

# TransBaltic task 5.5

## Karlskrona – Gdynia

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Fredrik Bärthel

Michael Malmquist

Edith Sorkina



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## Aim

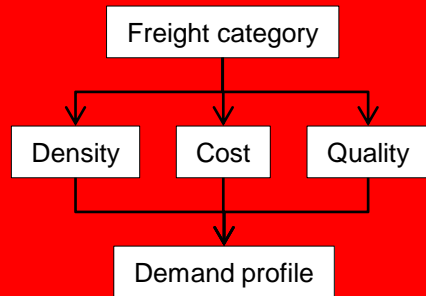
Analyzing the opportunities to design and implement a competitive intermodal hinterland transport service adapted to the needs and requirement of the corridor via Karlskrona – Gdynia based on 3 cornerstones

- A significant, sustainable competitive advantage
- Integrability of transport systems
- Suggest marketing orientation (Spatial and Commodity) in order to secure a base volume.

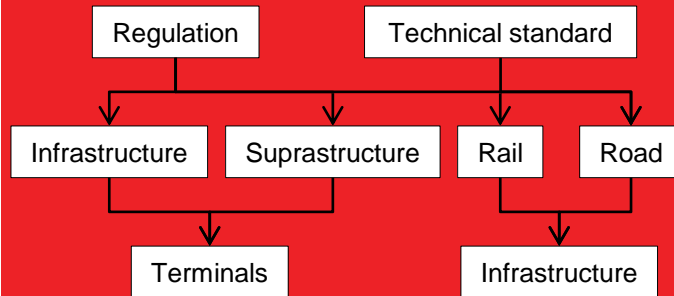
Delimitation: the project team has been advised by the steering committee to focus on the commodity fresh fish (as base volume) – and as complement make overviews of complementing commodities south bound as well as northbound for the backhaul

# Analytical framework

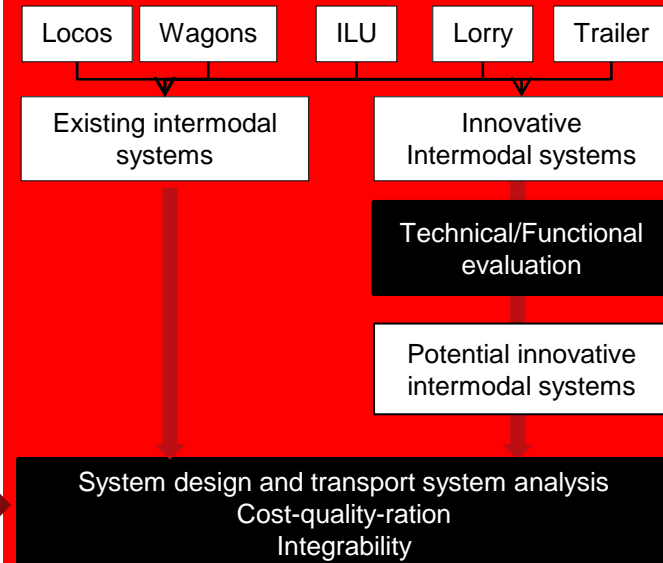
## Activity 1



## Activity 2

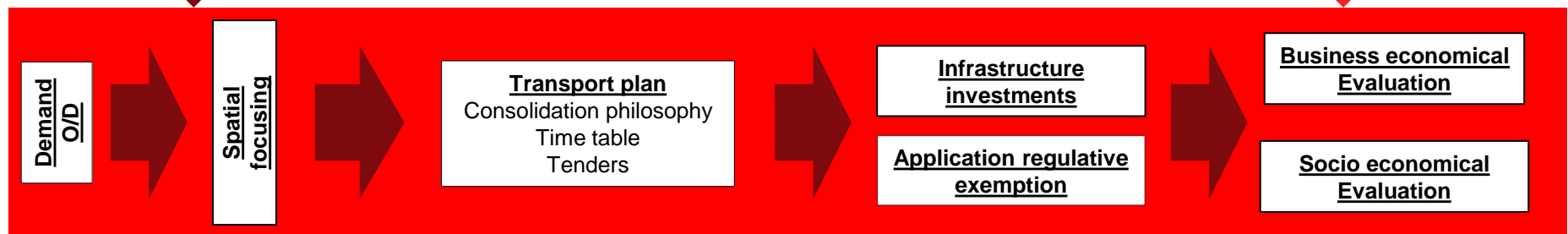


## Activity 3



Requirement specification for the Transport system, => SSCA

System design and transport system analysis  
Cost-quality-ratior  
Integrability



Implementation strategy – market entry ability

Satisfying results? Pilot actions ??



# Activity 1: Demand

## Northbound

- Colonial foods and perishables
- Durable goods

*What is transported?*

## Southbound

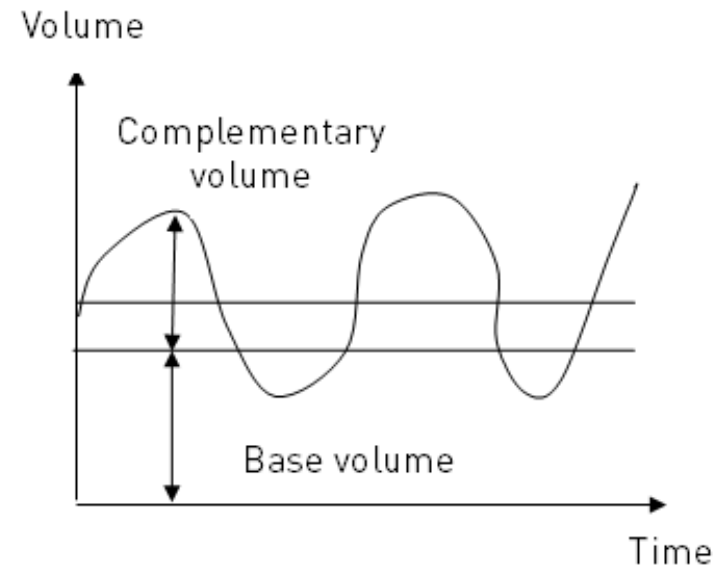
- Paper and pulp
- Aluminum
- Fresh fish

*How is it transported?*

# What is a base flow

## Rail transport' competitiveness

- Large regular flows
- Medium- and long distance
  - Without transshipment 100 – 150 km
  - One transshipment 250 – 300 km
  - Two transshipments 450-500 km
- Capillary infrastructure
- Balance



# Competing transport corridors

## Ferry connections

- Service function = missing bridge
- Competition between Karlskrona-Gdynia and Trelleborg/Ystad-Swinoujscie - diverging, but overlapping hinterlands
- Trelleborg & Ystad connected to Green Cargo's wagonload network
- Almost only accompanied transport
  - Driving/rest time regulation
  - Liability issues

		Tours per week	Lead time	
Trelleborg	Sassnitz	28	4tim	Scandlines
Trelleborg	Rostock	19	5tim15min	Scandlines
Trelleborg	Rostock	20	5h30	TT Line
Trelleborg	Travemünde	28	7h30	TT Line
Nynäshamn	Gdynia	7	19tim	Polferries
Ystad	Swinoujscie	7	6h15	Polferries
Ystad	Swinoujscie	14	6h30	Unityline
Karlskrona	Gdynia	14	10h30	StenaLine
Karlshamn	Klaipeda	7	14tim	DFDS Seaways
Malmö	Travemünde	20	8h30	Finnlines
Stockholm	Riga	7	17tim	Tallink/SiljaLine
Nynäshamn	Ventspils	5	11tim	Scandlines



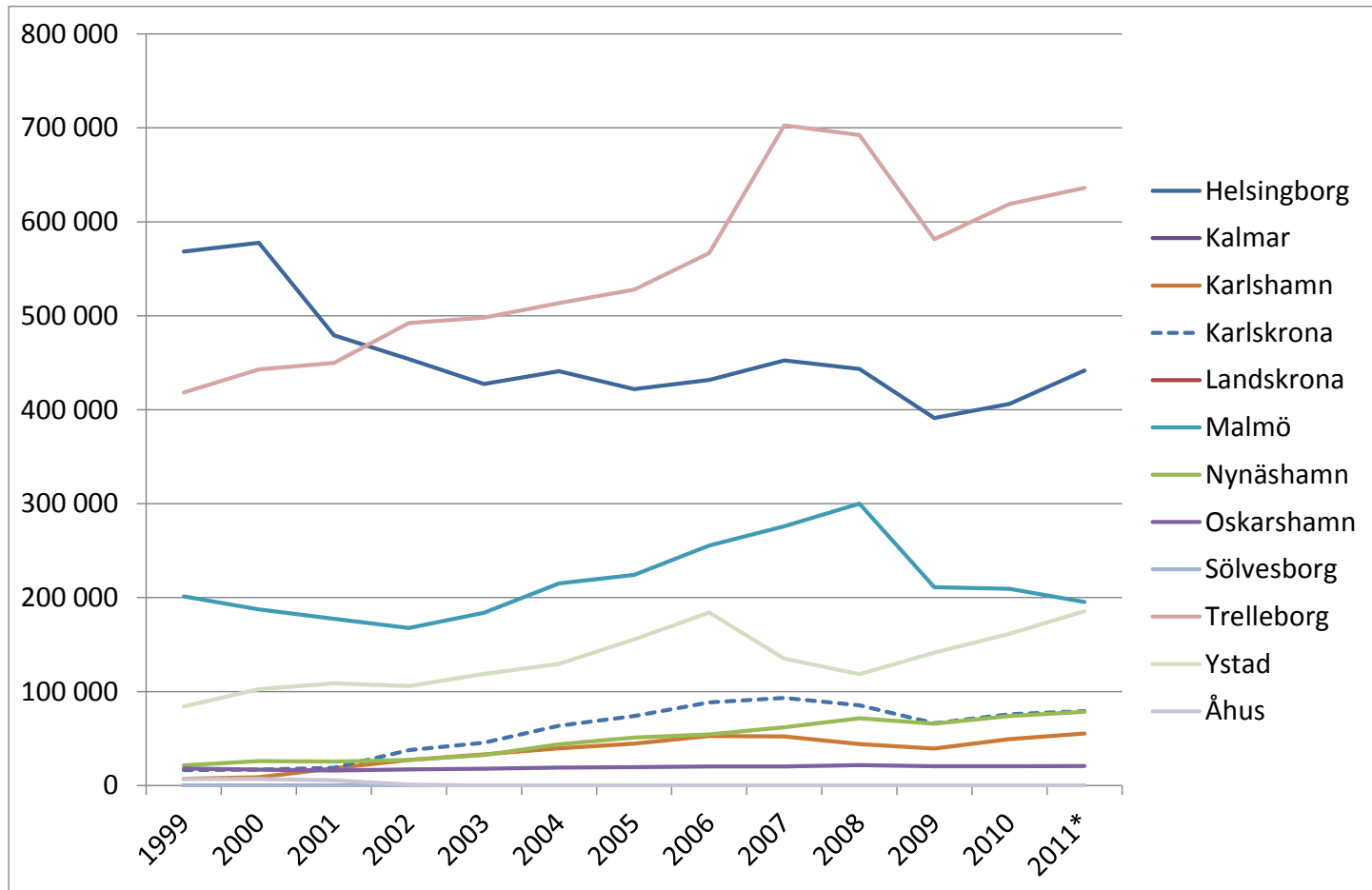
# CargoNet service network

- Trelleborg- Oslo connection still in place;
- Unclear what is happening with other connections within Sweden;
- Currently operates fish trains from Bodo and Narvik to Oslo (only frozen fish);

Terminal network from  
01/04/2012



# Handled trailer volumes at ports with direct links to Poland

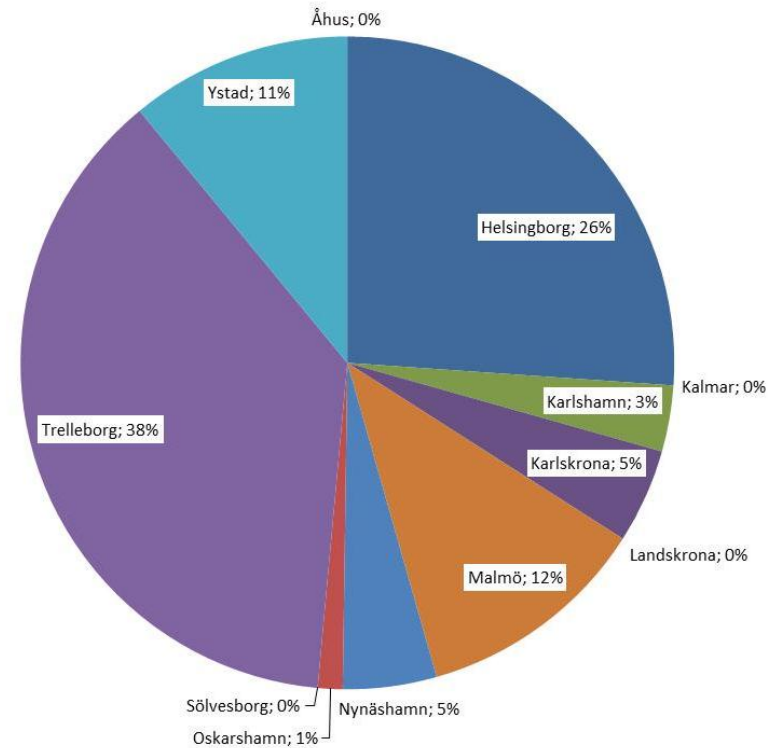


Karlskrona: growth 18,7 % per year or 685 % since 1999



# Traffic through the ports

- Container volumes concentrated in Helsingborg (77 %) and some in Malmö (14 %) and Åhus port (9 %)
- Handled container volumes make up less than 1 % of handled in trailer volumes in Skåne ports (measured in TEUs)
- Trailer volumes are spread along the coast. Ports in the Skåne region handle 87 % of trailer traffic



Trailer traffic

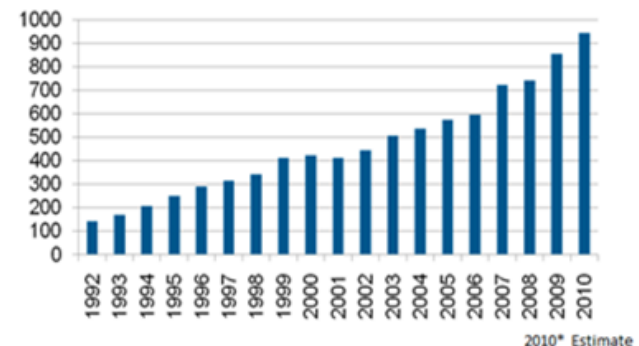
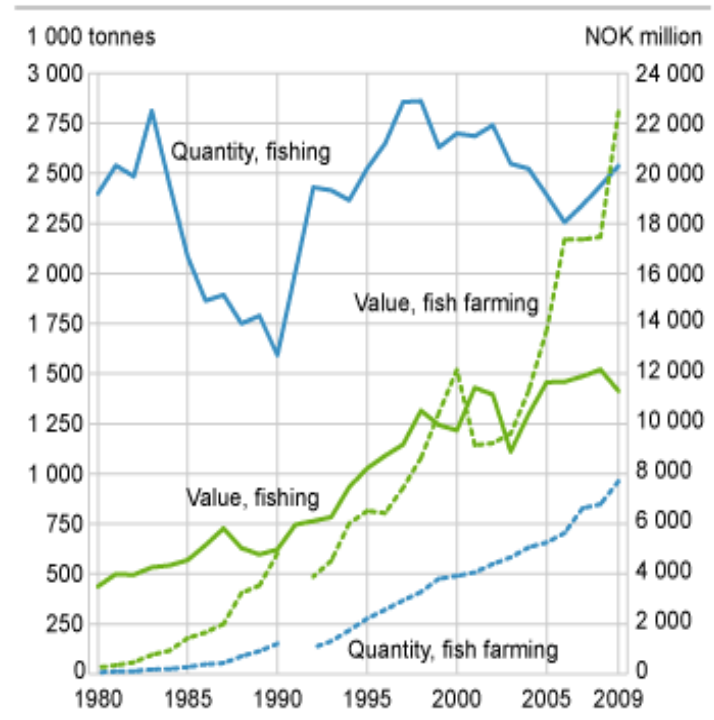
# Case study: fish transport

- major export article to Poland;
- location of the industry creates favorable conditions for intermodal rail in terms of distance;
- strong interest from the local communities;
- currently rail is used mostly for frozen fish cargo;
- problems with current road-based set-ups;



# Norwegian fish industry

- 6,6 % of Norwegian exports
- Structure: increased concentration in the industry:
  - Reduced number of factories, exporters, licenced farmers;
  - 25% of companies having salmon export licenses control 90 % of the exports;
  - Increased export value
- Salmon 61% of exports (2010), out of this 74% is exported fresh;
- Major shift in markets from west to east;
- Nearly half of the total volume of salmon and trout is produced in the four northernmost counties- Nordland, Nord-Trondelag, Troms, Finnmark;



Salmon production 1992- 2010

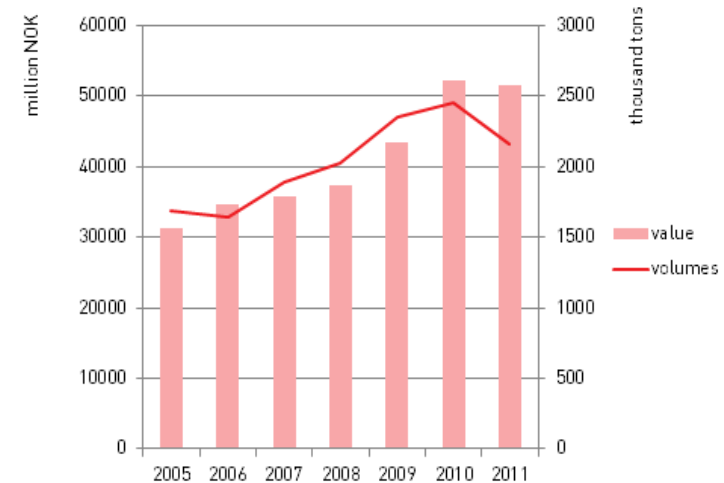


# Industry trends

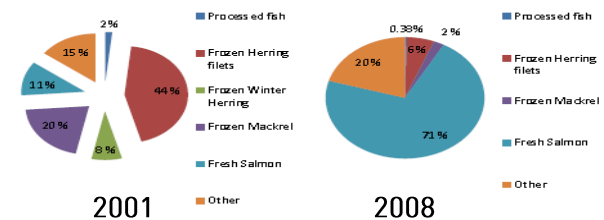
- Fewer more effective production plants and slaughter houses at less central locations;
- Future growth of export will primarily come from fresh fish segment
- Strong international competition → continued restructuring and streamlining of the aquaculture industry;
- Growing cooperation in the industry: joint sales organizations, cooperation in harvesting and packing;
- Signs of new technology that would increase the shelf life → likely to increased lead time, as receivers of cargo not interested in increased inventories;

# Polish fish industry and import from Norway

- 3rd biggest market for Norwegian fish after France and Russia
- Major processing country
- 60% goes for re-export (mostly to Germany)
- Share of norwegian fish ca 30 % (2006)
- Major processing companies situated along the coast line;
- Major changes in import composition;



Fish import from Norway to Poland: value & volume



Fish import from Norway to Poland: product composition

# Transport of exported fish from Norway

	to Poland	total export
Ship	31,8%	53,1%
Truck on ship	0,4%	4,8%
Trailer on ship	0%	0,1%
Rail	0%	0,1%
Truck/trailer on rail	<0,1%	<0,1%
Truck	67,8%	38,7%
Air	0%	3,2%

- Most of the pelagic fish - seaborne cargo→
- Big challenges are related to the transport of fresh fish and other high-value fish products

# Fish export on rail from Norway

Rail/ intermodal transport of exported fish (tons)

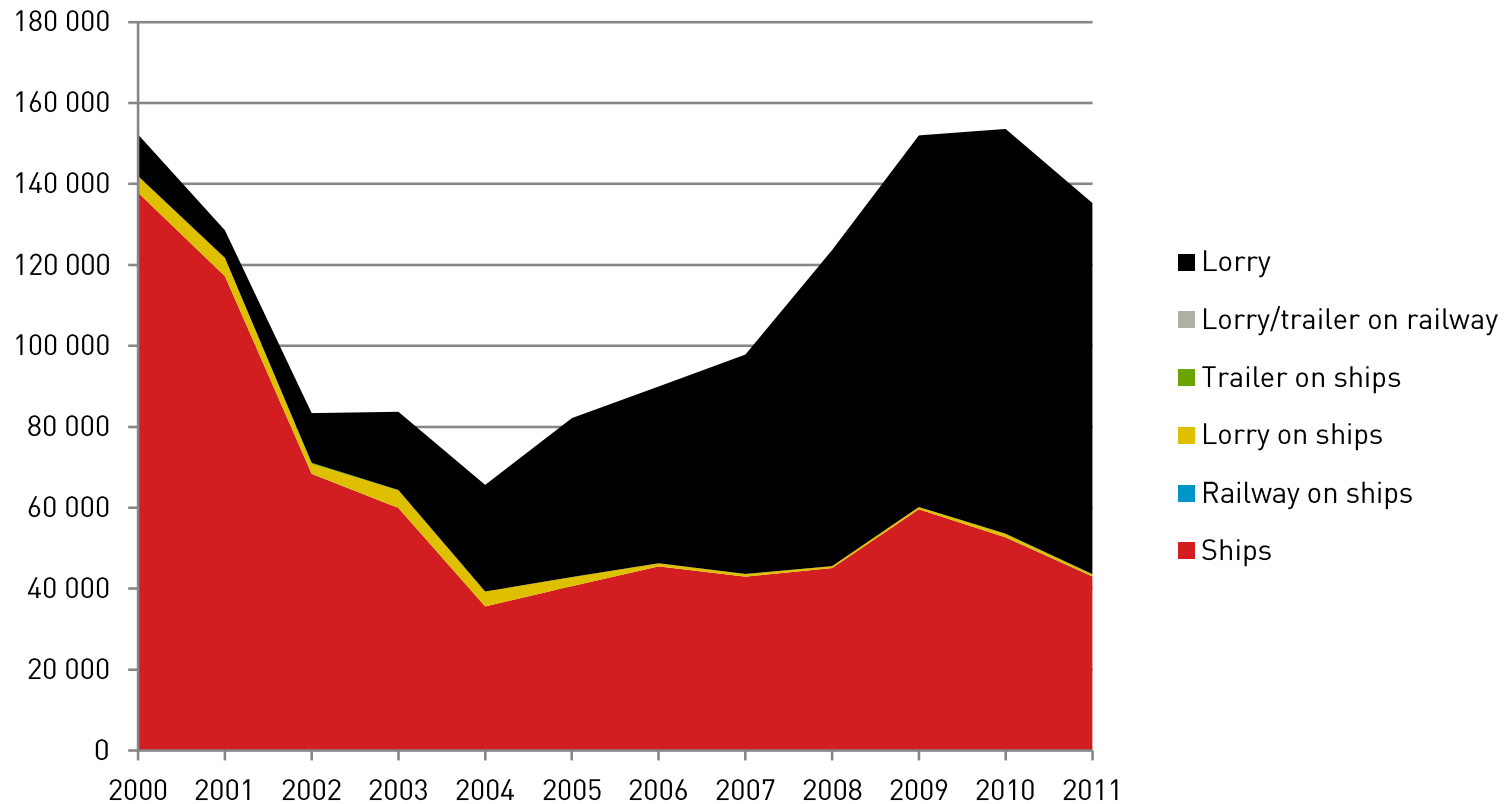
	2005	2006	2007	2008	2009	2010	2011
Railway	92	391	13	58	99	1335	1642
Lorry/trailer on rail	24		103	14	23	665	956

“Domestic” transport

90 000 ton of fish on rail (2005)

- from Narvik via Sweden to Oslo
- from Bodø /Fauske till Oslo

# Share of different transport modes over time



Transport of fish and fish produce from Norway to Poland



# Challenges in fish transport today

Return transport => often empty (Europe + Russia)

Localization of the fish industry

1-5 hour drive from plant to closest railway terminal

quality of local road network: from plants to main trunk roads

Seasonal variations (high season: pressure on truck capacity)

Time and temperature sensitivity (varies)

48-72 lead time to Poland

Shelf life: fresh salmon- 14 days

Transport time by rail to Alnabru terminal in Oslo:

From terminal	Transport time
Bodø	20:50
Fauske	19:49
Mo i Rana	16:09
Mosjøen	14:50
Trondheim	07:51

Transport buyers: too large extent fish sold on ex-works terms (receivers)



# Challenges in fish transport today

Transport to Western Europe mainly by Norwegian and Danish drivers  
vs. Eastern Europe- mainly eastern European drivers → transport cost

8 000 -12 000 kr per month including social fees and allowance

Fuel costs though increased are significantly less

Transport: small share of the product price (6-7%)

Survey among producers showed

## Accidents, congestion, exhaust fumes

In Nordland county february-march 200 trucks were off the road

## Commodities with similar spatial structure

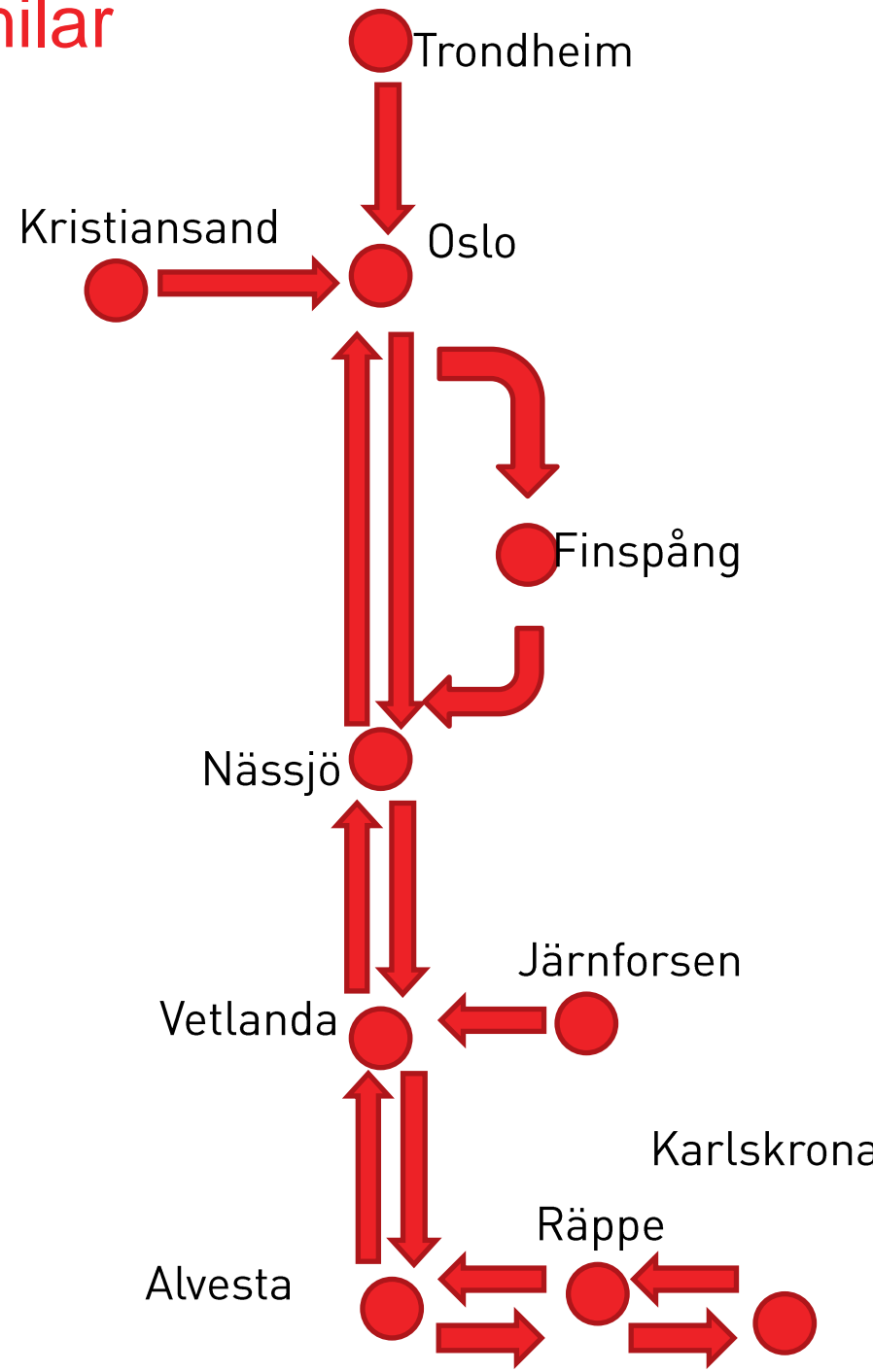
Aluminium bars to sub-suppliers for the automotive and furniture manufacturers;

- Mo i Rana
- Farsand (South coast)
- Sundalsøyra (West coast)

### Paper

- Recycled paper (northbound)
- Tissues (Northbound)
- Paper products (south bound)

Together these commodities form a base flow with a hub in Vetlanda and Alvesta/Räppe



# Barriers for intermodal transport

<b>Existing set-ups</b>	road – cheap despite problems with road transport, cargo owners too large extent satisfied road - flexible for re-routing (fewer long term contracts) partly triangular traffic possible adjustments in internal processes to synchronize with rail transport low concentration in the industry food imports (potential return cargo) in Sweden concentrated in Malmö/ Helsingborg region Transport buying too large extent ad hoc vs. 2-3 year contracts with Norwegian operators
<b>Organizational</b>	many actors transport buyers - too large extent not the senders who should the leading role? (channel manager/leader)
<b>Infrastructural</b>	industry located far from rail terminals increased rail track charges in Sweden lack of road tolls
<b>Operational, logistical and service related</b>	need for door-to-door services- who should take the responsibility fresh fish time sensitive delays affect stronger consolidated shipments
<b>Regulative</b>	lack of regulations on winter tires
<b>Technical</b>	2-10% of trailers equipped for intermodal handling
<b>Attitude</b>	cargo owners skeptical to rail haulers not interested

Finding the right business case



## To sum up

Fresh fish - difficult to have as base flow

But...

- Potential in alternative technologies: rolling highway; trailer train; megaswing
  - Current road-dominated set-ups not viable in long-term
  - Potential increase in product durability
  - High potential of further growth of the aquaculture industry
  - Increased industry concentration
  - Need involvement from the fishing industry (ex. Coop train)
- fish could be a complementary cargo in an intermodal solution



Thank you!