

## Short Sea Shipping in Canada: Lessons Learned and Research Model for the Development of New Services

James Frost TRB, Irvine, CA, June 29, 2010



### Agenda

- Lessons Learned: Conditions for Success of SSS
- Research Model for Development of SSS
- Business Planning Model for SSS Development



### Lessons Learned: Conditions for Success of SSS

SSS requires collaboration of shippers,
 SSS operators, ports and others
 stakeholders

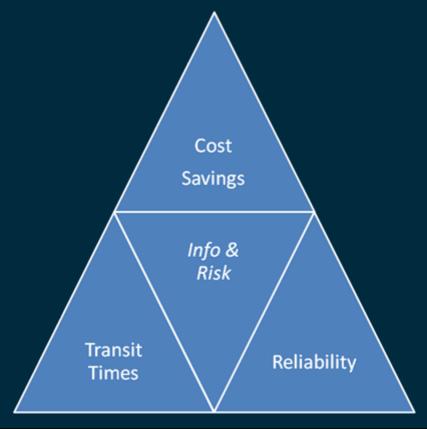
 Relationships to be cemented by mutual interests (e.g. financial or strategic gain)





### Shipper Interests

 SSS service must demonstrate value proposition vis-à-vis alternatives





### SSS Operator Interests

 Capture sufficient traffic from which revenues can be generated to cover capital and operating costs associated with the service (and to make a small profit)



#### Port Interests

- Increase total traffic volumes and related revenues
- Access infrastructure funding, where business case can be demonstrated



## Key Challenges in SSS Development

- Who takes on risks associated with new SSS services???
  - Shippers: Reluctance to commit traffic to unproven service (service/reliability risk)
  - SSS operators: Reluctance to develop new service for unproven market (traffic/revenue risk)
  - Ports: Reluctance to invest in infrastructure and marketing unless service feasibility clear (service & traffic risk (financial risk))



## SSS Research and Business Planning Model

- CPCS Research Model to identify potential opportunities for SSS (and to identify what are **not** opportunities)
- Business Planning Model to identify steps to capitalize on identified opportunities
- Models intended to quickly and cost-effectively identify if opportunities are worth pursuing further, and how (if an opportunity exists)



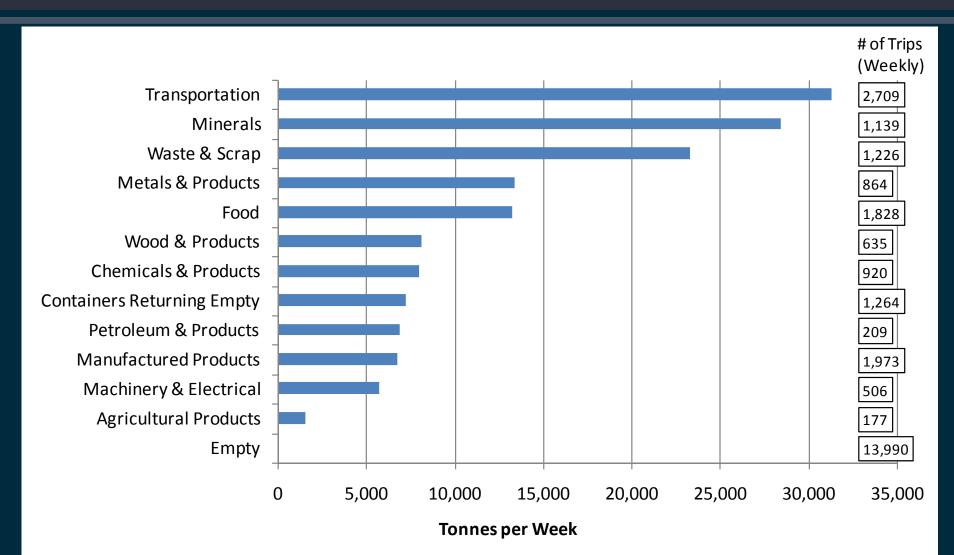
### SSS Research Model

Three phases of research and analysis:

- Identify universe of goods flows to/from and through a region (by commodity, origin/destination)
- 2. Apply screens to identify goods flows showing most potential for SSS
- 3. Assess potential competitive position of SSS relative to other modes for these goods movements



#### Phase 1: Review Goods Flows



Source: CPCS analysis of data from the Commercial Vehicle Survey (CVS), Ministry of Transport of Ontario (MTO).



## Phase 2: Initial Screening

Screen 1

 Origin and desintation in close proximity to a port accessible to the Great Lakes and St. Lawrence Seaway

Screen 2

 Sufficient distance over land between origin and destination to justify additional handling

Screen 3

 Supply chain characteristics compatible with characteristics of marine transportation



### Phase 3: Competitiveness Analysis

- Competitive landscape: are prevailing market conditions, competition and structure conducive to use of marine transportation?
- Cost competitiveness: can shippers realize a cost savings from using SSS (need for comparative analysis of total transportation costs using SSS vs. truck and/or rail)?
- Operational and infrastructure requirements: what is required by way of infrastructure and operations to support these flows by SSS?

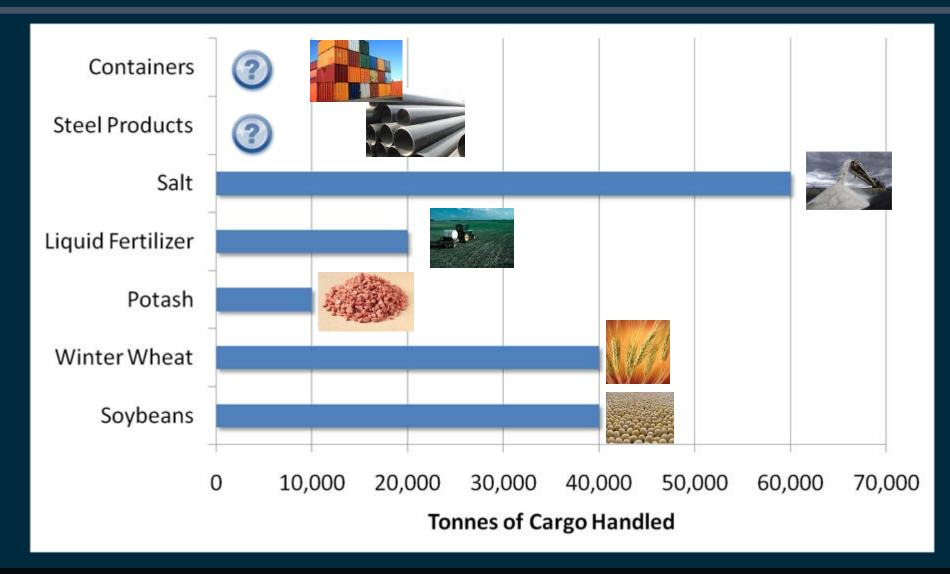


# High Level Output from Research Model Analysis

| Commodity              | Competitive<br>Landscape | Cost<br>Competitive-<br>ness | Infrastructure and Operational Requirements |
|------------------------|--------------------------|------------------------------|---|
| Grain                  | Very Good                | Good                         | Low to High depending on selected option    |
| Road Salt              | Good                     | Good                         | Low   |
| Fertilizer             | Average                  | Good                         | Low for dry, Medium for liquid              |
| Petroleum<br>Products  | Not Good                 | Not Good                     | Medium                                      |
| ICI Waste              | Not Good                 | Not Good                     | Very High                                   |
| Scrap metal            | Not Good                 | Not Good                     | High land requirements                      |
| Metal Products         | Average                  | Good                         | Potentially more land requirements          |
| Containerized products | Good                     | Below average                | Low   |



### Resulting Traffic Projections





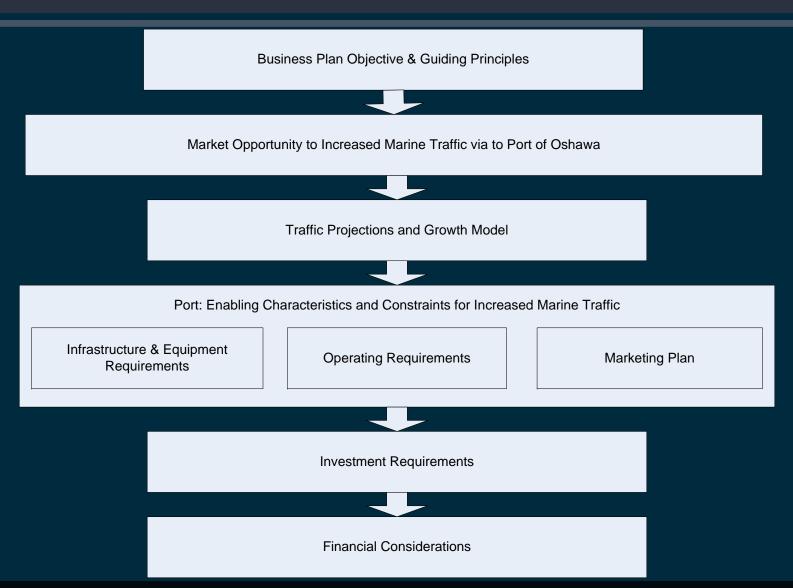
### **Business Planning Model**

#### Business Plan ends:

- To set out strategies and plans to capitalize on identified opportunities to increase marine traffic via a particular port or set of ports
- To outline related infrastructure, operating and marketing needs to support the strategy and plans
- To attract investment in the port(s) in question to support identified opportunities



### **Business Planning Model**





### Business Plan Guiding Principles

- Market driven. Capitalize on opportunities to increase the value of transportation to, from and through a particular region, for shippers, where there is potential to do so.
- Commercially oriented, rather than requiring ongoing financial support.
- Initial investments in infrastructure and capital may require government funding, where such funding is justified by long term economic benefits.
- Investment plans will seek to limit risk (not a "build it and they will come" model).
- Implementation driven by benefiting port(s) in collaboration with regional municipality(ies).
- Operating plans are to be supported by regional stakeholders.





### Summary & Conclusions

- Research and Business Planning Models to highlight opportunity for mutual interests (for shippers, operator(s), port(s))
- These stakeholders must then come together to realize value identified
- Pilot projects, where opportunities identified, could go some way in advancing development of new SSS where perceptual or structural barriers exist



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