



# **Research Seminar on Global Production and Communication**

Seminar at NTNU 13<sup>th</sup> June 2008

## **Seminar report**

**Department of Industrial Economics and Technology  
Management  
Norwegian University of Science and Technology,  
NTNU**

## **Preface**

The report is a summing up of a research seminar on Global Production and Communication. Since there has recently been a merger of two research groups within Globalization Program: Global Production and Global Communication into one called consequently Global Production and Communication (GL.P&C), there are now new questions and challenges opened to the researches.

The intention of the seminar was to present an ongoing research in both focus areas, and learn from each other about models of global production systems, and about communication tools and standards.

**Research Seminar on  
*Global Production and Communication***

**13. June 2008 09.00-14.00**

**Sentralbygg 1 – 11 etg Rom 1164 Gløshaugen**

**Agenda:**

- 0900-0915 Presentation of status and plans in the Global P&C-program, Annik M Fet
- 0915-0935 Models of global production systems, PhD Christofer Skaar
- 0935-0955 CSR and competitiveness in Global Production, PhD Natallia Vakar

**Coffe break**

- 1015-1045 Standardisation of communication, professor Tord Larsen
- 1045-1115 Communication Challenges faced by industry, direktør Tore Ulstein
- 1115-1145 'Culture' and management in a global context: The case of Auto ltd, post doc Sigrid Damman

**Lunch break**

- 1245-1315 Indicators and CSR-management as tool to promote better communication in value chains, post doc Ottar Michelsen and professor Annik M Fet
- 1315-1345 KPIs as communication tools in the maritime sector, senior researcher Egil Rensvik
- 1345-1400 Discussion, further plans.

Annik Magerholm Fet  
Coordinator of GP&C

**Participants of Research Seminar on  
*Global Production and Communication***

**13. June 2008 09.00-14.00**

**Sentralbygg 1 – 11 etg Rom 1164 Gløshaugen**

Annik Magerholm Fet

Tore Ulstein

Tord Larsen

Egil Rensvik

Sigrid Dammen

Ottar Michelsen

Christofer Skaar

Natallia Vakar

Magnus Sparrevik

James Rydock

Lucia Liste Munoz

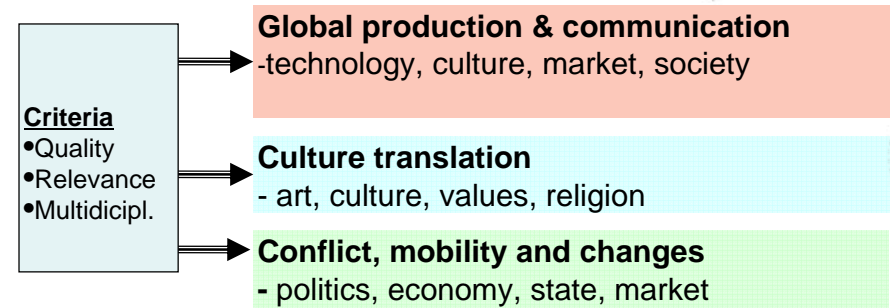
Alfnes Erlend

Øivind Hagen

Grøtan Tor Olav

# Global Production and Communication (GP&C) - Priorities and Budget 2008

Annik Magerholm Fet  
 Seminar 13.juni 2008



## Common key issues

GP: Production systems have been increasingly globalized, production is very often “off-shored” to countries with lower costs, lower labor and pollution control.

GC: Standardization of communication is central to the understanding of globalization processes as well as the understanding of the market in different cultural settings.

## The area leader group:

- Annik Magerholm Fet (leader), Dep. of Industrial Economics and technology management
- Carla Dahl-Jørgensen Department of Social Anthropology ,
- Hans Otto Frøland, The Department of History and Classical studies
- Erlend Alfnes, Department of Production and Quality Engineering
- Øystein Moen, Dep. of Industrial Economics and technology management
- Egil Rensvik, MARINTEK
- Johan Hustad, The Department of Energy and Process Engineering
- Tord Larsen, Department of Social Anthropology
- Tore Ulstein, Ulstein Group

Secretary: Ottar Michelsen, Dep. of Industrial Economics and technology management

## Overarching principles of GP&C

- Focus on sustainable (*environmental, social and economic issues*) and innovative solutions with a multidisciplinary perspective, particularly how sustainability can be a driver for innovation and how this is communicated.
- The understanding and communication of CSR in different countries will be an important part of the research.

## Key research goals:

- **understanding the environmental, cultural, social, economic and communicative challenges and expectations companies (large and SMEs) face in a global value chain.**
- **the examination of the barriers business need to overcome to position themselves in a global value chain while at the same time focusing on sustainable solutions in a global context.**

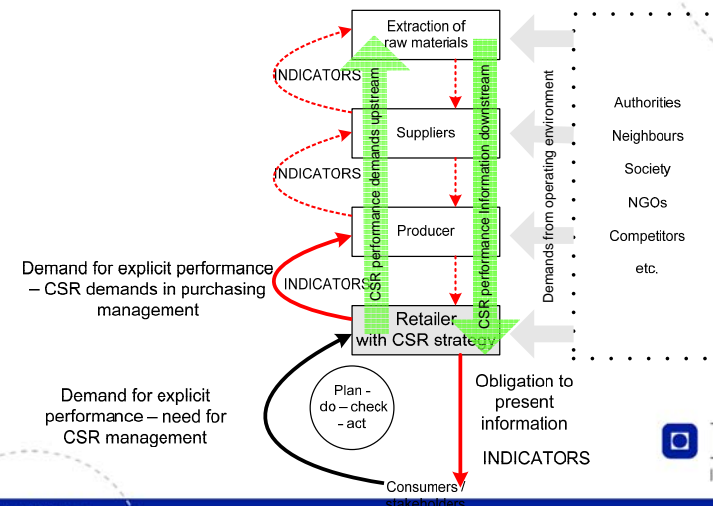
## The research should address

- *how firms deal with challenges and opportunities in the design and management of their **upstream** supply chain and network (supply chain management), and **downstream** activities (product life cycle management), as well as extended **producer responsibilities**.*

It will also address

- *how information is understood and communicated in the production system.*

## Illustration of a model for CSR driven SCM



## Prioritized sectors:

- The maritime industry, the energy sector, the material sector and the producers of common goods.

## Priorities for the budget in 2008:

The total 2008-budget for GP&C is 542275 NOK.

The area leader meeting 17.01.2008 recommended the following principles for prioritizations for 2008:

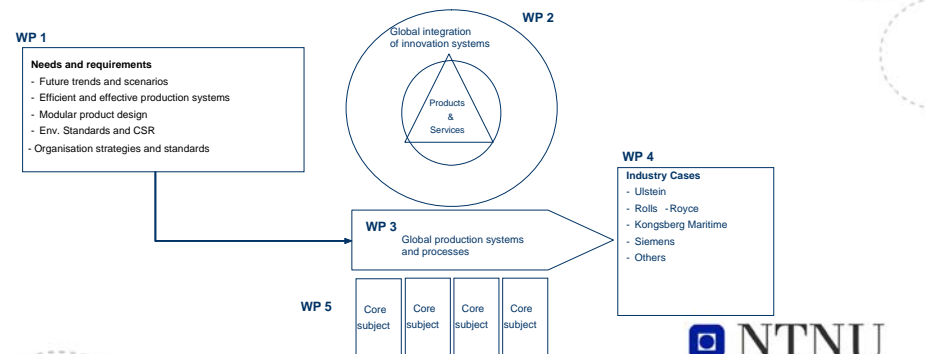
- A Application of new project proposals with external funding**
- B Activities of relevance under GP&C**
- C Further development of the research problems under GP&C**

## Budsjett 2008

<b>A Søknader om ekstern finansiering av prosjekter:</b>	<b>126 000</b>
1 Søknad KMB (NB søknadsfrist 13.02.2008)	15 000
2 Søknad BIA (løpende frist)	15 000
3 Brukerstyrte prosjekter, andre?	25 000
4 Vurdere aktuelle (EU-)søknader for videre bearbeidelse, aktuelle program for søknader <ul style="list-style-type: none"> <li>▪ 'People' (IIN Initial Training Networks - mts: 2. september)</li> <li>▪ SSH Linder 'Cooperation' -fristen september/oktober</li> </ul>	70 000
<b>B Faglige aktiviteter under GP&amp;C</b>	<b>100 000</b>
5 Seminarer PhD stipendiater og post doc under GP&C, <ul style="list-style-type: none"> <li>▪ 1 per semester</li> </ul>	10 000
6 Faglige seminarer i GP&C <ul style="list-style-type: none"> <li>▪ 7.-8.april, ØT, Topic: CSR</li> <li>▪ Høst 2008</li> </ul>	5000 10 000
7 Internasjonalisering, <ul style="list-style-type: none"> <li>▪ workshops,</li> <li>▪ konferanser</li> <li>▪ publisering</li> <li>▪ re ses:øtte</li> </ul>	75 000
<b>C Videreutvikle forskningsproblematikken i GP&amp;C</b>	<b>60 000</b>
8 Felles metodikk GP&C (guidelines? Opplæring i forskergruppen?)	30 000
systemteknikk	30 000
standardisering kommunikasjon	
<b>Annet</b>	<b>257 275</b>
Professor II	180 000
Kont Sitte i-roland (bevilget i 2007, overført)	55 000
Lønnsø	42 275
<b>TOTAL</b>	<b>642 275</b>

## Eksempel aktiviteter våren 2008

- KMB-søknad Innovation in Global Maritime Production 2020 (IGLO-MP), budsjett 15 mill over 3 år



# CSR-seminar 7.-8. april

se rapport på

[www.csr-norway.no](http://www.csr-norway.no)

NTNU  
Norwegian University of  
Science and Technology  
Faculty of Social Sciences and Technology Management  
Department of Industrial Economics and  
Technology Management

C(S)R in Global Value Chains: a  
Conceptual and Operational  
Approach

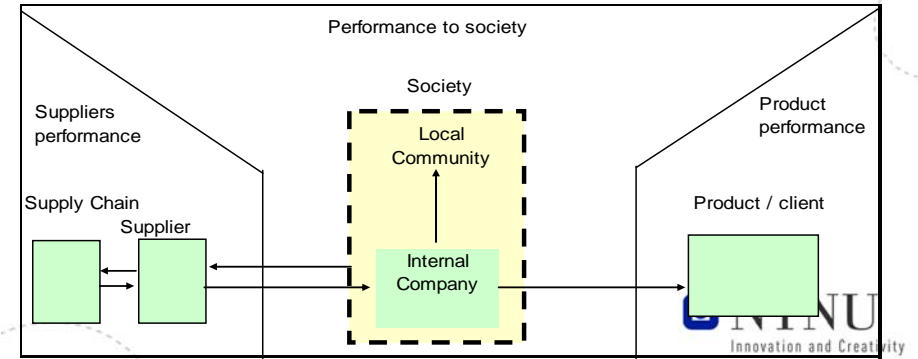
Implications for CSR Practice  
along the Value Chain

Trondheim, 7-8 April 2008



# EU-prosjekt **CSR-region**

- Søkt des 2007, fikk 14 poeng, men ikke lovet finansiering, var i møte Polen tirsdag, skal på forhandlingsmøte i Brussel 5.juni



# New call – opens sept 2008

## SSH-2009 - 2.1.3. Impacts of corporate social responsibility

Corporate social responsibility (CSR) is an important new phenomenon that should give enterprises an important role in helping to achieve the Lisbon and Gothenburg objectives. However, there is still little empirical knowledge as to how CSR impacts on the EU economies and societies. Research should empirically assess how CSR is, in practice, beneficial to the Lisbon and Gothenburg objectives and favour the development of better methodologies and tools to measure the impact of CSR activities at different levels:

- At company level, addressing motivations to take up CSR activities by companies and reasons for differences in CSR performance across companies, also in the SME sector, including the link between CSR and innovation;
- At European, regional or sectoral levels, through comparisons of regions or business sectors where CSR strategies are deployed and have different impacts on growth, competitiveness, quality of jobs and sustainable development.

**Funding scheme: Collaborative project (small or medium-scale focused research project)**

# Research seminar 13.06:

Models of global production systems, PhD Christofer Skaar

CSR and competitiveness in Global Production, PhD Natallia Vakar

Standardization of communication, førsteam. Tord Larsen  
Communication Challenges faced by industry, direktør Tore Ulstein

'Culture' and management in a global context: The case of Auto ltd, PhD Sigrid Damman

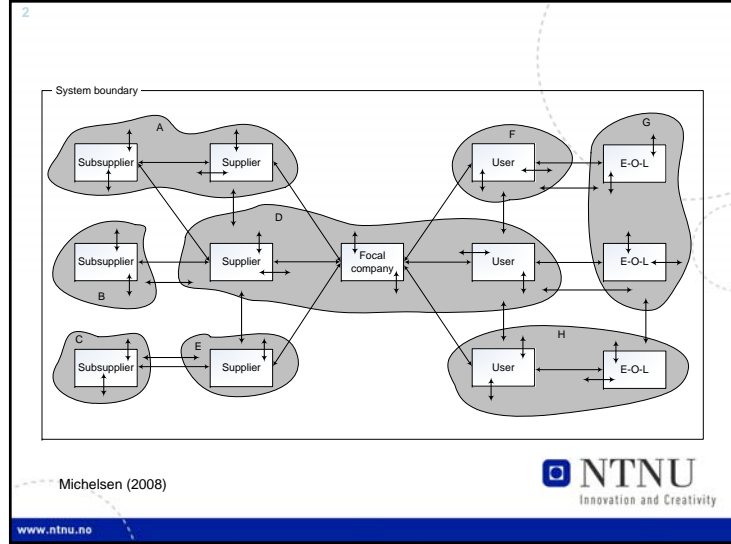
Indicators and CSR-management as tool to promote better communication in value chains, post doc Ottar Michelsen and professor Annik M Fet

KPIs as communication tools in the maritime sector, senior researcher Egil Rensvik



**Models of global production systems**

Christofer Skaar  
13 June 2008



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## UN Global Compact

- **Human Rights**
- Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and
- Principle 2: make sure that they are not complicit in human rights abuses.
- **Labour Standards**
- Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- Principle 4: the elimination of all forms of forced and compulsory labour;
- Principle 5: the effective abolition of child labour; and
- Principle 6: the elimination of discrimination in respect of employment and occupation.
- **Environment**
- Principle 7: Businesses should support a precautionary approach to environmental challenges;
- Principle 8: undertake initiatives to promote greater environmental responsibility; and
- Principle 9: encourage the development and diffusion of environmentally friendly technologies.
- **Anti-Corruption**
- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

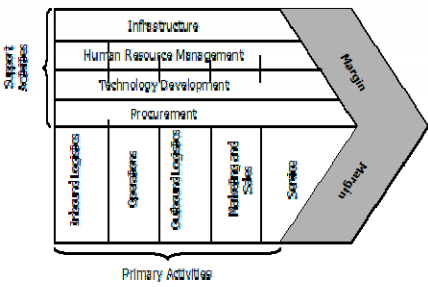
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## Global Reporting Initiative: TBL

<b>Economic</b>	Economic Performance, Market Presence, Indirect Economic Impacts
<b>Environmental</b>	Materials, Energy, Water, Biodiversity, Emissions, Effluents, and Waste, Products and Services, Compliance, Transport, Overall
<b>Social:</b> Labor Practices & Decent Work	Employment, Labor/Management Relations, Occupational Health and Safety, Training and Education, Diversity and Equal Opportunity
<b>Social:</b> Human Rights	Investment and Procurement Practices, Non-Discrimination, Freedom of Association and Collective Bargaining, Child Labor, Forced and Compulsory Labor, Security Practices, Indigenous Rights
Society	Community, Corruption, Public Policy, Anti-Competitive Behavior, Compliance
Product Responsibility	Customer Health and Safety, Products and Service Labeling, Marketing Communications, Customer Privacy, Compliance

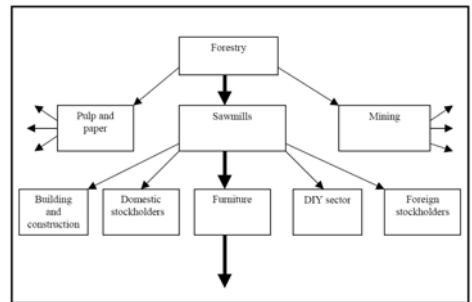
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# Origin of value chain concept



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# Value chain



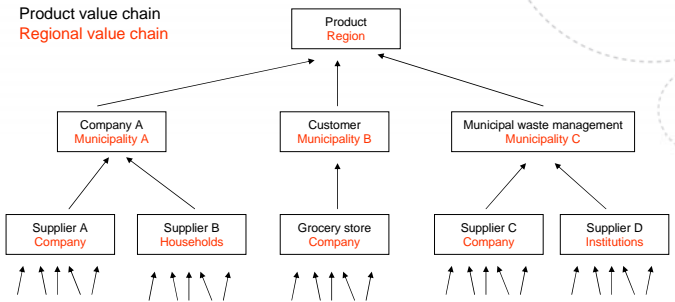
Kaplinsky and Morris (2001)



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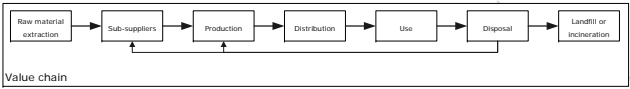
# Hierarchical value chains

Product value chain  
Regional value chain

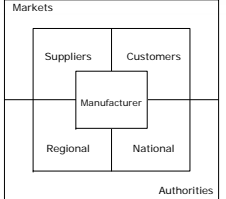


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# Value chain



## Value chain entry point



- Key issues:
- Economic flows
  - Material flows
  - Information flows
  - Governance
  - Stakeholders



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## SC and VC

Value chain

1. Value chain
2. Supply chain, value system, value chain
3. Supply chain
4. Supply chain, value chain
5. Extended supply chain, value chain

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Figure 2: Illustration of layers of production (tiers) for a 2 by 2 system

Solli and Strømman (2005)

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## Defining foreground and background systems (1)

	Ship management	Ship building	Steel	Electricity	Concrete
Ship management					
Ship building					
Steel					
Electricity					
Concrete					

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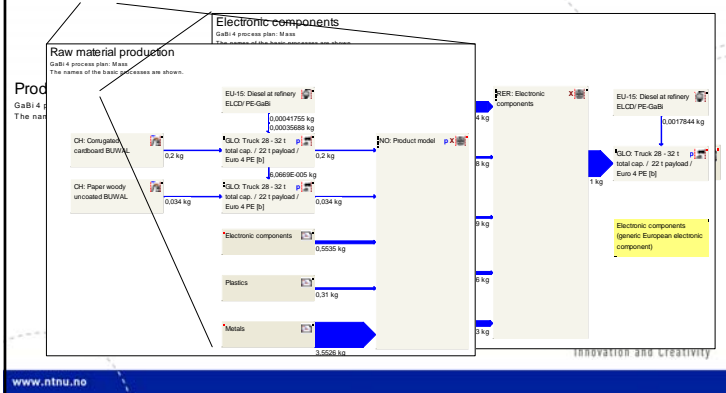
## Defining foreground and background systems (2)

Source: Modified from Azapagic and Perdan (2000)

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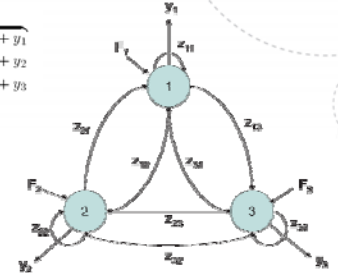
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# LCA model



# LCA and IOA model of production system

$$\begin{aligned} \overbrace{F_1 + z_{11} + z_{21} + z_{31}}^{in} &= \overbrace{z_{11} + z_{12} + z_{13} + y_1}^{out} \\ F_2 + z_{12} + z_{22} + z_{32} &= z_{21} + z_{22} + z_{23} + y_2 \\ F_3 + z_{13} + z_{23} + z_{33} &= z_{31} + z_{32} + z_{33} + y_3 \end{aligned}$$



The total demand can be found by calculating the Leontief inverse matrix  $x=(I-Z)^{-1} * y$ .

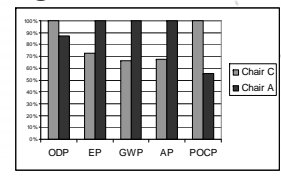
Source: Solli and Strømman (2005)

# Key issues

- How to include the corporate value chain in product information
  - Identifying the 'good' value chain
  - Social aspects in product information
    - Starting point: Occupational health and chemical use
- How to connect to overall sustainability measures and strategies
  - Are not connected or are loosely connected to top down approaches
- Is static, not dynamic
- Gathering specific information is resource consuming
  - What is the foreground system? (specific data)
  - What is the background system? (generic data from databases)
- How to aggregate when goals and targets will vary along the value chain?

# Communicating the results

- KPI
- Balanced scorecard
- EPD
- Dashboard
- Index



# Competitiveness and CSR in Global Production

**Seminar GI.P&C  
13 June 2008**

Natallia Vakar  
Department of Ind. Economics and Technology Management



*... if you know your enemies and know yourself,  
you will fight without danger in battles.  
If you only know yourself, but not your opponent,  
you may win or may lose.  
If you know neither yourself nor your enemy, you  
will always endanger yourself.*

"The Art of War" Sun Tzu, 6th century BC



## ***Evaluation enables the firm to:***

- determine what is working well, why and how to ensure that it will continue to do so;
- investigate what is not working well and why not,
- explore the barriers to success and what can be changed to overcome the barriers;
- assess what competitors and others in the sector are doing and have achieved;
- rethink original goals and make new ones if necessary.



## Competitiveness ?

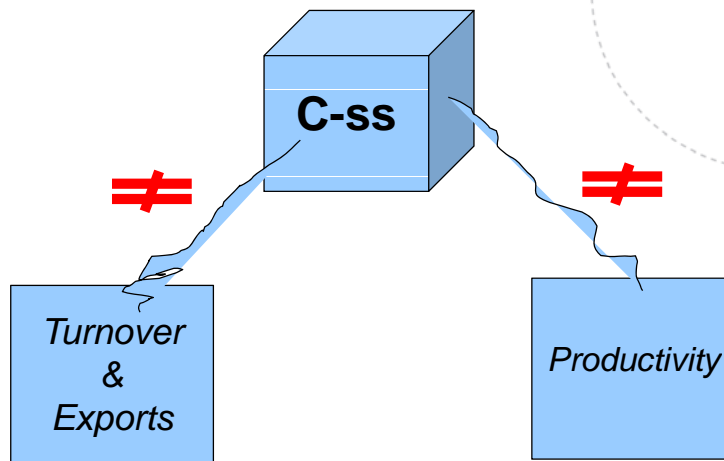
“...strength of a company in comparison with its competitors.”

(Murtha and Lenway, 1998).

## World Competitiveness Centre (created in 1989)

Prof. Stephane Garelli

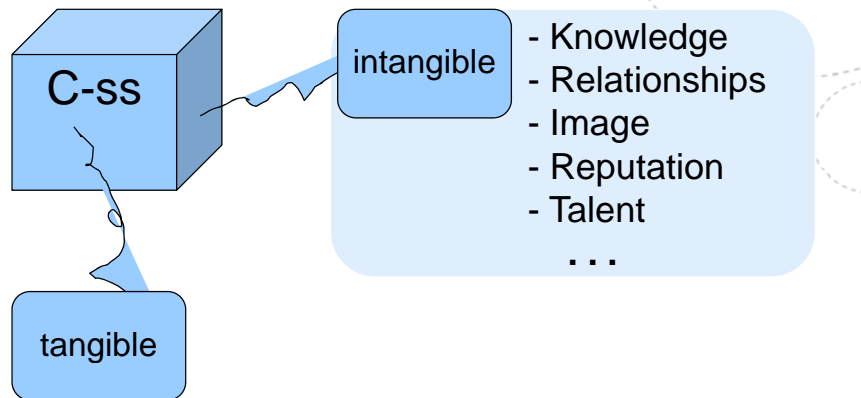
**IMD** (International Institute for Management Development), Lausanne, Switzerland



“Traditionally, many authors have considered **productivity** as a good indicator of competitiveness at a firm level “

(Porter, 1985).

## Competitiveness ↔ CSR



## Hypotheses:

### 1<sup>st</sup> hypothesis:

It's possible to define and assess the impact of CSR on companies' C-ss as well as their interdependency.

### 2<sup>nd</sup> hypothesis:

It's possible to assess the impact of upstream and downstream companies' performance on the C-ss of the considered company.

## Companies for Case Studies

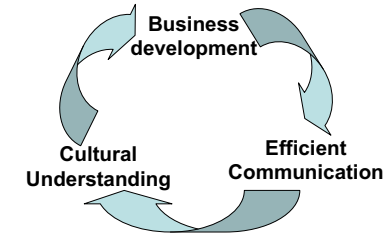
- **Ulstein Group**
- **DEVOLD**

- How is it possible for companies to use a concept of CSR and CSR-activities as a **workable tool** for *managing (esp. enhancing)* their level of competitiveness?
- How to use the obtained results of evaluation of companies' competitiveness at a **profit** of development and innovation *of the whole global value chain*, products in a global supplier's network, and marketing mechanisms for sustainable solutions?

## Communication challenges in industry

Tore Ulstein, Dr.ing.  
Deputy CEO, The Ulsteingroup

## A possible model of integrating Communication ...



## Efficient communication ... through different Channels / Arenas



## Visjon – kommunikasjon



- Skape verdier for selskapet, tilsette, eigarane og KUNDENE gjennom:
  - Å identifisere, presentere og distribuere relevant informasjon til relevante målgrupper
  - Å bidra til at kommunikasjon vert brukt som eit strategisk verktøy for å nå selskapet sine forretningsmessige mål
    - Komm.planar, puplikasjonar, mediarbeid, web,intranett, messer, giwe-aways m.m
- **Kommunisere på ein måte som skil oss ut i marknaden**



## Filosofi – kommunikasjon

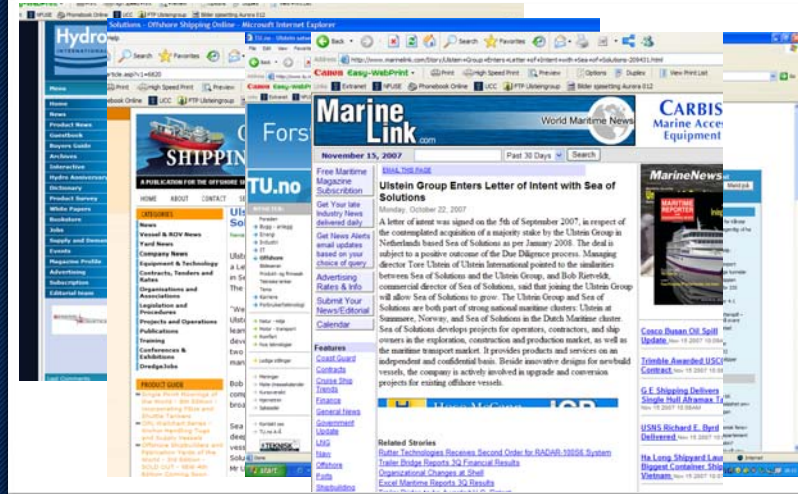
- Kommunikasjon er ein del av verdikjeda
- Open og pro-aktiv kommunikasjon gir best resultat
- Bodskap skal ta utgangspunkt i og tilpassast målgrupper
  - Basert på same kommunikasjonsplattform
    - Verdier – identitet – fakta – profil
- God eksternkommunikasjon er tufta på god internkommunikasjon
- Integrrert kommunikasjon gir størst gevinst
- All kommunikasjon skal vere mottakarorientert----

- Kva betyr dette for meg?
- ... og strategisk
- Hva ynskjer vi å oppnå ?



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## Sea of Solutions

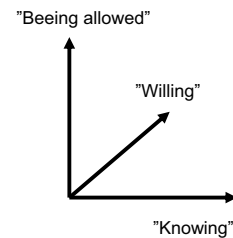


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## Understanding cultural differences

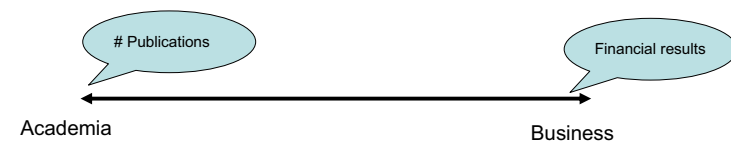
- Possible definition of an Innovation Culture
- Three important dimensions

- Knowing ...having the knowledge about something
- Wanting ... wanting to use it
- Being allowed ... being allowed to use it



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## Understanding cultural differences (ii)

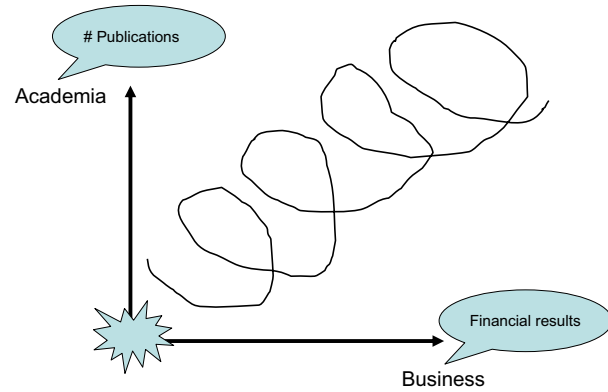


How do we approach this paradox?

Breaking the linear thinking ...

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Understanding cultural differences (iii)



Understanding cultural differences (iv)



- So, what does this mean ??
- consequences
- measures

Business Development

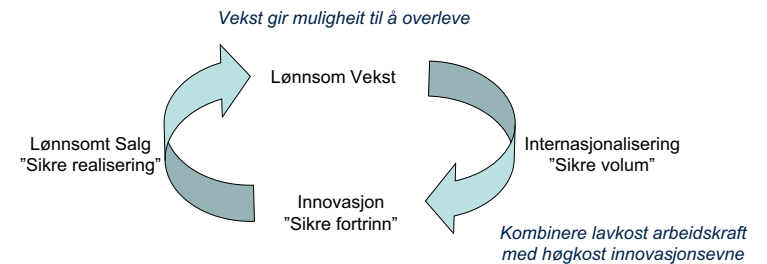


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TURNING VISIONS INTO REALITY

Forretningsutvikling

- Norge er et land med høyt kostnadsnivå!
- Sansynligheten for at dette stiger > enn at det går ned!
- Fokus på aktiviteter som forsvarer eit høgt kostnadsnivå  
=> Innovasjons- & kompetanseintensive aktiviteter

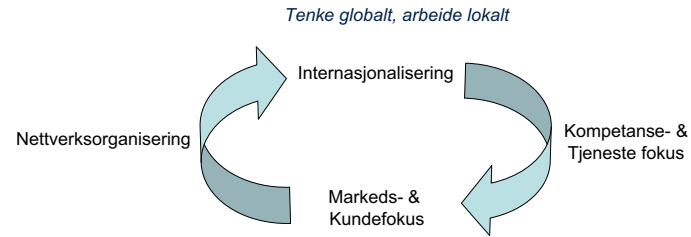




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TURNING VISIONS INTO REALITY

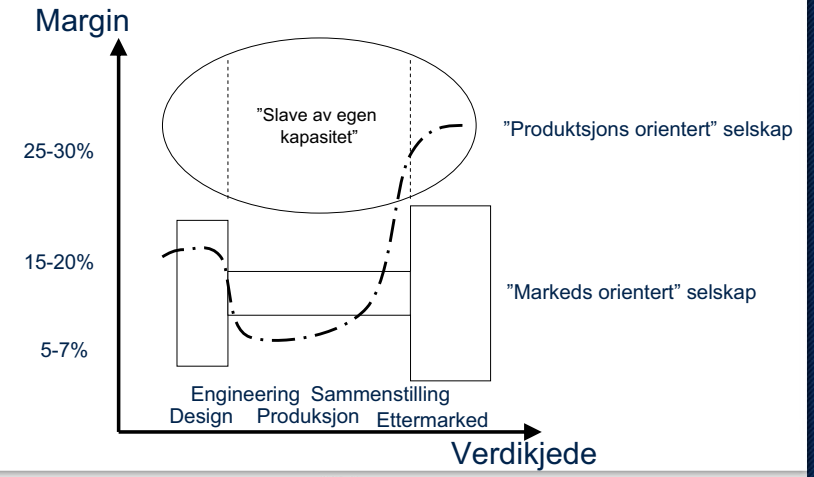
### Forutsetninger for Internasjonalisering



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### Kompetanse- & Tjenestefokus



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TURNING VISIONS INTO REALITY

### Global aktør

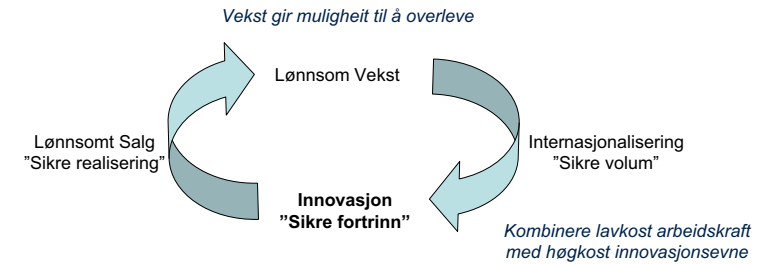


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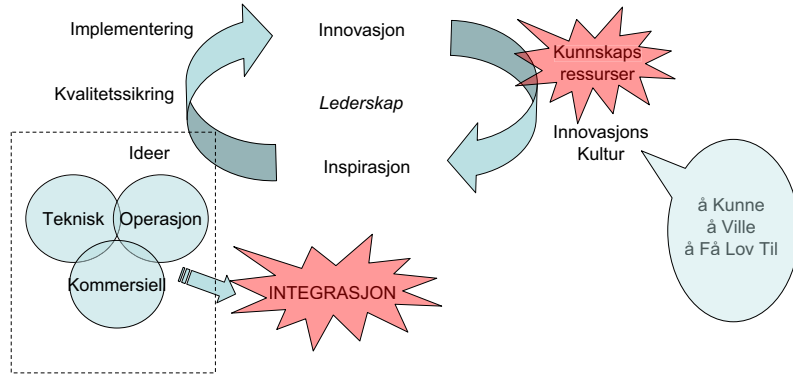
TURNING VISIONS INTO REALITY

### Forretningsutvikling

- Norge eit land med høgt kostnadsnivå
  - Sannsynligheita for at dette aukar > at det minkar!
  - Fokus på aktivitetar som forsvarer eit høgt kostnadsnivå  
=> Innovasjons- & kompetanseintensive aktivitetar



## Innovasjon



## Inspirasjon



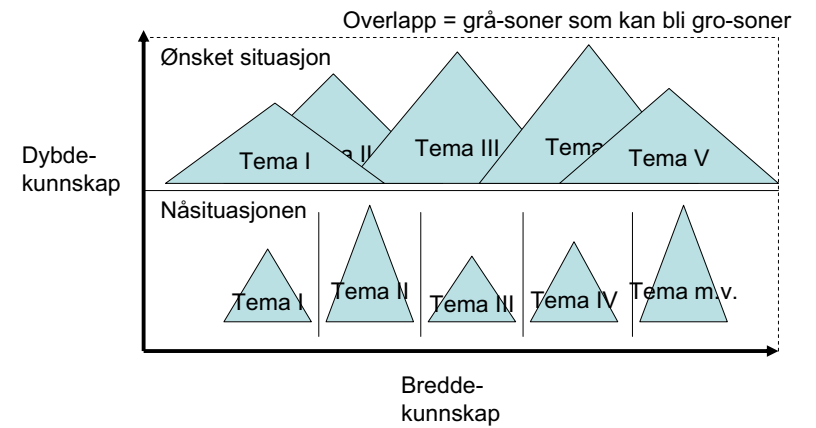
## Inspirasjon

### Science Fiction

Form, function, esthetics

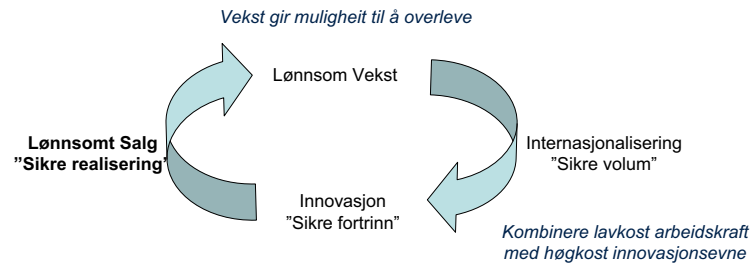


## Tverrfaglig integrering av kunnskap

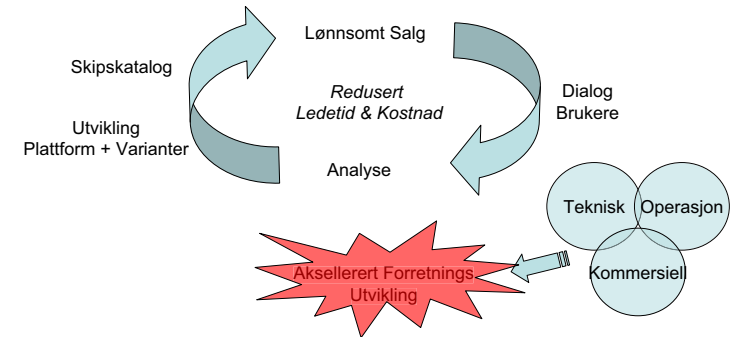


### Forretningsutvikling

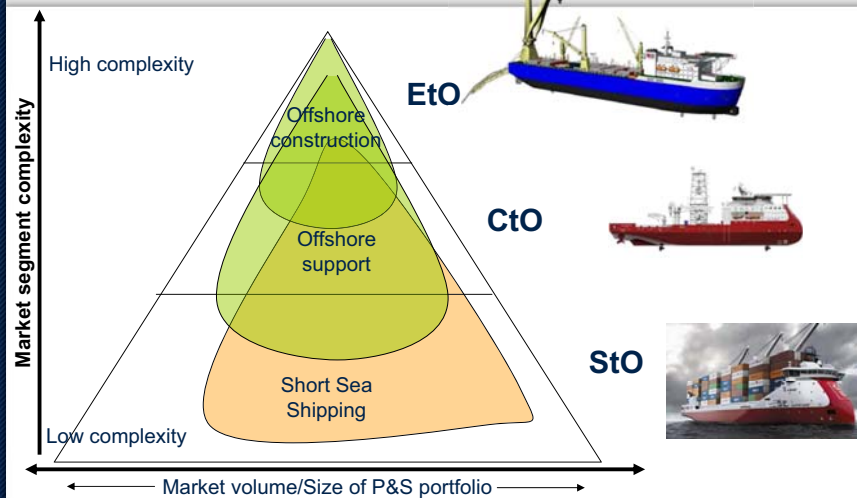
- Norge eit land med høgt kostnadsnivå
  - Sannsynligheita for at dette aukar > at det minkar!
  - Fokus på aktivitetar som forsvarer eit høgt kostnadsnivå  
=> Innovasjons- & kompetanseintensive aktivitetar



### Lønnsomt Salg

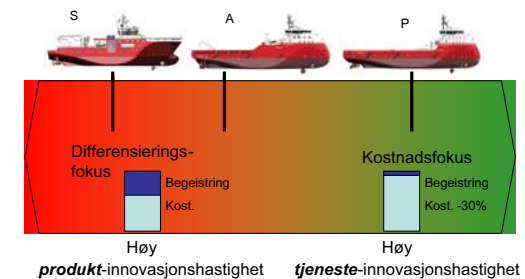


### Ønska marknadsposisjon



### Nye markedstilnæringer er nødvendig...

- Flerkanals merkevarebygging og posisjonering er nødvendig
- Skipskatalog basert på modulariserte and standardiserte design og byggeprosesser
- Nettverksbasert utviklings- og produksjonsmiljø
- Forretningssystembygging er viktigere enn fremtiden til den enkelte produksjonsenhet
- *Kanibalisering* av egen operasjon/produksjon er viktig for å skape tilstrekkelig tilpasningsdynamikk og innovasjon i selskapet og i produkt- og tjenesteporteføljen



## Hvilke veier kan vi ta?

- "Foregangs"-selskap eller "Diite-etter-selskap"
- Nær til kunder og kundes kunder – konseptleverandør eller
- fjern til kunder og kundes kunder - produktleverandør

Fokus bør være å identifisere og ta kontroll over de aktivitetene som tilfører produktet og kunden mest verdi



## Kunnskapsressurser ... Barnehagar og skule

- Kunnskap om lokalt næringsliv og lokalsamfunnet
- Samspel mellom skule og næringsliv- ein vinn-vinn situasjon
- Bruke lokalsamfunnet sine ressursar for å få til ei levande undervisning



## Barnehagar og skular - Kva gjer næringslivet?

- Informasjon, bedriftsbesøk og opplevingar
- Prosjektarbeid
- Rettleiing mot yrkesval



## Barnehagar og skular - Kva gjer næringslivet?

### Konkrete tiltak i nærmiljøet:

- 4.klasse-prosjektet
- **Ungdomsskuleprosjekt i samarbeid med NTNU:**  
Design og bygging av skipsmodellar
- Kunst og handverksfaget: Designkonkurranse
- Utplassering for yrkespraksis
- Læringsplassar
- TAF-ordning
- Motivasjonskurs for vidaregåande skular mot ingeniøryrket
- **Praktiske matematikkoppgåver ute i bedriftene for 3.klasse vidaregåande.**



## Kunnskapsressurser ... Universitetsmiljøene – utfordringer?

- Vanskeligere å utføre forskningsarbeid i samarbeid med industrien pga mer aggressiv IPR regime ved universiteter.
  - Bedrifter risikerer at universiteter patenterer i bedriftens egen kjernevirksomhet
    - de får innsyn i bedriftens teknologi og problemstillinger.
- “Universiteter på hvert nes” gjør at vi kan risikere å ende opp med mange underkritiske fagmiljøer bestående av middelmådigheter.
  - => **SFF og SFI er gode tiltak mot dette**
- Norske universitetene har de siste årene blitt mindre attraktive for ansatte ift industrien
  - Topp forskere i Norge er også attraktive for internasjonale FoU miljøer. Med andre ord kan norske universiteter tappes for dyktige folk både til industri og internasjonale FoU miljøer/universiteter.

## Konklusjoner

- Ulike markedssituasjoner og tilstander krever ulike forretningsløsninger for hvordan *beste* verdiskaping kan genereres
- Det er derfor nødvendig å utfordre sitt eget forretningskonsept når markedssituasjonen og eller et mulighetens tidsvindu spiller seg
- Morgendagens forretningskonsept består av **integre**te operasjoner gjerne i form av ulike korporativt ressursnettverk
- Ressursnettverkene må normalt krysse landegrensene for å gi maksimal verdiskaping, forutsigbarhet og robusthet
- Det finnes teori, metoder, og praksis for hvordan slike samvirkende ressursnettverk kan bygges opp og vedlikeholdes, men det er ikke så lett å få det til...
- **Å tiltrekke seg de beste ”hodene” er kanskje vår største utfordring i årene som kommer ...**
  - **Tenke langsiktig!!**

*Vi samarbeider når det er mulig og konkurrerer når det er nødvendig!*



**ULSTEIN**<sup>®</sup>

TURNING VISIONS INTO REALITY

*Takk for oppmerksomheten!*

For ytterligere detaljer og spørsmål:

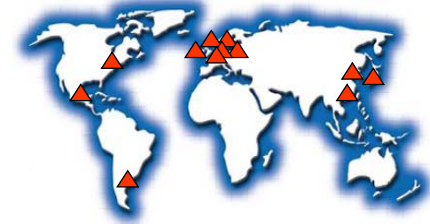
- [Tore.Ulstein@ulsteingroup.com](mailto:Tore.Ulstein@ulsteingroup.com)

## 'Culture' and management in a global context: The case of Auto ltd

Sigrid Damman  
Seminar GP&C, NTNU  
13 June 2008

## 'Culture' and management in a global context

- Interdisciplinary framework
- Auto Ltd
  - Global presence
  - Global culture?
- Longitudinal study
  - Data from 2001-2005
- Research and action
  - 180 interviews
  - Observation
  - 'peripheral' participation
    - Dialogue, training, improvement proposals



## Practically-oriented part studies



- Team leadership and training (Norway and Sweden)
- Production transfer (Poland, UK, Sweden, Norway)
- Central vs. distributed decision-making (US and Mexico)
- Communication and motivation in intercultural organisations (South Korea)
- Defining and debating corporate values (all units)
- Global management (all units)

## Overarching research focus

- Management as a social process
- 'Auto's way'
  - Project and practice
  - Standardisation scheme
- Cross-border negotiations
  - Time/space
  - History
  - Social ranking, positions
  - Technology
  - Organisational politics
  - (Cultural) selves and others
  - Rational of the organisation
- Application of the culture concept in this context





## Analytical approach

- 'Culture' as
  - Management instrument
  - Standard
  - Object of translation
  - Object of discourse
- Interaction with other standards
  - Lean production
  - MBTI
  - (SAP, TQM, etc)
- Opportunities and limitations to cooperation and communication
- Critical perspective



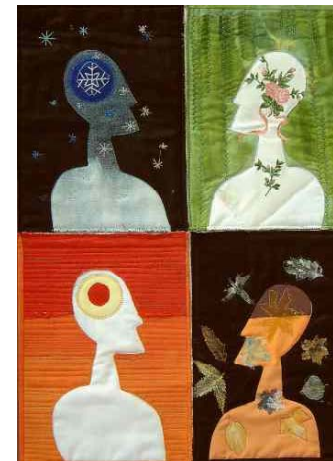
## Auto's Way in Poland

- Xerox-method
- Speed and action, directness, discipline
- Individual competence
- Lean production
  - Common definition vs. embedded notions
  - Knowledge transfer and consensus vs. implicit struggles and negotiations
  - Solutions and learning through conflict and improvisation
- Standardisation with unforeseen turns

## 'Right people on the bus'

- MBTI, Insights, cultural assessments
- Common language
- Rational-analytic vs. 'softer' qualities
- Therapeutic control and resistance
- Structures of common difference?
- Programme vs. technology
- Standardisation as a ground for further socio-cultural translations

## Concluding remarks



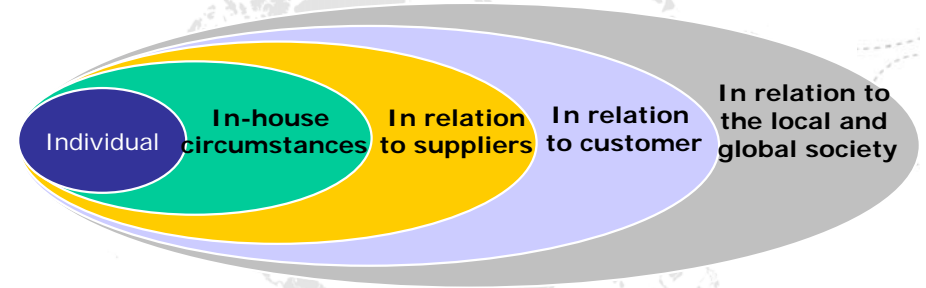
- Link; cultural management and standardisation
- Adverse effects
- Intent: facilitate communication
- Multiplicity and 'mess'
- "...faith in the hands of the users..."
- Subject to negotiation
- Opening and closure of discursive fields
- Need to identify cultural premises
- How they affect and are affected by standardisation efforts in different times and places

# Indicators and CSR-management as tools to promote better communication in value chains

Professor Annik Magerholm Fet / Dr. Ottar Michelsen

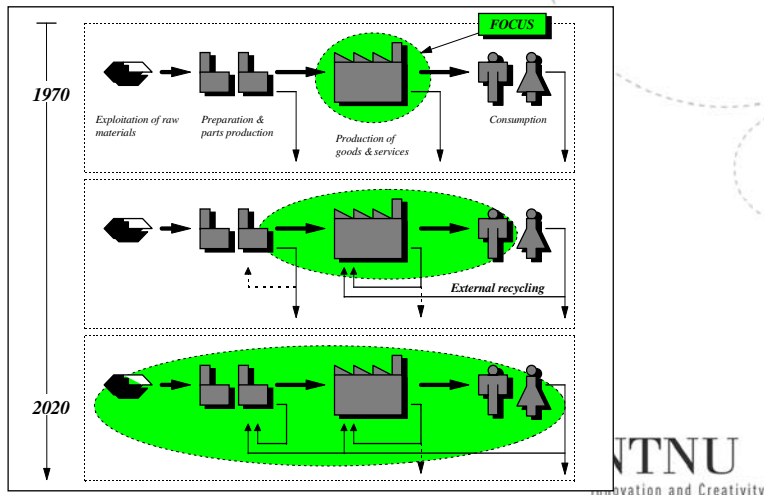
Seminar GP&C – NTNU 13. June 2008

# Corporate Social Responsibility - CSR



CSR implies to work along different dimensions in global production systems

# Focus on systems thinking



# Important CSR-issues

- Business Ethics
- Community Investment
- **Environment**
- Governance & Accountability
- Human Rights
- Marketplace
- **Workplace**
- Corruption
- **Product responsibility**

# Main environmental and workplace aspects:

## Environmental aspects

- Use of resources (renewable/non-renewable)
- Pollution to water
- Pollution to soil
- Emissions to air
- Waste
- Environmental aspect of products throughout the entire life cycle

## Workplace aspects:

- Child Labour
- Forced Labour
- Health and Safety
- Freedom of Association
- Right to Collective Bargaining
- Discrimination
- Disciplinary Practices
- Working Hours
- Remuneration/wages
- HSE-management systems



# Examples of CSR-reference documents

Firms should document compliance with for example the

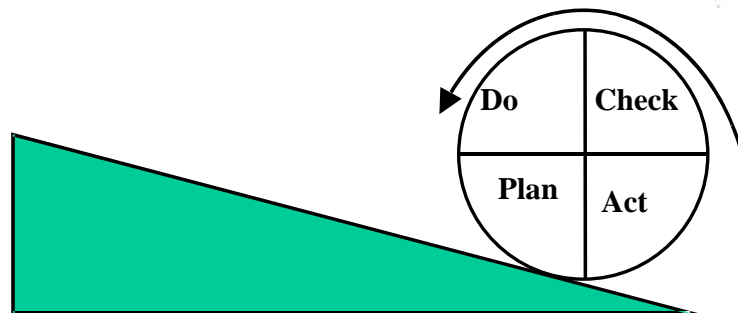
- Environmental management standards (ISO 14000)
- Global Reporting Initiative (GRI) guidelines
- The Global Compact
- The millenium goals
- AccountAbility AA1000-standards
- Social Accountability SA 8000 standard
- International guidelines for social responsibility (SR) (ISO 26000 - June 2008 ?)



# Environmental Management Systems

Follow the principles:

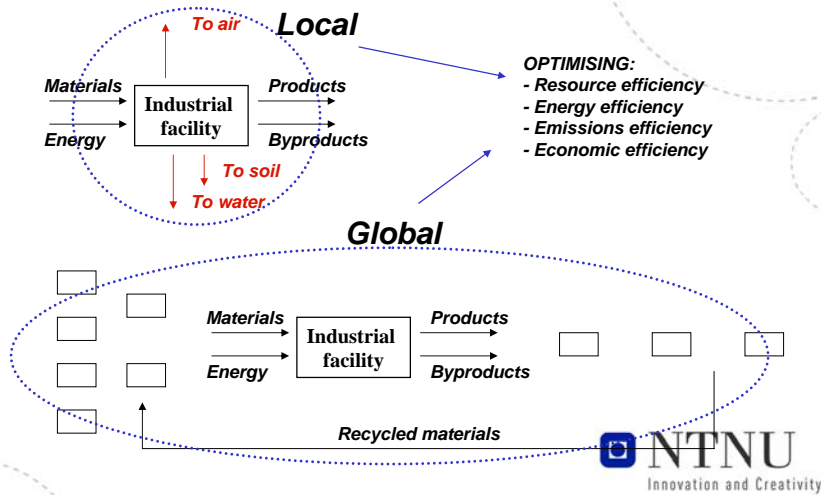
- Plan
- Do
- Check
- Act



# Mapping CSR into the PDCA-circle:

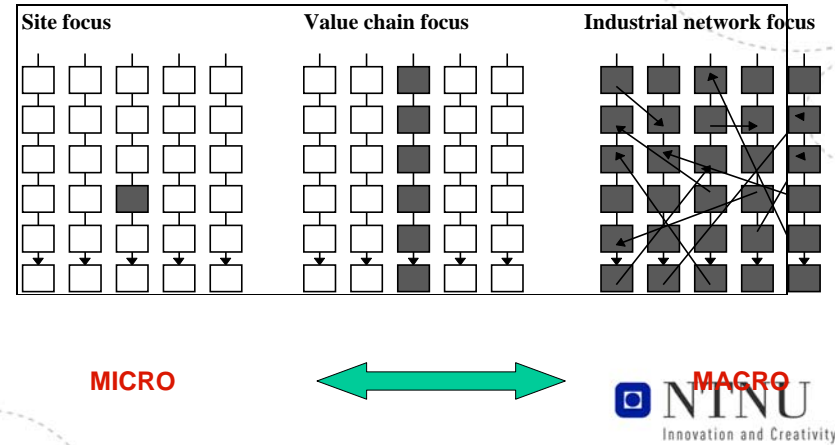


# From local to global perspective



- OPTIMISING:**
- Resource efficiency
  - Energy efficiency
  - Emissions efficiency
  - Economic efficiency

# Different systems perspectives



# Supply chain

Definition:

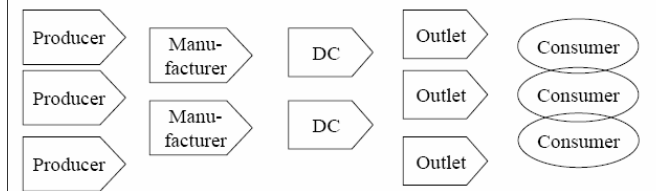
'the network of organizations that are involved, through upstream and downstream linkages, in the different processes and activities that produce value in the form of products and services in the hand of the ultimate consumer'. Christopher (1998)

A supply network is thus a complex combination different subsystems linked with each other by material flows, energy, monetary flows and flows of information.

The inputs and outputs of each subsystem can further be measured, calculated or monitored, and values can be aggregated along the supply chain.

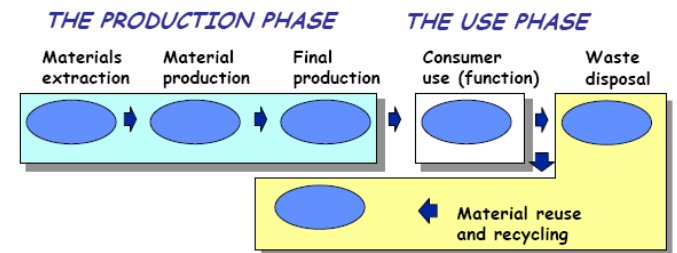
'Extended Supply Chain' also includes the use and the end-of-life of the products

# Supply chain model



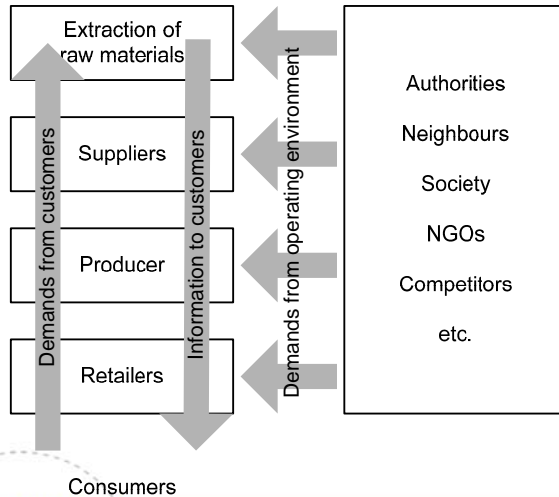
The **Extended Supply Chain** also includes the use and the end-of-life of the products

# The product life-cycle



**THE PRODUCT END-OF-LIFE PHASE**

# Communication in the extended supply chain



Performance indicators are used as communication tool



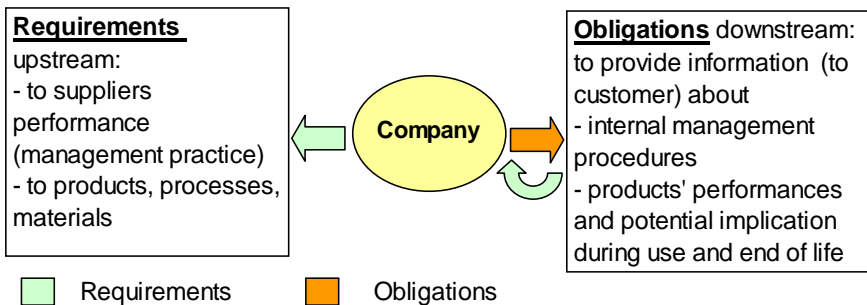
# THE GRI-INDICATOR FRAMEWORK

	CATEGORY	ASPECT
ECONOMIC	Direct Economic Impacts	Customers Suppliers Employees Providers of capital Public sector
	Environmental	Materials Energy Water Biodiversity Emissions, effluents, and waste Suppliers Products and services Compliance Transport Overall
SOCIAL	Labour Practices and Decent Work	Employment Labour/management relations Health and safety Training and education Diversity and opportunity
	Human Rights	Strategy and management Non-discrimination Freedom of association and collective bargaining Child labour Forced and compulsory labour Disciplinary practices Security practices Indigenous rights
	Society	Community Bribery and corruption Political contributions Competition and pricing
	Product Responsibility	Customer health and safety Products and services Advertising Respect for privacy

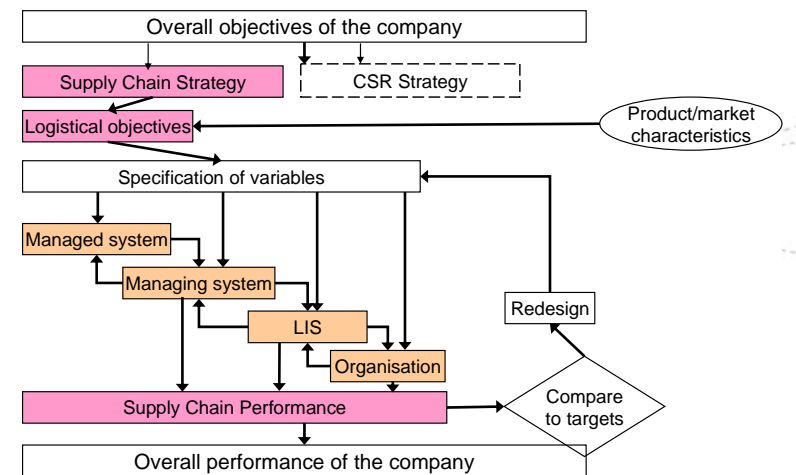
# Use of performance indicators

Indicators can be used to develop the supply chain by

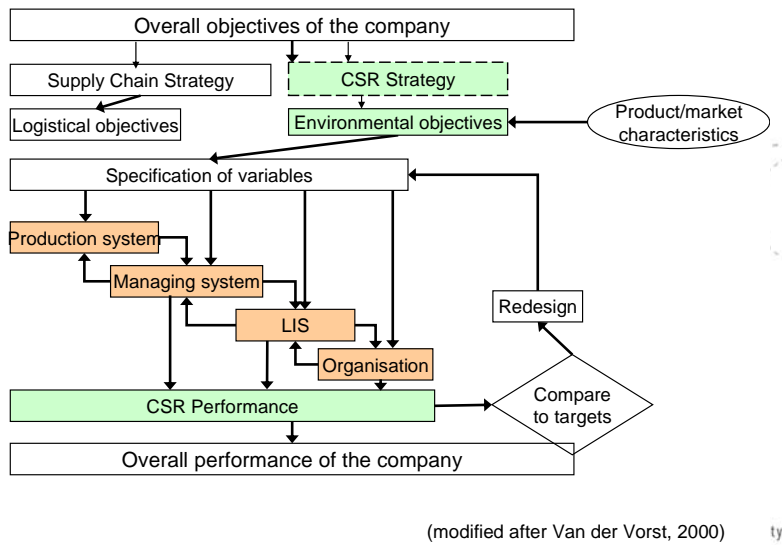
Setting requirements upstream ← - → Fulfilling obligations downstream



# SCM - model



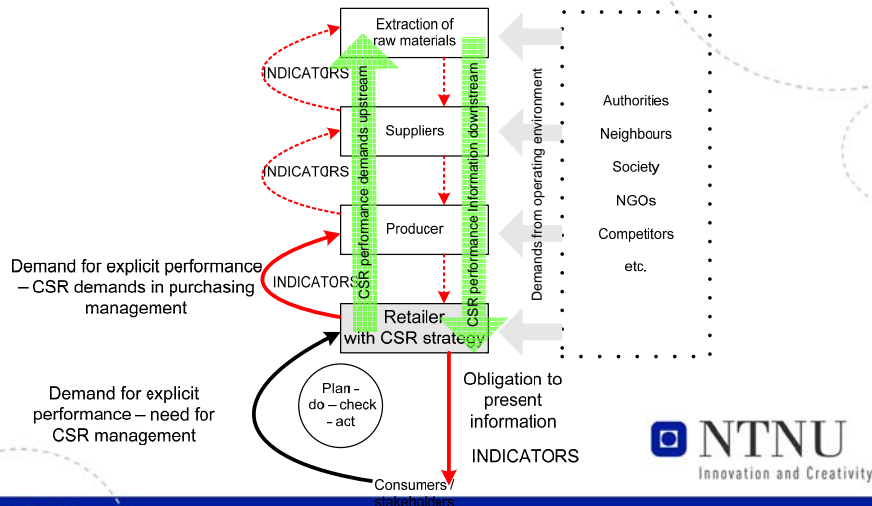
(modified after Van der Vorst, 2000)



## Indicators as supporting management tool

CSR-issue	Performance Indicators
<b>Workplace</b>	<ul style="list-style-type: none"> <li>Evidence of compliance with the ILO <i>Guidelines for Health MS.</i></li> <li>Average hours of training per year per employee</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>Performance of suppliers relative to responsible programmes</li> <li>Significant environmental impacts of products and services.</li> </ul>
<b>Corruption</b>	<ul style="list-style-type: none"> <li>Description of policy, management systems and compliance mechanisms for managing political lobbying and contributions.</li> <li>Amount of money paid to political parties and institutions</li> </ul>
<b>Product responsibility</b>	<ul style="list-style-type: none"> <li>Description of policy for preserving customer health and safety during use of products and services</li> <li>Voluntary code compliance, product labels or awards with respect to social and environmental responsibility</li> </ul>

## Outline of model for CSR driven SCM



## Which CSR-indicators should be used in SCM?

CSR-issues	Supply network variables			
	Managed system	Managing system	Information system	Organization
<b>Workplace</b>	Choice of equipment and infrastructure for transport, handling and production	Level of coordination with suppliers about usage and change of infrastructure	Availability of relevant information about physical properties of materials flow, processes and infrastructure used in the supply chain, its environmental impact, behavior of supply chain partners and usage of products by customers.	Level of agreement about CSR-objectives and how to measure performance
<b>Environment</b>	Choice of materials and processes	Ability to effectively avoid waste, emissions and spillage of resources		Level of alignment between individual values and responsibility in the network
<b>Corruption</b>	Choice of suppliers and other partners	Ability to effectively respond to undesired practices in supply network	The use of performance indicators	Take-back systems through distribution channels
<b>Product responsibility</b>	Choice of materials and processes, product modularity	Ability to effectively respond to accidents, faulty products etc		



# The shipping sector – Social responsibility



*Our most important contribution to accepting social responsibility is to conduct our business well in accordance with the international and national regulations which govern its operations.*

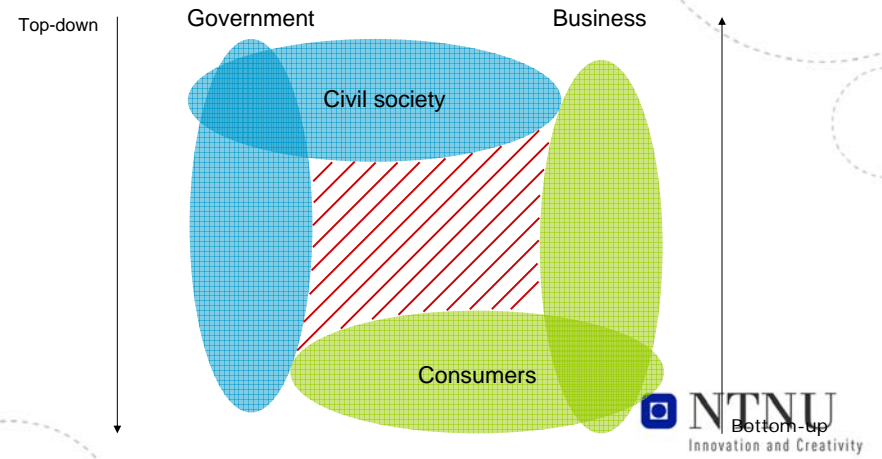
Focus on

- Workplace conditions
- Safety
- Environment
- Marketing potential

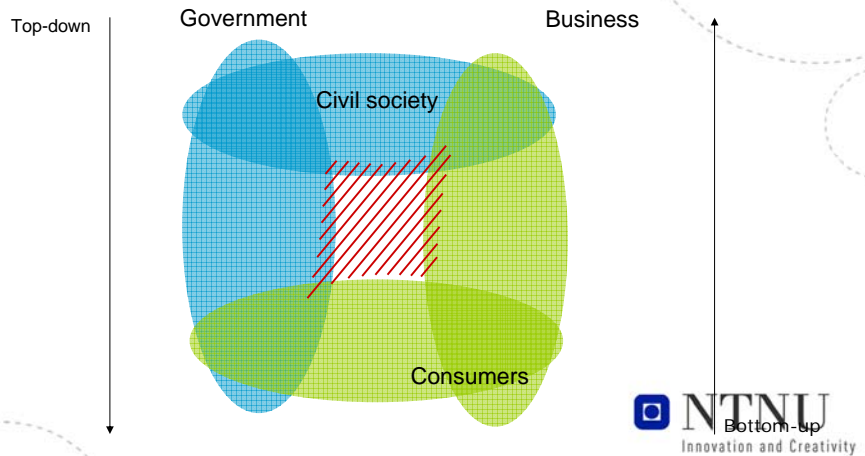


Cecilie Stray, Head of corporate communications, With. Wilhelmsen ASA

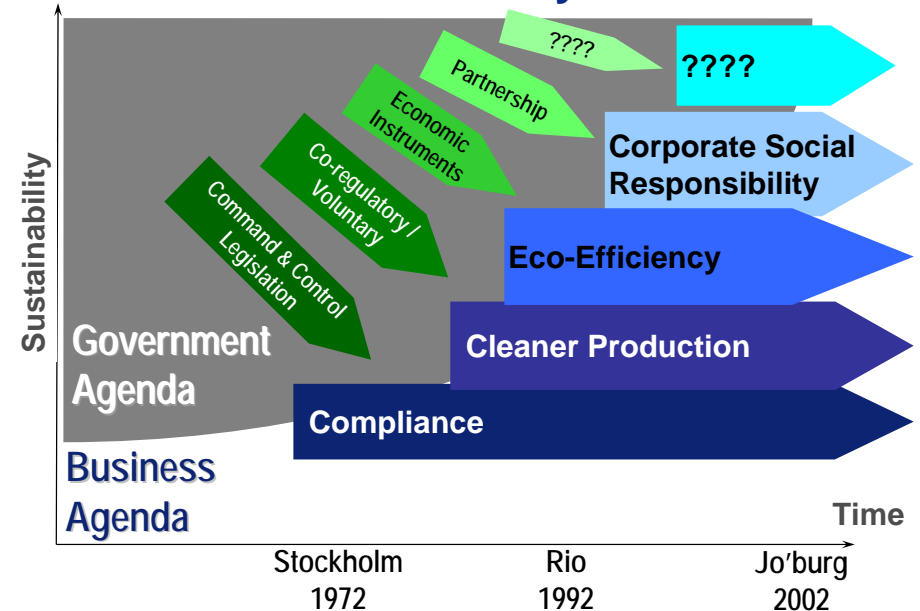
# The roles of the participants



# The roles of the participants



# Global trends - summary







## KPIs as communication tools in the maritime sector

13th June 2008

Egil Rensvik  
MARINTEK

## Contents

- Project Background
- Project structure
- Methodology



## Current situation

- Too many different indicators (KPIs)
  - Opportunities for confusions and mistakes
- Comparison of performance between companies is difficult
- Additional manpower required to present the same information in many different ways (onboard and in office)
- Difficult to mobilize organizational focus on quality improvement
- New reporting requirements are emerging, especially regarding environmental issues and CSR

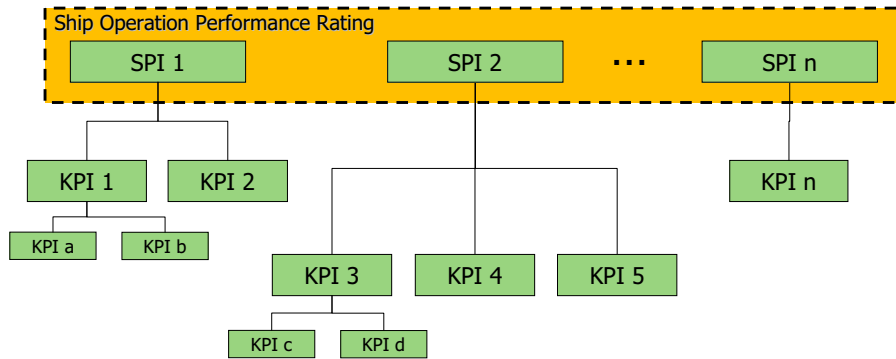


## “ISMA Code phase II”

- Improve the effectiveness of the ISM Code
- Support a new regulatory regime of setting minimum operational standards
- Change from “process management regulation” (ISMA/ISM Code) to “process output regulation”
- The Shipping KPI Report Card (Performance rating system)
  - Limited number of Performance Indexes
  - Meets future stakeholder requirements



## The Shipping Performance Indexes (SPI) are to be supported by a weighted KPI structure



Shipping KPI

## The challenge

The impact of the Shipping KPI Project depends on the acceptance by the industry of the developed KPIs and the Shipping Performance Indexes (SPIs)

The project runs three processes in parallel:

The rational process

- developing the KPI depository structure and the KPIs

The emotional process

- facilitate stakeholders detachment from current practices

The political process

- visualize the benefits for the industry and the stakeholders



Shipping KPI

## Project structure

Shipping KPI

## Project objectives

**Develop an international standard and tools for measuring company's and vessels' performance**

In order to:

- boost performance improvements internally in companies engaged in ship management activities
- provide an efficient communication platform of ship management performance both for the management onboard and ashore

This shall:

- avoid each company spending resources on developing the same (measurement criteria and tools)
- ensure focus on the most efficient performance indicators by the shipping industry
- avoid tailor-made reporting to all the different stakeholders both onboard and shore



Shipping KPI

## Increased transparency

- Focus on quality matters, safety issues and environmental performance
- Develop frameworks for reporting of operational performance
  - meaningful for stakeholders without technical/ maritime background



## Enhanced governance

- Facilitate performance improvement processes (e.g. benchmarking)
  - Further develop standardization of "best practices"
  - "The adoption of CSR\* strategies and the disclosure of performance in relation to announced goals represent an alternative to regulation. "
- (EC -European Maritime Policy excerpts from Green Paper 2006)



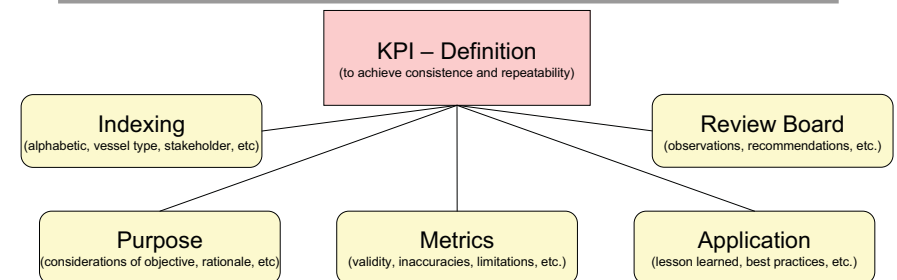
\* = Corporate Social Responsibility



## The KPI depository

## KPI Depository - Structure

A reference model for the shipping industry with regard to measurement of performance in ship operation



- "Fact sheets" for recommended KPIs (definition and attributes)
- Relations between KPIs – Hierarchical structure



## KPI Depository - Features

- A collection of “recommended KPIs” for measurement of operational performance in shipping
- Constitutes the collective “wisdom” with regard to measurement of operational performance
- A reference model for individual companies establishing (or revising) their respective performance measurement indicators



## KPI depository - Misconceptions

- The depository is NOT a database for capturing operational performance information from the participants
- Benchmarking will NOT be done as part of the project
- The project will NOT set any “minimum operation standard”

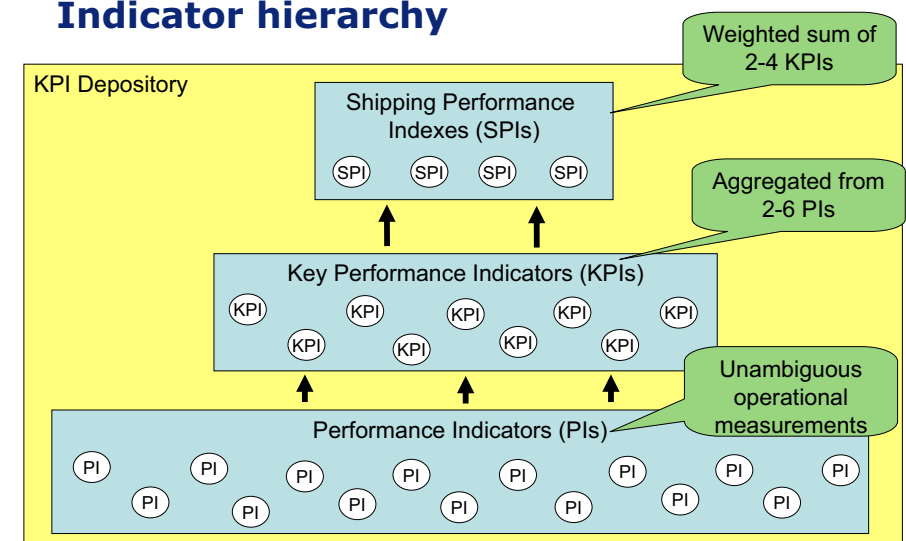


## KPI Depository - Opportunities

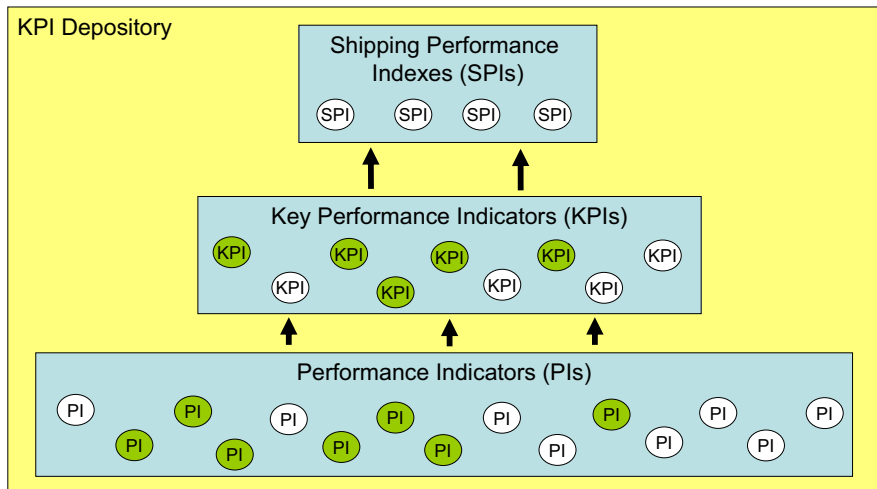
- Enable companies to compare (and align) own in-house performance indicators with an industry norm
- Allows comparison and benchmarking of operational performance between companies using identical KPIs
- With sufficient support from the industry the depository will form the foundation for an international standard
- Standardized KPIs are the “building blocks” of a performance rating system (SPIs)



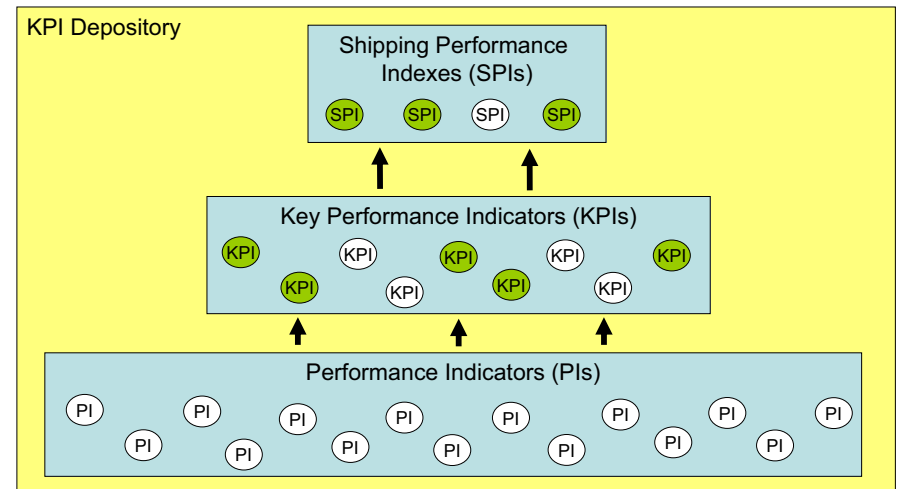
## Indicator hierarchy



**Not all KPIs are equally relevant for all companies**  
**Example: Ship Management company**



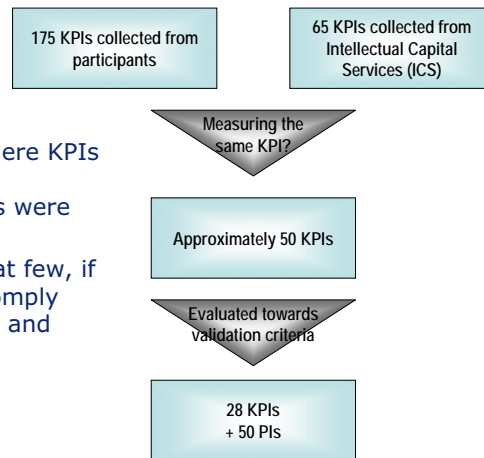
**Not all KPIs are equally relevant for all companies**  
**Example: Stakeholder - Regulator**



**Defining the "building blocks"**

## The project phase 1 identified building blocks for a new KPI framework

- Bottom-up approach where KPIs already in use by ship management companies were collected and analysed
- The analysis showed that few, if any, KPIs used today comply with basic requirements and expectations



Shipping KPI

## Preliminary Shipping KPIs

- 1.1) Port State Control Deficiency Rate
- 1.2) Port State Control Detention Rate
- 1.3) Overdue non-conformances from external audits
- 1.4) No of loss of ISPS clearance (1-3)
- 1.5) No of customs/immigration issues
- 1.6) No of stowaways
- 2.1) Availability
- 2.2) Technical Failures
- 3.1) Energy Efficiency/CO2
- 3.2) SOX
- 3.3) NOX
- 3.4) Incident Related Spills
- 3.5) Ballast Handling
- 3.5) VOC
- 3.6) PM
- 4.1) Lost Time Injuries Frequency
- 5.1) Public Appearance
- 5.2) Industry Reputation
- 5.3) Total no Of Claims
- 6.1) Cargo Incident
- 6.2) Delay
- 7.1) Crew Retention
- 7.2) Crew Quality/Performance
- 7.3) Crew Planning
- 7.4) Crew Availability
- 8.1) Financial Stability/Robustness
- 8.2) Financial Predictability
- 8.3) Cost Efficiency



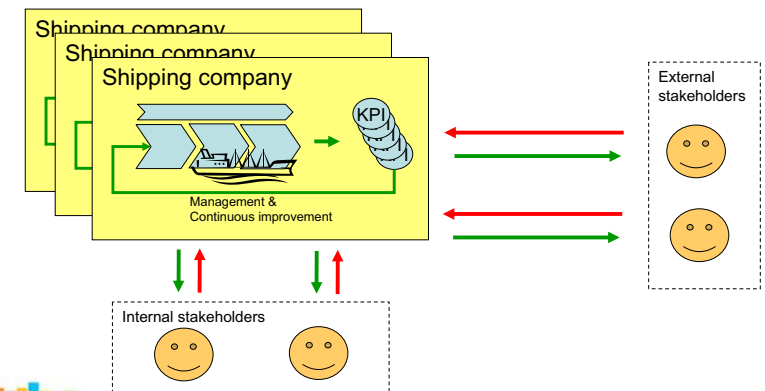
Shipping KPI

## Approach to identify requirements to KPIs for internal improvement

## Shipping KPI project scope Current situation

→ Reporting  
← Requirements

- Each stakeholder have individual reporting requirements
- Shipping companies have internal individually defined KPIs



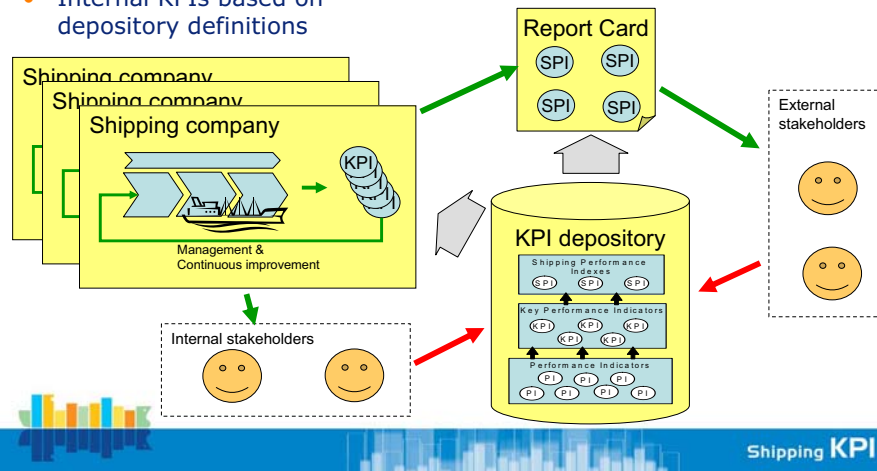
Shipping KPI



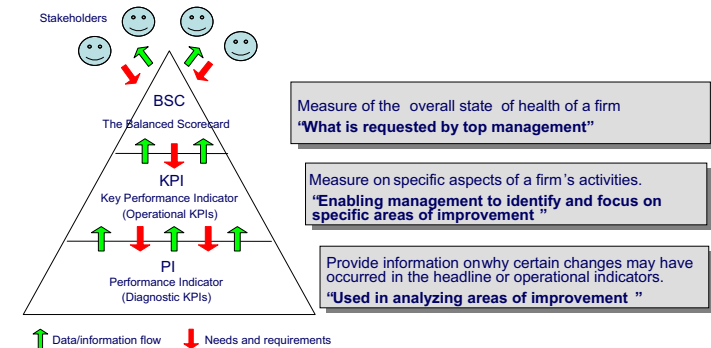
Shipping KPI

## Shipping KPI project scope To-Be Situation

- External and internal KPIs defined in common KPI depository
- External reporting through Report card – Indexes based on KPIs
- Internal KPIs based on depository definitions



## The Balanced Scorecard (BSC) is a framework designed to improve long term value creation



## The BSC framework provides a structure for organizing KPIs in order to address internal improvement areas

- The Balanced Scorecard framework encompasses four different perspectives:
  1. The financial perspective
  2. The customer perspective
  3. The internal-business-process perspective
  4. The Human Resources & Information Systems
- Due to an increasing focus on "Corporate Social Responsibility" within the business community, the project suggests to add a fifth perspective on HSE issues
  5. The health-safety-environment perspective

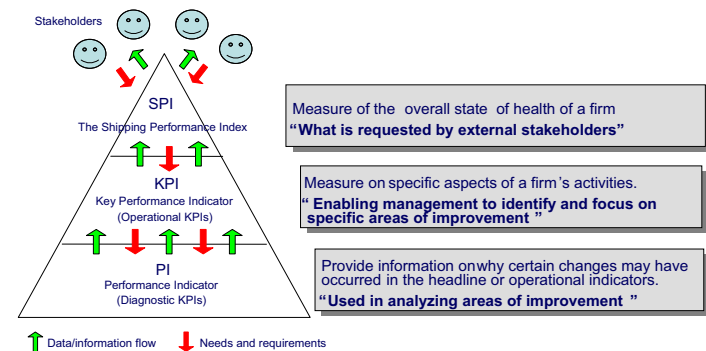
## Preliminary Shipping KPIs evaluated and categorised in the five different perspectives 28 KPIs -> 34 KPIs

- Finance
  - Profitability
  - Financial Stability/Robustness
  - Cost Efficiency
- Customer
  - Total no of Received Claims
  - Sales activities
  - Off-Hire
  - Budget Predictability
- Processes
  - Port State Control Deficiency Rate
  - Port State Control Detention Rate
  - Overdue non-conformances from external audits/surveys
  - No of loss of ISPS clearance (1-3)
  - No of customs/immigration issues
  - No of stowaways
  - Cargo Incident
  - Delay
  - Technical Failures
- HR & IT
  - Crew Retention
  - Crew Discipline
  - Crew Planning
  - Crew Availability
  - Crew Training
  - Number of new recruits/cadets
  - Sign-off process
  - Shore-personnel
  - IT-Systems
- Health, Safety & Environment
  - Energy Efficiency/CO2
  - SOX
  - NOX
  - Incident Related Spills
  - Ballast Handling
  - VOC
  - PM
  - Lost Time Injuries Frequency
  - Health

## Approach to identify requirements to KPIs for reporting to external stakeholder



## A stakeholder analysis to identify Shipping Performance Index requirements



## Briefly about stakeholder analysis

- Identification of most important stakeholders, stakeholder roles and their interest areas.
- Analysis based on stakeholder and their roles, intended to make a more accurate definition of each stakeholder.
- Identification of most relevant KPIs that may be used to create a set of SPIs



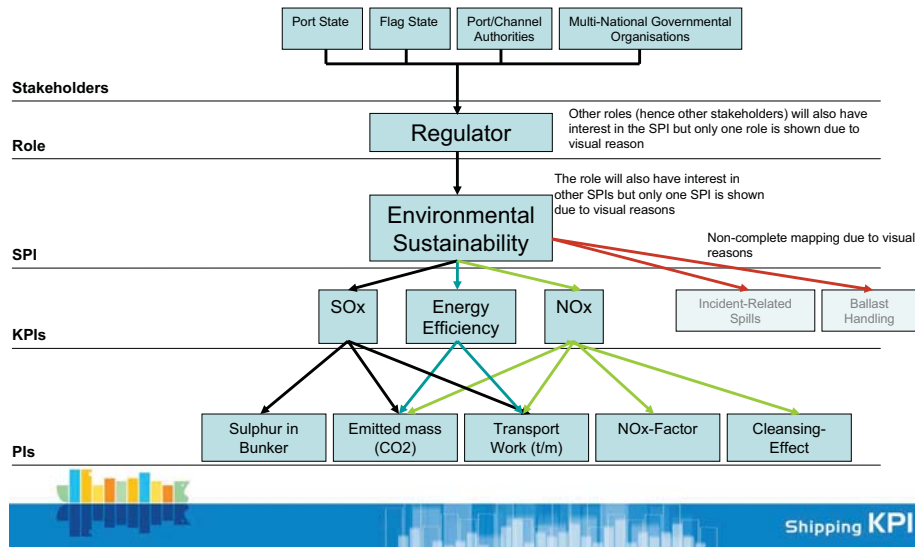
## Tentative results – This is the scope of next workshop with KPI working group

- Seven (7) Shipping Performance Indexes tentatively identified
  - Company image
  - Environmental sustainability
  - Attractiveness as employer
  - Safety
  - Security
  - Commercial reliability
  - Financial attractiveness
- Based on 30 different KPIs
  - Some reuse of 6 KPIs





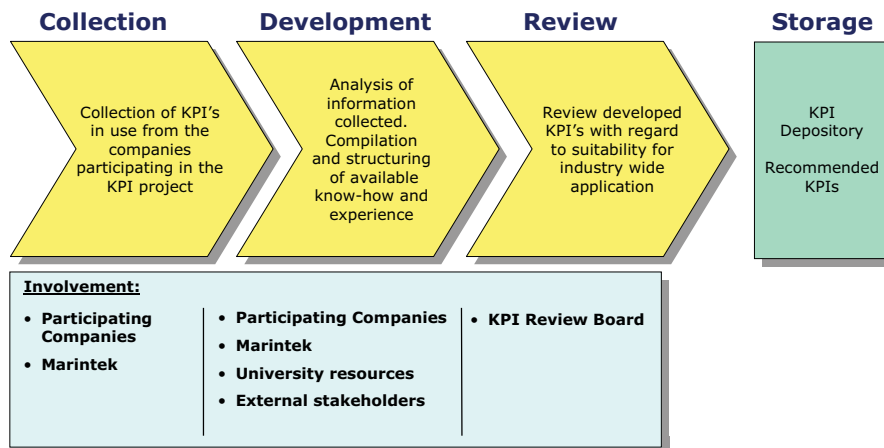
## Example of stakeholder mapping: Environmental sustainability SPI



## Project Participants

- Anglo Eastern Ship Management
  - B+H Equimar Singapore
  - Wilhelmsen Maritime Services
  - BW Gas
  - Chemikalien Seetransport
  - Columbia Shipmanagement
  - Dobson Fleet Management
  - DS Schifffahrt GmbH
  - Eurasia Group
  - Fleet Management
  - Hanseatic Shipping Company
  - Høegh Fleet Services
  - Jepsen Total Transport Solution Services
  - Navigo Shipmanagers
  - OSM Group
  - Seaspan Ship Management
  - Stolt-Nielsen Transportation Group
  - Eitzen Maritime Services
  - Thome Ship Management
  - V. Ships Shipmanagement
  - Wallem Group Ltd
- Shipping KPI

## KPI – development process



## More information?

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