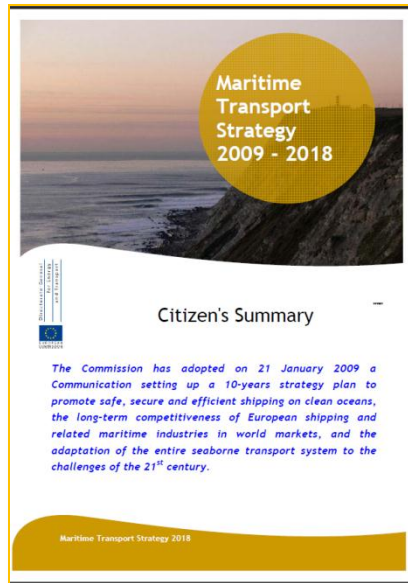


The work with alternative fuels in Sweden

Presentation, Helsinki
11.04.2013

Vision Zero

Maritime Transport Strategy 2009-2018



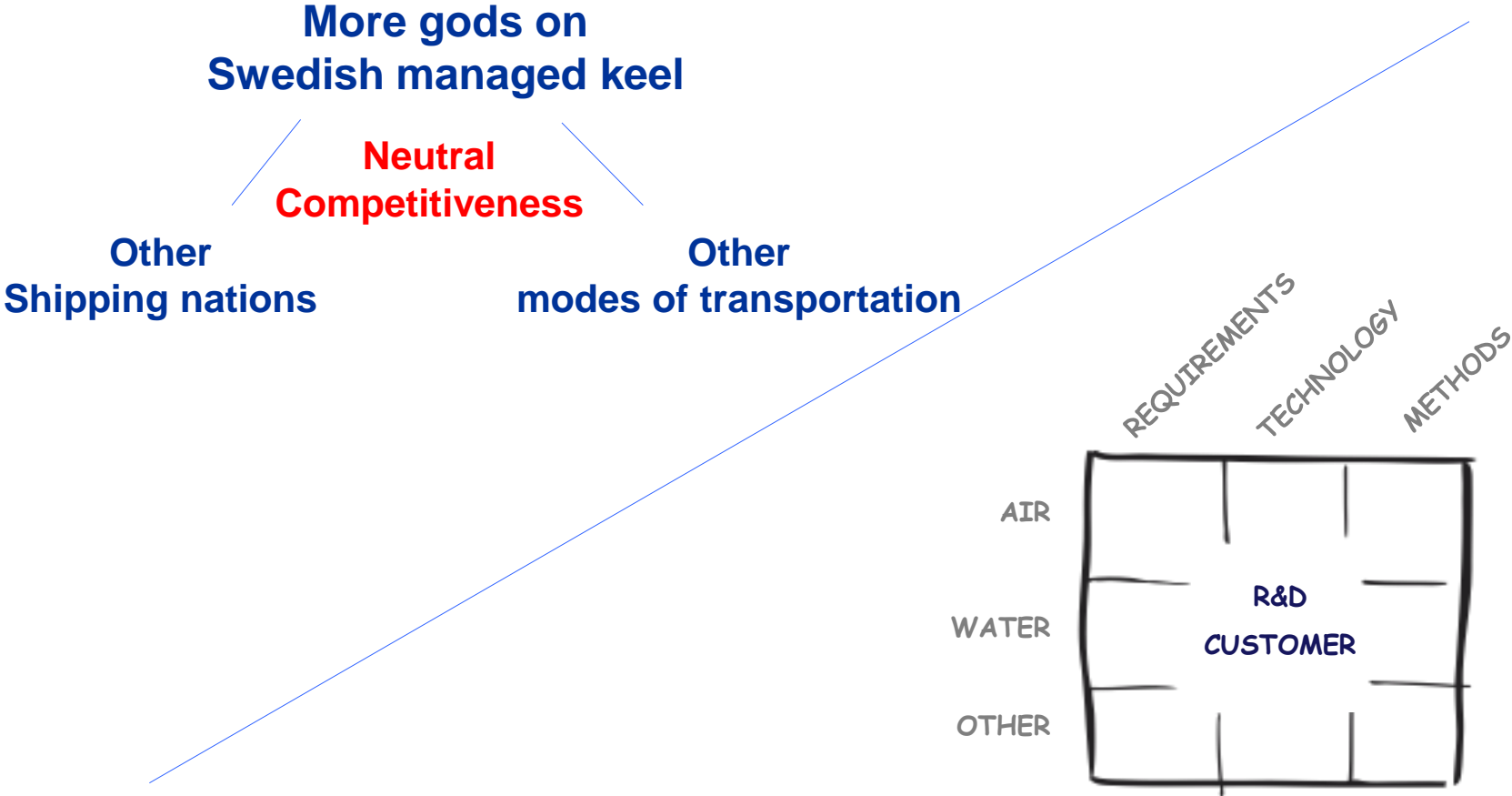
- “Vision zero”
- Avoid modal “back-shift”
- ...

The Challenge

- Increased economic growth
- Increased welfare
- Increased transport at sea
- Reduced negative environmental impact from shipping



SSA aim and the arena

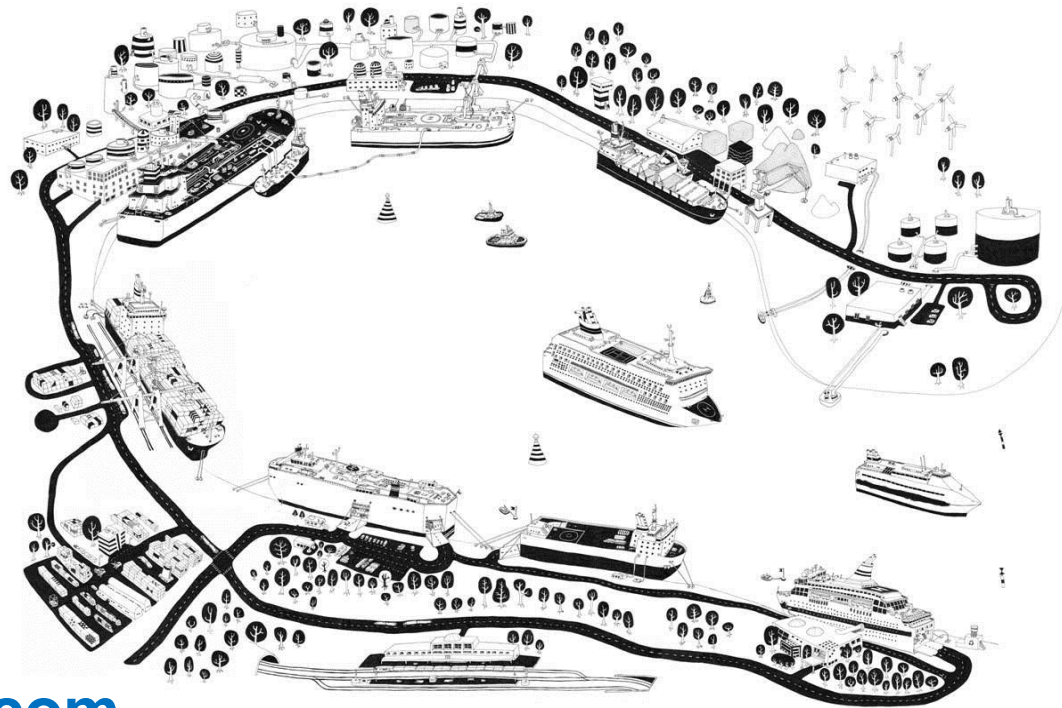


Collaboration – Shipowners & Ports

2009 “Östersjöpositionen”



2010



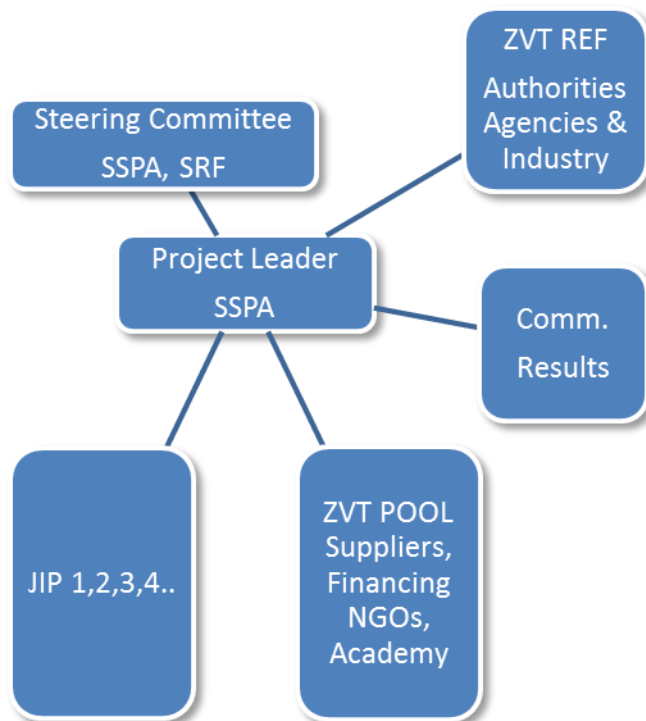
www.balticseaposition.com



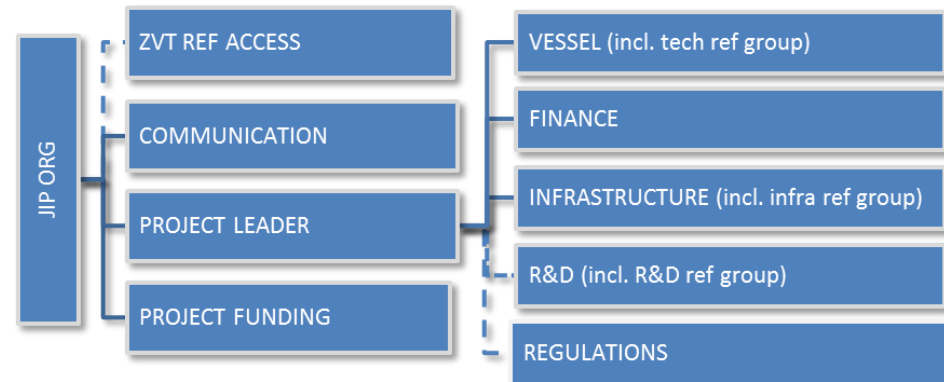


COLLABORATION – NEXT STEP

CO-OP PLATFORM STURCUTURE



JOINT INDUSTRY PROJECT (JIP) STURCUTURE

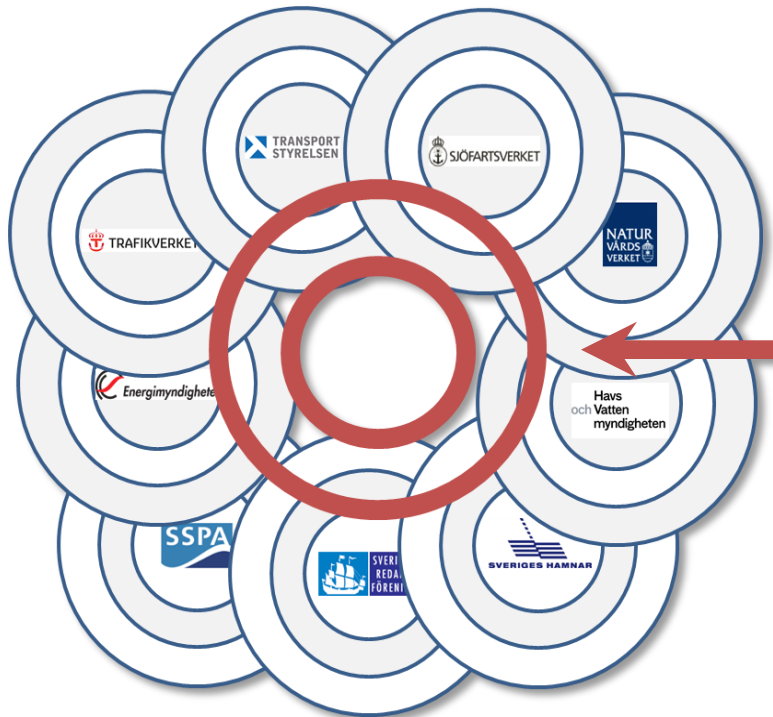


The platform structure co-funded by



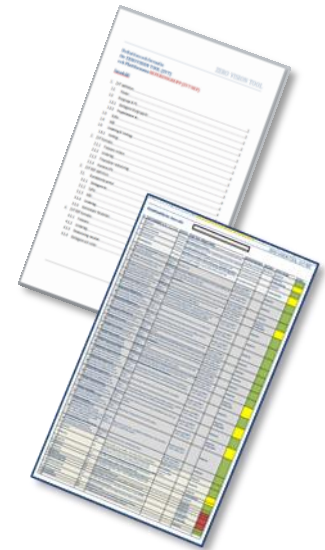
COLLABORATION – NEXT STEP

JOINT EXPECTATIONS



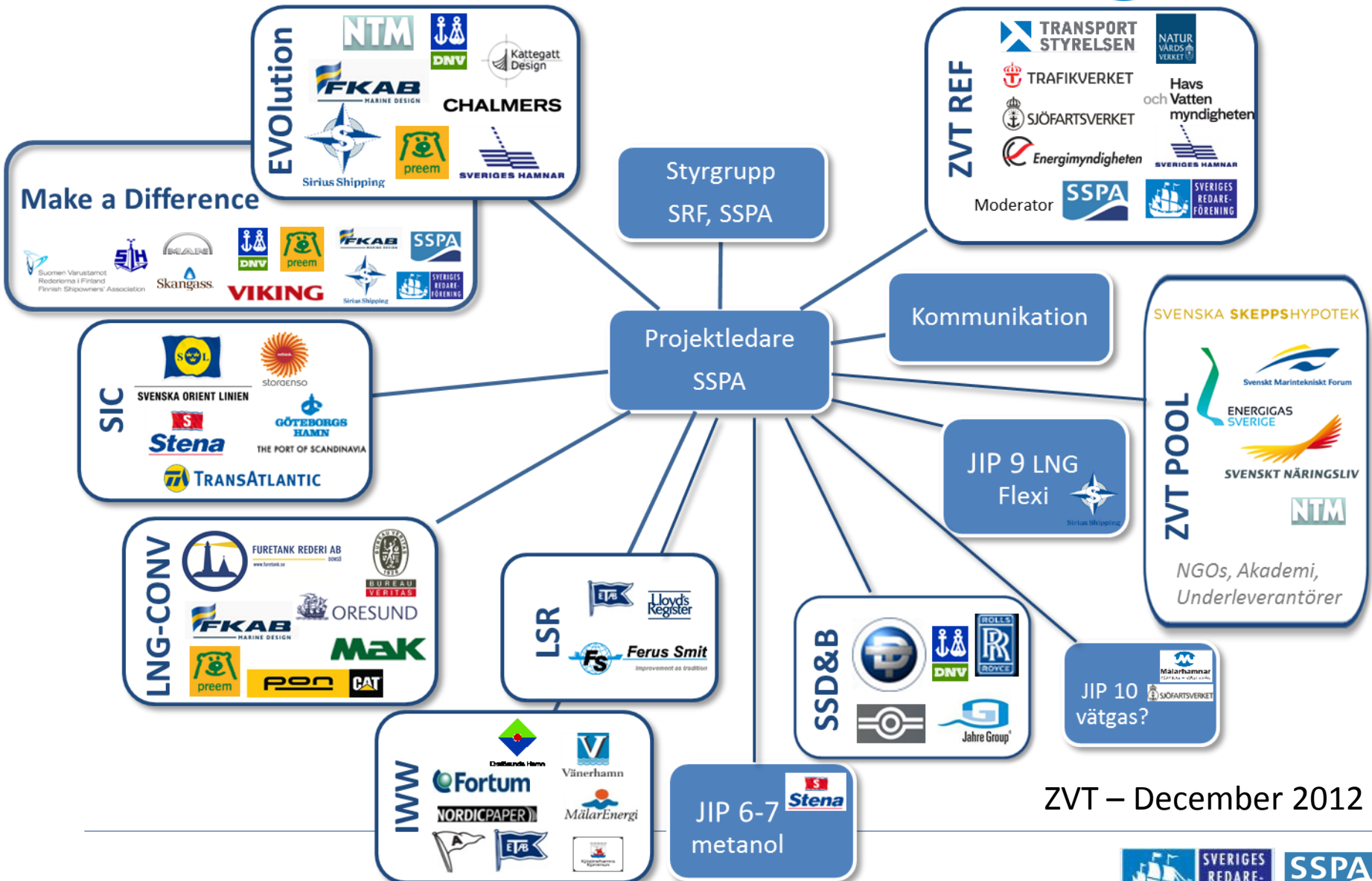
OPEN PROCESS & DOCUMENTATION

- JIPs Overview
- LoA
- Definitions & formalities
- ToR
- Communications matrix





COLLABORATION METHOD
ZERO VISION TOOL



ZVT – December 2012





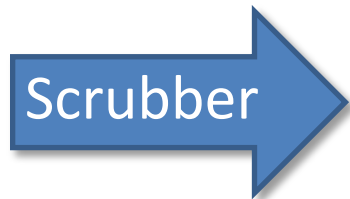
3 PILOTS TO TRY TO SOLVE THE TRANSITION



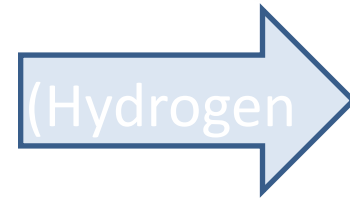
JIP EVOLution
JIP LNG-CONV
JIP IWW
JIP LSR
JIP SSD&B
JIP FLEXI



JIP 6
JIP 7

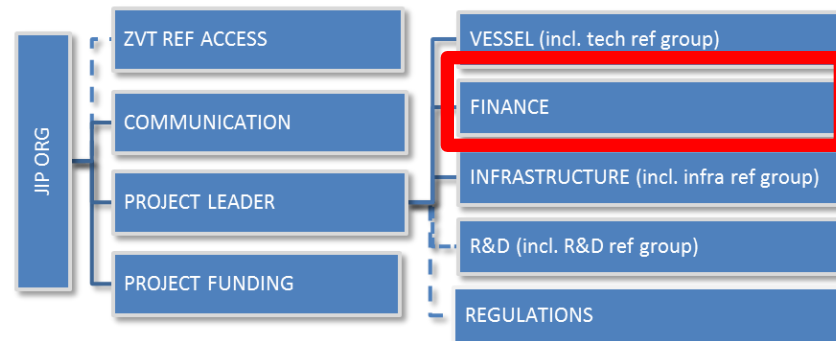


JIP SIC
JIP 5



JIP 10)

FINANCE





COLLABORATION METHOD
ZERO VISION TOOL

PILOT METHANOL

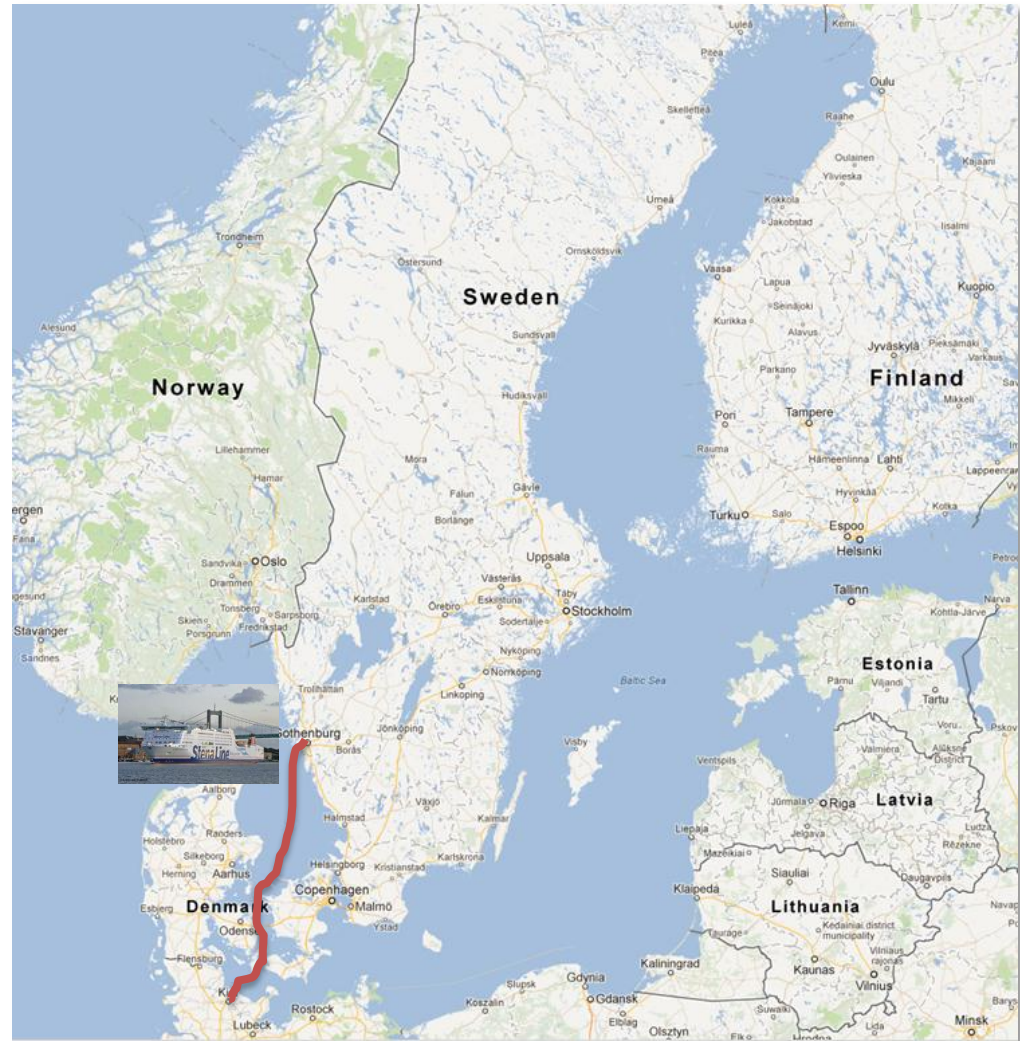
The Solution; demonstrate a cost effective, clean and easy to handle fuel alternative with an easy infrastructure implementation.





COLLABORATION METHOD
ZERO VISION TOOL

PILOT METHANOL - the route



SVERIGES
REDARE-
FÖRENING



Natural gas well head price

0.010	€/kWh	
183	\$/ton	Crude eqv.

Methanol cost ex works

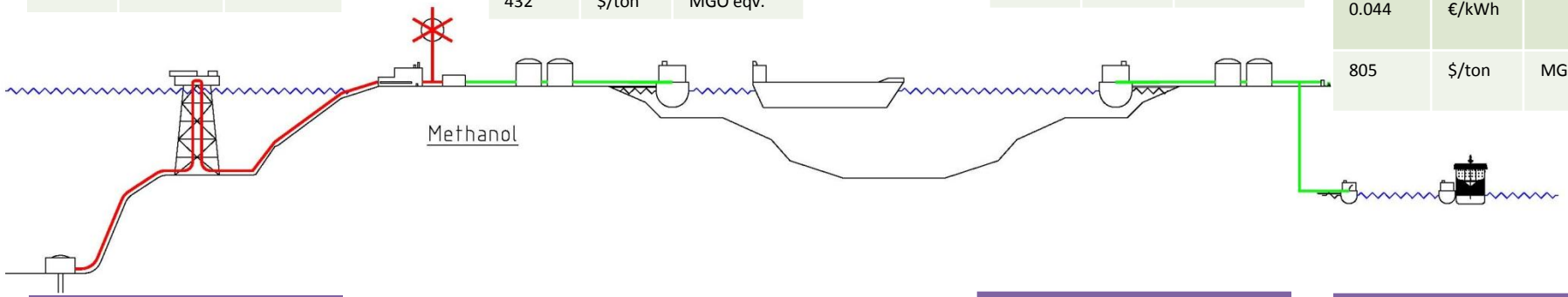
0.025	€/kWh	
432	\$/ton	MGO eqv.

Methanol produced from forest products

0.072	€/kWh	
1244	\$/ton	MGO eqv.

Methanol along side Göteborg

0.044	€/kWh	
805	\$/ton	MGO eqv.



Natural gas well head price

0.010	€/kWh	
183	\$/ton	Crude eqv.

LNG cost ex works

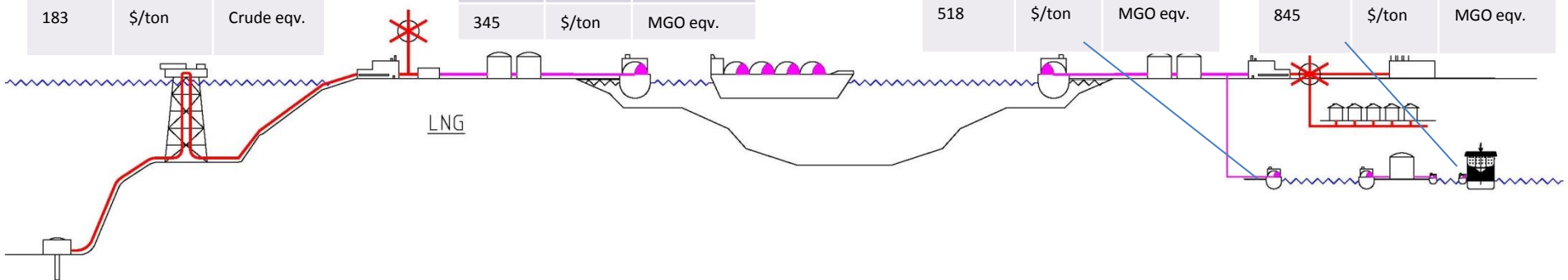
0.02	€/kWh	
345	\$/ton	MGO eqv.

LNG FOB Zeebrugge

0.03	€/kWh	
518	\$/ton	MGO eqv.

LNG along side Göteborg

0.046	€/kWh	
845	\$/ton	MGO eqv.



Crude oil well head price

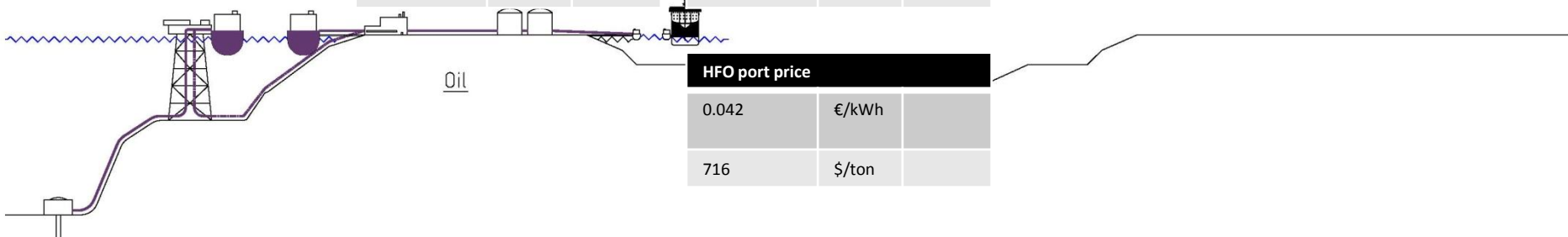
115	\$/bbl	
843	\$/ton	

Crude landed (WTI/Brent approx)

119	\$/bbl	
872	\$/ton	

MGO port price

0.062	€/kWh	
1070	\$/ton	



HFO port price

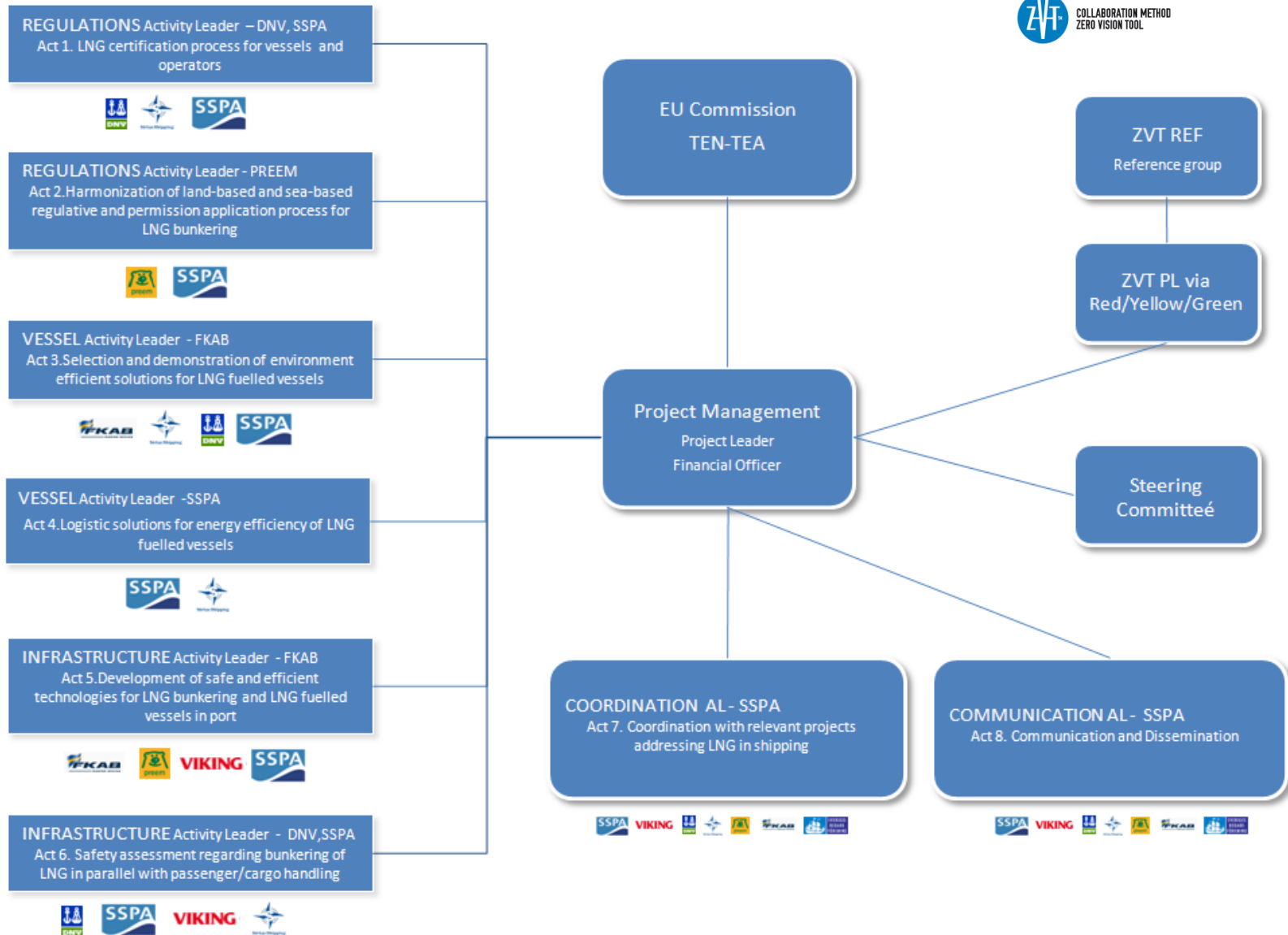
0.042	€/kWh	
716	\$/ton	

PILOT LNG - the routes



COLLABORATION METHOD
ZERO VISION TOOL





LNG harmonization land and sea

Workshop 01: May 20-21

See the Ship-to-Ship bunkering, share results, focus on safety and regulations

MAKE A DIFFERENCE

A TRANS-EUROPEAN TRANSPORT NETWORKS (TEN-T) PROJECT

Contract No. 2011-EU-92079-S

PARTNERS



SUPPORTERS



CO-FINANCED BY



WORKING METHOD



The market is complex and different solutions are needed to reach the set goals. In "Make a Difference" for the shipping industry (MaD), the below shown organisations are willing to invest to reach the aims for LNG fuelled ships. Since it's more expensive to implement new technology and finding new ways forward, EU said yes to co-financing the needed studies and the preparatory work.

The defined actions in MaD are *the first steps* towards reaching the results...



PILOT SKRUBBER – the routes



Thank you!

Carl Carlsson

carl.carlsson@sweship.se
