



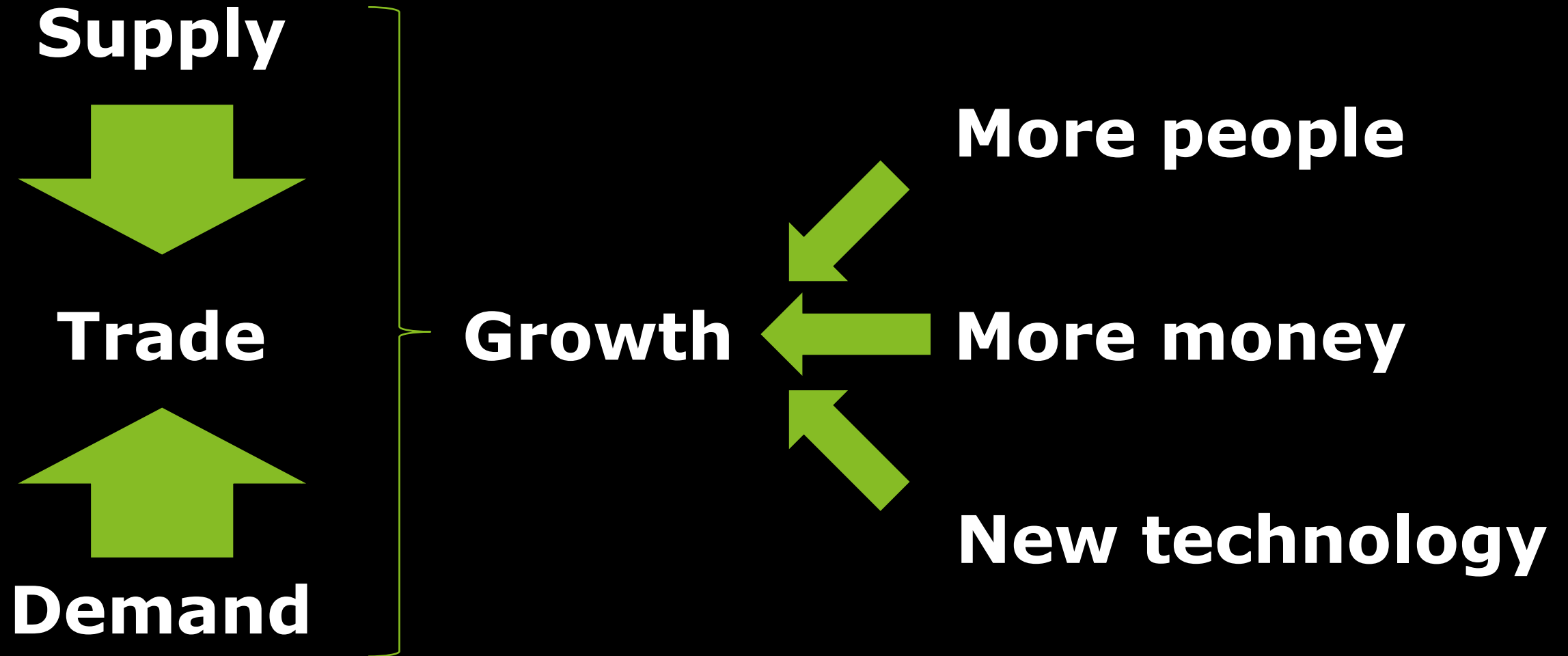
## **Demographic change and the maritime industry**

Indra Vonck, Deloitte Port Services

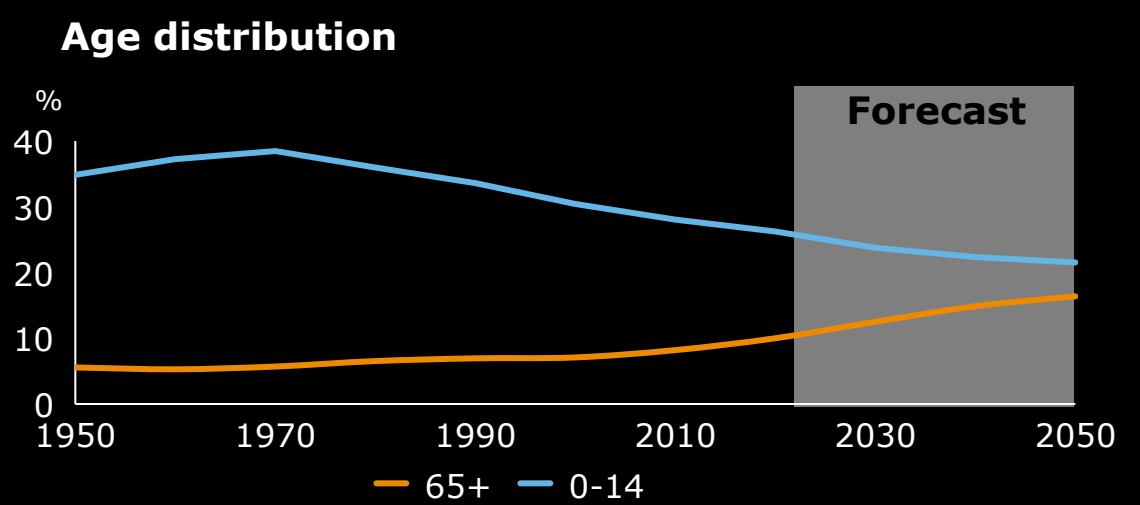
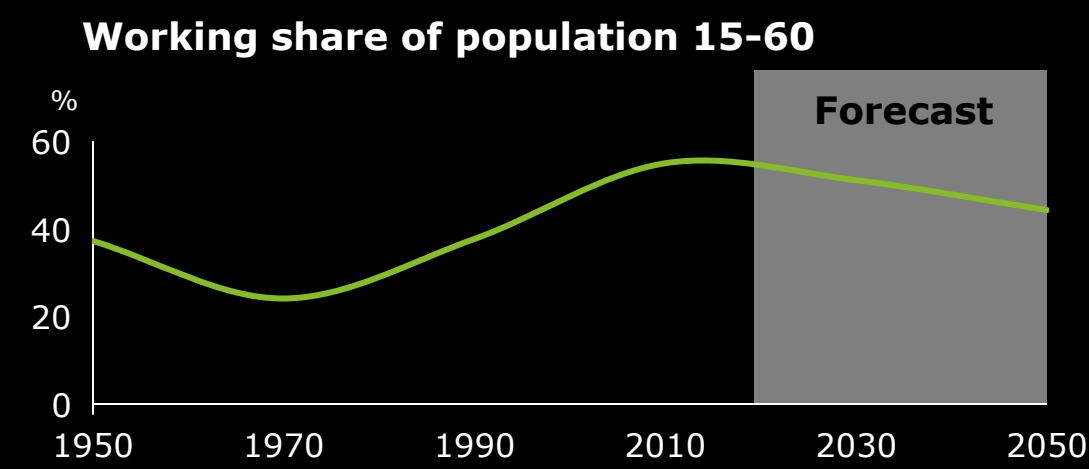
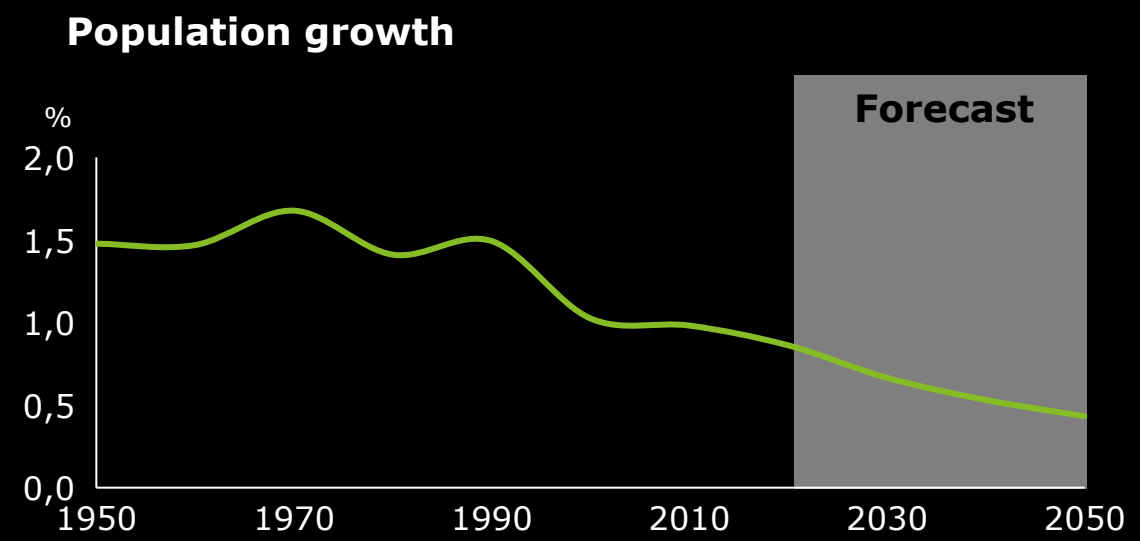
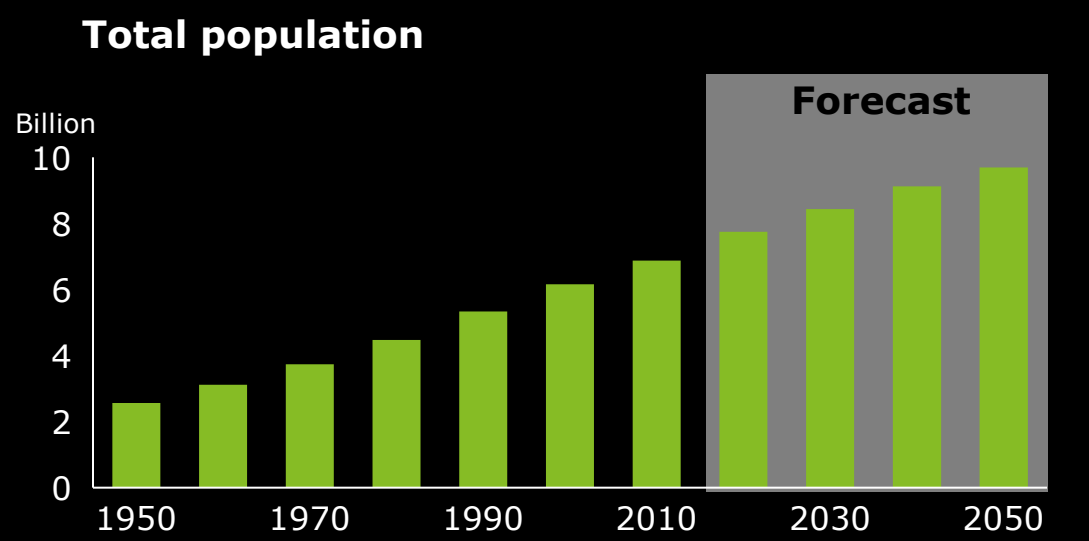
“Age is just a number”

Anonymous

Demography and the maritime industry has always a story of growth and imbalance



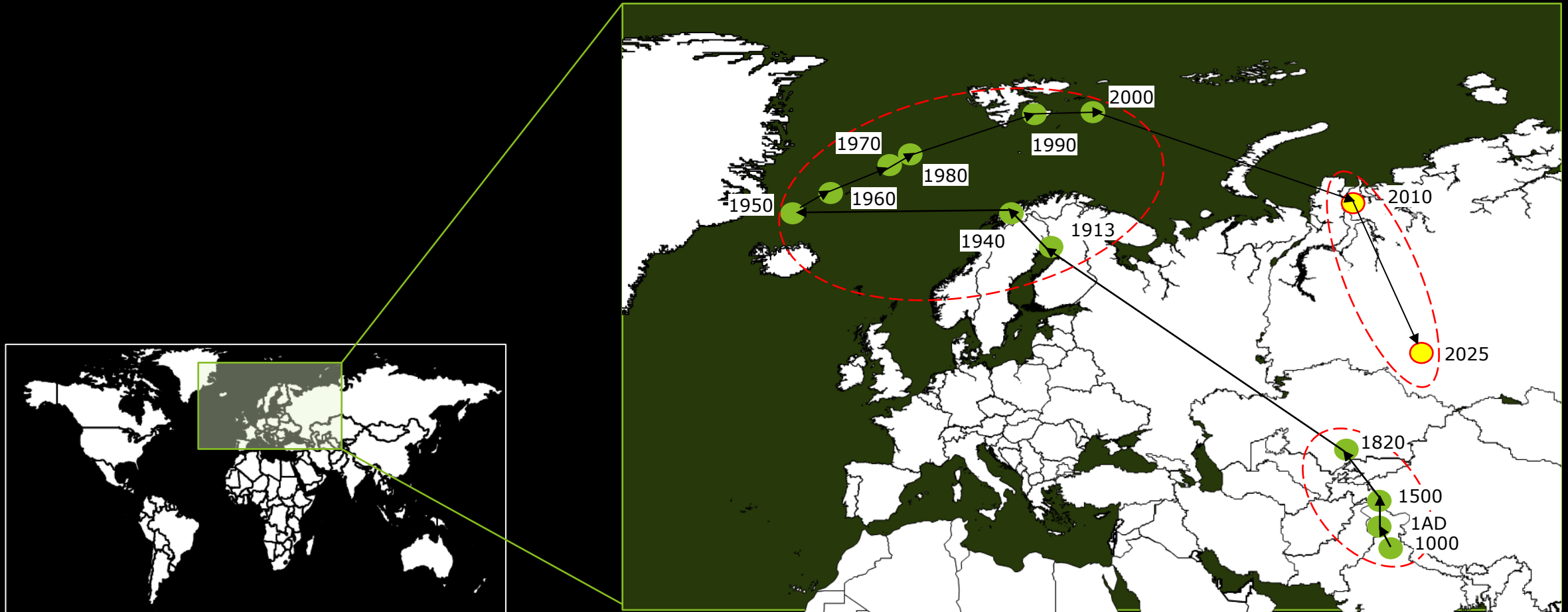
# Global demographic trends indicate a rising aging population



Source: worldbank based on UN data 2015

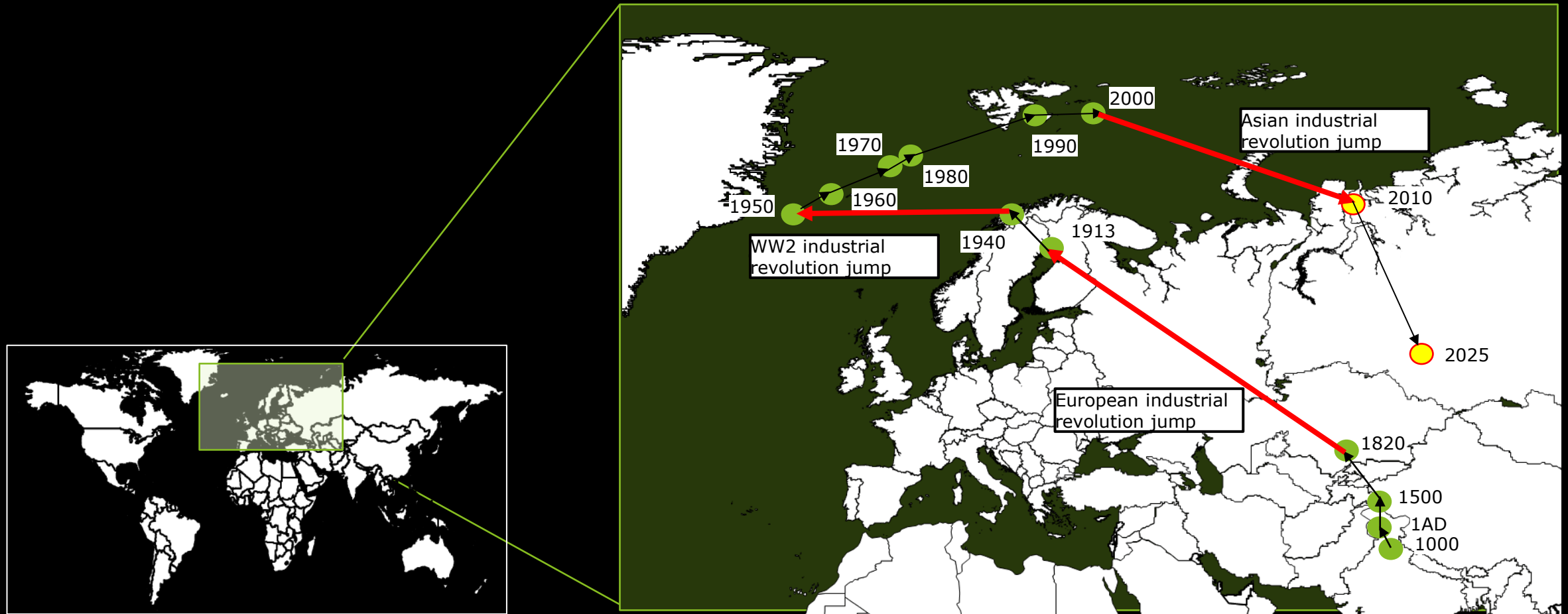
# Demography and the maritime industry has always a story of growth and imbalance

## Expected shift in world's economic center of gravity



# Demography and the maritime industry has always a story of growth and imbalance

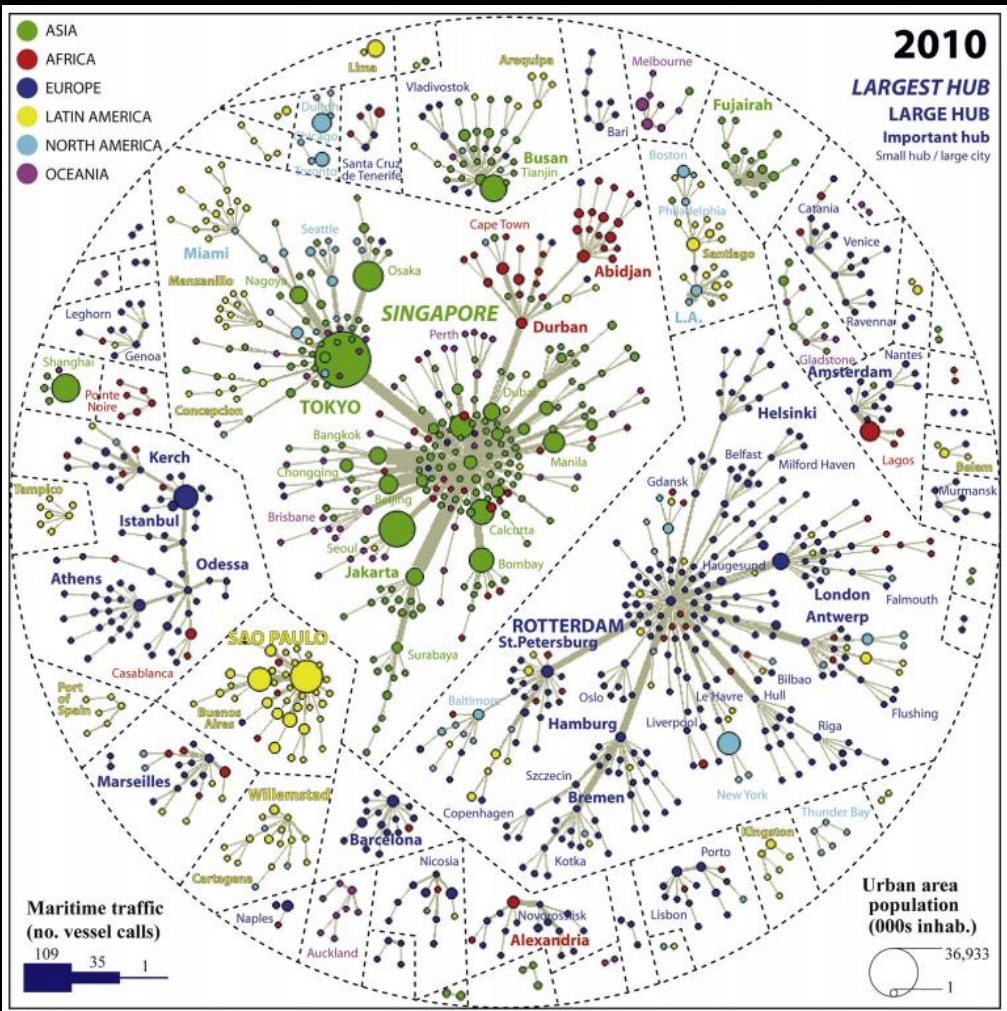
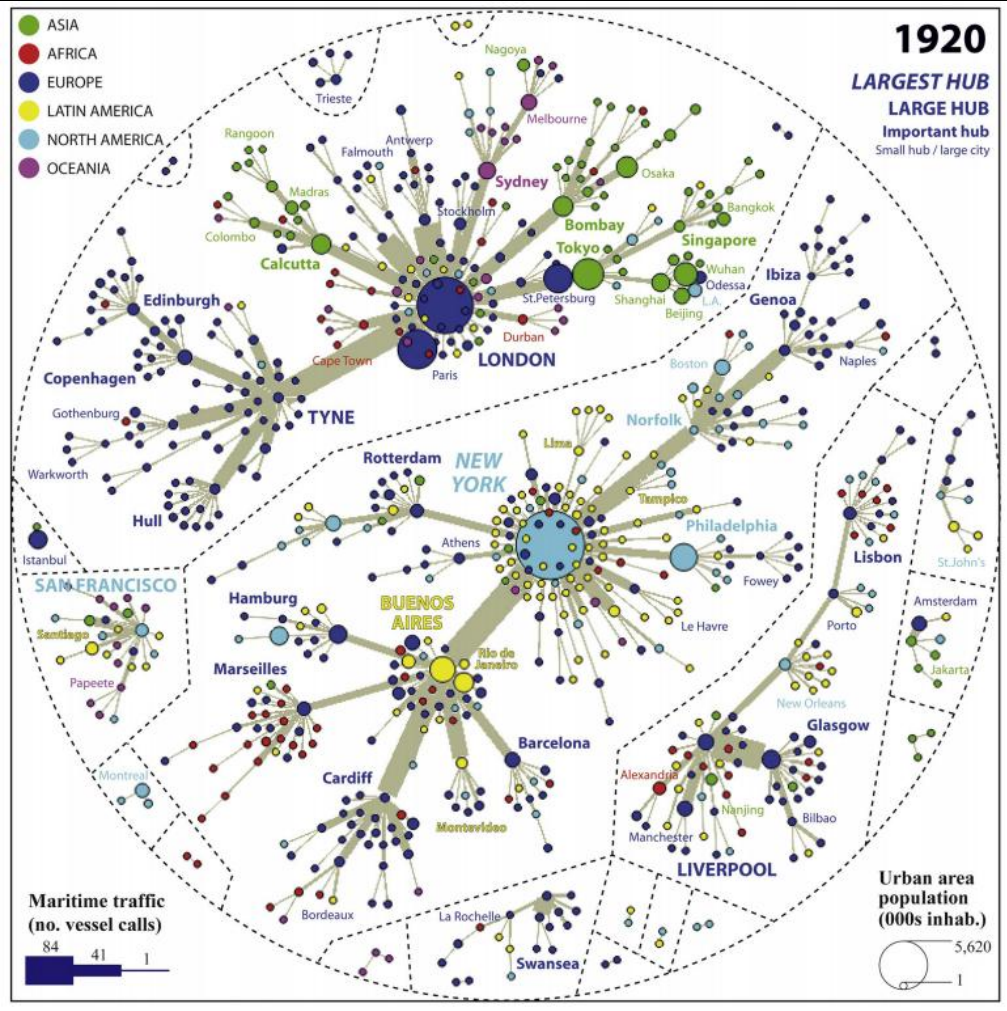
## Expected shift in world's economic center of gravity





We see this gravity shift visualized in the city mapping of maritime hubs over time

Growth of maritime cities over time



Source: Ducruet 2017

# Three main demographic parameters and trends directly affect the maritime industry

People mix



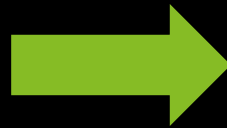
- Wealth & spending
- Product mix

People age



- Productivity
- Labour force

People  
concentration



- Throughput expectation
- Spatial priorities



The growing middle class in Asia is leading to a decrease in labour cost driven supply chains

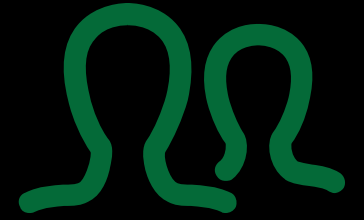


Goods intensive ❌

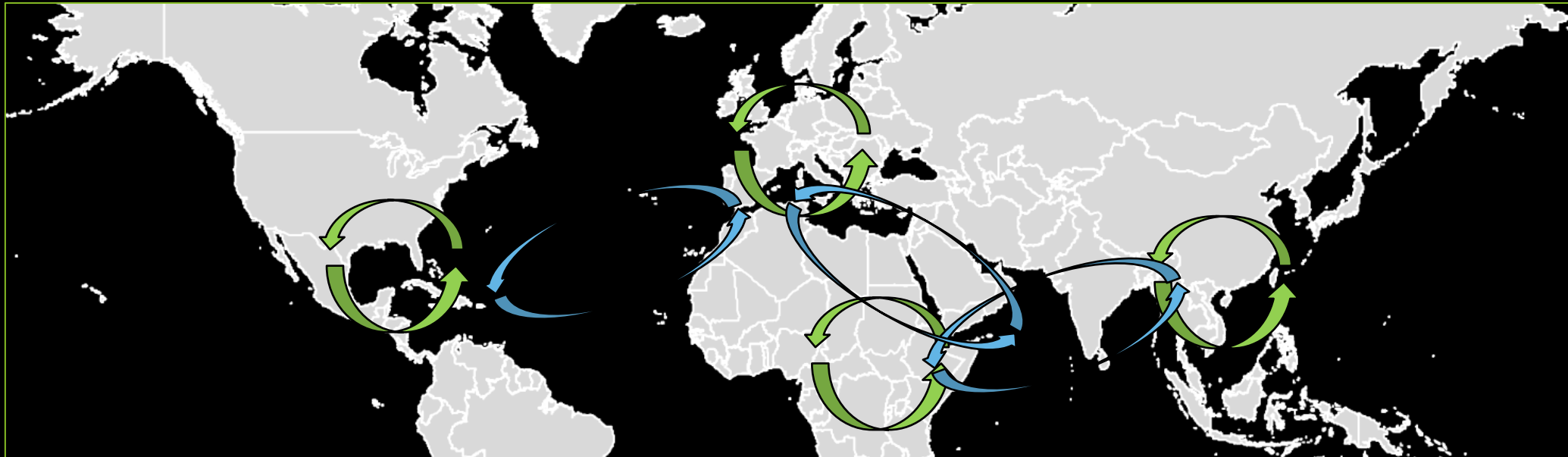
Labour cost driven ❌

Cross regional ❌

This shift in trade intensity and structure has already been happening and is only forecasted to increase



This will result in a more regionalized trade built on more knowledge- and technology driven trade flows



Knowledge  
intensive



Technology  
driven



Intra regional



The changing wealth distribution and age demographic mix leads to a more regionalized trade with smaller and more frequent sailings



**Increase in nearshoring**

**Smaller ships**

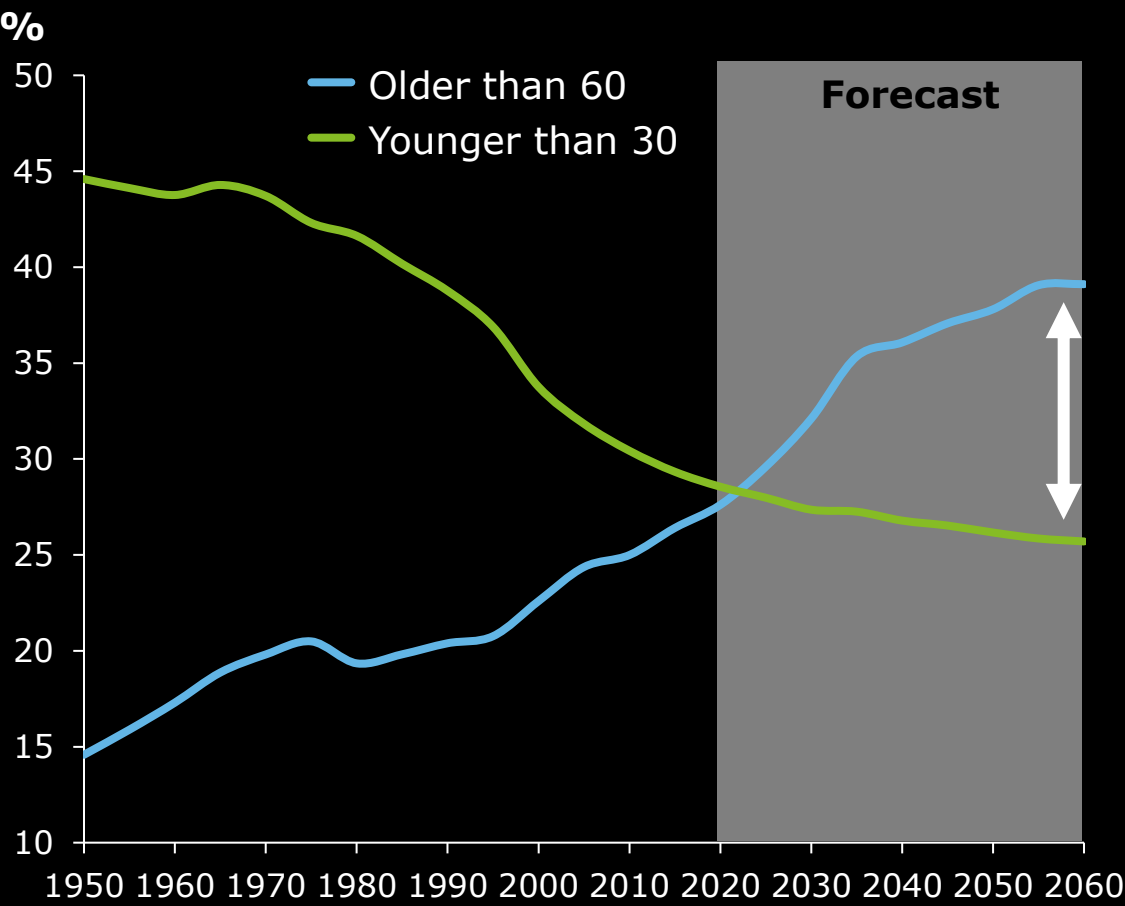
**More frequent sailings**

**Lower volumes and different cargo mix**

# Productivity is dropping, but technology is there to take up the slack

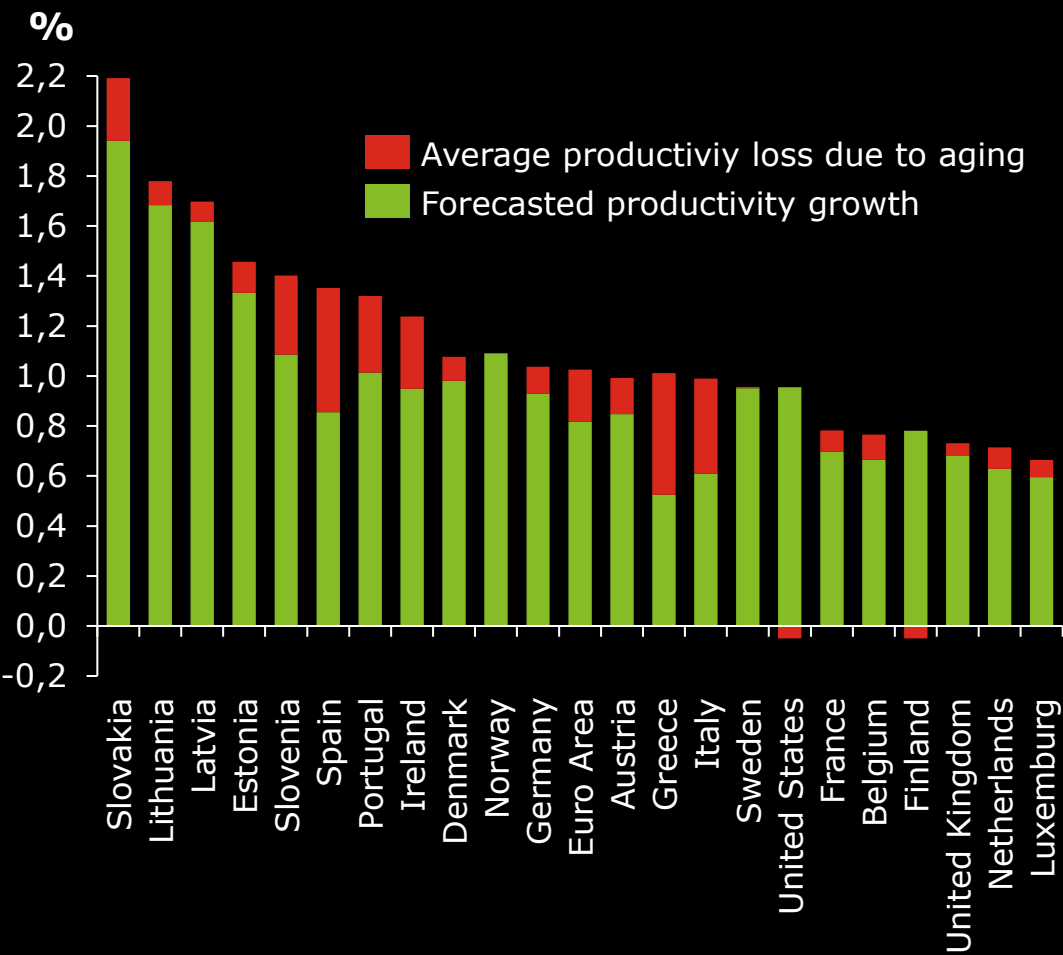


Population evolution (GE)

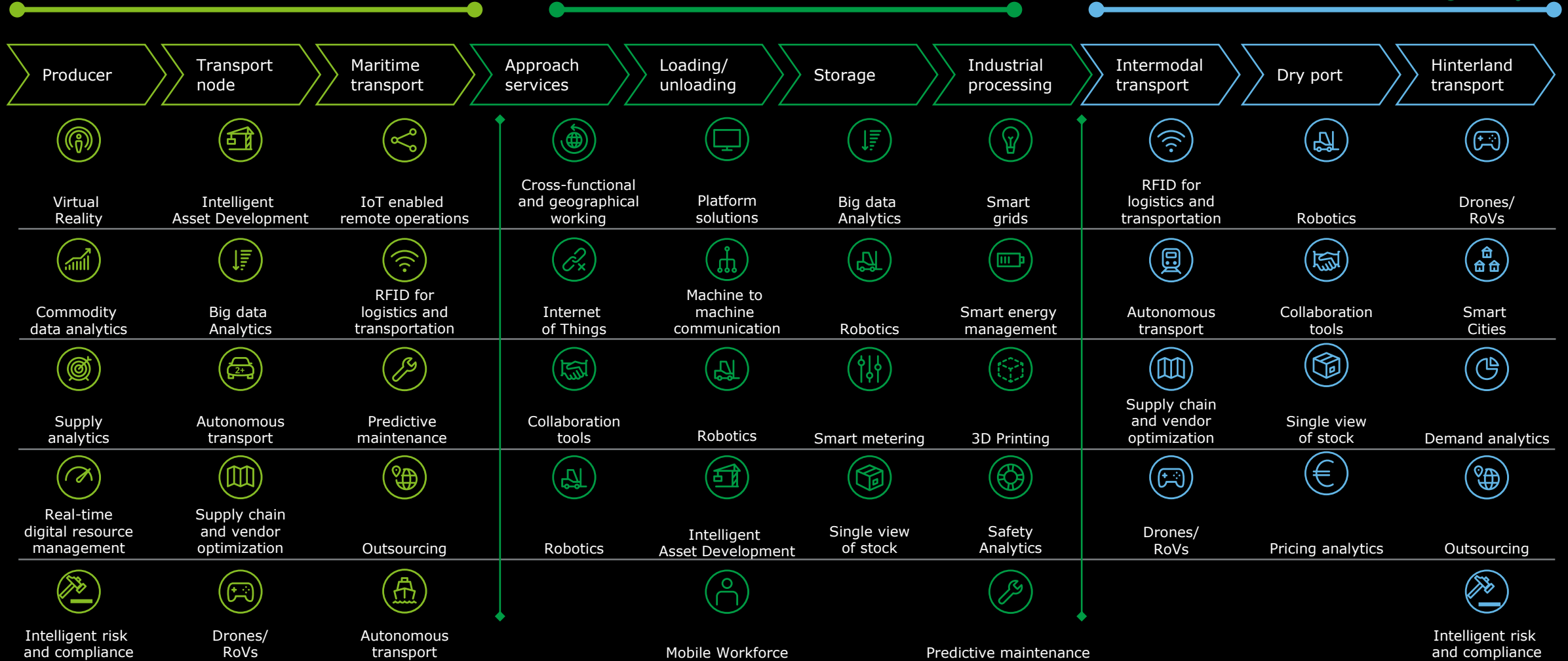


Sources: OECD; EU commission; US bureau of statistics; IMF

Productivity growth and aging impact



# The maritime industry has abundant opportunities to digitize and innovate



Note: Non exhaustive Source: Deloitte Port Services



# The resulting innovations will have a spin off effect on cargo and trade flows



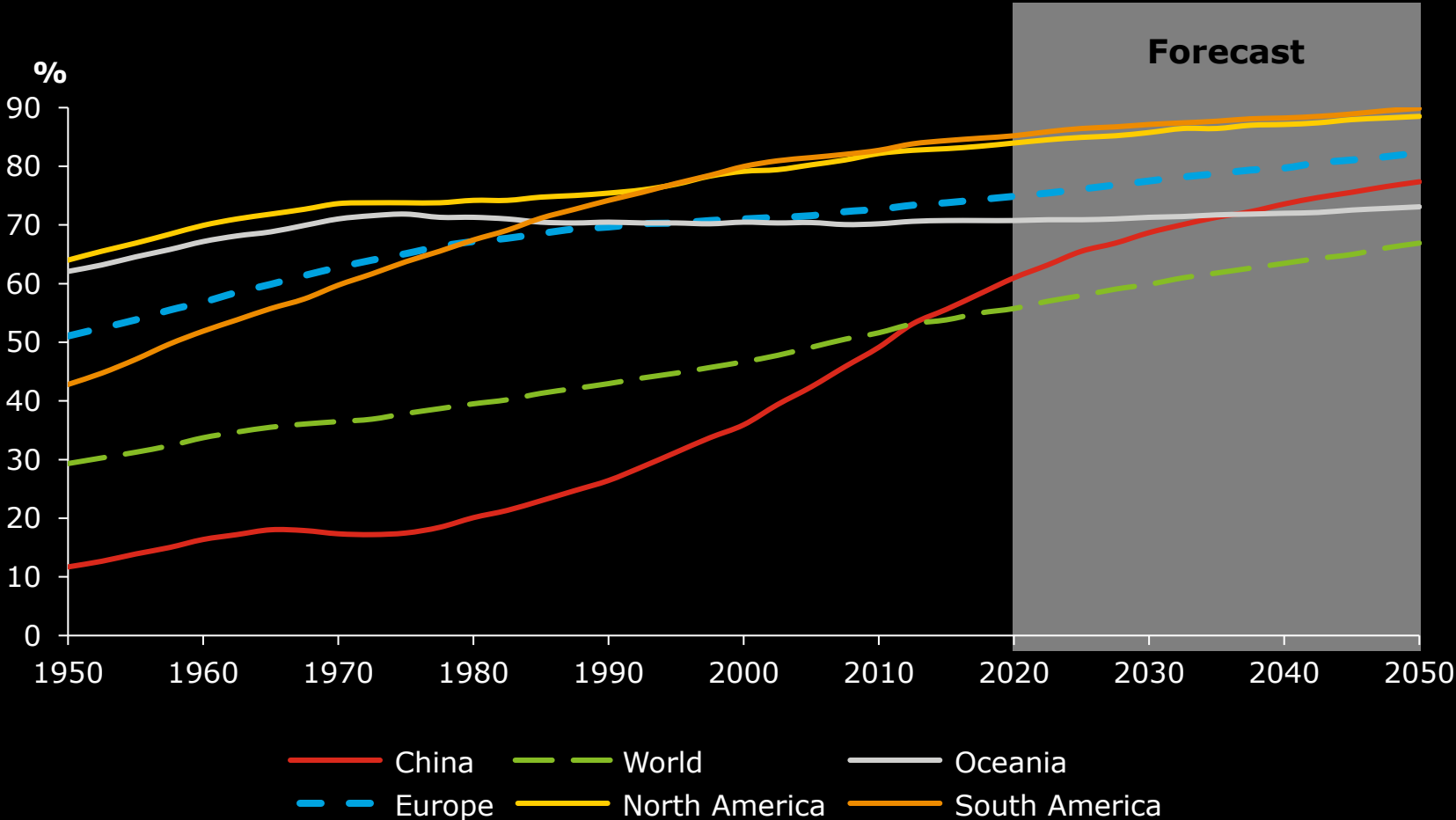
## Impact of technology on trade flows

		Impact on trade flows			
		Primary resources	Manufactured goods	Services	Data
Digital platforms	E-Commerce	—	▲	▲	▲
	Port community systems	▲	▲	▲	▲
	IOT platforms	▲	▲	▲	▲
Logistics tech	Smart materials	▲	▲	—	—
	Autonomous vehicles	▲	▲	—	—
	Blockchain	—	—	▲	▲
	Cloud	—	—	▲	▲
Altering production	3d printing	—	▼	▲	▲
	Automated (terminal) operations	—	▲	—	—
	Virtual assistants	—	—	▼	▼
	Back office automation	—	—	▲	▲
New products	Renewable energy	▼	—	—	—
	Electric vehicles	▼	▼	—	—

Our urban centers will keep growing increasing the pressure on sustainable land use and environmental challenges



% of urbanisation



Environmental pressure

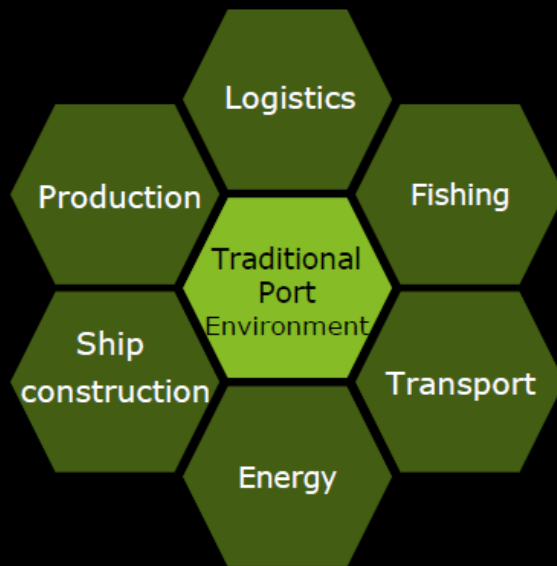


Land use pressure

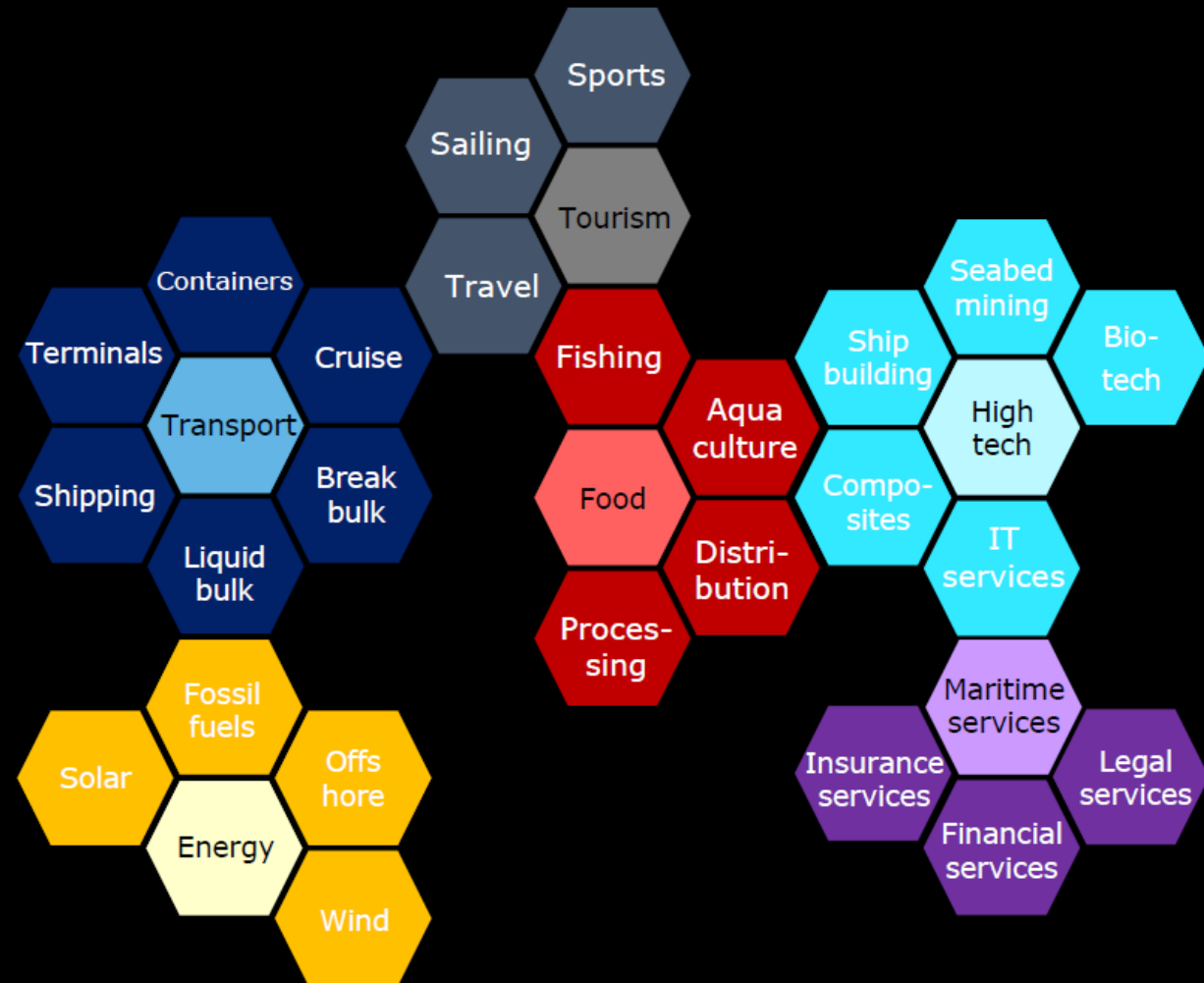
# The maritime industry will be forced to think about spatial planning and environmental responsibility



## Evolution of land use possibilities



Note: non exhaustive



# What will the future bring?

## Future of freight

- Increase in raw material flows
- Decrease in manufactured goods



## Future of maritime sectors

- Stagnating volumes
- Changing vessel dynamics
- Growing niche markets (cruise, offshore,...)



## Future of trade (logistics)

- Increase in nearshoring
- Increased use of technology



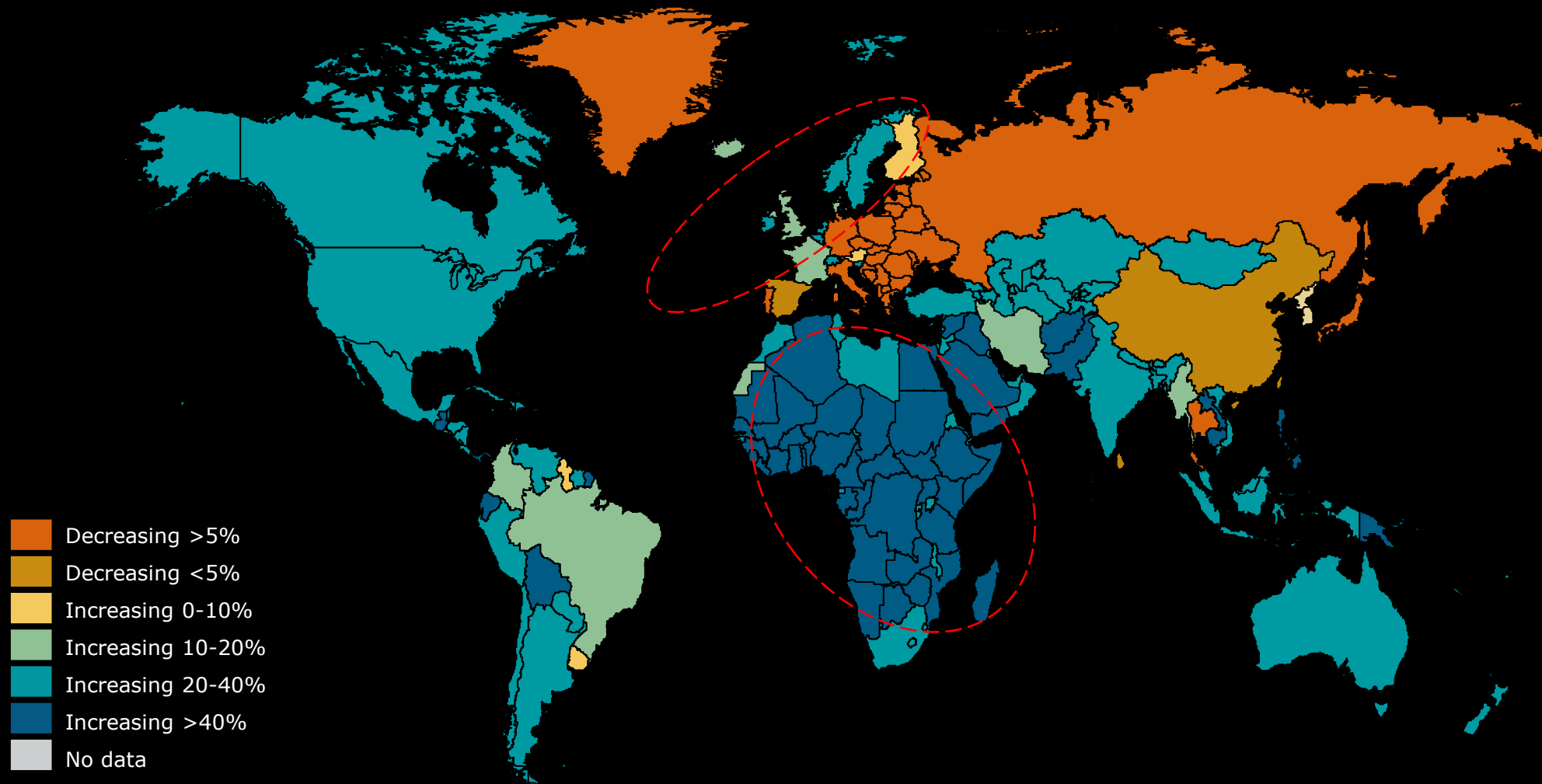
## Future of employment

- Lower dependency on labour intensive product flows
- Focus on knowledge intensive product flows
- Increased use of technology



# What will the future bring?

## Expected population growth till 2050



## Main takeaways

- We are getting **older**, becoming **more numerous** and have **less money to spend**
- **Trade** flows will become **more regional, knowledge and service** driven
- **Technology will gain importance** in our daily lives and act as a **balance** for **decreasing productivity**
- **Increasing concentration of people** will lead to increased **social license to operate** putting pressure on the way in which maritime operations are ran



# Thank you!

## Questions?