Discussion of Report:

Container Use in Western Canada:

Inland Terminals, Container Utilization, Service and Regulatory Issues

WESTAC, Victoria April 30, 2008

Study Parameters

- Study initiated in April 2007, covering:
  - Inland container terminal concept
  - Port and inland container flows, supply and utilization patterns
  - Role of shipper associations
  - Tariff exemption regulations
  - Container industry market drivers
  - Stakeholder views on key industry issues

Project Specifics

- Over 60 Stakeholder interviews with more than 100 people seen
  - Halifax to Vancouver; over 40 shippers; all major shipping lines and both railways; ports and terminal operators
- Development of complete statistical database on container traffic movement
  - Both railways, 3 ports combined with Stats Can data sets

Today's Discussion Points

- Summary Findings
- Traffic Flows
- Market economics
- Inland Container Terminals

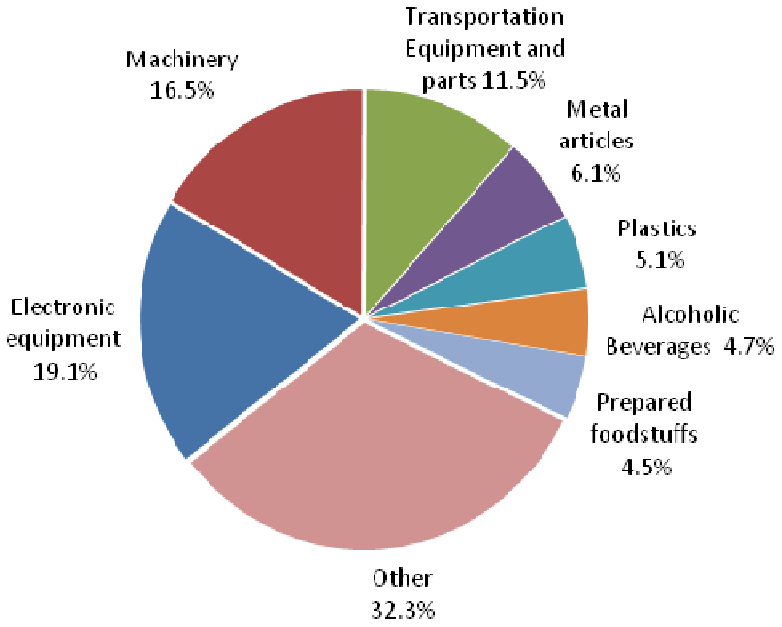
Findings Summary

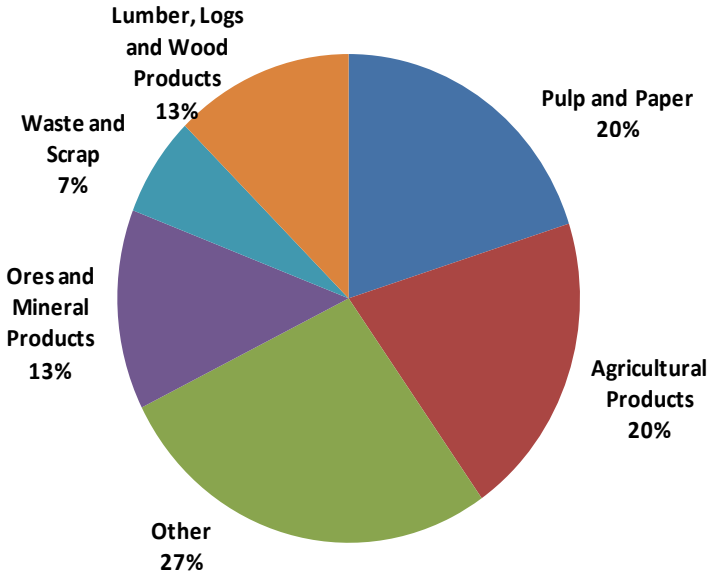
- There is a surplus of empty containers in Western Canada (with some exceptions)
- Tariff exemption regulations have or will have little or no impact on container supply
- Market and economic drivers have the single biggest influence on the positioning and allocation of containers
- The success of existing and proposed Inland Container Terminals/ Ports is driven by a combination of network efficiencies and value based market demand

Conatiner Characteristics

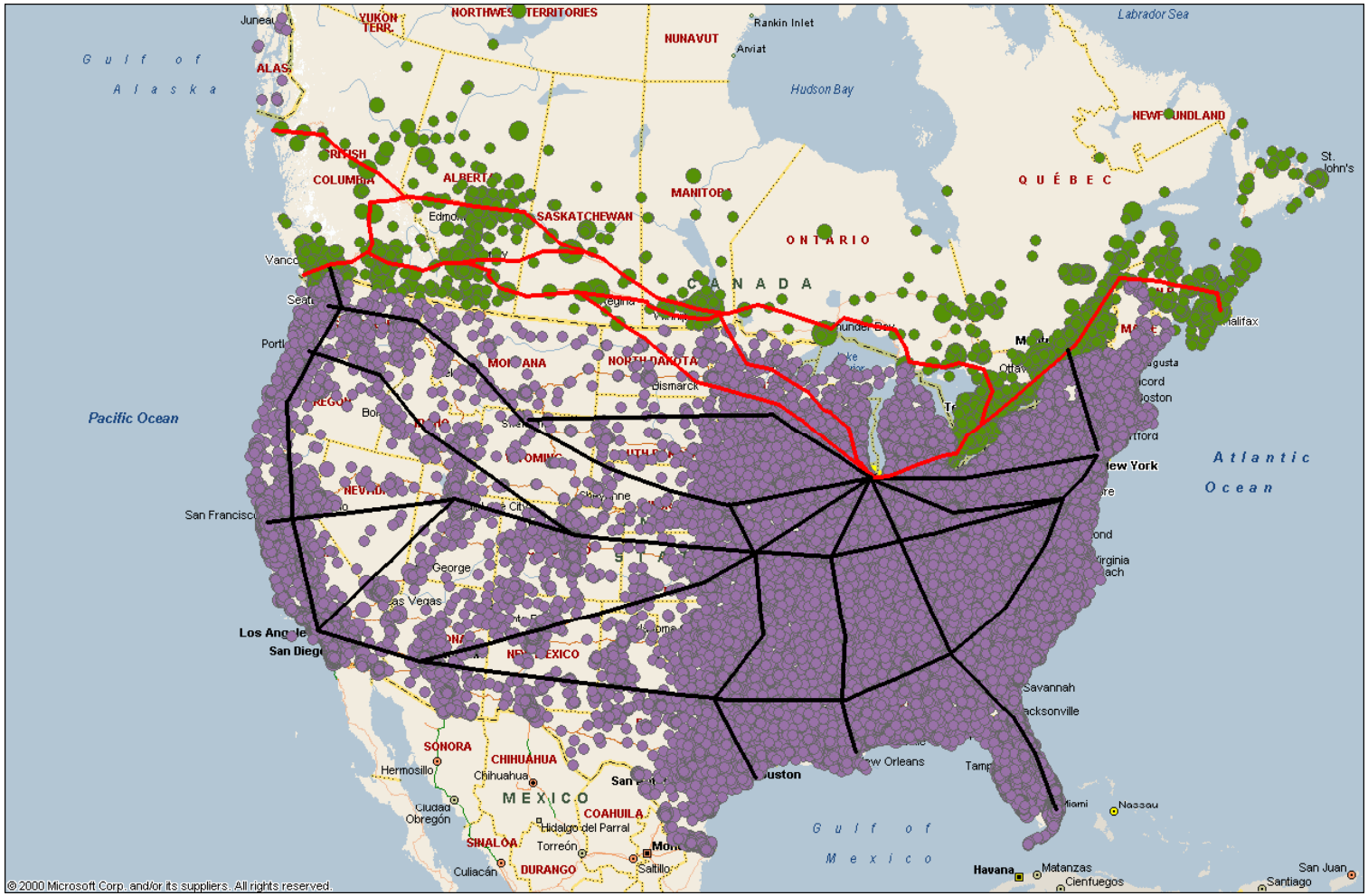
- Imports higher value goods
- Avg. of 10-12 tonnes/ container
- Rate: China to Vancouver $4000+

- Exports dominated by commodities
- Avg. of 22-26 tonnes/ container
- Rate: Vancouver to China <$1800

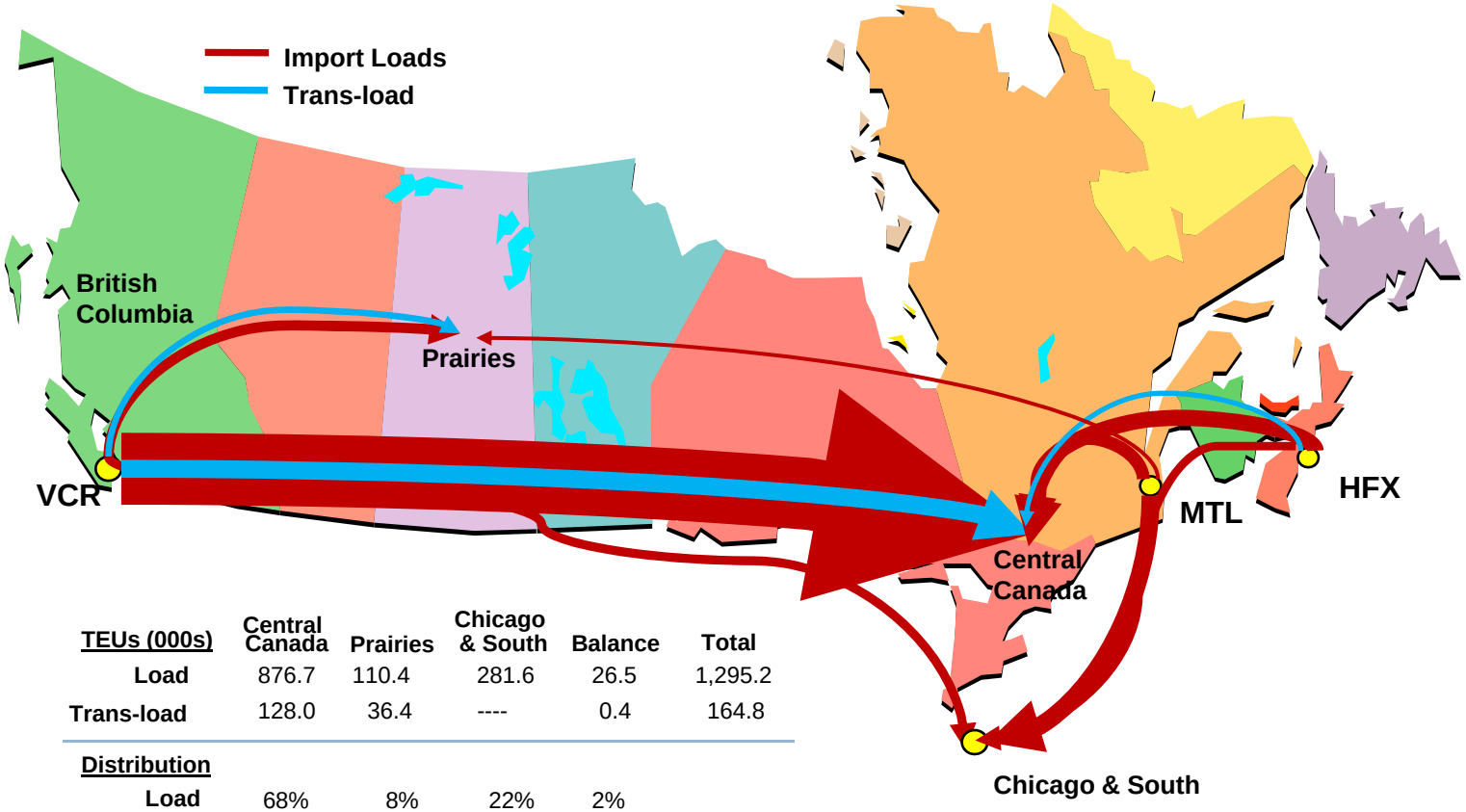




North American Demographics

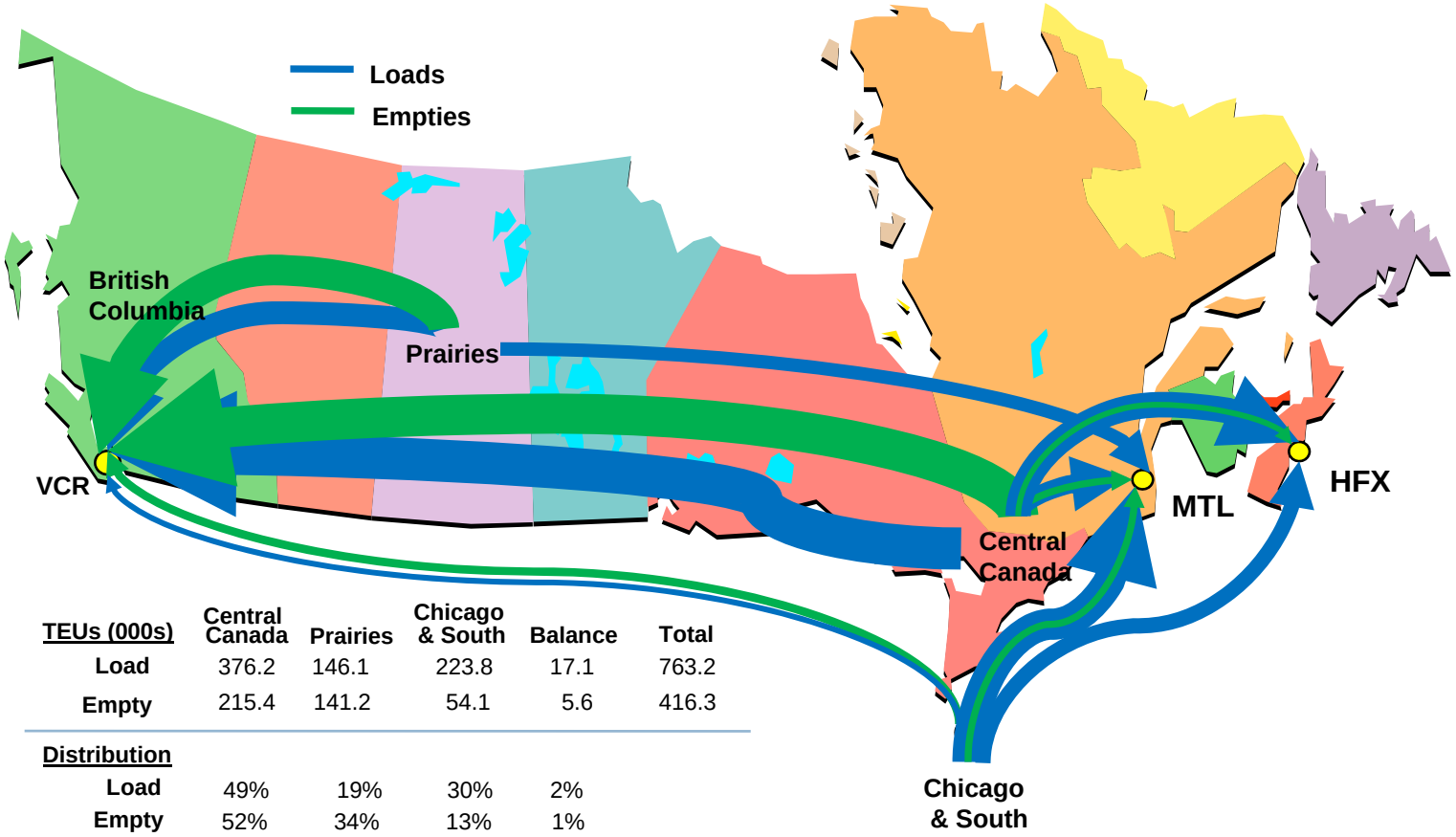


Containerized Rail Import Flows



TEUs (000s)	Central Canada	Prairies	Chicago & South	Balance	Total
Load	876.7	110.4	281.6	26.5	1,295.2
Trans-load	128.0	36.4	----	0.4	164.8
Distribution					
Load	68%	8%	22%	2%	
Trans-load	78%	22%	----	----	

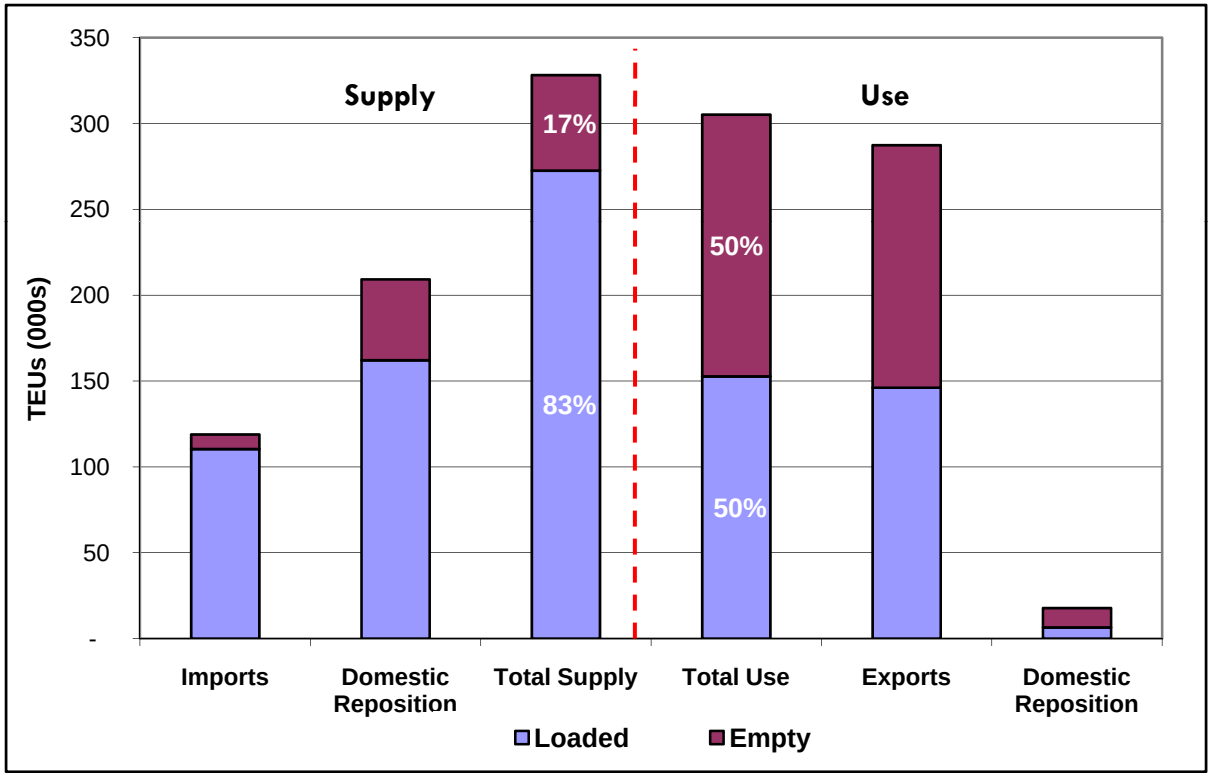
Containerized Rail Export Flows



TEUs (000s)	Central Canada	Prairies	Chicago & South	Balance	Total
Load	376.2	146.1	223.8	17.1	763.2
Empty	215.4	141.2	54.1	5.6	416.3
Distribution					
Load	49%	19%	30%	2%	
Empty	52%	34%	13%	1%	

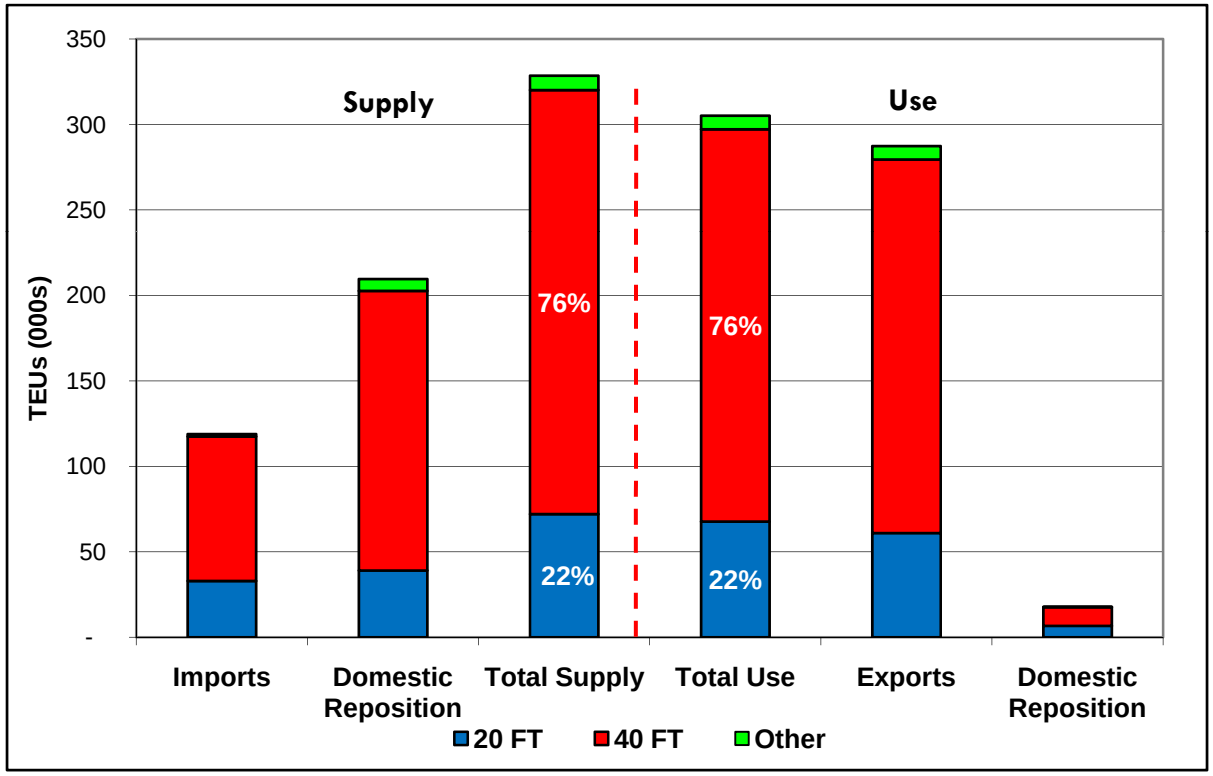
Prairie Supply and Use: loads vs. empties

- Repositioning is key supply source (63%)
  - Fills needs for specific equipment types
- Direct imports = 75% export needs
- 50% of containers leave empty
- Utilization rates vary by province
  - AB 48%
  - MB 50%
  - SK 78%

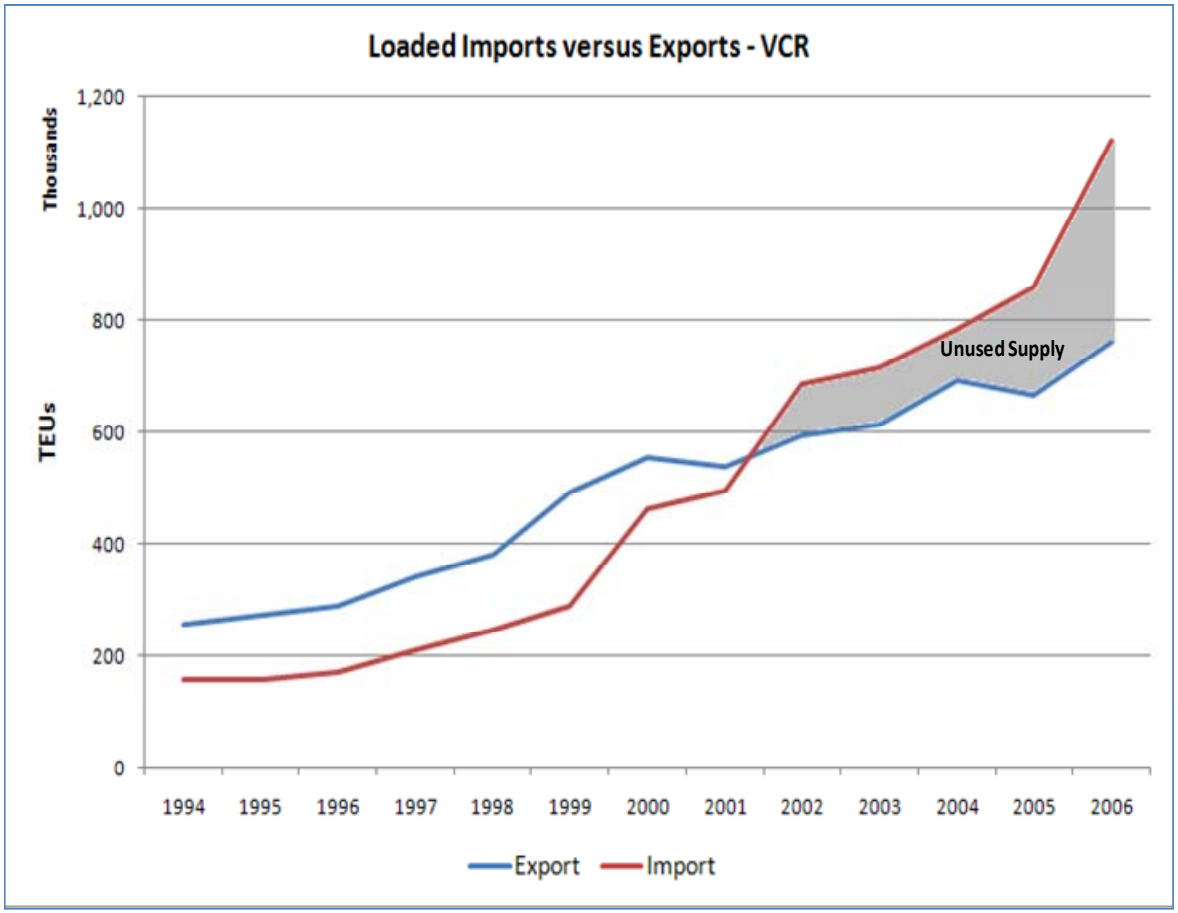


Prairie Supply and Use: by container type

- 40 ft equipment dominates supply (75%)
  - AB 83%
  - MB 78%
  - SK 37%
- Significance of 20 ft equipment as a percentage of total supply varies
  - AB 14%
  - MB 21%
  - SK 62%
- 20 ft equipment key for Saskatchewan
  - Heavily dependant on empty repositioning



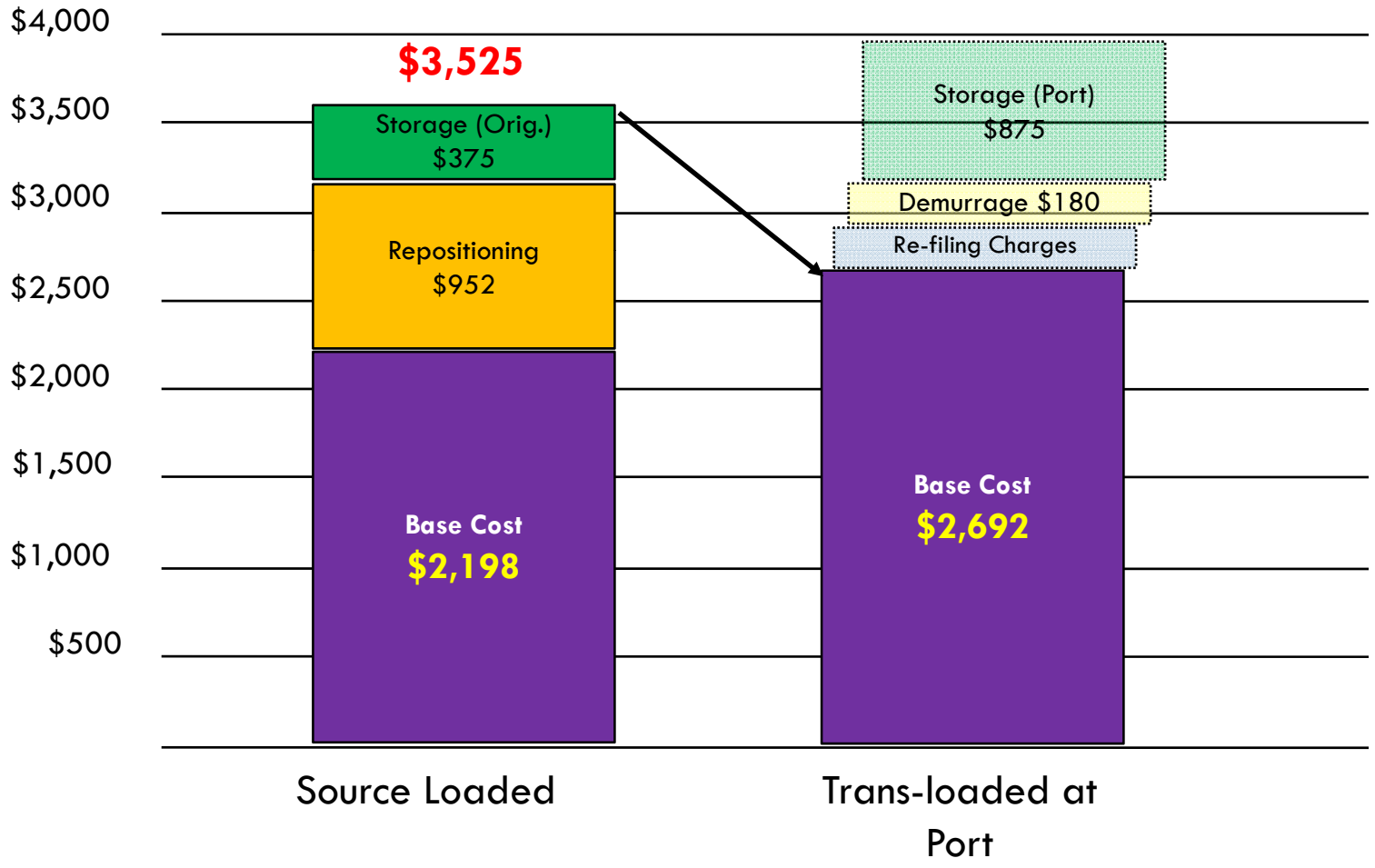
Container Flow Trend



Container Supply and Allocation

- The positioning and availability of containers is driven by the economics of commodity flows and financial return to service providers
  - Shipping Lines
  - Railways
- Railway agreements for container rates and service are with Ocean Carriers (shipping lines) not with shippers or freight forwarders
  - Understanding shipping line economics crucial

Shippers economics



Shipping Line Economics

Scenario 1

- Import container direct to rail
- Rail to Destination
- Return directly to port
- Evacuate empty out

Scenario	Net Contribution	Net Variance	Cycle Days
1	**$2,520**		**72**
2			
3			

Revenue	Amount
Ocean (Import)	$5,000
Ocean (Export)	$ -
Total	**$5,000**

Expense Item	Amount
Terminal In	$ 140
Storage In	$ 125
Rail in	$ 1,200
Dray	$ -
Rail out	$ 800
Terminal Out	$ 140
Storage Out	$ 75
Total	**$ 2,480**

	Amount
Total Net	**$ 2,520**

Shipping Line Economics

Scenario 2

- Import container direct to rail
- Rail to Destination
- Load container with export product to **"matchback location"**
- Return directly to port
- Export container to ship and onto destination

Scenario	Net Contribution	Net Variance	Cycle Days
1	$ 2,520		72
2	**$ 2,915**	**$ 395**	**83**
3			

Revenue	Amount
Ocean (Import)	$5,000
Ocean (Export)	$ 1,000
Total	**$6,000**

Expense Item	Amount
Terminal In	$ 140
Storage In	$ 125
Rail in	$ 1,200
Dray	$ 205
Rail out	$ 1,200
Terminal Out	$ 140
Storage Out	$ 75
Total	**$ 3,085**

	Amount
Total Net	**$ 2,915**

Shipping Line Economics

Scenario 3

Same as 2 except:

- Destination is **not a matchback**, so requires a transfer to another ship/ shipping line
- Destination request for longer unload period
- Must pay higher terminal and storage charges at destination

Scenario	Net Contribution	Net Variance	Cycle Days
1	$ 2,520		72
2	$ 2,915	$ 395	83
3	**$1,900**	**($ 620)**	**132**

Revenue	Amount
Ocean (Import)	$5,000
Ocean (Export)	$ 1,000
Total	**$6,000**

Expense Item	Amount
Terminal In	$ 140
Storage In	$ 375
Rail in	$ 1,200
Dray	$ 205
Rail out	$ 1,200
Terminal Out	$ 140
Storage Out	$ 75
Add. Term. & Ocean	$1,215
Total	**$ 4,300**

	Amount
Total Net	**$ 1,900**

Flow Considerations

- Demographics dominate
  - Load-empty balance and flow
  - Commodity values and directional rates
  - Shipping line economics
- Empty container availability inland does not mean that shipping lines are motivated to fill empties regardless of destination

Do empty backhaul opportunities create value for a regional economy?

Inland Container Ports/ Terminals

- What is their role?
- What format and functionality …
- Economic feasibility … size
- What is here now, what works and what doesn't

Intermodal Networks

- Fundamental principles:
  - It is about how the terminal serves the network
    - ***not*** how the network serves the terminal
  - Terminal investment is a small component of the total
  - Network investment IS 3 to 5 times terminal investment
  - Bigger and simpler is better
    - More terminals = more complexity = reduced service and asset utilization

ICT Analysis – Smallest Break-even

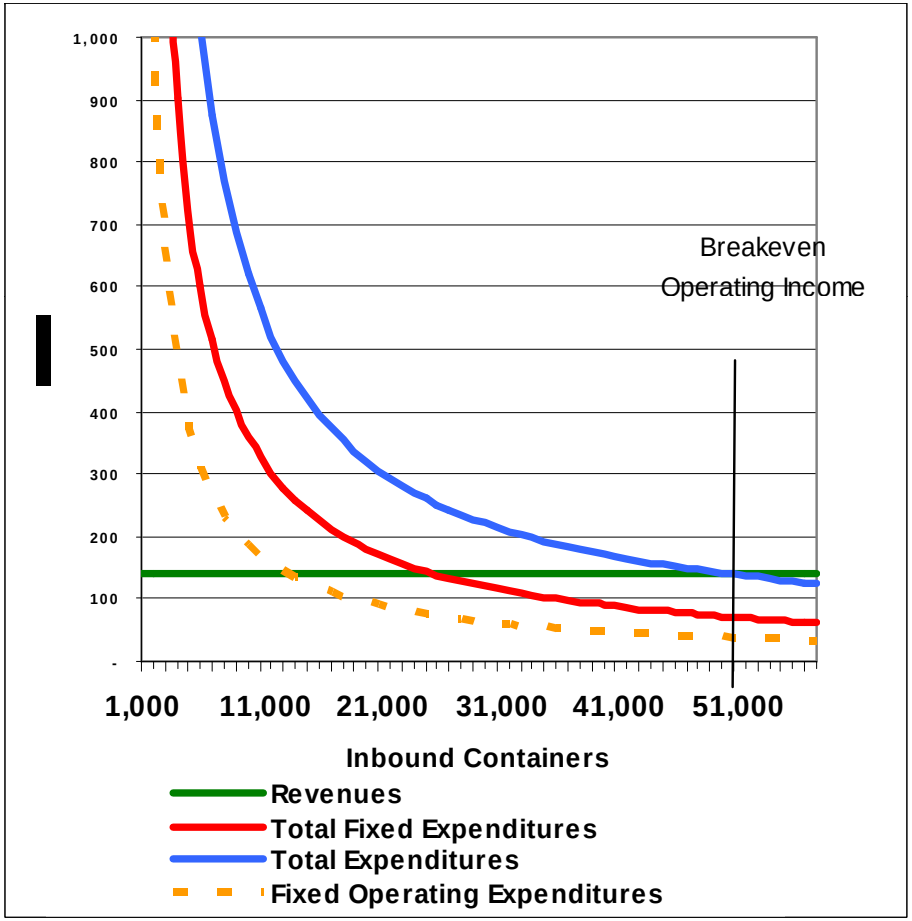
Capital Costs	$2.06 Million
Break even Model Volumes (TEUs)	38,454
Maximum Model Volumes (TEUs)	50,400

Workload Indicators	
Total Container Lifts:	91,350
Total Top lift-Hours:	6,525
Total Fuel Consumption (Imp. Gals.)	100,485
Total Labour-Hours:	26,624
Lifts per 1000 Labour-Hours:	3,431

Stand Alone Small Scenario

ICT Analysis – Key Findings

- Capital intensive
  - Long-term trade-off between initial investment and operating costs
- Susceptible to volume fluctuations
  - Directly correlated to size
  - Traffic diversity key to minimizing risk
- Network issues are important
- Benefit must exceed cost



Represents the Marginal Cost for a General Purpose – Medium ICT

The North American Experience

- Successful terminals
  - Located in areas of high population density
  - Railways and/or shipping lines own or are partners
  - Highly integrated, well capitalized operations (i.e. logistics parks)
- Failed terminals
  - No direct involvement of railways or shipping lines
  - Serve single shipper or dedicated traffic lane
  - Situated in areas with low population density

ICT Development: the Fundamentals…

- Shipping lines and railways are key
- Access to mainline rail and major highway routes is key
- Local and provincial government support is imperative
- Traffic opportunity must be "truly" incremental
  - Not a shift from existing intermodal terminals or rail segments
  - Selected products / markets must create value for all stakeholders

Pacific Gateway

- Image has been tarnished by reliability issues
  - Port and rail operations seen as fragile / vulnerable
    - Inability to withstand and recover from disruptions
  - Some exporters losing "preferred supplier" status
- Neither the blame nor the solution rests with one stakeholder
  - Vancouver port terminals are capacity constrained
  - High dependence on direct rail service to/from dock
    - Railway balanced service model is seen as permanent fixture
    - Key to railway intermodal profitability
  - These factors combined guarantee future service disruptions which may be severe
- Change in logistics approach and supply chain partner behavior is key to solution Infrastructure
  - Investments must be strategic

Summary

- Economics of logistics chain and the individual product market is key to success or failure
- No shortage of empty containers for Prairie exporters.
  - 50% of containers leave the Prairies empty
  - Isolated shortages caused by market factors
  - Availability of 20 ft containers in Saskatchewan single largest issue
- Shipping line strategies for Canadian market are shifting
  - Port to port strategy becoming more prevalent (Maersk, ZIM)
  - Impacting exporters primarily
  - Inland pricing strategies will encourage port transloading
- Inland container terminals are not the answer to container supply issues on the Prairies
- Port of Vancouver congestion issues will require a combination of investment and change in stakeholder behavior and strategy

Issues at Play

- Enhanced asset utilization
  - Increased Port to Port utilization
  - Extraction from inland markets
- Reduced weights in containers (22 tonnes)
- Economic downturn impacting inbound volumes
  - Reduced housing starts
  - Supply issues
- Shortages beginning to appear at times at Ports

Will consumer demand for Asian goods return to 2006-07 levels?

Thank You

Prairie Gateway Meeting