

CSR og supply chain management

**Internt seminar i strategisk satsning
miljøledelse og bedrifters samfunnsansvar:**

20.September 2007

**Department of Industrial Economics and
Technology Management**



Program

14.00-14.45 Alexander: "How does CSR contribute to sustainable development?"

14.45-15.05 Cecilia: "Monitoring progress toward CSR"

15.05-15.25 Christofer: "Extending life cycle of computers – Case study in Eritrea"

15.25-15.45 Ottar: "An update from Zurich"

Participants:

Annik Magerholm Fet

Ottar Michelsen

John Hermansen

Christoffer Skaar

Alexander Dahlsrud

Terje Skjønhal

Cecilia Haskins

Charoline Cheng

Presentations, see attachments.

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Internt seminar i miljøledelse, CSR og supply chain management

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Annik Magerholm Fet

Department of Industrial Economics and Technology Management

2

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Status for prosjekter

- **C(S)R in Global Value Chains: a Conceptual and Operational Approach.** NTNU and BI, (Norwegian Research Council) – gjennomførte vellykket seminar juni for olje, shipping og finans info on www.csr-norway.no
- **Environmental Management and Corporate Social Responsibility-network establishment.** NTNU – Poland initiative – report and presentations, published on www.ntnu.no/iot/csr
- **Corporate Social Responsibility in the US and Norway (CRUSAN).** (NFR) – report, published on www.ntnu.no/iot/csr
- **Innovation through Responsible Supply Chain Management (IRIS), EU 7 FP, application date 10.May, not approved, oppfølging?**
- Møbelprosjektet Data assisted product development tool - DATSUPI involverer flere ved HMS, testprogram for avdunsting i gang, avklaring vedr kommersialisering og eierskap i gang, vellykket seminar i juni
- Kjemikalieprosjektet, utvikling av PCR og EPD med kjemikalieinformasjon, EPD-Norge er oppdragsgiver

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Nye prosjekter og aktiviteter

- Ny søknad til EU 7FP, søknadsfrist 29.november
- Søknad under Polen-programmet, oppfølging av Polen-møtet høsten 2006, frist 29 desember
- Fått tildelt midler til gjesteforsker, Carlos Mataix fra Teknisk universitet i Madrid, 3 uker november
- Status andre midler vi søkte i vår ?
- Planlegger 2-dagers seminar 15.-16.november med fokus på CSR, må ha en planleggingsgruppe, har Erik Lundeby, får gjest fra Warwick university og fra Madrid
- Seminarer i regi av CSR-NTNU-BI-prosjekt:
 - Klimapanel 8.oktober, BI, Oslo
 - Møte med DU, 6.november, BI, Oslo
- Seminar i regi Globaliseringsprogrammet 1. november, Dragvoll
- Aktuelle seminarer / konferanser i høst
 - Sustainability Emisoft, Bergen, 30.-31- oktober
 - BIA-Sundvollen, 31.10-1.11
 - Nasjonal miljøkonferanse, Oslo kongresssenter, 6.november, Glassbjørnen
 - Publisingsseminar, NTNU, 9.november
 - Annet? Julebord?

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Status for Global Produksjon

- 1stipendiatstillinger innen miljø- og supply chain management til IØT, november 2007.
- Professor II innen internasjonal strategiarbeid
- Bør etablere samarbeid med utenlandsk universitet
- Plan for seminar, koordinering med vårt seminar 15.-16. november

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Annet?

- Oppdatere hjemmesider?
- Felles publisering:
 - CSR-paper til Journal of Supply Chain Management (Fet, Keitsch, deBoer, Michelsen)
 - Annet?
- Etablere samarbeid med industri / NGO-gruppe?
- Oppdatere strateginotat, hva skal vi legge vekt på?

Corporate Social Responsibility

Business contribution to sustainable development

Alexander Dahlsrud
 Department of Industrial Economics and Technology
 Management
 NTNU

Corporate Social Responsibility

CSR is framed as “business’ contribution to sustainable development” by important institutions such as:

- European Union
- OECD
- DTI

Perspectives on CSR

	Descriptive	Normative	Represented by
CSR champions	CSR is profitable	Companies should implement CSR measures	Business Governments Moderate NGO's
Free-market advocates	Companies implement both profitable and unprofitable CSR measures	Companies should only implement CSR measures that are profitable	Political right Economists
CSR skeptics	Companies only implement CSR measures that are profitable	Regulation is necessary in order to secure sustainable development	Radical NGO's Political left

Research questions

How does CSR contribute to sustainable development?

1. How is CSR defined
2. How significant is CSR measures compared to mandatory measures
3. Why does corporations implement specific CSR measures?

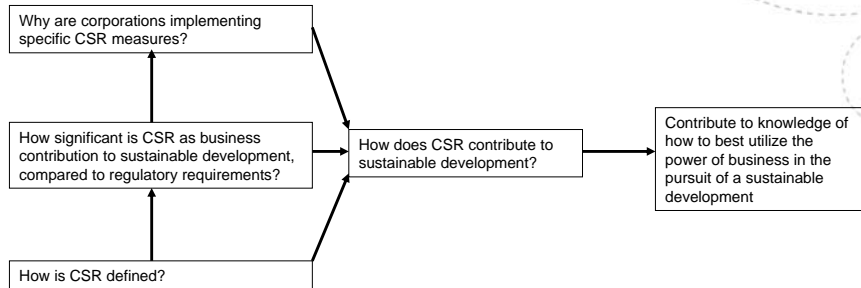
CSR measures:

- processes that improve the social, economic and environmental impacts of a corporation beyond regulatory requirements.

Research questions

Overall research question

Research goal



How is CSR defined?

A content analysis of 37 definitions reveals 5 dimensions of CSR

The dimension ratio expresses the probability of a random definition to contain the dimension

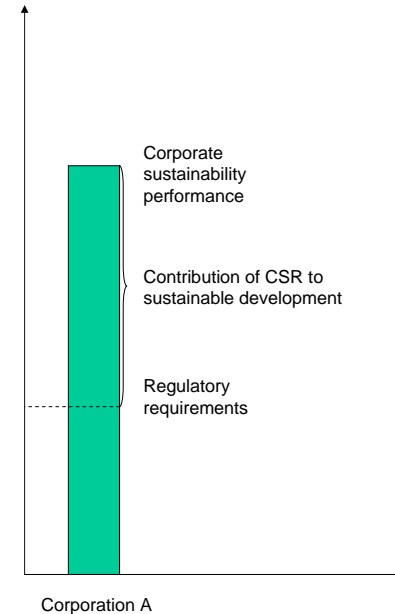
Dimension	Dimension ratio
The stakeholder	88 %
The social	88 %
The economic	86 %
The voluntariness	80 %
The environmental	59 %

How is CSR defined?

- Normative definition?
 - How is a corporation to conduct its' business in order to be socially responsible? (Milton Friedman).
- Descriptive definition?
 - What is the concept of CSR?
- Which processes?
 - CSR legitimizing processes
 - CSR measures

All definitions are descriptive and focus on CSR measures

Sustainability performance



The business case for CSR

... is a hypothesis that CSR is profitable

... because it

- Attracts investors
- Attracts customers
- Attracts the best employees
- Improves relations with local communities
- Etc., etc...

CSR vs. mandatory measures

- Case: Norwegian shipping industry.
- Screened homepage of 112 companies.
- 9 companies reported in total 98 environmental measures.
- Compared these measure with regulatory requirements

CSR vs. mandatory measures

The reported measures did fall into four categories

	Regulations in force	Regulations not yet in force	Not explicitly regulated	Above regulatory requirements
% of all reported measures	33,7 %	15,3 %	40,8 %	10,2 %

CSR vs. mandatory measures

Not explicitly regulated (40 measures):

- Policy or vision (20 measures)
 - "working to use less fuel"
 - "reduce packaging to an absolute, safe minimum"
- Implemented on less than half of the vessels (11 measures)
 - Testing of new equipment
- Minor improvements (9 measures)
 - Freon log
 - Vacuum toilets
 - Waste segregation

CSR vs. mandatory measures

Above regulatory requirements (10 measures):

- "Clean design" classification (1 measure).
- Lower sulfur content in bunkers (2 measures).
- Applying the VOCON procedure (2 measures).
- Bilge water with 5 ppm oil in water (1 measure).
- Solid waste delivered onshore (4 measures).

CSR vs. mandatory measures

Implications:

- A bigger business case for CSR legitimizing processes.
- CSR legitimizing processes do not function as drivers to implement CSR measures.
- The contribution of CSR is insignificant, compared to the overall impacts of business.

Implementing CSR measures

Case: An international maritime corporation

- Identified 15 CSR measures in case company
 - Screened sustainability reports from 10 shipping companies
 - Identified 19 CSR measures
 - 15 out of these were identified in the case company through a questionnaire.
- Interviewed top management responsible for implementing these CSR measures

Implementing CSR measures

- | | |
|--|---|
| <ul style="list-style-type: none"> • Sulfur content in bunkers • Bilge water purification • Docking intervals • Corporate academy • Sponsoring education • Group life insurance • Extra holiday • Financial services | <ul style="list-style-type: none"> • Incentives scheme • Employee welfare • Health checks and insurance • Employee survey • Seamen's church • Sponsoring sports club • Environmental NGO |
|--|---|

Implementing CSR measures

The respondents adhere to the business case rhetoric

- The company is benefiting from CSR!
 - CSR is profitable
 - Beneficial reputation
 - Attracting employees
 - Attracting customers

Implementing CSR measures

When asked about specific CSR measure

- Incentives for the specific CSR measures more or less the same as for CSR

BUT!

- If the specific CSR measures would not provide the benefits listed as their incentives, they would not have been implemented

CSR vs. CSR measures

- Different rhetoric used on CSR and CSR measures
- This could be paraphrased as
 - CSR is beneficial to our company, so we do it.
 - When it is beneficial to our company, we implement CSR measures.
- Might explain potential greenwashing
- No general causal effect between CSR measures and profits.

How does CSR contribute to sustainable development?

- Companies do implement CSR measures they perceive to be profitable → Genuine contribution to sustainable development
- However, CSR measures are implemented too rarely and too sporadic to be a significant contribution to sustainable development

How to best utilize the power of business in the pursuit of sustainable development?

- Regulations?
- CSR?
- Both!
- Active stakeholders that rewards the best businesses

Extending the life cycle of computers
Case study Eritrea

Christofer Skaar
20. september 2007

Case study

- Two purposes:
 - Evaluate the Fair Recycling programme on behalf of NTNU
 - Use as case in PhD

Eritrea



- Population: 4,900,000
- Language: Tigrinya and Arabic (some Italian)
- Economy: 80 % agriculture
- Literacy: 58,9 %
- 3,5 computers per 1000 population
- Independent in 1993, after 30 years of civil war. Tension with Ethiopia (war in 2000).

Fair Recycling

- Fair Allocation of Infotech Resources (FAIR) is an international NGO (Norwegian HQ) with the purpose of aiding developing countries by providing recycled IT resources
- Fair collects used IT equipment from Norwegian companies (now including NTNU), upgrades the software and ships it to developing countries
- The target group is 12-18 year olds
- Computers are used in computer labs in a thin-client (network based) environment
- Funded by Norad

Progress plan

- Define value chains (e.g. the life cycle of the computers)
- Develop CSR-indicators for the value chain
 - Economic
 - Environmental
 - Social
- Verification procedures (existing and potential)
- Challenge: Which performance indicators to use for economic and social performance in Eritrea

Progress plan, cont.

- Norad evaluation criteria:
 - Relevance
 - Effectiveness
 - Efficiency
 - Sustainability
 - Impact
 - Risk management
- NB! The names for the criteria are not used in an industrial ecology/CSR understanding

Field trip

- Logistics (FairRecycling and partners)
- School visits
- Internet café visits
- Maintenance
- Meetings
 - Government (especially the MoE)
 - Local employees
 - Graduates (employed and unemployed)

Looking forward to
kursi, mesah and diran



Dehaan kun!

1

Monitoring progress toward sustainable development

Cecilia Haskins
Department of Industrial Economics and
Technology Management
CSR internal seminar – 20th Sep. 2007

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Research topic

- Applying a systems engineering framework to the creation of an eco-industrial park
 - Case community – Verdal, Norway
 - Application of the collaboration framework – historical perspective
 - Progress toward sustainable development

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Research activities

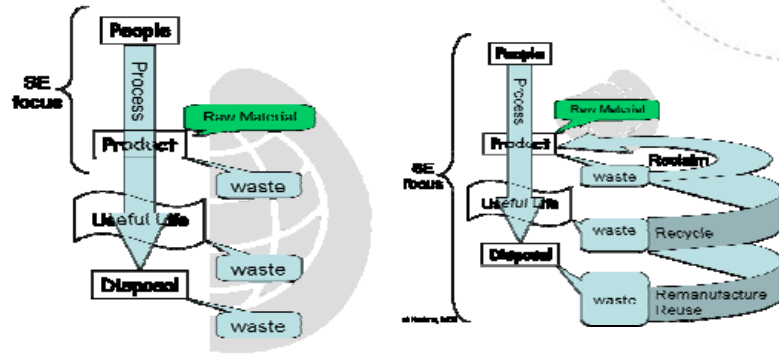
- Develop a questionnaire that takes the pulse of the current economic situation and local networks; also included some extra questions related to sustainability
- Questionnaire was validated by interviews with 16 respondents
- 23 CEOs participated in facilitated brainstorming session to define a Vision for Verdal for 2025
- Tour of the municipality and countless hours being told the history
- Attendance at town hall meeting regarding emission levels from new Calc-burning oven
- Website for Innherred Vekst documents projects funded nationally
- Local and regional newspapers covered the events; access to a clippings archive
- 3 studies of the Verdal phenomenon by NTNU students

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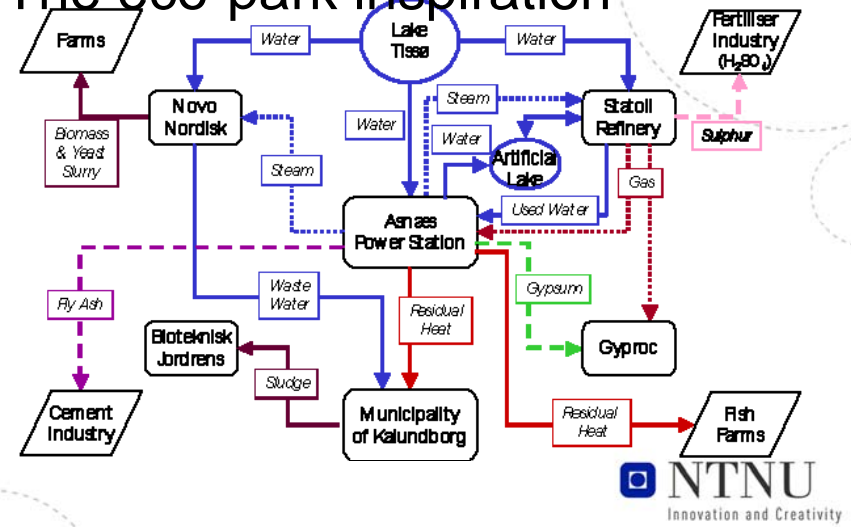
Story of Verdal

- Plant closing threatened 900+ jobs in 1998
- Swift action by management averted crisis
- Verdal has been receiving national funds since 2002; the allocation ends 2007
- Money combined with local mentors has yielded impressive growth in new start-ups
- Investment in recycling and reclamation companies
- Leaders looking ahead to ensure future prosperity and growth of the municipality and the region

AS IS – TO BE



The eco-park inspiration

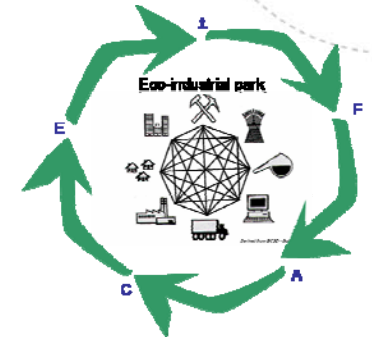


Multi-disciplinary mapping

Discipline	Eco-Industrial Parks	Systems Engineering
Logistics	Movement of goods and materials	Whole life planning
Production	Minimize waste; recycle	Modularity; reuse
Economics	Natural capitalism	Sustainable operations
Organization	Networks; network identity	Multidisciplinary project teams
Knowledge management	Collaboration	Communication
Industrial Ecology	Do no harm; symbiosis	Environmental concerns
Systems Dynamics	Understand interactions	Process analysis tool
Soft systems methods	Stakeholder alignment	Requirements elicitation

Framework for collaboration

- An advantage for understanding, analyzing and recommending future directions
 - iFACE
 - Identify stakeholders
 - Frame the problem
 - Alternatives
 - Choose
 - Evaluate



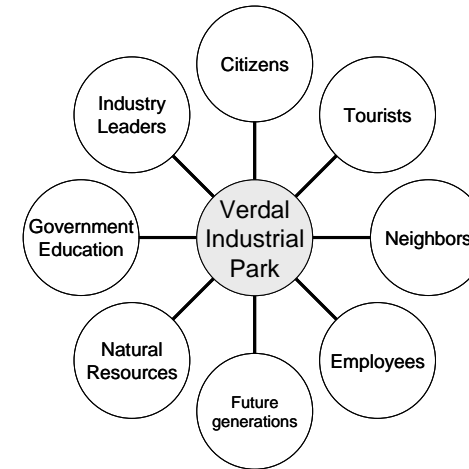
Verdal and iFACE – i

i – identify stakeholders

To address the initial crisis, management involved all impacted employees; created special training and educational opportunities; created IndPro – first incubator in Norway – to provide mentoring and good advice; sought funding from the municipality and succeeded in establishing Verdal as a “CHANGE” community, eligible for special funding to support new projects

See the next chart for a view of the Verdal Industrial Park stakeholders

VIP stakeholders



Verdal and iFACE – F

F – frame the problem

Rather than see the lost jobs as a problem that belonged to the employees, or the community alone, Aker Verdal management saw this as a joint challenge; they provided funding through IndPro and gave over the former administration building to house the new incubator

Today, the community is looking for ways to increase the interactions between the firms – especially reuse of by-products; distance heating

Verdal and iFACE – A

A – generate alternatives

Many alternatives were available; putting the employees on welfare as unemployed workers, to providing education, funding assistance for entrepreneurial ventures. Other measures were considered as ways to help mitigate the overall impact of the lost jobs – creation of an industrial cluster to replace the former disjointed relationships. Attention is turning to creating a materials flow profile of the park – bringing in experts from the university to conduct MFA and other analyses

Verdal and iFACE – C

C – choose a course of action

Within months of the announcement that the jobs would be lost (1999), IndPro had been established, and the positive actions described earlier were underway. Application for national funding took more time, but that appeared in 2002 (which is not a long time in political decision-making cycles)

Today, leadership is looking to improve the ecological footprint of the industrial park while inviting new firms that can reuse, reclaim or remanufacture using existing byproducts

Verdal and iFACE – E

E – evaluate

Each action was accompanied by continuous scrutiny and progress assessment – this has resulted in a rich archival record

Permission to observe the process from NTNU graduate students (geography department) resulted in independent assessments of the activities

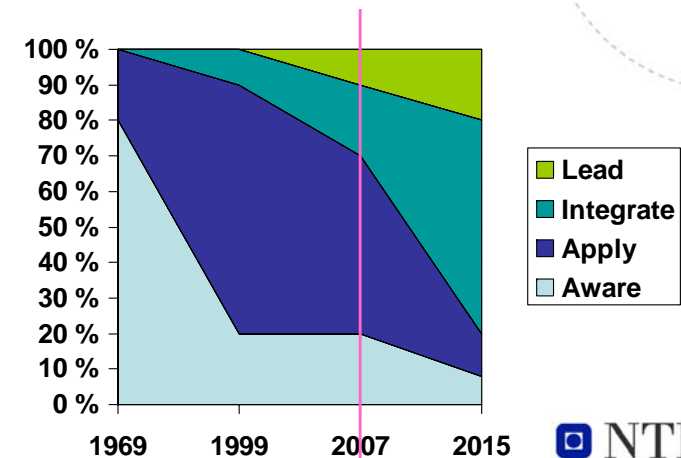
This case study is expected to yield results that support future decision-making – thus continuing the cycle!

Individual firm evaluation

Application	Integration	Leadership
Application	Application	Integration
Awareness	Application	Application

x-axis, social; y-axis eco

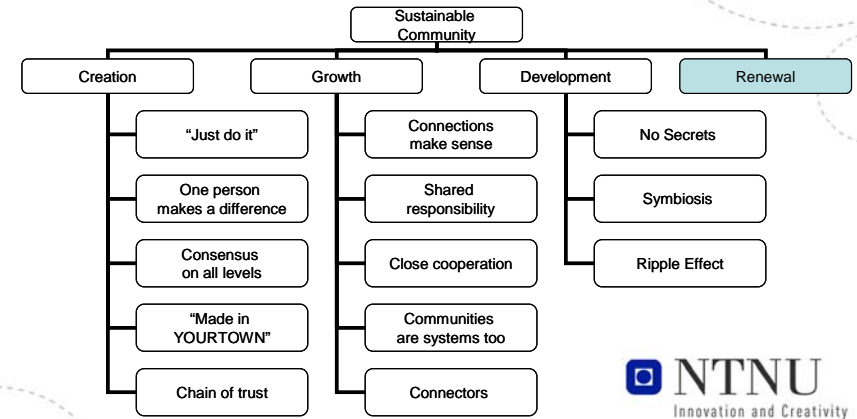
Case Study – Verdal, Norway



Conclusions

- The definition of each sustainable community belongs to the people who live in the place – provided they observe basic tenets of equity and stewardship
- Collaboration framework has been found useful
- Eco-industrial park not a quick solution – demands new information and analysis not part of every day thinking

Quick update on the patterns



About the patterns framework

- Using the metaphor of natural ecologies, the life cycle of an industrial park or other social community can be viewed in the same way as the stages of a forest or other natural system. These four stages can be summarized as Creation, Growth, Development, and Renewal.
- During the creation stage, many ideas are generated; there is an abundance of energy, and a desire to make something happen (Just Do It). It is helpful to create a shared vision of how the community looks during this phase.
- Trial and error teaches what works, and this learning is applied during the growth stage. The participants begin to understand the role they play in the overall context (Shared Responsibility).
- The development stage is typified by more maturity, continued growth, and institutionalization of 'what works' such that success breeds success (Ripple Effect).
- But success also breeds the conditions that constrain unlimited development. Eventually, the status quo is threatened by the need for change and renewal begins.
- At the end of a life, every entity experiences a form of creative destruction that eventually leads to renewal. In nature, a fire that destroys a section of the forest but allows dormant seeds to burst out into newly-created sun would be an example of this destruction and renewal phase.

Some inspiration



“Treat the earth well: it was not given to you by your parents, it was loaned to you by your children. We do not inherit the Earth from our Ancestors; we borrow it from our Children.”
Ancient Indian Proverb

*“When all the trees have been cut down,
when all the animals have been hunted,
when all the waters are polluted,
when all the air is unsafe to breathe,
only then will man discover he cannot eat
money.”*
Cree Prophecy