Quorum Corporation

The Movement of Grain in Containers in Canada: *Issues and Measures*

CSCA/ Pulse Canada Annual Conference

Lethbridge, AB
July 10, 2006

Topics

- Overview
- Industry Structure
- Business Models
- Issues and Challenges
- Measures
- Summary: What have we learned?

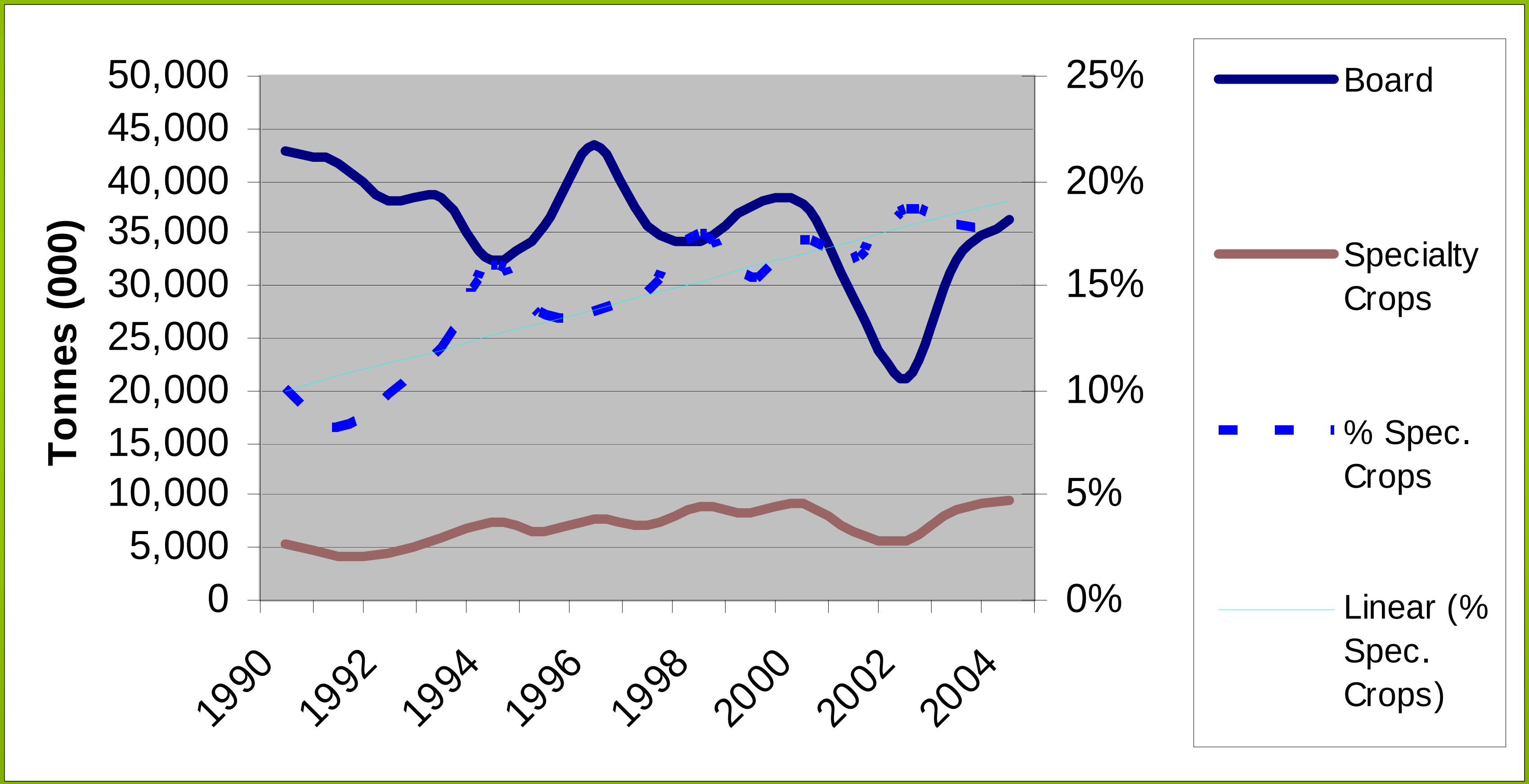
Study Approach

- Industry Research
  - Much written, mostly individual opinions
- Special Crops Association
  - Good starting point
- Stakeholder Sessions
  - 40 + meetings with good industry cross section

Overview

- 250 % increase in production of Special Crops in the past 15 years
- Different markets with variety of sale conditions
- Container lines and Railways “bought” into this market and helped it to grow
- Growth has now exceeded capacity, with the expected ramifications

Industry Structure



Industry Structure

- Two Business Models
  - –Source Loading
  - –Port Loading

Business Model – Source Loading

- First preference of most shippers
- Economics driven by a combination of supply and length of haul from the Container Terminal
- Shortage of empty containers in prairie (Saskatchewan) a driving factor
- Prairie demographics not conducive to sustainable "natural" inbound supply

Business Model – Port Loading

- Driven by lack of inland equipment supply
- Process complexity: *Single biggest risk*
- Several players in Vancouver market
  - Capacity & capability exhibits significant variability
- Sector has "plateaued" and will require a strategic capital approach
  - Rail Capacity, track side storage, sanitary & phytosanitary issues
  - "Go big or go home" scenario at play
  - Expansion options: Edmonton, WestNav ….

Logistical Economics

Shipper Economics

	Source Loaded at SK Points	Port Loaded, Origin SK	Source Loaded at AB Points	Port Loaded, Origin AB
Origin Dray	$ 432		$ 432	
Rail / (hopper) Car		*$ 3,553*		*$ 2,694*
Rail Cost / Container	$1,100	$ 888	$ 600	$ 673
Ocean	$ 600	$ 600	$ 600	$ 600
Destination Dray	$ -	$ 230	$ -	$ 230
Stuffing	$ -	$ 545	$ -	$ 545
Total/ Container	**$ 2,132**	**$ 2,263**	**$ 1,632**	**$ 2,048**
Alternative Differential		**6%**		**26%**

Shippers Cost of Risk

	Source Loaded at SK Points	Port Loaded, Origin SK	Source Loaded at AB Points	Port Loaded, Origin AB
Preliminary Costs	**$ 2,132**	**$ 2,263**	**$ 1,632**	**$ 2,048**
Repositioning	952		1,098	
Origin Storage	375		375	
Re file		200		200
Storage (7 days)		875		875
Demurrage		180		180
Max Cost of Risk	**1,327**	**1,255**	**1,473**	**1,255**
Adjusted Cost/ Cont.	**$ 3,459**	**$ 3,518**	**$ 3,105**	**$ 3,303**
Risk Value %	**62%**	**55%**	**90%**	**61%**
Adjusted Alternative Differential	**2%**		**6%**	

Shipping Lines Perspective

	Asia Pacific to Canada	Canada to Asia Pacific	Total
Lading Value (CDN)	*$ 80,000*	*$11,500*	
Weight/ Container (tonnes)	**11**	**23**	
Ocean Revenue	**$ 4,000**	**$ 600**	**$ 4,600**
Freight % of total Value	**5.0%**	**5.2%**	
Est. Avg. Cycle Time	**53 days**	**43 days**	**96 days**

Trips/ Year/ Container	**3.8**
Revenue/ Year/ Container	**$17,490**
% Value of 1 Canadian shipment	**3%**
The Value in terms of container cycle days	**6.25**

Issues and Challenges

- Process Related
  - Forecasting
  - Empty Allocation
  - Risk
  - Bottlenecks
  - Communication and Documentation
  - Vessel Space
- Regulatory
- Railways
- Ports
- Industry Knowledge

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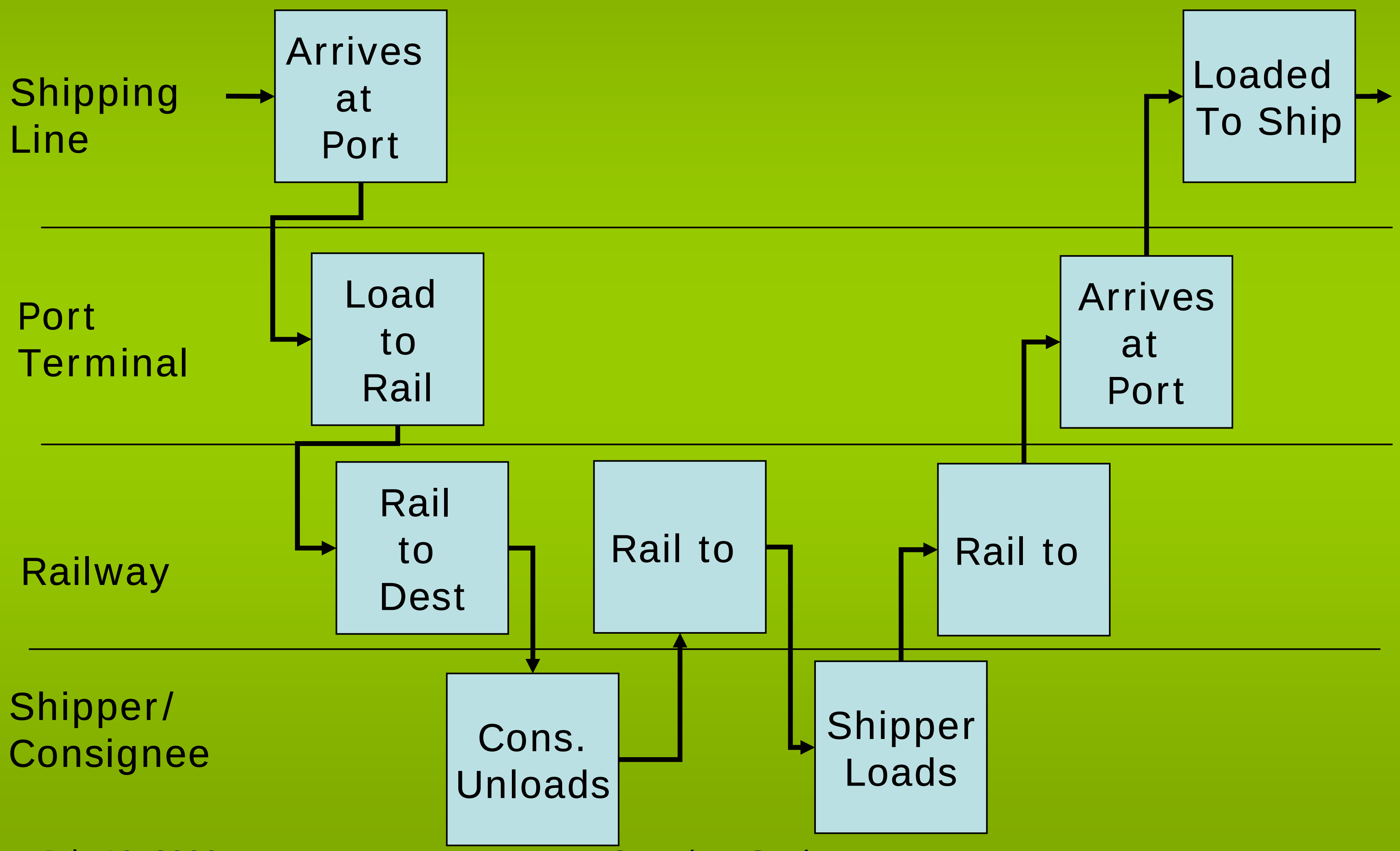
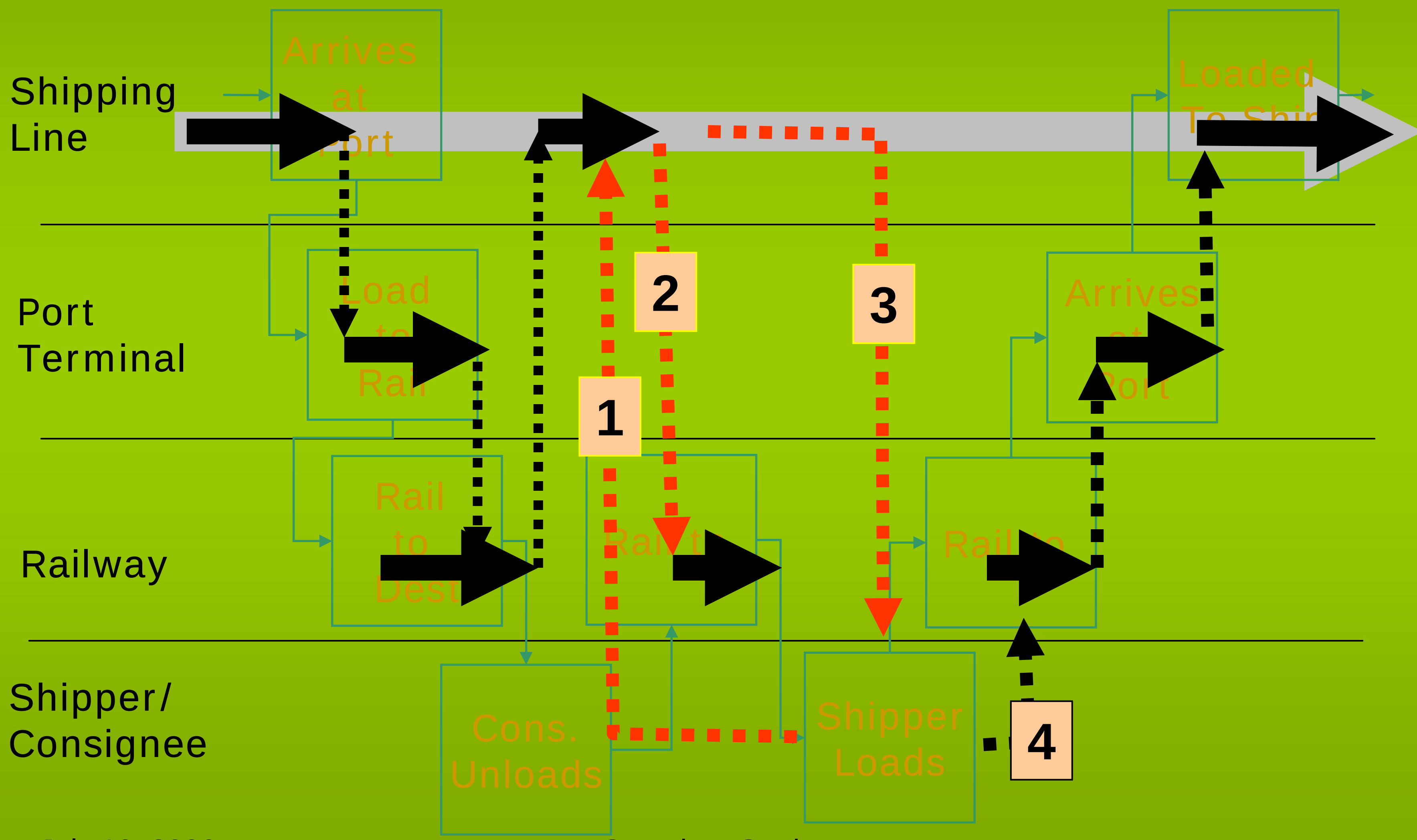
Process Flows



Data Flows



Shipping Line
Port Terminal
Railway
Shipper/ Consignee
Arrives at Port
Load to Rail
Rail to Dest
Cons. Unloads
Shipper Loads
Loaded
Arrives
1
2
3
4

Risk Exposure

- Risk mitigation means protecting supply of empties
- Queue jumping at inland container terminals
- Hoarding of equipment
- Over confidence in forward bookings
- Overbooking on vessels

Net Result = Sub–optimization of supply chain

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Cabotage Regulations

- Current Situation
  - Canadian tax rules (based on Tariff 9801.10 of the Canada Customs Act) state that foreign built and owned equipment must exit the country no later than 30 days after its incoming lading has been discharged (++)
  - Rules are "loosely" enforced by the CBSA
  - Tariff item exists due to specific NAFTA provisions
- Need harmonization with US
- Challenges lies in complexity of tripartite NAFTA and gaining the "will" to move forward.

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Railways

- Pipeline Management
  - Common practice used to avoid congestion
- Bulk Handling model vs. Manifest Train model
  - Special crops sales not conducive to whole unit train movement
- Service a common issue
  - Transit performance (time and consistency)
  - Car allocation
  - Spotting of both empties and loads

Railway Transit – Hopper Cars

2004-05 Crop Year	Loaded Transit	Standard Deviation
Board Grains	11.4 days	6.5
Canola	9.9 days	6.4
Specialty Crops	16.5 days	8.3
All Movements	11.8 days	6.7

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Issues and Challenges

Ports

- Land Cost and Availability
- Traffic congestion and associated costs
- Labour – truck, dock and other
- Overall "perceptions" Canada has gained

Industry Knowledge

- Big challenge for service providers
- Institutional knowledge of certain smaller shippers an issue
- Logistics as a profession as opposed to an administrative burden

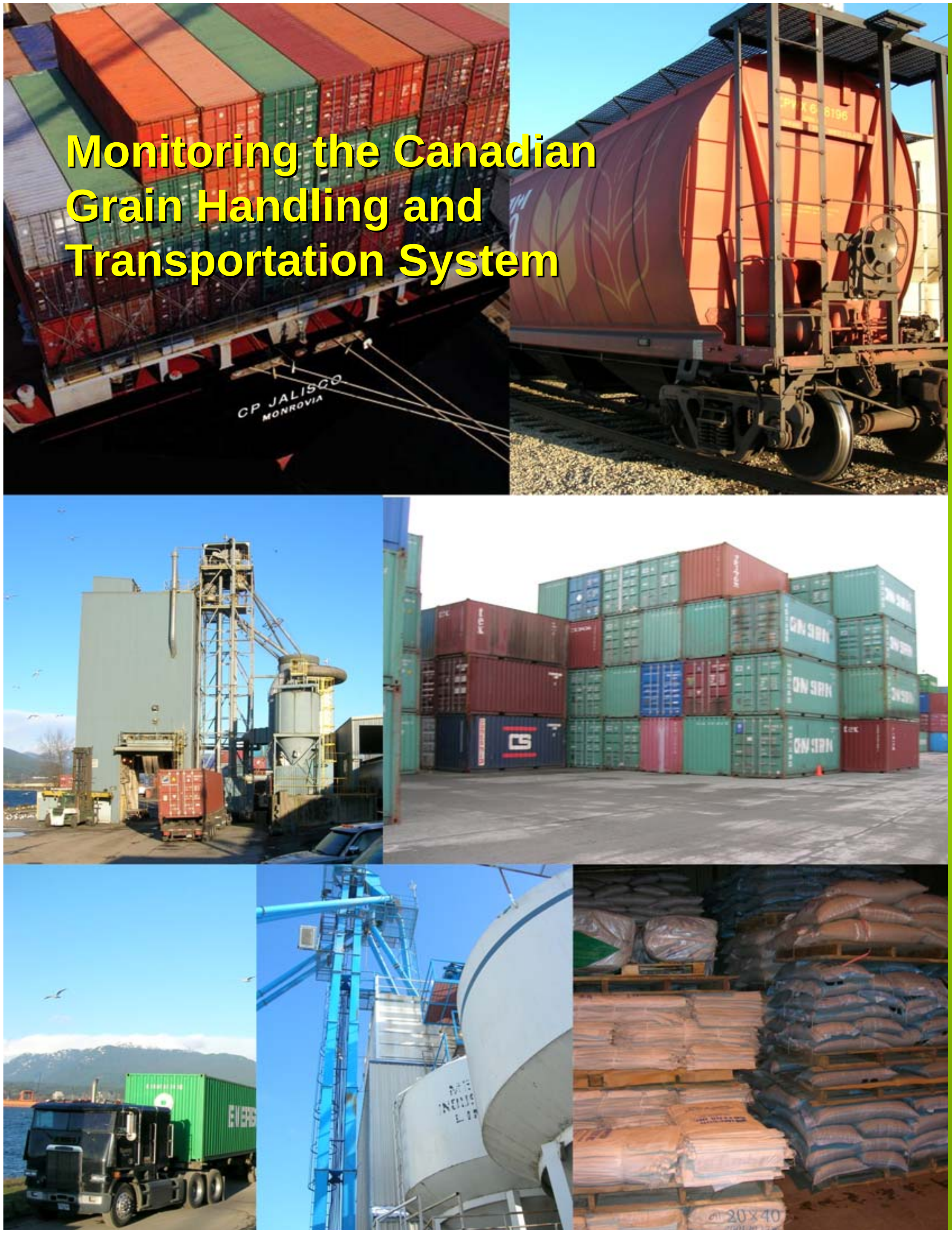
Measures

- Creating a measures package
  - Container Movement (statistics and demographics)
  - Equipment Availability and Velocity (Performance)
  - Special Crops
- Challenges
  - Data Availability
  - Relevance
  - Gov’t Support

Summary: What have we learned?

1. Most issues are more process related than anything else.
2. A conflict exists between Source and Port loading approaches as one often sub optimizes the other: *Pick one or compromise?*
3. Regulatory solutions will only provide an opening – *Will anyone walk through?*
4. Railway issues are common to all stakeholders, *including the railways!*
5. Industry is willing to help themselves – but they are looking for someone to provide guidance, leadership and/or facilitation.

Monitoring the Canadian Grain Handling and Transportation System



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Thank You