WiFi Meet FuFi: PhD Research in Business Decision Systems

Air capacity
- cost of operation
- how many cargo planes in operation / scheduled
- how many planes ordered / who / used for
- carbon footprint

Ship capacity
- how many in operation
- how many in dry docks
- what type of cargo – LNG vessels
- who is buying / booked
- excess shipbuilding capacity
- total tonnage available / yearly projected growth
- cost per ton / projected increase
- carbon footprint

Ton of goods movement
- China to EU, Africa and vice versa by country
- Type of goods
- Breakdown by land, air, sea, rail routes
- Cost / time analysis

Existing rail
- maps
- gauge / gauge variation / gauge interoperability
- coverage
- gaps
- capacity for cargo
- railroad in progress / planned
- habitat (weather)

Goods
- commodity vs finished goods movement: EU, Asia, Africa
- projected carbon emission per unit production
- projected change in manufacturing (OEM, assembly, parts)
- projected change in tonnage of goods that need to travel
- projected carbon footprints of supply chain
**RESEARCH**

**Projected growth**
- demographic spread
- housing / infrastructure (airports, water purification, sewers)
- building materials (raw, finished, parts) Africa vs China/India
- white goods / cars, trucks

**Connectivity**
- Vladivostok, Yokohama, +/- Middle-East, Sahara
- Morocco-Spain bridge/tunnel

**Fuel**
- cost without disruptive innovation
- electricity: coal, gas, nuclear energy (on-board STAR)
- grid map / grid growth / grid construction
- cost of nuclear energy vs other
- biofuel / volume requirements / raw material / production
- metabolic engineering – butanol as fuel
- methanol economy
- ITER / STAR commercial status / supply chains
- Carbon footprint of traditional vs FuFi energy value chains

**Economy by country**
- what do they produce / will produce / projected shifts
- demographics / immigration / projected movement / mortality
- education in sci/eng, number of universities, research funding
- FDI / GDP / GNP / production vs consumption and export vs import
- healthcare: primary care, A&E, long-term care, disease profile

**Thesis Modelling**
- Global Supply Chain of (choose) with/without railroad
- Economic Growth of (choose country) with/without railroad
- Carbon Footprint of Supply Chain (Sarbanes-Oxley vs climate risk)
- Eg: Bananas by truck or rail from S. America to N. America – storage, farm size, growing method, fertilizer, packing/distributing, refrigeration
- Eg: Google - server farms

**Thesis tools**
- Template: simulation tool to analyse goods by route/country
- Method: web tool to determine carbon footprint of supply chain