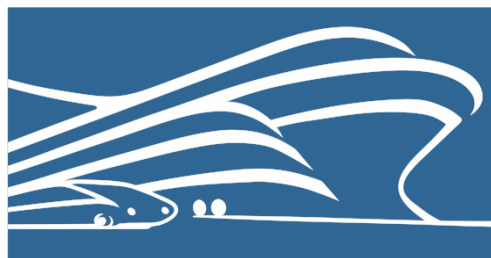


Understanding How Port Customers and Users Assess Port Performance



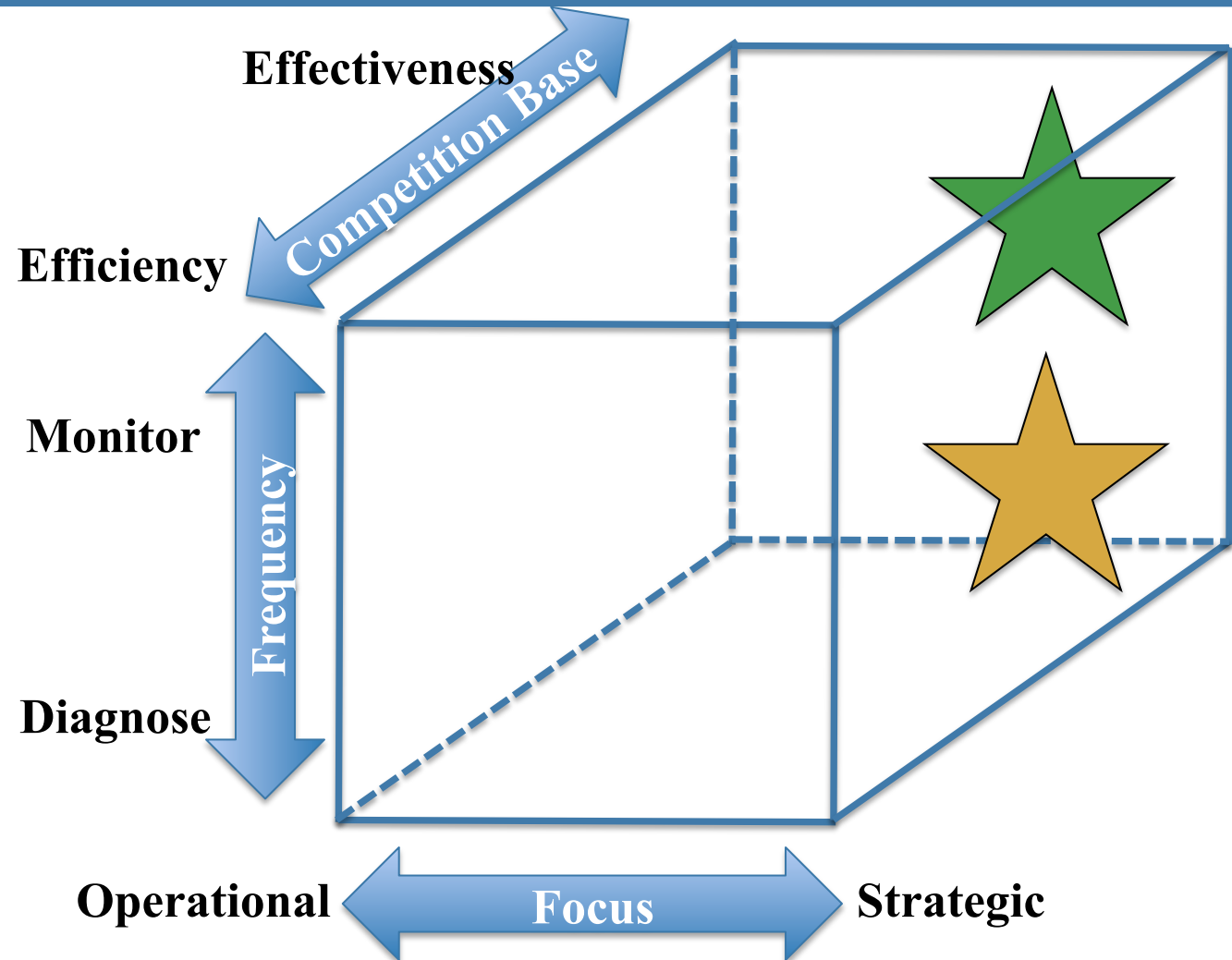
11 June 2013

Agenda

- Introduce how the AAPA's Customer Service Initiative 2012 fits in a bigger picture of port performance benchmarking
- Explain how the AAPA metrics were developed— understanding different customer and user groups for making strategic investments in port infrastructure and marketing
- Explain how results were interpreted
- Explore the future possibilities for expansion of the Customer Service Initiative—the SEAPORT tool



Why Are You Measuring Performance? (Answer Drives Choice of Metrics)



Source: Variant of Griffis et al. (2007). "Aligning logistics performance measures to the information needs of the firm." *Journal of Business Logistics*, 28, 2, 35.

The AAPA's Customer Service Initiative Vision

- An independent third-party assessment of use to ports in effecting change and improving service delivery in supply of port services.
- An individualized report to each port that provides “best practice” scores and the port’s scores to provide context to user “importance” **and that** enables benchmarking for assessing resource allocation
- Each port gets its own report; AAPA gets a “state of its ports” report.
- The first study was done in 2012 and we plan to repeat it in 2014.

The Goal for Ports: Thinking About Supply Chain Improvements

- ① Identify your port's customers' and users' criteria for assessing service quality
- ② Evaluate the port's performance on both the criteria you control and what you influence
- ③ Determine what needs to be fixed based on those items of importance to the customer and determinant in their assessment of your port's service quality performance
- ④ Via information-sharing, coalition-building, and identifying financial support and sources, you should be able to help your tenants and suppliers to change services under their control

Identifying the Right Metrics by User Type

- Phase 1: Extensive literature search = 80 criteria (unspecified users)
- Focus groups with users in Canadian ports
- Phase 2: Three studies (the next slide)
- Phase 3: AAPA Port Customer Service Initiative in 2012
- Findings: User groups are mostly different in “importance criteria”
- They all also see satisfaction as correlated with customer service (called effectiveness of service delivery).



Research Phase 2: 3 Internet Surveys



Inspiring Minds

Canadian Port
Users
3 Cdn 2 US

American East
Coast Port Users
5 US Ports

American West
Coast Port Users
5 US Ports

Same Instrument:
2 publications in 2011—*Maritime
Policy & Management* and
Transportation Research Record
plus
1 publication in 2013 in *Maritime
Policy & Management* (Fall issue)

Reduced and Modified
Instrument for 2012
AAPA survey

Phase 3: Service Delivery Effectiveness Performance Measures in 2012 Survey



Inspiring Minds

User Group	Criteria for Determining Service Quality Performance Effectiveness
Shipping line	19 specific criteria plus two cost criteria
Cargo owners & agents	11 specific criteria plus two cost criteria
Supply chain partners	15 specific criteria

Criteria are “plug and play” based on previous research for this initiative.

Illustrative Measures for 2012 AAPA Customer Service Initiative



Inspiring Minds

Cargo Interest Examples (5 of 10)	Shipping Line Examples (5 of 18)	Supply Chain Partner Examples (5 of 14)
Provision of adequate, on-time information	Provision of adequate, on-time information	Provision of adequate, on-time information
Terminal operator responsiveness to special requests	Incidence of cargo damage	Accessibility to port premises for pick-up & delivery (gate congestion)
Availability of direct service to destination	Timely vessel turnaround	Efficiency of documentary processes
Incidence of cargo damage	Connectivity/operability to rail/truck or warehousing	Ocean carrier schedule reliability/integrity
Choice of truck/rail/warehousing	Terminal operator responsiveness to special requests	Speed of stevedore's cargo loading/unloading

How It Works (1)

Platform: LimeSurvey hosted on its own web address on a secure Dalhousie server (not subject to the U.S. Patriot Act)

What do we measure?

- The overall performance rating of each port by their users on effectiveness of service delivery (7 point scale)
- Importance of each service criteria to the specific user group (7 point scale)
- The performance of up to three ports used by that user rated on those service criteria (7 point scale)

Other data collected?

- Type of user
- Usage data
- Open-ended concerns
- Company demographics



How It Works (2)

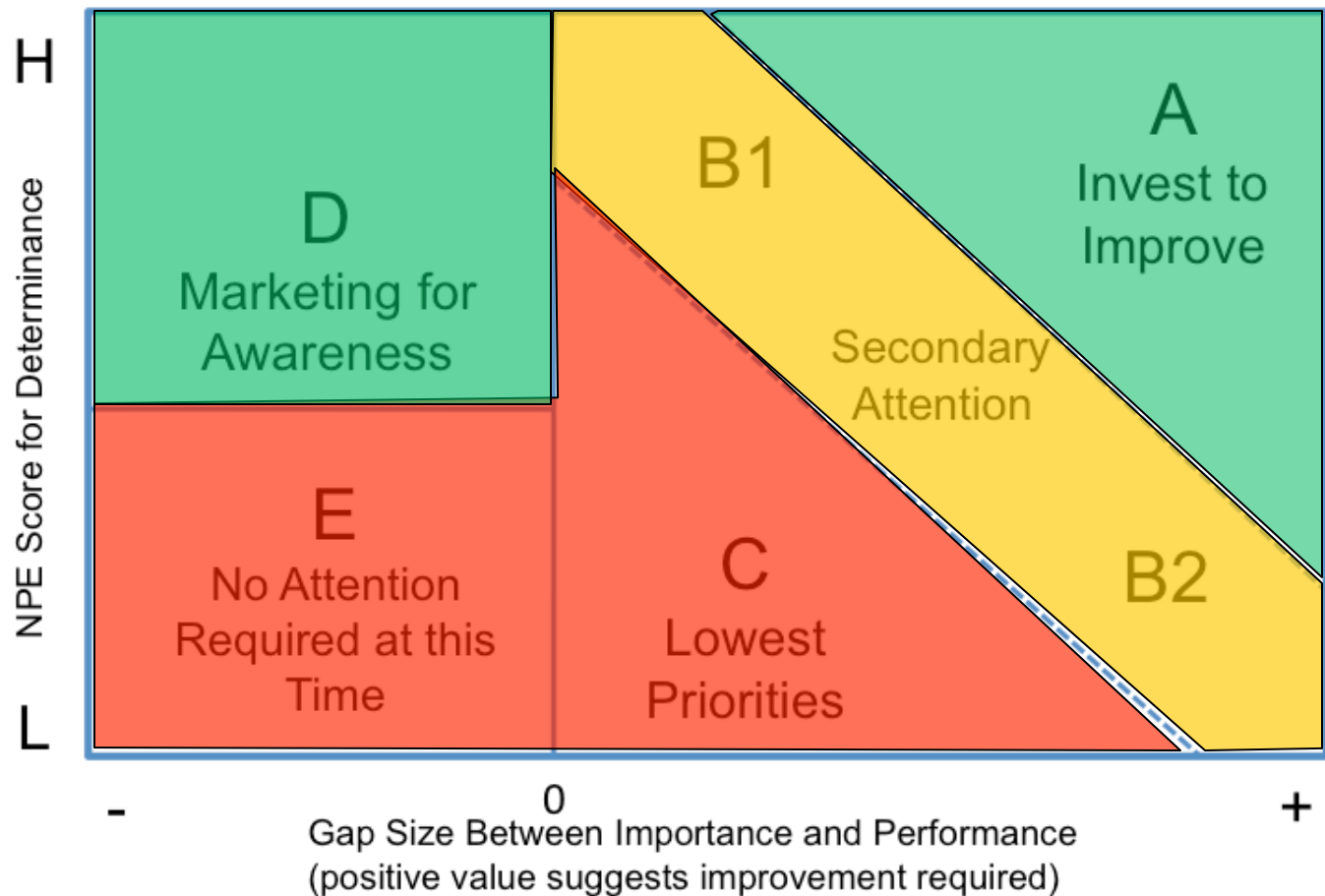
What do we get as outputs?

- The determinants of the effectiveness of service delivery score for each particular port (using NPE—normalized pairwise estimation) **SCORE**
INFLUENCERS
- A gap analysis (importance minus performance) for each user **SERVICE GAPS**
- Direction to each port on their particular ratings and results, including their relative score in comparison with the other ports in the survey. **BENCHMARK**
- Open-ended comments and demographics of the survey participants **INDIVIDUAL FEEDBACK**

What We Do With the Effectiveness Data Collected

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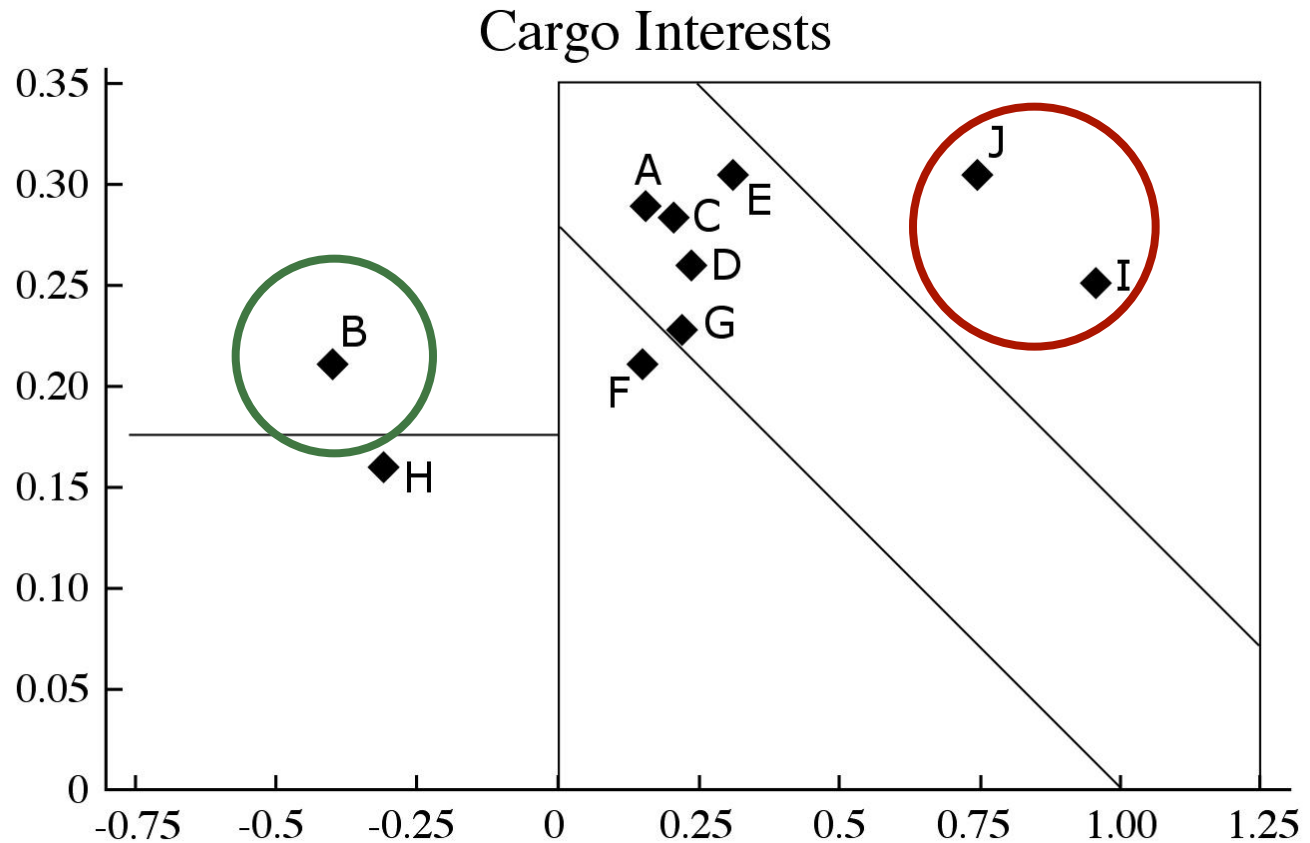


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Evaluation Report Card by Cargo Interests for the Mystery Port on 9 of 10 Criteria

	Evaluative Criteria	I-P Gap	Performance Mean	Lowest	Highest	NPE	Relative Score
A	Criterion A	0.16	5.16	4.21	6.09	0.289	51%
B	Choice of rail/truck/ warehousing companies	-0.40	5.96	5.25	6.12	0.211	82%
C	Criterion C	0.21	5.63	4.50	5.89	0.283	81%
D	Criterion D	0.24	5.80	5.19	6.11	0.259	66%
E	Criterion E	0.32	5.37	4.55	6.19	0.305	50%
F	Criterion F	0.15	5.77	5.38	6.33	0.211	41%
H	Criterion H	-0.31	6.00	5.50	6.61	0.158	45%
I	Provision of adequate, on-time information	0.96	5.50	5.00	6.08	0.250	46%
J	Terminal operator responsiveness to special requests	0.75	5.19	4.44	5.96	0.304	49%

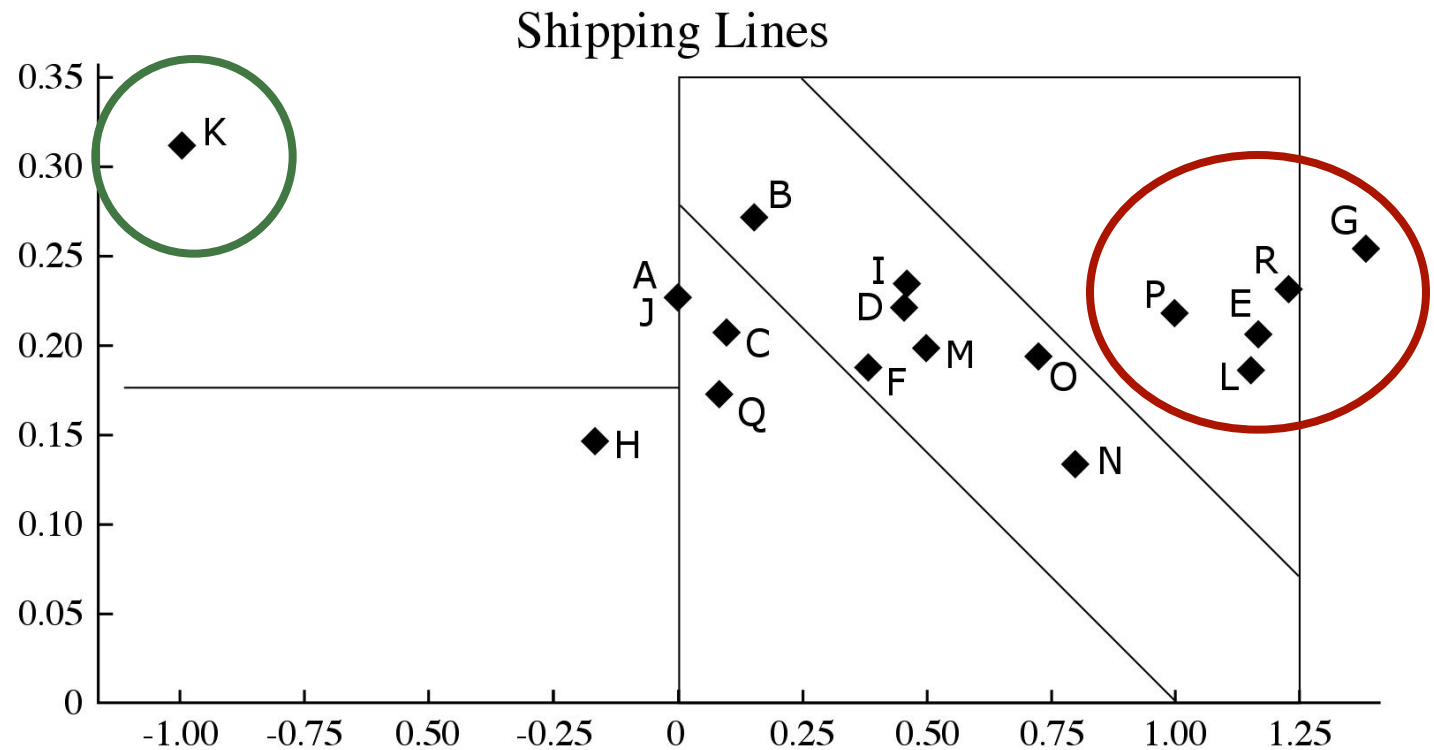
Determinance I-P Gap Space for Cargo Interests for the Mystery Port



Evaluation Scores by Container Shipping Lines for the Mystery Port (on 10 of 18 Criteria)

	Evaluative Criteria	I-P Gap	Performance Mean	Lowest	Highest	NPE	Relative Score
B	Criterion B	0.154	6.08	4.29	6.08	0.271	100.0%
D	Criterion D	0.455	5.64	4.29	6.22	0.221	69.9%
E	Criterion E	1.167	4.92	3.00	6.18	0.206	60.4%
F	Incidence of cargo damage	0.385	5.23	5.22	5.80	0.187	1.7%
G	Criterion G	1.385	5.15	4.29	5.80	0.253	57.0%
I	Provision of adequate, on-time information	0.462	5.38	5.14	5.89	0.234	32.0%
K	Quality of rail/truck/ warehousing companies	-1.000	5.90	5.14	5.90	0.311	100.0%
N	Criterion N	0.800	4.80	4.73	6.30	0.133	4.5%
P	Timely vessel turnaround	1.000	5.50	4.64	6.11	0.218	58.5%
R	Criterion R	1.231	5.00	4.83	6.08	0.231	13.6%

Determinance I-P Gap Space for Shipping Lines for the Mystery Port



Open-Ended Comments on Port Performance Provides Feedback

For oversize/weight cargo [Port of Mystery] has very good inland capability and vessel ro-ro service; however charter vessel availability/cost is a problem. Also port infrastructure is a limiting factor.

Extremely important that port efficiency is at highest possible achievable level. Speed of turnaround times, cost effectiveness & inland distribution capabilities are critically important.

Truckers seem less knowledgeable regarding the container pick up & delivery so takes more time to deal ex [Port of Mystery].

Excellent infrastructure and ocean connections but the inland clearances are a significant disability.

We are a specialized trucking company ... The [Port of Mystery] is not realistic with their hours of operation; they try to serve an industry that operates 24/7 with basically office hours. ... Some days our trucks spend in excess of 4 hours waiting to get into the port and load/unload.

With the Reports, Port Managers Can Improve Port Performance if...

- They know the **importance/relevance** of attributes
- They know user's **perceptions** of port performance overall (e.g., effectiveness in service delivery) and by attribute (e.g., cargo handling)
- Therefore, they identify **performance gaps**
- They uncover the **determinance** of attributes for effectiveness in service delivery
- Have combined this information using a **Determinance – IP Gap Analysis** to identify where to concentrate service delivery improvement efforts (translation: where to allocate resources!!) or where they can market their superior performance to users (because they have a perceptible gap)
- We propose to provide the information needed...

What We Found in 2012

- Port user groups rate a port's effectiveness in service delivery differently, i.e., a port that is rated highly by the shipping lines may score poorly when rated by cargo owners or its own supply chain partners, or vice versa.
- No port excelled in serving all three groups
- The pattern of performance gaps were different on the various criteria for each port.
- In all cases, the initiative identified criteria for targeted improvement for each user group—Cargo Interests, Shipping Lines, and Supply Chain Partners. Each port had a unique portfolio of factors to repair by investing for improvement, and many ports found a usable “market for awareness” opportunity.
- East and West Coast patterns were also noted.

What We Found in 2013's Further Data Analysis

- Cargo Owners who book their own transport arrangements are a distinct sub-group from those who act as Agents for owners on five of 13.
- Cargo Agents are more influenced traditional CRM criteria like responsiveness and information provision while Cargo Owners are more influenced on perceptions of port security.
- The two Cargo segments are best evaluated separately where possible.
- We have learned enough to focus the Shipping Line criteria more tightly in future surveys.
- Supply Chain Partners are a forgotten user group for some ports; with their own unique set of needs, as partners they need to be part of the solution in developing port strategic investments.

Our Next Steps: SEAPORT

- The survey has been modified (SEAPORT—Service Effectiveness Assessment for PORT managers) and translated so we can add ports in French and Spanish speaking countries.
- We plan to co-operate with the European Sea Ports Observatory and the PORTOPIA initiative to progress the effectiveness benchmarking process in Europe.
- We plan to co-operate with UN ECLAC to progress the effectiveness benchmarking process in Latin America.
- We see it possible to extend the port customer service survey to bulk ports and to cruise terminals. (Mediterranean Cruise Association pilot study in discussion; report at the International Association of Maritime Economists meeting in Norfolk July 2014?) The 2014 Port Performance Research Network meeting will also be in Norfolk in July.
- We hope to do a second run with North American container ports in 2014.



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Questions?

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