

Consolidated Comments from Working Group Members in Response to the following:

1. How should BTS define the different types of ports in terms of tonnage, container, and dry bulk?
2. What nationally consistent measures would you recommend for capacity and throughput?
3. How should BTS approach collecting and reporting this information?

Contents

Edwin Ferris and Michael Podue (International Longshore and Warehouse Union)	2
Michelle Livingstone (The Home Depot).....	6
Andrew Lynn (Port of New York and New Jersey)	8
Mike Mabry (Maritime Transportation System National Advisory Committee)	11
Jeff Pavlak (Transportation Trades Department)	12
Darrel Ruban (Federal Motor Carrier Safety Administration)	14
Eugene Seroka (Port of Los Angeles)	15
Curtis Whalen (American Trucking Associations)	18
David Adam (U.S. Maritime Alliance).....	20
Lauren Brand (Maritime Administration).....	22
John Gray (Association of American Railroads)	24
Roger Guenther (Port of Houston)	27
Lois Loarte (Federal Aviation Administration).....	28
John Giorgis (Federal Transit Administration).....	29
Jonathan Berkson (U.S. Coast Guard)	30
Rick Gabrielson (Lowe’s Companies, Inc.).....	31
Thomas Wakeman (Stevens Institute of Technology)	33
Ned Mitchell (U.S. Army Corps of Engineers).....	36

Consolidated Comments from Working Group Members in Response to 3 Questions

Edwin Ferris and Michael Podue (International Longshore and Warehouse Union)

Comment submitted on August 1, 2016

1. How should BTS define different types of ports and their boundaries?

The FAST Act requires that the Bureau of Transportation Statistics (BTS) provide an annual report on the “top 25” ports by tonnage, container and dry bulk. The ILWU does not itself define ports by operation. Many widely available sources annually report on the revenue tonnage, total containers moved, and measures of other categories of freight such as “general cargo,” “lumber & logs,” “automobiles & trucks,” and “bulk cargo.” Given the ready availability of this type of data on a port-by-port basis, the ILWU would propose relying on the existing public sources that report on the industry and report annually to establish which ports are among the top twenty-five nationally based on tonnage, container and dry bulk.

It is our understanding that the BTS is already surveying existing data sources of this type industry wide, and the ILWU believes the Agency will find that data related to tonnage and general categorization of freight transported is already widely available. Therefore the most cost effective manner for BTS to obtain this information is to rely on these long established public sources. This also avoids putting any new data collection and reporting burdens on America’s ports, an end result that would be counter to the legislative purpose of benefiting our port operations.

We also note that the FAST Act specifically references collecting data on the top 25 ports in limited categories. This would result in a data base that captures statistics on the operations on all of America’s leading ports for goods movement. Major federal programs and investments are centered on these ports and the freight corridors leading into and out of them. The ILWU sees no purpose or legislative authority in the FAST Act for expanding beyond the major ports that would meet the requirements of the statute.

2. What nationally consistent measures do you recommend for Capacity and Throughput:

The port performance provision of the FAST Act was intended to collect “nationally consistent” data that could be used to better inform national federal freight planning and transportation investments. Given that the FAST Act requests an annual report that would arrive in Congress just before the annual release of the President’s proposed budget for the coming fiscal year, and at the start of the annual congressional appropriations process, it is difficult to see why reporting to BTS would need to be done on anything more than an annual basis.

Federal freight policies and funding are not set monthly, bi-monthly or even semi-annually. They are annual if not multi-year processes. In addition, any individual investment decision, whether it is one relevant to the very limited amount of federal grant dollars that directly benefit ports or from any other governmental source, would require the collection of locally specific facts, planning, costs and transportation considerations regardless of what information BTS collects in its annual, national report.

As several members of the working group have already asked, what is the purpose of collecting this data? In the opinion of the ILWU, and based on the clear legislative history and intentions of Congress, it is to provide broad national information of the kind used by the US Department of Transportation to make determinations about nationally significant transportation decisions such as the designation of national priority freight corridors, proposals on overall federal maritime and surface program spending levels, and to better identify major surface congestion points outside of ports that impact the flow of

Consolidated Comments from Working Group Members in Response to 3 Questions

goods that would rise to the level of national significance. The FAST Act is seeking a comprehensive overview of the flow of goods at ports as part of our nationwide freight transportation system – an overview that can then be used to make strategic decisions in federal transportation policy.

As was widely agreed to by all industry and expert opinions at the initial meeting of the port performance working group, no two ports are alike. The differences in physical layout, size, organization, surface transportation connections, maritime approaches, weather conditions, tides, age of equipment and infrastructure, and many more variables overwhelm efforts to generate comparable measures of daily, weekly or even monthly activities – even within each individual port. They would be costly to ports and taxpayers, meaningless to federal transportation policymakers and provide no value to local highway planners either.

Local freight planners will no more rely on the data collected by BTS to make specific investment decisions than their local highway and transit colleagues do based on broad data collected and reported annually by the US Department of Transportation for their modes. Nor do airports or airlines make planning and investment decisions based on annual FAA reports on passenger enplanements. So to suggest – in complete disregard for the clear legislative history of the port performance provision of the FAST Act – that local transportation planners need BTS to collect detailed local information is unprecedented, unauthorized and ridiculous.

The ILWU also notes that nothing in the FAST Act lifts the US Department of Transportation from its responsibility to promote safe transportation – a requirement so core to the Department that it is listed specifically in its mission statement. The Department in fact opposed the port performance proposal when it was in Congress because of the risks that it could have on the safety of the men and women working in America’s ports. The ILWU repeats once again – and hopes every member of the working group acknowledges – that the Occupational Health & Safety Administration (OSHA) has long labeled longshoring a “high hazard” profession with accident rates multiple times those in rail and trucking. It will be a failure of duty for this advisory group and BTS to move forward without considering the safety impacts of any measure adopted.

That is why, as a safety and also an efficiency measure, the ILWU supports the new international standards for certifying container weights. Shippers have long been responsible for providing this critical information but have frequently provided inaccurate estimates. Under the authority of the United States Coast Guard, the United States has now adopted these new internationally consistent weight verification requirements. Compliance with these verification requirements will unquestionably contribute to overall efficiency of the freight system in this Country and – as a nationally consistent standard – the ILWU proposes that the port performance working group endorse compliance with these measures and active enforcement by the Coast Guard as has already been called for by Chairman Mario Cordero of the Federal Maritime Commission – the very federal agency responsible for regulating the U.S. international ocean transportation system for the benefit of U.S. exporters, importers, and the U.S. consumer. The ILWU proposes that one measure of port performance be inclusion of the enforcement and compliance rate data that should be collected by the Coast Guard.

Finally, individual shippers frequently enter into contracts to prioritize the movement of their goods through our ports. Without a doubt this has a negative impact on overall movement of freight through ports and often disproportionately impacts smaller shippers who lack the bargaining leverage of large corporations. Prior to adopting any measures, the working group should be presented with such reports and information necessary to evaluate the impacts these “favored cargo” contracts have on the operations of America’s ports. New alliances among shippers have also impacted the flow of goods by

Consolidated Comments from Working Group Members in Response to 3 Questions

altering traditional and expected distributions of containers, for example, so an understanding of these business practices and their impacts on the flow of goods is essential.

a. Capacity?

The ILWU joins with other members of the ports industry in noting that there is no standard for measuring a port's "capacity." The variables are so numerous as to render meaningless anything more than a broad census of the physical size and conditions that exist at each point, consideration of long term throughput averages, and an overview of surface transportation access to ports. All of this data would then have to be compared with national and global economic information so that we can realistically adjust for the macroeconomic trends that control the volume of goods going into the world-wide freight system of transportation.

Not only can this type of information be collected without placing significant costly burdens on port authorities and the freight and port industries, it also can be done both nationally and consistently, and it would provide sufficient insight to guide national policy making.

A census of our largest ports that describes existing infrastructure by readily available methods does have value for strategic planning. Such fundamental information as the physical acreage, number of cranes or other specialty equipment designed to move particular bulk cargo, depths of approaches to ports, and number of roadway and rail line access points for example are easily collected on a consistent, cost effective, nationwide basis – and they provide a more coherent and relevant set of data for national planning than counting rail cars, trucks or containers on an hourly basis.

Once this census style information is collected, and annually updated as investments in infrastructure move forward, and it can then be viewed in the light of long term throughput averages. As we have already noted, multiple industry sources and media sources provide publicly available annual reports on a port-by-port basis on freight movements and have done so for many years. These annual reports provide summaries of statistics showing 15 years of past data. And this data tells us better than any hourly, daily or monthly reports what are the trends in the industry and what strategic plans the United States' transportation policymakers need to make.

b. Throughput?

Unlike capacity, the ILWU believes it is much easier to define throughput, since tonnage data for ports is readily available, as well as data on the nature of the freight being moved. Existing reports of this type already give the information that would be critical to federal strategic transportation planning. This data is widely available and BTS could use these existing sources with minimum modification and cost to fit the needs of the annual congressional report on port performance.

Revenue tonnage is also a widely accepted and understood concept, and comes with a wealth of historic information, unlike any newly fabricated measures with no industry pedigree. The existing sources for regular reporting on port goods also capture container counts and measures of other categories of freight that can included bulk cargo.

Once again, the ILWU believes that a nationally consistent standard that fully meets the needs of the federal government can be found without politicizing transportation data collection, endangering safety, or placing an undue and expensive burden on the industry and federal taxpayers.

Consolidated Comments from Working Group Members in Response to 3 Questions

3. How should BTS go about collecting and reporting nationally-consistent data measures?

The ILWU believes BTS should complete its review of existing sources of data and freight transportation as it relates to ports. At that point, the working group and BTS should identify only those nationally consistent data points that have value to federal strategic planning for transportation purposes. It should then be reviewed to assure that this data collection does not endanger safety in this “high hazard” industry by emphasizing speed without consideration for safety improvements.

This course of action embodies the legislative intent and language of the FAST Act.

Consolidated Comments from Working Group Members in Response to 3 Questions

Michelle Livingstone (The Home Depot)

Comment submitted on August 2, 2016

Dear Pat:

Below is Home Depot's response to the Port Metrics Working Committee's three questions:

1. How should BTS define different types of ports in terms of tonnage, container, and dry bulk?

We recommend segregating ports by handling type (containerized, bulk, etc.) and geography (US East Coast, US West Coast, Gulf) and focusing primarily on container terminals/ports.

2. What nationally consistent measures do you recommend for:

a. Capacity?

Terminal Yard Capacity – Every container terminal knows roughly how many FEU they can store on yard (static theoretical capacity), which is dependent on its ground slots (acreage), expected volume mix (empty/laden), and permitted stack heights for empty/laden containers. The recommended measurement would be for terminals to provide their static capacity (X), which should be vetted by BTS during upfront setup of port performance metrics and refreshed periodically to capture any changes to terminal capacity. On a routine basis, terminal should then provide daily average number of FEU (Y) on terminal yard over the reporting period (start or end of day average). Converting this metric to Terminal Yard Utilization % (Y/X) would be ideal. Since terminal utilization is generally a solid indicator of congestion and delays, it would allow stakeholders to validate concerns from the trucking community, identify seasonality, and better smooth volumes to avoid seasonal capacity crunches/delays

b. Throughput?

Vessel Throughput – A measurement for ensuring vessel unload/load operations are healthy would be to build a historical trend, by port, of how many container vessels were turned during the reporting period (average daily, or total over reporting period). Since vessel throughput can be a solid indicator of overall port health (especially when compared to historical trends/seasons), it would be another indicator of possible congestion and vessel schedule integrity

Gate Throughput – Measuring total number of gate transactions (empty and laden) would provide a relative view of a port's operating capacity over time and seasons. An unexpected decline in overall gate throughput during peak season, for example, would signal congestion and delays

Truck Turn Time – Leveraging GPS and/or RF technology, measuring driver wait times from start of queue to gate out for single (drop or pick) and dual (drop and pick) transactions would allow stakeholders to validate concerns from the trucking community, identify seasonality, and better smooth pickup/delivery schedules to avoid capacity crunches and delays (i.e. avoid busy hours of day or days of week). Harbor Trucking Association and Port of Vancouver have derived ways to measure from start of queue, which is absolutely critical to making this metric meaningful. Today, most terminals report their "pedestal to pedestal" turn times, which fail to account for excessive driver delays in queue (i.e. waiting to arrive at pedestal due to insufficient yard or gate capacity). The analogy is that this would be like McDonald's being proud of filling an order in 60 seconds, but having that same customer wait in line for 20 minutes before being

Consolidated Comments from Working Group Members in Response to 3 Questions

served. The kicker in this analogy, of course, is that the customer MUST eat at McDonald's (no other options exist if they want to be fed). Among other potential issues, long turn times are a sign of insufficient gates, insufficient terminal handling equipment/labor, or imbalanced truck arrivals (which terminal appointment systems should help with). Until we can consistently measure this and stop the anecdotes from all parties involved, it will be hard for the industry to make sustainable improvements. Port of Vancouver may have the best record of doing so.

Rail Dwell (for ports with on-dock rail) – Average duration from vessel discharge to rail departure. When a container terminal with on-dock rail gets congested, rail dwell can increase dramatically (i.e. we experienced up to 30-day dwell during 2014-2015 west coast situation). Keeping routine measure of rail dwell will provide stakeholders with an indicator of both terminal and railway health

3. How should BTS collect and report nationally consistent data?

We recommend weekly collection and reporting of all metrics vs. monthly to ensure any government response to port issues is timely. We defer to BTS on how best to collect and report the data for public monitoring/consumption. We feel strongly that the only way we can move our ports forward and continue to compete on the global stage is to make measurable improvements to productivity and efficiency. Our ports are currently plagued with competing priorities and inconsistent performance. Agreeing on how we will measure the overall health of our nation's ports is one step toward identifying opportunities for improvement, aligning priorities, and ultimately making measurable improvements.

We appreciate being a part of the Working Committee and trust found these comments helpful. If you would like to discuss in more detail, please let me know.

Sincerely,

Michelle D. Livingstone

Consolidated Comments from Working Group Members in Response to 3 Questions

Andrew Lynn (Port of New York and New Jersey)

Comment submitted on August 1

Goals of the Working Group

At the Working Group's first meeting, a number of members asked for a clearer sense of why port performance data should be collected and what use would be made of the data. The Working Group should encourage the relevant federal agencies to collaborate with the port industry and port authorities in collecting, reporting, and analyzing port performance metrics that enable stakeholders to make better informed decisions for strategically improving the nation's key marine gateways, the transportation infrastructure (road and rail) which support the gateways, and the supply chains they serve.

Questions posed by USDOT

1. How should BTS define different types of ports in terms of tonnage, container, and dry bulk?

The Commerce Department and the Army Corps of Engineers use Customs Districts, which are defined by federal statute, as the basis for its existing port data. We are reluctant to propose a different definition, but using the Port of New York and New Jersey (PONYNJ) as an example highlights some of the serious challenges to collecting port performance data in the top 25 ports by TEUs, tonnage, and dry bulk. The New York New Jersey Customs District includes approximately 185 port facilities that extend from Perth Amboy, New Jersey in the south all the way up the Hudson to Albany, New York. The Port Authority of New York and New Jersey (the "PA") owns or controls only 12 of these facilities (six container and six bulk terminals). The remaining 170+ facilities are all privately owned and operated with no single entity having jurisdiction over them. Another consideration is that even aggregate data for PA facilities would blend data from individual facilities that have different operators and differ significantly in the size and nature of their operations.

To some, a "port" is an individual facility where cargo is exchanged between a vessel and the adjacent land. To others, a "port" is a collection of facilities or marine terminals within a defined geographic area. The terms "port," "facility" and "terminal" are often used interchangeably. Collecting data from the top 25 terminals, which some people call "ports," is very different than collecting data from the top 25 ports which contain over 1,000 individual facilities or terminals.

In addition to the definition of a "port," **BTS should reconsider whether the threshold for collecting data should be the 25 largest ports in each category. It may make more sense to base the cut-off on a minimum number of TEUs or tonnage per year if the objective is to focus attention on those ports that have the greatest impact on the nation's economy.** In the case of container ports, in 2015, 10 ports handled over 800,000 TEUs each and collectively handled 83% of the nation's waterborne TEU imports and exports. The 15 largest ports handled 350,000 TEUs each and collectively, 93% of the nation's total. Does it make sense to collect the data from all 25, given the challenges of collecting the data, when so many handle such a relatively modest share of container cargo?

2. What nationally consistent measures do you recommend for capacity?

As Dan Smith of The Tioga Group pointed out at the first Working Group meeting, capacity of a container port is a function of a number of variables, including draft alongside, number and size of berths, number of cranes, size of container yards and stacking heights, and hours of operations. **Capacity is not a static number and could change during a reporting period in response to**

Consolidated Comments from Working Group Members in Response to 3 Questions

demand. Adding an additional work shift or increasing stacking height, for example, can make a large difference in a terminal's capacity. **It is not clear that the percentage of port capacity being used is a good measure of port "efficiency"** because port capacity can change fairly quickly and an increase in capacity is likely to result in a short-term reduction in utilization (unless introduced to address pent-up demand).

While estimating capacity in a nationally consistent way may be difficult and of limited utility, the PA can certainly provide an estimated annual average capacity for its facilities.

3. What nationally consistent measures do you recommend for throughput?

TEUs for containers, including empty containers. Tonnage for bulk.

4. How should BTS collect and report nationally consistent data?

BTS should start by looking at what data is collected and available now, assess what data is available from the terminals that are of interest, and build over time, as appropriate, from that base.

BTS should go to the source for the data it collects – not to intermediaries. The source for much of the data will be terminal operators – not port authorities. Accordingly, it would be a good idea for the Working Group to consult terminal operators, who are not currently represented on the Working Group.

The PA currently collects the following data from container terminal operators to measure changes in performance at PA facilities over time:

- a) Number of gate moves
- b) Size of container inventory
- c) Container dwell time
- d) Number of truck trouble tickets.

The PA's Council on Port Performance, whose port stakeholder members include unions, terminal operators, truckers, intermodal equipment providers, and others, identified the following additional key indicators as the most promising means for further evaluating performance.

- a) Truck turn time at marine terminal – pedestal to pedestal time with and without trouble tickets
- b) Truck turn time at chassis depot – pedestal to pedestal time
- c) Truck turn time at empty depot – pedestal to pedestal time
- d) Crane moves per hour
- e) Ship to rail transfer time – hours from ship unload to rail terminal gate
- f) Rail equipment moves per hour – lifts per hour (data from rail terminal)
- g) Vessel on-time performance – differential between reported vessel arrival time two weeks out and actual arrival time (data from SealIntel).

The PA is now starting on a pilot basis to collect some of this information from select container terminals. At this point, the indicators are aspirational (i.e., this is data the PA would like to collect). The most significant element of the pilot will be determining how the data will be used as either a predictor of progress (or an impending problem) and catalyst for productivity improvements. **Productivity depends on factors outside the footprint of a terminal, including whether ships arrive on schedule, whether trucks and chassis are in the right place at the right time, and railroad schedules. For this reason, it is important**

Consolidated Comments from Working Group Members in Response to 3 Questions

that BTS looks at port performance in the context of the entire supply chain. “Outside the gate” information, such as freight’s inland destinations and origins, is a critical element of the supply chains in which ports function. Defining freight’s termini will allow system-level solutions to enhance supply chain speed and reliability. Inland destinations and origins are often omitted or incorrectly reported as the consignee’s headquarters location. A change in the current bill of lading to require the address of the ultimate consignee or the first point of rest outside the port is one possible method to achieve the proposed outcome. Once collected, the information could be reported in a manner that supports data-driven analysis, while meeting industry confidentiality needs.

It will not be feasible to issue a report on January 15th of each year with complete data on the preceding calendar year. BTS must recognize that there is no consistency among ports in their reporting years – some use calendar years, some fiscal years of October to September or July to June – and so full calendar year data is not immediately available at the end of the year. More time will be needed to collect the data, translate it to a consistent timeframe, and produce a report.

Consolidated Comments from Working Group Members in Response to 3 Questions

Mike Mabry (Maritime Transportation System National Advisory Committee)

Comment submitted on August 3 (NOTE: MTSNAC also submitted matrix of individual responses – what follows below is their consolidated comment)

How should BTS:

1. Define ports and other definitions to be used for data collection and reporting performance measures?

A port is a marine facility which:

- a. Consists of one or more facilities or terminals under the purview of an organized navigation district or port authority;
- b. Is engaged in domestic or international freight movement, passenger or cruise activity, commercial fishing or other maritime specific commercial/industrial activity;
- c. Is located along or adjacent to a channel, harbor or Federally maintained inland waterway within the United States, its territories and the Great Lakes;
- d. And, exists for the public good.

2. Identify nationally consistent metrics for port capacity and throughput?

- a. We should better define why we are collecting each performance measure and what we are trying to accomplish with each measure before we define any measures. This was not adequately addressed during the meeting.
- b. The measures should be focused on outputs not inputs. Each port will have unique opportunities that are impacting the flow of goods. By focusing on the output we can identify where opportunities for improvement are without being prescriptive on how they should be solved. Each port will have unique requirements to improve the outputs.
- c. The metrics should enable the DOT to proactively identify choke points and actively work to eliminate them through targeted programs.

3. Identify specific nationally consistent data to be used in the program and processes for collecting, reporting, and safeguarding the data?

The performance measures, intended audience for each measure, and the intended audience's use of performance measures should be identified before this question is answered. Ultimately, measures should be made publicly available on a web portal. The intended audiences can be established by the working group in line with the legislative mandate.

Consolidated Comments from Working Group Members in Response to 3 Questions

Jeff Pavlak (Transportation Trades Department)

Submitted on August 1 by TTD and on behalf of the International Longshoreman's Association (ILA) and International Organization of Masters, Mates and Pilots (MM&P).

1. How should BTS define different types of ports in terms of tonnage, container, and dry bulk?

We have no specified preference on how tonnage is counted or defined or on how containers are counted or defined. We believe there are many available sources that provide annual data on containers moved, revenue tonnage, and other categories of freight cargo. We believe existing public sources that report annually to establish which ports are among the top 25 nationally. We do not believe that expanding beyond the top 25 is helpful or consistent with the FAST Act.

2. What nationally consistent measures do you recommend for:

a. Capacity?

We note that there is no individual standard for measuring port capacity. Given the breadth of variables, it is impossible to use anything beyond broad survey of physical size and conditions, long-term throughput averages, and broad measures of surface transportation access to ports. These measures are readily available, easily collected on a consistent, nationwide basis. Industry and media sources provide this data and is more useful than any hourly or monthly data considered by other sources.

That said, as laid out in previously letters, we categorically reject the inclusion of any port productivity measures. Not to belabor the legislative history, but we believe the evidence is clear: Congress included prescriptive port metrics on a series of items (crane lifts per hour, average vessel turn time, cargo/container dwell time, average truck time at ports etc.) in the Senate Drive Act that were both rejected by the House of Representatives – via removed amendment – and formally removed in total during conference. If Congress intended for these measures to be included, they would have remained in the FAST Act Conference Report.

These metrics were originally identified by the Pacific Maritime Association (PMA) publicly and privately by other groups, including the National Retail Federation, as clear and direct evidence that productivity problems on the West Coast during the International Longshore and Warehouse Union's (ILWU) contract negotiations were the result of the labor organization. More pointedly, they were used in public and private to try and compel the President of the United States to invoke the national emergency provisions provided under the Taft-Hartley Act (29 USC § 176-180) to enjoin contract negotiations. The president wisely ignored their meritless requests and settled the dispute through dispatching the Secretary of Labor and utilizing the Federal Mediation and Conciliation Service (FMCS). Undeterred, however, shipping groups moved forward in the FAST Act and its legislative antecedent, the Port Performance Act (S.1298), with these metrics – tied to union contract negotiations – as means to either use the imprimatur of the federal government to help pressure future administrations to issue Taft-Hartley injunctions or to assist other reforms of port sector collective bargaining rights put forward in other pieces of legislation (S. 1519, S.1630, HR 3932). This is why these metrics were stripped and must not be considered by the Working Group.

We would also note that while BTS has no mission in measuring worker productivity, it does have a safety mission as part of the Department of Transportation. The marine, rail and longshore industries are dangerous, with OSHA labeling the longshore industry a "high hazard" profession. The consideration of any evaluation tool must consider the safety of employees. For this reason TTD and its unions support new international shipping standards for certifying container weights. Including compliance with these standards, as called for by the Coast Guard and the Federal Maritime Commission, as measure of port performance is consistent with DOT's mission.

Consolidated Comments from Working Group Members in Response to 3 Questions

b. Throughput?

We support the use of publicly available information on throughput that focus only on value and volume of the merchandise/product moving through ports. This collection, along with the collection of capacity data, should only be done on an annual basis. The FAST Act and the Port Performance Act (S.1298) included measurements of port performance originally on a monthly basis. The frequency of this intervals was specifically tied to seaport union contract negotiations to try and show that measures of port performance were affected by unions. Even with the absence of specific port metrics, we believe more frequent data collection will be used - as previously intended - to cynically blame port unions for congestion to undermine the collective bargaining process, use the imprimatur of the federal government (BTS) to compel a Taft-Hartley injunctions, or to assist with other reforms of labor law put forward in companion pieces of legislation. We reject a more frequent measurement period and call on BTS to measure the value and/or volume of throughput annually only.

3. How should BTS collect and report nationally consistent data?

The BTS should examine existing sources of data, identify those that are nationally consistent and ensure none of the information betrays the legislative history, encroaches on or imperil collective bargaining or compromises safety.

Consolidated Comments from Working Group Members in Response to 3 Questions

Darrel Ruban (Federal Motor Carrier Safety Administration)

Comment submitted July 19, 2016

1. How should BTS define different types of ports in terms of tonnage, container, and dry bulk?

The FMCSA is interested data and statistics from each individual port location. We are fine with statistics in various formats to cover tonnage, container, and dry bulk. Our interest would be ports utilizing containers (utilizing road chassis) and each of their movements. These ports could be categorized based on size (movements) to be comparable with other similar ports. Identifying ports by all these measures is useful, especially by container. For example, from a safety perspective we would want to know the total number of movements regardless of whether the container is empty or full (or both broken out separately) because of the safe transportation of the chassis whether the container is laden or not. This may assist FMCSA with understanding and identifying through this data, overall chassis traffic. Identifying it further based on HM type per container, tank, etc., would also be advantageous. Also, a port should be defined (for our purposes) as each individual port location that unloads and loads cargo in one specific location. Each port location should identify its own activities.

- Container (chassis) movements by individual ports (laden or unladen)
 - If possible, broken down by movements more than 100 air miles and less than 100 air miles from each port
 - If possible, movements by IEP and motor carrier (USDOT Number)
 - Movements containing placardable quantities of hazardous materials
- Tonnage and dry bulk as it relates to placardable quantities of hazardous materials by individual ports

2. What nationally consistent measures do you recommend for:

a. Capacity?

- With the dredging of ports, the expected increase in imports/exports in the long-term, and larger ships carrying freight, the Gov't should know a ports expectation and potential needs over the next 5-20 years. Will chassis be able to be readily available based on growth vs. space as an example. Will the space within a port be capable of keeping up with demand?
- Measures should include chassis/container capacity, broken down by chassis readily available per safety requirements and those in storage
- Measures should include chassis maintenance support per gate moves per day

b. Throughput?

- In and out gate moves on any chassis/container movement per day (laden or unladen)

3. How should BTS collect and report nationally consistent data?

Individual ports report monthly automatically to BTS. Data should be broken down by each individual port as well as regional areas based on size depending on what is being reported. Regionalizing data is important however it makes it difficult to track and understand the transportation needs around each port location.

Consolidated Comments from Working Group Members in Response to 3 Questions

Eugene Seroka (Port of Los Angeles)

Comment submitted on August 1, 2016



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August 1, 2016

Patricia S. Hu
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Re: Response to Questions Posed at the BTS Port Performance Freight Statistics Working Group Meeting

Director Hu:

I write in response to the questions that were posed during the July 15, 2016, Bureau of Transportation Statistics (BTS) Port Performance Freight Statistics Working Group meeting. The collection of nationally consistent port metrics is a valuable effort that can support freight system efficiency, performance, and competitiveness. Ultimately, port metrics can assist the integration of ports into the national and state freight planning process, support supply chain efficiency, and overall freight system performance. For example, eventually, the collection of metrics may assist policy-makers in assessing the impact of changes in the maritime supply chain (e.g., use of larger ships, formation of alliances, etc.) and the impact of public investment on freight system performance.

However, while there are clear public benefits to the collection and reporting of port metrics, the effort must establish parameters that reflect and prioritize other public values, including the supply chain security, collective bargaining rights, and proprietary nature of data.

Furthermore, it is important to recognize that port performance is a function of multiple variables – including physical attributes (e.g., draft, berth length, container yard size, equipment, etc.) and operational practices (e.g., operating hours, etc.). Therefore, there are many qualifiers that must be acknowledged with the use of port capacity and throughput data, including but not limited to: 1) the use any one metric in isolation can be misleading; and (2) ports and terminals vary widely and it is important to avoid port-to-port and terminal-to-terminal comparisons of performance.

Consolidated Comments from Working Group Members in Response to 3 Questions

It is with these thoughts in mind that we offer these responses:

1) How should BTS define the different types of ports and their boundaries?

As stated above, we support the collection and use of port performance metrics as part of a coordinated effort to integrate ports into the national freight planning process and develop a dedicated funding program for the multi-modal freight infrastructure, including ports.

We would recommend use of the list of ports being identified in the National Multimodal Freight Network (NMFN) process underway at the U.S. DOT, as required by Section 70103 of Title 49 of the U.S. Code. Further, we recommend augmenting the list to ensure inclusion of the ports identified in Section 6108 of the FAST Act, if necessary. The categorization of the ports by cargo type (as explicitly described in Section 6108) will need further development.

2) What nationally-consistent measures would you recommend for:

- a. Capacity?
- b. Throughput?

We recognize that the identification of specific metrics will require additional stakeholder consensus-building through the BTS Port Performance Statistics Working Group. Therefore, in the early phases, we recommend the use of the most basic, but widely accepted, measures of capacity and throughput by cargo type. For a container port, we recommend the following:

Capacity:

- TEU Design Capacity

Throughput:

- TEUs handled per year

Ultimately, port capacity and utilization measures incorporate measures of productivity. For productivity measures, we would recommend the following categories of measures (with specific measures being subject to further development by the BTS Working Group):

- Port-wide Ship Productivity;
- Port-wide Gate Productivity; and
- Port-wide Rail Productivity.

Importantly, the BTS should consider demand (long-term throughput) vs. capacity (measures as demand/capacity). This is, for example, how roadway and rail systems

Consolidated Comments from Working Group Members in Response to 3 Questions

BTS Port Performance Freight Statistics Working Group
Response to Questions from July 15 Meeting

Page 3

are evaluated (i.e., determination of a true capacity deficiency). Estimates of capacity, once quantified, should be compared to demand to determine congestion.

3) How should BTS go about collecting and reporting nationally-consistent measures?

As mentioned above, it is important to recognize that port capacity is a function of multiple variables. Therefore, we recommend collection (and aggregation) of metrics at the port authority level. To be clear, we would caution against the use of equipment-level or terminal-level metrics. Additionally, to the extent possible, we also recommend use of indices that allow the metrics for a port to be measured against its own past performance.

Thank you for your consideration. If you have any questions about these responses, please don't hesitate to contact me at (310) 732-3456.

Sincerely,



EUGENE D. SEROKA
Executive Director

Consolidated Comments from Working Group Members in Response to 3 Questions

Curtis Whalen (American Trucking Associations)

Comment submitted on July 26, 2016

1. How should BTS define different types of ports in terms of tonnage, container, and dry bulk?

Given the short time we have to put together the initial report, I suggest we stick to the guidance provided in the underlying legislation and focus on the top 25 ports in terms of tonnage, 20-foot equivalent units and dry bulk which are already delineated in BTS data. If we thereafter conclude we need to go beyond this list we can discuss and define definitions for different types of ports....

2. What nationally consistent measures do you recommend for:

- a. Capacity?
- b. Throughput?

The American Trucking Associations and the Intermodal Motor Carriers Conference were both signatories to the January 14 letter to Secretary Fox which was signed by numerous organizations representing manufacturers, farmers and agribusinesses, wholesalers, retailers, importers, exporters, distributors, transportation and logistics providers which provided discussions and details on developing key metrics as part of the Port Performance Freight Statistics Program envisioned in Section 6018 of the Fixing America's Surface Transportation (FAST) Act.

Specific Trucking concerns and data needs are detailed under the Truck Gate Operations section and include Average monthly total truck turn times, Chassis Availability and Trouble Ticket information.

3. How should BTS collect and report nationally consistent data?

I have attached to this email the full Report filed by the MTSNAC in 2009 (I was a member) which provided discussion and details on collecting and reporting nationally consistent data and was in part summarized as follows::

Enable timely, consistent and accurate measurement of capacity and productivity of the MTS.

- Support data collection, analysis and MTS measurement with appropriate funding and oversight
- Use the Federal Highway Administration's (FHWA) Freight Analysis Framework (FAF) and annual Freight Facts & Figures Report as templates;
- Select a single data inventory for MTS data;
- Complete and maintain the Maritime Administration's (MARAD) Port & Terminal database;
- Implement recommendations from MARAD's Data Gap Analysis report;
- Integrate the Maritime Data Working Group of the Bureau of Transportation Statistics (BTS) into the CMTS;
- Maritime Data Integrated Action Team and develop a single list of facts about the MTS.

While these and other recommendations may need to be updated, they were developed and vetted by a group as representative of port stakeholders as our present group and certainly present a good starting point for our current work. In addition, as I referenced in comments at our first meeting last Friday, the need for port operational data very much predates the labor negotiations and actions which took place during last year's congestion crisis and I hope labor will see the benefits of collecting uniform operational data.

As highlighted in the MTSNAC report...

Consolidated Comments from Working Group Members in Response to 3 Questions

“You can’t manage what you can’t measure” and highlighted that there are no metrics commonly available to objectively measure capacity and productivity of the MTS. The public and private sectors do not really know how much additional volume can be handled before the system effectively collapses. The MTS requires a multi-modal view and benefits little from the traditional silo approach of measuring capacity and productivity by single mode of transport. ...

Consolidated Comments from Working Group Members in Response to 3 Questions

David Adam (U.S. Maritime Alliance)

Comment submitted August 1

Based on the nature of the working group and experience gained from the interactions of the first meeting, my guidance would be to keep the input and discussions at the next meeting at the rooftop level and as simple and non-adversarial as possible. The major focus of my business is container ports, so my responses below are oriented to the container terminal operation and NOT to non-containerized dry bulk cargo operations.

ACTION ITEM 1: *How should BTS define different types of ports in terms of tonnage, container, and dry bulk?*

Port Definition: Typically, container ports are either a “landlord model,” where the port leases facilities to Marine Terminal Operators (MTOs), or the “operator model,” where a port controls and operates the individual terminal or terminals. Some persons label each specific terminal as a port. Others use the term as equivalent to the local Port Authority. The word “port” to me typically means a geographic location (which usually equates to the geographic location of a port authority), until I look further into how that port is managed, what cargoes it handles and what facilities that may be incorporated. Inevitably, no two are identical, so “port” is simply a generic term. I think that the simplest approach would be to use the geographic jurisdiction of a port authority, which, depending on the port, will include both port authority terminals and private terminals. As for the container category, the defining metric should be both loaded and empty containers handled at the terminals. Last, I will simply observe that the law’s separate category of 25 ports by tonnage is puzzling, and may present a challenge to the BTS, since “tonnage” to the maritime industry comprises all cargo types, including containers, liquid bulk cargo and project cargo.

ACTION ITEM 2a: *What nationally-consistent measures do you recommend for Capacity?*

The definition that I would use for “capacity” is “the port’s/facility’s theoretical design capacity on an annual TEU throughput basis.” This can be viewed on a whole-port or individual-terminal basis, based on a ports model as stated above. I would also expect to have the specifics on the net and gross acres used in the calculation. This would be for all empty and full containers loaded on or off the vessel, as well as the container acreage dedicated to that particular function. This could be expanded to include ancillary operations such as gate, rail, etc., the gross and net acreage dedicated to those functions, and the design capacity and actual throughput experience.

ACTION ITEM 2b: *What nationally consistent measures do you recommend for Throughput?*

Throughput refers to the volume of TEUs handled in a port. The definition that I would use for “throughput” is “the actual throughput achieved within a port over a defined period of time measured against that port or individual terminal’s theoretical design capacity.”

ACTION ITEM 3: *How should BTS collect and report nationally-consistent data?*

Typically, this data is available from public entities such as port authorities, whether as operating or landlord ports, and can be updated on an annual basis. The American Association of Port Authorities (AAPA) currently collects such data from the port authorities and provides it on the association’s website (<http://www.aapa-ports.org/>).

Note 1: At the next meeting, I see two possible ways to facilitate productive discussion:

- a. It might be suggested that the group ask the SMEs to provide their thoughts on the 5 key metrics that drive port/terminal capacity/performance against the assumptions used in theoretical design capacity and use those as topics for group discussion, i.e., Loaded Container

Consolidated Comments from Working Group Members in Response to 3 Questions

Dwell Time (first meeting presentation used an assumption of 5 days), Vessel Schedule Integrity, Daily Gate Volumes, and Gate Turntime, etc.

- b. Another possibility is to ask each member of the group: what metric/s used to measure port/terminal operations that you might be responsible for that contribute to a port's or terminal's performance and how have you impacted that metric and how might you proactively cause improvement in that metric? i.e., an SME may say that a key factor to terminal capacity/performance is dwell time. Who in the group might impact dwell time? What is a current or acceptable national/world industry standard for loaded container dwell time? Typically, this will differ between import and export containers (as noted, the terminal presentation at the last meeting used an assumption of 5 days dwell time that was obviously a blended import/export number). Is 5 days an acceptable standard? How would a 50% improvement in dwell time impact Port/Terminal performance? Who can impact that particular metric? What might a port authority do to improve the theoretical capacity of a terminal given the current grows and net acreage? If the current design capacity of a facility is 10,000 TEUs per acre/per year, how might a Port Authority improve that capacity on the same acreage? What other key metrics might result in improved port/terminal throughput; who in the group owns these metrics, and how can they improve them?

Note 2: One point I would offer about the group dynamic. As it exists, the makeup of the Working Group results in a shipper attempting to question port performance directly with port labor without that labor's direct employer being involved in the discussion. That is the equivalent of one of the union group members complaining directly to a shipper or beneficial cargo owner group member about the quality of the manufacturing that went into the product they shipped. The dots do not connect, i.e., the makeup of the group is flawed and no matter how many more BCOs, import or export, that you add, it won't improve anything.

Consolidated Comments from Working Group Members in Response to 3 Questions

Lauren Brand (Maritime Administration)

Comment submitted August 2, 2016

How should BTS:

1. Define ports and other definitions to be used for data collection and reporting performance measures?

A port is a marine facility which:

- a. Consists of one or more facilities or terminals under the purview of an organized navigation district or port authority;
- b. Is engaged in domestic or international freight movement, passenger or cruise activity, commercial fishing or other maritime specific commercial/industrial activity;
- c. Is located along or adjacent to a channel, harbor or Federally maintained inland waterway within the United States, its territories and the Great Lakes;
- d. And, exists for the public good.

2. Identify nationally consistent metrics for port capacity and throughput?

- Beneficial Cargo Owners know through day to day operations what the operational situation is at any port in the United States. As the Department of Transportation offers planning, grant and financing assistance to improve freight transportation infrastructure, providing an index of regional capacity and throughput can be of interest to port users, as well as federal, state and regional officials to help inform future infrastructure investment decisions. These can include identifying transport chokepoints (throughput) and available capacity.
- Additionally, metrics should reflect the needs of the nation to support the integration of ports into the surface transportation system to meet shippers' national and regional freight transportation needs. As such, measures that can help identify long-term, structural deficiencies in the intermodal system – such as chokepoints at road and rail connectors to ports - would be most useful.
- The metrics should enable the DOT to proactively identify issues that can be addressed through targeted programs. The measures should be focused on outputs not inputs, and the outputs indexed to measure the average change over time in a region.
- As ports to be included on the list will change from year to year depending upon their volume throughput, regional indices will remain more relevant than individual port measures.
- Measures should focus on aspects of the ports industry likely to be relevant in the medium to long term, and we should avoid choosing measures for activities of capital equipment (such as ships) that are in a constant state of flux. For example, measuring the velocity and frequency of ship movements in/out of ports is significant only for certain types of ships, and is dependent upon the capability of port equipment, volumes to be moved at one time, weather and other commercial factors. Further, these needs will likely change over time as the size and types of ships calling at a port changes. For example:
 - perishables may not be able to be transported in inclement conditions,

Consolidated Comments from Working Group Members in Response to 3 Questions

- breakbulk steel ships easily average 5 to 7 days in port while container ship discharge and loading is measured in hours,
 - different sized container ships will take more or less time in port depending upon the amount of cargo to be transported in a particular port and the age and capability of the port's equipment,
 - bulk ships can range in size from Suezmax to smaller than Panamax – and bulk unloading equipment can be extremely efficient, or old and slow.
- Rather than measuring 'velocity of freight transported' or 'ship calls', metrics can be established for 'average output for a region/cargo type' and then indexed to determine how the region is progressing against the expected norm.

3. Identify specific nationally consistent data to be used in the program and processes for collecting, reporting, and safeguarding the data?

If it is determined that TEU throughput at a port is desired as a metric, each individual port collects data on the volume moving through their port over a given time frame. The U.S. Department of Transportation (DOT) might want to ask the top 25 (or more) container ports with the largest annual volumes, and those awarded DOT funded assistance, to submit their volume data to the DOT. Preferably they would submit their data on full/empty import, export, and domestic containers per month (submit every 6-12 months but break out by the month). Since most ports routinely publish variations of these types of data sets on their websites, it might be a low-cost opportunity to collect data. USDOT would provide guidance on submission parameters, such as format, to help adhere to the requirement of nationally consistent data and reporting.

Long term reporting of this information could come through the reporting requirements of other initiatives such as the International Trade Data System (ITDS) and the Automated Commercial Environment (ACE). This federal initiative, led by Customs and Border Protection (CBP), will allow shippers and carriers to submit data required by CBP and its partner federal agencies through a single window concept. Many transportation data elements, including information on loaded and empty containers into and out of U.S. ports, will be collected through ITDS/ACE when fully implemented. The process for protecting and safeguarding such data will be predicated on existing safeguards for trade and transportation information currently collected by CBP. But until ITDS/ACE is fully implemented, the process of ports submitting their information appear to be a useful alternative.

Further, we recommend that DOT's port performance metrics program also provide clear definitions of metrics being collected so as to prevent confusion about the measures. In addition, related guidance for uniform reporting could address the "nationally consistent" issue. The American Association of Port Authorities (AAPA), the Inland Rivers, Ports and Terminals Association (IRPT), and the American Great Lakes Ports Association, as the voices of coastal, Great Lakes, and inland ports, should be asked to vet definitions.

Consolidated Comments from Working Group Members in Response to 3 Questions

John Gray (Association of American Railroads)

Comment submitted July 26, 2016

During the meeting of the Port Performance Freight Statistics Working Group three questions were posed to the members and their comments on these questions was requested. The questions were:

1. How should port geography be defined?
2. How should measures for throughput and capacity be defined?, and,
3. How should the agency go about collecting national statistics that are consistent?

These questions are addressed by AAR in the order stated above.

1. Don't reinvent the wheel. The Corps of Engineers (COE) already has rather rigorous definitions of the commercial port areas in the United States. I would suggest that the most appropriate course of action would be to utilize these definitions as the basis for setting out the geography for the ports that will be captured in BTS's data gathering process. There is good reason for utilizing these definitions beyond simple inter-agency consistency. The COE data documents both cargo movements and ship calls, by type, at the many ports where information is collected. This is the type of data that provides the measure of commerce flow that can give substance and meaning to any performance data that may be collected by BTS. Failure to harmonize these data sets would almost inevitably lead to misapplication of both, errors in data interpretation and attempts to create "bridges" between the two that may, or may not, be accurate representations of their relationship. It would generally result in sub-optimization of the utility of both data sets over the long run.
2. Neither the concept of throughput or capacity has a straightforward definition. In this particular case, there are unknown issues that do not yet permit a definition of either that would necessarily accommodate all of the interests related to port utilization. I would emphasize that before these two definition can properly be finalized, either BTS or the Working Group must address three questions:
 - a. Who will be the end user of this data?
 - b. How will the data be used? and,
 - c. What are the types of decisions that can be expected as a result of the use of the data?

Will it be used by Federal or local officials evaluating applications for financial assistance programs or to help port users understand shipment decisions? Will it be for the development of local or regional environmental and community policy or to help improve the management of port processes, either public or private? Until the users and use of the data is known, it will be difficult to properly define the measurements necessary to realize that use or to specify the granularity of either the data definitions or the data itself necessary to make the end product fit the task. However, it is useful to make a few notes on the concepts of throughput and capacity and to render some cautions on loosely using these concepts.

Throughput sounds easy. At its most basic, it is simply the amount of something moving through a system during some time period. However, reality is less accommodating. Reality demands an understanding of what those units are, whether they are the correct units for the particular purpose, whether they are sufficiently disaggregate for the purpose, whether they can, or cannot be summarized upward / disaggregated downward or whether the measure fully reflects the work

Consolidated Comments from Working Group Members in Response to 3 Questions

done or is simply a component of a broader index. There will also always be a question as to whether there is a parallel measure which also (or better?) describes the measured phenomena such as the substitution for container “lifts” for the ever popular TEU. All of these questions, and more, depend on how the information is intended to be used. Throughput may be at a very detailed level or it may be much more broadly summarized as required by the question to be answered.

Capacity is even more complex and much less measurable. Unlike many industrial processes where equipment being used will have a design throughput capacity dictating plant capacity, transportation systems are made up of processes, some of which are subject to precise engineering analysis and others which have more flexible definitions. Ultimately, the interaction of equipment, infrastructure, control systems and, most importantly, people must be mixed together to determine the capacity of any transportation facility. Ports are no exception. In fact, due to the multiple players that must be involved in even the most basic port processes, they may be among the most difficult to assess in terms of capacity. Given that a port is the interaction of both water and land side carriers, terminal operators, facility owners, equipment providers together with port labor, capacity may often be defined as the most constrained link in a rather long chain with each of the links’ constraints varying over time and with the physical conditions under which performance takes place.

However either of these terms are defined, it is probably useful to remember that this is Federal data being collected at the national level and will ultimately, at some point, be used as a part of Federal decision making. As such, it will need to reflect broad trends rather than minute detail since the most likely Federal decisions that will be made using this data will be related to either policy or funding. Thus, the ability to understand the direction in which a port’s performance is moving is a key factor in establishing the value of the data. Hopefully, Federal interest is not in helping a port manage its day-to-day operations. Rather, it should be in supporting development and use of capabilities that contribute to national economic objectives while mitigating local impacts. This implies data structured to understand trends along with definitions of that data which support broad decision making rather than specific operational results.

All this would all suggest that rather than measure capacity, it would be more productive to develop several throughput measures that help determine the conditions when throughput volumes are placing a strain on one or more operating systems that limits some dimension of capacity. Of necessity, such a measurement can only become useful over time when the cycles of business have demonstrated weaknesses, reliability and resilience within the operating system. However, it is important to understand that any such measures remain somewhat speculative until the Working Group addresses the three questions above on the uses of the information that BTS must collect.

3. Collection of a consistent data set is not a trivial undertaking. Data may currently be subject to variation both within the reporting of each of the ports being measured and across the spectrum of these ports. The complexity of this problem suggests that there will be a need to tackle this task in a two-phased approach. The first phase reflects what BTS can do in the short term to meet its obligation to provide Congress with a report early in 2017 while the second phase is about establishing a reliable data set for portraying port performance measures. In the immediate future it will be practically impossible for BTS to do anything other than report data that is already being collected or can be easily developed by ports. The time available before the end of the year is

Consolidated Comments from Working Group Members in Response to 3 Questions

sufficient only to determine the ports that will need to report for 2016 and to poll these entities to determine what they can make available basically “off the shelf”.

However, during the same period, BTS will also need to determine what data it seeks to collect long term and begin the process of convening the relevant ports and terminal operators to design a data system that has consistent definitions of phenomena to be reported. Our experience at AAR suggests that this will not be a trivial task.

The first phase of this process will be to reach agreement on the metrics to be reported. While BTS can, and should, provide a suggested list of metrics, it should be understood that the ports will, in all probability, wish to considerably refine these metrics in order to create data which it is possible for them to report with minimum disruption of the processes they are now using. This will inevitably involve not only ports but terminal operators since they are often the source of the data needed for reporting.

The definitions of metrics will also be critical since it is highly likely that different ports now provide information on the desired processes but do so to definitions that fit both the needs of their particular constituents and the capabilities of their current data systems. BTS should recognize that it is inevitable that some subset of the ports may be placed in the position of having to change their data definitions and, consequently, will need to modify their data gathering and reporting systems to harmonize them with the proposed product. This has certainly been AAR’s experience in the development and reporting of rail performance metrics over the last eighteen years even though we have been dealing with a much smaller number of constituents than will BTS with ports.

The time and effort needed to modify internal data systems to support the proposed metrics and definitions will also not be trivial. Inevitably, the systems modifications do not just involve the final reporting applications but will also get deeper into the internal reporting processes that are used to manage the day-to-day workings of operations. BTS should be prepared for the ports and terminal companies to request months, not days or weeks, to make these modifications if the definitions of the metrics are materially different from what a port is now using or the number of underlying terminal operating systems is significant.

Finally, there will be the issue of developing data backward. Even if a new data series is being developed, it will be necessary to understand how these same metrics performed for at least one year (preferably more) prior to the first reporting period in order to provide context for the new metrics. Without this context, it is really necessary to collect at least two years of data before the new metrics can begin to provide the comparative understandings that brings value to the process.

AAR hopes that these comments provide useful context for the discussion of performance metrics. If there are any questions please contact me directly.

Consolidated Comments from Working Group Members in Response to 3 Questions

Roger Guenther (Port of Houston)

Comment submitted August 1, 2016

1. How should BTS define different types of ports in terms of tonnage, container, and dry bulk?

They should be defined and categorized by terminal type and size, and not by Port. In other words, a single port may have general cargo/breakbulk terminals, container terminals, etc. and in many cases more than one of either type. If measuring performance, the types should be measured individually by terminal versus overall port.

Terminals should be defined by tonnage for breakbulk/general cargo and by annual volume of TEU for container terminals.

For comparison, there should be some level of differentiation and separation between large and small terminals.

2. What nationally consistent measures do you recommend for:

a. Capacity?

Capacity measurement is difficult, fluid, and subjective. The only way to consistently measure would be to compare density of utilization in terms of TEU per acre of defined grounded/wheeled capacity on a container terminal. This is very subjective and dependent on the mode of operation and would only be relevant for measuring future growth capability vs. daily throughput velocity.

For other types of cargos, such as breakbulk/general cargo, the only feasible way would just to compare acreages of terminals of this type.

b. Throughput?

Throughput efficiency measurements for container terminals needs to focus on the ability to move a box from the ship and out the gate (or vice versa) Measures could include:

- Truck turn time (from entering queue to exiting gate)
- Average time from ship arrival to container released for pick up
- Overall average of number of transactions (pick up/delivery) per hour of operation
- % of truckers rejected at gate (penalty box)
- Measure resources for federal support agencies that support the efficiencies of terminal operations (i.e. insuring CBP resources are available for night and weekend gates)

3. How should BTS collect and report nationally consistent data?

- Make it a simple process
- Use data with quantifiable times that are not subjective (vessel arrival, time container was available, truck arrival time, truck departure time)

Consolidated Comments from Working Group Members in Response to 3 Questions

Lois Loarte (Federal Aviation Administration)

Comments submitted August 1, 2016

1. How should BTS define different types of ports in terms of tonnage, container, and dry bulk?

Why not define different types of ports something like the FAA defines Airports. We define our airports by capacity or operations' at the airports. We break out our Airports into different Airport Classifications depending on Commercial Service and such. We also provide roles for the General Aviation airports. Maybe define all the ports by how much tonnage they receive a year and then break it into dry and wet bulk. Can it then be looked at capacity as well like how many containers can the port handle in an hour?

In addition, you can have your top 20 or 25 port that is s monitored because if something happens at one of these the rest of the port system is affected.

Please see:

http://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/categories/
for some details.

2. What nationally consistent measures do you recommend for:
 - a) Capacity? Can be used at the smaller ports
 - b) Throughput? Used at the larger ports
3. How should BTS collect and report nationally consistent data?
Yes, if OMB wants to provide funding I think it would be essential to tell the correct story.

Consolidated Comments from Working Group Members in Response to 3 Questions

[John Giorgis \(Federal Transit Administration\)](#)

Comments submitted August 5, 2016

As the representative of the Federal Transit Administration on this Working Group, our primary areas of concern appear to be mostly out-of-scope:

- Throughput of passengers for passenger ferries and ocean liners/cruise ships
- Connectivity for the Port workforce to the rest of the area's public transportation networks

To the extent that either of those two things may impact throughput for freight, perhaps by occupying the same scarce resources, they may be worth considering by the larger group.

Other than that, in terms of the issue raised at the first meeting of "how to define a port" – I would suggest that a port be defined as contiguous facilities under the operation of a single entity. Thus, the Ports of Los Angeles and Long Beach would be measured separately. Also, the facilities of the PANYNJ would also be measured separately.

Consolidated Comments from Working Group Members in Response to 3 Questions

Jonathan Berkson (U.S. Coast Guard)

Comments submitted August 12, 2016

(1) How should BTS define different types of ports in terms of tonnage, container, and dry bulk? BTS should use the same criteria for all ports, whether or not they apply. Those criteria not applying to the particular port would be labeled N/A

(2) What nationally consistent measures do you recommend for:

- **Capacity?** Recommend the WG initially include multiple measures of weight (e.g. different measures of tons), containers (e.g., TEU, 4-ft equivalents), and dry bulk (different measures of tons as well as different measures of volume). Later – after further discussions - WG could eliminate some of the measures due to redundancies, cutting costs, etc.

- **Throughput?** Recommend WG should initially include a wide variety of novel measure candidates, e.g. crane moves per hour, truck-turn-times, and drayage metrics. Later – after further discussions - WG could eliminate some of the measures due to redundancies, cutting costs, etc.

(3) How should BTS collect and report nationally consistent data? BTS should report same metrics (using same sampling frequency) for all ports, whether they apply. Those criteria not applying should be labeled N/A.

Consolidated Comments from Working Group Members in Response to 3 Questions

[Rick Gabrielson \(Lowe's Companies, Inc.\)](#)

Comments submitted August 8, 2016

Dear Ms. Hu,

At our July 15, kick off meeting of the Port Performance Freight Statistics Working Group, there were three questions posed to the working group in which feedback was requested. Below, please find the response from Lowe's. The responses below are based on feedback from other retailers and much of this was incorporated into the formal response that you received from the Retail Industry Leaders Association's (RILA).

1. How should BTS define the different types of ports and their boundaries?

There are a number of different port types that include Container, Bulk, Grain, Liquid, Ro-Ro (Cars, equipment) and other specialized freight. While the fundamentals of measuring capacity, throughput and productivity is similar, due to the variability that exists at all terminals/ports it is extremely difficult to use the same metrics to measure one facility against another. As the retail industry deals almost exclusively in container shipping, the following responses refer to container operations, with the awareness that other types of shippers may have somewhat different interests.

2. What nationally consistent measures would you recommend for:

> Capacity?

Due to the variability in operations, the capacity of a terminal is based on a number of conditions that are unique to that specific terminal. Ports and terminals all differ in their layouts and operations, and cannot be justifiably compared. We believe it is more informative and actionable for a shipper to understand each port/terminal on an individually, based on descriptive measures in order to gauge the operational improvements of each. The general, descriptive measures for background/overview profile for each port/terminal include:

- Berths capacity statistics (including number, size, etc.)
- Crane capacity statistics (including number, height, move capability, etc.)
- Number of gates and gate moves per hour
- Yard capacity statistics (including space on-the-ground and vertical stacking)
- Presence and extent of on-dock rail

A key input for optimizing supply chain flow is understanding the volume at a port/terminal against the maximum capacity at any point in time. The active measures that give a more dynamic picture of capacity and help render utilization rates include:

- Yard capacity availability/utilization (over time) and operating maximum (percent of maximum)
- Annual cargo volume (TEUs for container shipping; other units as appropriate for type of shipping)
- Chassis availability (utilization, by terminal, total pool size, and percent out of service)
- Average vessel turn time

Consolidated Comments from Working Group Members in Response to 3 Questions

> Throughput?

The key metrics that retailers track and take action are defined below. A number of ports/terminals already capture this information.

- Time of container availability from vessel arrival (Average performance over time)
- Average container dwell time for imports and exports containers (definitions/locations of “dwell” e.g. vessel arrival to container discharge, discharge to gate out, discharge to loaded on rail)
- Truck turn time (gate and queue; average and weekly performance over time) and gate moves per hour; single and dual transactions

3. How should BTS go about collecting and reporting nationally consistent measures?

A standard platform for collecting port data via automatic electronic data interchange (EDI) and making it available via an accessible internet site should be a longer-term goal, to improve visibility. Data from the standard platform may be kept in a central repository, accessible by the public and the shipping industry. In the interim, collection of data can be as basic as distributing a standard spreadsheet to the participating ports, which they can complete and return to DOT on a predetermined schedule. Once compiled and analyzed, these can be released in an annual report as directed by the FAST Act, and be readily accessible by the public by publishing online. Though the FAST Act outlines an annual report to Congress, reporting of industry-determined metrics would be more beneficial on a more frequent basis—as frequently as stakeholders can agree to do so.

Consolidated Comments from Working Group Members in Response to 3 Questions

Thomas Wakeman (Stevens Institute of Technology)

Date: August 24, 2016

Participants:

Alisa Fine (Volpe Center)

Lydia Rainville (Volpe Center)

Daniel Hackett (Hackett Associates)

Dan Smith (The Tioga Group)

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Background statement and context:

Dr. Wakeman conveyed that his comments are personal opinions, and he was not speaking for either the National Academy of Sciences or the Transportation Research Board.

Port performance is a dynamic subject. It could be hazardous to assume that one report will, on its own, completely help Congress understand port performance. The goal should be to create something simple at first and build upon it annually, so that Congress understands that ports are part of a larger transportation system. Ports are only one element that should be considered to ensure that the nation's economic needs are being met by its transportation system.

Waterways were present before landside infrastructure. The U.S. Army Corps of Engineers were made responsible to maintain the waterside of ports, the navigable waterways. Subsequently the U.S. Department of Transportation was made responsible for the landside, the surface transportation system. Both need to work seamlessly to ensure that goods get to market efficiently, otherwise congestion at a port will impact the entire supply chain.

There is a lot of difference between regions, if for no other reasons than labor unions are very different. Labor is sensitive to metrics regarding how fast they work and their reliability, but shippers need a sense of when their goods will get to market. Industry is extremely tied to on-time delivery at a specific location. Shocks to the system upset the entire business community.

For example, after Superstorm Sandy, waterways were back in service within several days, but goods were not moving smoothly on the landside for weeks and failed to meet Black Friday and holiday timelines. There were too many independent enterprises, each focused on their own bottom lines. This meant that there was disconnect between landside and waterside performance—there was a competitive landside and cooperative waterside. The supply chain was also disconnected from the consumer. In general the supply chain was not as predictable or reliable as shippers desired.

It is important to think about how to change the transportation system moving forward, such as reducing oil dependency, greenhouse gas emissions, or accident frequency. We also need to think about the best ways to get export goods to a port on the landside and reduce associated costs. This country's port system used to be an import-dominated system but light manufacturing and agricultural exports are increasing. Our landside infrastructure has not kept pace with these trends. As a whole, there is not enough focus on a systems approach for transportation planning.

1. How should BTS define different types of ports in terms of tonnage, container, and dry bulk?

It is important to ensure that we don't confuse ports with terminals and facilities. A port is a collection of terminals or facilities that can transport goods from land to water and vice versa. Terminals typically handle a single type of cargo: containers, liquid bulk or dry bulk. A port is nothing more than a place where all

Consolidated Comments from Working Group Members in Response to 3 Questions

types of goods and people move back and forth between land and water through individual terminals; it's just a transfer point. Beyond the berth is when the terminal becomes more integrated into the transportation network, whether water or landside.

2. What nationally consistent measures do you recommend for capacity and throughput?

a. Capacity

b. Throughput

Capacity is best defined as static capacity at a terminal, whether these are public or private facilities. Each terminal has their own way of measuring capacity depending on the cargo type. As port people say: "If you've seen one port, you've seen one port" -- meaning each is unique.

The simplest way to approach the ranking of ports is to use the U.S. Army Corps of Engineers' Waterborne Commerce Statistics data and U.S. Customs data. This allows us to use existing data that are not proprietary. But it is almost impossible to make other supply chain data comport: how do you align the waterside and landside transportation corridors to be able to see system capacity and throughput for a corridor with both water and landside components? Because the data are so different it is very hard to align them. So it is a good idea to start with the information we already have in hand and then use an iterative process over time to improve the data's utility.

Vessel arrival times used to be about 50 percent on time, and recently released statistics for the East and West coast ports showed that these arrival times were still about the same. From the water side, if you are going to wait for a vessel and do not have excess capacity, there are going to be challenges. Vessel arrival reliability is crucial for safety and also for organizing when gangs and other service providers come onto the terminal to transfer cargo and so forth. The rules of play have been set for a long time, but they are not keeping pace with the speed of change in terms of increased vessel size and increased cargo velocity. Arrival times have more to do with carriers than ports, and that can impact cargo delays.

We could look for open, publically available databases that show where delays are occurring, and look at the ones where we may be able to try and control congestion and assist with infrastructure. It is better to do a broader-scale assessment of where data are available than to sink into detail.

3. How should BTS collect and report nationally consistent data?

Rely on available datasets as they currently exist. As each year passes, enhance and tweak these as needed to not only align them with the global transportation system but also to improve the metrics. We should move forward recognizing that the legal definition of a port is actually talking about a collection of terminals and intermodal connectors. We should try to break this down and determine how they function as part of the overall supply chain.

It is important to think strategically about how we can improve the freight transportation system. We should not be constrained by state boundaries; in fact there are about eight megaregions. It might be better to organize around those regions. We need to get over the business of a fence line approach where terminals are competing with one another within a single port for local market share.

Taking a regional approach can better make the case that we are all in this together and that a rising tide lifts all boats. Ports contribute at a regional level in terms of jobs created and economic activity. The northeast ports, for example, all support the same consumption zone (other regions might also have their own consumption zones, manufacturing zones and transshipment zones). You cannot forget the domestic

Consolidated Comments from Working Group Members in Response to 3 Questions

side of things. A regional approach would also help characterize freight flows in the aggregate, whether import, export or domestic.

4. Other

We need to keep an eye on the technology so that we do not get left behind in improving supply chain performance from a global perspective. Retailers are paying months ahead of sales to get appropriate clothing or goods at exactly the right spot at the right time.

Dan Smith: Is there something that we can do to help Congress focus their attention on the report? What metrics would help this?

At the aggregate level, we could look at how much are we importing and exporting and what are the trendlines. Unless these are equal, we will continue to suffer a trade deficit. The solution is to start thinking of the entire transportation system, domestically and globally. This report could be a campaign to help improve overall fluidity of our cargo. One element to highlight in the report could be how many jobs are affected? Or how many jobs does port performance impact? Economic activity could be a lever to help communicate to Congress the long-term importance of this sector.

We should also think about security and the vulnerability of the supply chain, particularly since about 40 percent of the nation's cargo is imported and exported through a single location. It is impossible to make all ports do all things for all carriers and shippers. There are other considerations that have to be examined, not just focus on getting the highest economic performance out of our ports. Sustainability and resilience are important as well.

Consolidated Comments from Working Group Members in Response to 3 Questions

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1. How should BTS define different types of ports in terms of tonnage, container, and dry bulk?

The list of ports should be derived from a quantitative treatment of commodity classifications and direction of movement (inbound/outbound) combination, recognizing that there are many ports that perform multiple functions and can have substantial business in multiple classes.

Looking at data published by the Corps' Waterborne Commerce Statistics Center (WCSC), a national summary of cargo movements by commodity provides a starting point. At the top of this list is crude petroleum imports at 300M tons per year, which is almost double the second place entry, which is inland river coal movements. Many of these inland coal movements on barges are ultimately bound for export, but the trip from Illinois to the lower Mississippi River is considered a domestic move. The inland river system is more like a conveyor belt and does not behave like a traditional port, differing from the compact coastal port that was perhaps in mind when the [FAST Act] legislation was crafted. Dry bulk export ports should be included as their own classification. Finally, 75 million tons of manufactured equipment, machinery, and products (typically moved by containers) dominate by value, despite being fifth in volume. The various categories of grain exports (corn, soybeans, and wheat) are further down the list.

Focusing on the logical groupings of ports and the function they play in the system is useful for understanding the functional role of waterborne commerce in the marine and freight transportation system. The various port designations and management structures are less meaningful to the national freight network than are the real-world movement of goods supporting the various industrial sectors of the national economy. It is useful to know which ports are domestic hubs versus import/export gateways. For example, Tampa is interesting as it is a domestic hub but a coastal port, bringing in gasoline from the Texas coast refinery ports as well as those along the Lower Mississippi River. However, it is not necessary to create separate lists of ports based on imports and exports, since there is a lot of overlap in the respective rank-ordered lists; many large ports rank highly in both categories. These issues could be treated through annotation and text within the report.

There should be consistency between the lists when it comes to issues like presenting the Ports of Seattle and Tacoma, Washington, as either one port or two. The Corps' WCSC can provide cargo totals for these ports separately, but the data may not fully align with other sources such as the American Association of Port Authorities (e.g., loaded vs empty volumes). Empty container movements are not something USACE has typically tracked; these data must typically be gathered from the individual ports directly.

To revisit the potential problems with including the inland port areas in these respective lists, there are quite a few idiosyncrasies in these inland port boundaries and definitions that reflect human arrangements and business partnerships but don't necessarily map to the underlying freight network functions. Along these lines, it might make sense to group the entire lower Mississippi from Baton Rouge to the Gulf of Mexico into one functional port area. Technically there are four different port authorities, but functionally it performs as one big industrial corridor. The movement of commodities into, out of, and within this corridor, on shallow-drafting barges (as well as oceangoing tankers and bulk carriers) primarily reflect

Consolidated Comments from Working Group Members in Response to 3 Questions

responses to domestic and global market forces and, to a lesser extent, the various business arrangements that govern port authority boundaries.

2. What nationally consistent measures do you recommend for capacity and throughput?

Providing nationally consistent measures poses the challenge of balancing what is attainable with what is useful. Annualized measures like tonnage, value, throughput, and vessel calls are readily obtainable but may not provide enough information for people to make meaningful distinctions among the ports. However, providing detail beyond these broad metrics can quickly become controversial based on the comments from working group members at the kickoff meeting in July.

What is meaningful and has value, with some adjustment for the size of the port, (e.g., 10M tons or 100M tons in a year) would be to look at some overall measure of turn time that would be aggregated from: time spent in outer approach zones waiting for a vessel pilot, transit time through the federally maintained channels, dwell time at the berth for unloading and loading, and duration of the outbound leg. Even if aggregating without splitting up the component delays, it would likely be an important measure and could be presented in terms of the overall throughput for that port over the course of the year. This measure could be used for all three port type groups, as long as the results are presented within their respective subsets.

For its part, USACE is focused on its Navigation mission, which is limited to supporting safe, reliable, efficient, and environmentally sustainable waterborne transportation. This mission does not typically entail the berths (usually within the purview of the ports or private terminals), nor does it directly encompass issues associated with landside port logistics (the issues that arguably were primary factors driving the port performance measures legislation). However, it is still valuable for USACE to understand the landside constraints on overall port throughput efficiency. If transportation cost savings brought about by USACE maintenance and/or deepening projects are negated by chronic landside congestion issues, then the investment by the Corps is not cost-effective. Accordingly, it is important for USACE to inform itself as much as possible when making resource allocation decisions across its vast portfolio of Navigation projects.

The ultimate question is how efficiently the ports are operating within the overall freight network. Ports are just a pass-through location within this broader intermodal system. The Corps' Navigation R&D program has been trying to work with truck probe data to understand average truck turn times (from when trucks first enter the port area, potentially several miles outside the port) and the relationship, if any, to the frequency of vessel arrivals and departures. Given this interest in the port as a functioning system and in looking at turnaround times relative to overall rates of throughput, presenting the component delays is less necessary, although it may be useful at the local level when trying to alleviate congestion hot spots.

Another performance measure that would be useful and that would also reflect the USACE Navigation mission would consider annual maintenance requirements for the federally authorized projects. These would be the costs to conduct dredging so as to maintain the authorized dimensions of the channel as well as the costs of moving and placing the large volumes of dredged sediments. These costs can vary widely based on the material type (gravel, sand, silt, and/or fine-grained cohesive sediments) that is dredged as well as seasonal dredge fleet availability trends, weather delays, etc.

How should BTS collect and report nationally consistent data?

With the exception of the turn-time question for marine vessels and trucks (and there is no existing mechanism that has those numbers today), it would be best to revert to readily available data such as Waterborne Commerce Data and US Census Bureau figures for imports and exports. A number of datasets

Consolidated Comments from Working Group Members in Response to 3 Questions

are available that can be used to piece together the information that is required for port listings based on the underlying commodity-direction groupings discussed previously. The collection of new data may not be desirable or even feasible given the short timeline this working group is using.

The desirable outcome is be a high-level report that is approachable, hitting high points and major takeaways and allowing the reader to derive new knowledge. Also useful for researchers would be to have access to the underlying data in a text file, database file, or GIS file.