

Why can't we have trains like America?

How the USA's rail freight model translates
(or doesn't) around the world

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DRAFT #5

AGENDA

Background on RDC

Differences between North America & Europe

- Physical
- Institutional
- Cultural

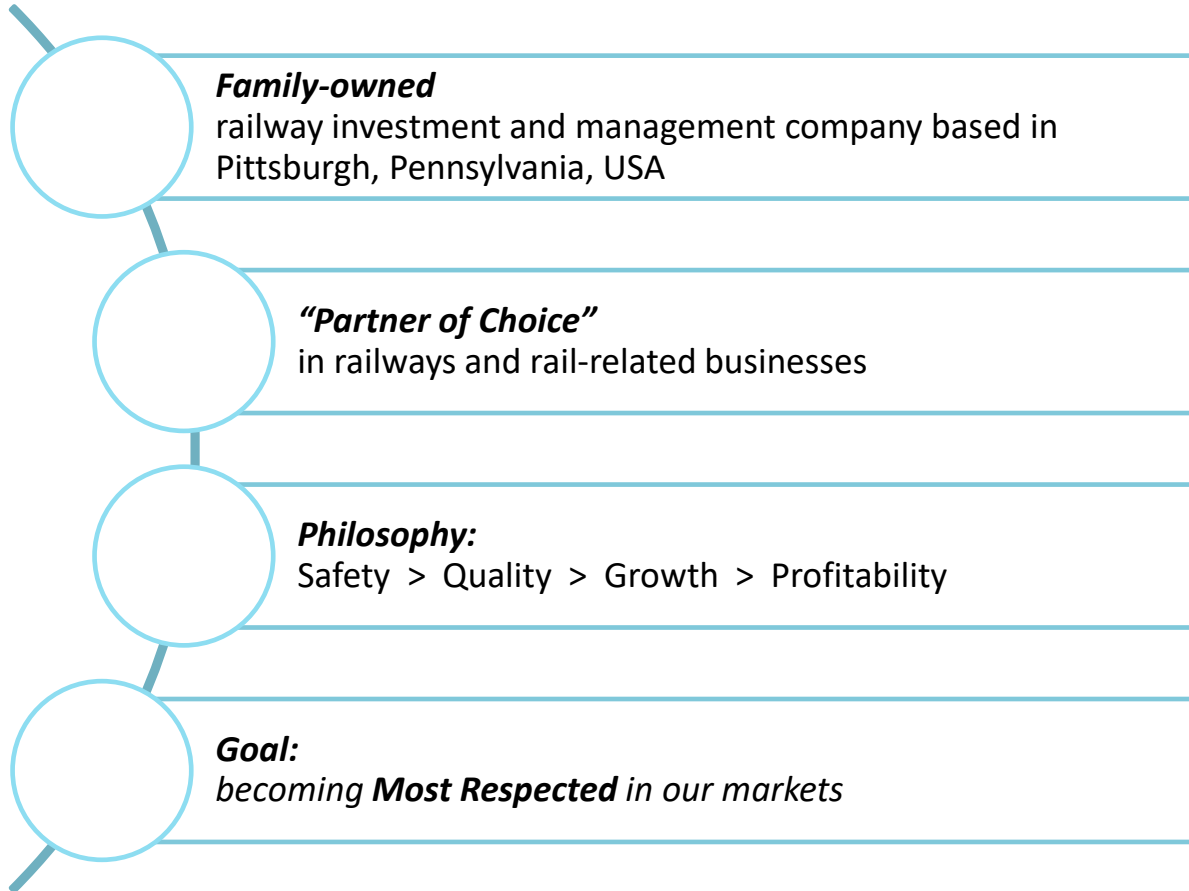
Niche opportunities for RDC in Europe

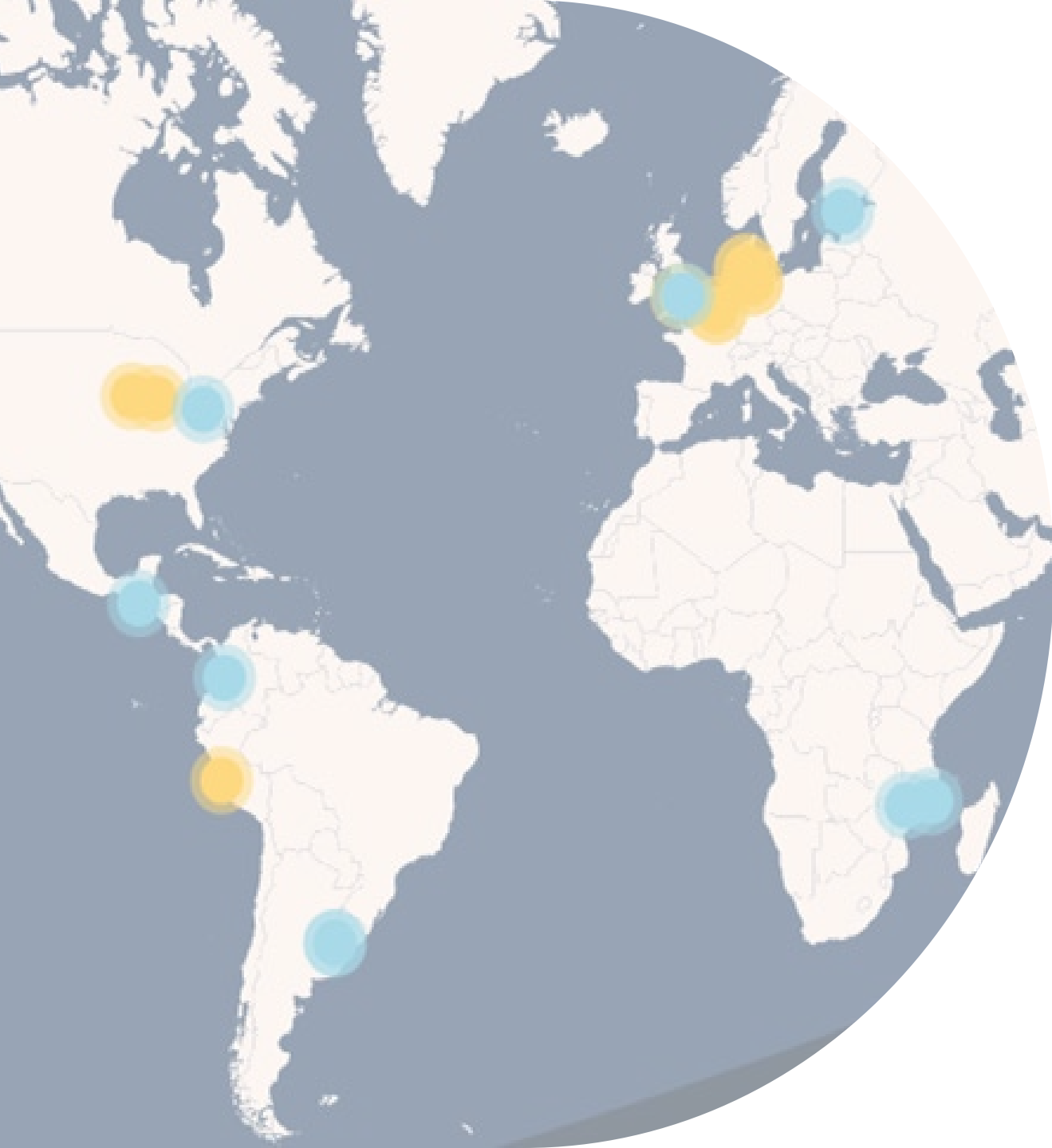
- **PAST**
 - Infrastructure (Estonia)
 - Freight Operations (Estonia)
 - Passenger Rolling Stock Manufacturing (UK)
 - Passenger Operations (DE)
- **PRESENT**
 - **PASSENGER**
 - Auto shuttles (DE)
 - Night trains (Europe)
 - Feeder networks (DE)
 - **FREIGHT**
 - Wagonload (FR)
- **FUTURE ?**
 - Rolling stock – Freight (Ukraine/Europe)



RDC BACKGROUND







Current Business

USA

IOWA INTERSTATE RAILROAD

Freight | Partners since 1991

RAILPULSE

Rail Technology | Partners since 2022

PERU

FERROCARRIL CENTRAL ANDINO

Freight | Partners since 1999

GERMANY

RDC DEUTSCHLAND GMBH

Passenger and Rolling Stock | Partners since 2009

FRANCE / BELGIUM

EURORAIL

Freight and Logistics | Partners since 2014

UNITED KINGDOM

TDI GREENWAY

Passenger | Partners since 2020

USA:

IOWA INTERSTATE RAILROAD



- **Class II freight railroad** operating between Chicago IL and Council Bluffs IA with branch to Peoria IL: connects with all 7 Class I railroads
- **SAFETY:** Delta Airlines reference peer
- **Industrial Development:** Ethanol, Biofuels, Wind Energy, Intermodal Initiatives
- **Partnership:** iCON Infrastructure since December 2020
- **Community Service:** fire department benefit steam trips





PERU: FERROCARRIL CENTRAL ANDINO

- **Industry model for safety;** no injuries 2018, 2021
- 489 km (305 mi) single-track standard gauge railroad from Port of Callao and Lima to Huancayo and Cerro de Pasco
- Highest railway in the Americas, **second highest in the world;** 4,818 meters (15,807 ft/3 mi) above sea level
- **Railway Wonder of the World:** 68 tunnels, 61 bridges, 9 switchbacks
- Completely rebuilt 286,000 GWOR corridor featuring CWR, concrete ties, strengthened bridges and central dispatch/control center
- A multi-year track record of delivering sustained growth in tonnage, efficiency, and revenue

GERMANY: (Part 1)



RDC Deutschland holds interests in:

BahnTouristikExpress (BTE)

- **AutoReiseZug**: night auto train service between Hamburg and Lörrach
- Provider of rolling stock for the European **night train** renaissance
- Operator of **Thunderbird services** such as Ukrainian refugee trains
- New turnkey offering for Swedish Rail (SJ)

AUTOZUG Sylt

- First privately-owned railway company to transport passengers in their vehicles to the **island of Sylt**. Trucks added in 2019.
- Recent investments: new trainsets, locomotives
- Terminal upgrades for an enhanced customer experience completed in 2019



GERMANY: (Part 2)

RDC Deutschland also holds interests in:

NEG:

- Local passenger operator
- Infrastructure Owner

GSH:

- Niche freight operator



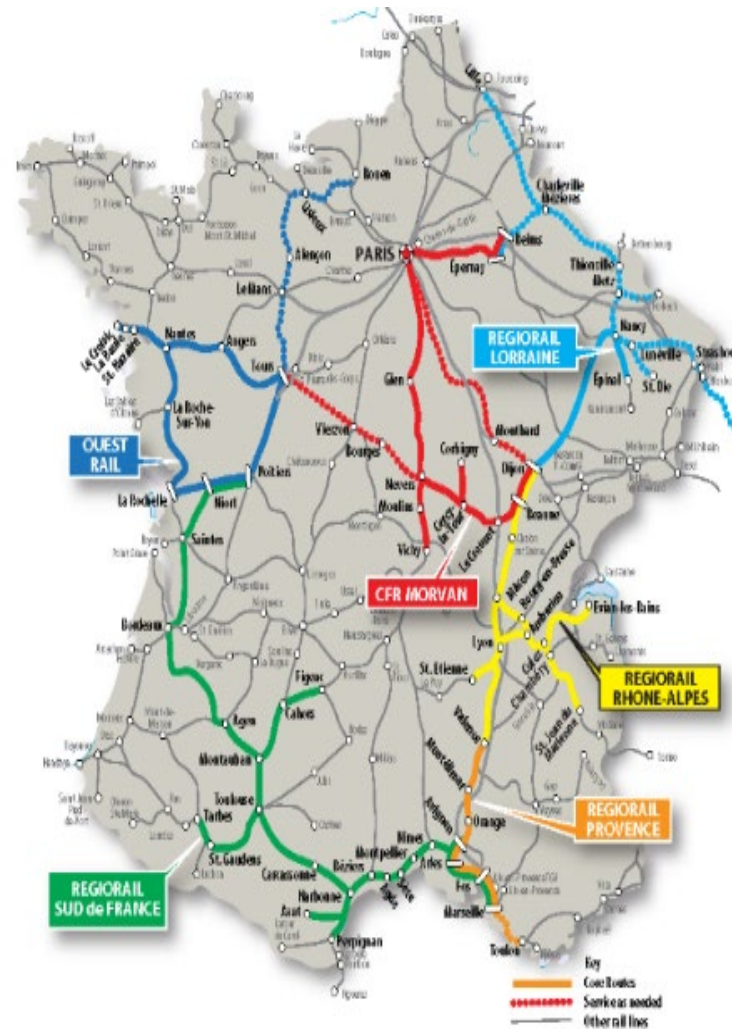
FRANCE / BELGIUM: RegioRail / Eurorail

RegioRail

- First kilometer/last kilometer, **wagonload** traffic, **national coverage** in France
- Clients include Danone (Evian), Nestlé (Perrier), Lafarge, Eiffage, Michelin

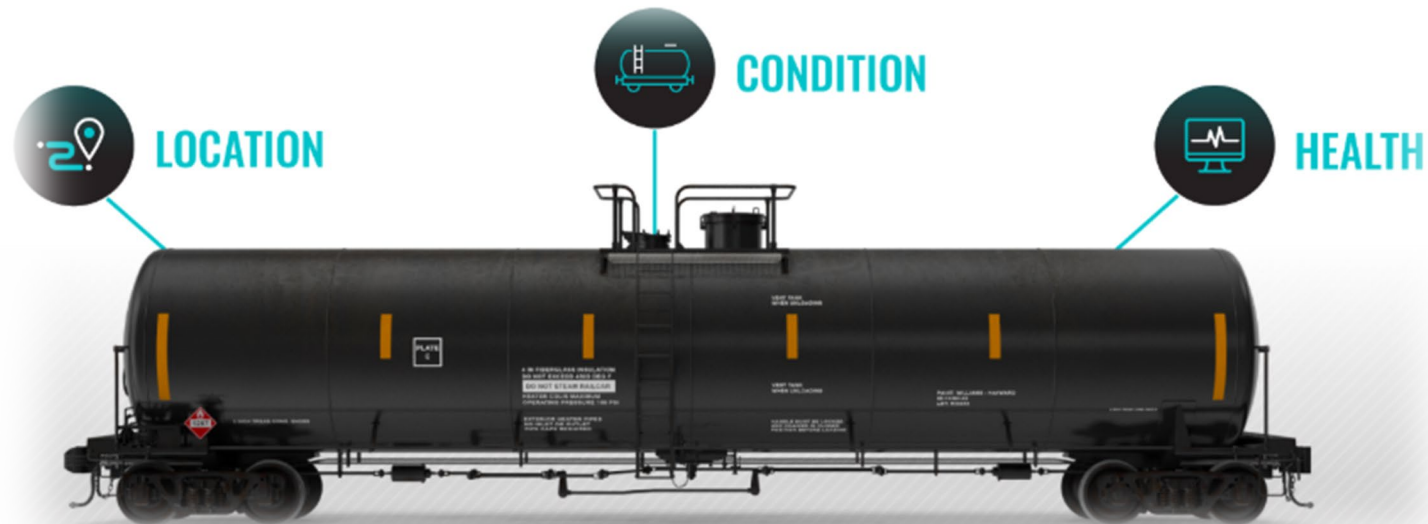
Eurorail

- **Logistics specialist** based in Belgium
- **5 rail-served warehouses**, connecting France, Italy and Spanish border with global networks



USA: RailPulse

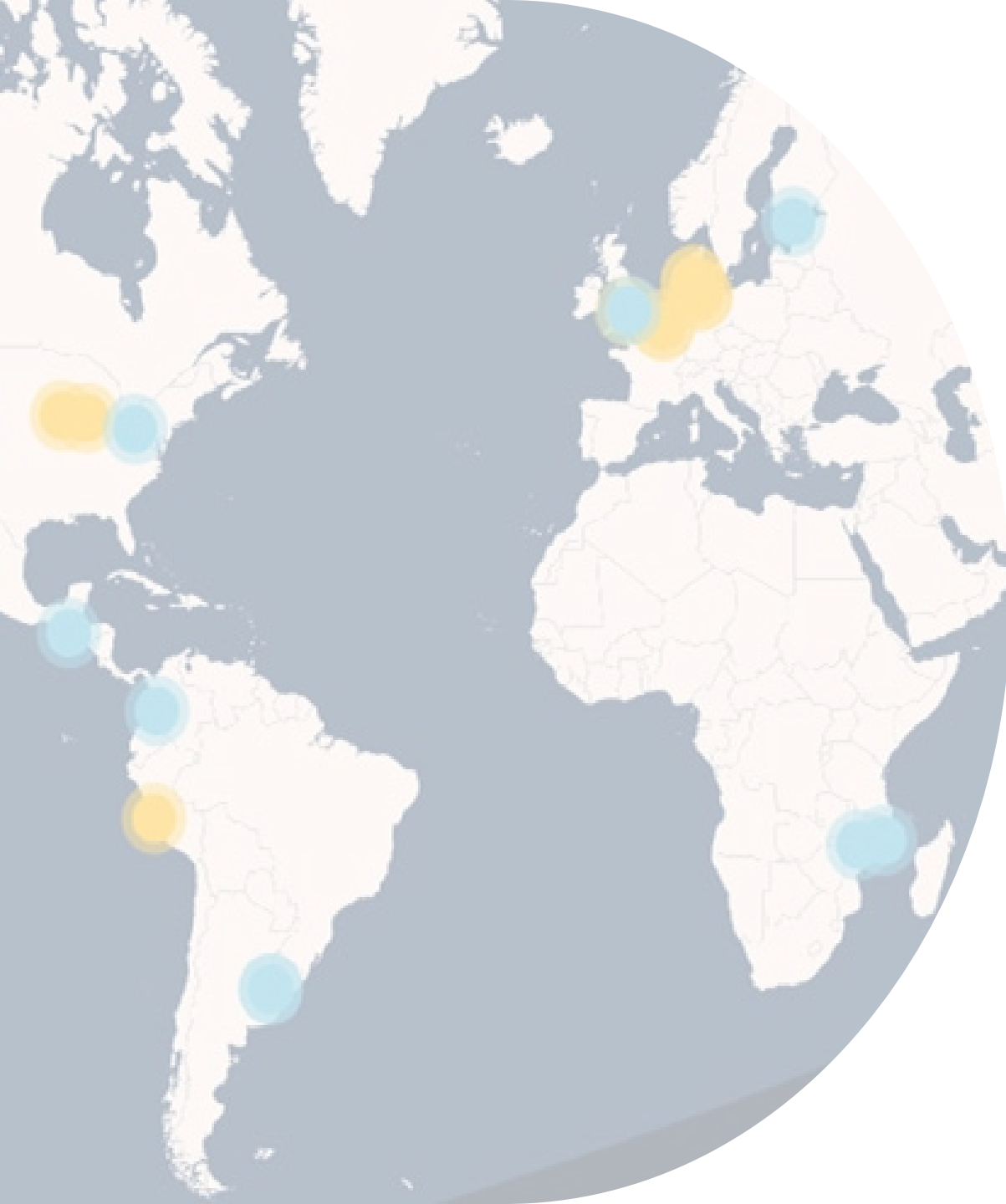
- End-to-end digital platform that provides real-time railcar data
- Standardized technology infrastructure across the rail supply chain to track the location, condition and health of railcars
- Optimizes fleet performance, visibility and safety to keep supply chains moving



UNITED KINGDOM: TDI GREENWAY | POP-UP METRO

- Partnership in 2025
- Rapidly deploy light metro, light-rapid transit, very light rail (VLR) and tram solutions on secondary freight and passenger routes worldwide
- Trains & Turnkey Maintenance
- Charging Infrastructure
- Temporary ADA Compliant Modular Platforms
- Temporal Separation protocols under FRA guidelines
- **USA: Pop-Up Metro**
2 active battery-powered train-sets operational for demonstration at Rockhill Furnace, PA on a 1.8-mile test track on the East Broad Top Railroad





Past Business

ARGENTINA

ALL MESOPOTAMICA

Freight • 1993-2013

ALL CENTRAL

Freight • 1993-2013

GUATEMALA

FERROVIAS GUATEMALA

Freight • 1997-2007

MALAWI

CENTRAL EAST AFRICAN RAILWAYS CO

Freight • 1999-2008

MOZAMBIQUE

CORREDOR DE DESENVOLVIMENTO DO NORTE (CDN)

Freight • 1997-2008

ESTONIA

EESTI RAUDTEE

Freight • 2001-2007

COLOMBIA

FERROCARRIL DEL PACIFICO

Freight • 2012-2014

UNITED KINGDOM

VIVARAIL

Rolling Stock • 2014-2022

UNITED KINGDOM: VIVARAIL | 2014-2022

- Designer and manufacturer of rail rolling stock, charging systems, and traction control technology
- Leader in battery train technology, including UK's first battery and battery hybrid trains
- Modular power: diesel, battery, hybrid, 3rd rail, hydrogen...
- Mainline product in the UK: West Midlands, Wales, Isle of Wight, Greenford
- For the USA: Pop-Up Metro



GUATEMALA:

FERROVIAS GUATEMALA | 1999 – 2007

- 1996** ■ Abandoned by public sector
- 1999** ■ Restored to operation by private sector
- 2005** ■ Oligarch “offer” to become 50% shareholder without compensation (*Culture of Impunity*)





- 2006 LESIVO DECLARATION = INDIRECT EXPROPRIATION
- 2007 FIRST-EVER CAFTA CLAIM
- 2007 RAIL SERVICE SUSPENDED
- **2008 – 2012 THEFT**
- 2012 CAFTA ARBITRATION AWARD

COLOMBIA:

FERROCARRIL DEL PACIFICO | 2012-2014

- 122-mile single-track narrow-gauge corridor between the port of Buenaventura and Palmira, just north of Cali
- 1998 the Pacific Railroad is concessioned by Colombia Govt.
- 1999 operated as Tren de Occidente
- 2008 operated as Ferrocarril del Oeste
- 2011 operations suspended
- 2012 operations resumed under Colombia Rail Investors Corp. – joint venture between **RDC** and Colombian/Israeli investor group **Mariverdo**
- 2013 majority interest in FDP purchased by **Trafigura**; operations managed by Belgian rail operator **Vecturis**



ARGENTINA: ALL MESOPOTAMICA 1993 – 2013



- In 1993, **Ferrocarril Mesopotámico – General Urquiza** began operations under a 30-year concession under the commercial name **ALL Mesopotamica**
- 1,680-mile single-track standard gauge, extending north from Buenos Aires
- Directly connects with Paraguayan and Uruguayan standard gauge, and links with Brazilian meter gauge
- Joint venture: **RDC, America Latina Logistica** and **Argentine Govt.** until re-nationalization in 2013

ARGENTINA: ALL CENTRAL | 1993 – 2013

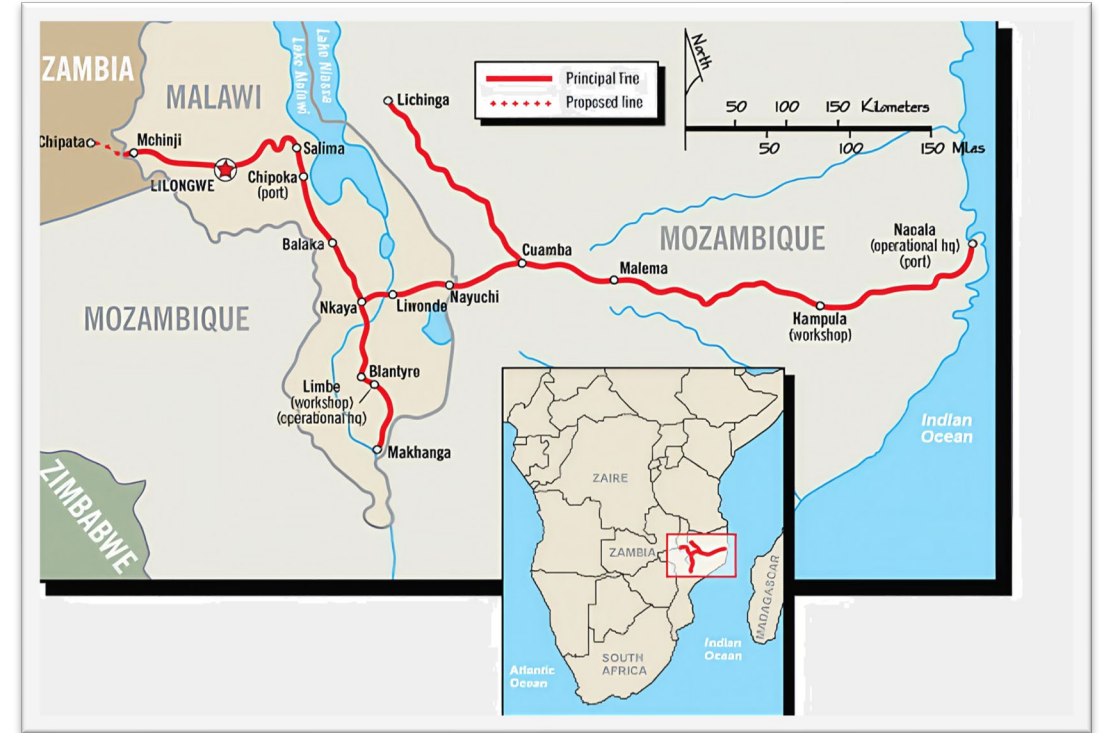


- In 1993, **Buenos Aires al Pacifico-San Martin** began operations under a 30-year concession under the commercial name **ALL Central**
- 3,535-mile single-track broad gauge, extending west from Buenos Aires, close to the Chilean border
- Freight corridor from west to consumption zones and port facilities in the east; railroad links Chile and the western Argentine provinces to Uruguay, Paraguay and Brazil via ALL Mesopotamica
- Joint venture: **RDC, America Latina Logistica** and **Argentine Govt.** until re-nationalization in 2013

NACALA CORRIDOR

1999 - 2008

- Integrated port/railway network for Malawi, Mozambique and Zambia



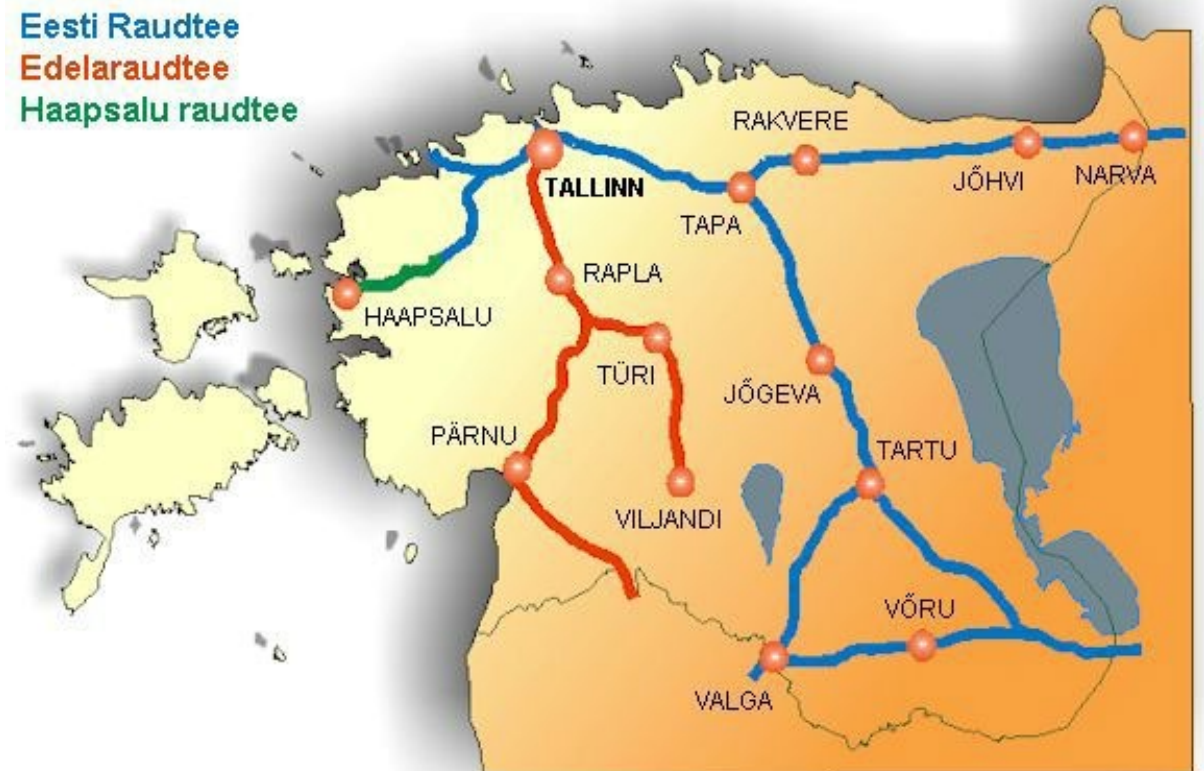
NACALA CORRIDOR

1997	■ Negotiations begin...
Jan 1999	■ Mozambique -- MoU for Nacala concession
May 1999	■ Malawi -- railway concessioned
2003	■ Mozambique -- OPIC \$29.6M financing
2004	■ <i>Mozambique – World Bank funding \$110M to competing Beira Corridor</i>
2005	■ Mozambique -- 15-year concession awarded
2006	■ <i>World Bank interference on behalf of Beira Corridor</i>
2008	■ Nacala Corridor concessions sold to “Mozambican investors”

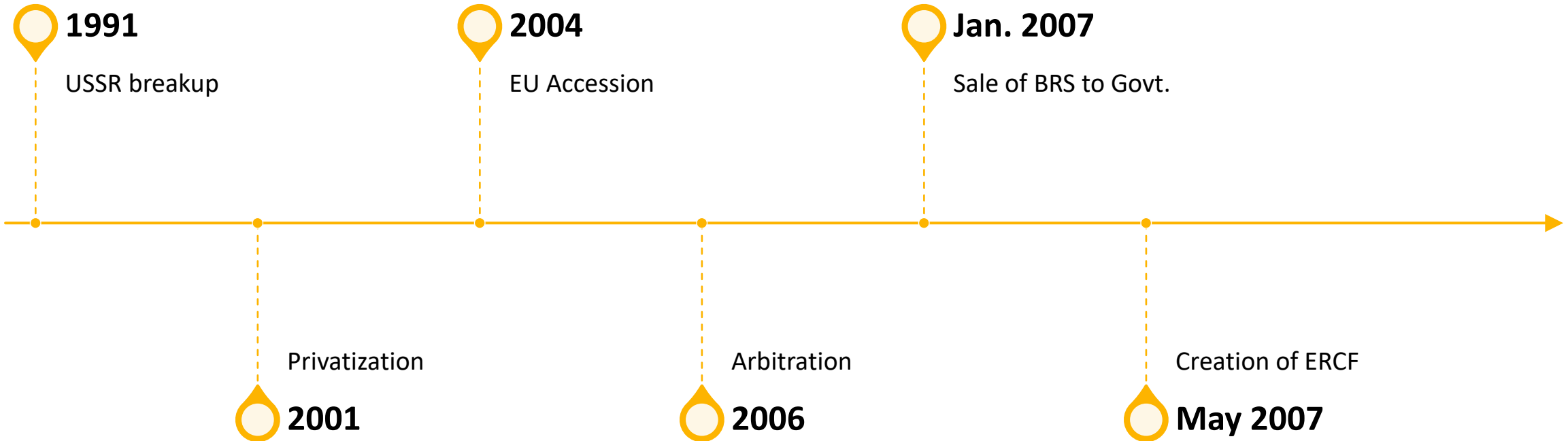
ESTONIA:

EESTI RAUDTEE | 2001 – 2007

- **The only ex-Soviet rail privatization**
- 500-mile five-foot gauge railway linking the Estonian ports with Russia and Ukraine
- Independent operators provide passenger service using EVR's infrastructure under access agreements:
 - **EVR Ekspress:** operates international passenger traffic between Estonia and Russia
 - **Elektriraudtee:** operates Tallinn commuter trains on electrified lines
 - **Edelaraudtee:** operates all other internal passenger traffic with diesel trains
- Shareholders: **66% Baltic Rail Services** and **34% Govt.**
BRS = Rail World, RDC, Ganiger, EEIF
- 5 years of private sector management; EVR re-nationalized in 2007



Timeline: BRS Investment and Sale





DIFFERENCES BETWEEN NORTH AMERICA, EUROPE & LATIN AMERICA



PHYSICAL DIFFERENCES:

PHYSICAL

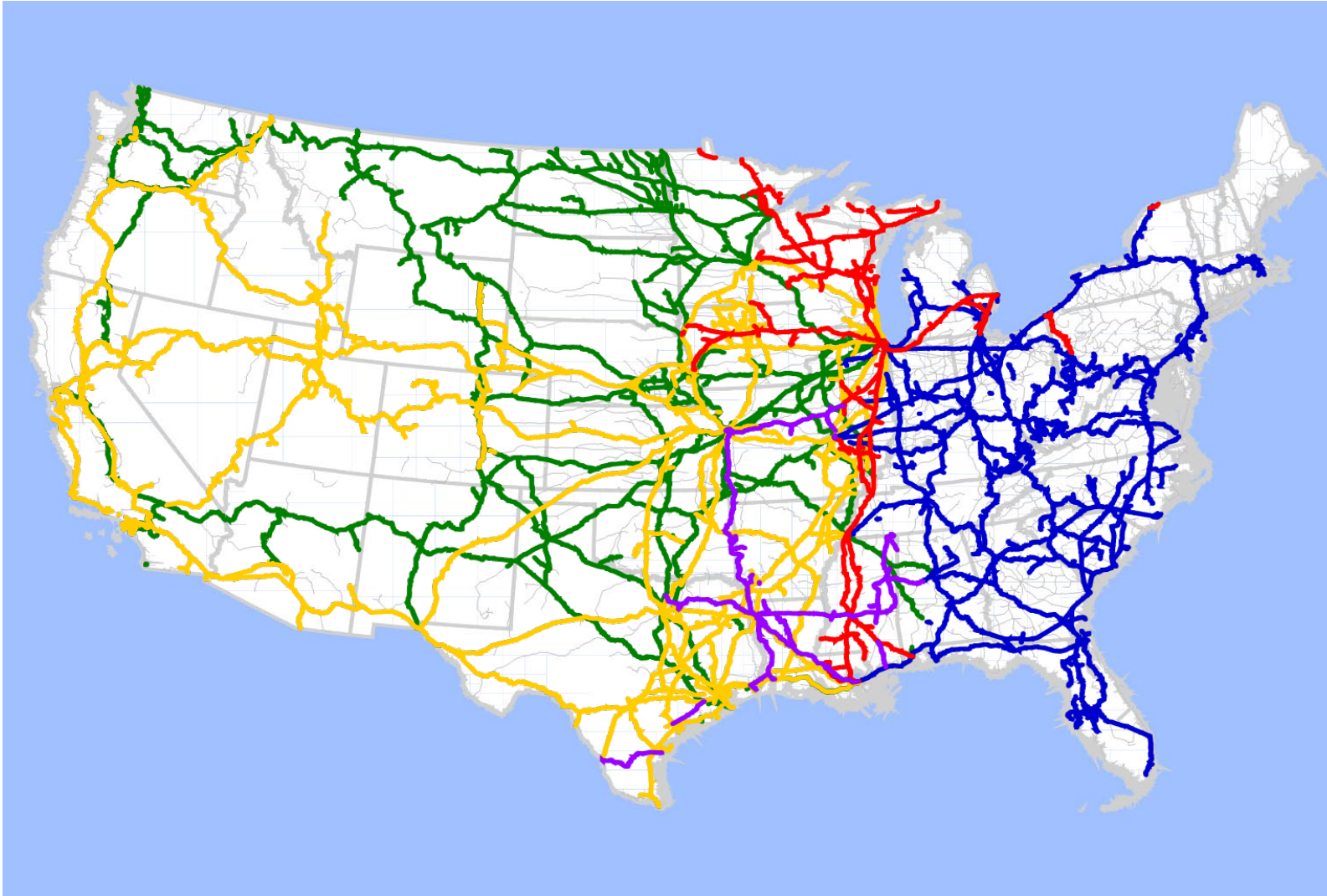
	North America	Europe	Latin America
Distances	Long	Short	Diverse
Traffic Patterns	Concentrated	Fragmented	Concentrated
Competition	Other Rail	Truck	Truck & Geographic
Capacity Constraints	Line Capacity	Clearances	Infrastructure
Orientation	Freight	Passenger	Freight

INSTITUTIONAL

INSTITUTIONAL DIFFERENCES:

	North America	Europe	Latin America
Traffic Driver	Competition	Regulation	Competition
Rail Competition	Parallel Rail	On-Rail	Truck, Geographic
Infrastructure Control	Operator	Regulator	Operator
Funding	Private	Public	Private

NORTH AMERICA: Parallel Competition in USA



FREIGHT BUSINESS DRIVERS (DESCENDING PRIORITY)

COMMENT: FOR RAIL COMPETITION TO EXIST, THERE MUST BE RAIL CAPACITY AND SERVICE!

Priorities	CUSTOMERS Worldwide	NORTH AMERICA Competition as Result of DEREGULATION	EUROPE REGULATION Forces Competition	LATIN AMERICA Competition as Result of PRIVATIZATION
1	Rail as Option	Rail as Option	Rail as Option	Rail as Option
2	Capacity	Capacity	Competition	Capacity
3	Service	Service	Service	Service
4	Competition	Competition	Capacity	Competition

FREIGHT BUSINESS TRENDS

	North America	Europe	Latin America
Wagonload Traffic	Stable	Declining	Dead, except Mexico
Operator Focus	Common Carrier	Customer-Specific	Customer-Specific
Financial Performance	Stable	Declining	Improving
Market Share	Increasing	Declining	Diverse
Ownership	Private	Public	Private / Public

GLOBAL CONCLUSIONS - MICRO

- Unlike other transportation modes, railways are a **network business**...
- ...which are only as strong as the weakest link

Examples:

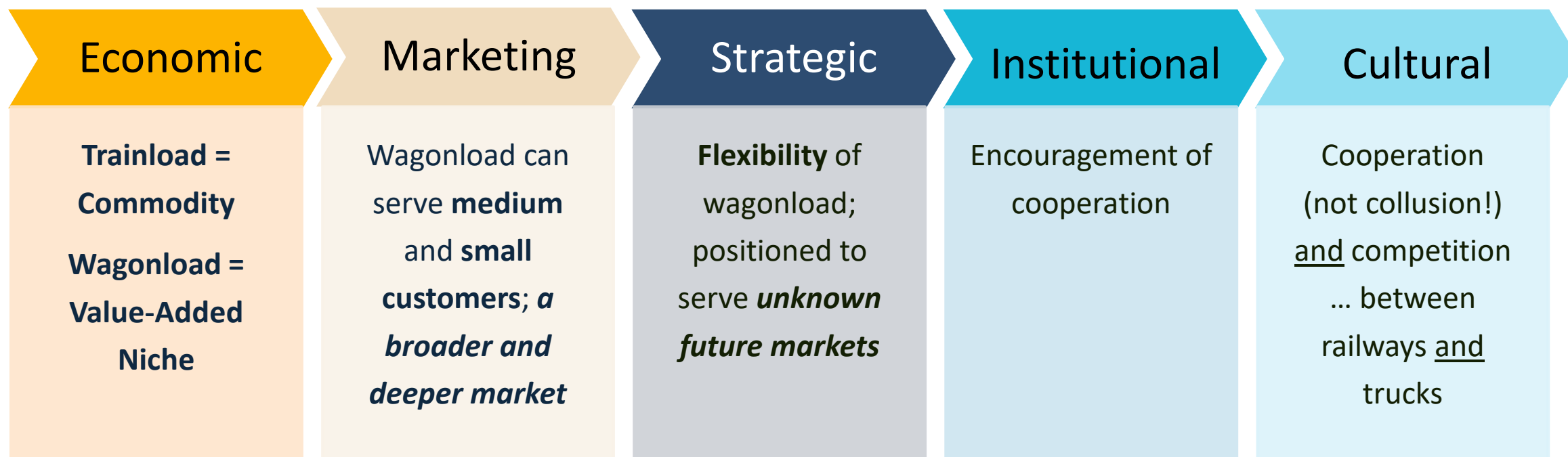
- **USA**
interchange of traffic among 600 privately owned railways
- **Estonia**
90% dependent on Russian traffic
- **Africa**
Nacala Corridor based on 2 railways + 1 port

Counter-Examples:

- **Latin America**
mostly single line
(exception: Mexico)

TRAINLOAD VS. WAGONLOAD

“Trainload is about trains. Wagonload is about logistics.”



MARKET VALUATION

		Financial Markets	Transportation Markets
USA	Block Train	Short-Term Niche	Long-Term Commodity
	Wagonload	Niche	Niche
EUROPE	Block Train	Liquidation	Commodity
	Wagonload	Limited	Niche
LATIN AMERICA	Block Train	Short-Term Niche	Long-Term Commodity
	Wagonload	Dead	Dead

RAIL INDUSTRY STRUCTURE: USA Example

Network Industry Shaped By, in order:

- Geography
- History
- Markets
- Regulation / Deregulation
- Funding (private vs. public)
- Ownership
 - Public (Example: most Class 1s)
 - Private (Example: BNSF, GWRR)
 - Family (Example: WATCO, IAIS)

COMMENT: Competing modes (truck, barge...) are NOT network industries

...SHAPES INDUSTRY CULTURE: USA Example

Relationship-Based Network Industry (*as opposed to Transactional*)

- Safety Culture – universal
- Competition *and* cooperation
- Fragmentation – 600+ RRs
- Capacity constrained – per public policy
- Interoperability
- Segmentation – Class 1 focus vs. short line focus

CULTURAL

...Which Explains How Culture Drives Railroad Behavior...

Threats

- **Cooperation supports** the network

Opportunities

- Need for **cooperation constrains** the industry

CULTURAL

...Which is Imperfect but Better Than ...

Monoculture

- Europe

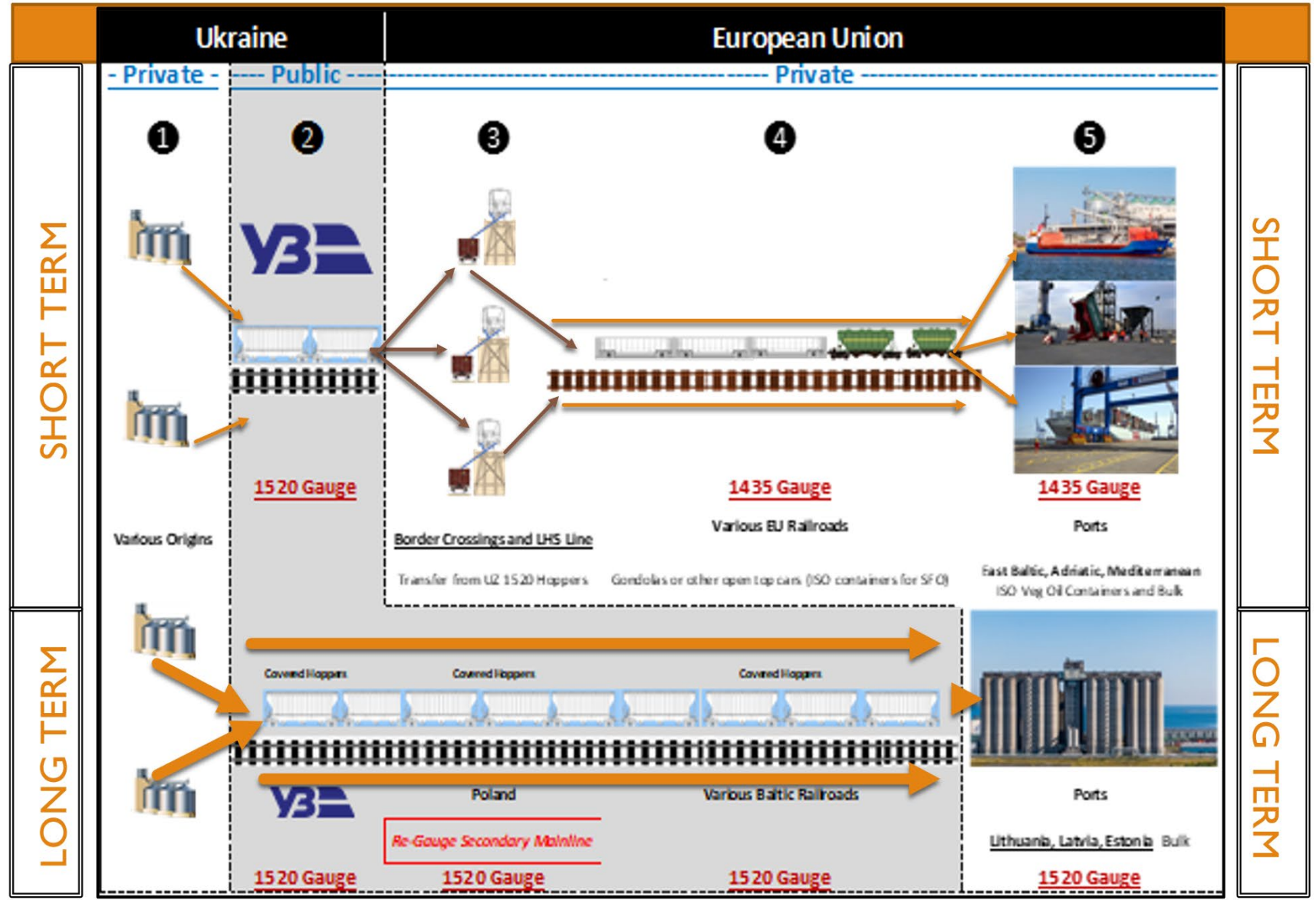
State Culture

- Europe
- Most of Asia
- Absent from most of Latin America

Hot Topics in the USA are the Same in Europe & Latin America

- **Cooperation vs. Competition**
- **Who pays?**
 - Capacity
 - Resiliency
- **Licenses to Operate**
 - Safety
 - Common Carrier Obligation
- **DOO/One-Person Crews – normal on Amtrak, Via, Europe...
vs. competition with autonomous trucks**
- **Exporting the US model:
Europeans say, “Why can’t we have trains like the USA?”**

A Spot Opportunity in Europe





Making rail more competitive

FRANCE

New entrants energise the passenger market

Page 18

MAINTENANCE

High-tech workshops support DB's growing ICE fleet

Page 30

IN FOCUS

Chinese metro expansion continues apace

Page 44

IRONY AS A
COMPETITIVE
ADVANTAGE!

Thank You!

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QUESTIONS & ANSWERS

