3rd Trans Asia 2006 China Exhibition and Conference

Container Shipping Supply & Demand For East West Trade

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South African Port Operations

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Global container supply

Regional growth projections, 2003 - 2008

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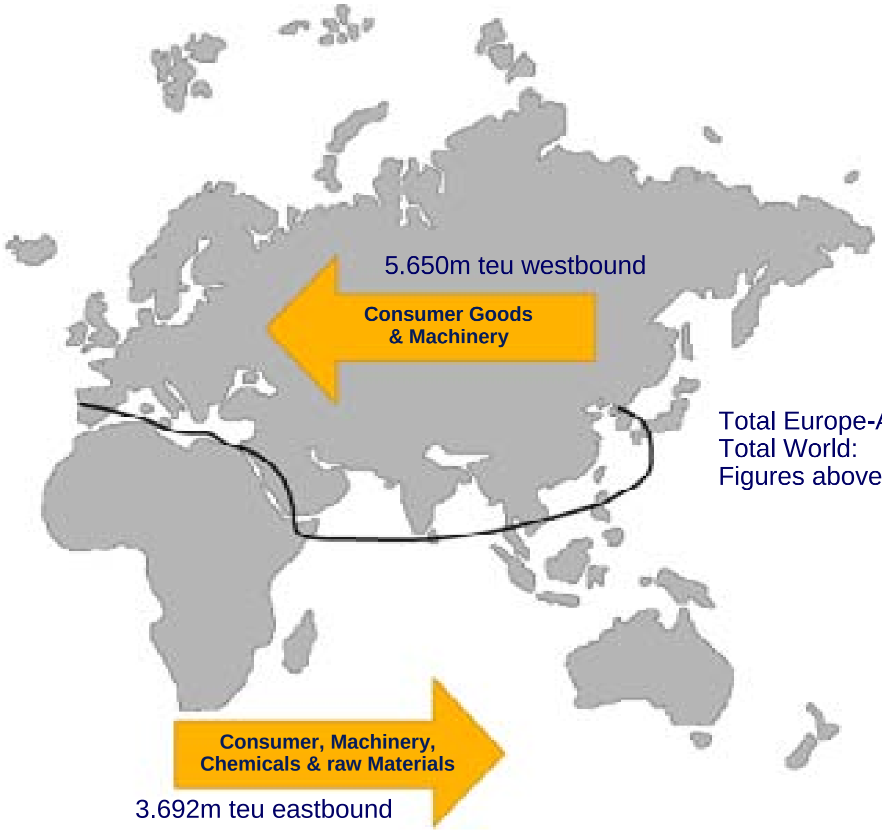
International and local markets

- Container trade running from East to West constitutes 39% of the more than 350 million teu global container trade
- Far East to Europe and North America via Suez Canal
- Includes transhipment traffic to and from smaller regions and ports
- World Container Trade is estimated to grow at an average of 9.5% from 2003-2008
- With South America & Africa growing at 8%. Dominant growth area is the Far East growing at 12.8%, accounting for 44% of global container traffic.

Europe-Asia Container Traffic

Europe-Asia is the second largest trade in terms of cargo volume. Westbound trade (Asia-Europe) exceeds eastbound trade (Europe-Asia)



Total Europe-Asia: 9.342m (13.3%)
Total World: 69.925m
Figures above relating to year 2001

Asia-Europe Westbound Cargo breakdown

Vehicles & Machinery	17%
Computer/Electronic Goods	12%
Textiles	8%
Rubber & Plastics	8%
Footwear & Clothing	6%
White Goods	5%
Food	4%
Toys	3%
Beverages	3%
Others	34%

Asia-Europe Eastbound Cargo breakdown

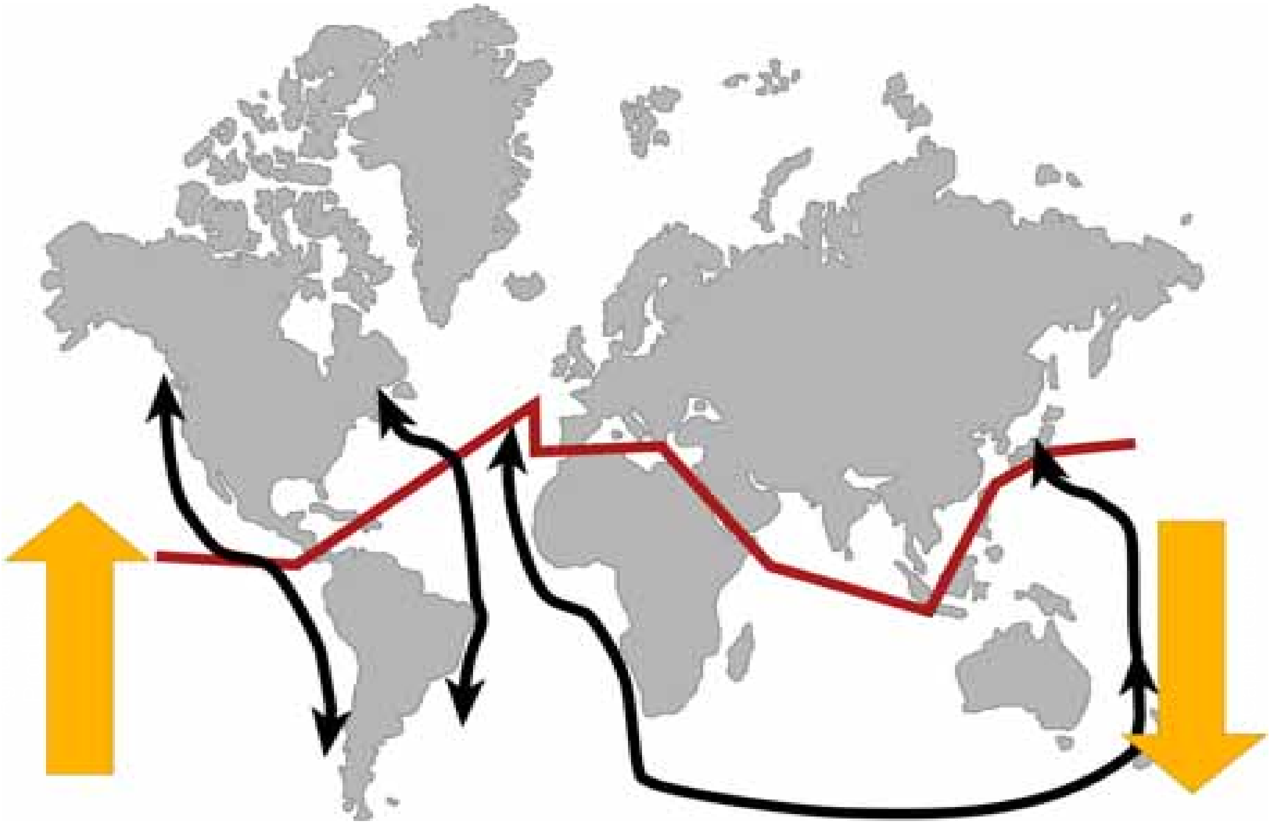
Chemicals	16%
Construction Machinery	13%
Wood & Paper	11%
Raw Materials	11%
Food	10%
Minerals & Metals	5%
Alcoholic Drinks & Beverages	4%
Motor Vehicles	3%
Others	27%

Around 60% of the total is westbound with 40% eastbound. Asian imports from Europe mainly constitute raw materials such as chemicals, forest products, minerals & metals etc. On the westbound route from Asia to Europe the main cargoes are consumer products such as electronic goods and clothing etc.

Source: P&O Nedlloyd (2000) / JP Morgan / Drewry Shipping Consultants

North-South Container Traffic

In general terms, north-south trades tend to be operated by niche players who make use of hub ports on east-west axis. These traders are characterised by lower volumes than east-west with port infrastructure restricting ship size and port performance comprising schedule reliability. Trade is also influenced by government quotas and protectionism. There are also box imbalances with reefers repositioning to the South and dry boxes to the North.



7.836m teu
northbound

Total North-South: 16.721m (23.9%)
Total World: 69.925m
Figures above relating to year 2001

8.885m teu
southbound

Northbound Cargoes

Agricultural Products:

Wine
Frozen meat / dairy / fish
Fruit
Wool
Wood Products
Coffee, cocoa, tea

Southbound Cargo

Base chemicals
Mechanical components
Capital goods

Poor regions:
Basic foodstuffs
Aid cargo, etc.

Major trade routes

Major trade routes

There is a trade imbalance on this route with around 55% of the total northbound and 45% southbound.

Source: P&O Nedlloyd (2000)
Drewry Shipping Consultants

World Container Traffic and its Components

As transhipment has increased as a function of the increased ship size, so has the concept of hub & spoke. Transhipments have increased from 11% of total port handling in 1980 to 25% in 2000 with the rise set to continue.

Estimated World Container Traffic And its Components (million teu)

	Total Port Handling	Full	Empty	Trans-shipment
1980	38.8	30.3	8.4	4.3
1985	57.3	43.9	13.4	8.1
1990	87.8	70.0	17.7	16.2
1991	96.3	77.4	18.9	18.9
1992	105.8	84.9	21.0	21.6
1993	116.5	93.7	22.8	24.9
1994	130.7	106.7	24.0	28.6
1995	144.6	118.1	26.6	32.7
1996	157.1	126.9	30.2	36.9
1997	175.0	141.0	34.0	42.7
1998	189.3	148.4	40.8	47.7
1999	209.1	165.1	44.0	54.1
2000	235.1	185.8	49.3	62.5
2001	244.8	191.8	53.0	66.3
2002	263.1	211.8	51.3	67.7
2003	281.4	227.9	53.5	74.1
2004	303.0	245.4	57.6	81.7
2005	326.9	264.8	62.1	89.8
2006	349.3	282.9	66.4	97.6

Source:Drewry Shipping Consultants

- To maximise operating efficiency, Post-Panamax vessels will only call at a limited number of ports on one round trip voyage. The larger container ships operate mainly between regions calling at a limited number of high volume ports. The larger ships are often operated on trunk routes and call at 'hub' ports along the 'east-west axis' where draft restrictions are not a problem.

- For cargo destined for ports not serviced by direct calls, smaller container ships, known as feeder ships, 'tranship' the container from the 'hub' port to the port of final destination. The main operators will use 'in-house' feeder ships or third party companies to carry out these operations.

- Containerisation of cargo for smaller ports has supported 'hub-and-spoke' routing and has led to a steady increase in transhipment cargo, as shown in the table to the left. Transhipment activity rose from an estimated 4.3 million teu in 1980 to an estimated 66.3 million teu in 2001.

- In future, increased trade growth will not only benefit hub & spoke development but also direct port calls. Transhipment as a generator of port handling activity, is expected to continue to increase as carriers rely on filling their ever larger vessels with cargo which originates from an ever wider geographical radius. At the same time though we'll see that as regional ports gain in importance, direct services will take over more and more cargo.

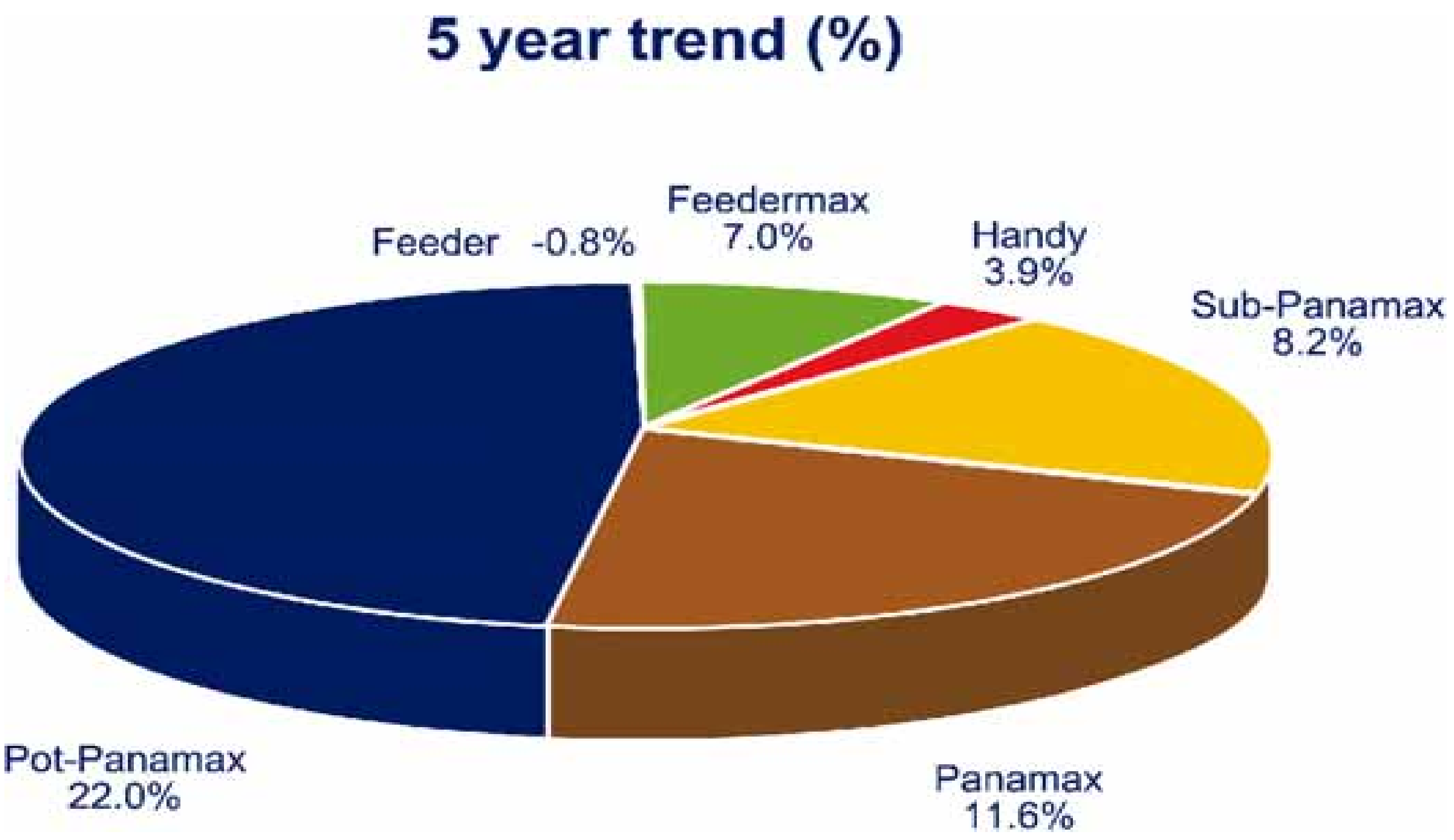
Factors affecting port performance

- **Incidence of larger vessels**
  - Suitable infrastructure and superstructure is required (draft, berths, equipment, etc.)
  - Increased handling rates and efficiencies required to minimise wait times and ensure fast vessel turnaround
- **Port capacity is also affected by**
  - Tranships which account for 20.7% of world port handling volume
  - Empty containers represent over 20% of container movements (head haul growth continues to outstrip back haul volumes)

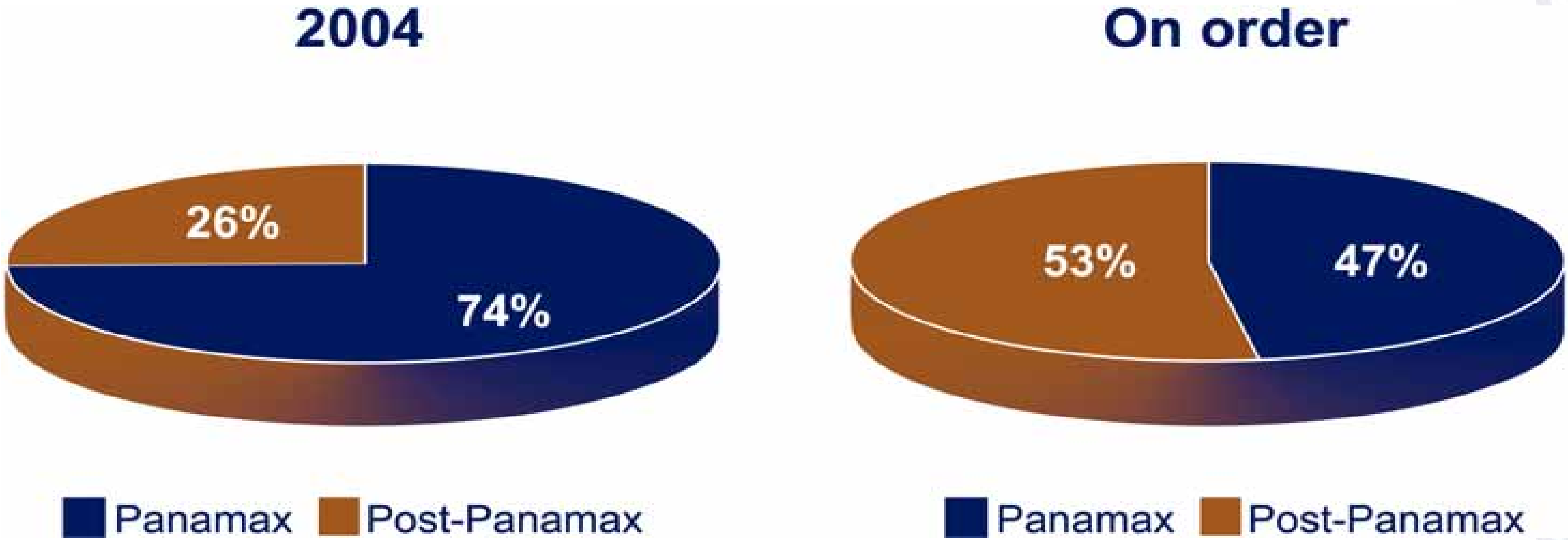
Port capacity development continue

- **Global port handling grew by 11.2% in 2005 to 400m teu**
- **Asian ports account for 50% of world activity**
- **International port capacity developments have resulted in lead times of up to 2 years for STS cranes**
- **South Africa is also investing in port capacity**
  - Recently installed 6 new cranes at Durban Container Terminal
  - New 600,000 teu container facility being developed in Durban
  - Expansion plan for Cape Town Container terminal
  - New container terminal development at Ngqura

Containership Fleet & Forecast

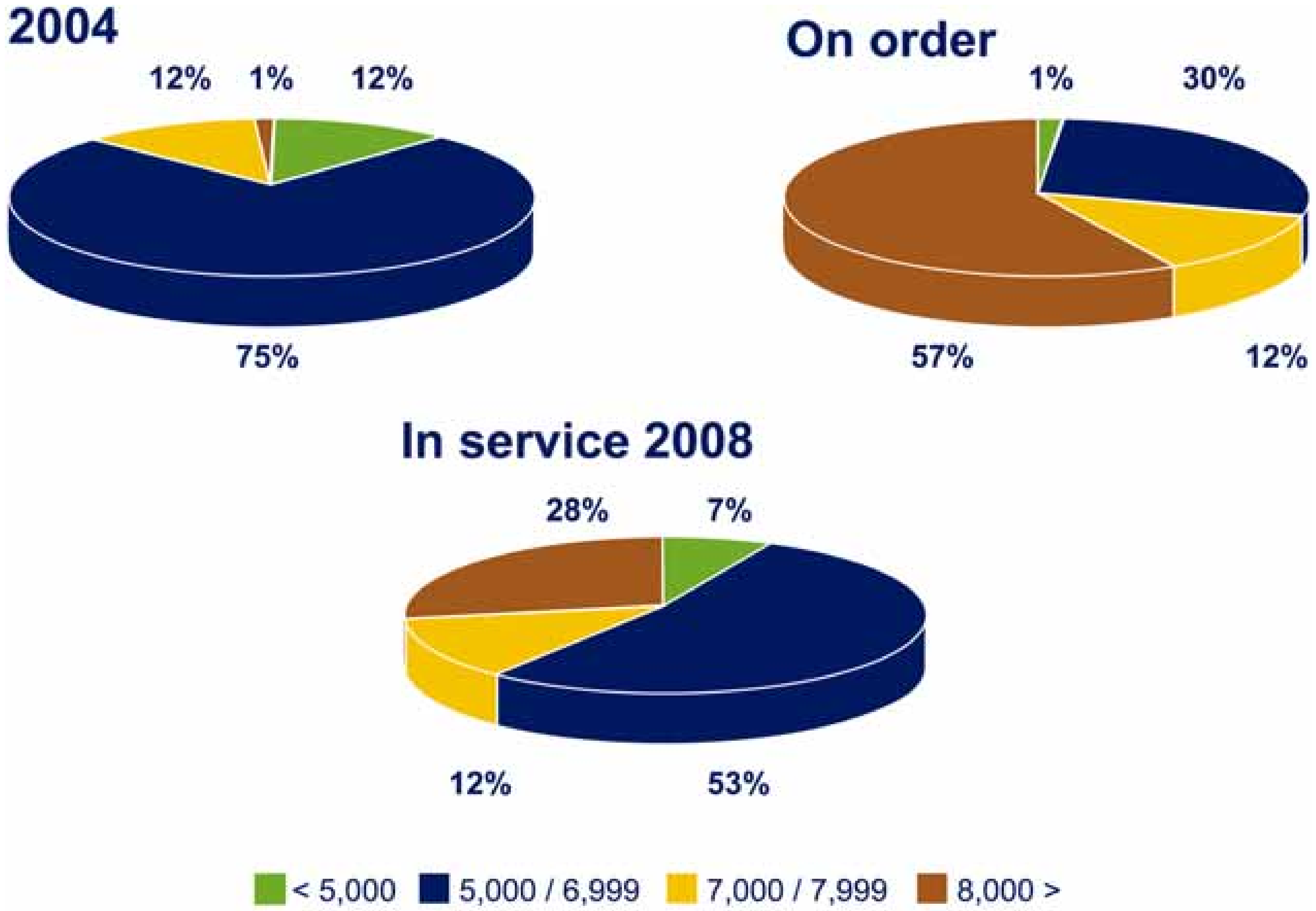


Post-Panamax share of the container carrying fleet



Source:Drewry Shipping Consultants Ltd www.drewry.co.uk

Vessels are getting larger



Container ship supply growth

- **The following trends were evident for 2005**
  - Container ship capacity increased by 11.1% adding 210 vessels and 750,000 teu
  - Of the 740,000 teu delivered, 60% (450,000 teu) was for vessels over 5,000 teu
  - Over 60% of capacity ordered during 2003 was for post Panamax vessels with an average size of 7,373 teu
  - The average speed for post Panamax vessels over 5,000 teu is around 25 knots
  - New building prices rose by 27% with a 6000 teu vessel price costing $112m
  - Accelerating delivery of new vessels
  - Imbalance of east west trades

Factors affecting the supply demand balance

- **Supply side**
  - Relative productivity of cellular and non-cellular vessels
  - Size of global box inventory relative to fleet capacity
  - Equipment management efficiency
  - Changes to vessel routing patterns (eg. shorter rotations)
  - Vessel deadweight constraints
  - Vessel speed
  - Port productivity (including the impact of congestion)

- **Demand side**
  - Incidence of empty container movements
  - Incidence of transhipments
  - Average cargo weight per teu

Conclusion

- **Rampant demand experienced on the east west trades up to Q3 of 2005 has slowed in 2006**
- **North – South trades are experiencing a similar slowing of traffic growth**
- **This trend is expected to continue into 2007**
- **Capacity building programmes for port terminals and vessels are continuing, resulting in**
  - Vessel capacity is likely to exceed demand
  - Port capacity increases also coming on stream
- **Softening of market expected, resulting in competitive pricing and service**

East-West Trade : African Implications

East west trade Implications to Africa - demand

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- **Growing international container trade has been felt in Africa which is expecting 7.9% p.a growth to 2008**
- **In Southern Africa, South Africa's AGISA initiative, NEPAD and other economic development programmes are driving demand**
- **There are opportunities for transhipments as lines realign call schedules**
  - Southern Africa is strategically located to take advantage of Tranships on east west trades (South America, Middle and Far East)

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East west trade Implications to Africa - supply

- Increased pressure is being felt in a region that has suffered from under investment in ports and transport infrastructure

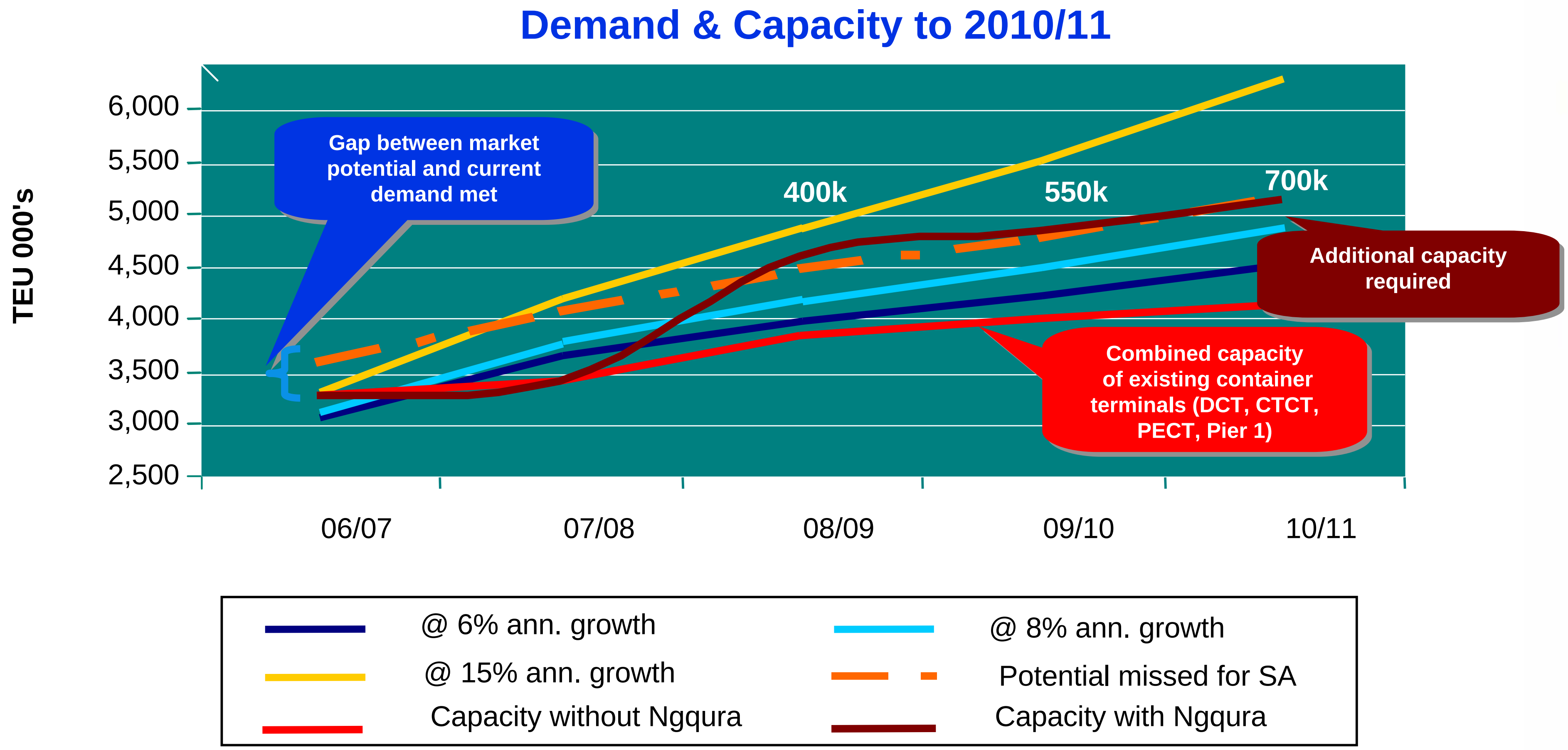
- In addition to capacity constraints, operational performance has lagged behind constantly improving standards and expectations in the industry

- Skills shortages remain a critical challenge

Introduction to South African Port Operations

- **SAPO is a part of the Transnet Group**
  - A public sector Group that reports to the department Of Public Enterprises
  - The Group has core operations in ports, rail and pipelines
  - Annual revenue of $9.5 billion USD
- **It is a national port operator in South Africa**
- **SAPO operates across 4 sectors**
  - 4 container terminals at 3 ports handle 3.2m teu p.a
  - 4 bulk terminals handle 50.8m tons of import and exports p.a
  - 3 automotive terminals imports and exports 500,000 vehicles p.a
  - 7 break bulk terminals handle 11.8m tons p.a
- **SAPO competes against global supply chains**
  - South Africa must compete with world markets on exports
  - Shipping lines compare performance in South Africa to other countries

South Africa's Container Capacity Projections



- Container capacity required during 07/08
- Without Ngqura, capacity shortfall will be 550k TEU's by 2009/10 (@8% growth)
- At growth > 8%, shortfalls will be experienced again in 10/11. Additional capacity will be required to prevent congestions and vessel delays in the South African port system

SAPO's investment (Rm) to address capacity and performance challenges

CONTAINER SECTOR (Excl. Ngqura)			LE	Forecast				
	ETC		2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
78 x Straddle Carriers (DCT,CTCT, PE CT)	382		200	182	0	0	0	0
14 x Gantry Cranes (DCT, PIER 1,CTCT)	785		41	349	360	35	0	0
12 x Rubber tyed gantry cranes (Pier 1)	125		22	44	44	15	0	0
Tractors/Trailers (Pier 1)	57		11	42	4	0	0	0
Other equipment and set up costs (Pier1)	215		12	57	56	90	0	0
Other equipment (CTCT)	74		17	2	2	2	50	0
Reefer points (DCT,CTCT)	49		12	21	6	0	0	0
Container Stacking Area (EL)	20		1	18	1	0	0	0
2x Mobile Cranes (EL)	50		0	25	25	0	0	0
5th Gantry Crane for PE	74		0	15	59	0	0	0
Refurb 8 Noell cranes (DCT)	240		0	60	120	60	0	0
14 x Straddle Carriers (PE)	89		0	0	53	36	0	0
Replacement of Haulers x 38 (DCT)	46		0	19	26	0	0	0
Other projects	1129		94	114	193	143	134	269
	3334		**410**	**945**	**953**	**381**	**184**	**269**

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Thank You!!!