

Welcome to:

Importance of Ports within the Food Supply Chain

CILT Ports, Maritime & Waterways Forum Event
Thursday 29th October 2015, Port of Tilbury



The Chartered
Institute of Logistics
and Transport

Importance of Ports within the Food Supply Chain

- Welcome & Introductions
- Health & Safety



Agenda Overview

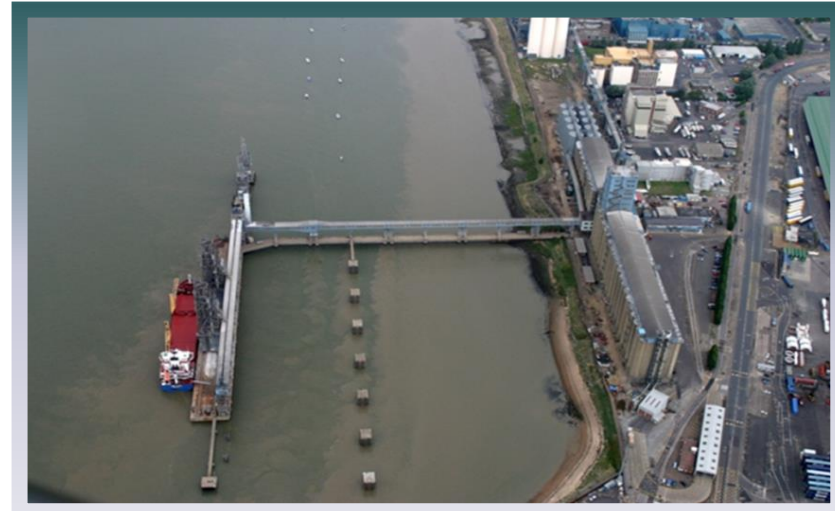
1. Tour of the Facility
1. Overview of the Grain Terminal
2. Importance of Tilbury Grain Terminal within the Food supply chain
3. The Resilience of the UK Agri-Food Supply Chain
4. Closing Remarks



Tilbury Grain Terminal

Port of Tilbury London Ltd

*Mark Faraway,
CMILT, Head of Operations Grain & Bulks
Port of Tilbury, London Ltd.*



Port of Tilbury

Owned by Forth Ports Ltd

Forth Ports Ltd

- Forth Ports are the third largest port operators in the UK
- 2011 privatised, purchased by our main shareholder.
- The Group handles 50m tonnes of various commodities through its terminals with a strong focus on liquid bulks, containers, dry bulks and operating tenants within our ports
- Tilbury handled 16 million tonnes
- 4 major port operations in UK (which are Tilbury, Grangemouth, Leith and Dundee)
- 4 smaller regional ports (which are Methil, Kirkcaldy, Burntisland and Rosyth which is the largest)
- Freehold land owner in all of its ports
- £216 million turnover in 2012 with a FTE staff circa. 1,200
- Port of Tilbury represents 50% of group revenue
- Privately owned with 2 key shareholders
- Continued to investment since 2011, including the purchase of our deep sea container terminal in 2012



Facts about Port of Tilbury

- 34 operational berths
- Over 7.5 km quay
- Land Area: 919 acre site
- Warehouse Space: Over 5 Million sq. ft of warehousing (current)
- 65 acres of land available for development - LDP
- Rail Terminals: 3 Terminals onsite
- 120+ Companies Operate within the port
- Directly employee approx. 800, with up to 3,000 on site daily
- Britain's Greenest Port/Prime Geographical Location/Position
- 8,000 vehicle movements per day



One of the UK's largest grain handlers



Key Facts

- Built in 1969 (£6 million to build) to support the London Flour milling industry
- Import & Export facility
- 2 x River Jetties (main jetty 265m long)
- Maximum depth 12.8m
- Coaster berth for discharging coastal vessel by suction.
- Fully computerised terminal
- Full traceability tracking service for sensitive cargoes
- BSI ISO9002 Registered, TASCC, AIB & Organic
- Conveyor belt network between storage areas.
- Currently handle up to 1 million tonnes per annum of Grain product.

Grain Terminal

Storage Capacity

- 120,000 tonnes of silo storage capacity onsite.
- 2 million tonnes handling capability per annum of Import/export products.
- Concrete & galvanised steel silos
- 200 Storage bins (ranging from 60-200t capacity)

Handling Capacity

- Road intake rate for export cargoes up to 650 tonnes per hour
- Vessel discharge rate up to 2,000 Tonnes per hour
- Vessel loading rate up to 1,000 Tonnes per hour

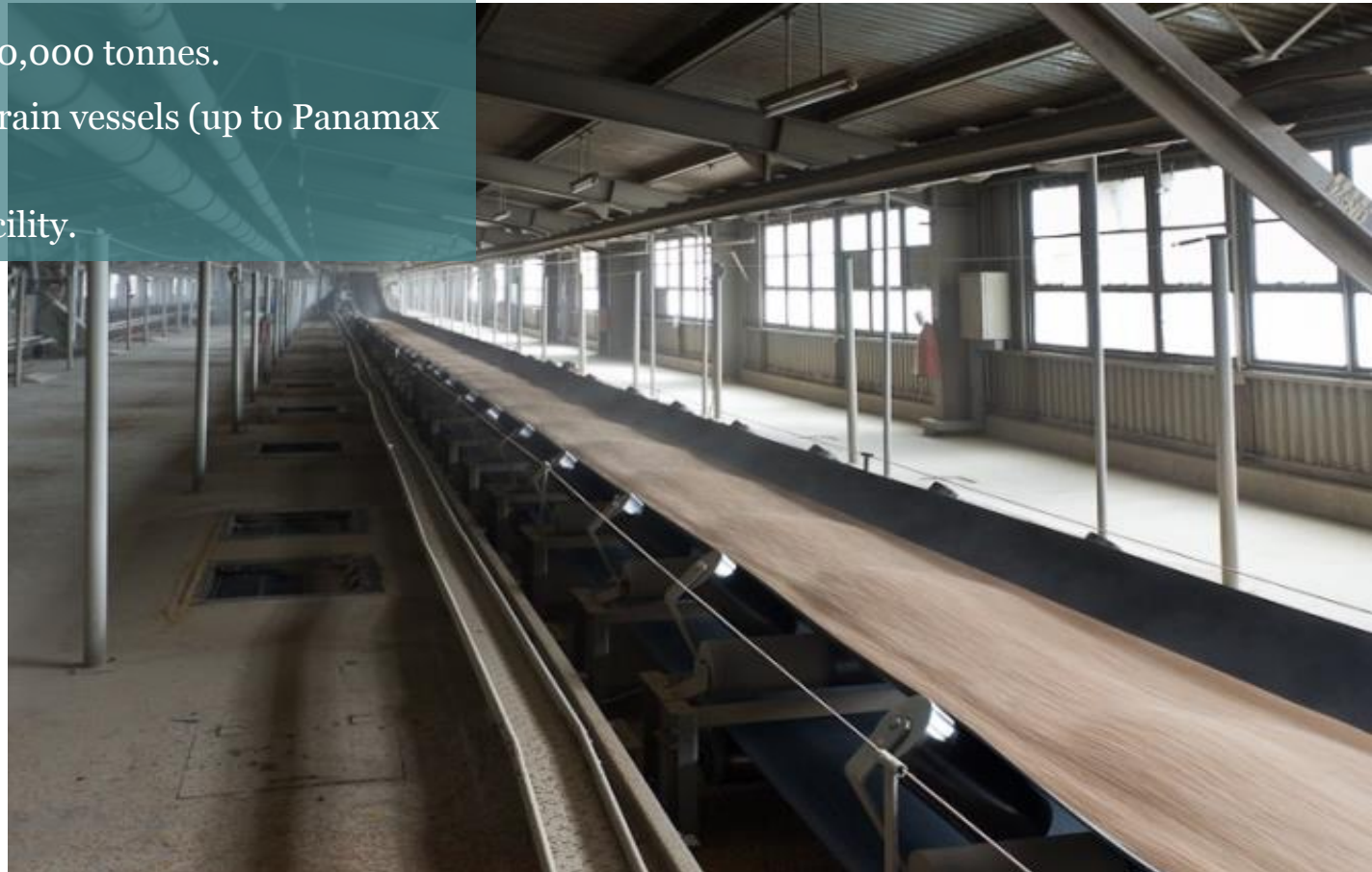


Specialist Handling Facilities

- Multiple Mills on Site direct conveyor link feed
- Onsite laboratory services to support the intake of UK crops
- Deep Sea Capability for import & Export Ships

Only one of two places in the UK:

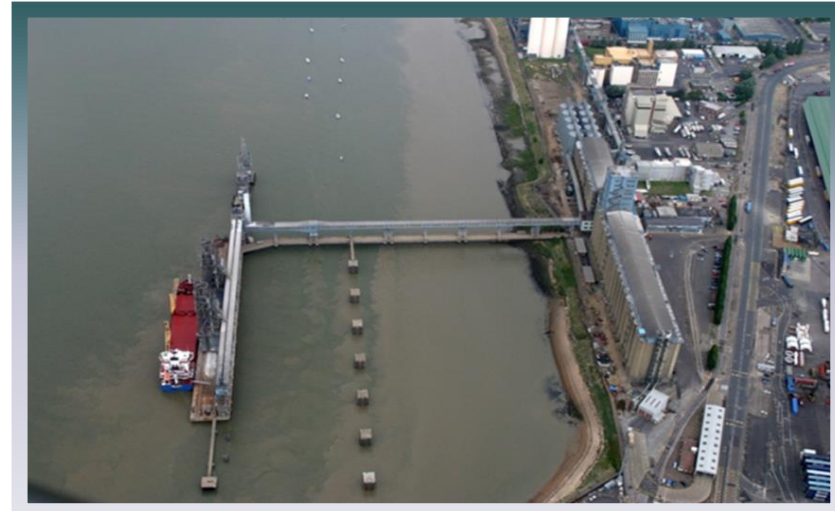
- Silos storage capacity of up to 120,000 tonnes.
- Handling capacity for deep sea grain vessels (up to Panamax size).
- Efficient computer controlled facility.



The Importance of Tilbury's Grain Terminal within the Food Supply Chain

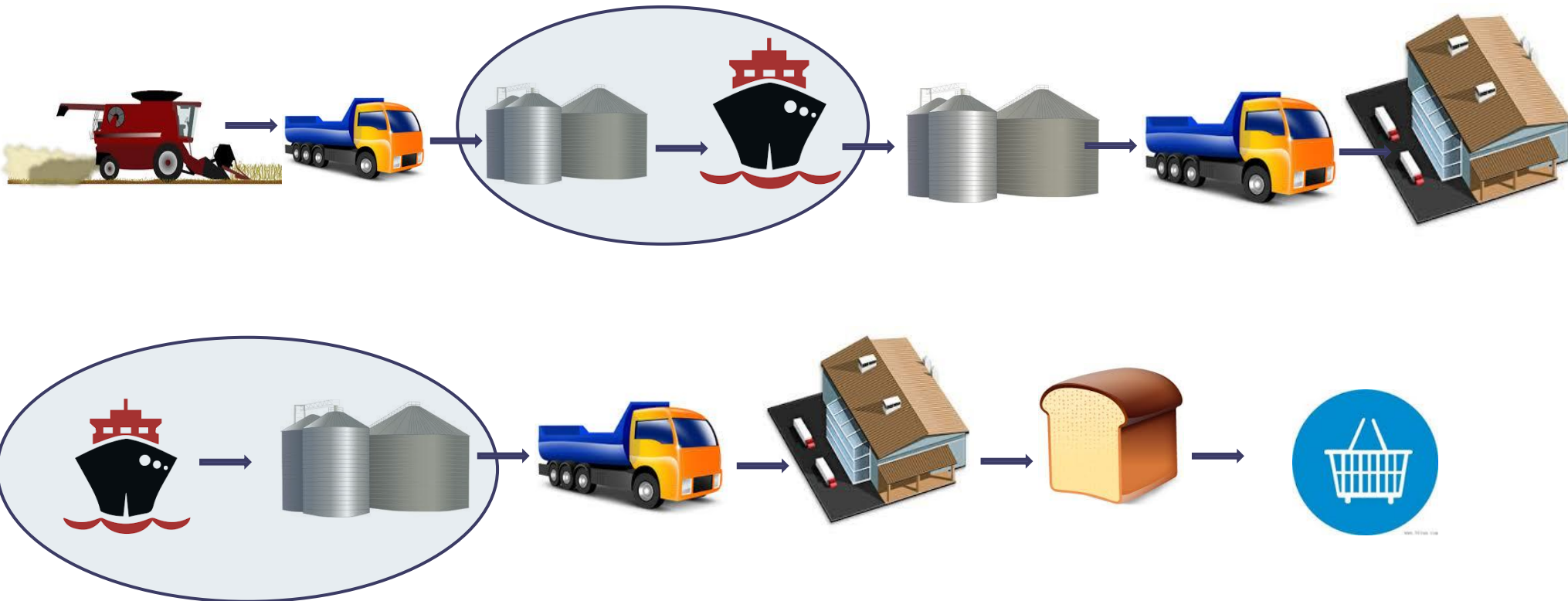
Port of Tilbury London Ltd

*Alison Hall
CMILT, Development Manager
Port of Tilbury, London Ltd.*



Tilbury's Place in the Food Supply Chain

1. What part we play in the supply chain?
2. What commodities do we handle?
3. Why Tilbury works for supporting food supply chains?
4. What food and drink products we support the delivery of?
5. What is expected from us to meet industry standards & accreditations?



Grain Commodities handled

UK Crop - Exports

Wheat

- Human consumption and animal feed
- Between 12% to 20% of UK wheat is exported, main buying regions Spain, Portugal, Morocco & Tunisia.
- Exports World wide and can range from 3,000t to 50,000t shipments
- Going into the Flour Milling and baking industry

Barley

- Predominately of a quality which is used as Animal feed
- 16% of UK barley is exported, with the main buying regions Spain & Portugal (75% of export market) & Saudi Arabia.
- Exports worldwide and can range from 3,000t to 25,000t shipments

Beans

- Human consumption and animal feed
- 7% of UK beans are exported, mainly to Egypt
- Human consumption beans are crushed to make into a paste for Ramadan
- Shipment sizes 6,000 – 25,000t



Imports – to Support UK Supply chains

Wheat

- UK import requirement is approx. 5% (1.2m tonnes) to support the UK wheat market.
- Main import origin France, Spain, Germany, Canada & US
- Tilbury holds a significant market share of all UK wheat import
- Tilbury is the market leader in the importing of Non EU Wheat
- For human consumption going predominately into:
 - Flour miller to produce bread products
 - Biscuit Flour millers
 - Food Ingredients
 - Breakfast Cereals & Cereal bars

Durum Wheat

- Import 40,000 – 60,000 tonnes of durum wheat imported into UK
- Used to mill Semolina flour
- Allied Mills are the UK's leading durum semolina mill with their mill adjoining the grain terminal
- Semolina flour goes predominately into:
 - Pasta
 - Biscuit
 - Couscous
 - Desserts



Imports – to support UK supply chains

Soya Beans

- Import of the UK Soya Beans market
- Soya Beans are used for human consumption & animal feed
- For human consumption goes predominately into:
 - Ingredients as a protein
 - Biscuit & breakfast cereals
 - Infant formula

Barley

- Malting barley for human consumption
- Go to a number of Maltsters to be used within the distilling & brewing industry



Location Location Location....

So why Tilbury?

- Tilbury's is situated in the middle of the most intensive arable farming regions in the UK.
- Well located central to the UK population
- A number of large milling and agricultural production facilities.
- 2 of the largest flour milling companies have flour milling facilities onsite (ADM & Allied Mills).
- Tilbury supplies a significant amount of the UK flour milling import capacity.
- Can offer transshipment opportunities to reload onto smaller vessels to other destinations in the north of England.
- Easy for customer wanting to import and export grain in containers
- Good back Haulage runs
- Flexability within the Terminal

Key



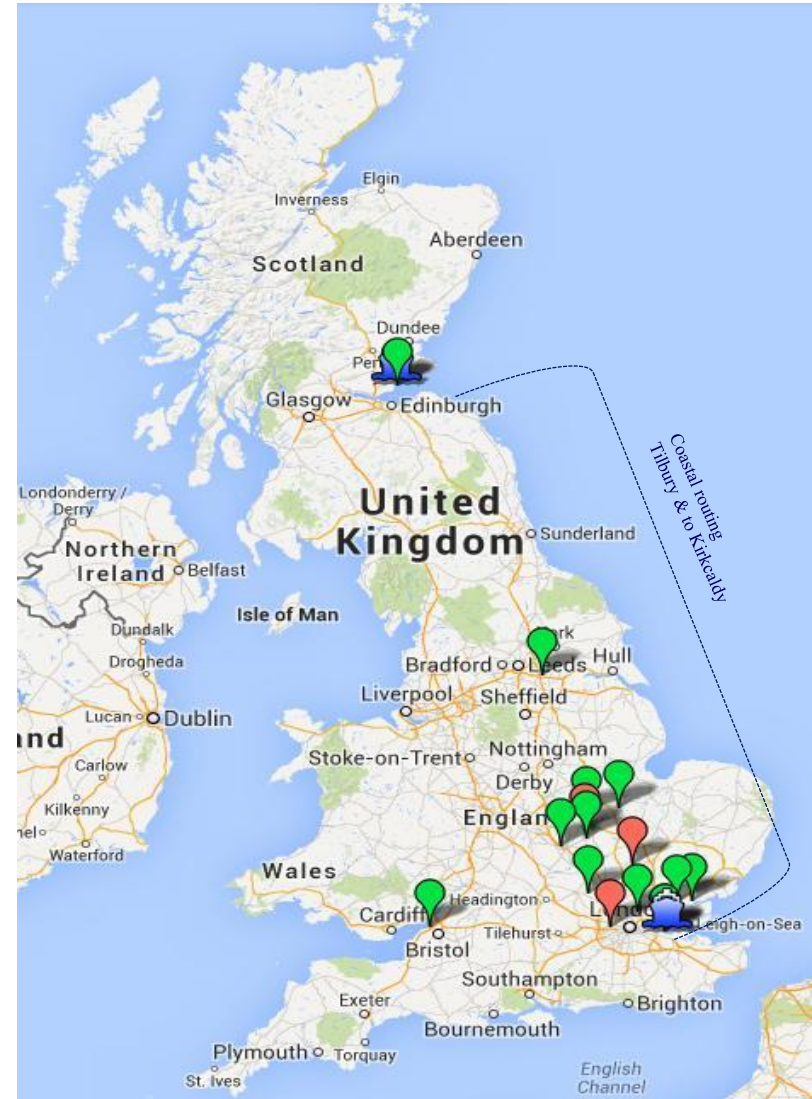
Routing Ports



Malsters / Food Producers



Flour Mills



Food industry standard & accreditations



AIB – American Institute of Bakers

- American led but accepted worldwide.
- Grain Terminal adheres to the 'Grain Handling' Standards including hygiene certification
- Intense 3 days inspection of site (covering operational practices, cleaning, pest control, maintenance and quality systems)



TASCC – Trade Assurance Scheme for Combinable Crops

UK led accreditation for business in combinable crops –grower, farmers, stores, haulage & Merchants

- The Grain Terminal and Bulks accredited
- Day audit on focusing on tractability through the supply chain.



OFF - Organic Food Federation

- UK led accreditation for participants handling Organic Food, (processing, storage and importing of Organic Food)
- Audit focusing on documentation and traceability
- Food Trading Standard & Port Health – not on a defined time table but can inspect the premises at any given
- Customers Clearance – all cargo whether exported or imported needs the customers agreement and clearance
- Cargo Superintendent who are independent to the Grain Terminal sample the cargo to ensure quality and meets specifications are agreed with the Customer

Partners and brands within the food & drink industry we work with either directly or through our customer base.....



Other Food & Drink commodities moved through the Port of Tilbury

- Coco beans
- Fresh Produce for a number of supermarkets (containers)
- Fruit juices
- Beer, Wine & Spirits
- London City Bond (Wine)
- Browns Food Group -Tilbury Chill Store (fresh fish & meat)
- NFT new chill store (currently being build opposite)

The Resilience of the UK Agri-Food Supply Chain

Andrew Morgan CMILT, Director, Global 78 Limited



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29 October 2015 – Port of Tilbury

CILT(UK) Presentation

The Resilience of the UK Agri-Food Supply Chain – features and challenges

Grain Terminal: Port of Tilbury

29th October 2015

Andrew Morgan: Global 78

Background



Andrew Morgan
Global 78

- 1978 on: logistics operations and mgt.
- 1990 on: projects incl.
 - Safeway Stores (UK)
 - Sadia (Brazil)
 - Grainfarmers (UK)
- 2011: **Global 78** founded – focused on **business research** and **scenario planning**

- Defra report '*Resilience of the Food Supply to Port Disruption*'
- Collaboration with Peter Baker of PRB Associates
- 4 import corridors and 4 food commodity groups

Defra Report: Structure of Outputs

FINAL REPORT

September 2012

Global 78 and PRB Associates

Background

Annex 1: UK Food and Drink Import Data

Annex 2: UK Food and Drink Supply Chains

Import corridors

Annex 3: Dover and Channel Tunnel

Annex 4: Felixstowe and Southampton

Annex 5: Thames and Medway

Annex 6: Humber

Food commodity groups

Annex 7: Meat and fish imports

Annex 8: Citrus fruit imports










Annex 9: Sugar imports

Annex 10: Palm oil imports

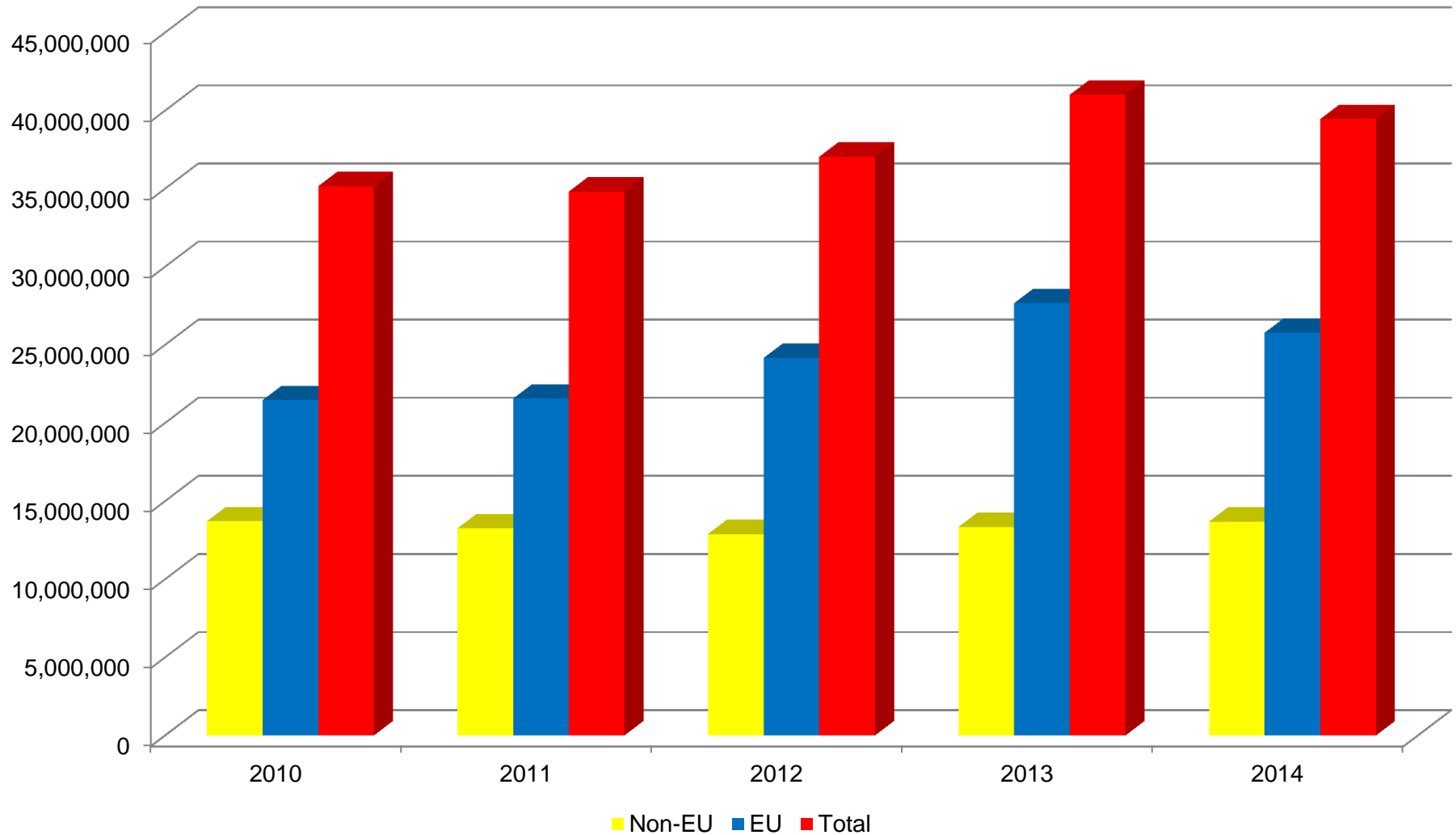
Import Corridors



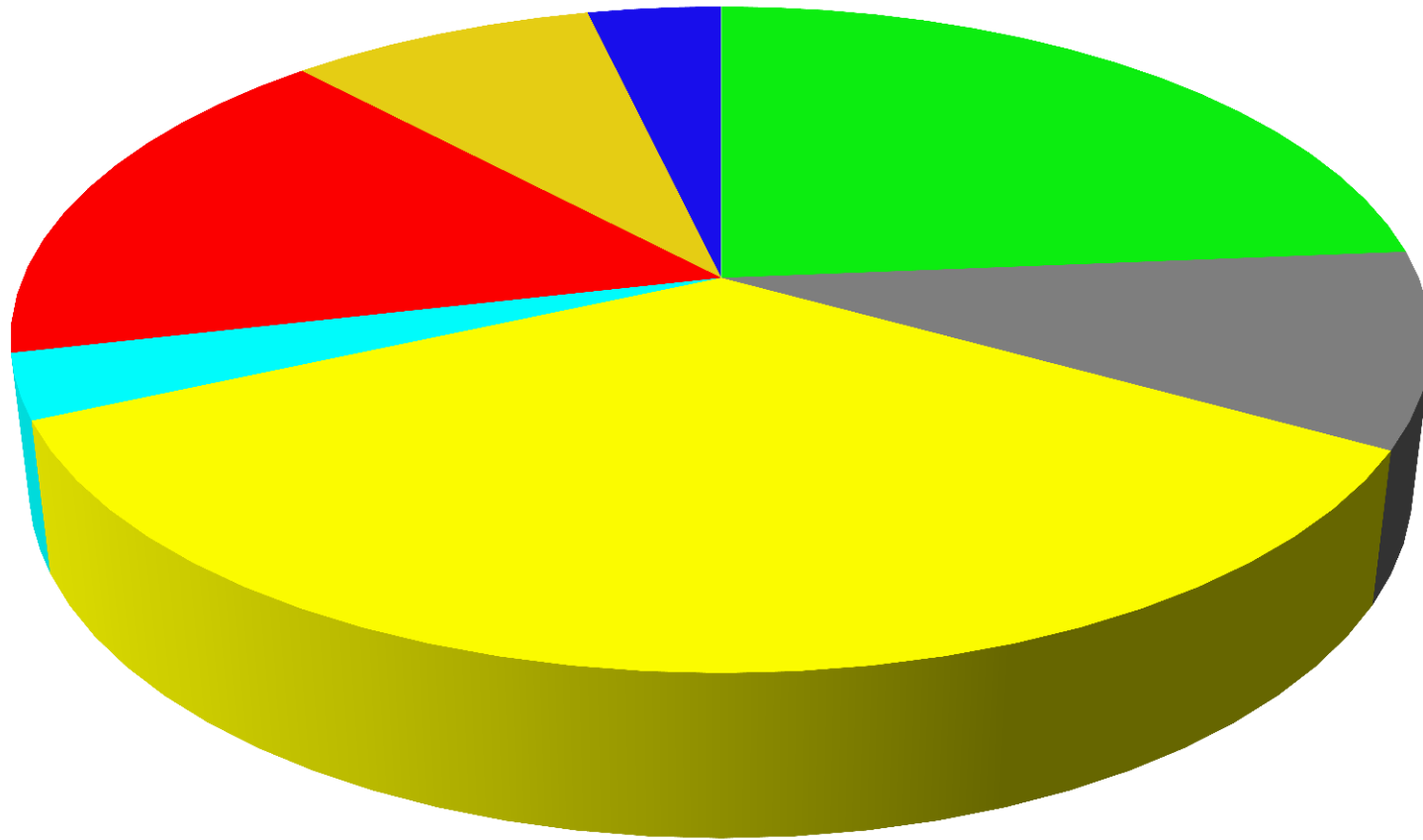
Flow Types and Modes of Appearance

	Roll on Roll off	Lift on Lift off	Liquid bulk
	<i>Meat, fish, citrus</i>	<i>Meat, fish, citrus</i>	<i>Palm oil</i>
Vessel			
Terminal			
Delivery			

UK Food Imports; non-EU, EU and total (tonnes)



Share of non-EU Food Imports into UK in 2014

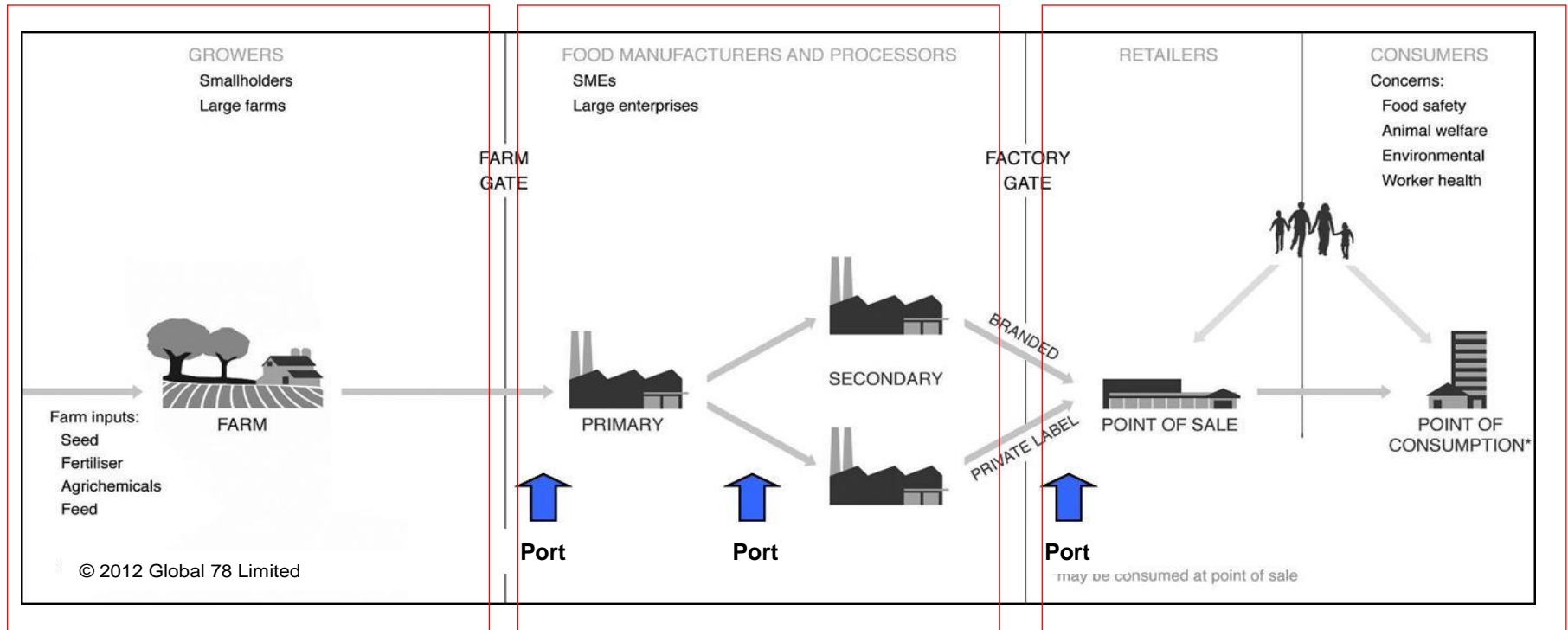


Asia and Oceania
Middle East and N Africa
Western Europe exc EC

Eastern Europe
North America

Latin America and Caribbean
Sub-Saharan Africa

The Extended Supply Chain



Production

**Manufacturing and
processing**

Consumption

- **Northern Hemisphere vs. Southern Hemisphere**
 - Port interface changes as production “follows the sun”
- **Food ingredients + food service + grocery retail**

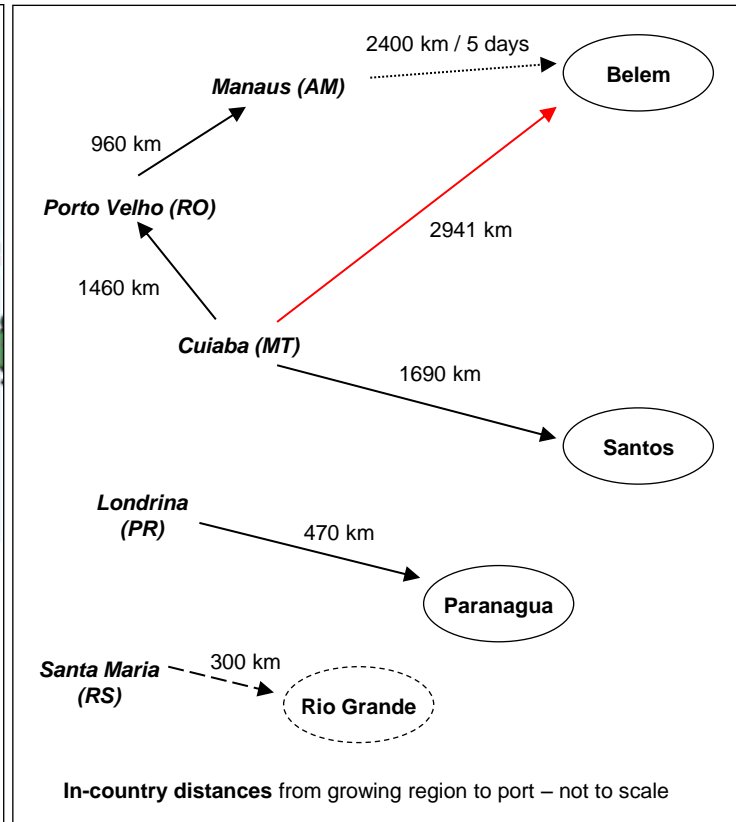
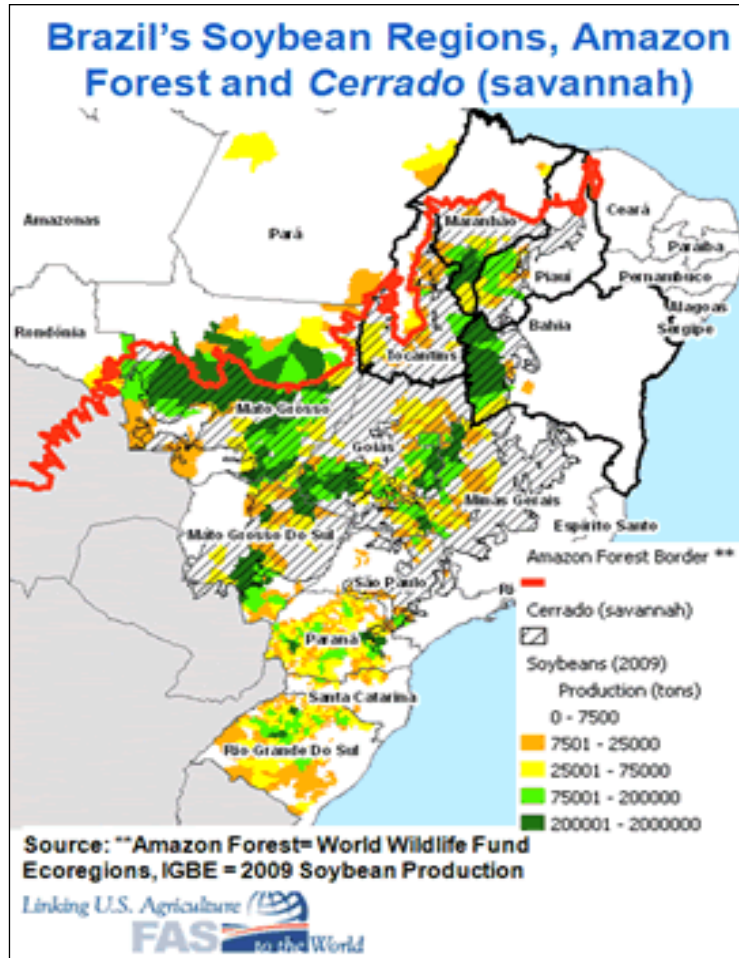
Consumer-led Final Market Challenges

- **Consumer behaviour**
 - Time is tight
 - Now!
 - Convenience is key
- **Demand from**
 - Retail
 - Food service
 - Food manufacturing
 - Baking
 - Brewing
 - Distilling
- **Supply chain innovation**
 - Complex 'neural networks'
 - 'Pull not push'
 - Time compression
 - Reduced stocks
 - Frequent replenishment
 - Etc.

Recipe: *Tuna sandwich on oatmeal bread*

- Oatmeal Bread
 - Fortified Wheat Flour
 - Oatmeal
 - Wheat Bran
 - Yeast
 - Demerara Sugar
 - Salt
 - Wheat Protein
 - Soya Flour
 - Emulsifiers
 - Mono and Diglycerides of Fatty Acids, etc.
 - Rapeseed oil
 - Palm oil
 - Flour treatment agent
- Tuna
- Cucumber
- Mayonnaise (incl. Rapeseed oil)
- Salad Cream

Sourcing Example: Bulk Soya from Brazil



c. 50% production originates in Centre-West states (MT; MS; GO). Santos (30%) and Paranagua (25%) are the lead ports.

Key International Challenges

- Population growth
 - 9 billion people by 2050
- Demand for food
 - Demand predicted to soar
- Changing diets
 - Moving up the scale
 - Nutritional issues
- Push for food security
 - Often a nationalist approach
- Urbanisation
 - How to maintain agricultural and horticultural production
 - New consumer markets
- New markets coming on line
 - Competition for resources

- Transport revolution
 - Including containerisation
- Information revolution
 - Impact on behaviours
 - Phenomenon of big data
- Agricultural land use
 - Fuels vs. feeds vs. food
- Environmental impacts
 - Climate change
 - Water
 - De-forestation
- Upstream food loss
 - Reports of 30% or more
- Downstream food waste
 - Initiatives such as WRAP

And many more

Thank you!

Andrew Morgan: Global 78 (www.global78.co)

Q&A



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Summing up...

- Join the Institute, join the Forum (Ports, Maritime & Waterways Forum)!

Wish you all a Safe journey home!



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