



► **STRATEGIER OG LØSNINGER FOR FLEKSIBEL
PRODUKSJON**

SINTEF TEKNOLOGI OG SAMFUNN, TRONDHEIM

FAGSEMINAR 5. DESEMBER 2012

**GODE OG DÅRLIGE TIDER – KRITISKE
IMPLIKASJONER OG KONSEKVENSER FOR
FORRETNINGSSTRATEGI, PROSJEKTERING OG
PRODUKSJON**

DR. PER-OLAV BRETT
ULSTEIN INTERNATIONAL AS
05.12.2012

INNHOLD

- Kort om Ulstein gruppen
- Gode og dårlige markeder i den maritime industri – ekstrem markedsdynamikk
- Implikasjoner og konsekvenser av sterk markedsdynamikk for Ulstein
- Krav og utfordringer til fartøysdesign og – byggerier fremover

Problemstilling for seminaret:

- Markedssvingninger og usikkerhet – utfordringer for norsk maritim næring
- Kundetilpasning og store variantspekter, små serier og prosjektbasert produksjon
- Behov for fleksibilitet i det fysiske og det organisatoriske produksjonssystemet – gjennom hele verdikjeden
- Norge har tradisjonelt vært bedre rustet til fleksibilitet og respons enn konkurrentene i lavkostland
- Styrke og videreutvikle disse egenskapene vil være en viktig pilar for Norges fremtidige industriarbeidsplasser
- Hvordan bygger vi opp, organiserer og styrer produksjonssystem og verdikjeder for å oppnå en fleksibilitet og respons evne som gir konkurransefortrinn i globale markeder?
- Stimulere til læring og forbedring i egen og andres virksomheter, gjennom erfaringsutveksling på tvers av industrielle sektorer

ULSTEIN GRUPPEN ASA

Restrukturering

- I 1996 gikk “gamle” Ulstein på børs
- I 1998 ble “gamle Ulstein solgt/kjøpt opp av Wickers LTD, UK, som senere (etter 9 mndr) ble oppkjøpt av Rolls-Royce Marine, UK
- Siden 2001 har Ulstein Group ASA arbeidet med en strategi om å revitalisere selskapets skipsbyggingskapasitet og erfaring. Denne aktiviteten inngikk ikke i salget til Wickers/RR

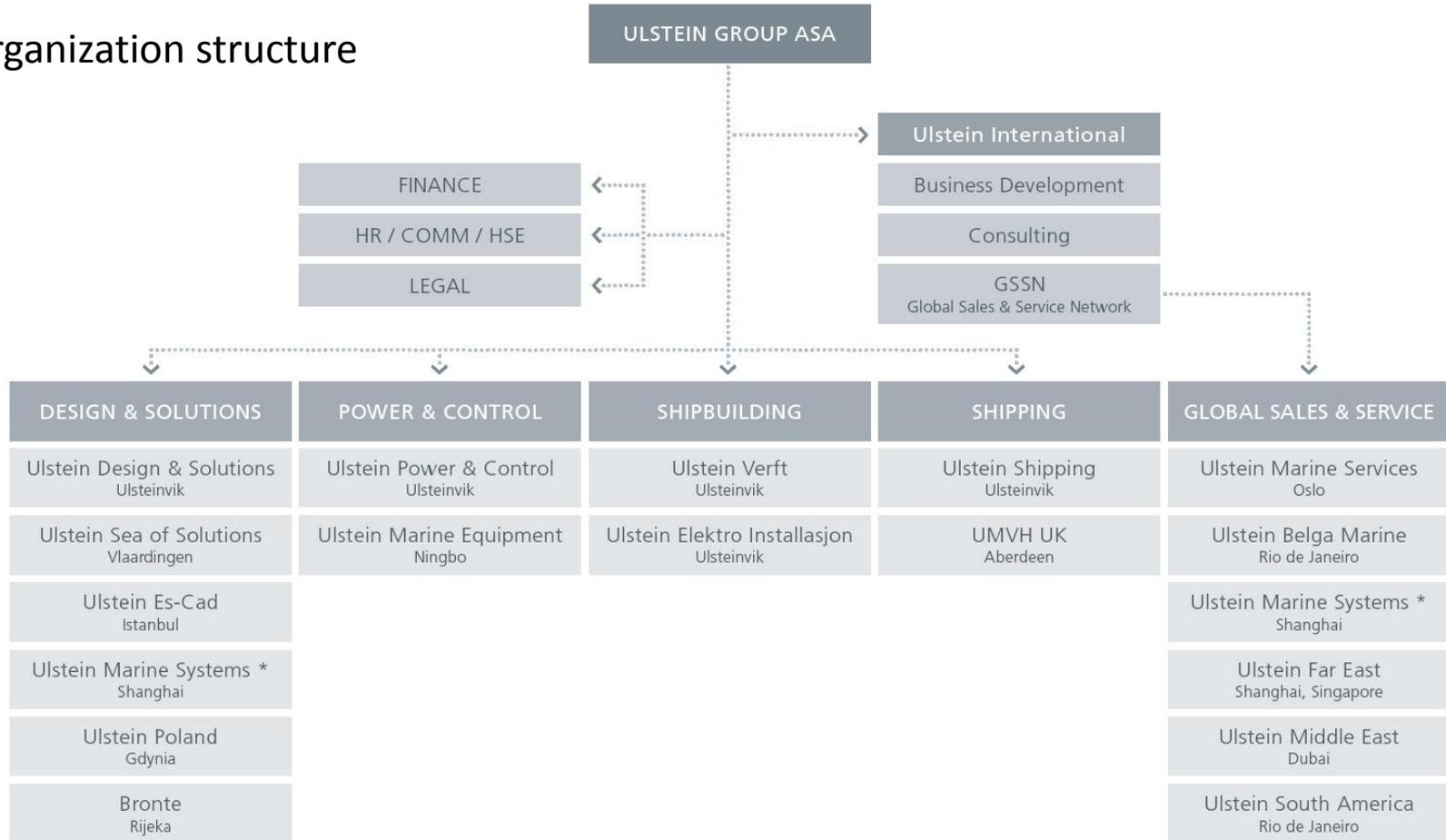
Nå situasjonen:

- Eies og ledes av tredje generasjon Ulstein familiemedlemmer
- Tilbyr ulike produkter og tjenester som har å gjøre med fartøysdesign, -konstruksjon og -fabrikasjon
- Antall ansatte har passert 800. Innleid personell utgjør 250 til 400
- Omsetningen ligger på ca 2,5 mrd pr. Ar
- Ordreserver ligger på ca det samme nivået



THE ULSTEIN GROUP

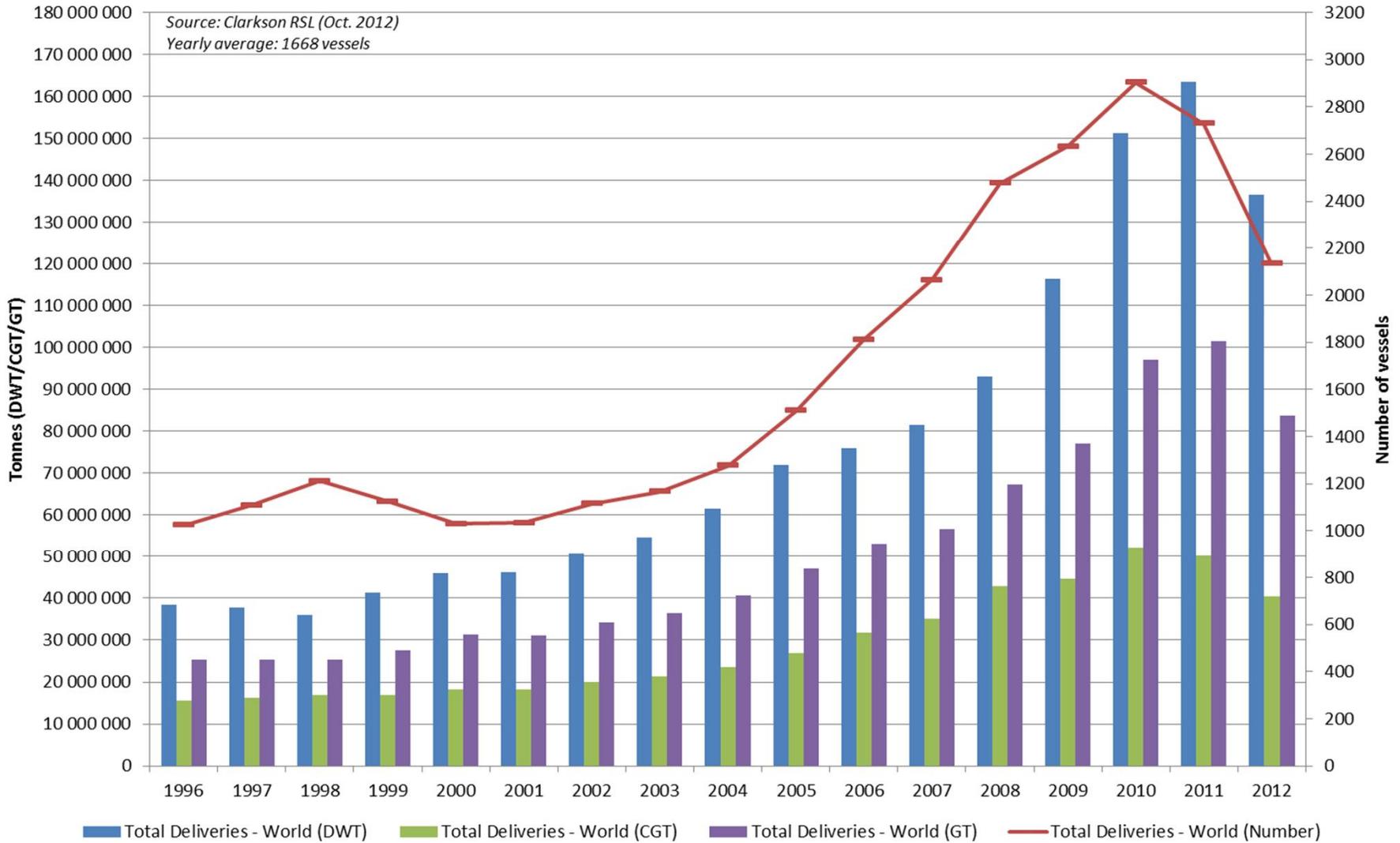
Organization structure



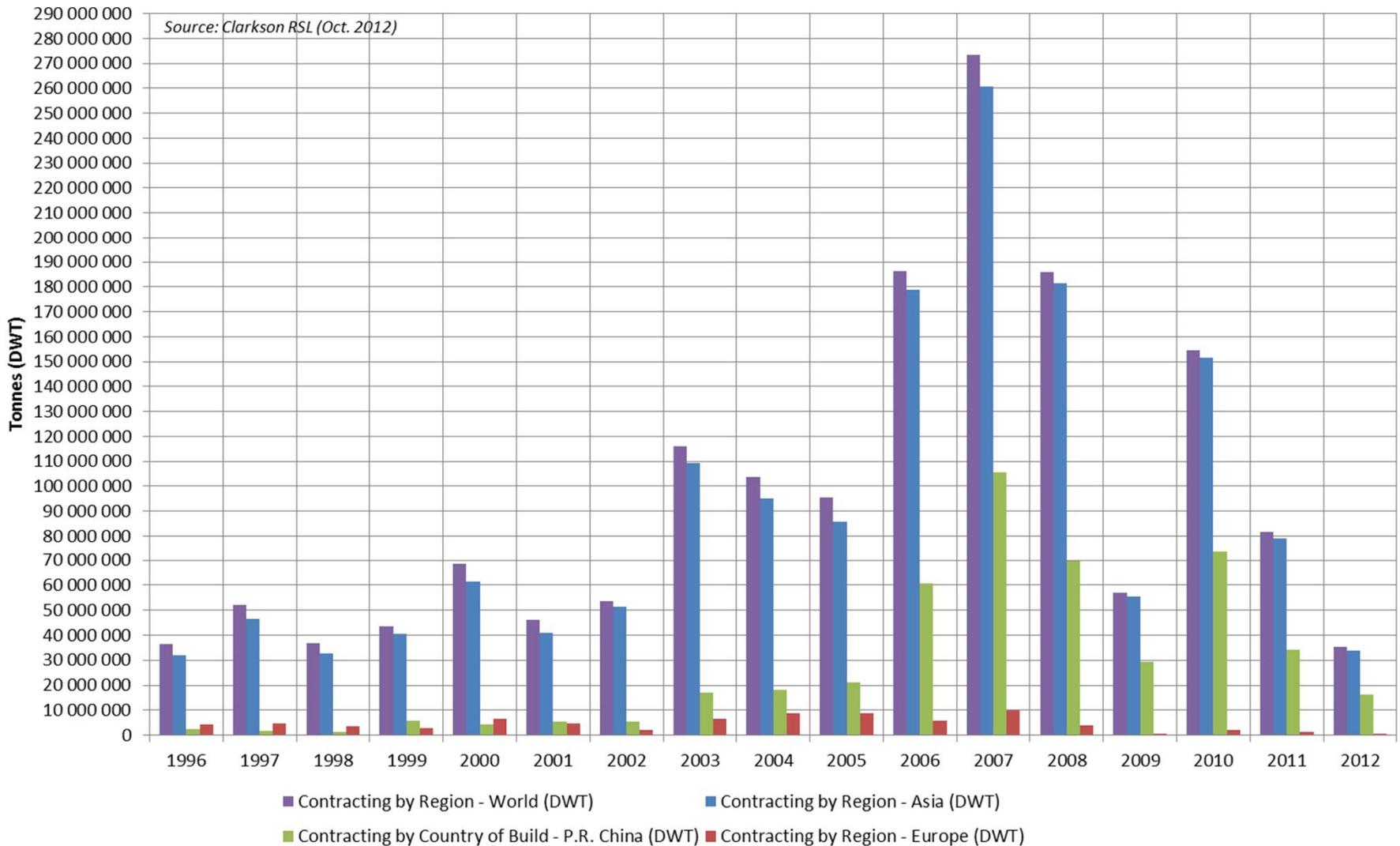
* Ulstein Marine Systems consists of two departments, one design department and one sales department.



World Shipbuilding Activity 1996-2012 (all vessel segments)

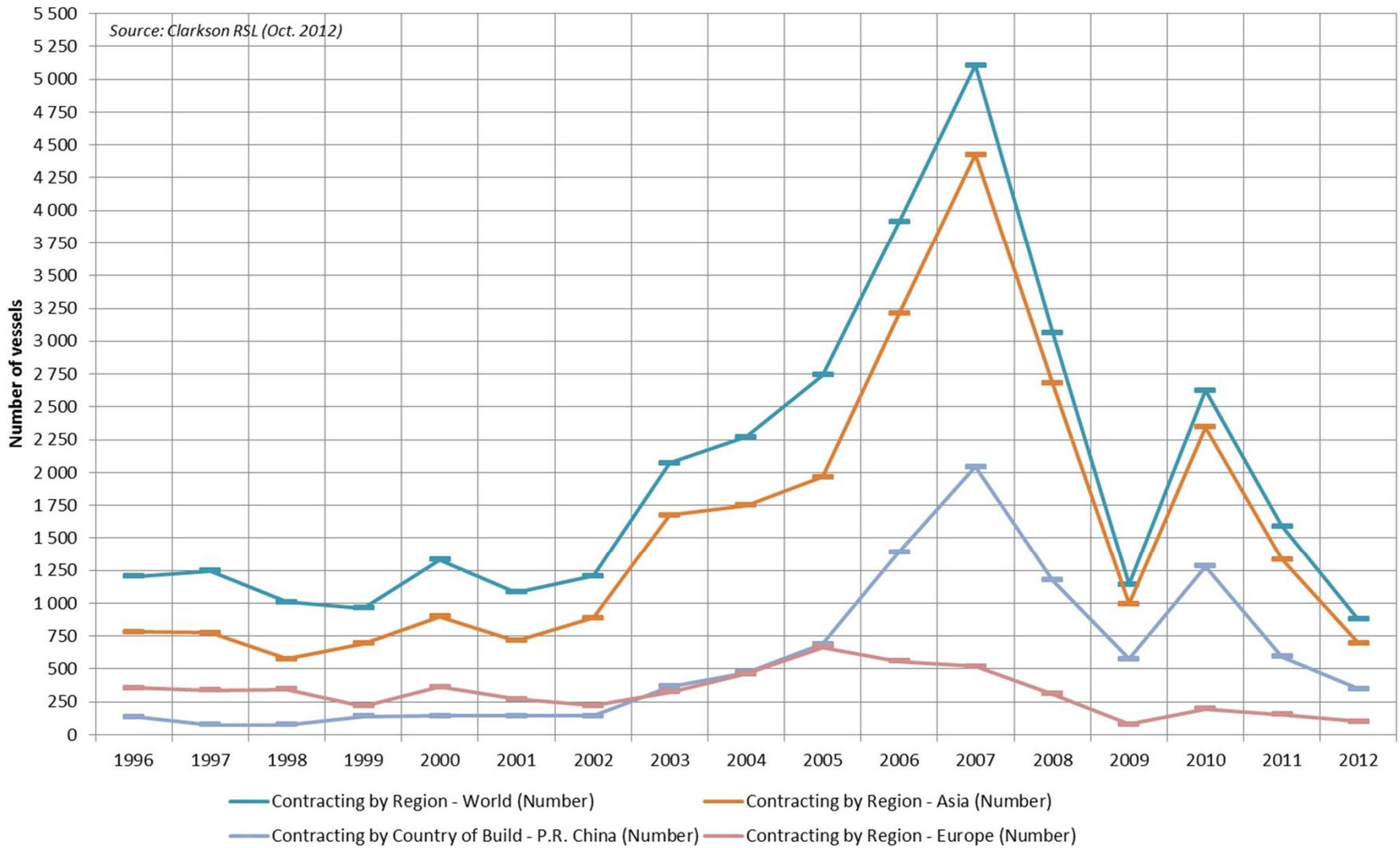


Contracting by DWT 1996-2012 - W/Asia/China/Europe (all vessel segments)

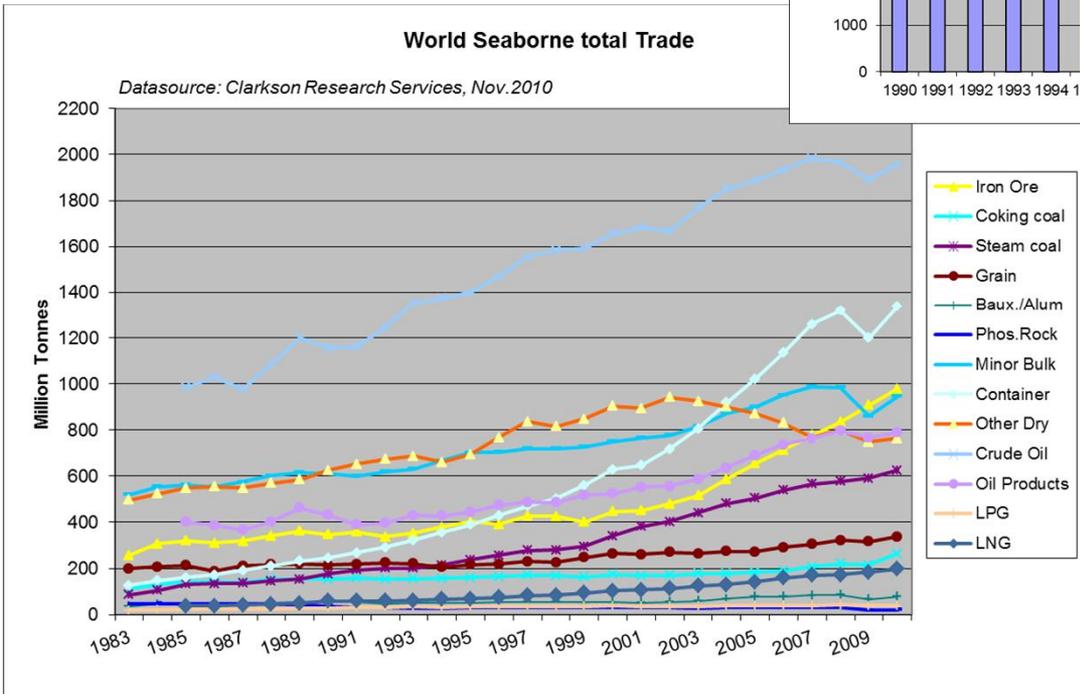
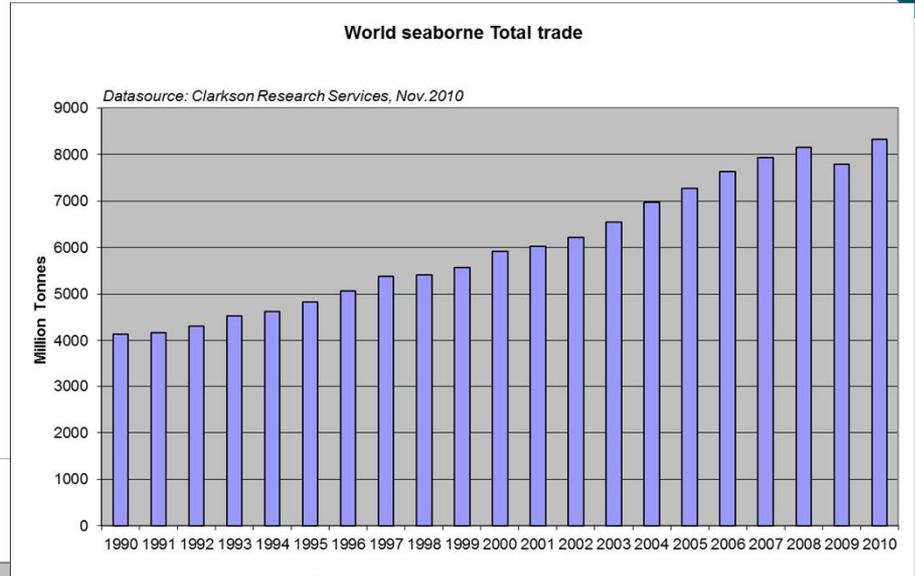
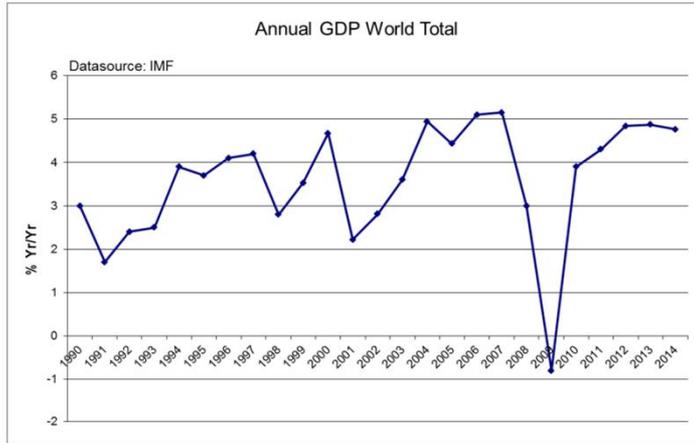




Contracting by Number 1996-2012 - W/Asia/China/Eur (all vessel segments)

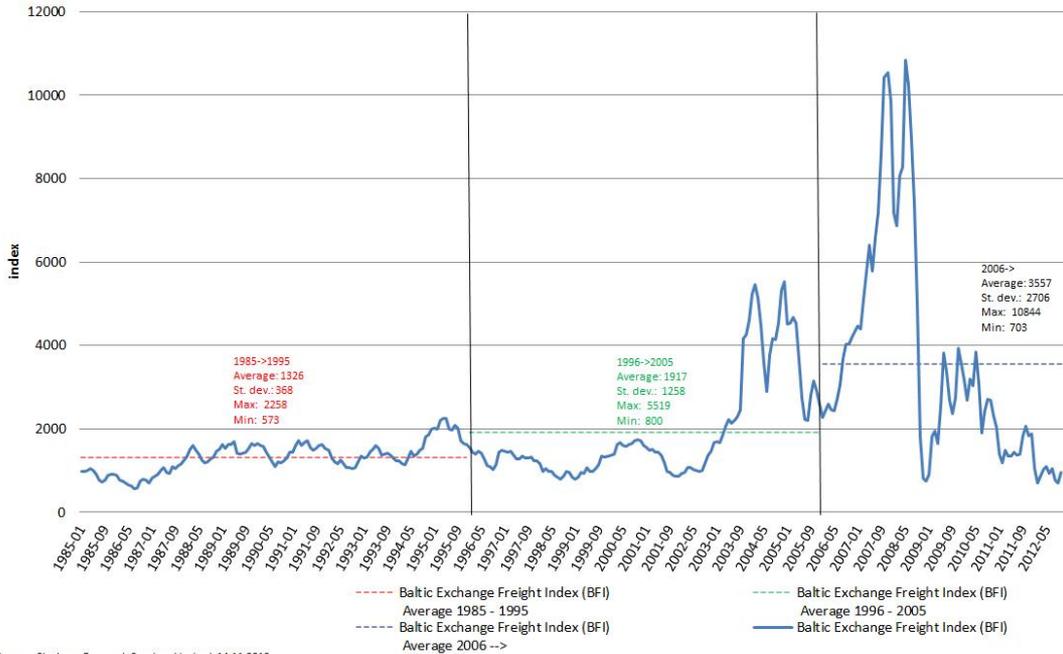


DEAMAND DRIVERS



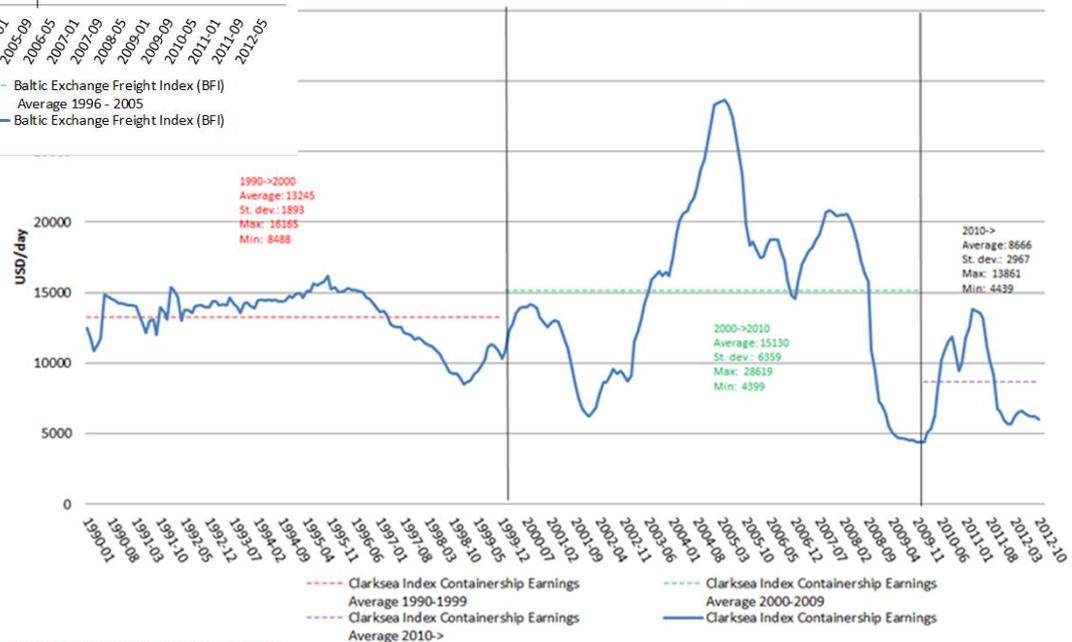
REVENUE MAKING DRIVERS

Baltic freight indices



Source: Clarkson Research Services Limited, 14.11.2012

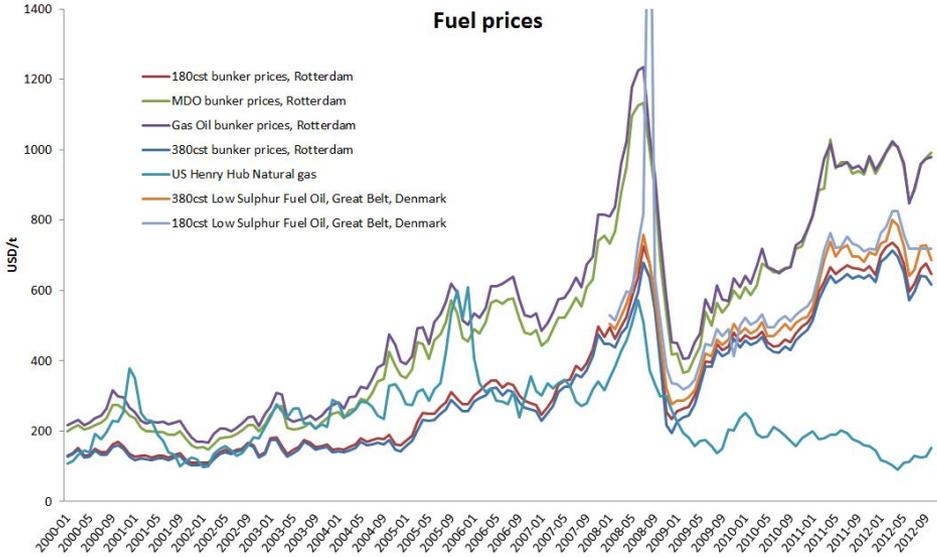
Clarksea index containership earnings



Source: Clarkson Research Services Limited, 14.11.2012

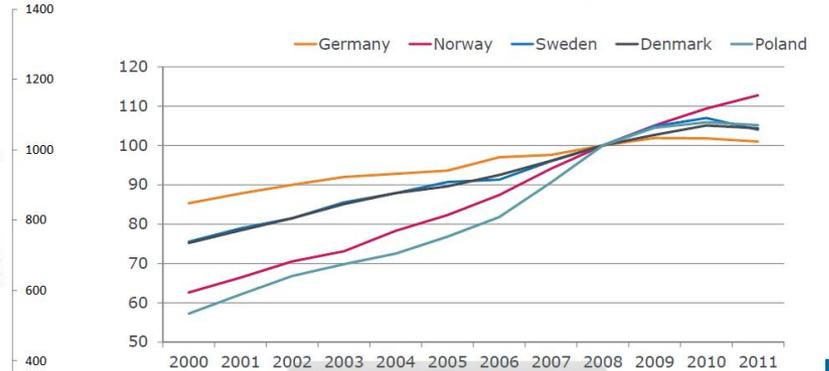


COST DRIVERS



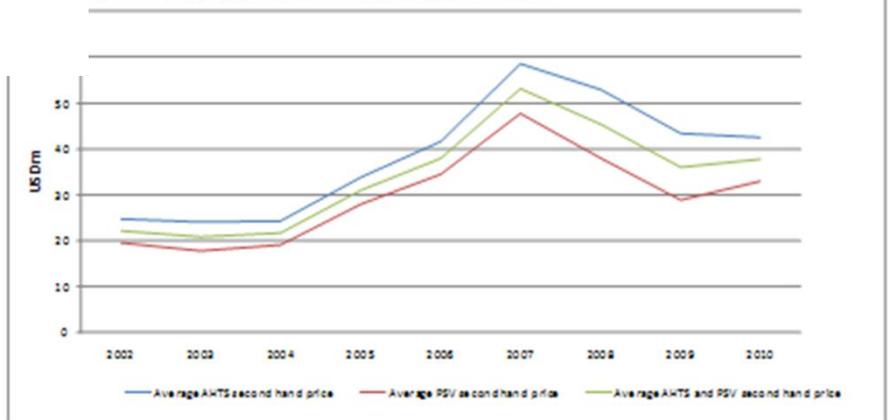
Source: Clarkson Research Services Limited and GO-TECH database
Updated: 14.11.2012

Arbeidskraftkostnader (Unit Labour Cost, 2008 = 100)



Second hand price tendency of AHTS and PSV

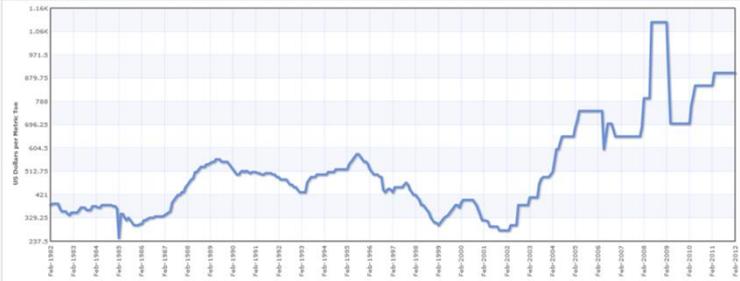
Source: data from Fairplay Q4 2009, US Fleet on North sea supply report Feb 2011



Cold-rolled steel Monthly Price - US Dollars per Metric Ton

Range 6m 1y 5y 10y 15y 20y 25y 30y

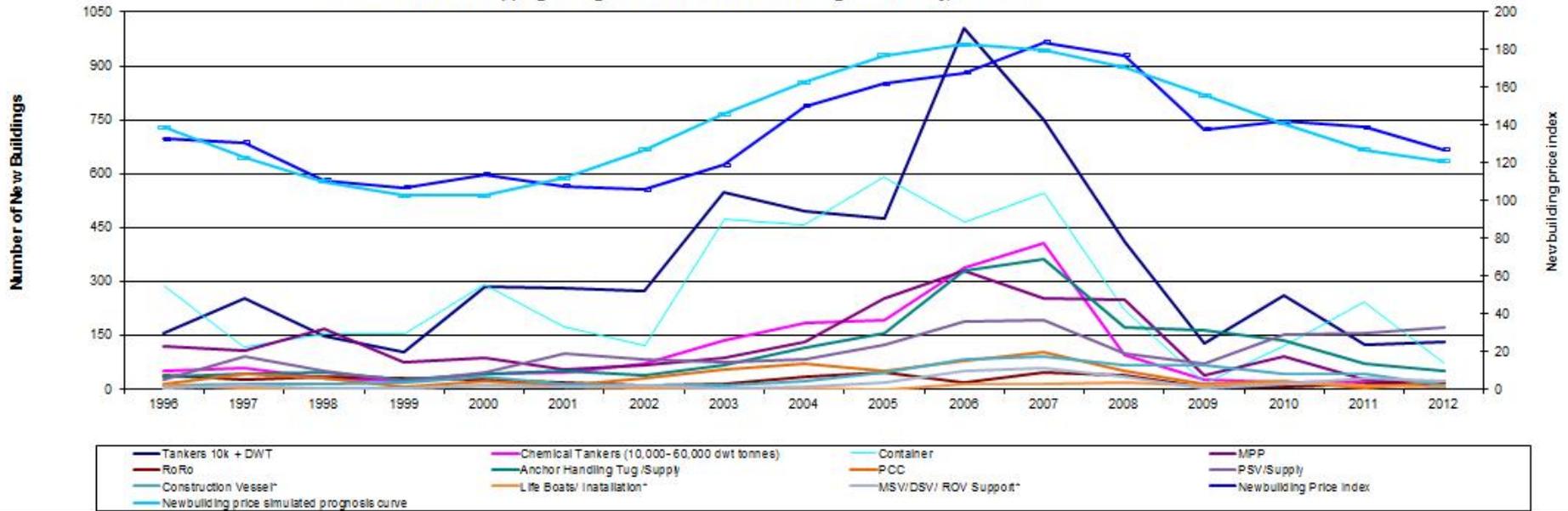
Feb 1982 - Feb 2012: 520,000 (136.64%)



Description: Cold-rolled coil/sheet (Japan) producers' export contracts (3 to 12 months terms) for mainly to Asia

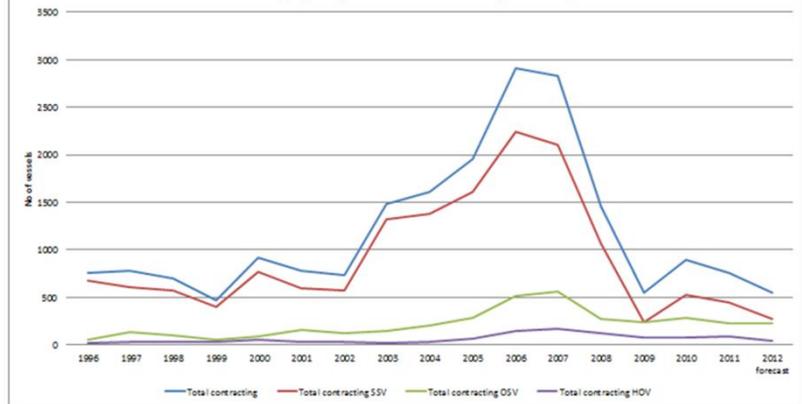
NB CONTRACTING ACTIVITY AND NB PRICE INDEX FOR ULSTEIN MARKET SEGMENTS

SSV, OSV and HOV Newbuilding Contracting and price index
 Source: Clarksons Shipping Intelligence 2012 and Offshore Intelligence Monthly, end October

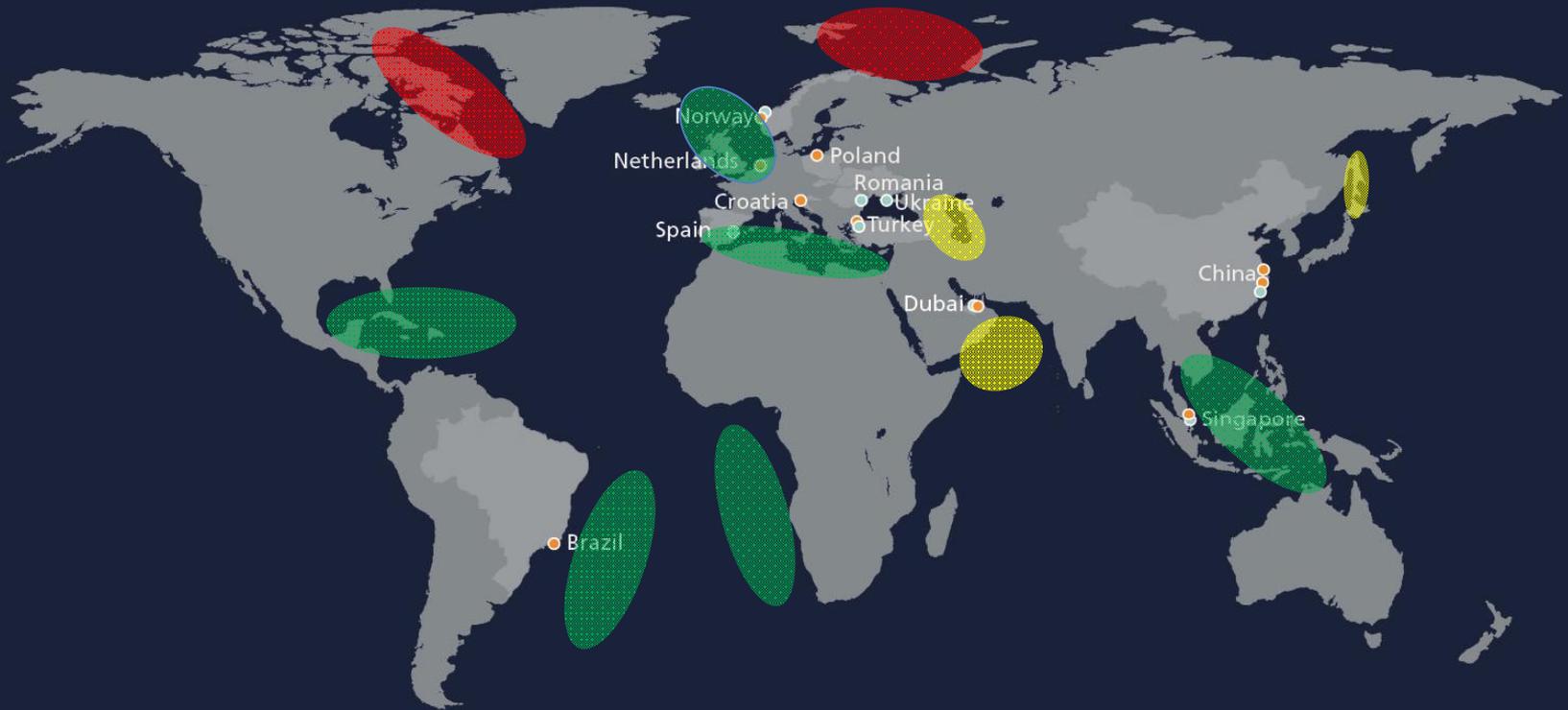


2012 = Forecasted volumes in 2012, Newbuilding Price index shows latest month value
 * Data from Offshore Intelligence Monthly - !! September figures for Construction vessels, Life boat/Installation and MSV/DSV/ROV support !!

Total contracting activity SSV, OSV and HOV
 Source: Clarksons Shipping Intelligence 2012 and Offshore Intelligence Monthly, end October



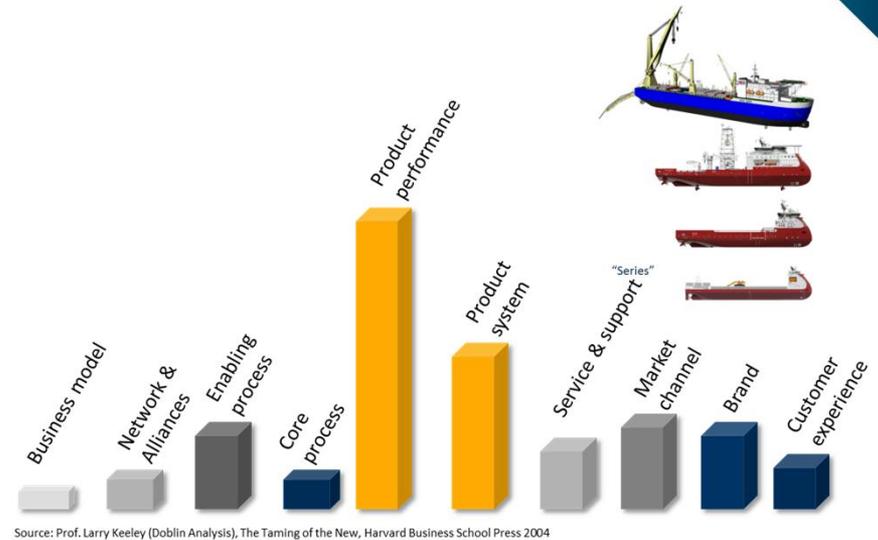
INTERNATIONALISATION



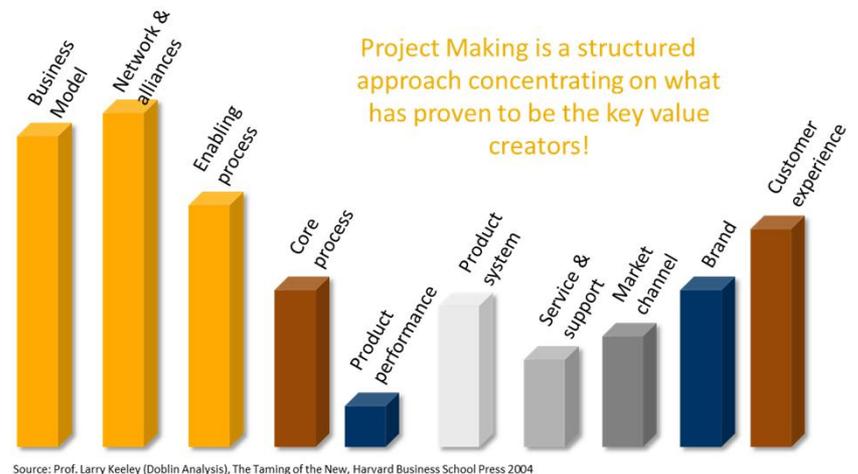
- Ulstein Group companies
- Ulstein Group's shortsea, offshore support and heavy offshore designs built at external yards

ULSTEIN GROUP ASA STRATEGIER

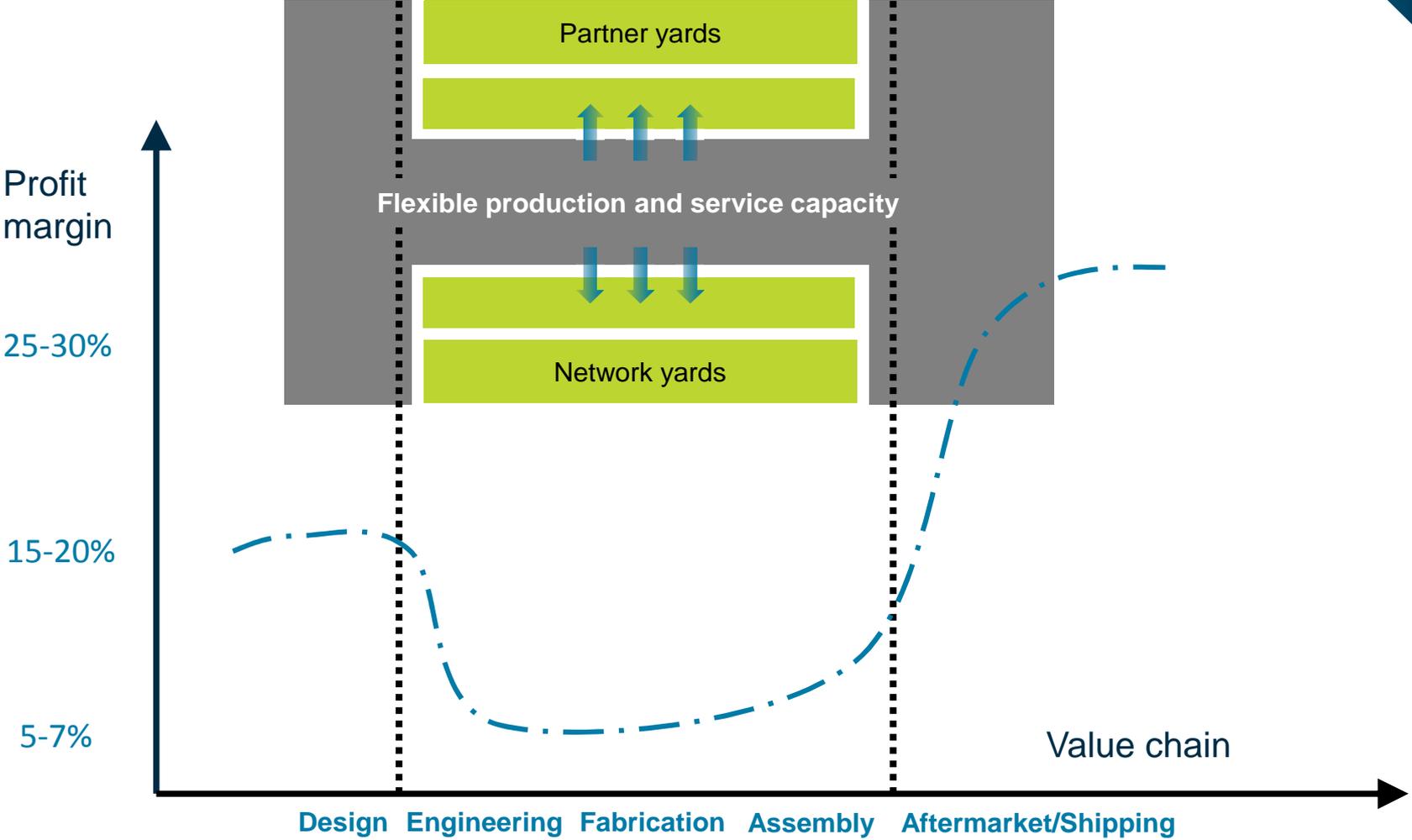
- Bærekraftig vekst
- Internasjonalisering
- Innovasjon



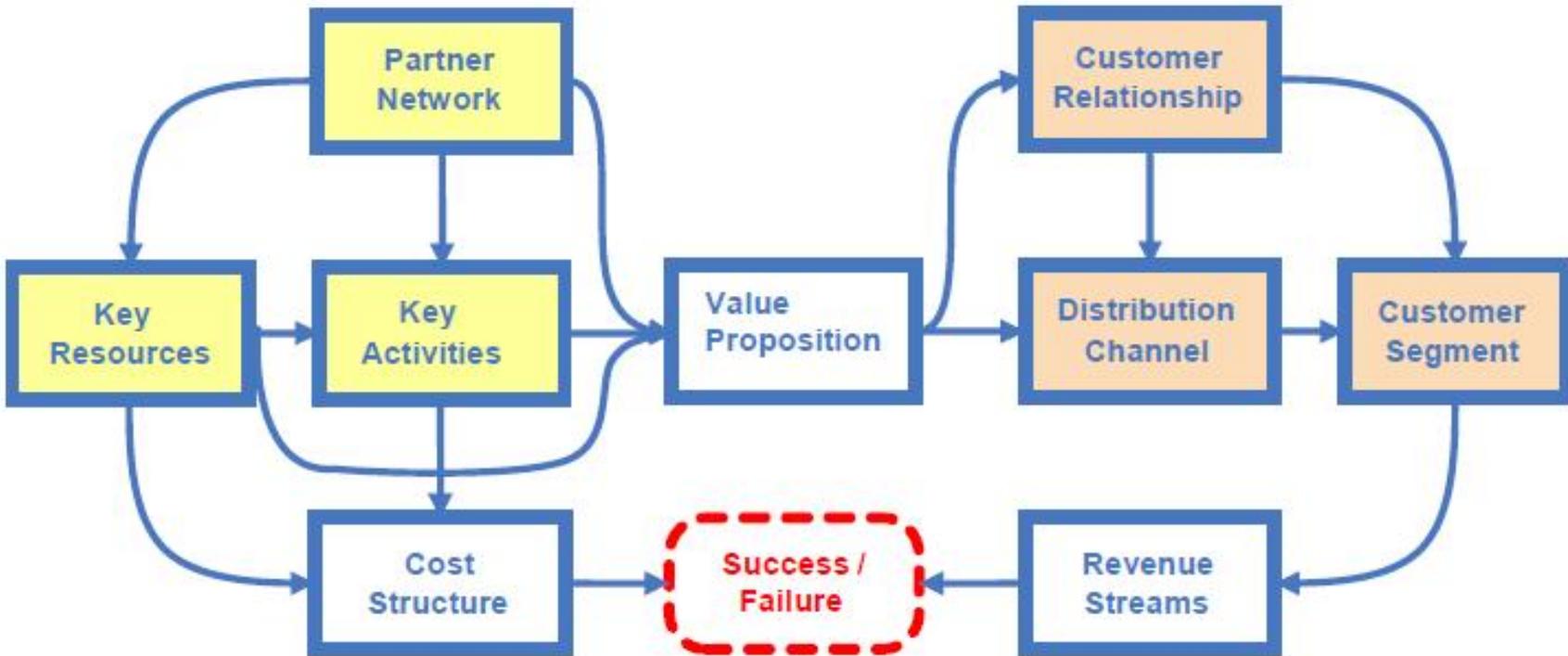
- *Fra et produksjonsorientert- til et tjenesteorientert selskap*



VALUE CHAIN REFLECTIONS

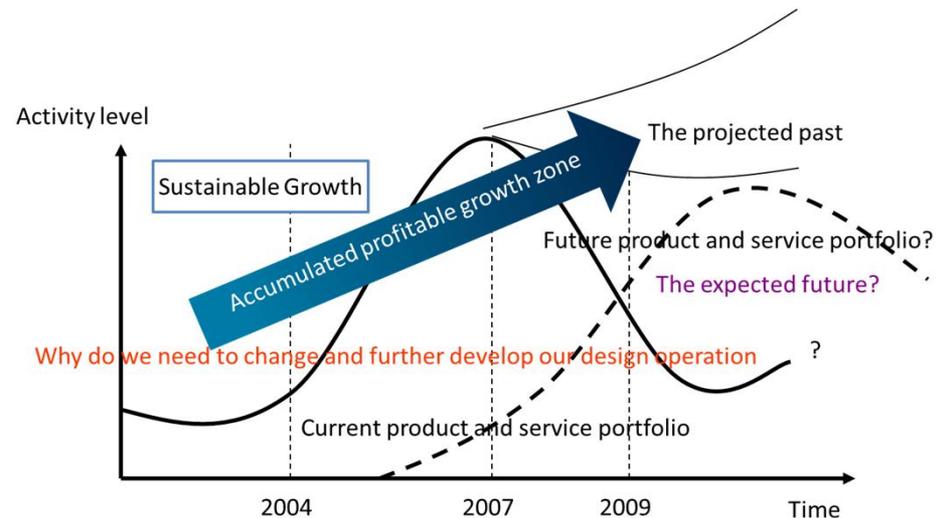


BUSINESS MODEL FOR FIRMS WITH VALUE CHAIN ORIENTATION

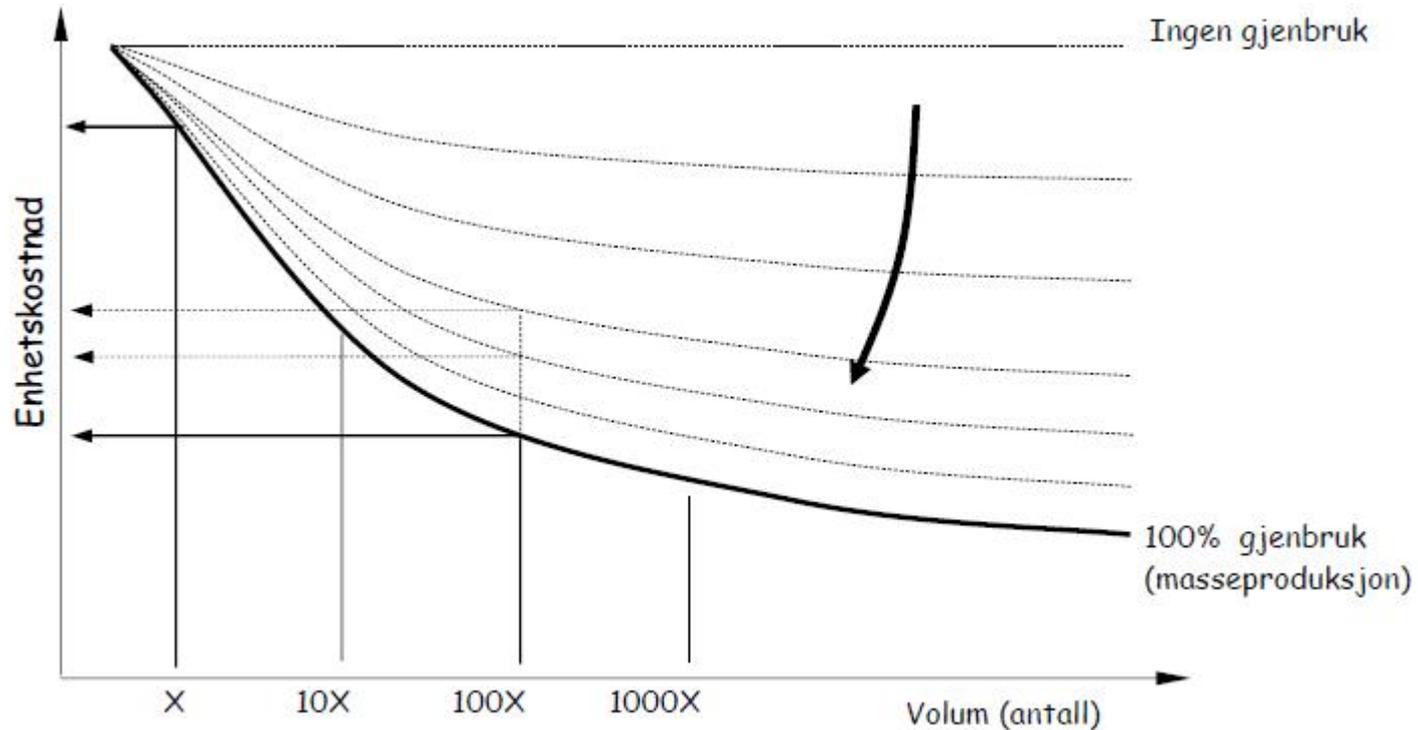


NEW INITIATIVES FOR ACCELERATED REVENUE CREATION IN ULSTEIN

- Design and equipment package sales in HOV and SSV in addition to OSV
- Exploring new market segments
- Expanding the HOV, OSV and SSV product portfolios
- Expanding the value creation model with new upstream and downstream services
- Streamlining the business area organisations and their affiliates

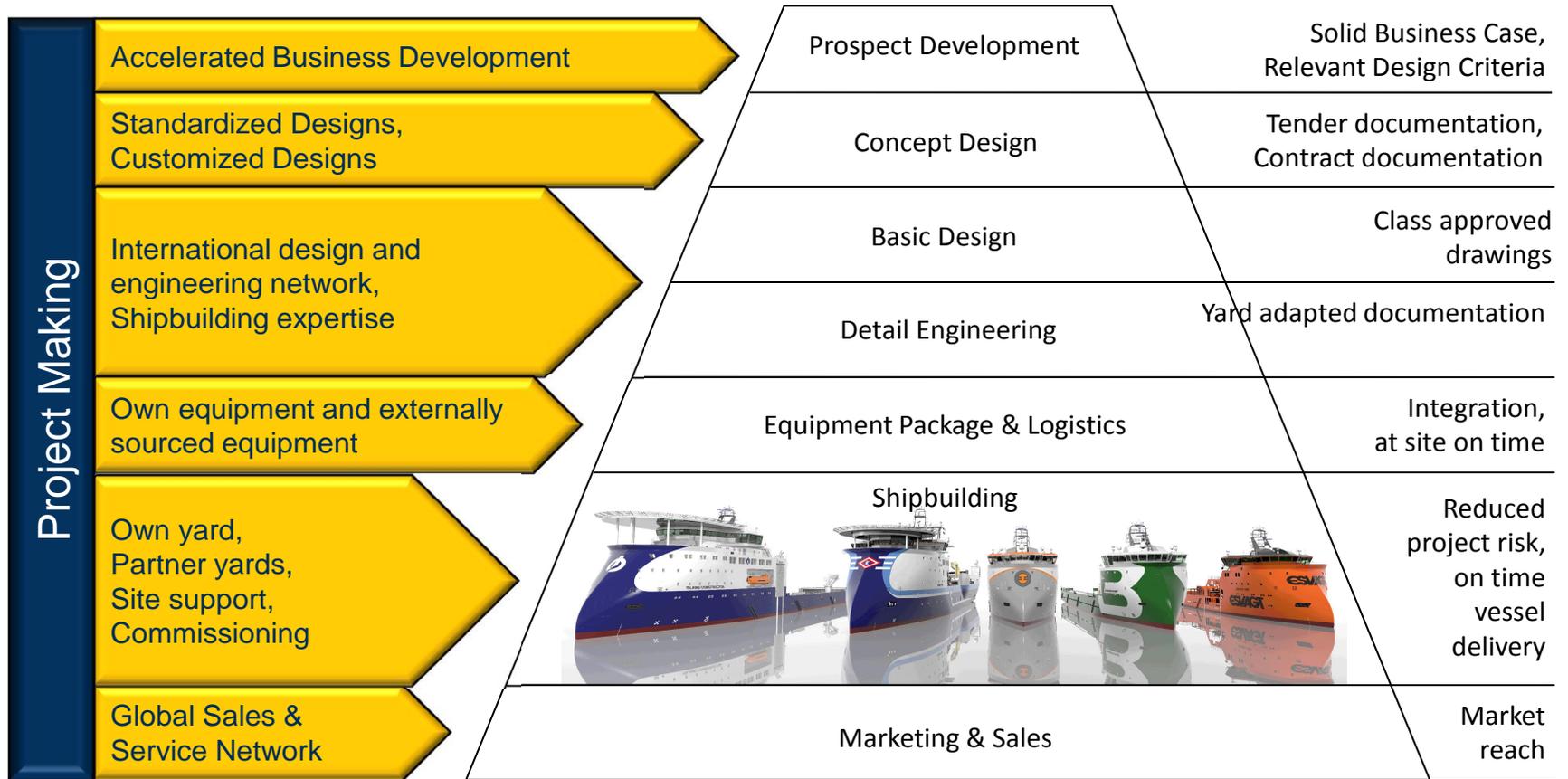


REDUKSJON AV ENHETSKOSTNAD VED GJENBRUK OG DERMED ØKT PRODUKSJONSVOLUM

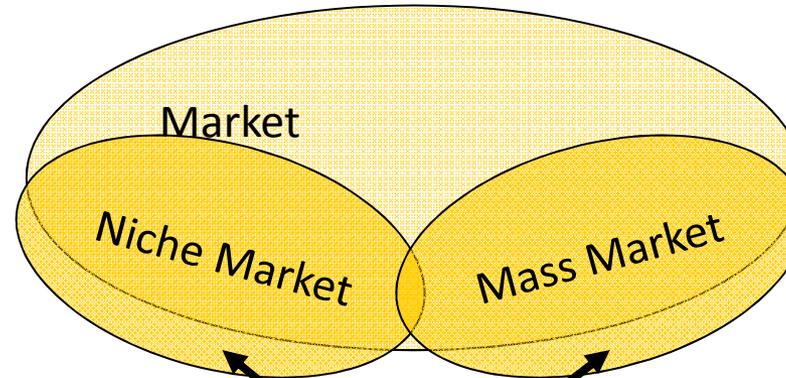


THE ULSTEIN GROUP

Project Making - Integrating the Value Chain



TWO DIFFERENT WAYS OF APPROACHING THE MARKET! ...



Niche market

- Low volume
- P2P(Person to Person)
- Product driven
- Technology leadership
- EtO design philosophy
- Design and equipment sales

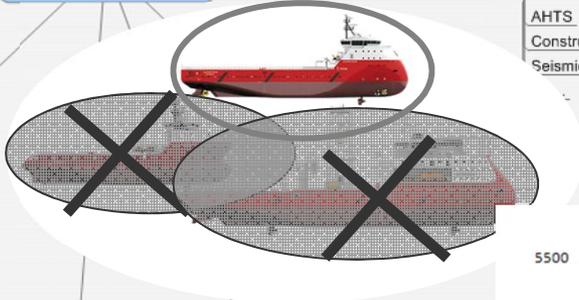
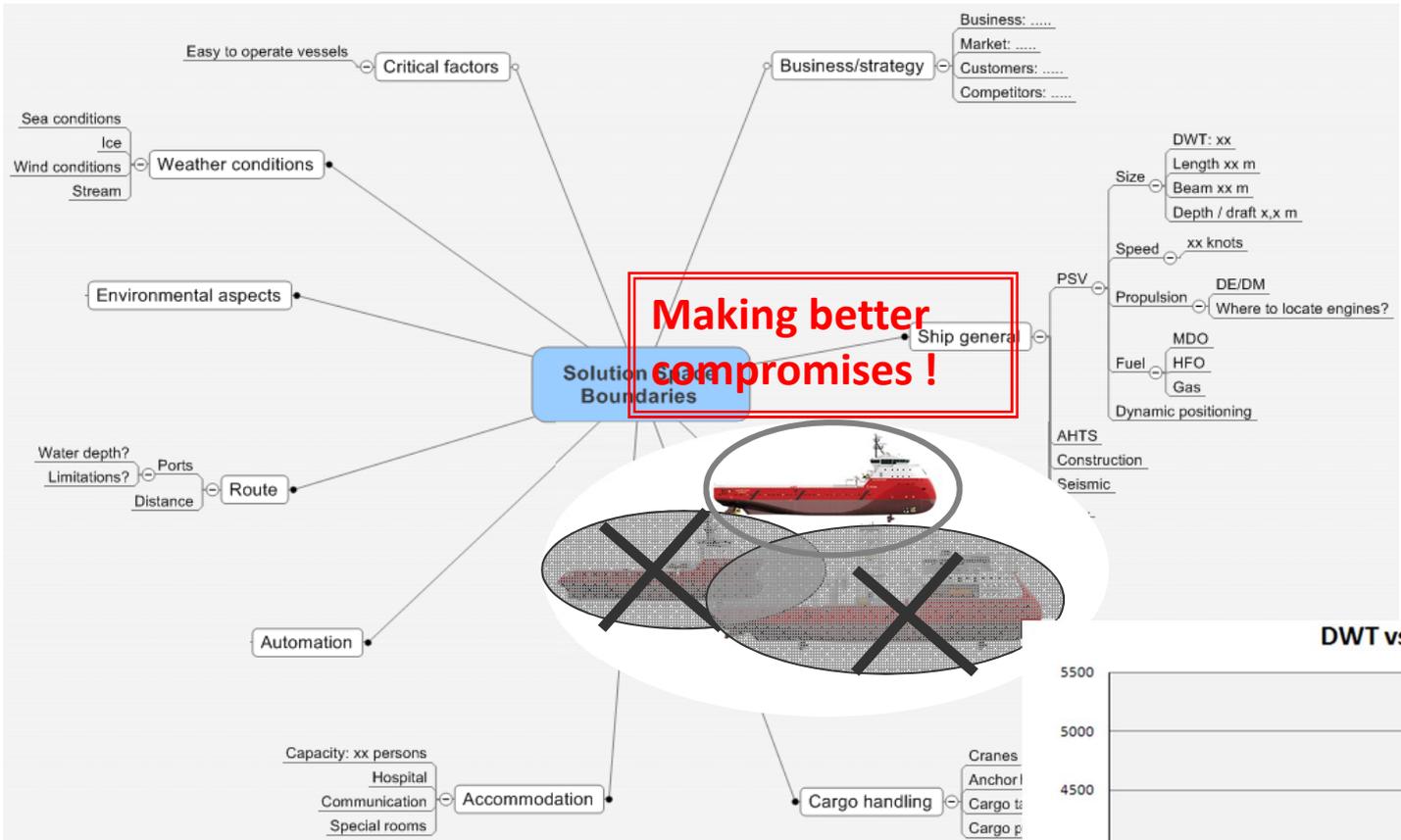
Mass market

- High volume
- B2B (Business to Business)
- Process driven
- Cost leadership
- CtO/StO design philosophy
- Design and equipment sales

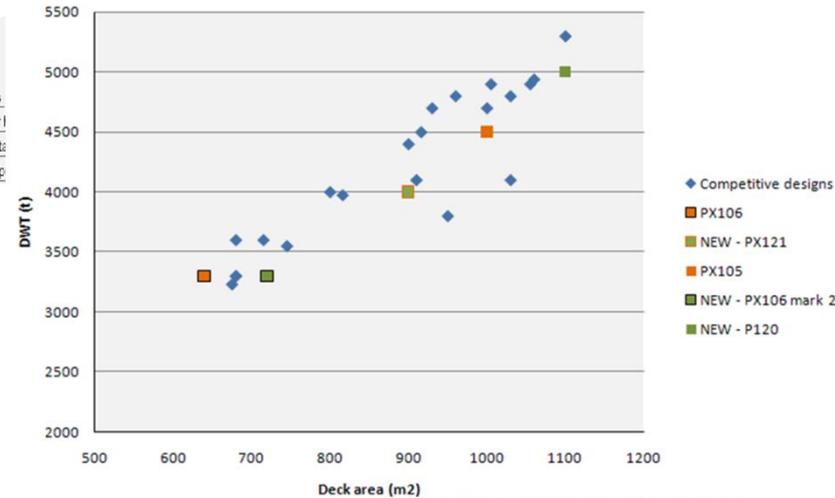
Two different
Customer
approaches

The Ulstein Group has a tradition of approaching the customer from a niche market perspective!

CONCEPT DEVELOPMENT

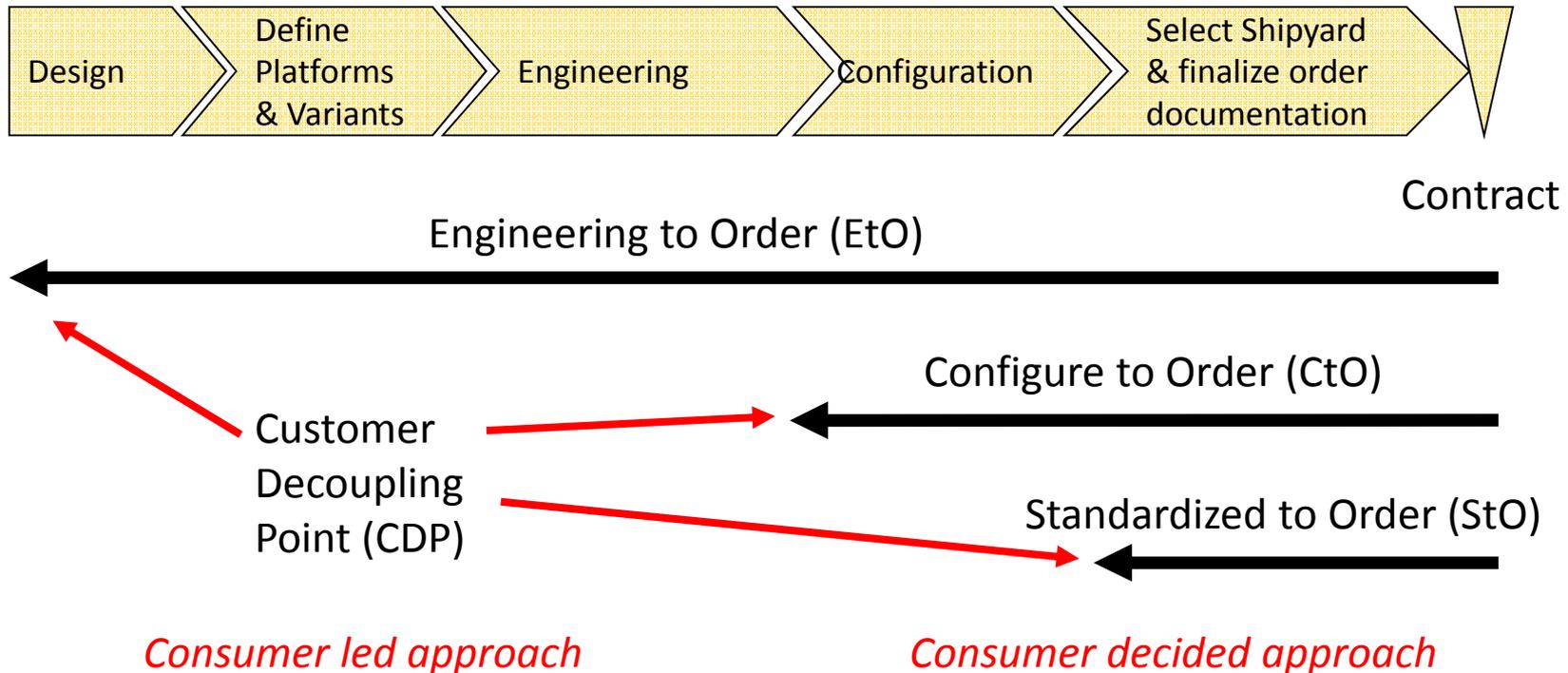


DWT vs. Deck area



WORK METHODOLOGY - STANDARDIZED VS. CUSTOMIZED DESIGN

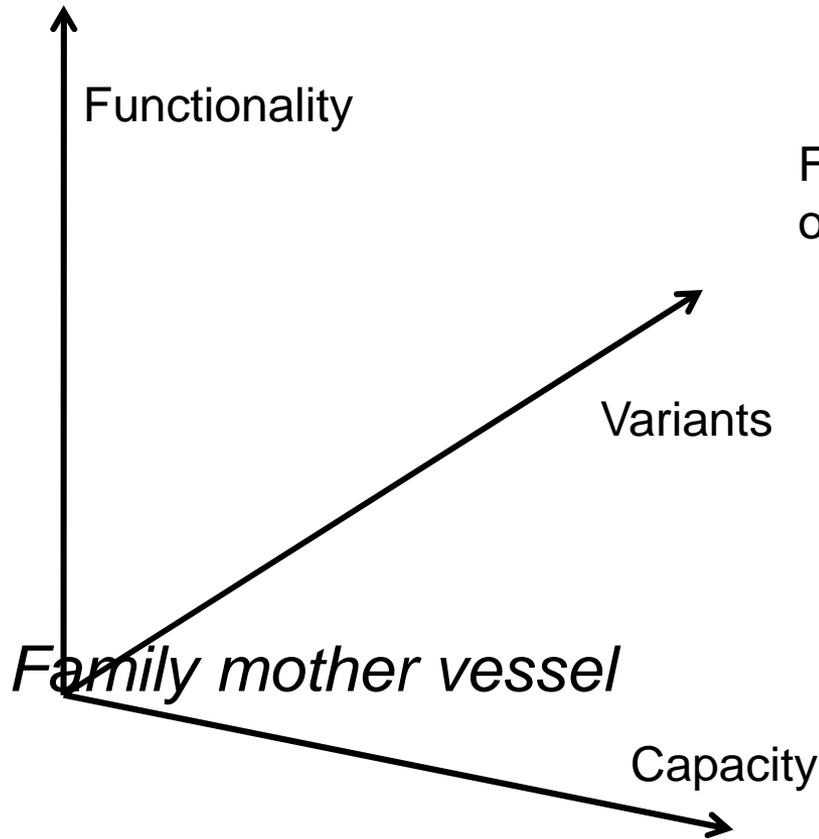
The Value Chain Involvement from the Customer



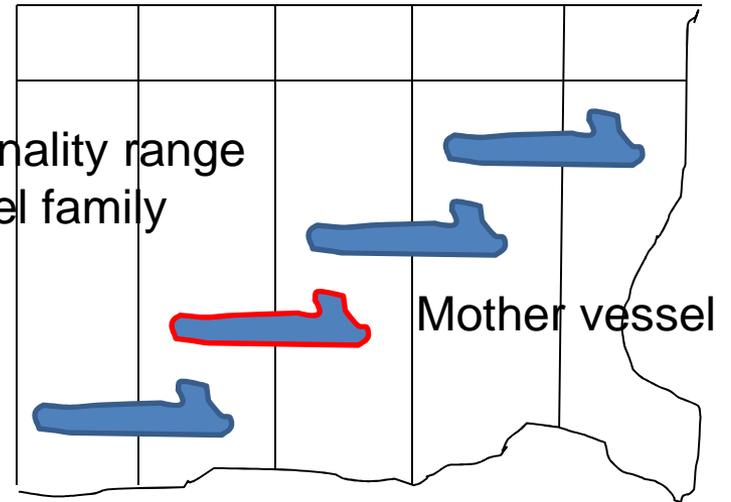
CDP is the point in the Value Chain where the customer is decoupled from decisions related to the configuration of the end-product (the Order).

STANDARD CATALOGUE VESSEL FAMILY DIMENSIONS

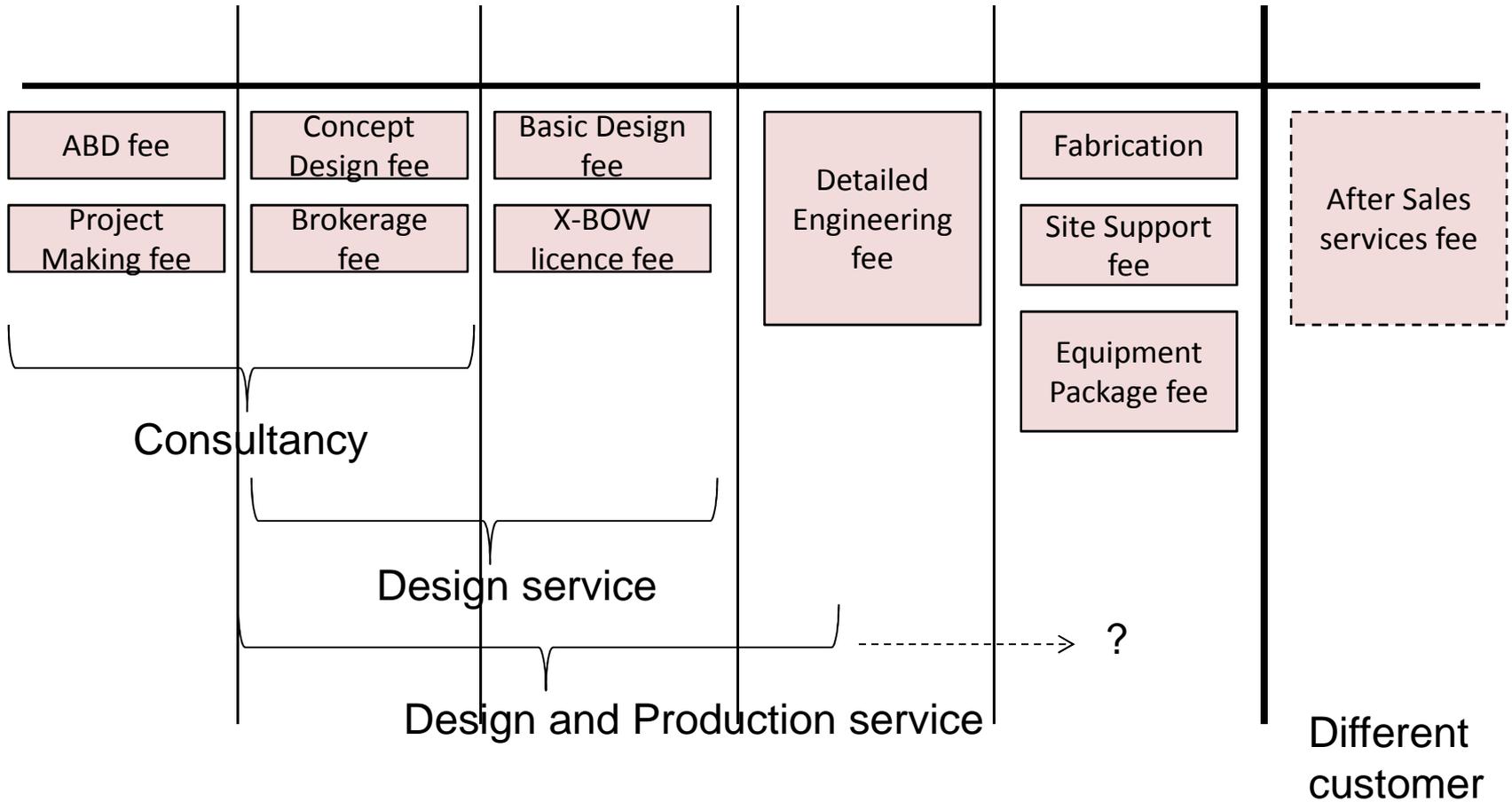
Capacity range of vessel family



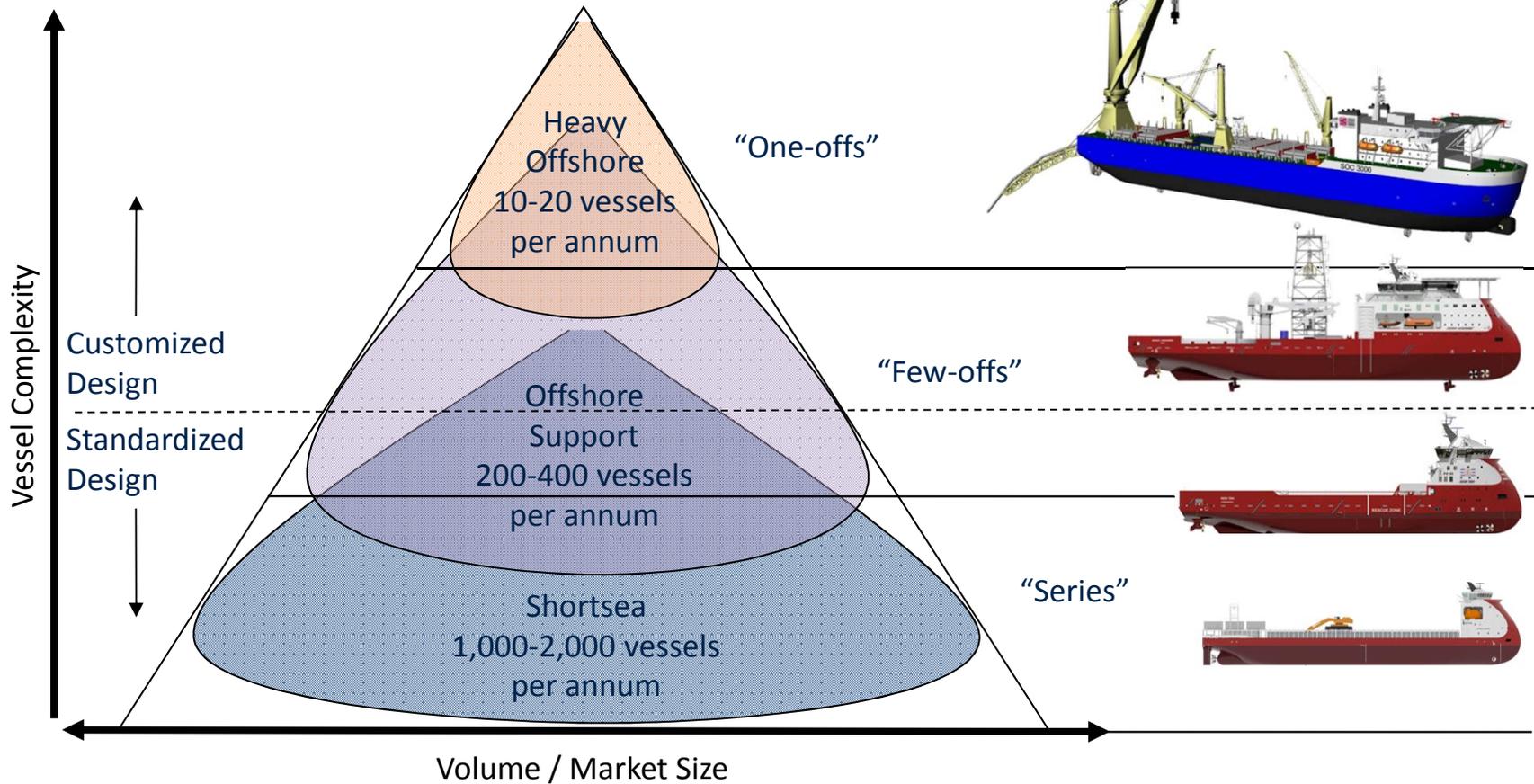
Functionality range of vessel family



PRODUCTS AND SERVICES VALUE CHAIN ELEMENTS



DESIGN APPROACH BY MARKET SEGMENT



Platform Supply Vessels

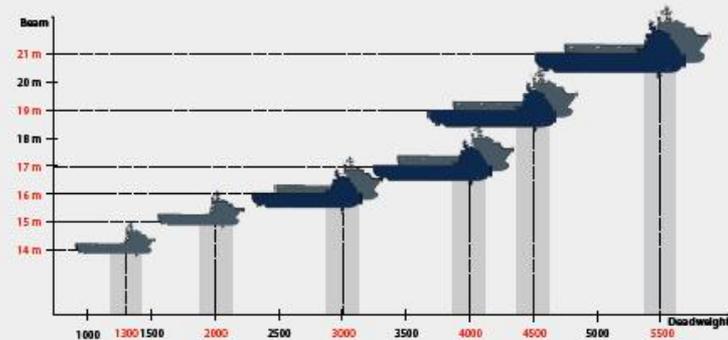


PLATFORM SUPPLY VESSELS (PSV/MPSV)

The platform supply vessel family includes smaller to medium sized platform supply vessels and larger multipurpose platform supply vessels. These vessels are specialized for efficient supply and support operations world wide.

For excellent operability, even under harsh weather conditions, these high speed vessels have been designed to give optimum cargo capacity, low noise level, high maneuverability, high transit speed and optimum sea-keeping capabilities. Flexibility is ensured by cargo systems and tank arrangements suited for changing requirements. For more demanding vessels with higher operational flexibility, additional machinery and equipment will be integrated.

An example....



SIZE AND CAPACITY - Typical dimensions

	1300	2000	3 000	4 000	4 500	5 500
Deadweight*	1300	2000	3 000	4 000	4 500	5 500
Deck area (m2)*	360	515	610	690	950	1240
Length over all LOA (m)	56	69	68	80	88	94
Beam B (m)	14	14,5	16	17	19	21
Depth D (m)	6	6,2	7,5	7,5	8	9
Draught T (m)	5	4,6	6,3	6	6,5	7
Speed (kts)	13	13	14	16	16	17
Accommodation*	22	22	24	24	35	87
Reference designs	P801	P107	P106/PX106	PX110	PX105	P101

* = subject to selected variant configuration

PLATFORM SUPPLY VESSEL VARIANT CONFIGURATION

Typical operation	Region	Shallow draft	Fire fighting	Oil recovery	DP	Combination tanks	SPS	Elevated cargo deck	Ice class	Winterized	Subsea crane	ROV	Reference designs
PSV, benign seastates	Middle East, Asia	S	O	O	-	-	O	O	-	-	-	-	
PSV, moderate seastates	GOM, Brazil, West Africa, Asia	-	O	O	S (DP1)	O	O	O	O	O	O	O	P801, P106, PX106
PSV, harsh conditions	North Sea	-	S	S	S (DP1/DP2)	S	S	O	O	O	O	O	P105, PX105, PX106, PX110
PSV in polar regions, ice service	Polar areas	-	S	S	S (DP1/DP2)	O	S	O	S	S	O	O	P108

S = Standard feature, O = Optional feature, - = N/A

SUCCESS DRIVERS

- ▶ **Best on Project Making**
- ▶ **Best on Concept Development**
- ▶ **Best on Resourcing and Project Management**

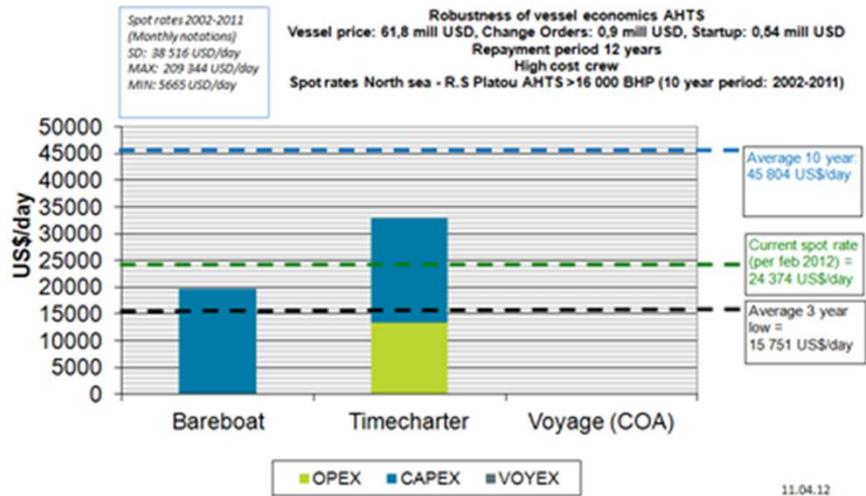
Important enablers:

- ▶ **Basic Design**
- ▶ **Pre-Procurement Engineering**
- ▶ **Engineering**
- ▶ **Lean structures**
- ▶ **Effective administration**
- ▶ **Core competencies and capabilities**
- ▶ **Effective mobilisation/demobilisation of capacities**
- ▶ **Fabrication knowledge**
- ▶ **Operational knowledge**
- ▶ **Commercial knowledge**

CRITICAL SUCCESS FACTORS

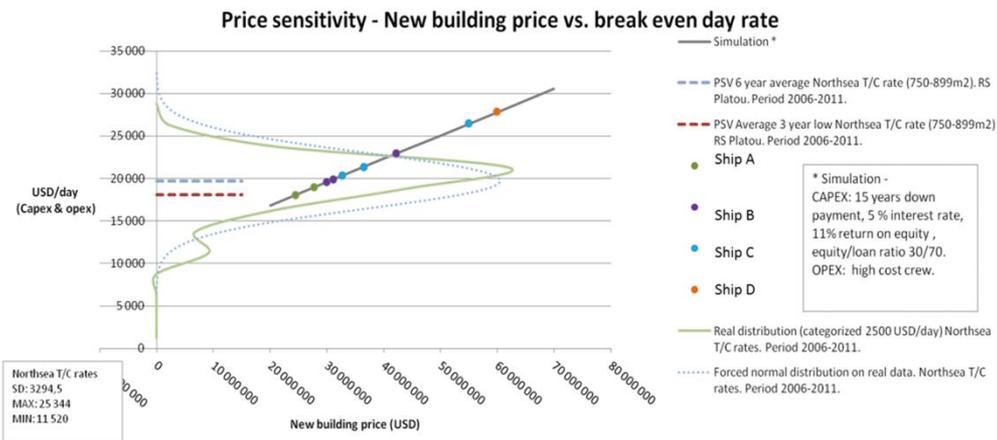


- Market Pricing
- Customer relationships
- Innovation power
- Scalability of operation – project through put
- References
- Renomé
- Quality (time, price, style, and delivery)

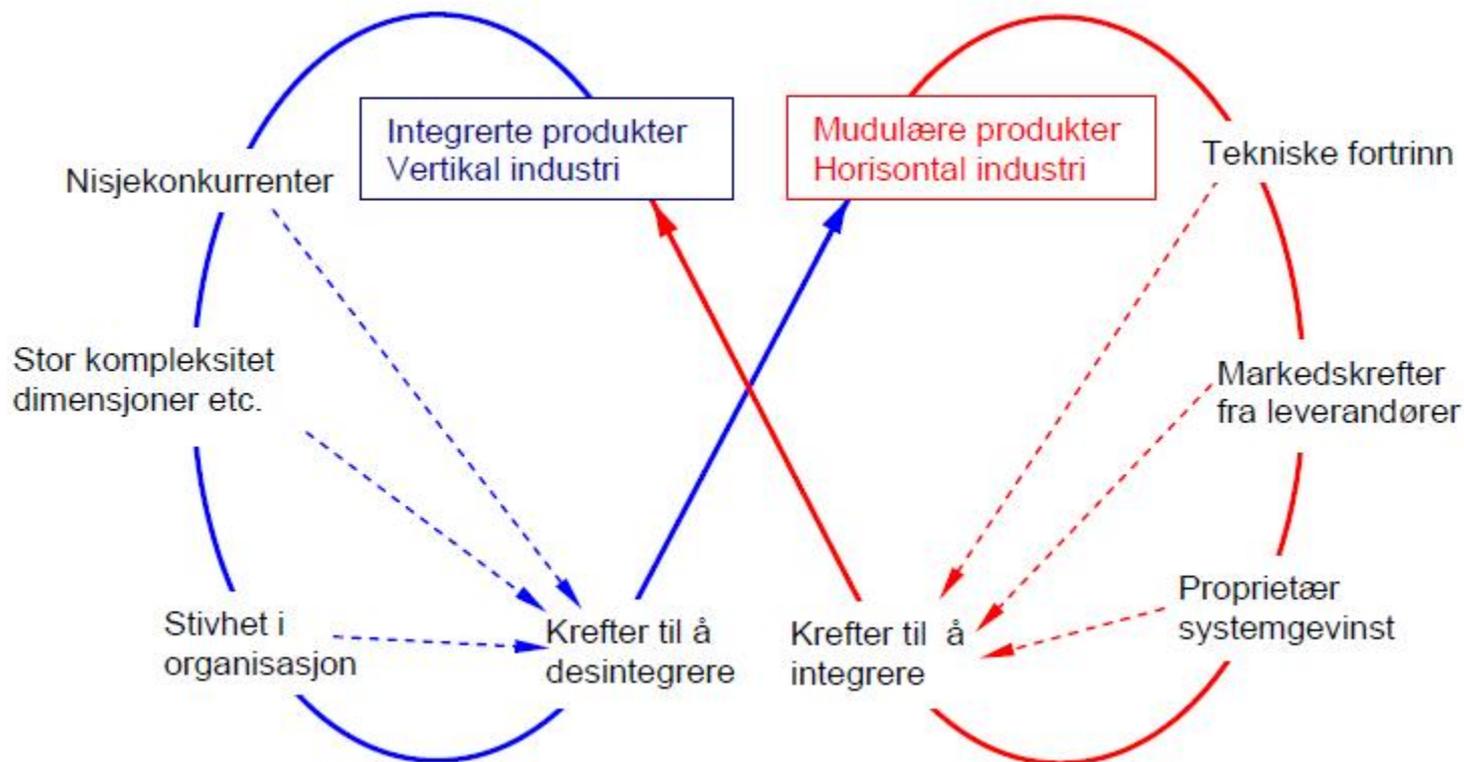


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