



(INstruments and NEtworks for developing logistics towards Sustainable Territorial Objectives)

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Local Scenario Workshop of the Viborg County case study

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Introduction

The 2nd June 2004 the research team of Roskilde University held a Local Scenario Workshop as an integrated part of the INNESTO-project and its methodology. The aim of the workshop was to get the views of different experts on logistics, transport, regional and industrial development on the development of sustainable regional logistics and transport systems in the future. The regional case study of Viborg County was taken as a starting point, but the experts view also included a perspective on the Viborg County in a wider national and European context. On the basis of the Local Context Analysis the following hypothesis of innovative action was developed:

To develop innovative networks in the relationships among local furniture and transport firms as the basis for implementing regional policies aiming at promoting more sustainable district logistics.

The scenario workshop was intended to create alternative scenarios to describe possible future roads towards sustainable regional logistics and transport systems by identifying visions, barriers and stakeholders/actors for implementing new strategies.

The workshop had 8 participants with the following professional background:

1. Researcher within the field of transport and traffic planning
2. Researcher within field of freight logistics
3. Representative from the regional department of the transport union in Viborg County
4. Consultant within the field of transport and logistics
5. Consultant within the field of traffic planning and policies
6. Representative from the Danish Environmental Protection Agency
7. Representative from the Spatial Planning Department of the Ministry of the Environment
8. Researcher within the field of industrial development

The scenario workshop was held as a one-day seminar from the morning to the afternoon at Roskilde University. The workshop participants were introduced to some key results from the District Logistics Analysis of Viborg County in order to highlight central themes and present the regional context of the workshop. The workshop was executed in a process of three phases: the phase of critics, the phase of vision-building and finally a phase of outlining strategies for realisation of desired visions.

In the following sections of this report is presented the keywords and themes presented and discussed in the three phases. Finally, an overall assessment and concluding remarks are presented in the last section.

Results from the District Logistics Analysis of Viborg County

As an introduction to the Local Scenario Workshop the participants were introduced to the overall idea of the INNESTO-project and its partners and their local case studies.

Thereafter a general introduction to the case study of Viborg County followed and the main conclusions of the Districts Logistics Analysis were presented (see appendix 4):

- In the Viborg County a cluster of competencies within furniture related logistics and transport is located. The competencies are embedded within the interfirm networks of small and medium based furniture producing firms and specialised transport firms in the region.
- The transport flow of wooden components and sampled furniture is concentrated within specific transport corridors to and from Viborg County.
- The decision-making related to transport and logistics is primarily located at the suppliers within the value chains. This implies that the competencies related to organising the transport and logistics within the furniture industry is primarily locally situated in relation to the distribution of sampled furnitures out of Viborg County.

In succession of the presentation of the District Logistics Analysis of Viborg County were the following three themes presented as issues, that the participants were encouraged to reflect in their discussions during the working phases of critics, visions and realisation:

- Who will be the future actors and what will be their role in future logistics and transport networks ?
- What will be the significance of regional planning territories and industrial districts for the development of sustainable logistics and transport systems ?
- How will the relationship develop between (increased/reduced) traffic work versus (increased/reduced) transport efficiency in the future ?



Phase of critics

The headline of this phase is:

We are consequently negative

The phase was run as a brainstorming, following three principles:

- short statements (was written on wall papers by the facilitators)
- no discussion of statements
- all negative statements were allowed

The following themes were listed as negative statements related to the overall theme of the scenario workshop:

- Global markets can not be governed or controlled.
- The furniture industry will be re-located to Poland and the Baltics and the furnitures are transported by Ukranian low-cost road haulage firms. Specially when the transport cost rise.
- Transport has little importance for the location of companies.
- The rules for driving and rest will be challenged by unfair competition.
- The wood-processing industry will be re-located to Russia.
- The forwarding companies are expendable in the transport chains
- The specialisation of high-value products results in more frequent transports with less full loads.
- Too much focus on production and too little attention on consumption. It is the consumption that structures the material flows and not the production.
- Large retail chains will be the leaders in organising value and transport chains. This will increase the vulnerability of small firms in the chains.
- Too much focus on quality furniture in stead of low-price furniture.
- Too much focus on transport and too little on logistics.
- Too much focus on the environment explicitly and too little real integration in sector policies and decisions.
- Too little competence-building in the transport industry. Too much focus on physical transport and too little attention on know-how.
- Distribution logistics from specialised regions is nit efficient.
- Too many accidents with heavy vehicles caused by insufficient infrastructure.
- Responsibility by the forwarding companies is missing. The small road haulage firms are too dependent on the forwarding companies and the forwarding companies tend to re-locate the responsibility for the transport quality to the road haulage firms.
- Lack of knowledge is a barrier.

- The competition within the road haulage sector is too fierce, which leads to low profits in the sector. Not attractive sector for serious firms, but for firms with low competencies.
- A low wage-level and lack of formal qualifications among the employees gives the industry an image problem.
- The transport industry is characterised by a poor working conditions.
- Too much focus on price and too little on quality in the transport market.
- Transport is too invisible.
- The pressure from the forwarding companies decrease the traffic safety.
- Small road haulage firms are easier put under pressure from forwarders and customers – partly because of lack of formal qualifications
- Too little focus on power relations in the transport chains – extreme concentration of power by some actors.
- Too little focus on the environment in the transport industry.
- Too little focus on limits for transport growth.
- Too little responsibility for transport content at the final consumers.
- Too much attention on the transport sectors capabilities to solve the problems. The general driver in the modern society is the main problem.
- The regional planners and authorities cannot affect the growth of transport.
- Too little attention on the potentials for making the transport flows more efficient by increased use of alternative transport modes – e.g. railways.
- Too difficult to communicate the issue of sustainable transport.
- Too little knowledge about real environmental effects of the use of ships and trains as alternative to lorries.

Selection of most important critical themes

After the brainstorming the participants were asked to vote for the theme they found most important. Each participant had 3 votes and the following 5 themes came up as the most important:

1. Too little competence-building in the transport industry. Too much focus on physical transport and too little attention on know-how (4 votes).
2. Transport has little importance for the location of companies (3 votes)
3. The regional planners and authorities cannot affect the growth of transport (3 votes).
4. Legal responsibility by the forwarding companies is missing. The small road haulage firms are too dependent on the forwarding companies and the forwarding companies tend to re-locate the responsibility for the transport quality to the road haulage firms (3 votes).

- 5. The furniture industry will be re-located to Poland and the Baltics and the furnitures are transported by Ukranian low-cost road haulage firms. Specially when the transport cost rise (3 votes).



Phase of vision-making

The headline of this phase was:

'Reality is out of function. We are situated in a perfect world, where everything is possible'

The phase was following the same principles as the phase of critics by brainstorming and following three principles:

- short statements (will all be written on the wall papers by the facilitators)
- no discussion of statements
- all statements are allowed

The following themes were listed as statements on visions related to the overall theme of the scenario workshop:

- The global frame conditions are similar for all national economies – e.g. wage.
- The forwarding companies are gone.
- The transport level has been severely reduced
- Transport costs are important parameters in decision-making concerning production and consumption.
- Production has become locale
- Railway and sea transport plays a significant role.
- Transport and logistics is more efficient due to more flexible production systems. Production facilities produce different types of products on same location – less specialisation.
- More attention on life quality than high speed.
- Transport customers demands more quality in transport – e.g. better working conditions for the drivers, the environment etc.
- Transport regions and not administrative regions.
- Strategic planning of transport terminals for intermodality and global/local distribution on an European level.
- Transport between major transport terminal on trains or ships
- Standardised European driving and resting regulations + standardised wage levels
- Just In Time deliveries are not any more used as excuses for small and quick deliveries.
- The furniture industry cooperates on transport.
- The introduction of post-ponement to the furniture industry in Viborg County
- The coordinating competencies are removed from the – now obsolete - forwarders to the road haulage firms
- New technology reduces the emissions from the transport sector to only 1/10 of the present level

- Transport costs reflect the overall cost.
- Larger transport units
- Transport is bought on the internet
- Danish transport firms are number 1 on a European level via their use of 4th part logistics
- The transport industry has become a knowledge intensive industry
- National and regional authorities can appoint specific transport corridors
- Increased capabilities for control and monitoring by the authorities of the transport sector.
- The transport industry is self-regulated in on issues as environment and quality. The self-regulation is not only limited to the transport sector alone, but involve also customers.
- The transport service is regarded as 100 pct. part of the total value adding chain



Selection of most important visionary themes

After the brainstorming the participants were asked to vote for the theme they found most important. Each participant had 3 votes and the following 5 themes came up as the most important:

1. Transport between major transport terminal on trains or ships (4 votes).
2. The transport industry is self-regulated in on issues as environment and quality. The self-regulation is not only limited to the transport sector alone, but involve also customers. (3 votes).
3. Transport customers demands more quality in transport – e.g. better working conditions for the drivers, the environment etc. (3 votes).
4. Transport costs are important parameters in decision-making concerning production and consumption (3 votes).
5. The forwarding companies are gone (3 votes).
6. National and regional authorities can appoint specific transport corridors (3 votes).



The participants each selected a theme, which they would like to elaborate from vision to reality. The 5 prioritised themes were clustered together to fit 3 working groups:

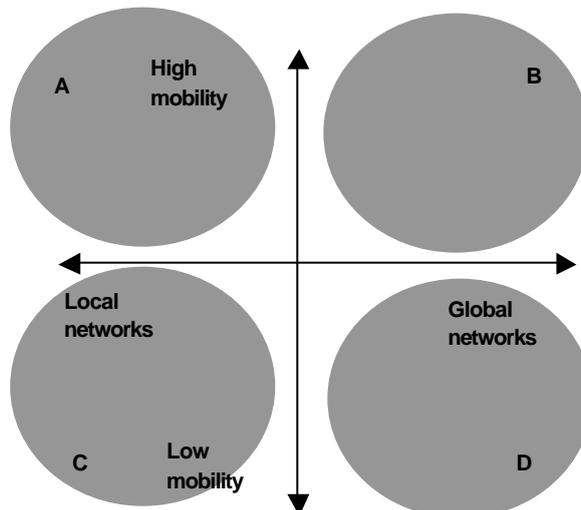
1. Transport between major transport terminal on trains or ships + National and regional authorities can appoint specific transport corridors (3 participants)
2. The transport industry is self-regulated in on issues as environment and quality. The self-regulation is not only limited to the transport sector alone, but involve also customers + Transport costs are important parameters in decision-making concerning production and consumption (2 participants)
3. The forwarding companies are gone (2 participants)

Phase of realisation

In the 3rd phase, the participants discussed in 3 working groups how selected visions could be realised in a time horizon from 2004 to 2030. The working groups had to relate their realisation strategies to a timeline on a wall paper, that was handed out by the facilitators to each group. On this timeline the participants could indicate when and what kind of events would occur, that would be of critical importance for realising the vision.

Another task for the working groups was to reflect on the following two questions:

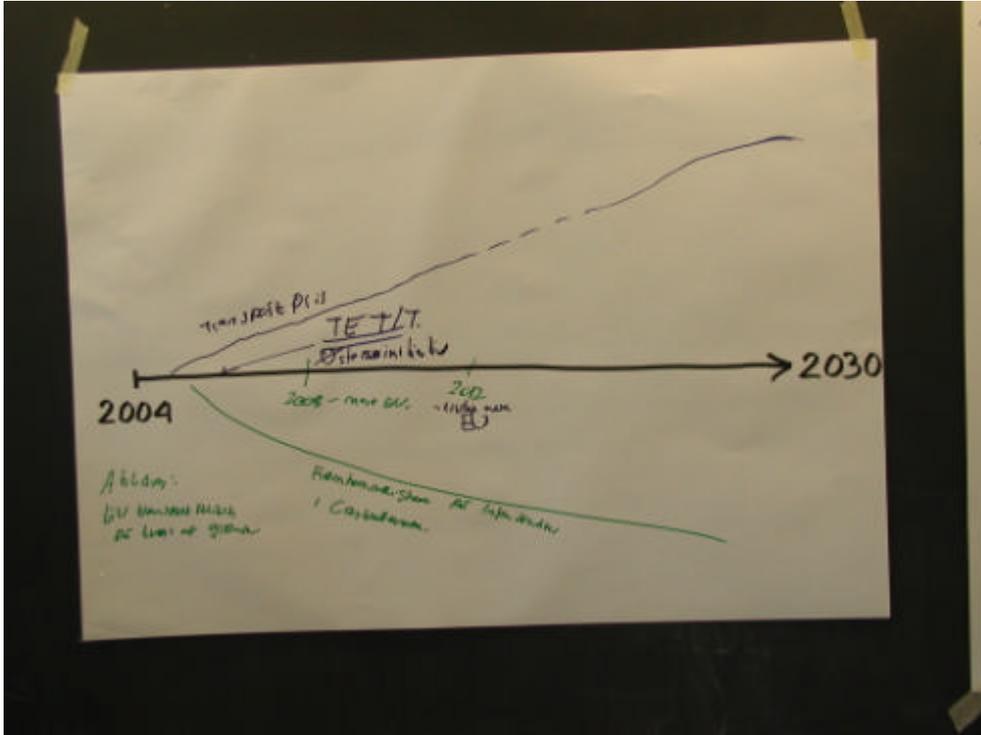
1. How does the realisation of the vision reflect one of the four possible development directions in the scenario-dimension figure (see figure below) ?
2. What kind of actor – e.g. in the transport chains, planning, policymaking, consumers, etc. – can promote the realisation of the vision ?



Realisation of visionary themes

The three working groups presented their realisation on wall papers, that was followed by questions and comments from plenum.

Realisation of vision 1: Transport between major transport terminal on trains or ships + National and regional authorities can appoint specific transport corridors



Realisiering gruppe 3.

The vision of working group 1 was that a European hub and spoke system will be developed and long distance transport between major terminals will be performed on railway and sea transport. From the central terminals a close-knit network of distribution by lorries and vans takes place. The effect on the transport system would be a more efficient use of transport capacity and a reduced traffic and environmental load.

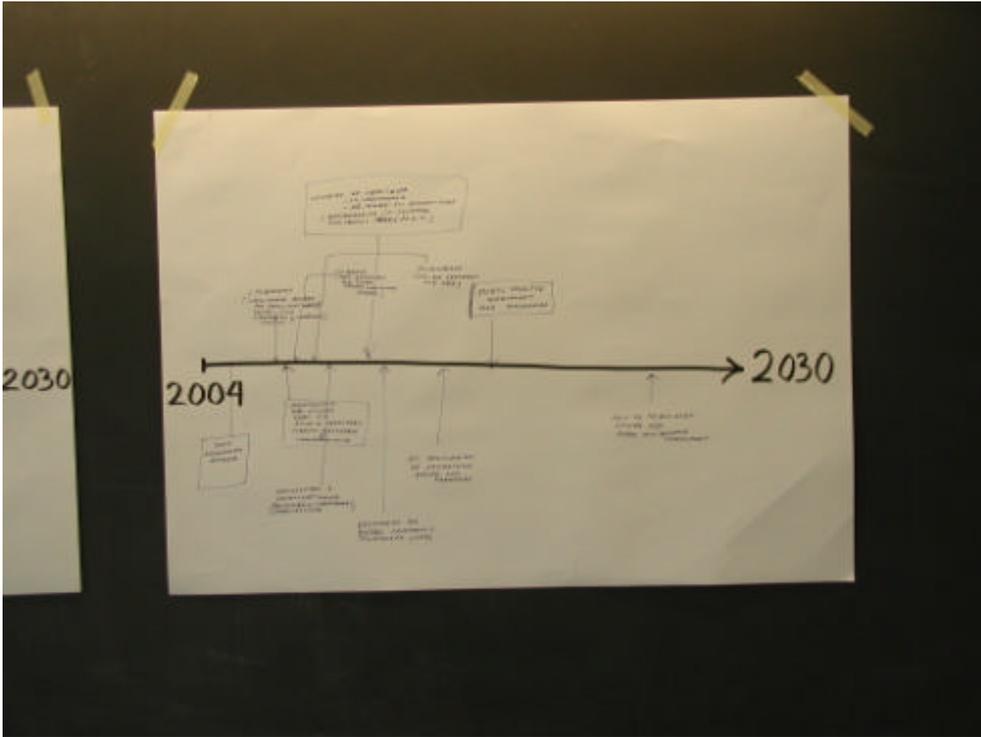
In order to realise the vision, the working group had listed a number of events that were likely or desired to come in the time horizon towards 2030:

- In the near future will the accessibility on the European road network be severely decreased
- The enlargement of new memberstates in the EU in 2008 and 2012 – e.g. Eastern European countries and Turkey – will add to the accessibility problem
- The enlargement process will increase the need for spatial planning on a coordinated European level
- A planning concept of Trans European Terminals of Transport (TET-T) is developed
- The demand and use of a TET-T system is supported by an increase in fuel costs
- New transport terminals are established along the coast of the Baltic Sea along with new transport corridors connecting Western and Eastern Europe.

In relation to the four scenario dimensions, the working group found that their vision primarily could be fitted into the scenario dimension of low mobility and less globalised networks.

Comments from the other participants: a possible threat to the vision could be that single operators establish their own transport corridors and thereby drag out network volume. The market will tend to sub-optimize and therefore political initiatives are necessary.

Realisation of vision 2: The transport industry is self-regulated on issues like environment and transport quality. The self-regulation is not only limited to the transport sector alone, but involve also customers + Transport costs are important parameters in decision-making concerning production and consumption



Realisation, group 2.

The vision of working group 2 was that the transport industry in the future would be self-regulated on issues like the environment and securing high transport quality. The self-regulation is not only limited to the actors of the transport sector, but involve also customers of transport. Also has transport costs become a significant and visible cost among other costs determining the organisation and localisation of production and consumption.

In order to realise the vision, the working group had listed a number of events that were likely or desired to come in the time horizon towards 2030:

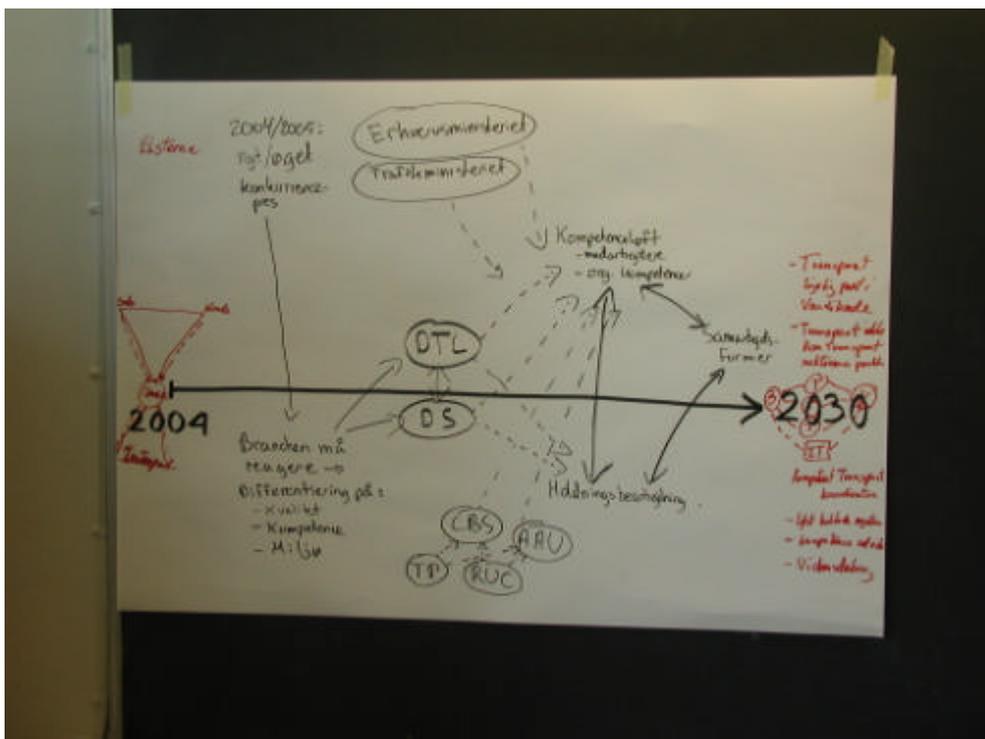
- A stronger regulation of the transport sector will occur on national and European level
- Environmental zones in cities and other critical areas will restrict the free mobility
- The forwarders are made more legally responsible for the organisation and transport quality in the transport chains in cooperation with transport firms and customers
- Advantages of higher speed on the roads are eliminated in order to increase traffic safety and reduce environmental load

- The transport customers are requiring higher environmental and quality standards to their transport operators
- The transport customers accept their responsibility for the transports
- Transport services are declared with information on transport content and environmental load.
- Regulations on a European level prevent competition that leads to low quality transport, environmental problems and decreased working conditions for employees in the transport sector
- Large lorries are only permitted on a restricted number of routes

In relation to the four scenario dimensions, the working group found that their vision primarily could be fitted into the scenario dimension of high mobility and global logistics and transport networks.

Comments from the other participants: Regulation on national and European levels are necessary drivers of a change. Market mechanisms takes care of the fine tuning. The forwarders has still an important role to play.

Realisation of vision 3: The forwarding companies are gone.



Realisation, group 3.

The vision, that group 3 had been elaborating on, was directed towards a future where forwarding companies no longer were necessary. The forwarding companies were seen as an unnecessary and costly part of the logistics and transport chains.

In order to realise the vision, the working group had listed a number of events that were likely or desired to come in the time horizon towards 2030:

- The traditional road haulage firms have taken over the coordinating role of the forwarding companies and there is a greater knowledge sharing across the logistics and transport chains among involved actors
- Transport buyers do to a larger extent than at present take part in the organisation of transport together with transport firms.
- The vision is created by pressure from the market. The transport industry has to create more specialisation and differentiation. The environment and transport quality becomes important parameters for differentiation.
- The industrial organisations of the industry and transport sectors are important levers in the process of creating a higher competence level among the transport firms.
- Universities are involved in the competence development of the transport sector.

The working group found no direct use of the four scenario dimensions in the realisation of their vision.

Comments from the other participants: Policies for the transport sector are to a larger extent formulated by the Ministry for Industry. The forwarders role in the future ought to be neutral "transport integrators" of the transport chains. Today's role of the forwarders is replaceable and can be substituted via IT. The coordinator will still be a role for the forwarders.

Correlation between LCA, DLA and LDA

LCA – main hypothesis

“Development of innovative networks in the relationships among local furniture and transport firms as the basis for implementing regional policies aiming at promoting more sustainable district logistics.”

The hypothesis mainly interact with the following SDL-elements:

O2 Economy

D2 Open collective learning

D3 Negotiation and co-decision

P1 Perception of a variety of development approaches

P3 Capacity to cope with the complexity and ambiguity and to anticipate change

LDA – findings related to the conditions for realising the hypothesis of innovative action

- In the Viborg County a cluster of competencies within furniture related logistics and transport is located. The competencies are embedded within the interfirm networks of small and medium based furniture producing firms and specialised transport firms in the region.
- The transport flow of wooden components and sampled furniture is concentrated within specific transport corridors to and from Viborg County.
- The decision-making related to transport and logistics is primarily located at the suppliers within the value chains. This implies that the competencies related to organising the transport and logistics within the furniture industry is primarily locally situated in relation to the distribution of sampled furnitures out of Viborg County.

LSW-results concerning LCA hypothesis of innovative action

The participants pointed through their working groups at three different visions/scenarios that reflect different perspectives on the opportunities to realise the original hypothesis of innovative action from the LCA:

1. Transport between major transport terminal on trains or ships + National and regional authorities can appoint specific transport corridors
2. The transport industry is self-regulated in on issues as environment and quality. The self-regulation is not only limited to the transport sector alone, but involve also customers + Transport costs are important parameters in decision-making concerning production and consumption
3. The forwarding companies are gone

The scenarios point at different directions to operationalise strategies that possibly could fulfil the hypothesis of innovative action. Specially, scenario 1 and 2 highlight possible directions that involve existing and potential resources in the cluster of furniture production in Viborg County.