



**NTNU – Trondheim**  
Norwegian University of  
Science and Technology

# **The Role of Sustainability in Strategic Thinking in Norwegian Shipbuilding Industry**

*ShipArc 2015 – Malmo August 26*

**Presenter :** Faheem Ali, Researcher, NTNU

**Co-authors :** Annik Magerholm Fet, Professor, NTNU

**Dina Aspen, PhD Candidate, NTNU**

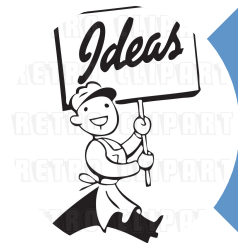
# Scope of the paper



Literature Review



Case Study



Deductions and  
Suggestions

# The Norwegian Shipbuilding Industry

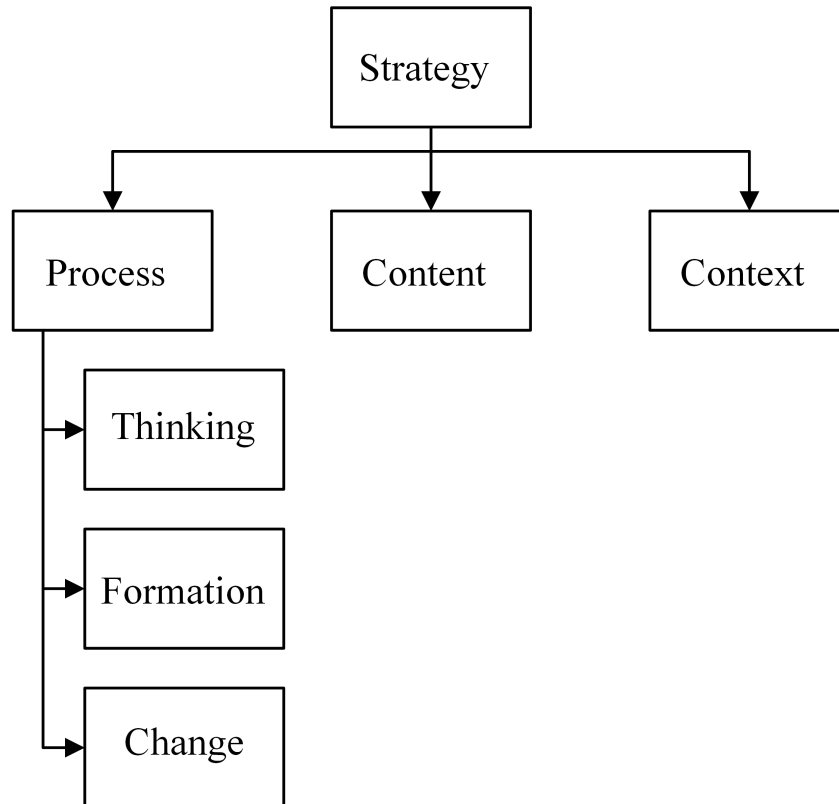
- Highly competent and technically advanced (Reve, 2012)
- Bulk share of the present orders come from the offshore service vessels category (Norwegian Shipowners Association, 2015)
- Mostly Engineer to Order vessels (Semini et. al 2014)
- Environmental friendliness and sustainability issues have been in the limelight for a good amount of time
- Stiff competition from low cost countries
- Increasing prominence of Arctic shipping and environmental regulations (IMO)

# Research Questions

- What is the strategic thinking process in the Norwegian shipbuilding industry?
- How has the focus on sustainability issues affected the strategic thinking in the industry?
- What practical step can augment the sustainability efforts of the Norwegian shipbuilding industry?

# Strategic Thinking

- Strategy and strategic thinking



**Strategy : Process, Content, Context**  
(Adapted from Wit and Meyer (2010))

# Strategic Thinking

- *a specific management activity whose aim is “to discover novel, imaginative strategies which can rewrite the rules of the competitive game; and to envision potential futures significantly different from the present” (Heracleous, 1998)*
- **Two major views**
  - Michael H. Porter – *a more analytical process*
  - Mintzberg – *a synthesis of ideas around strategy making process*

# Sustainability in Strategy

- Investments in sustainability initiatives translate to economical benefits for companies (Porter and Kramer 2011)
- Judicious environmental regulations would stimulate technical innovation and strategic changes in businesses (Porter and van der Linde 1995)
- Such innovations and changes have been recognized to be " Pay-to-be-green" strategies (Berchicci and King, 2007)

# Strategic Thinking and Sustainability

Insights from literature reviewed :

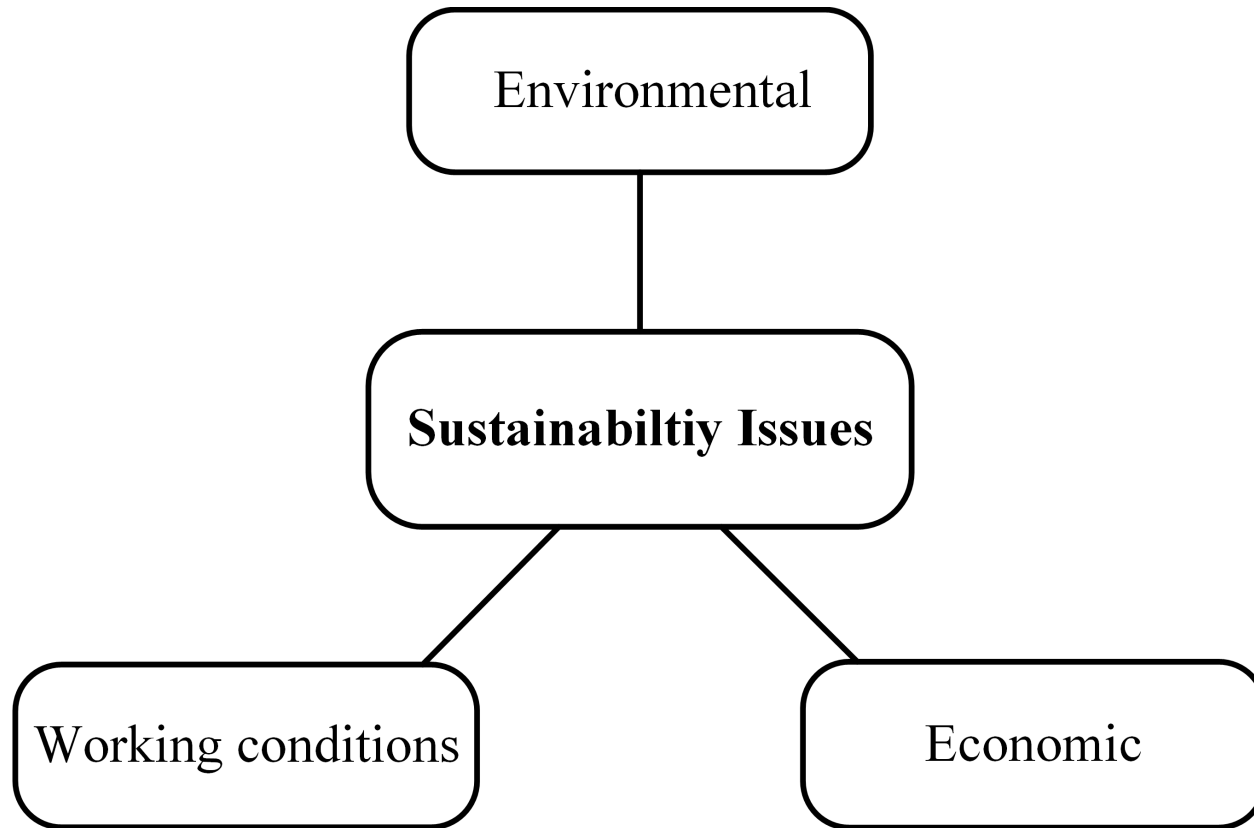
- Strategic thinking in business, distinct from strategic planning (Heracleous, 1998)
- A strong linkage is missing between the two concepts of strategic thinking and sustainability
- Two major theories in literature that link sustainability with strategic thinking
  - Shared Value Creation - Porter and Kramer (2011)
  - Natural Resource Based View - Hart (1995)



# Natural Resource Based View (NRBV)

- Proposed by Hart in 1995
- Relevant for any company working in close interaction with the environment, such as shipping
- Companies capabilities to tackle the environmental challenges will translate to competitive advantage
- Three dimensions to NRBV framework :
  - Pollution prevention
  - Product stewardship
  - Sustainable development

# Sustainability issues focussed upon



# Case companies for interviews

## Company A

- Over 100 years of organizational history
- Size : 800 - 1000
- Design and manufacturing customized OSVs
- New build and design

## Company B

- Over 100 years of organizational history
- Size : 200- 300
- Alternate fuel and hybrid vessels - ferries and fishing vessels
- New build and repair

# Interview - overview

Type of Interview	Respondent position in the organization	Number of formal interviews	Number of Informal interviews
<b>Case Company A</b>			
Face to Face	Deputy Managing Director	1	2
Face to Face	Manager Planning Department	1	1
Face to Face	Senior Business Analyst	1	2
<b>Case Company B</b>			
Face to Face	CEO	1	1
Telephonic	Sales Director	1	2

# Major Findings



Strategic thinking tools – Porter's 5 forces, PESTEL



Resource capability determine success of tools



Sustainability missing focus in such tools



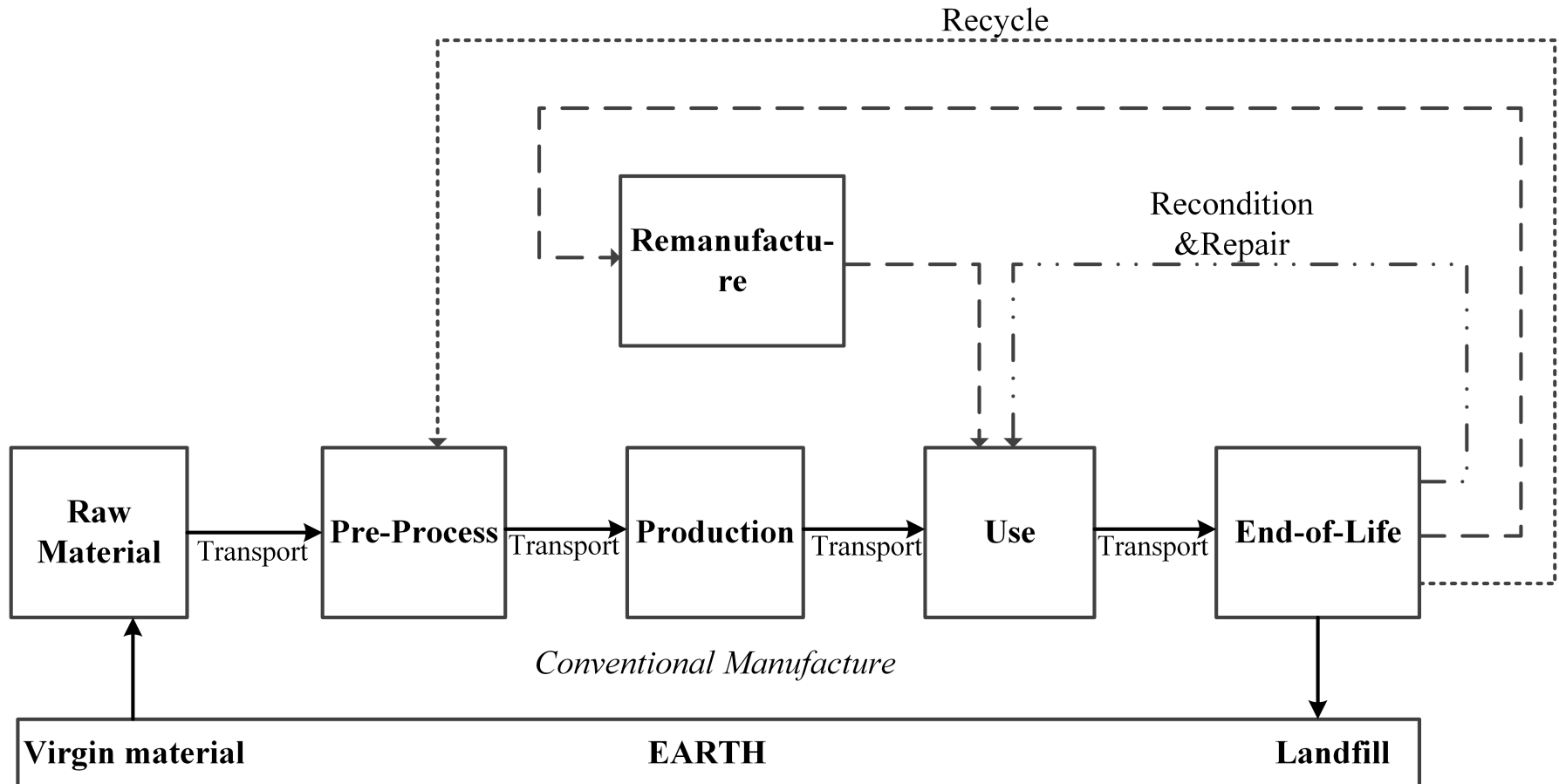
Practical steps driven primarily by economic benefits

# Major Findings

- Sustainability initiatives implemented in the case companies included lean production, alternate production technologies and so on.
- Lean was found to be a feasible concept in the shipyards
  - both economical and waste reducing
  - streamlined operations
  - increased efficiency

# Remanufacturing

- An alternate production concept that we found will be applicable in the industry



# Remanufacturing and the shipbuilding industry

- Already in practice is minor scale in one of the case companies, though commonly known as refitting
- An innovative production concept adding value to products in end of life cycle
- Developing a decision making framework on aiding companies remanufacture a vessel will make it more attractive



# Future Work



# Questions?



# THANK YOU

Email : [faheemak@stud.ntnu.no](mailto:faheemak@stud.ntnu.no)