Agenda

- Background and perspective
- Current Status of GHTS
- Impact of CWB Changes
- Summary
Who is Quorum?

- Transportation and Logistics consulting firm with a focus on North American surface modes – rail, truck, container – for shipments of bulk commodities and grain
  - Established 1999 with a specialization in transportation data management with a strong IT back shop
  - Three Divisions – Quorum Corp, QGI and QTMS
- Quorum Corp has been the Grain Monitor for the Federal Gov’t since 2001
- QGI Consulting selected to provide analytical services and information for the Rail Freight Service Review
- Quorum Group is presently undertaking a review of the Grain Industry Supply Chain on behalf of Transport Canada and AAFC
Grain Monitoring Program

The Western Canadian Grain Monitoring system is a unique supply chain measurement program that tracks and monitors all aspects of the movement of grain grown in Canada from the farm gate to the time the ocean vessel departs from a port for export.

It is sponsored by the Federal Government under a regulatory authority contained in the Canada Transportation Act, contracted to a fully independent party and broadly supported by all industry stakeholders.
GHTS - Background
Licensed Elevators – January 2011

360 elevators in 271 communities
GHTS Rail Network: 1980
GHTS Rail Network: 2011
The GMP Dashboard

<table>
<thead>
<tr>
<th></th>
<th>1999-00</th>
<th>2009-10</th>
<th>Q3 2010-11</th>
<th>Year/Year Change</th>
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<tbody>
<tr>
<td>Total Time in System:</td>
<td>68.1</td>
<td>52.2</td>
<td>55.1</td>
<td>5.6%</td>
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<tr>
<td>Loaded Transit Time:</td>
<td>7.8</td>
<td>5.5</td>
<td>6.0</td>
<td>9.1%</td>
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<td>Time In Store – Country:</td>
<td>41.7</td>
<td>30.5</td>
<td>33.4</td>
<td>9.5%</td>
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<td>Time in Store – Terminal:</td>
<td>18.6</td>
<td>16.2</td>
<td>15.7</td>
<td>-3.1%</td>
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<td>Vessel Time in Port:</td>
<td>4.3</td>
<td>6.2</td>
<td>10.2</td>
<td>64.5%</td>
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<tr>
<td>Elevator Turnover Ratio:</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Country:</td>
<td>4.8</td>
<td>6.2</td>
<td>5.6</td>
<td>-9.7%</td>
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<tr>
<td>Terminal:</td>
<td>9.1</td>
<td>10.0</td>
<td>n/a</td>
<td>0.0%</td>
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<tr>
<td>Total Car Cycle:</td>
<td>19.9</td>
<td>13.2</td>
<td>14.3</td>
<td>8.3%</td>
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The Supply Chain
Changes with the CWB ...
Cereals have dropped from approx 83% to under 60%
  - Canola and Special crops have filled the gap

Driven by a combination of regulatory shifts and producers desire for diversification
CWB Change - Areas of impact

Based on feedback obtained through extensive consultative meetings with Industry stakeholders …
C WB Change: *Country Sourcing*

- Present system of sourcing grain through CWB contract calls will shift to agreements between the producer and the elevator.
- Most grain companies see this as opportunity to better manage their own logistics processes.
- Some producers concerned about the ability to deliver into the system:
  - Apprehension about their competitive options once grain companies take full control.
CWB Change: *Country Elevator Access*

- Concern from producers regarding how pooled grain will access to the system, and from grain companies about what their obligation may be (i.e. regulatory intervention).
- Some concern about another round of facility rationalization in the country.
- Concern about potential increase in length of haul.
CWB Change: *Railway Service*

Concerns from most stakeholders concerning railways’ ability to consistently provide car supply and service in the new regime.

*Car distribution and allocation*

- Railways presently distribute cars based on the CWB and non-CWB demand
- Concern especially among grain companies that a heavy sales program / heavy demand will place railways in the sole position of determining grain company market share when rationing is required.
CWB Change: *Railway Service*

**Service Review “commitments”**
- Potential delay in the implementation of service level agreements (SLA’s)
- Timing of the GHTS logistics chain review given the CWB mandate change

**Revenue Cap**
- Most grain companies and producers favour the continued existence of the revenue cap
  - Provides rate stability in the rail freight market.
  - Few believe an offsetting operational or financial benefit would accrue if freight rates were left to “market forces”.
CWB Change: *Producer Cars & Short lines*

- The majority of producer cars are comprised of grains marketed by the CWB (wheat and durum).
- Shortline railways (48.5%) promote and facilitate producer car movement to generate greater volume on their lines has been instrumental in the growth of producer cars.
- Producer cars could be one avenue for the post single desk CWB to source grain in the country.
- Producer groups and grain companies concerned that volumes may decline in the post CWB monopoly period.
  - Market outlets?
  - Inconsistent car supply and service
CWB Change: Port Terminal Issues

Order Consolidation and shipment size

- CWB currently plays a role in consolidating shipments by sourcing from multiple elevators and grain companies.
- One option for grain companies will be the greater use of third-party brokers who could consolidate loads for a fee.
- Port Specific Issues
  - Prince Rupert
  - Vancouver
  - Thunder Bay
  - Churchill
CWB Change: *Port Terminal Issues*

1 Facility
- 209,000 MT Storage
- 4.6 MMT Avg. Annual Movement

6 Facilities
- 954,290 MT Storage
- 14.6 MMT Avg. Annual Movement

1 Facility
- 140,000 MT Storage
- 0.5 MT Avg. Annual Movement

8 Facilities
- 1.25 MMT Storage
- 5.9 MMT Avg. Annual Movement
CWB Change: Port Terminal Issues

1 Facility
209,000 MT Storage
4.6 MMT Avg. Annual Movement

1 Facility
140,000 MT Storage
0.5 MT Avg. Annual Movement

6 Facilities
954,290 MT Storage
14.6 MMT Avg. Annual Movement

8 Facilities
1.25 MMT Storage
5.9 MMT Avg. Annual Movement
CWB Change: Port Terminal Issues

![Map of North America with bar chart showing terminals and storage capacity in Western and Eastern Canada. The chart shows 16 MMT in Western Canada and 11 MMT in Eastern Canada, with 2.56 MMT and 2.07 MMT respectively for annual average TP.]
CWB Change: *Port Terminal Issues – US?*
Will there really be a lot of movement south?
CWB Change: *Traffic Flows (Market)*

Will there really be a lot of movement north?
CWB Change: *Traffic Flows (Logistics)*

Flows to the US PNW Ports
CWB Change: Traffic Flows (Logistics)

... or to the head of the Mississippi for barge movement
CWB Change: *Traffic Flows (Logistics)*

... or rail all the way to the Gulf Coast facilities
CWB Change: *Traffic Flows (Logistics)*

There could be more to Thunder Bay for storage.
CWB Change: Traffic Flows (Logistics)

... or movement to the upper seaway facilities for storage
CWB Change: Traffic Flows (Logistics)

... or direct rail to the upper Seaway facilities
CWB Change: *Traffic Flows (Logistics)*

There could be direct rail movement to country facilities from the US.
CWB Change: Traffic Flows (Logistics)

... or more likely, direct to Canadian ports.
CWB Summary

- We should expect some structural change over time
- Entrance/ increase in interest of international players will change the landscape and approach to process and, perhaps, markets
- Expect “experimentation” with markets and logistical alternatives which will shift traffic flows
... and about the Revenue Cap

- It is important to have a healthy discussion on the topic ....

... but should consider the following
Competitive points: Dual served/ IC

- 3 Dual Served Facilities 3% of Capacity
- 29 facilities within IC 14% of Capacity

In 8 general locations
Single Railway Served Origins

- 335 Facilities served by one or the other Class 1 railway

83% of Capacity
CN – 10 Year Revenue/ RTM

CAGR
- M&M – 2.3%
- IM – 1.9%
- P&C – 1.6%
- FP – 1.1%
- G&F – 1.7%
- Coal – 4.0%

Rev Cap CAGR = 1.6%
CPI Average = 1.9%

Petroleum and Chemicals
Metals and Minerals
Forest Products
Intermodal
Coal
Grain and Fertilizers
CP 10 Year Revenue/ RTM

- Grain: 0.9%
- Coal: 3.2%
- Sulphur and Fertilizers: -0.5%
- Forest Products: 0.7%
- Industrial Products: 2.4%
- Intermodal: 3.2%

Rev Cap CAGR = 0.9%
CPI Average = 1.9%
Thank You
Grain in Containers ...
Loading of Grain in Containers

- Source vs. Port (Trans) loading
- Source of capacity supply (where to get the containers?)

- The drivers of container loading
  - Demographics – Price – Operational issues
Consumer Demographics
North American Demographics
Western Canadian Demographics
Western Canadian Demographics
Container Price - *Ocean Freight Rate Indices*

- Baltic Dry
- Ocean Container

Graphs showing the price trends from 2002-03 to 2011-12.
Container Price - *Ocean Freight Rate Indices*

- Baltic Dry
- Economic Boom (2006-08)
- Economic Fall (2008)
- Leveraging Container Capacity (2010-11)
- Commodity price resurgence
Container Logistics - Vessel Weight and Balance

*Example of an 8,000 TEU vessel inbound from Asia*

Inbound max allowable load = 84,000 tonnes or 10.5 tonnes per TEU

Average outbound grain load = 23 tonnes per TEU

Therefore....
That 8,000 TEU vessel outbound from Canada:

must carry 3,700 loaded and 4,300 empty containers to meet maximum allowable weight ....

Or
Thank You