dramatically increased
- Better farm production + easier transport → **urbanization**

Long-term cereal yields in the United Kingdom

Average agricultural yields in key crops in the United Kingdom from 1270-2014, measured in tonnes per hectare.

Our World
in Data



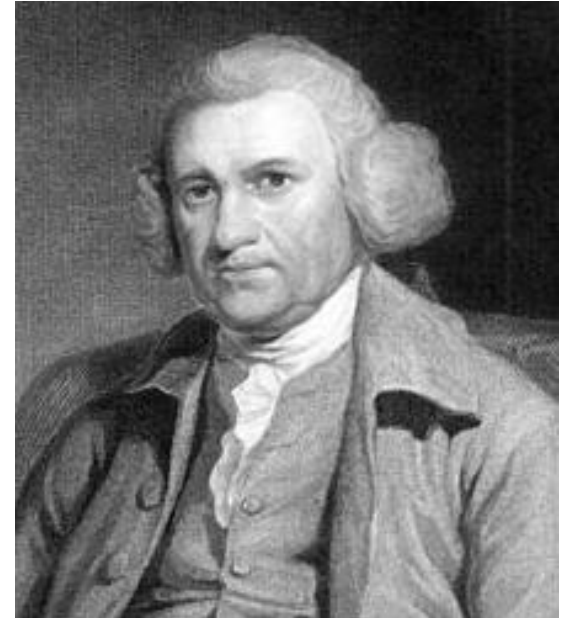
Source: OWID Long-term crop yields in UK - OWID (2017)

OurWorldInData.org/yields-and-land-use-in-agriculture/ • CC BY-SA

1820: Cement Became Viable

- Steel (1805) + Cement (1820) + engineering enabled bridges & tall building

London became the largest city in the world by 1825



John Smeaton
First Civil Engineer
1724-1792

London: Population Growth

Population [[edit](#)]

Year	Population ^{[48][49][50][51][52][53][54]}	
1	1—A few farmers	
50	50—100	
140	45—60,000	█
300	10—20,000	
800	10—12,000	
1000	20—25,000	
1100	10—20,000	
1200	20—25,000	
1300	80—100,000	█
1350	25—50,000	
1500	50—100,000	█
1550	120,000	█
1600	200,000	█
1650	350,000-400,000	█
1700	550,000-600,000	█
1750	700,000	█
1801	959,300	█
1831	1,655,000	█
1851	2,363,000	█
1891	5,572,012	█
1901	6,506,954	█
1911	7,160,525	█
1921	7,386,848	█
1931	8,110,480	█

Interchangeable Parts

- Machine tools + precision engineering decreased need for skilled labor
- First to create 100,000 pulley-blocks for Royal Navy to rig ships in 1803

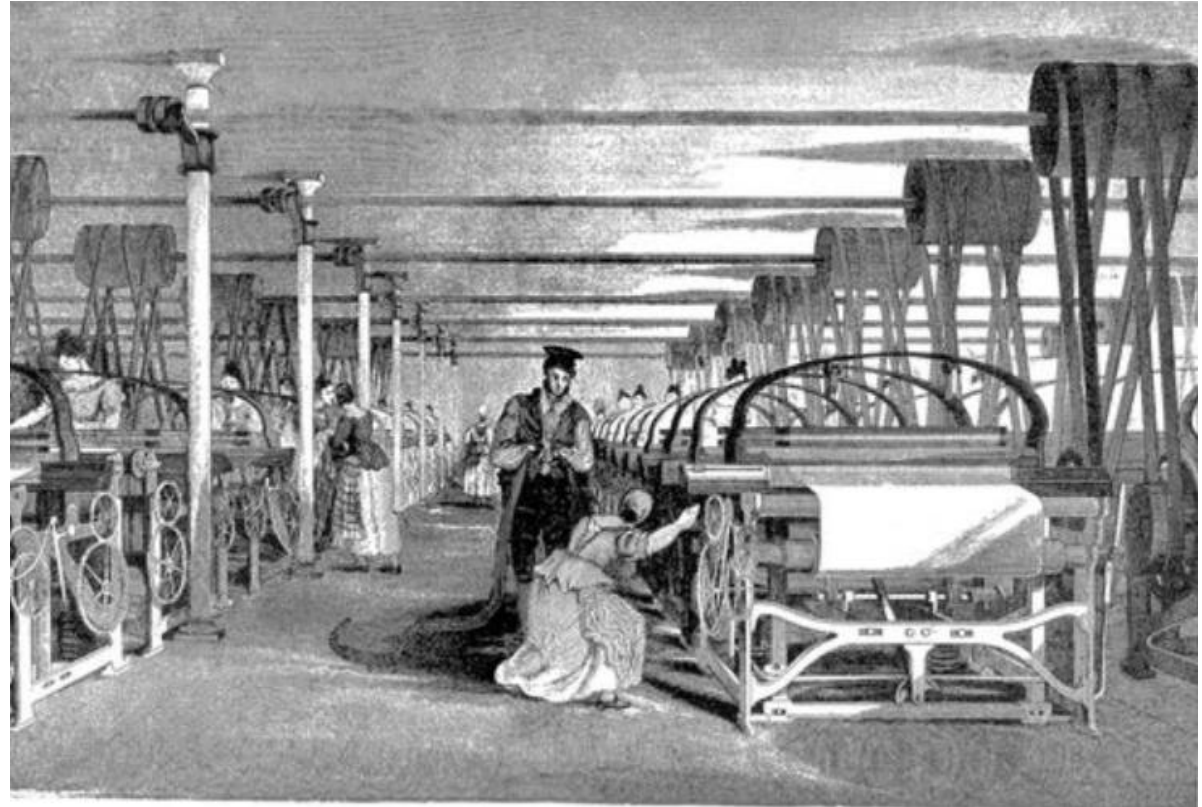


Sir Marc Brunel
1769 – 1846
Standardized screw threads

Textile Industry in England



Eli Whitney was an American inventor best known for inventing the cotton gin. This was one of the key inventions of the Industrial Revolution



Industrial Revolution

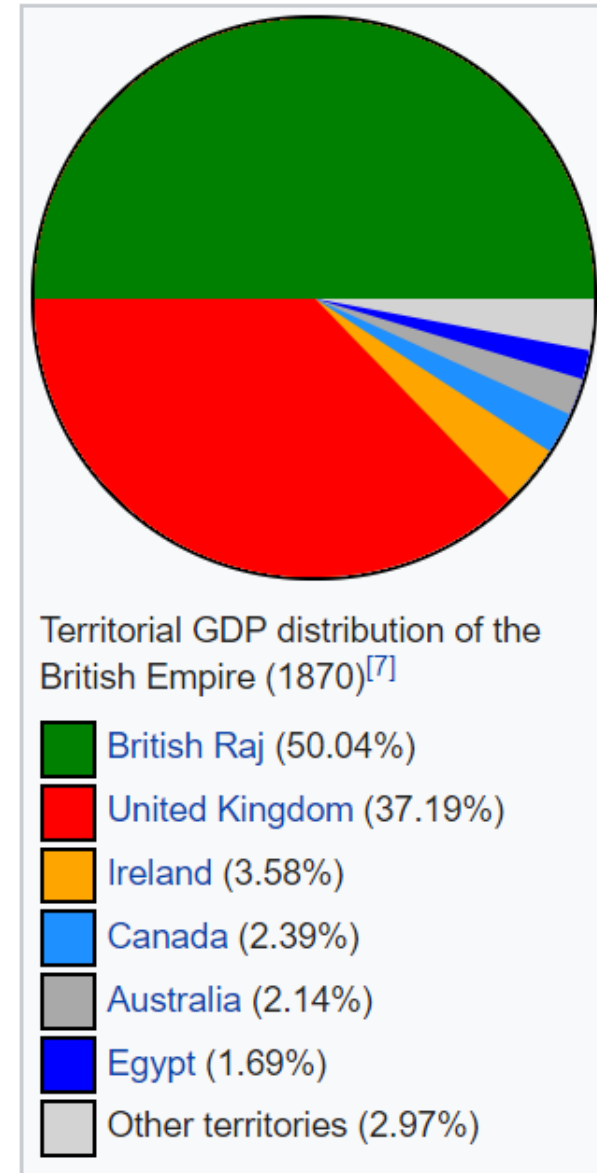
1. Coal & steam
2. Chemicals
3. Interchangeable parts (Assembly lines)

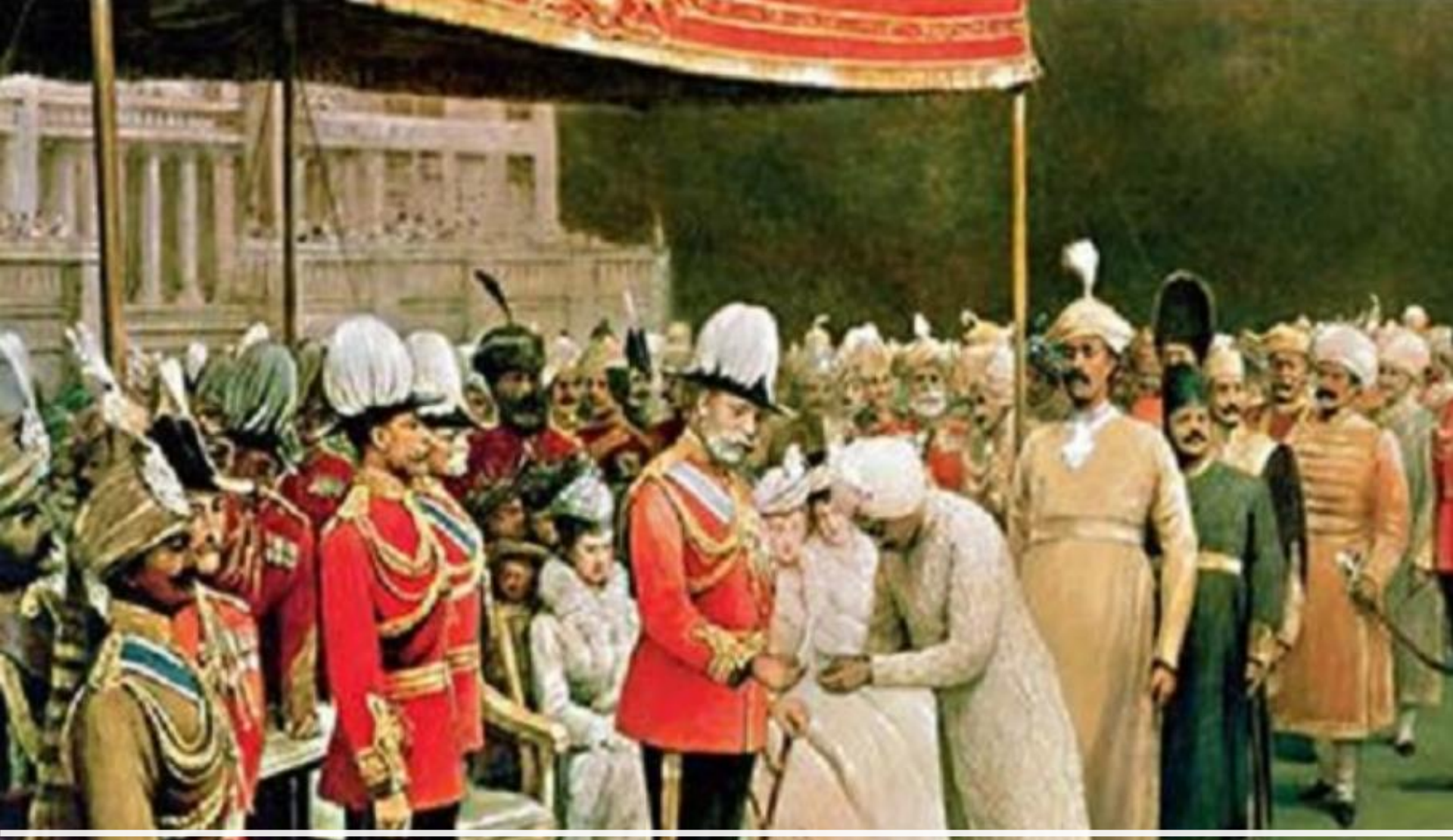
Wealth of an Empire

- The British Empire was largest empire to have ever existed in history
- 413 million people – 23% world population
- By 1920 it covered 13,700,000 sq. miles - a quarter of the Earth's land
- New empire would be 146 x larger than UK in 2017 & 40 times population

The Timing Was Right!

- Normally industrialization would have collapsed the economy by tremendous unemployment but ...
- Colonization had created new insatiable demand for English goods worldwide
 - Whatever they produced was “sold” to the empire





**Lessons: Industrialization + Global Reach + Wealth from Colonization
Creates Superpowers**

Technology & Industrialization Found Their Home: A New Superpower Takes Shape 1850-1940

Europe in Early 1800



North European Plains Offer No Resistance

Nasty neighbors all around never allowed Germany to unite

Borders Poles, Czechs, Swiss, French, Dutch & Danes

Nearby are English, Russians, Norwegians, Swedes, Hungarians & Italians



Fragmented Lands of Germany

- Germany was never left alone to develop
 - Not isolated enough like Spain or Great Britain
- Despite very favorable geography it was poor
 - Being in the middle North European Plains (unlike Spain & England at the western edge) makes it vulnerable & convenient battleground

Germany Was Never United

(until 1871)

- Rivers flow in different direction into different seas – each city looks to different horizon for their economic well being
- Any kind of centralized government was not easy



1648



Germans Missed Out on Deepwater Navigation Boom of 1600-1800

Germans did not even control one of their major river deltas until 1720

- Stettin on Oder seized from Sweden (now part of Poland)
- Danish island of Zealand controlled traffic between the Baltic & North sea



**Full access to ocean only in 1871
when Hamburg folded in**

German Culture was Shaped by a Need for Survival

- Geography shapes culture not just balance of power & economy
- Stronger local governments created
 - Berlin was not readily reachable (geography of rivers) so local authorities had to learn to act autonomously
 - Had to marshal own resources: financial, labor, technical, and even military
- For weak city states to survive powerful neighbors, one must focus on **total talent capture**
- Had to develop excellent organizational skills

19th Century Germany Was Anything But United



Deutschland Created Hypercompetent Cities

- Fairly independent, local government
 - Due to the lack of strong transportation between these cities & lack of mobility
- Infrastructure created to survive & make local cottage industries

Berlin Had to invest in an expensive & incredibly advanced infrastructure



Germany had a national railway network in 1840 - three decades before their political consolidation

Evolution of Germany

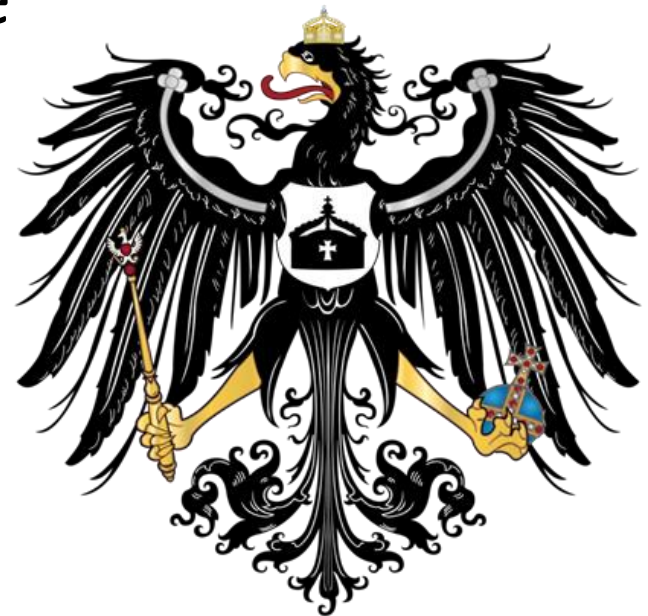
- Brandenburg → Prussia → German Confederation → Imperial Germany
- As new territories combined in this evolution, links of transportation existed & were rerouted to Berlin

German Culture: Quest for Quality

- Omnipresence of rivals & competition required a hypercompetent government
- Germans had to be better just to survive
- Quest for quality – need for survival
 - Compulsory education for all in 1717 (150 years before England)
- Pioneered the standing army : 4th largest by 1740 despite being 12th in population
- By 1860 had more rail lines than France

Culture Shaped Society

- Culture created equal prestige for scientists & industrialists as for military generals & princes
- Corporate magnates regularly consulted & advised all levels of government including the chancellor & later the emperor

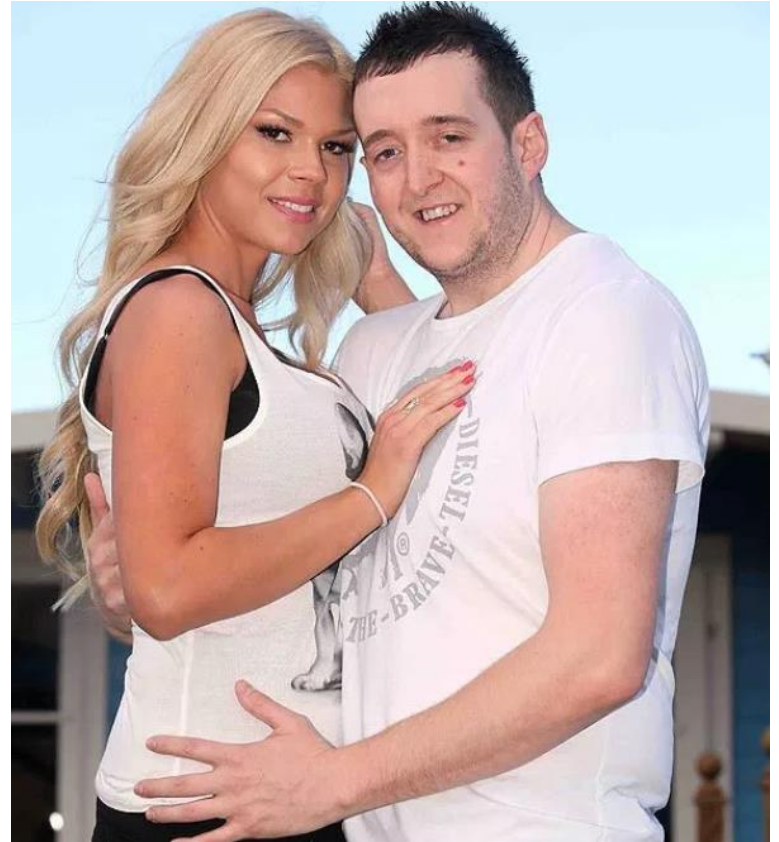


German Financial System: Highly Diversified

- All this infrastructure, education, standing armies & industrial base needed capital
- Created **network of banks** to finance needed infrastructure projects & industrialization
 - Enabled building of infrastructure
 - Enabled standing army instead of drafting peasants
- Was able to fuse these local banks into a regional banks to meet the state's needs

All this allowed Germans to “punch above their weight”

- All this cultural shaping allowed Germans to be force to be reckoned with
- Even if they were much smaller, they had a gun & a doctorate in engineering!



The Rise of Germany

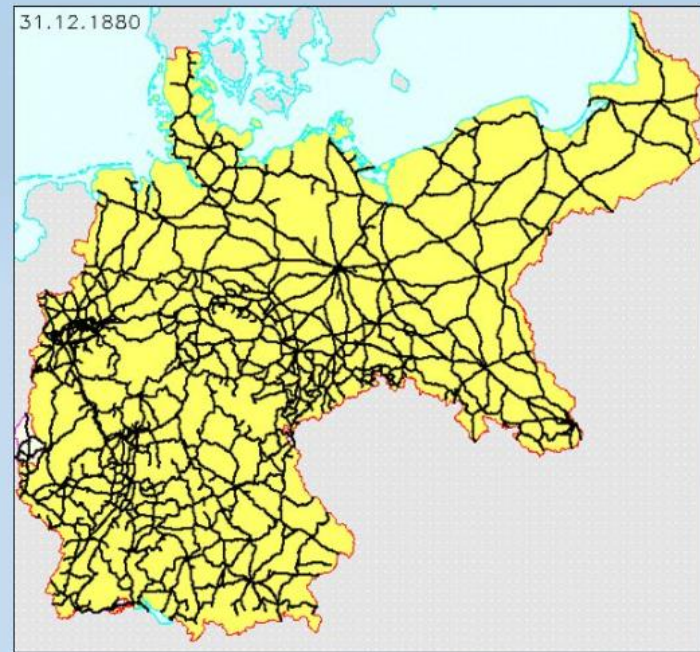
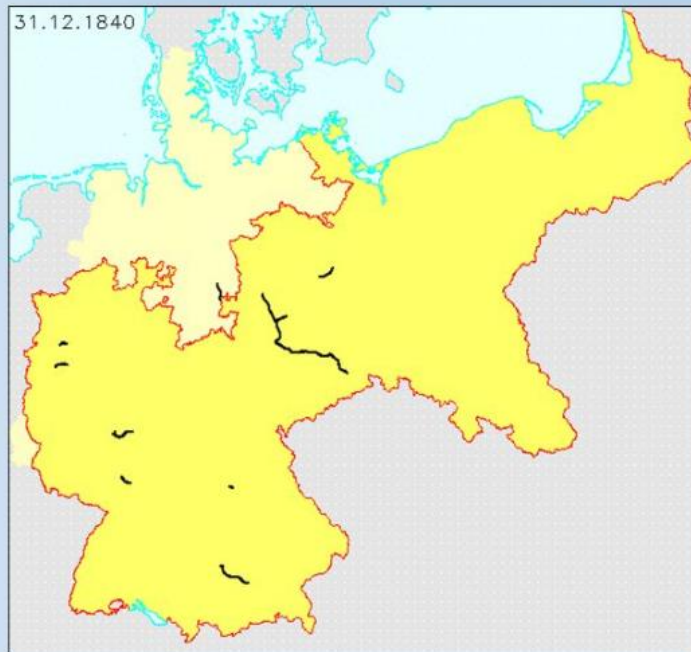
- As British shoved down cheaper, higher-quality goods → caused destruction of local economies, financial ruins & revolution of 1848
- From 1850 Germans adopted industrialization faster than anyone else ... they had to!
 - with unusual speed & efficiency -- unlike anywhere else
 - Elsewhere in Europe it started from the capital cities & radiated out
 - In Germany each city was well prepared with local infrastructure

Most Rapid Industrialization

- Industrialization happened most rapidly in Germany
 - 40 regional cities, already independent
 - Now connected –built own hub-n-spoke rail systems
- English industrialization took 150 years, for Germany **40 years!**

Industrialization Unified Germans as a Country & as People Unheard of Elsewhere (Before or since)

German Railway Maps from 1840 & 1880



THE GERMAN REICH

1871-1918



German Military Structure

- German innovation: “middle management” for army



- Fusing government expertise with academia, industry & finance created larger cannons & speediest logistics using rail lines

Unprotected Borders East & West Forced Industrialization to Prepare For War Footing

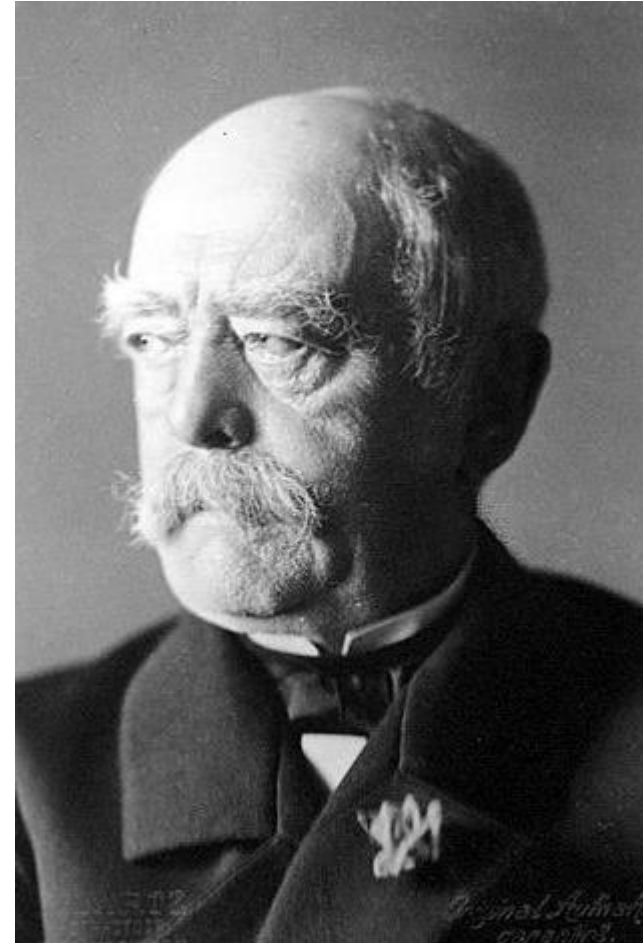
In one generation, Germans went from being NEP's poorest to some of its richest people & enabled them to impose decisive defeat on Poland, Austria, Denmark & France



Diplomatic Genius of Otto von Bismarck

Creates the Colossus of Europe

- Revolution of 1848 resulted from economic depression
- Bismarck: first Chancellor of the German Empire 1871-1890
- War booty capital was invested efficiently into industrialization
- Used technology for better war machine due to smaller population



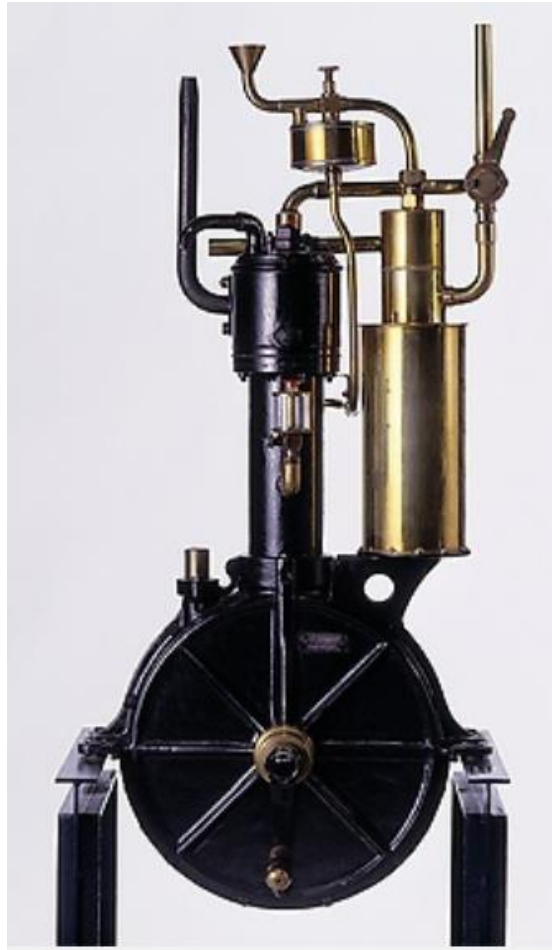
An “Electrified” German Nation

- Germanic cities, unassociated since Charlemagne’s death, suddenly connected rail networks & discovered a peer-to-peer relationship
- Economically & culturally they unified, ecstatic about their identity & its government in a way a few other cultures have ever achieved!

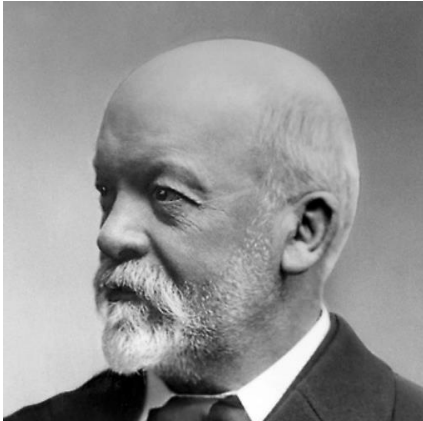
Methodically Applied Every Industrial & Scientific Breakthrough to National Strategy

- Germany quickly surpassed its competitors in economic, financial, industrial, demographic & military strength
 - First country to have majority of its population urbanized
 - By 1900 Germany had more major industrial cities than rest of the Europe combined
- First country to develop mass universities & research labs
 - And link them to local governments & corporations

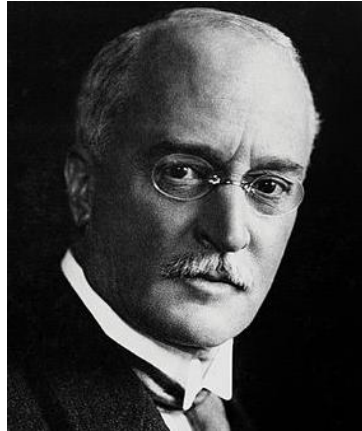
Daimler 1.5-hp one-cylinder engine "grandfather clock", from 1885



German Industrialists



Gottlieb Daimler



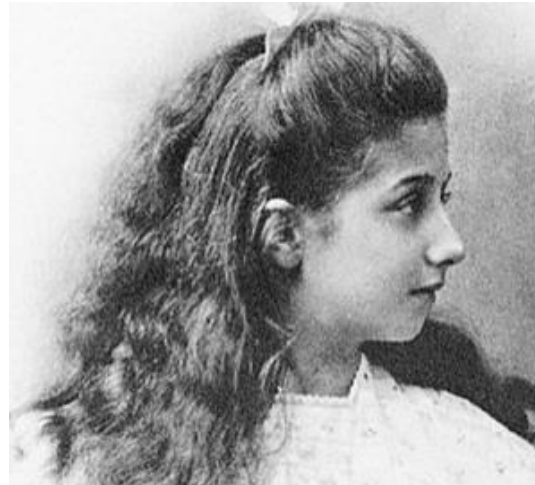
Rudolf Diesel



Karl Benz

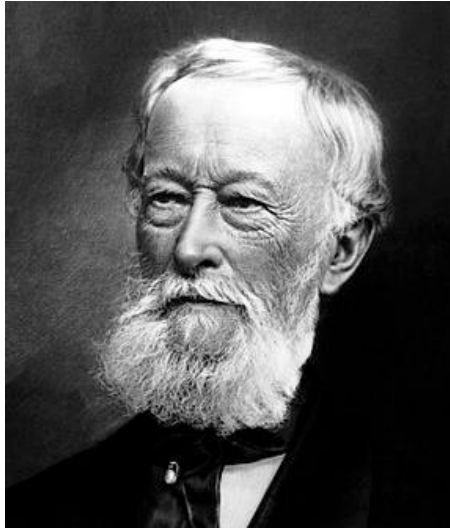


Emil Jellinek



Mercédès Jellinek

German Industrialists



R. Koch (bacteriology)



Paul Ehrlich
Immunology



Friedrich Bayer
Pharmaceuticals



Alfred Krupps; Steel

It All Came Together! (Not a Surprise & Not by Accident)

- German education system + technology + speed to movement (Railroads) + Force (industrialization) = **Blitzkrieg!**
- German rise was a result of geography + technology

Rise of a New Superpower

1900-2100

To be a Super Power Any of These Will do the Trick

- Cheap transportation → Ottomans
- Deep Water Navigation → Iberia
- Protected geography → England
- Infrastructure: to move goods → Britain
- Technology → Germany

United States Had All Five!

England could make better use of deep water navigation than Iberia, and Germany could make better use of industrialization than England

but there was another geography that could make better use of both!

United States of America

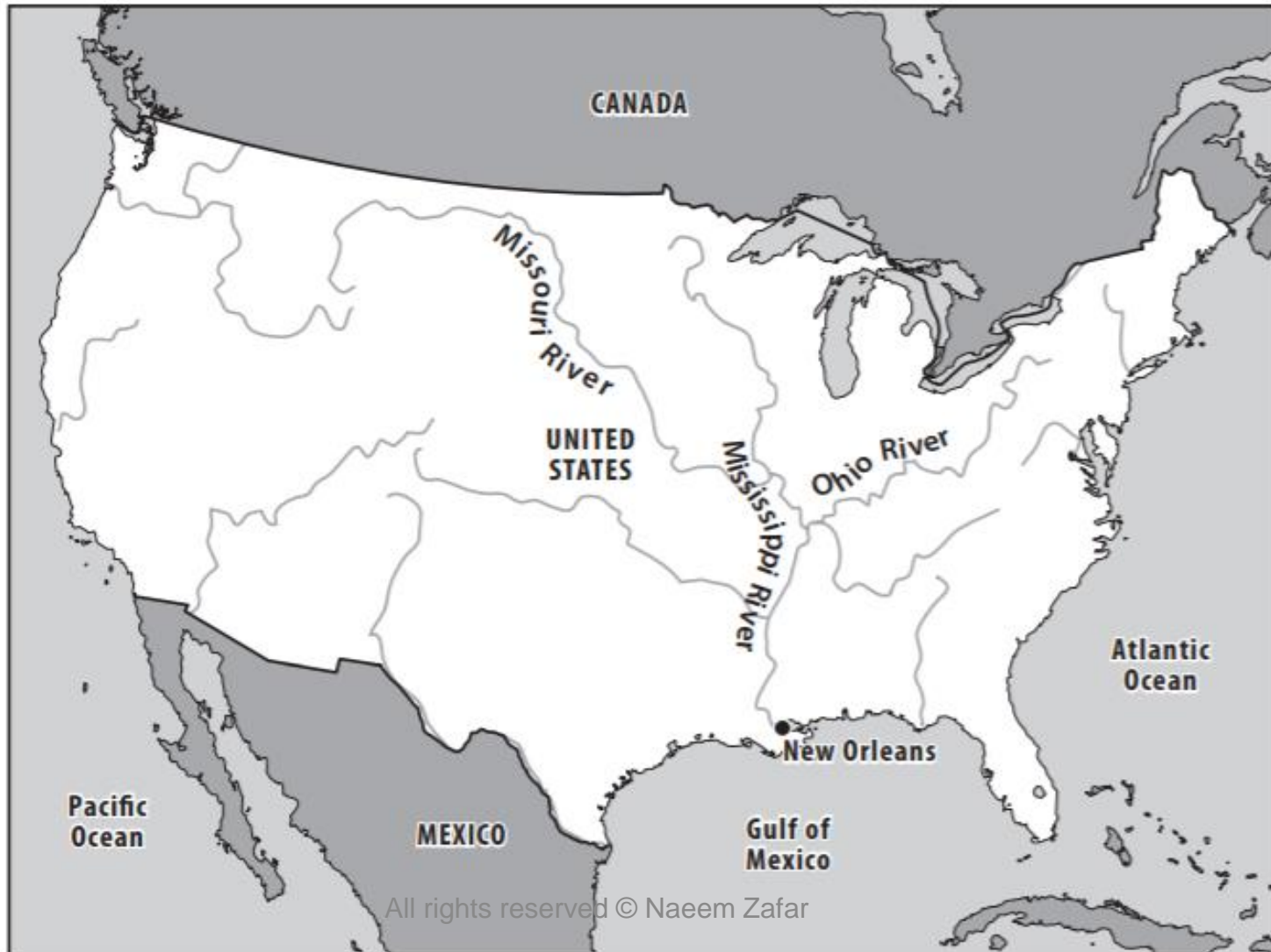
- Lowest acquisition cost of a landmass in treasure, blood & time
- Even better suited for Deepwater Navigation & industrialization than Great Britain or Germany

Defining: “Navigable River”

- At least 9 ft. of draft, nine months in a year



Mississippi: Longest “Navigable River” in the World



Mississippi is one of 12 Such Rivers



US River System

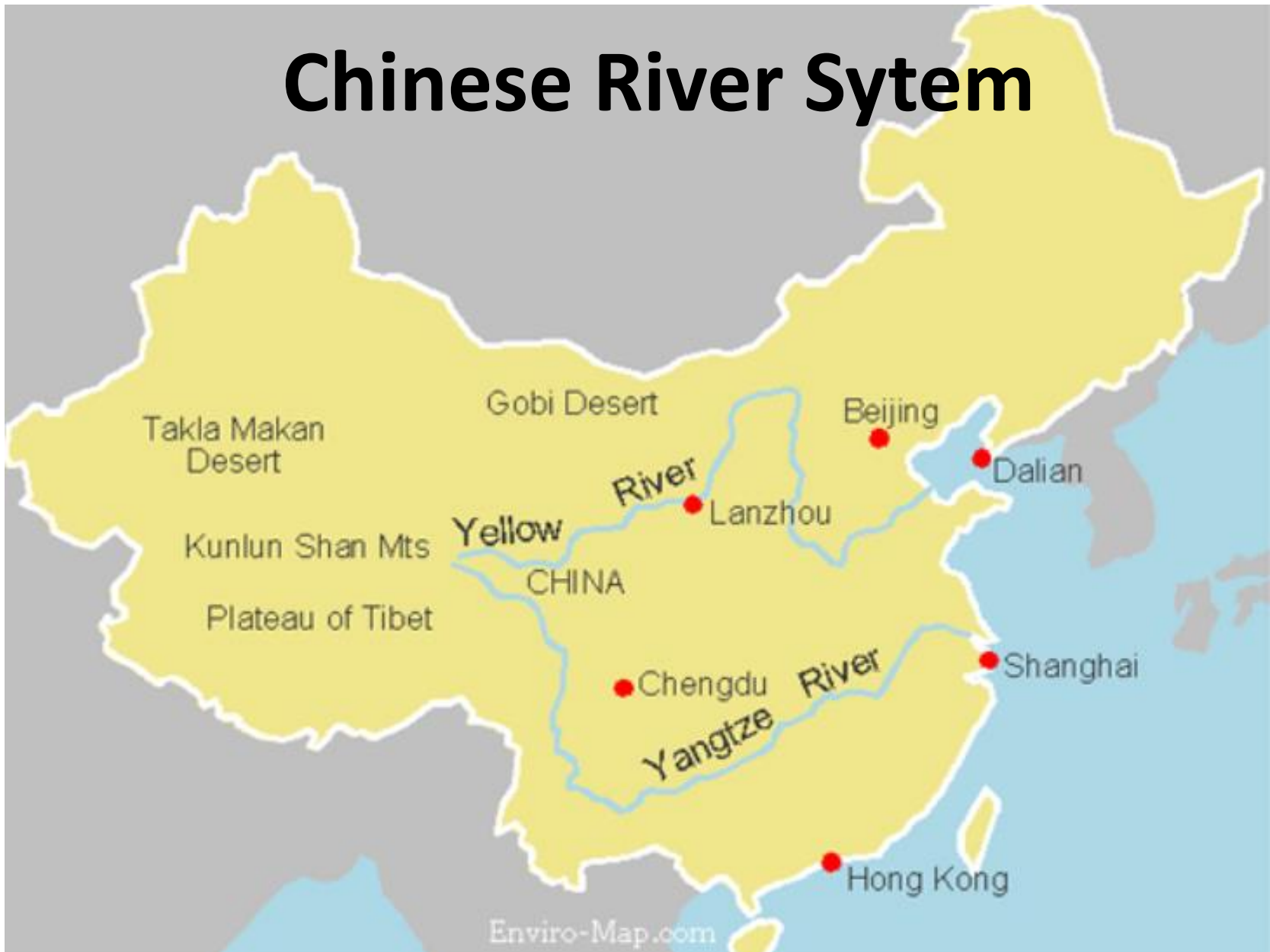


Lizardpoint.com

Add the Great Lakes & 3,000
miles of Barrier Islands =
17,600 miles of Navigable
Waterways



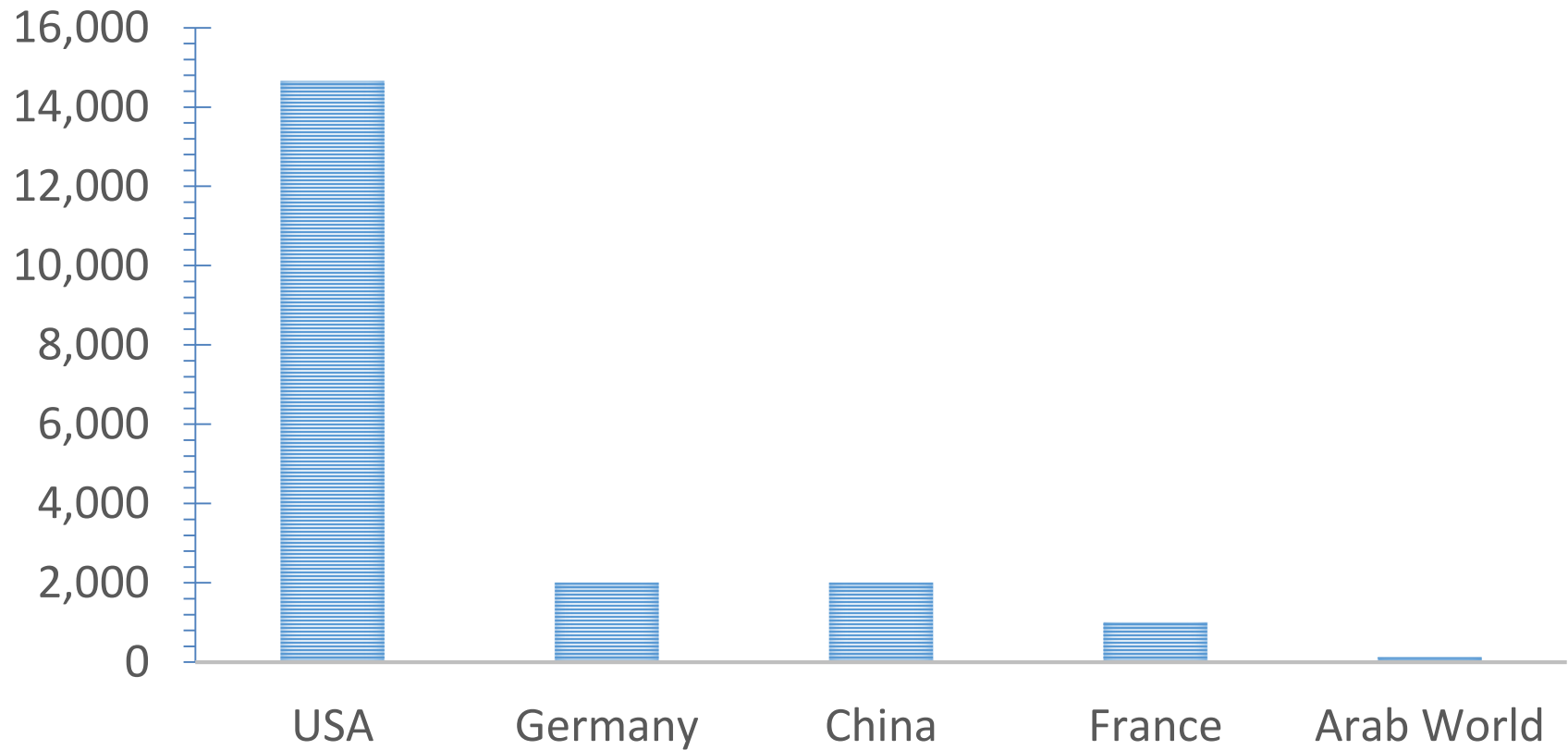
Chinese River Sytem



Russian Rivers Block Easy Transport & Largest River Empties into a Lake



MILES OF NAVIGABLE RIVERS

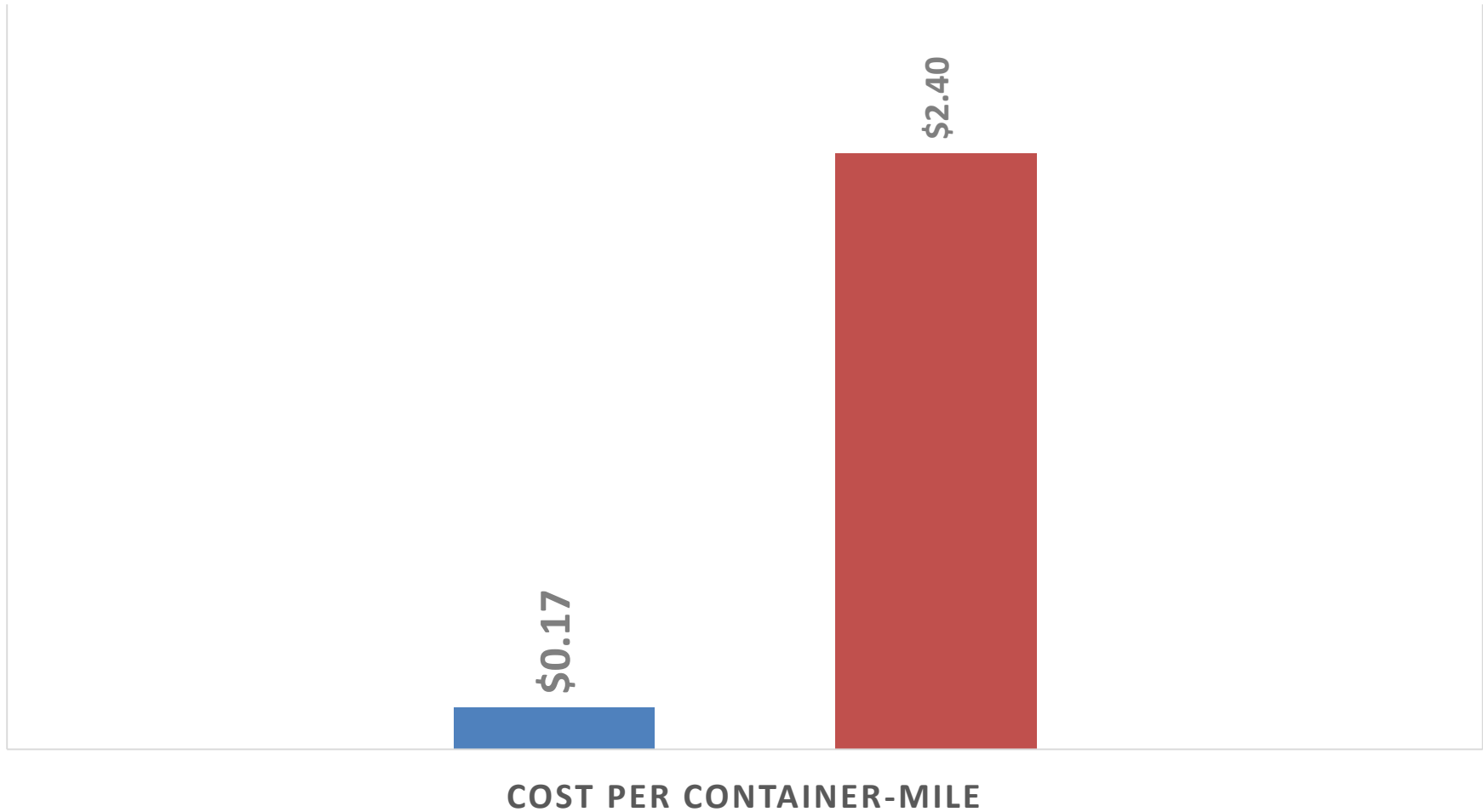




**70:1 advantage to use waterways than
build roads in sparsely populated USA**

COST OF MOVING GOODS

■ Waterway ■ Road with Trucks/Trailers



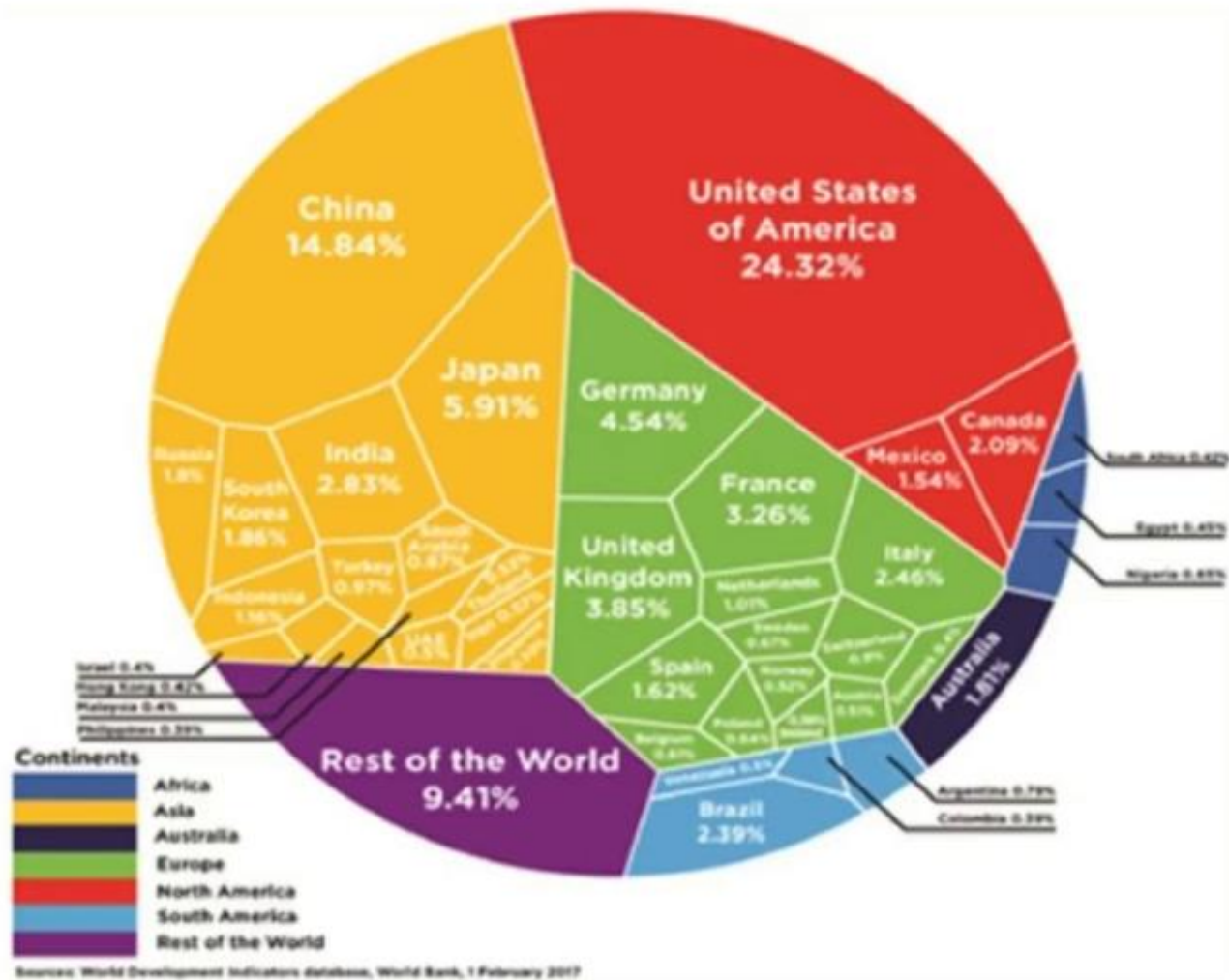
A Land Rich with Capital & Credit

- Interconnected waterways means ease of transporting goods anywhere
- No need to spend capital on artificial infrastructure → more available capital for industrialization
- Vastness of land = less government

A United Country

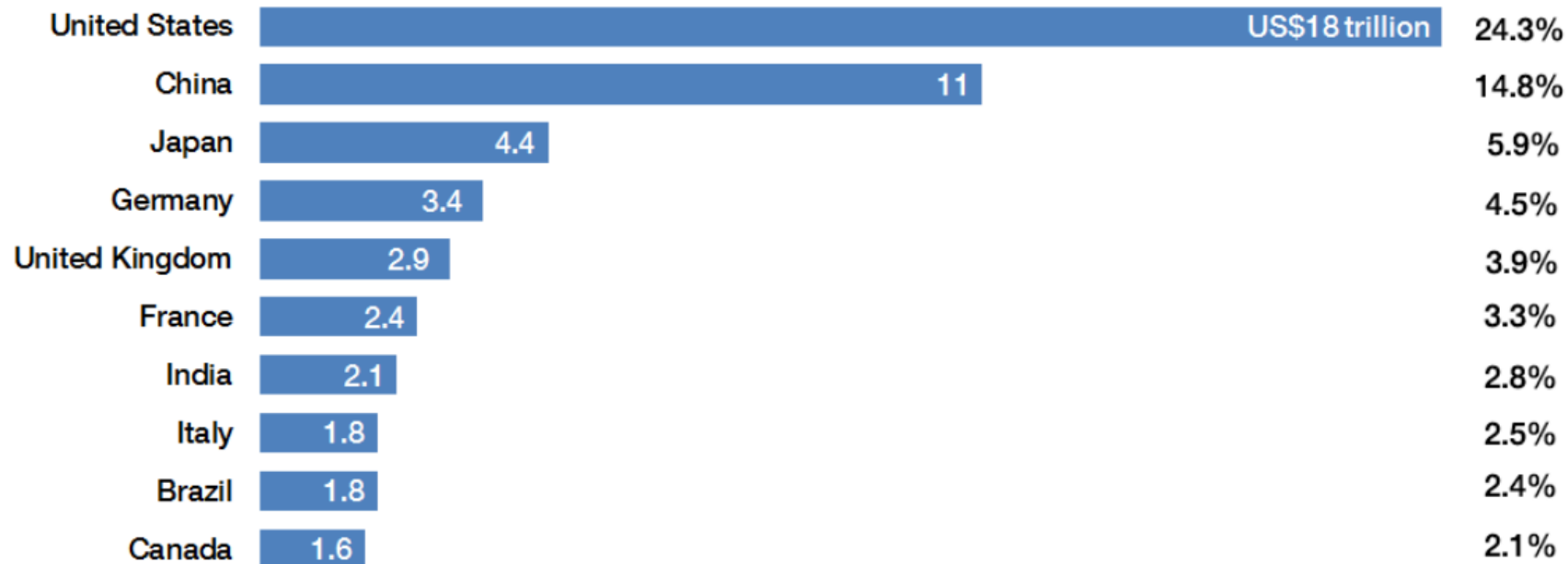
- Huge local economy = \$18.4 trillion
 - Mutual interdependence within USA
- West coast usually out of step with the rest of the country
 - Reason: barriers; Rocky Mountains

World's 40 Biggest Economies



The world's biggest economies

GDP in current USD and share of global total, latest World Bank data, 2015



Source: World Bank and Visual Capitalist

US Roads & Infrastructure



Cumberland Pass Connects Ohio Valley to Potomac

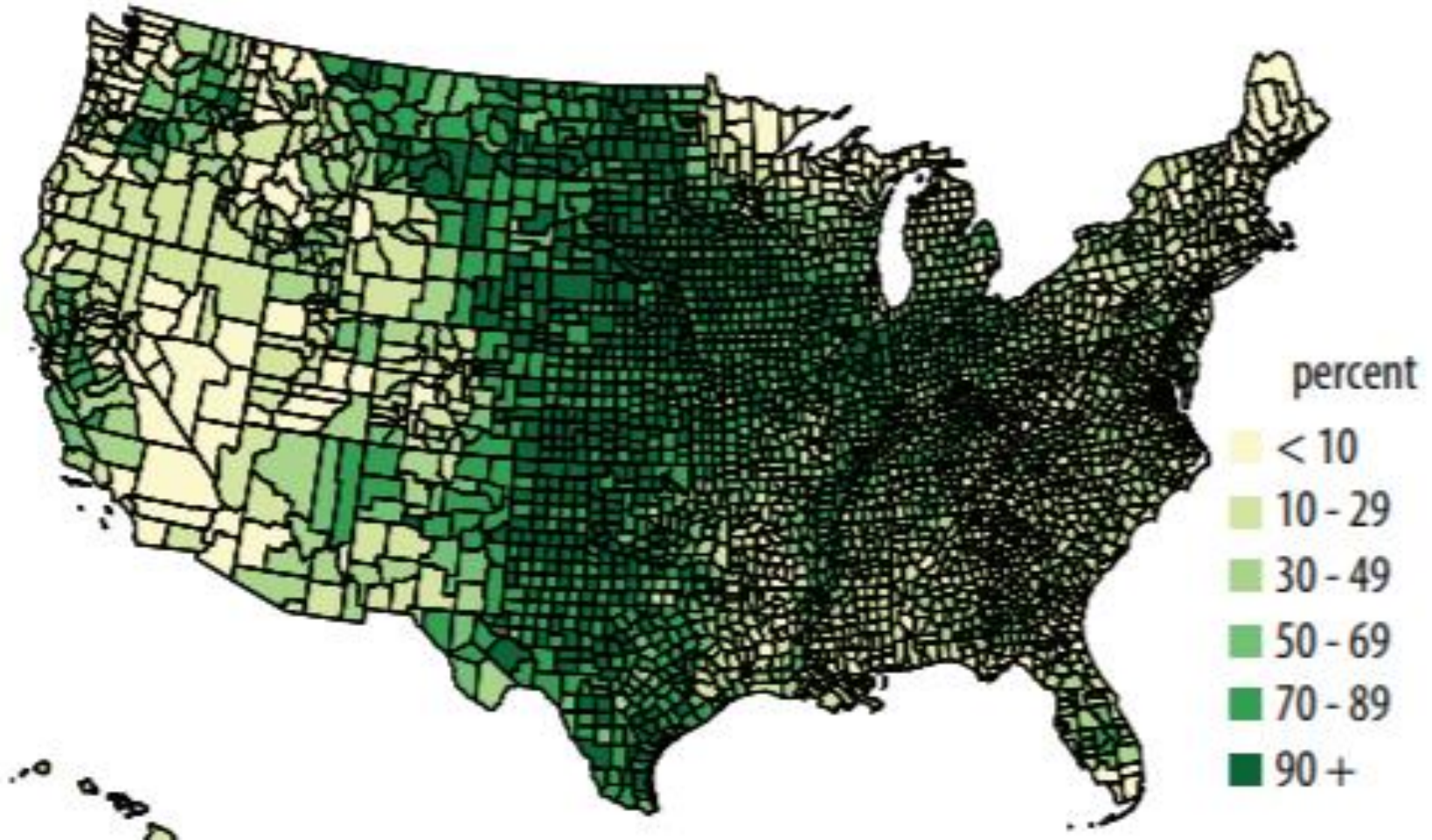


Six Passes Through Rockies Unite Two Halves

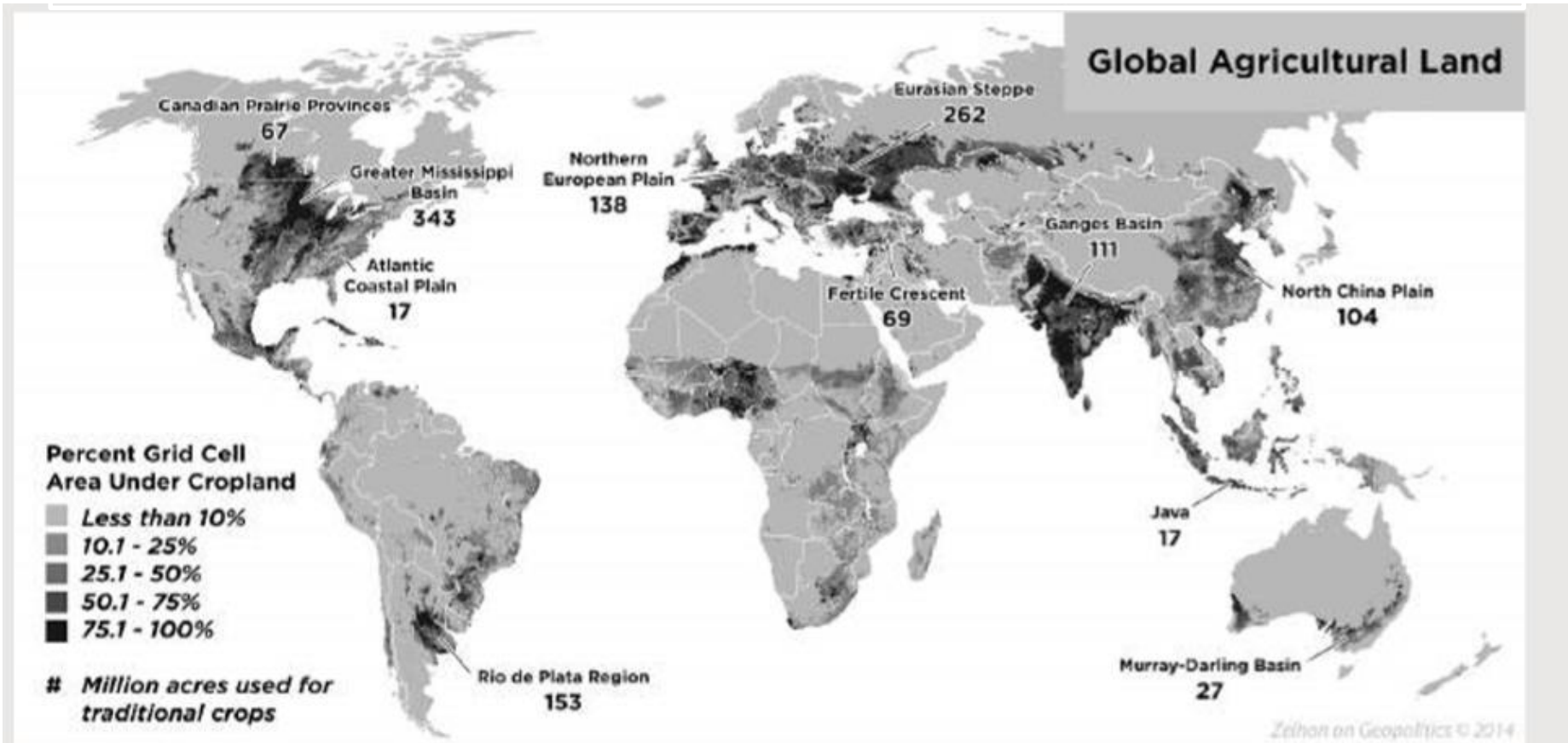


In US 40% of Land is Farmland

915 Million acres & 2.1 million farms/ranches



US has the largest continuous agriculture landmass in the world: 139m hectares (350 Million Acres)



**In a bad year USA produces 1b bushel of wheat,
9b bushel of corn, 2.5b bushel of soybean**

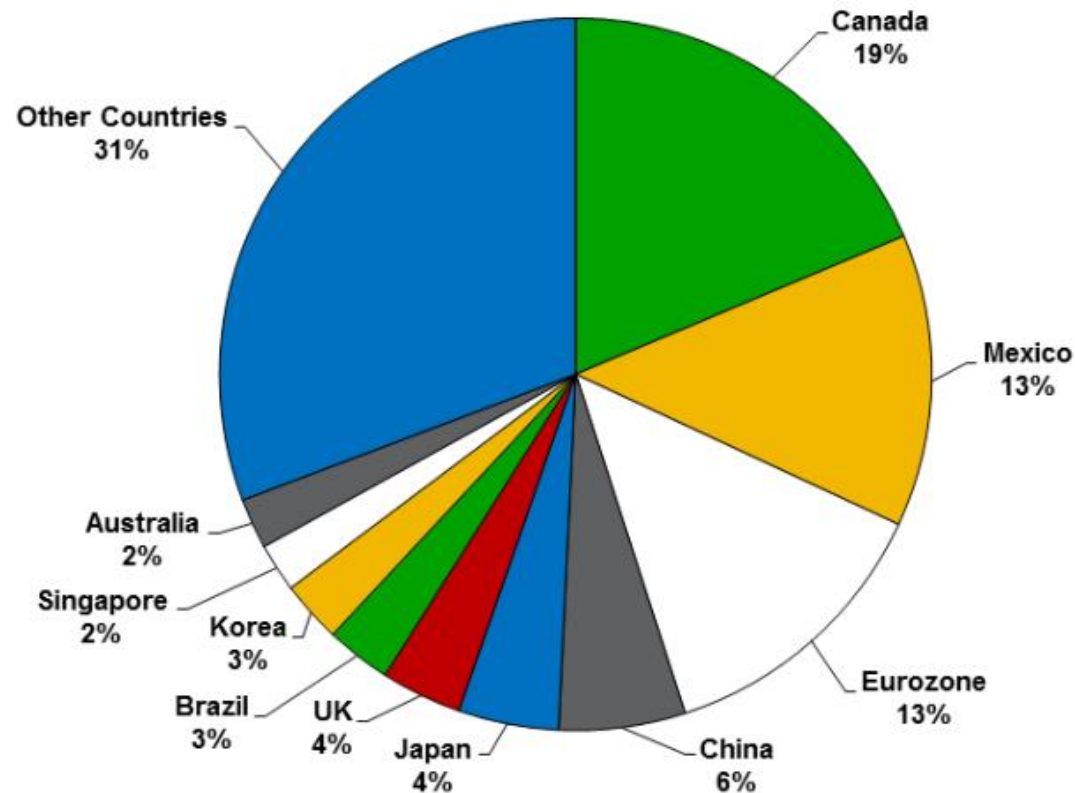


NORTH AMERICAN AGRICULTURAL REGIONS



American Dependence on International Trade: 15% of GDP

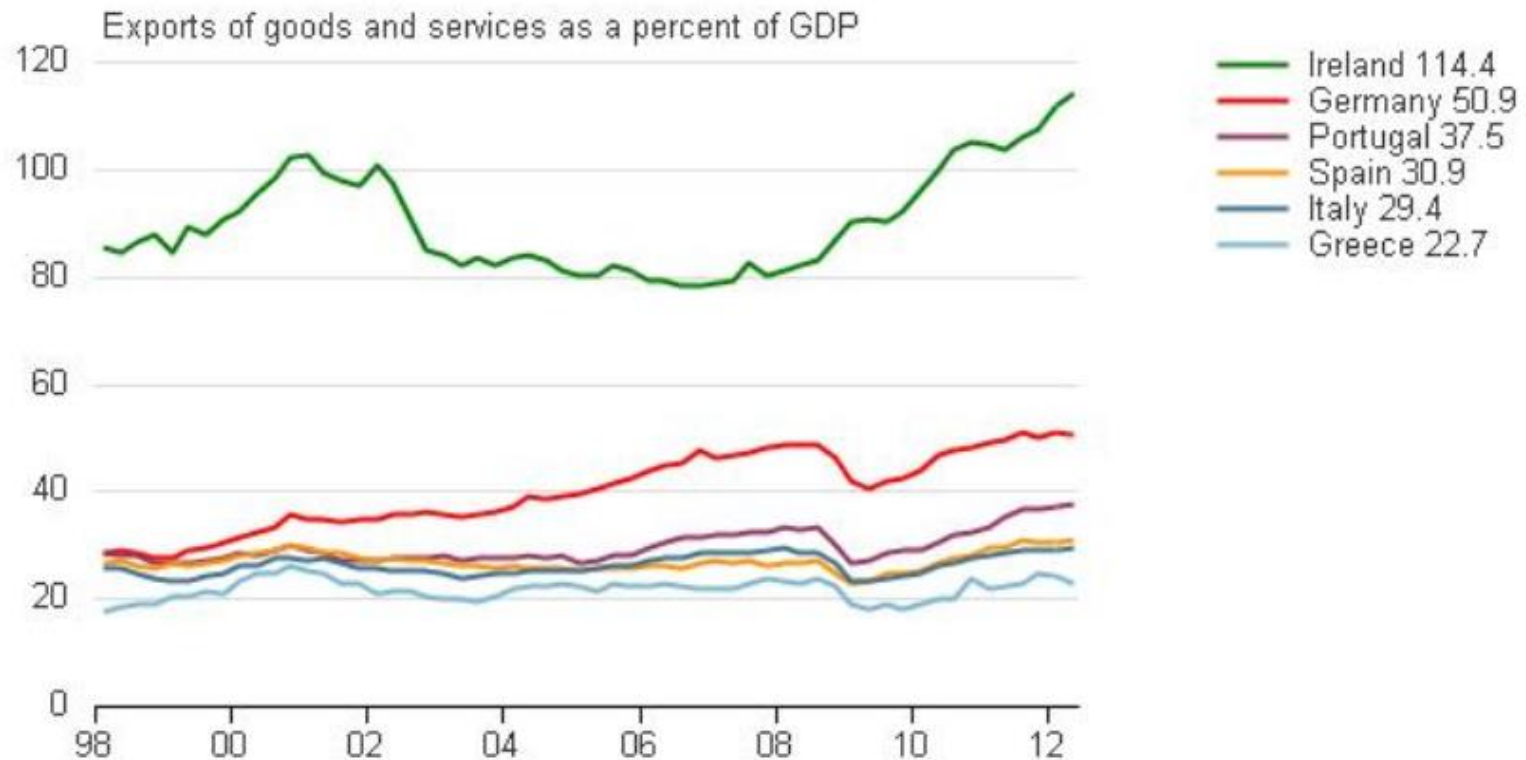
U.S. Manufacturing Exports to 238 Countries
Exports by Country/Region, 2012



Source(s): U.S. International Trade Commission and MAPI

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Exports as a % of GDP



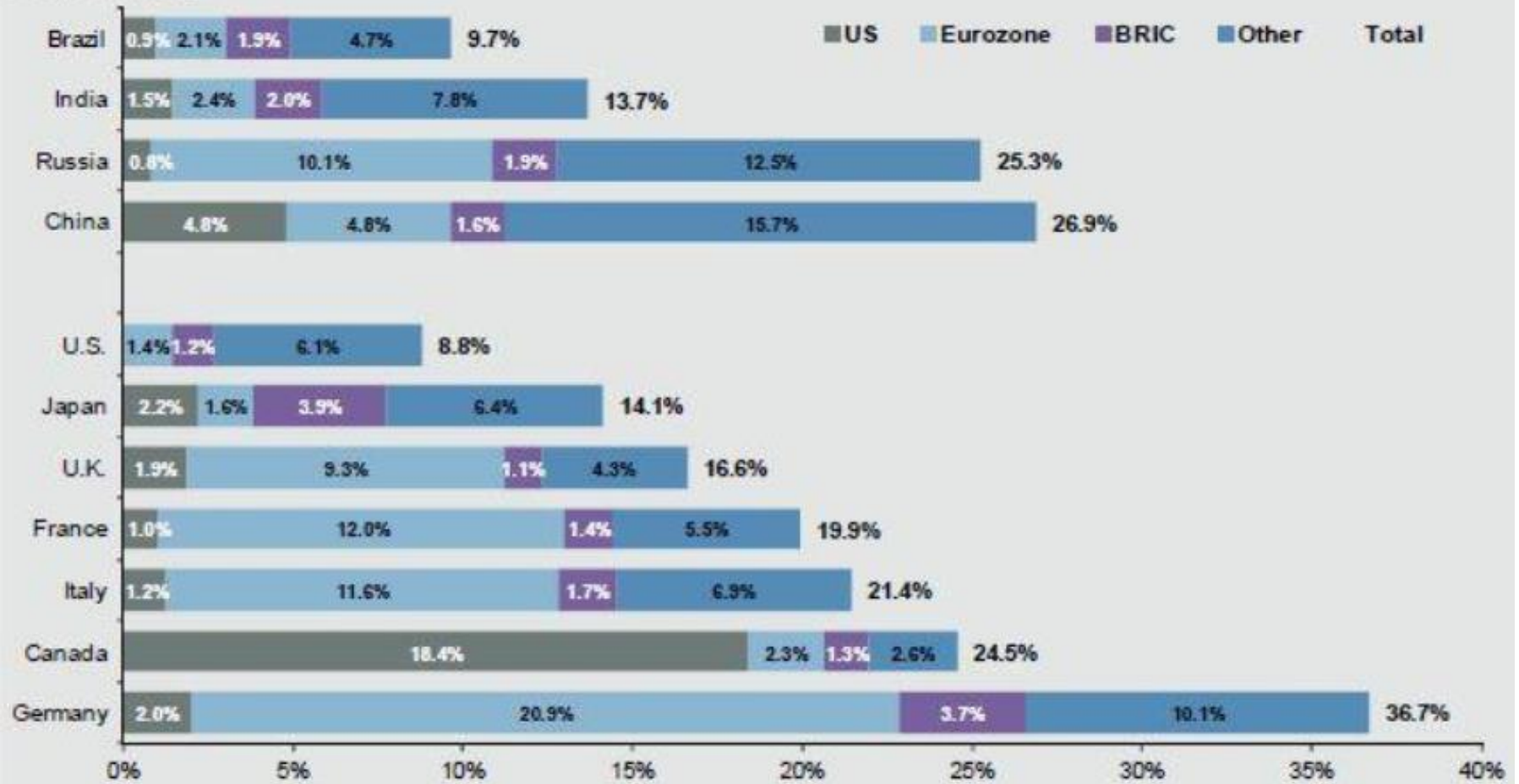
Source: Thomson Reuters Datastream, Oxford Economics Reuters graphic/Scott Barber 18/06/2012

Goods + Services

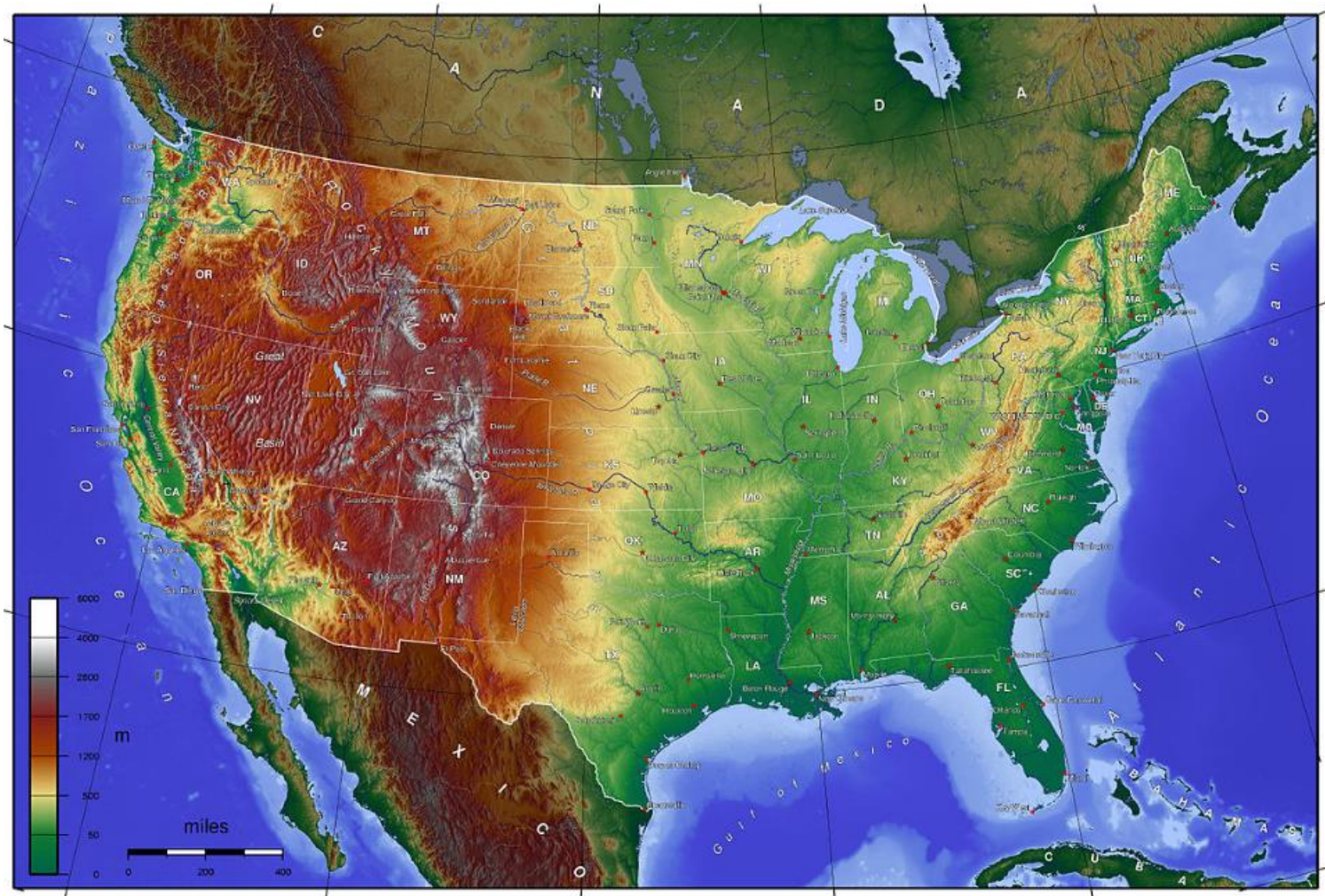
US is Self Sufficient

Exports as a % of GDP – 2010

Goods exports only



US Borders are Secure – Naturally



US Expanded **Atlantic** Border by Treaty or Physical Access



PACIFIC SEA APPROACHES TO NORTH AMERICA

US Expanded **Pacific** Border by Treaty or Physical Access



First Railway Line in Mexico 1873

US Already Had 50,000 Miles of Railway

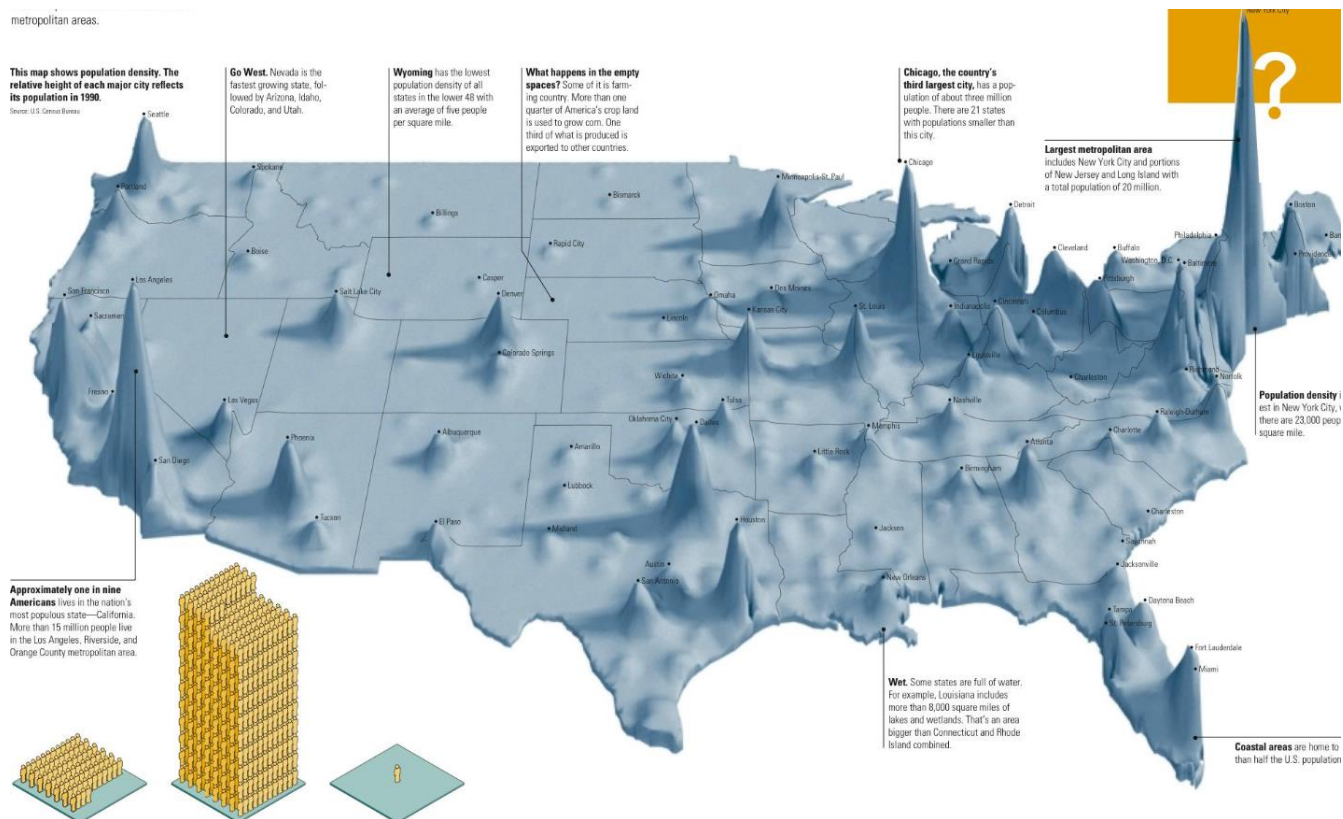


American Ports

- USA has more deep water ports than the **rest of the world – combined!**
- Africa has more than 16,000 miles of coast but less than 10 bays for suitable ports
- Texas alone has 13
- Southern Brazil & Chinese coast have cliffs

Population Distribution USA

- With 50M people on the west coast and 100M on the east coast USA has the flexibility to change dance partners without a hiccup



Industrialization is Hard

- Requires large concentration of labor & capital
- Requires continuous access to hungry markets
- Puts enormous pressure on social fabric



Two most successful example of industrialization did not get it right!

Industrialization in USA Was Easier Than Anywhere Else

- Local governments, local capital & entrepreneurs
 - German resources had to be spent on defense, local government had to be hyper efficient & marshal all resources to defend themselves
- With the war of 1812 & Mexican-American war the borders were well protected
- American governments had no threats, better quality land, contiguous blocks, best waterways for transport – *they had to give away land to attract settlers!*
- There was little to no need for to be governed!

Industrialization in USA Was Easier Than Anywhere Else

- Unlike Germany, there was no need for government's assistance; the American entrepreneur took the resources & created infrastructure & developed local solutions
- There was no need to create artificial infrastructure to create national unity
 - Unlike Germany

The Only Federally Funded Infrastructure Project in US in the first 50 Years



America was blessed with a naturally unified country

Natural Evolution of Educational & Financial System

- As farmers grew same crops, had need to same tools, used same local banks & built local schools → small towns popped up along the riverways
- Larger towns formed naturally where 2 rivers met & at the navigation heads
 - Chicago, Pittsburg, Minneapolis, Kansas city, Albany, Memphis, Louisville, Charleston, St. Louis
- 50 urban centers existed in US when industrial technologies came from Europe with own educational & financial systems
- Infrastructure: 164M miles of track & roads by 1890 without much investments from feds
 - Just land concessions to Robber Barons did the trick

Industrialization in USA

- Integrated waterways + world most fertile land + complete lack of strategic threats = world's largest capital base (& least need for it)
 - Unlike Germany where every morsel of cash was needed to funneled through banks
 - No need to for government to regulate capital allocation
- → Resulted in world's first **truly integrated** financial system

Advantage of American Financial System: 2007 Financial Crisis

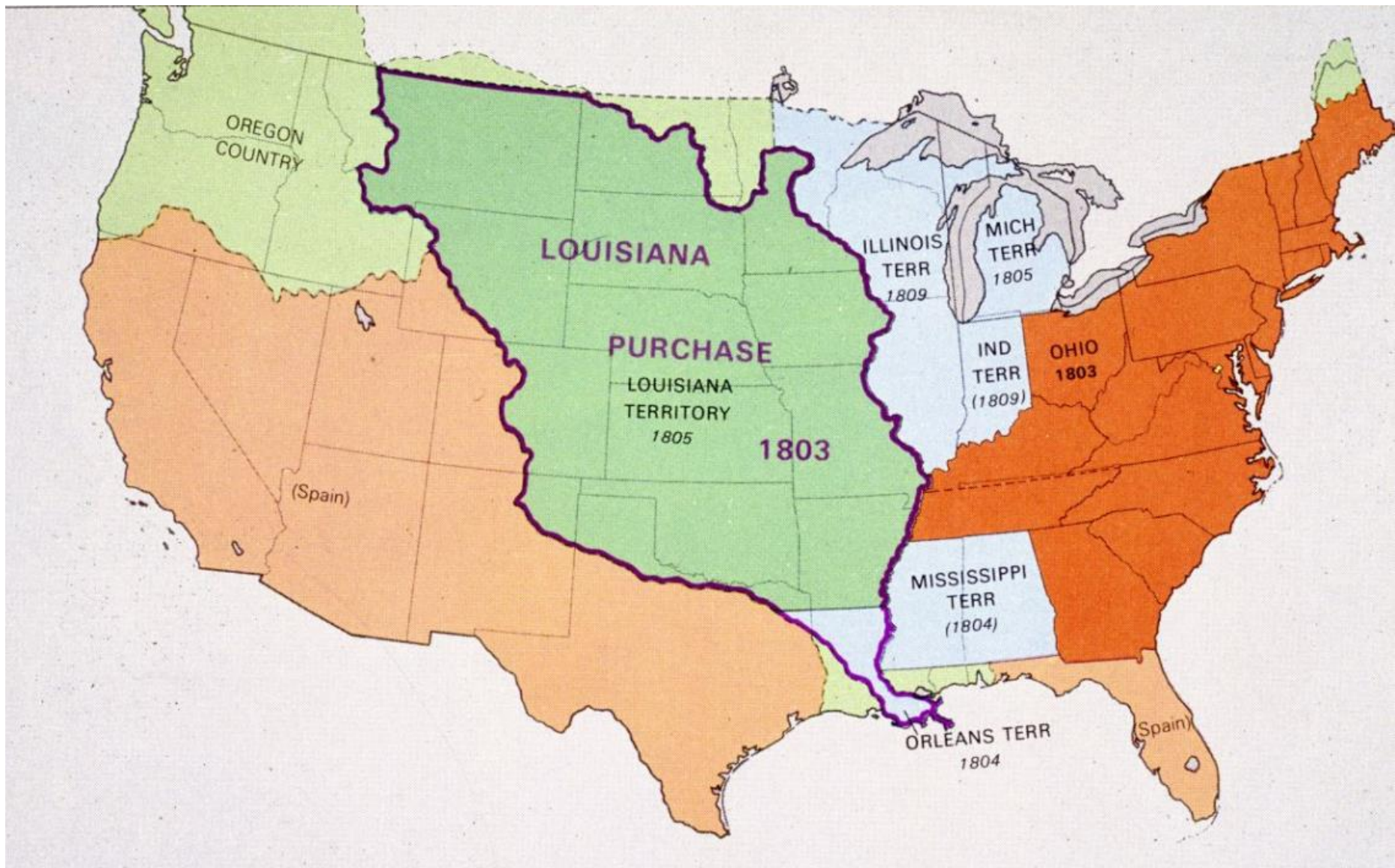
- In USA:
 - in matter of hours Federal Reserve, FDIC & Treasury Secretary hammered out a \$700B package
 - Within days it was fully funded & tweaked over weeks
- In Europe:
 - German took months to get a grip on the problem
 - 4 years of negotiation (8 summits) with EU partners to hammer out solution
 - It will not be fully funded to its planned \$55B until 2025

The Land of the Plenty

- World's largest agriculture, technological, financial and (depends on how to calculate) industrial power
 - And has been for 150 years!
- Availability of land, labor & capital in unprecedented in human history
- → USA does not have to at its *best* to be better than everyone else!

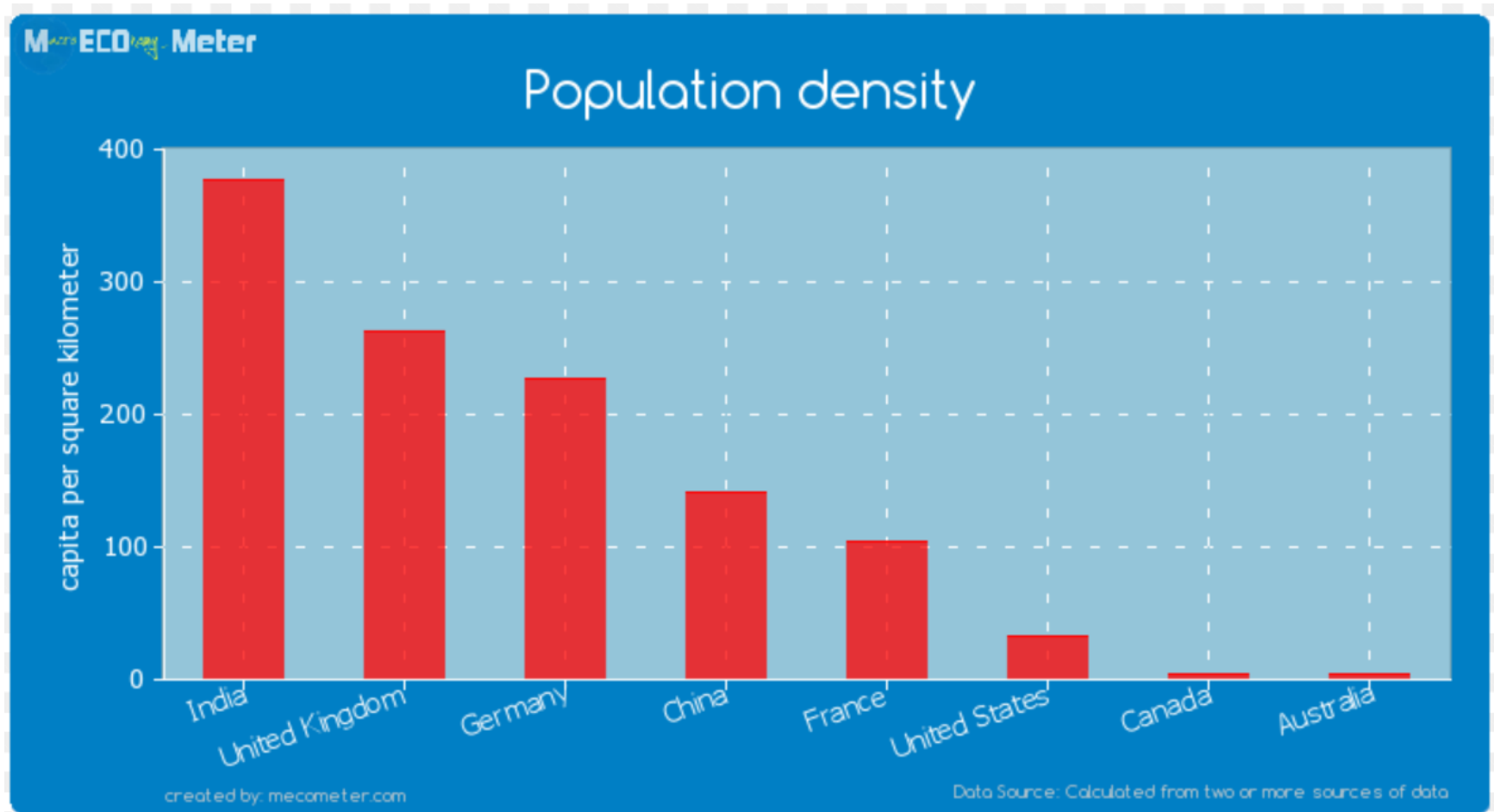
Lowest Cost of Land Acquisition

- Upon independence Americans gained the unsettled Ohio Valley: doubling the size of useful land
- Acquisition of Louisiana Territory doubled that a generation later (1803) 827K Sq. Miles
- Deal with British around Columbia River added area similar to original 13 colonies (1846)
- Texas annexation & Mexican-American War increased land by other $\frac{1}{3}$ rd cumulative (1845)
- Purchase of Alaska \$7.2M in 1867 for 586K Sq. Miles

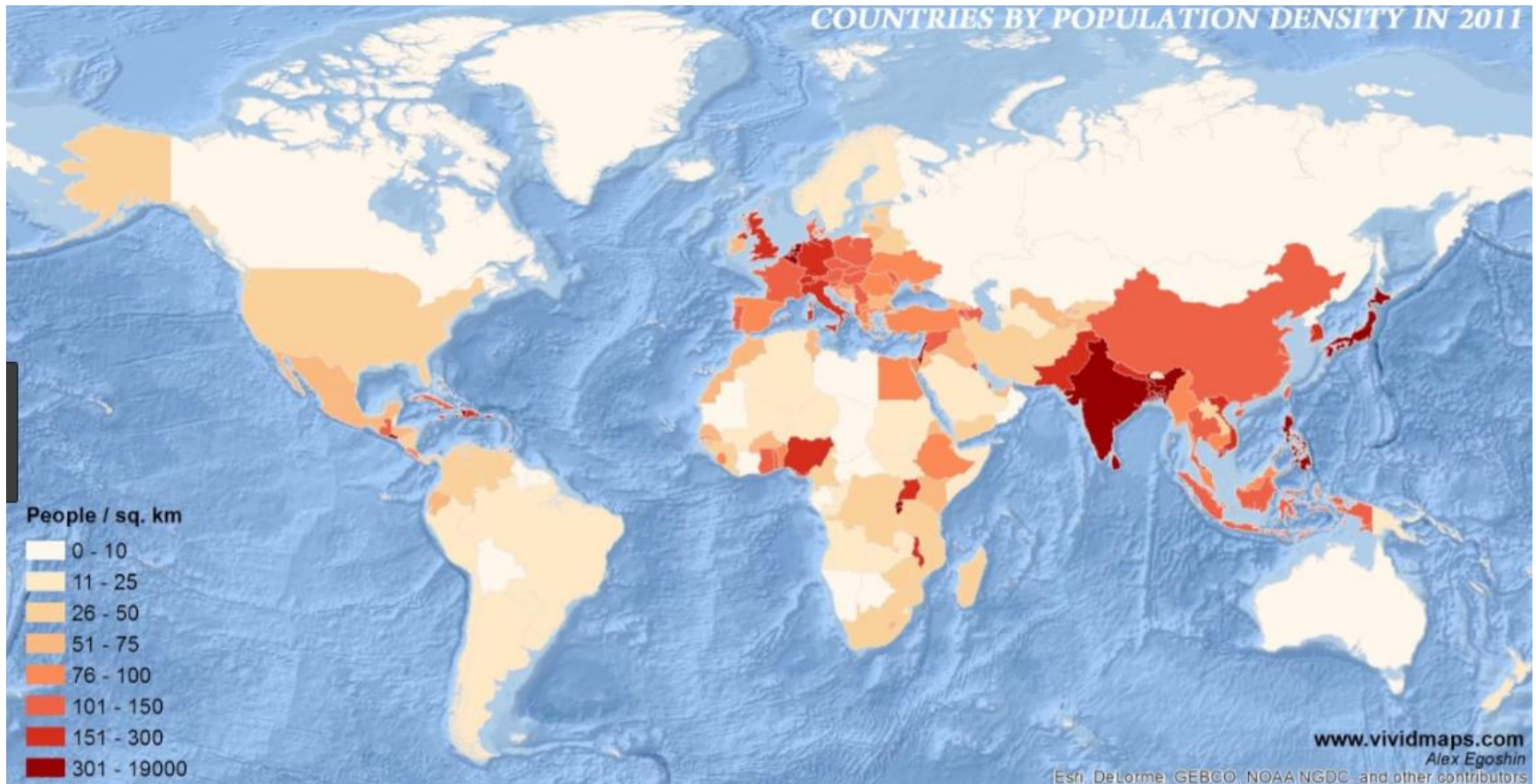


<https://www.smithsonianmag.com/smart-news/170-years-of-americas-evolution-in-one-animated-gif-12784190/>

US Still Has a LOT of Room to Grow



US: 180 people/Sq. Mile



Dawn of a Superpower

- 1850 – 1899: acceleration of industrialization
 - 30-years of reconstruction post civil war
 - By 1900 USA was the largest economy
 - The largest market
 - Largest producer of steel, corn ...

American Power is Different from Others

- All maritime powers are offensive but American power is different
 - These powers have to expand into empires due to their limited size (& resources)
 - Great Britain, Japan, China?
 - They need access to markets, resources, raw material ...
 - Due to the size & insulation of US we are different
 - US is self sufficient in everything that matters (markets, energy ...)
- It did not matter that Germans were better industrialists or English better sailors, US' sheer mass & insulation guarantees US will surpass them both

American Became of Arbiter of Global Affairs

- 1898: American seized all Spanish lands: Cuba, Philippines, Puerto Rico ..
- 1899: Open door policy to trade with China
 - To minimize Japanese influence
 - Start of elimination of European influence in Asia
- 1904: Roosevelt announced that US will exert influence in South American affairs
 - Troops dispatched 32 times – all unopposed

America Role in the World

- 1914 Panama Canal



Why Do it?



US Role in the World

- 1917: Arbitrated World War I
 - To ensure that a strong Germany emerges
- That is what naval powers do!
 - Keep rivals bottled up in regional conflicts
 - No money left to build a strong Navy for our rivals

US Navy Builds up

- 1939 US Navy had 400 vessels
- By 1945 it had 6,800
- Only other real Navy left was UK after WW II



Greatest Concentration of Power that the World Has Ever Seen!

US and Chinese naval power Data: International Institute for Strategic Studies ▼China's first aircraft carrier, the Liaoning



▲The US's 11th aircraft carrier, the nuclear powered Gerald Ford

미국		중국
11	Aircraft carriers	1
31	Amphibious warship	4
62	Destroyers	24
8	Frigate	53
54	Tactical submarine	53
14	Strategic submarine	4
512,000	Soldiers	236,000

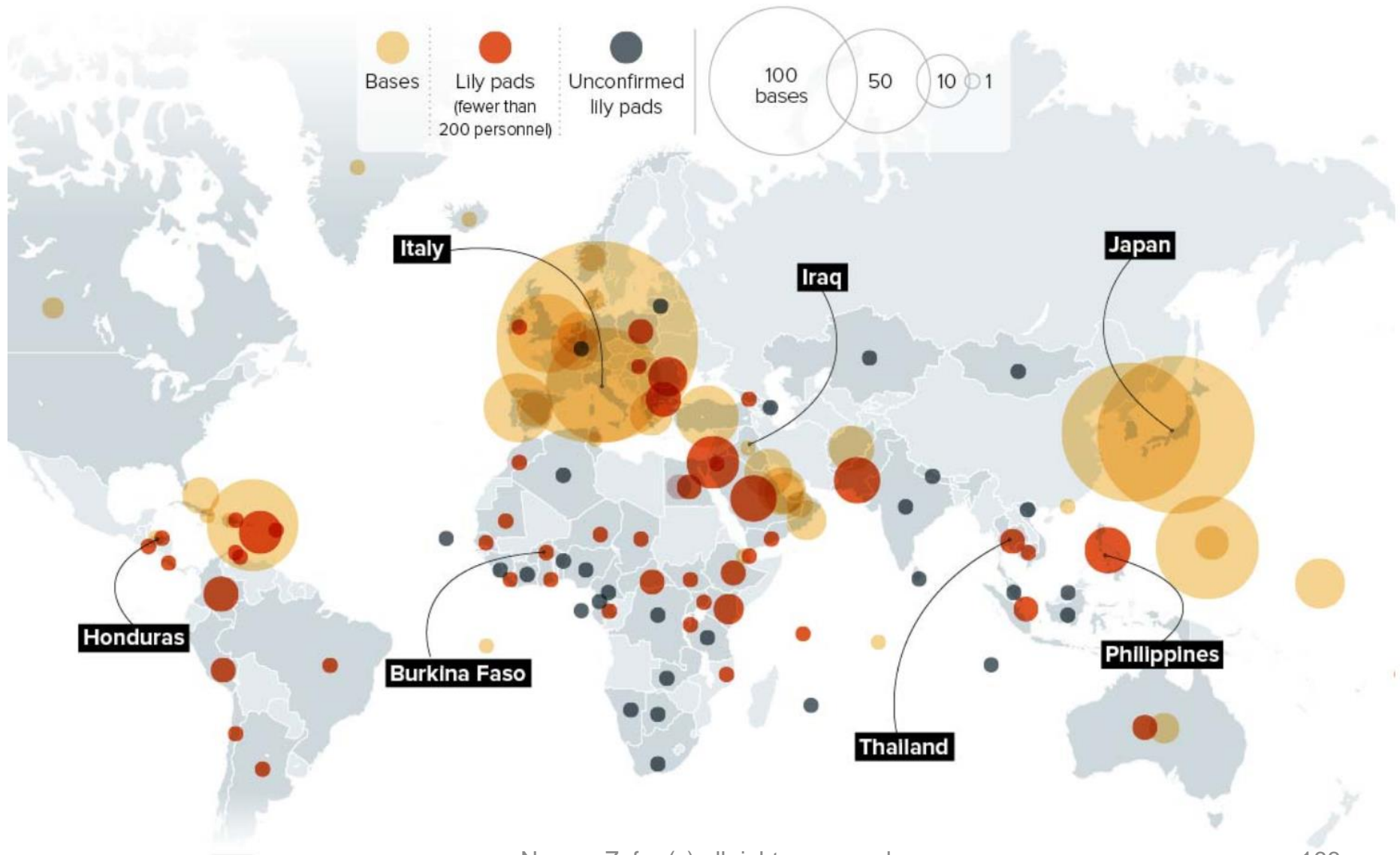


▲China's Changsa Aegis destroyer, which is participating in Baltic Sea exercises with Russia

US Industrialization

- + Balance of transport (waterways & roads)
- + Wealth & capital
- + Security of borders
- + Deepwater navigation (Reach)
- + Naval muscle
- = **Super Power Status**

US Bases & Influence



Summary

- US strength is geographic & accidental
- Our unique system – balance of power between the states & the federal government – allows USA to remain strong & prosper
- Decentralized development is the strength
- Our culture celebrates entrepreneurship & it has been allowed to flourish

Roman Empire Was Once the Superpower

