

Interaction between maritime industry and maritime research

**Growth strategy in the wake of crisis
- new challenges?**



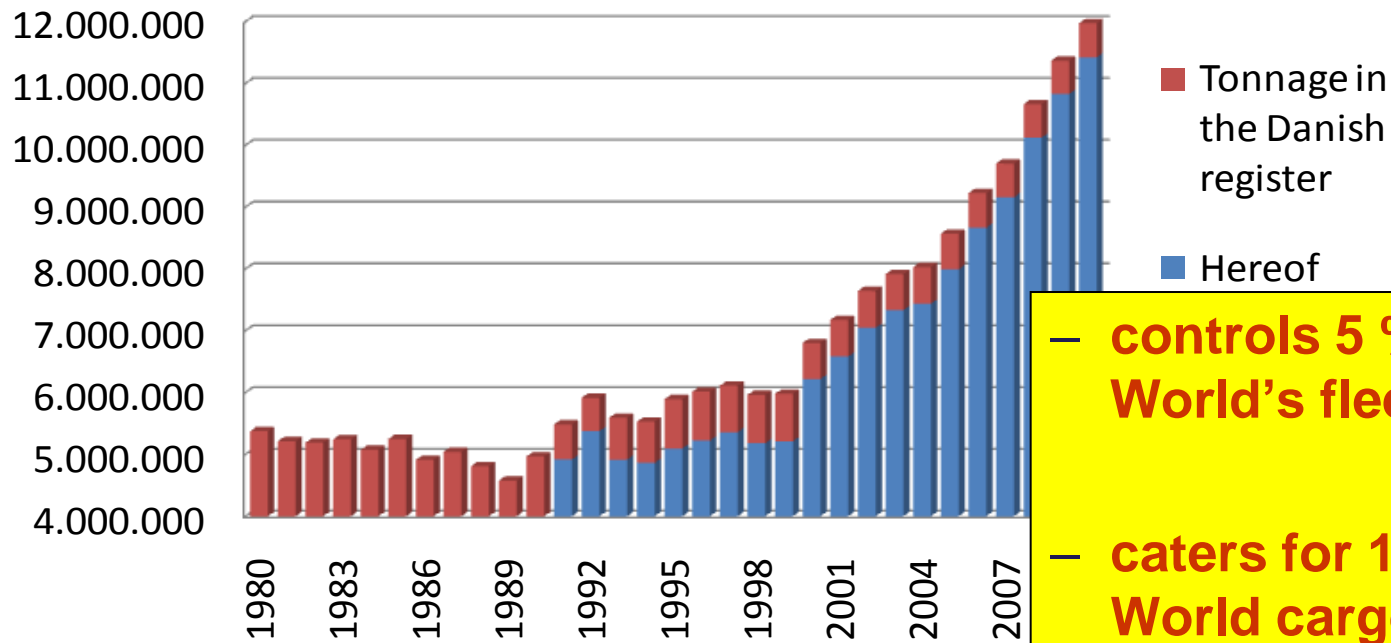
The 21st Century – a Century of Less

- **Communication – Wireless**
- **Phones – Cordless**
- **Cooking – Fireless**
- **Food – Fatless**
- **Sweets – Sugarless**

Shipping industry – Research-less ?

- **Needs – Endless**
- **Business Environment – Ruthless**
- **Demands – Shameless**
- **Financial Situation – Hopeless**
- **Salaries – Less and Less**

Danish shipping – stronger than ever



— controls 5 % of the World's fleet

— caters for 10 % of World cargo transport (measured in value)





The Danish Maritime Cluster - an agenda for growth 2011 -

Tax

- attractive and stable tax regime and commercial framework

Technology

- service oriented infrastructure, research, development and innovation

Talent

- recruitment and training decisive for increased growth



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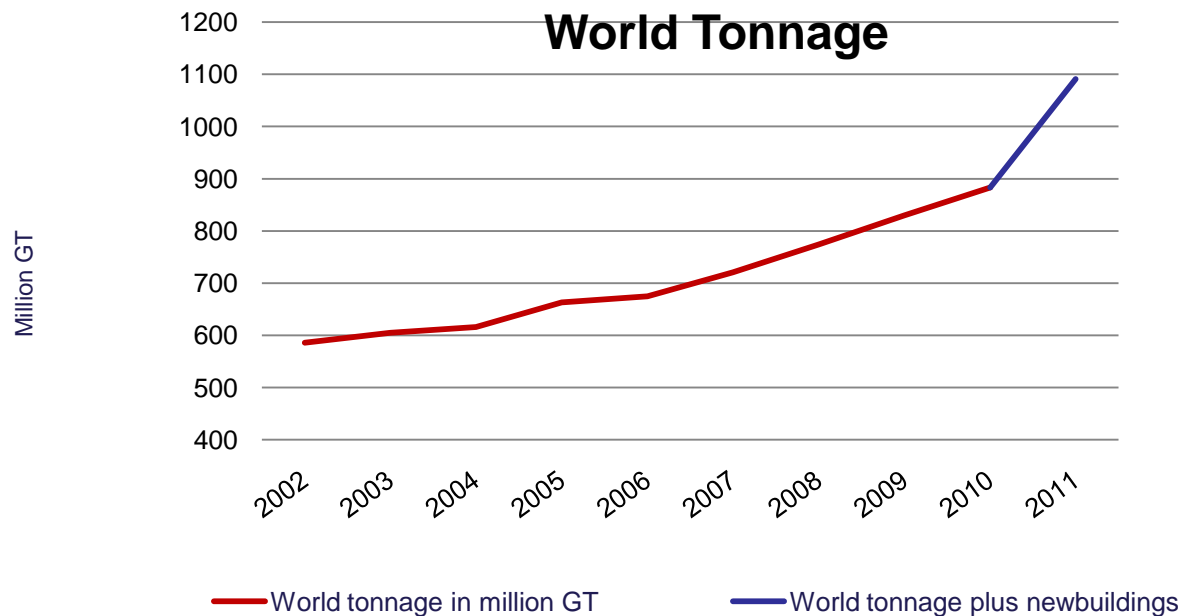
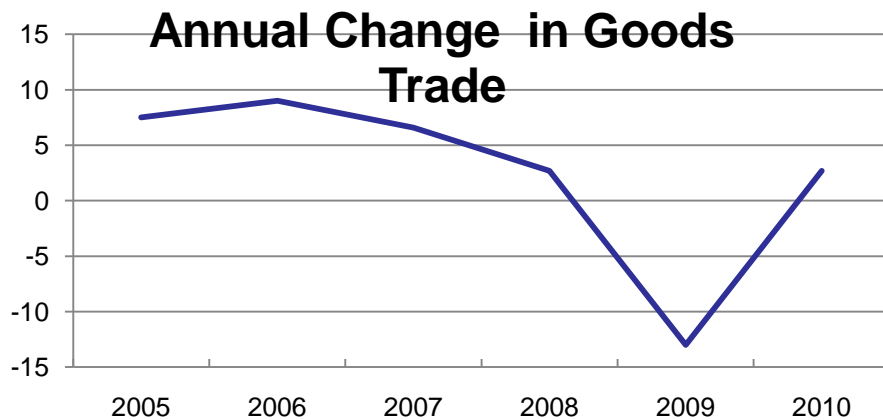
Characteristics of shipping industry

Genuine global industry

The backbone of globalisation

- Mobile production facilities
- International regulation
- Mobile labour force on a global market
- Tough competition on price





Characteristics of shipping industry

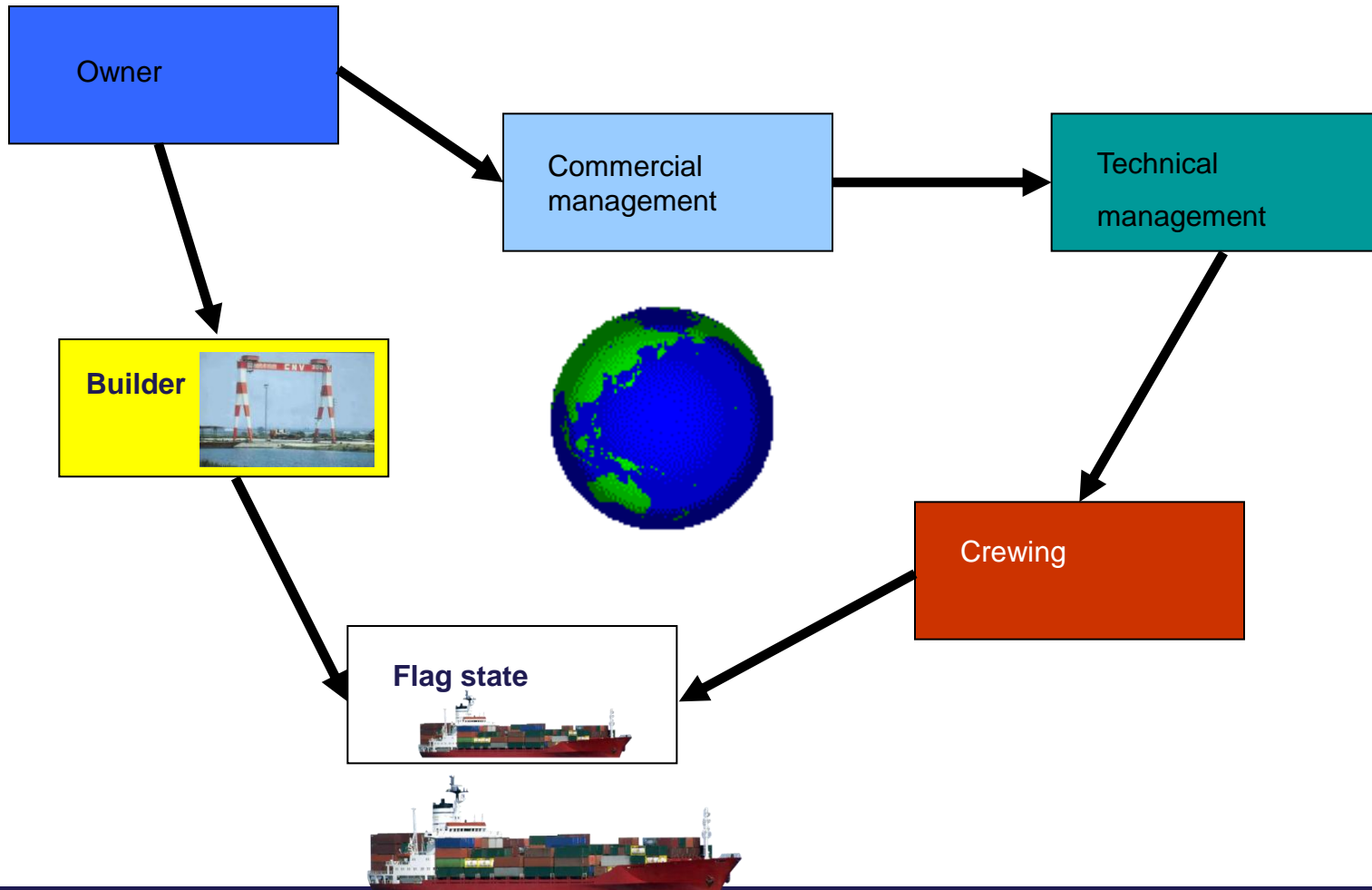
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The backbone of globalisation

- **Mobile production facilities**
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- **Mobile labour force on a global market**
- ***Tougher* competition on price**



Globalised shipping



Globalised shipping

○ How will maritime clusters develop after the crisis if Shipping Companies become truly global (rootless)?

Can a cluster be maintained across continents?

E Will the Danish cluster be able to maintain competencies on technical management – and if not then what?

Will the post crisis scenario require new talent and competencies?

Flag state



Characteristics of shipping industry

Tough competition on price

Demand driven industry

- **No new products**
 - Transport of goods from A to B is *the* product
- **Few and rare “technology jumps”**
 - None since containerization
- **Proces innovation important**



Proces innovation

Research based

- Hunt for drivers
- Requires close cooperation between industry and academia

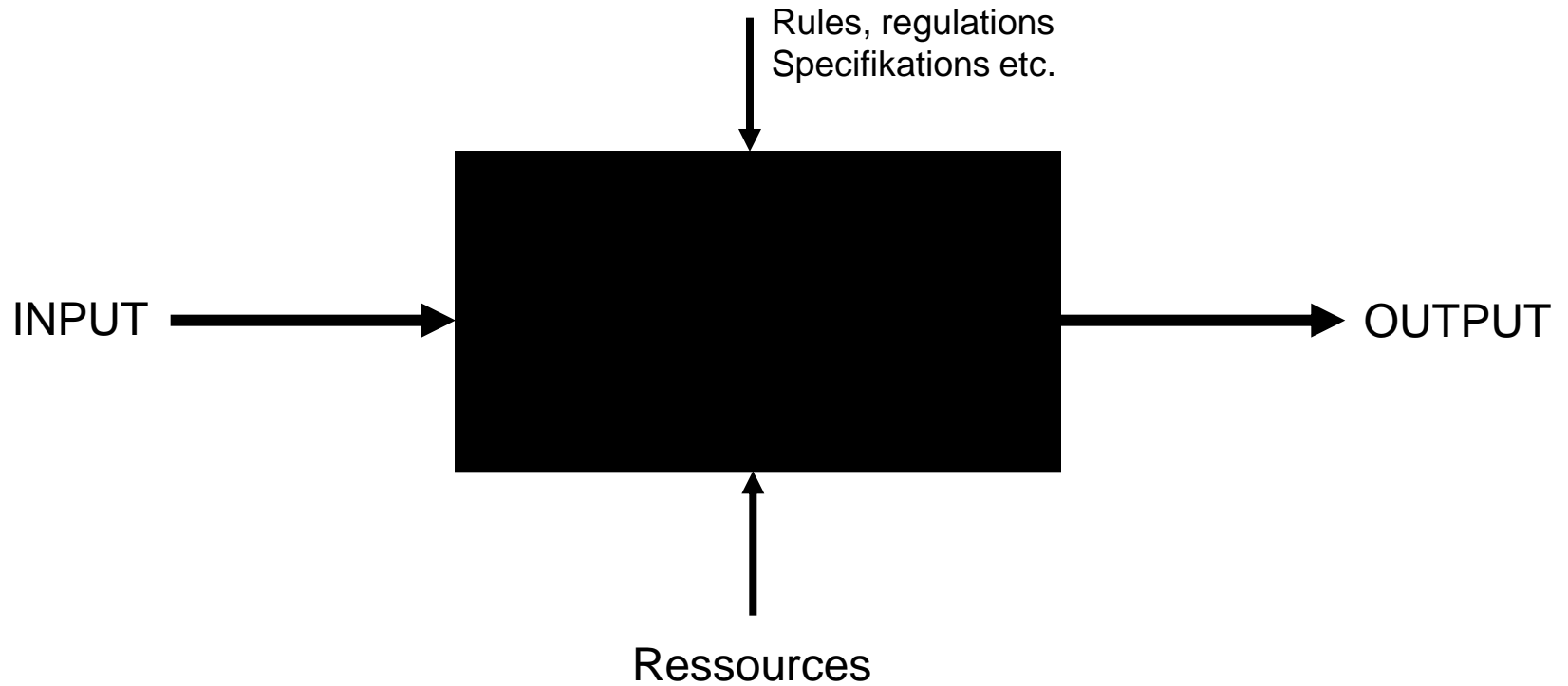
Incremental (small steps, user driven)

- Requires competencies
 - knowledge and ability to use it

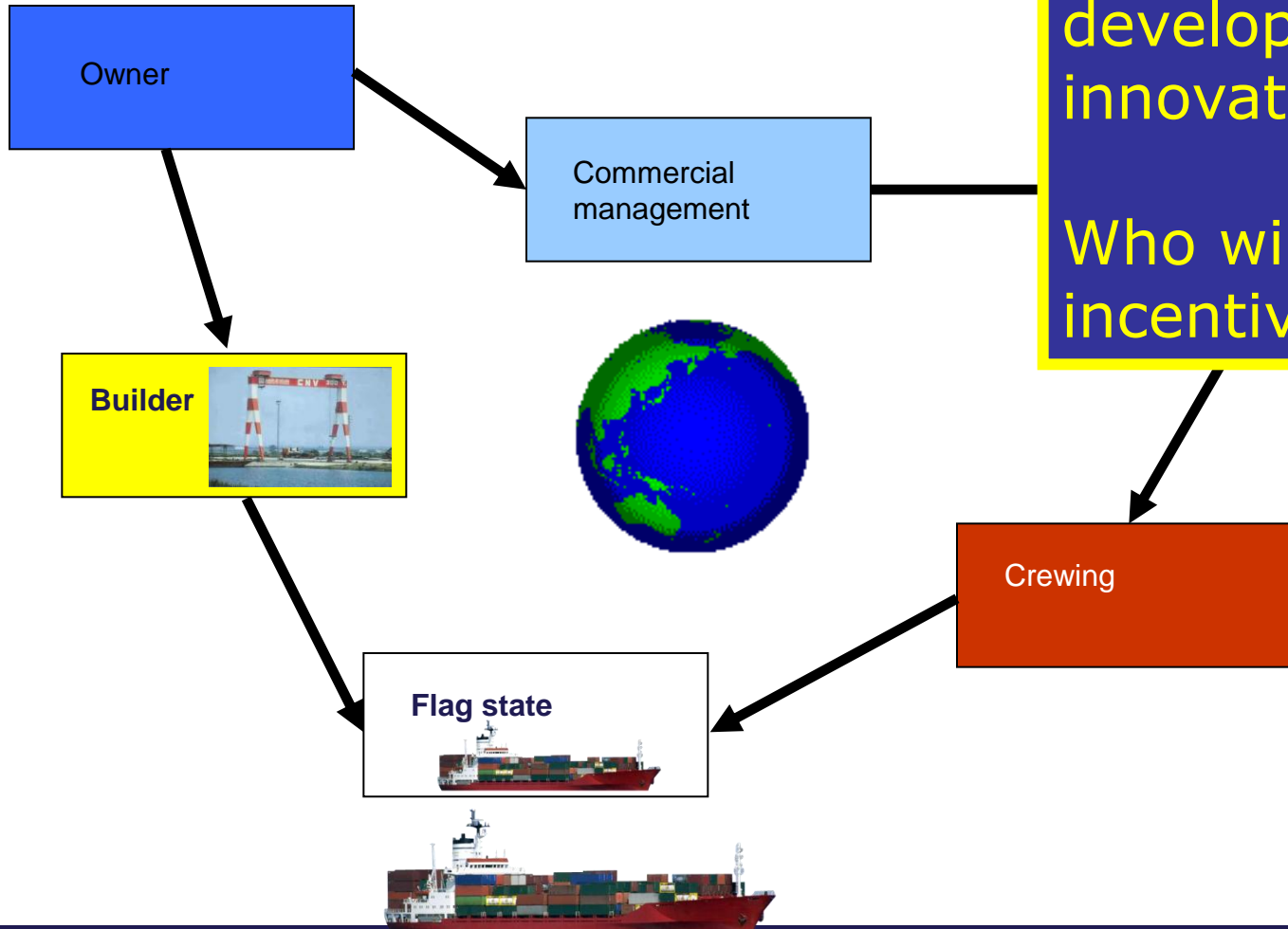
Needs kick starting?



The ship seen as a proces



Globalised shipping



In a world of outsourcing
Who will drive process development and innovation forward?
Who will have incentive?

Concluding remarks

Important challenges for R&D

- Vital questions to be asked and answered
- Proces innovation needs kick starting
 - Competitive advantage – Blue Ocean
- Tough challenge to break non-technical academic tradition
 - 3 sided
 - but important to lift this challenge





Thank you for your attention

