

NORTHEAST CANAM CONNECTIONS:

INTEGRATING THE ECONOMY AND TRANSPORTATION

Task 4 – Predictive Analysis
Management Committee Webcast
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Presented by:
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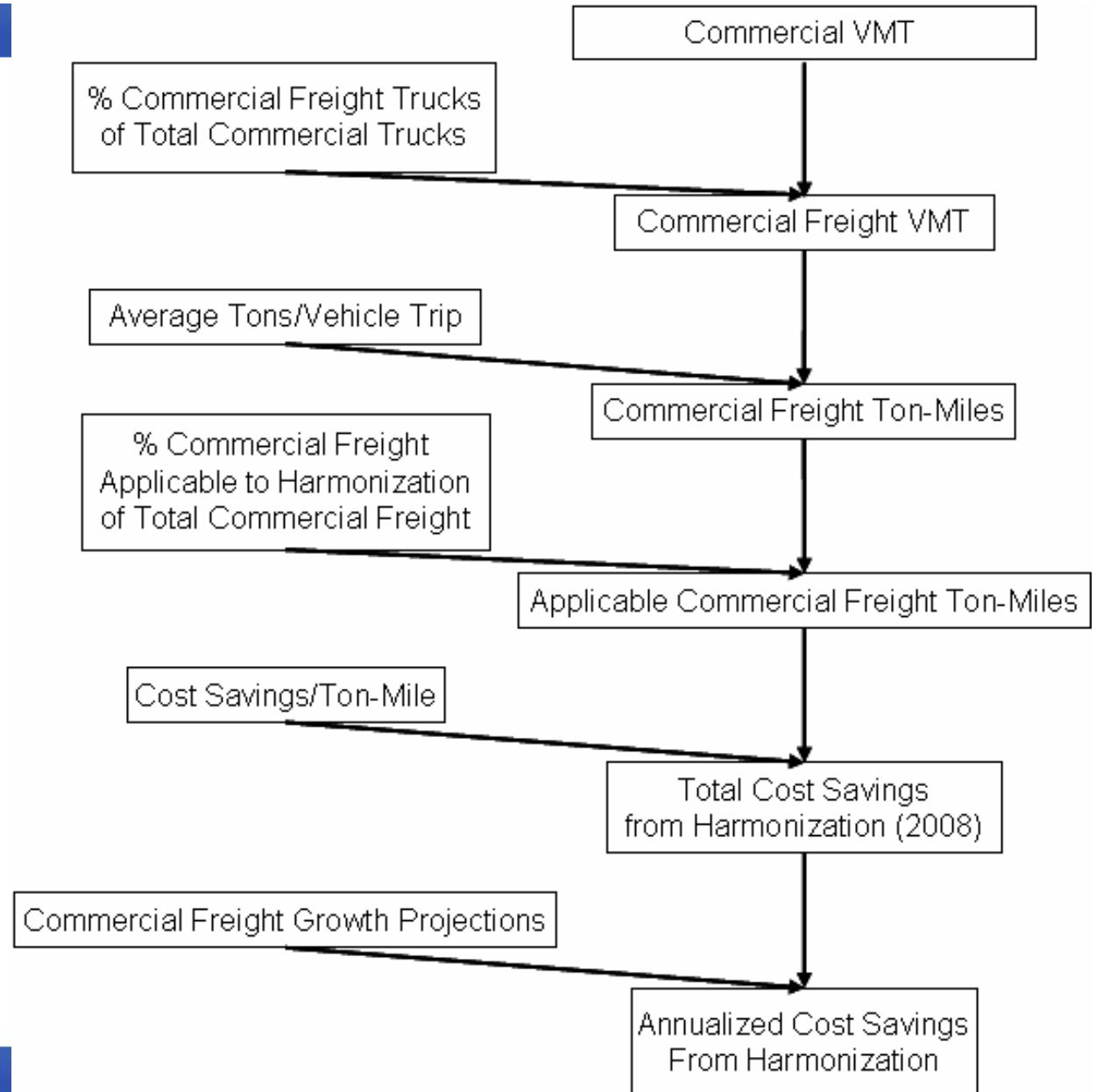
Agenda

- Truck Harmonization Findings
- Trade Diversion Findings
- Next Steps and Schedule

Truck Harmonization

- Allow Canadian weights on US facilities in region
- 80,000 pounds to 137,500 pounds (the Canadian maximum limitation)
- Avg cost of \$0.0494/ton-mile to \$0.0318/ton-mile, respectively
- Savings of \$0.0177/ton-mile
- Based on 2007 North Dakota study

Approach



Potential Truck Harmonization Savings, 2020 (millions \$)

	No Investment		So. Hwy Investment	
Low	\$	34.9	\$	34.8
Mean	\$	54.2	\$	54.2
High	\$	77.5	\$	77.4

Trade Diversion Potential

- Examine competitive factors
- Develop baseline TEU projections for NA
- Examine business cases for on-going regional initiatives
- Develop baseline and high case trade diversion estimates
- Conduct risk analysis for 6 scenarios

Competitive Factors

- Size of immediate inland market
- Total time to market for cargo
- Physical capacity constraints
- Total transportation costs of delivered goods

Market Size

Port	Province/State	City Population (million)	State/Province Population (million)
Halifax	Nova Scotia	0.36	0.91
Montreal	Quebec	3.44	7.24
Saint John	New Brunswick	0.12	0.73
St John's	Newfoundland	0.17	0.52
Boston	Massachusetts	0.56	6.40
New York/New Jersey	New York & New Jersey	8.14	27.97
Philadelphia	Pennsylvania	1.46	12.43
Baltimore	Maryland	0.64	5.60
Norfolk	Virginia	0.23	7.57

Time to Market

Port	Montreal			Toronto			Chicago		
	Sea Days	Intermodal Days	Total Transit Time	Sea Days	Intermodal Days	Total Transit Time	Sea Days	Intermodal Days	Total Transit Time
North Europe Trade from Rotterdam									
Halifax	5.0	3.0	8.0	5.0	3.0	8.0	5.0	4.0	9.0
Montreal	6.1	0.0	6.1	6.1	0.2*	6.3	6.1	2.0	8.1
New York	6.0	2.0**	8.0	6.0	2.0	8.0	6.0	3.0	9.0
Norfolk	6.5	3.0	9.5	6.5	3.0	9.5	6.5	3.0	9.5
South Europe Trade from Gabrater									
Halifax	5.0	3.0	8.0	5.0	3.0	8.0	5.0	4.0	9.0
Montreal	6.2	0.0	6.2	6.2	0.2*	6.4	6.2	2.0	8.2
New York	5.9	2.0**	7.9	5.9	2.0	7.9	5.9	3.0	8.9
Norfolk	6.2	3.0	9.2	6.2	3.0	9.2	6.2	3.0	9.2
Asia via Panama Canal (Cristobal)									
Halifax	4.7	3.0	7.7	4.7	3.0	7.7	4.7	4.0	8.7
Montreal	NA	0.0	NA	NA	0.2*	NA	NA	2.0	NA
New York	3.7	2.0**	5.7	3.7	2.0	5.7	3.7	3.0	6.7
Norfolk	3.3	3.0	6.3	3.3	3.0	6.3	3.3	3.0	6.3
Inland and Asia Subcontinent Trade via Suez***									
Halifax	17.1	3.0	20.1	17.1	3.0	20.1	17.1	4.0	21.1
Montreal	NA	0.0	NA	NA	NA	NA	NA	NA	NA
New York	18.1	2.0**	20.1	18.1	2.0	20.1	18.1	3.0	21.1
Norfolk	18.4	3.0	21.4	18.4	3.0	21.4	18.4	3.0	21.4
East Coast South American Trade from Santos									
Halifax	4.7	3.0	11.9	8.9	3.0	11.9	8.9	4.0	12.9
Montreal	NA	0.0	NA	NA	NA	NA	NA	NA	NA
New York	9.1	2.0**	11.1	9.1	2.0	11.1	9.1	3.0	12.1
Norfolk	9.0	3.0	12.0	9.0	3.0	12.0	9.0	3.0	12.0

All transit times based on direct to gateway sailing and 22.5 knots plus advertised intermodal time. Additional 0.3 days allowed for Montreal sailing due to restrictions on St Lawrence seaway

* By truck

** Faster transfer may be available by truck

*** Average transit time from India, Thailand and Singapore

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Port Capacity

- 2010, historical growth
- Year over year change in volume

Port	Projected Capacity ('000 TEUs)	Projected Utilization
S. California	17628	131.6%
N. California	3415	81.4%
Pacific NW	10467	85.0%
Other WCNA	31510	110.7%
Halifax	900	62.3%
Montreal	1396	120.9%
Boston	565	51.9%
New York	6541	116.6%
Baltimore	1952	37.8%
Norfolk	3807	87.7%

Port	2007	Jan-Apr 2008
Los Angeles	-1.40%	-7.40%
Long Beach	0.40%	-6.50%
NYNJ	4.10%	4.70%
Savannah	20.60%	12.80%
Norfolk	4.00%	0.30%

Total Transportation Costs

FROM HONG KONG TO CLEVELAND	Total Cost	Differential to Least Cost
Halifax/Direct Feeder Service	\$4,087	\$439
San Pedro Bay - Rail	\$3,821	\$173
Pacific Northwest - Rail	\$3,648	\$0
New York - Truck	\$3,962	\$314
New York - Rail	\$3,816	\$168
Philadelphia - Truck	\$3,820	\$172
Norfolk - Rail	\$3,803	\$155

FROM MEDITERRANEAN TO CLEVELAND	Total Cost	Differential to Least Cost
Halifax/Direct Feeder Service	\$1,957	\$79
New York - Truck	\$2,023	\$145
New York - Rail	\$1,878	\$0
Philadelphia - Truck	\$1,922	\$44
Norfolk - Rail	\$1,951	\$73

FROM INDIA TO CLEVELAND	Total Cost	Differential to Least Cost
Halifax/Direct Feeder Service	\$3,173	\$79
New York Suez - Truck	\$3,240	\$145
New York Suez - Rail	\$3,094	\$0
Philadelphia Suez - Truck	\$3,140	\$45
Norfolk Suez - Rail	\$3,167	\$73

FROM NORTH EUROPE TO CLEVELAND	Total Cost	Differential to Least Cost
Halifax Direct Feeder Service	\$1,738	\$47
New York - Truck	\$1,836	\$145
New York - Rail	\$1,691	\$0
Philadelphia - Truck	\$1,737	\$46
Norfolk - Rail	\$1,766	\$75

FROM SINGAPORE TO CLEVELAND	Total Cost	Differential to Least Cost
Halifax/Direct Feeder Service	\$3,658	\$79
New York Suez - Truck	\$3,725	\$145
New York Suez - Rail	\$3,579	\$0
Philadelphia Suez - Truck	\$3,625	\$45
Norfolk Suez - Rail	\$3,653	\$74

Martin Associates

Base TEU Forecasts

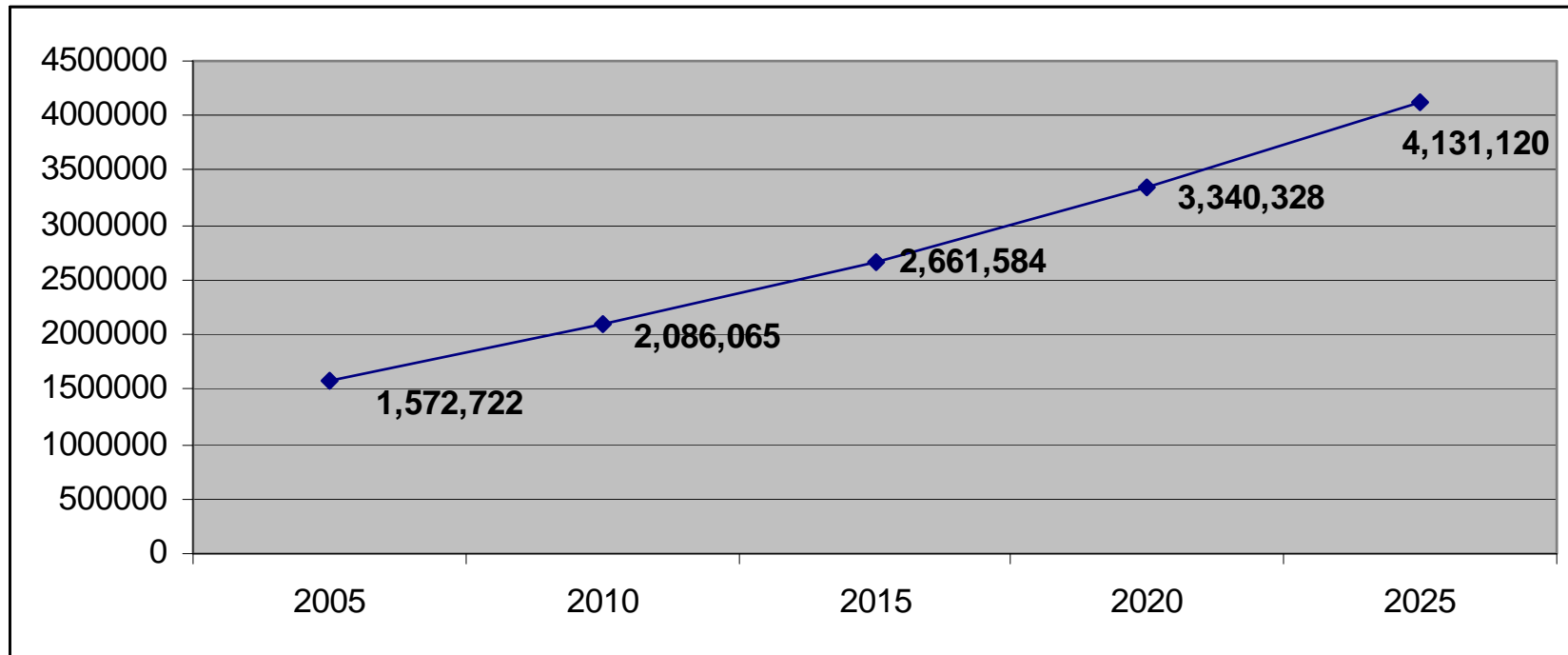
Export Country	Import Country	2005	2010	2015	2020	2025
World Total	Canada	1,378,210.51	2,039,447.00	2,670,814.57	3,462,419.01	4,453,207.35
World Total	North Atlantic	4,473,891.88	5,081,842.04	6,572,974.94	8,333,590.30	10,487,253.91
Canada	World Total	1,388,136.02	2,024,752.68	2,527,301.97	3,128,098.24	3,758,607.01
Canada	North Atlantic	71,214.03	123,305.17	132,099.02	141,273.78	150,041.59
North Atlantic	World Total	1,474,702.22	2,384,647.36	2,965,995.37	3,595,670.41	4,229,774.90
TOTAL	TOTAL	8,786,154.67	11,653,994.26	14,869,185.88	18,661,051.75	23,078,884.77

Global Insight, 2008

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Base TEU Projections for CanAm Assuming “Same-Share”



17.9% share

TEU Projections Assuming 3% CAGR and New Port Development

Port	2007	2010	2015	2020	2025
New York	5,400,000	5,900,726	6,840,558	7,930,082	9,193,139
Norfolk	2,400,000	2,622,545	3,040,248	3,524,481	4,085,839
Montreal	1,400,000	1,529,818	1,773,478	2,055,947	2,383,406
Baltimore	624,000	681,862	790,465	916,365	1,062,318
Halifax	490,000	535,436	620,717	719,582	834,192
Philadelphia	247,000	269,904	312,892	362,728	420,501
Boston	220,000	240,400	278,689	323,077	374,535
Saint John	50,000	54,636	63,339	73,427	85,122
Total existing	10,831,000	11,835,326	13,720,387	15,905,689	18,439,052
Canso		1,000,000	1,159,274	1,343,916	1,557,967
Searsport			75,000	100,794	127,682
Total All	10,831,000	12,835,326	14,954,661	17,350,399	20,124,702
Total CanAm Region	1,940,000	3,119,890	3,691,808	4,293,666	4,988,370

24.8% share

Best Case + Suez Shift TEU Projections

Port/Initiative	TEUs in 2035 (in millions)
Atlantic Gateway	3.2
Strait of Canso	1.5
Port of Sydney	1.5
Searsport	0.5
Total	6.7

Trade Diversion Potential with CanAm Investments

Scenario		2010	2015	2020	2025	2030	2035
Seamless Movement	Median	628,582	974,508	1,656,023	2,048,072	2,532,934	3,132,583
	Low	471,436	730,881	1,242,018	1,536,054	1,899,700	2,349,437
	High	785,727	1,218,135	2,070,029	2,560,090	3,166,167	3,915,729
Truck Harmonization	Median	94,287	146,176	248,404	307,211	379,940	469,887
	Low	70,715	109,632	186,303	230,408	284,955	352,416
	High	117,859	182,720	310,504	384,013	474,925	587,359
Rail	Median	440,007	682,156	1,159,216	1,433,650	1,773,054	2,192,808
	Low	330,006	511,617	869,412	1,075,238	1,329,790	1,644,606
	High	550,009	852,695	1,449,020	1,792,063	2,216,317	2,741,010
North E-W Hwy	Median	251,433	389,803	662,409	819,229	1,013,174	1,253,033
	Low	188,575	292,352	496,807	614,422	759,880	939,775
	High	314,291	487,254	828,012	1,024,036	1,266,467	1,566,291
South E-W Hwy	Median	188,575	292,352	496,807	614,422	759,880	939,775
	Low	141,431	219,264	372,605	460,816	569,910	704,831
	High	235,718	365,441	621,009	768,027	949,850	1,174,719
Radial Network	Median	157,145	243,627	414,006	512,018	633,233	783,146
	Low	117,859	182,720	310,504	384,013	474,925	587,359
	High	196,432	304,534	517,507	640,022	791,542	978,932

Next Steps

- Address committee comments
- Conduct economic analysis
- Develop sketch cost estimates
- Compile BC ratios for 6 scenarios
- Finalize Task 4 & 5 report
- Compile draft final report