Agriculture is Everyone's Business

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May 31, 2019

RE: Freight Rail Data Regulations: Refining the Data Requirements of the Transportation Modernization Act

To whom it may concern:

The Agricultural Producers Association of Saskatchewan (APAS) welcomes the opportunity to provide input to the Transport Canada Freight Rail Data Consultations.

APAS considers this regulatory review of freight data requirements as an important opportunity to develop a common benchmark for which to assess and monitor the operational effectiveness of Canada's grain supply-chain. The lack of railway capacity to move grain efficiently to market continues to be the primary growth constraint facing Saskatchewan agricultural exports. Recurring deficiencies in rail service for grain shipments have negatively impacted Saskatchewan farm businesses and local economies. The need to greater transparency in rail system performance has been a main theme in the policy discussions that have occurred since the transportation crisis of 2013/14 prompted a comprehensive review of Canada's transportation legislation. APAS welcomes the steps that have been taken to date to improve transparency, and we are pleased that Transport Canada is developing a regulatory framework for railway reporting and service accountability.

In response to the Transport Canada questionnaire, dated March 19, 2019, APAS is pleased to submit the enclosed recommendations developed by the Crop Logistics Working Group (CLWG). For agricultural producers, it is very important that railways are held to uniform and consistent service standards and reporting requirements. The resulting data also needs to accurately reflect the level of service provided to grain shippers. The collection of relevant service data on measures such as weekly car-order fulfilment will be critical to ensuring the information is relevant and useful to all stakeholders. The development of these regulations is also a key opportunity to better measure service delivery on a more regional and commodity specific basis. The lack of regional data in particular has been a concern for Saskatchewan. It is very common for rail service to vary considerably across specific areas of the province given the size and diversity of Saskatchewan's agricultural regions and associated transportation infrastructure.

The CLWG recommendations broadly address these information needs, and APAS urges Transport Canada to use the CLWG recommendations as the basis for new information regulations for grain transportation. The CLWG submission leverages a great deal of experience and expertise in the collection of rail performance data,

providing Transport Canada with a collaborative response on behalf of both grain shippers and grain producers.

In addition to the new service metrics, APAS also encourages Transport Canada to initiate additional consultations focused on improving transparency of freight rates for grain shipments. Rail freight costs are an important pricing component in local grain markets. APAS members have expressed a need in recent years for greater transparency of rail freight costs, recognizing that ultimately bear these costs in the prices they receive for their grain. It has also been noted that Canadian producers lack the same level of rail freight price transparency that is provided to producers in other jurisdictions, like the US, where the US Department of Agriculture publishes a weekly report of average rail freight rates by commodity and regional origin. Once the consultation on service metrics are completed, APAS looks forward to working with Transport Canada to develop similar rate reporting information for Canadian producers.

In closing, APAS wishes to recognize Transport Canada's commitment to improved transportation transparency for Saskatchewan agricultural producers. We welcome the opportunity the submit the CLWG recommendation as our response to the questionnaire, and look forward working with Transport Canada in the next phase of the consultations.

Sincerely,

Todd Lewis
President, APAS

Enclosed: "Grain Sector Response to Transport Canada Rail Data Questionnaire"

Introduction

The Canadian Grain Sector is pleased to submit this document in response to Transport Canada's questionnaire as part of ongoing consultations for refining the data requirements of the Transportation Modernization Act.

The Canadian Grain Sector is a strong supporter of increased transparency in Canada's rail freight system and the development of quantitative fact-based performance data as the vehicle for achieving this. We would like to commend Transport Canada for taking this most important step to move forward in this area. We welcome the opportunity to provide Transport Canada with feedback on the issues that are of critical importance to our industry, as they are to freight shippers across all industry sectors who depend on rail transportation as the principal means of transporting their products both domestically and for export to international markets.

While we remain strongly supportive of Transport Canada's initiative it is our belief that even with significant improvements to the service and performance measures that may result from this consultative process it will still fall short of meeting the needs of freight shippers in Canada. Our view in this regard stems from our belief that a truly effective and robust performance measurement program is underpinned by two fundamental principles namely, the independence of performance measurement and the auditability of performance data at a granular level.

Independence of Measurement and Auditability

We have significant concerns, as do shippers across all industry sectors, that transparency into railway performance will be based on railway self-measurement without accountability. We believe that allowing the railways to measure their own performance and report it publicly constitutes a fundamental flaw in a process designed to create credible transparency in the public domain. This process, as proposed, will not require the railways to reveal the underlying data behind the performance data they produce, and the data will not be independently verifiable.

Self reporting of performance by railways for internal and investor relations purposes is appropriate because this is undertaken within the realm of their own business interests. Doing so in the context of providing transparency in the public domain and ensuring public confidence in the performance of the Canadian railway system is a higher bar which demands greater rigor of process. The reporting of performance data by the railways, without the benefit of independent verification, will establish the public record for performance which has the potential to impact future industry oversight and regulation. Because of this we believe the railways are in a conflict of interest as regards potential rail service complaints if they alone are responsible for performance measurement calculation and publication.

For nearly two decades the Grain Monitor, established by the Federal government in 2001, has provided independent monitoring and measurement of performance by all supply chain participants, including railways, for Canada's grain handling and transportation system. The government of the day made this decision because it believed that independent verification of system performance was critical to establishing both a common understanding of system performance and confidence among system stakeholders with respect to the accuracy of reported performance.

Given that the Federal government is now contemplating providing such transparency to all industry sectors we believe that a comparable level of independent scrutiny and verification is warranted. Admittedly the Grain Monitor program is constrained in its ability to report performance by individual railway due to existing legislative provisions – provisions which are within the government's purview to modify - however it does at a minimum provide an independent view of performance.

We urge Transport Canada, in the context of this consultation and the establishment of regulations in this arena, to strongly consider seeking out a performance measurement and reporting framework that ensures independent auditability of performance data while maintaining flexibility to report performance for railways individually.

Railway Health versus Railway Service

It is important that the measures, and the construct of those measures, selected for public reporting ensure a good balance between providing transparency on the health of the broader rail system and the service performance experience of freight shippers. It is generally thought that a well functioning or healthy railway network translates into good railway service for freight shippers. More appropriately it can be said that a healthy railway network is a precondition for good railway service but that the former does not necessarily beget the latter. This is because railways in Canada effectively operate monopolies across significant portions of their business whereby, they are empowered to act in their own self interest without regard to the ramifications of such actions on their customers.

Most importantly they control, without exception, the level of railway capacity they offer, including train, track and railcar capacity, and the level of service they provide to freight shippers. Their arbitrary control of these two critical elements provides the railways with the ability to constrain capacity at will and to manage operations as they see fit to maximize their self interest – operational efficiency leading to lower costs and maximum profitability. This can lead to decisions that maximize the efficiency of the railway network but sub optimize or have negative ramifications on the day to day service experienced by their customers. In the grain industry this is best exemplified by the railways' decision to arbitrarily constrain hopper car capacity each year with neither justification nor evidence of the need to do so. This constraining of capacity is done in full public view and has seemingly become the accepted norm, both among industry participants and regulators, for defining railway capacity for the grain industry at certain times each year.

For this reason it is critical that the service and performance metrics, including the dimensions and characteristics of these metrics and the level of granularity of publicly available data, need to be equally weighted toward providing stakeholders with detailed and timely information on the health and fluidity of the railway network and transparency into the quality of service received by freight shippers across all industry sectors.

While stakeholders and regulators need to have insight into how well the railway system is performing this insight must be from two perspectives. First, is to determine if the railways' networks are operating normally, free of congestion and significant impairment, that positions them to deliver excellent service to their customers. Second, is to identify whether the state of the network is reflective of the service

experience for freight shippers. Achieving the former without the latter does not serve the economic interests of industry or the country.

Recurring Themes

Our response to Transport Canada's questionnaire is guided by three recurring themes – the need for standards against which to benchmark performance, the need for appropriate contextual data to allow stakeholders to accurately assess both the veracity of the reported performance and the significance of changes in performance and more granular performance data through the inclusion of regional and commodity based reporting. Each of these elements is key to providing the necessary level of transparency and insight that is required by system stakeholders, including the regulator, to allow them to understand both the health of the rail network and the quality of service being provided to shippers.

Performance Standards

Understanding whether a process or system is operating efficiently or in a normal state requires a baseline or performance standard against which to compare actual performance. Without such a baseline the best conclusion one can draw from performance statistics for any system is that performance is changing over time, whether positively or negatively. In the absence of a performance standard the data will tell you that performance is the same, better or worse than it has been in prior periods but not whether it is good or bad, whether the system is performing as it should be and to the extent it is not how far it has deviated from the norm.

Having said this, not all the proposed metrics lend themselves to the establishment of a standard. For instance, measures of shipment activity such as weekly average cars on line and weekly carloadings are a function of traffic volumes that may have no relation whatsoever to railway performance being driven principally by external factors beyond the railways control. Other measures however, such as train speed and terminal and origin dwell time, do lend themselves to the establishment of standards because they are directly tied to railway operations and more importantly scheduled operations. Every train CN and CP operate has a schedule associated with it and thus an inherent train speed. Every yard or terminal that CN and CP operate does so based on scheduled train arrivals and departures, train connections, scheduled yard assignments and switching times. All these scheduled activities in a normally operating system effectively define what the performance standard for these measures should be.

None of the existing transitional measures include a standard against which to benchmark performance and where appropriate they should. The data required to create such standards exists in the railways' systems and is central to how they operate their businesses. Whether these standards currently exist within the railways' organizations or not the underlying data to create them does and should be used to establish standards, where appropriate, for the purposes of service and performance reporting in this context.

Measurement Context

Understanding and correctly interpreting performance data requires the appropriate context. This is particularly important when data is presented in absolute as opposed to normalized terms. Without the proper context it is impossible to determine whether the performance data is representative of a normal or expected level of operations or if changes in performance are reflective of changes in traffic volumes as they pertain to the measure in question. None of the transitional measures, as currently defined, are structured to provide stakeholders with contextual data around which to evaluate performance.

Context for performance reporting can be achieved in one of two ways – the reporting of underlying data used to calculate performance and/or the reporting of performance using normalized data. For some metrics the use of normalized data also facilitates the comparison of performance across railways and can minimize the risk of users incorrectly interpreting the data leading to incorrect conclusions regarding performance.

For example, if we consider the performance measure for trains held short of destination. Currently this data is reported using absolute data – i.e. the average daily number of trains held. Railway reporting over the course of the last four months shows that CN on average reports three to four times as many trains held as does CP. A user of this data may infer from this that CN performance is materially worse than CP. This inference however is drawn without full knowledge and may in fact be incorrect. Were this data accompanied by normalized data that reflected the percentage of total trains operated that were held then a valid comparison across the two railways could more readily be made and likely more accurate conclusions reached.

Performance measures should where appropriate be supported by the appropriate contextual data, whether on an absolute or normalized basis.

Regional and Commodity Based Reporting

Railway networks, much like any integrated production system, do not tend to fail at a system level – at least not initially. Service disruptions generally begin locally or regionally and subsequently migrate across the broader network over time as common assets such as train crews and locomotives become displaced within the network. This ripple effect, depending on the location and nature of the disruption, can take weeks to be reflected in system level measures while in the interim resulting in significant disruption within individual corridors and impairing service to customers in those areas.

Railway networks in Canada are broad, expansive operations that serve shippers in densely populated regions (Intermodal) and remote rural areas, the latter a common characteristic of resource shippers such as grain, coal and potash. Much as all shippers do not receive the same level of service, not all regions of the railways' networks necessarily see the same level of service. While regional reporting can serve to identify systemic service issues in certain areas it can also, equally importantly, identify developing service issues in specific parts of the network before they migrate to the broader system. This is particularly important when origin regions or destination corridors represent a

disproportionate percentage of the railway's business as is the case for grain traffic moving to the ports of Vancouver and Prince Rupert.

Much as reporting performance at a system level without regional segmentation reduces the effectiveness of these measures and limits transparency, so does the reporting of performance without commodity or industry sector segmentation. Some of the existing transitional measures do provide some commodity context, others do not. For those that do, the current commodity breakdowns are arguably too broad and do not provide sufficiently granular information regarding some industry sectors. An example of this is the absence of performance reporting for the forest products and ores, minerals, and metals sectors. These sectors represent an estimated 24% of CN traffic and 12% of CP traffic yet are not reported on distinctly under current reporting protocols, but are currently aggregated into "other commodities".

In some cases, commodity definitions are too broad to provide the necessary transparency into performance for important commodity sub-segments. This is the case with performance measures for grain which as currently defined include all grain and grain products as defined under Schedule II of the Canada Transportation Act. In this arena however all grain is not the same. Oilseed products such as canola oil and meal are a significant sub-segment of the grain industry whose logistics, capacity and performance issues are not necessarily the same in all cases as "traditional" grain. These commodities utilize primarily shipper owned rail cars as opposed to railway-controlled rail cars and as such shippers and asset owners need transparency on the performance of their assets distinctly.

It is for these reasons that we recommend that all service and performance measures selected for inclusion in the regulations provide a consistent commodity basis for reporting across all measures. The proposed commodity segmentation, subject to the input of other industry sectors, should reflect the following:

Automotive
Coal
Crude oil
Ethanol
Fertilizer
Grain
Canola oil
Canola meal
Intermodal
Forest products
Ores, mineral and metals
Other commodities

We recognize that achieving this level of transparency while balancing issues of commercial confidentiality and the potentially diverse expectations of the shipping community to report performance along regional lines that are most beneficial to their interests will be a difficult task. These challenges however should not deter Transport Canada from pursuing the most granular information possible within these parameters.

With respect to issues of confidentiality we urge Transport Canada to give great weight to the public interest in its determination of the level of granularity to be provided and to ensure that any arguments made by either railways or shippers for restrictions in transparency based on commercial confidentiality are compelling and clearly outweigh the public interest value of such reporting.

Regional reporting criteria should be guided principally by the needs of shippers within reason. Decisions in this regard should not be relegated to the lowest common denominator with a view to easing the reporting burden on railways or to streamline reporting on the assumption that this will make it easier for stakeholders to understand performance.

While railways may say that an undue burden is being placed on them to de-construct performance across multiple geographic definitions this is a self-serving argument. CN and CP are large sophisticated organizations with extensive information technology resources. This combined with the sophistication of information technology tools available today makes it relatively simple to report data across multiple views to meet such a need. Similarly, simplicity for ease of use by stakeholders should also not be a decision driver. As currently published users who want to examine the data and assess changes in performance need to download the data from the Statcan website and do their own analysis off-line. Adding more dimensions to the data will not make this work any harder but will yield far greater value to the user. If ease of use was the principal driver of data presentation Transport Canada would be publishing fully processed data in the form of charts to allow for quick access and viewing. <u>The primary objective is however to put performance data in the hands of users for their own analysis</u>, that takes work on their part and that is okay.

Our responses to the questionnaire will speak to the preferred regional reporting for each metric individually however at a high level we would recommend to Transport Canada that their assessment of this issue be guided by the following:

- The adoption of a tiered regional reporting scheme with the highest level of aggregation being national (system) followed by provincial reporting thus providing two levels of standardized geographic reporting common to all metrics;
- Consistency of regional segmentation across all commodities for an individual metric; and
- No requirement for all metrics to share the same regional segmentation other than at the top two levels – i.e. national and provincial.

<u>Timeliness of Data</u>

Timeliness of publication is critical if performance data is to be used by shippers to understand the performance of the rail system and to make logistics decisions based on this information. The same can be said about the regulator's ability to monitor developing issues across the rail system.

The current nine-day delay in publication greatly diminishes the effectiveness of the data in this regard for both parties. Currently both CN and CP report similar performance data to the Surface Transportation Board within 5 days of the end of the measurement period (week ending on Friday, data is published the following Wednesday).

We would urge Transport Canada to adopt the same timelines as are currently in place at the STB thus cutting the delay in reporting nearly in half.

Summary of Proposed Reporting Dimensions

The table below provides a summary of the proposed enhancements to service and performance metrics including the definition of regional reporting, contextual information and performance standards.

Summary of Proposed Changes to Transitional Performance Measures

Measure	Enhancement	Geography	Contextual Data	Performance Standard
1. Average Train Speed	• Within the proposed geographic reporting parameters report train speed for mainline versus non mainline trains separately	• System • Province	• Number of trains measured for each train type and geographic segmentation	• Based on scheduled train run times
2. Weekly average terminal dwell	• Add reporting by commodity group • Add terminal dwell measures for Intermodal traffic distinctly • Identify additional carload terminals for reporting	• System • Province • Terminal	• Number of cars / intermodal units measured	• Based on scheduled operating times for train arrivals, departures, connection and local operating assignments
3. Weekly average cars on line	• Add measurement categories for center beam flat cars and other bulkhead flat cars • Report loads and empties separately • Add locomotives (by type and status)	• System • Province • Terminal (yard locomotives)	• N/A	• N/A
4. Origin dwell	• Remove unit train criteria and measure dwell for all loaded traffic for all commodities • Add reporting by commodity group • Add reporting for Intermodal traffic distinctly based on measurement for individual containers	• System • Province • Origin Region • Destination Corridor	• Number of cars / intermodal units measured	• Performance standards for railway should be consistent with the performance standards they place on shippers to load and release empty cars (e.g. demurrage rules)

5. Trains Held	• Add reporting categories:
	  • engineering work / track maintenance;
	  • mechanical failure (freight cars);
	  • service / network disruption (including weather)
	• Standardize reporting threshold to ensure consistency of reporting by railways
	• Within the proposed geographic reporting parameters report trains held for mainline versus non mainline trains separately
		• System
		• Province
			• Percent of total trains operated held	• N/A

6. Cars not Moving	• Enhance reporting by commodity group per defined categories
	• Remove manifest category
	• Expand definition to clearly identify which commodities are included in which commodity groups
		• System
		• Province
		• Destination corridor (loads)
		• Network location
			• Percent of total cars on line not moving
			  • Loads and empties separately
			  • By commodity grouping
			  • By defined regional segmentation
				• N/A

7. Grain cars loaded and billed	• Add commodity groups for canola oil and canola meal • Remove canola oil and canola meal from existing grain definition • Report performance distinctly for railway controlled and private cars	• System • Province • Origin region • Destination corridor	• N/A	• N/A
8. Grain orders placed, filled, past due	• Remove limitation of manifest train and capture all orders entered into railway car ordering systems	• System • Province • Origin region • Destination corridor	• N/A	• N/A

New Measures

Measure	Enhancement	Geography	Contextual Data	Performance Standard
Trains Operated	• Report average daily number of trains operated each week by train type consistent with train speed metric	• System • Province	• N/A	• N/A
Average Train length	• Report average daily train length for trains reported in the trains operated metric each week by train type consistent with train speed metric	• System • Province	• N/A	• N/A
Order Fulfillment	• Create measure for on time order fulfillment • Include all commodities for which car orders are placed into railway car order systems • Report performance by commodity group	• System • Province • Origin region • Destination corridor based on data availability	• Number of railcars ordered by car type • Number of railcars supplied by car type • Number of railcar orders cancelled by car type	• N/A
Corridor Velocity	• Create measure for car velocity reported on a corridor basis for all commodities for all loaded and empty cars	• System • Province • Destination corridor	• Number of cars measured • Loads and empties reported separately.	• N/A
Car Cycles	• Create car cycle performance measure for railway controlled and private car fleets for all traffic originating and terminating on CN and CP including cars interchanged between the two carriers • Report cycle performance by fleet, commodity and origin-destination province	• System • Origin – destination province combination	• Number of cycles measured for each fleet / commodity / corridor combination	• N/A

	• Report cycle performance for railway controlled and private car fleets separately • Report performance monthly • Establish appropriate threshold for reporting purposes – e.g. minimum number of cycles per month for a given car type / corridor combination			

Feedback Questionnaire – Refining the Data Requirements of the *Transportation Modernization Act*

Name: **Email:**
Position: **Organization:** Grain Sector Response
Website:
Can your submission be made public? Yes ☐ No ☒

From the table below, please identify supply chain roles played by your organization and/or your members, along with commodities shipped/handled:

Commodity		Supply Chain Roles	You	Members
Chemicals		Producer		
Fertilizer, potash		Shipper		
Forest products		Railway		
Grain products	X	Terminal Operator		
Metals and minerals		Transload Facility		
Petroleum products		Port Authority		
Other (please specify)		Vessel Operator		
		Trade Association		
		Consignee		
		Other:		

From the table below, please identify key areas where you ship by rail (note all that apply):

Key Origin Areas		Key Destination Areas	
British Columbia		British Columbia	
Prairies		Prairies	
Ontario		Ontario	
Quebec		Quebec	
Atlantic Canada		Atlantic Canada	
U.S. and Mexico		U.S. and Mexico	
Overseas		Overseas	

Please include any other information about your organization you wish to provide in the box below:

Please rate the helpfulness of each metric (with 5 being most helpful)

Metrics	1	2	3	4	5
1. System-average train speed for the overall system and by train type	☐	☒	☐	☐	☐
2. Weekly average terminal dwell time, for the carrier's system and its 10 largest terminals.	☐	☒	☐	☐	☐
3. Weekly average cars on line by car type	☒	☐	☐	☐	☐
4. Weekly average dwell time at origin for certain train types	☐	☒	☐	☐	☐
5. Weekly average number of trains holding per day sorted by train type	☐	☒	☐	☐	☐
6. Weekly average of loaded and empty cars, operating in normal movement and billed to an origin or destination, which have not moved in 48 hours or more sorted by service type	☐	☒	☐	☐	☐
7. Weekly total number of grain cars loaded and billed, by province.	☐	☒	☐	☐	☐
8. For the grain reported in metric (7), for railroad-owned or leased cars that will move in manifest service, the following data by province:					
i) Running total of orders placed	☐	☒	☐	☐	☐
ii) The running total of order filled	☐	☒	☐	☐	☐
iii) For unfilled orders, the number of orders 1-10 days past due and 11+ days past due	☐	☒	☐	☐	☐

DISCUSSION QUESTIONS

Please provide your answers to the discussion questions below in the following table:

Service and Performance Metrics
Sec. 3.1 Purpose, use, and benefits
Question 1: How are you using the transitional metrics? Which metrics do you find most helpful?
Response: Transitional metrics performance data is currently being downloaded weekly from the Statcan website. The data is being charted for time series analysis to show performance over time and allow for high-level comparison against data collected by and reported on by the Ag Transport Coalition (ATC) for grain performance to try and ascertain if the transitional metrics are consistent with the performance data collected by ATC. Given the current structure of the metrics most have minimal utility because they either lack contextual information, regional reporting and/or a performance standard to allow users to understand whether the performance being reported deviates significantly from the norm.
Sec. 3.3 Reporting railways
Question 2: Do you find the service and performance metrics reported by carriers other than CN and CP helpful? Is there specific information you would like to have about these railways' performance?
Response: **No -** reporting for CSXT and BNSF Railroad may be meaningful for selected shippers however they offer little value for grain shippers due to the limited nature of their railway operations in Canada with respect to grain traffic.
Sec. 3.4 Frequency and Week Definition
Question 3: How should the reporting week be defined? Should railways be able to define their own reporting week? Would it be appropriate for railways to use different reporting weeks for different metrics, to better align with their operations or industry standards?
Response: Under current transitional performance measures the reporting week is defined as Saturday 12:01 am to Friday 11:59 pm – a definition adopted from the Surface Transportation Board (STB). This definition was adopted by the STB as a matter of practicality and convenience based on the railways' position that existing reporting practices for similar measures reported weekly to the AAR were done on the basis of this definition and maintaining it would provide consistency across reporting mediums and not require railways to create two distinct reporting processes using different week definitions. While this may have been appropriate in the U.S. context, we do not believe this to be the case in the Canadian context. First, CN and CP no longer report metrics through the AAR. Second the C-49 service and performance measurements are a standalone process separate and distinct from other external reporting efforts and all aspects of these measures, including the definition of the reporting time period, should be tailored specifically to the Canadian context. Lastly, given the sophistication of current information technology systems, including within the railway companies, there is little if any burden placed on them to create a customized reporting stream for the purpose of meeting their requirements under C-49. While we would defer to the input from other commodity sectors, we are of the view that nearly all metrics should be reported based on calendar week (Sunday to Saturday) which we believe to be the basis that the railway and all its customers – other than grain – operate on.

CN's current methodology statement identifies that the STB Saturday – Friday week definition is used for all reported transitional metrics other than those specific to grain which are based on CN's grain service week definition of Sunday 12:01 am to Saturday 23:59. CP's methodology statement does not explicitly identify the week definition that is being used for any reported metrics including grain.

The grain sector in Canada currently operates based on two different grain week definitions. As noted above CN operates on a Sunday to Saturday week while CP operates on a Monday to Sunday week. We are of the view that a week definition aligned with each of the railways' grain service week definitions is appropriate for grain specific measures including grain orders placed and filled, orders past due and grain cars loaded and billed. This definition would also be appropriate for any other grain specific measures which may be added through the consultation process such as order fulfillment performance. Using this definition for these measures specifically would conform to long-standing industry practice and align with other existing measures of grain performance currently published by other stakeholders including the railways.

All other metrics regardless of commodity, subject to the views of other industry sectors, should be reported based on calendar week.

It is critical that there be consistency in the definition of the reporting week across railways – excepting specific commodity cases such as grain – to ensure the ability to identify trends on an ongoing basis and to undertake valid and accurate historical analysis. The definition of reporting week should not be at the discretion of the railways but should rather be set out in the regulations.

Request:

1. Establish the definition of reporting week by measure in the regulations.
2. Define the reporting week for grain specific measures including grain orders placed and filled, orders past due and grain cars loaded and billed, as well as any other grain specific measures adopted through the consultation process, on the basis of existing grain service week definitions currently established within industry and railway practices; specifically:
    a. For CN – Sunday 12:01 am to Saturday 23:59 pm
    b. For CP – Monday 12:01 am to Sunday 23:59 pm
3. Define the reporting week for all measures other than those identified in item (2) as calendar week (Sunday to Saturday) unless otherwise defined by other commodity sectors.

Sec. 3.6.1 Transitional Metrics – Network Capacity and Performance Metrics

Question 4: For metric 3 (weekly average number of cars online), are there other railway car types to capture? If so, why?

Response:

The table below provides a breakdown by car type – based on number of cars – of reporting to date by CN and CP under the transitional performance measures and the current rail car classifications used by the UMLER system - the railway industry centralized database for recording all North American freight cars.

	Percent Reported Cars on Line		
C-49 Car Type	**CN**	**CP**	**UMLER Car Type Designations**
Box	7%	4%	Box car
Covered hopper	35%	47%	Hopper
Open hopper	0%	1%	
Gondola	10%	11%	Gondola
Intermodal	9%	5%	Intermodal flat
Multilevel automotive	4%	4%	Vehicular (auto) flat
			Flat car
Other car types	8%	3%	Miscellaneous Cars
Tank	28%	25%	Tank

Under existing transitional performance reporting the category "other car types" for CN and CP constitutes 8% and 3% respectively of total cars reported under this metric. For CN this category is the fifth largest and is larger than open hoppers, multilevel autos and box cars and nearly as large as Intermodal and gondolas. For CP while this category is smaller it also represents nearly as many cars as box cars, Intermodal and multilevel autos.

As the table shows, UMLER contains a category called "flat cars" distinct from Intermodal and automotive flat cars. This category includes several specialized flat car types but would primarily contain center beam flats and other bulkhead flats which are important car types for the forest products and ores, minerals and metals sectors.

Loads versus Empties

As currently reported, it is unclear if the data reflects both loaded and empty cars although it is presumed that it does. Understanding the relative balance between loaded and empty cars on line – particularly in a regional context – can provide shippers with meaningful insight into operational performance.

We believe the segregation of loads and empties for reporting under this measure is appropriate and necessary to maximize it value to stakeholders.

Regional Reporting

If provided solely at a system level this metric will lose much of its value. It is proposed that loaded and empty cars be reported separately by car type with the following geographic/regional breakdown.

- system
- province

Request:

1. Create distinct car type categories for railway reporting for center beam flat cars and other bulkhead flat cars.
2. Segregate loads and empties in reporting
3. Provide two levels of geographic reporting including system and by province.

Question 5: For metric 3, would it be helpful to include reporting on locomotives online? Would this raise any confidentiality issues from a railway perspective? Would it be helpful to also include aggregate horsepower?

Response:

Information and data regarding the railways' locomotive fleets operating in Canada would provide valuable insight into the state of railway operations. To be meaningful however, the data would need to provide more than simply a count of locomotives online. The health of the rail system depends not only on how many locomotives the railways have but also their serviceable status, the types of locomotives and where in the system they are operating.

When railway service begins to falter, specifically during winter months, a significant contributor to decreasing operational capacity can be the available locomotive capacity. If the number of serviceable locomotives declines – or conversely the number of bad order locomotives rises – it negatively impacts the railways' capacity to operate trains and thus can be an important yardstick for shedding light on service performance. Similarly understanding the number of serviceable yard locomotives can shed light on the behaviour of dwell times in railway terminals.

We do not believe that publishing locomotive data at this level of detail would create a confidentiality issue that outweighs the public interest.

From the perspective of understanding the health of the rail system aggregate horsepower would add no value.

Regional Reporting

Understanding the state of the railway's locomotive fleets – both road and yard locomotives – requires two different views of regional reporting.

Road locomotives will move across provinces based on the railways' locomotive cycling plans. For instance, locomotives originating in Alberta and Saskatchewan will find their way to Vancouver and back. Yard locomotives however are assigned to a specific terminal and are generally a fixed value day to day and week to week. The number of yard locomotives and their serviceable status is key to the fluidity of terminal operations for the railways as this determines, in part – the other principal determinant being yard crews - their capacity for switching traffic within their operating yards and planning switching assignments for delivery of railcars to receivers serviced from those terminals.

Providing this visibility requires reporting on yard locomotive status by terminal. Understanding that there are "x" number of locomotives in the province of British Columbia for instance does not speak to whether the railway has enough locomotive resources in the Vancouver terminal versus Kamloops or Prince George or Prince Rupert in the case of CN.

Availability of locomotive resources was a prominent subject of discussion in the recent CTA investigation into service issues in the Vancouver terminal - an issue vigorously defended by CN during the hearing, confirming that the railway itself views this as a critical element of its ability to effectively operate within its terminals. This issue was also a prominent area of scrutiny during the 2017-18 grain year when CN experienced significant widespread service issues for much of the winter.

Given the prominence of this issue in recent years and the acknowledgement of the railways of the importance of this asset we believe that providing transparency on this aspect of railway operations is critical. We do not believe that railway confidentiality issues in this regard should outweigh the public interest value of providing this information.

Request:

1. Expand metric 3 to include reporting on locomotives, specifically in the following categories:
    a. total number of locomotives segregated between road and yard locomotives
    b. number of serviceable locomotives daily
    c. number of stored locomotives daily
    d. number of bad ordered locomotives daily.
2. Locomotive data along with the cars on line data should be reported on the following geographic basis:
    a. on a system basis (yard and road)
    b. by province (yard and road)
    c. by terminal (yard) – at a minimum this should be reported for the same terminals that dwell times (metric 2) are reported.

Question 6: Would it be helpful to extend beyond the number of cars online, and examine the use of these cars (and possibly locomotives) over the week (for example, by reporting on average car-kilometres and locomotive-kilometres)?

Response:

Distance travelled whether by locomotives or freight cars is neither a measure of service performance nor capacity but rather a measure of railway operational efficiency.

We do not believe adding metrics in this area would yield value with respect to providing insight into railway network health or service performance.

Question 7: Would it be useful to measure the average weight per freight carload using a similar breakdown as metric 3?

Response:

Average weight per freight carload is neither an indicator of railway service performance nor of railway network health. It will identify changes in fleet productivity – i.e. increased payloads – and will be driven by changes in commodity mix and fleet renewal.

We do not believe adding metrics in this area would yield value with respect to providing insight into railway network health or service performance.

Question 8: Should the metrics include STB metric 11 (carloads originated and received in interchange, by commodity)? If so, are there other commodities you would like to capture under metric 11? Are there commodities in Canada for which reporting weekly carloadings could reveal sensitive shipper information? How could we address this challenge (e.g., by reporting on multiple commodities together)?

Response:

The value of this metric is questionable from the perspective of shedding light on railway service performance, network health or system capacity. Like other such metrics, looking at long term trends may show how activity levels are changing on the railways' networks but they will not likely shed meaningful light on service performance or network health because it is impossible to know what is driving this number. It can be as simple as changes in demand for railway service – whether up or down – but that is not going to tell you how well the system is performing.

Other system stakeholders and industry sectors may see value in the inclusion of this metric.

Question 9: Should metric 11 include a geographic component? If so, what would be the best approach (corridor-based, by province, or other)? What confidentiality concerns could this create, and how could we mitigate them?

Response:

See response to question 8 above.

Question 10: Is the current list of train types and commodities for metrics 1 (system-average train speed), 5 (number of trains holding per day), and 6 (number of cars unmoved in 48 hours or more) appropriate to the Canadian context? Are there any train other types or commodities we should capture?

Response:

Cars Unmoved in 48 Hours or More (Metric 6)

The table below shows, based on the initial 19 weeks of reporting for this metric the percentage breakdown of loaded and empty cars by commodity type. As the table shows the "other commodities" grouping represents the most significant segment of the population for both loaded and empty cars on CN and the second largest segment of loaded cars and largest segment of empty cars for CP.

Percentage Breakdown of Weekly Average of Cars Not Moving

	Loaded		Empty	
	CN	**CP**	**CN**	**CP**
Automotive	2%	1%	2%	0%
Coal	1%	0%	2%	0%
Crude oil	2%	2%	1%	1%
Ethanol	0%	0%	1%	0%
Fertilizer	4%	22%	4%	11%
Grain	21%	47%	6%	16%
Intermodal	2%	1%	0%	0%
Manifest	0%	0%	0%	0%
Other commodities	66%	26%	59%	32%

While the grouping "manifest" is included in the data published for this metric this is inappropriate as this refers to a train type and not a commodity type as the measure requires; to date neither CN nor CP have reported anything in this category for this measure.

Major commodity groups including forest products and ores, minerals and metals are not represented distinctly in this metric despite representing 7% and 17% of total CN carloads and 3% and 9% of CP carloads for 2018.

Request:

1. Remove manifest as a commodity designation from this metric;
2. Include commodity groupings for forest products and ores, minerals and metals or more specific sub-segments within these commodity segments as appropriate based on input from these industry sectors.
3. Report distinctly on canola oil and meal, removing these commodities from the current grain definition.

4. Expand measurement definition to provide additional details with respect to which commodities or commodity sub-groups are included under each of the commodity groupings – e.g. forest products = lumber, pulp, paper, panel board, etc.

Question 11: Should metrics 1, 5, or 6 include a regional component? If so, which regions or corridors should we capture? Are there specific segments or corridors we should break out for metric 1 reporting in particular, which are key to your industry and will remain important to monitor over time?

Response:

Geography is a critical dimension for these metrics to provide insight into regional issues and potentially developing issues before they spread and become identifiable in the system metrics. The problem presented by "system level" performance data for each of these metrics is that it can mask developing local or regional issues in their early stages. Once system level metrics reflect deteriorating performance it is more likely than not that the entire rail system has begun to deteriorate, and service issues have become well entrenched in railway operations. The inability to detect performance issues until they reach this stage greatly diminishes the potential effectiveness of these measures.

It is important however, to consider how the geography is defined for each metric and recognize that a single geographic definition is likely not appropriate for all measures due in part to potential confidentiality issues and the differences in market structures.

In the railway industry the term "corridor" is used in various contexts and means different things to different people – e.g. destination corridor versus physical rail corridor. Currently ATC measures loaded cars not moving for 48 hours or more based on destination corridor. The data is further disaggregated to identify at which network location cars are not moving – specifically at origin, en route, or at destination. Thus, the data is grouped based on where cars are destined (corridor) and where within the network they currently reside (origin, enroute, destination). Additionally, ATC can identify the specific railway stations where "idle" cars are located – e.g. Saskatoon, Edmonton, Jasper etc. – which provides valuable information but may not necessarily be appropriate for public dissemination given the number of locations involved and potential confidentiality issues if specific origin locations are divulged.

Train Speed

The train speed metric, if sufficiently disaggregated can provide valuable information in signalling a slowdown or recovery in network fluidity. This is not possible if performance in this area is reported only at the system level. Obviously not all trains are destination trains so segmenting based on destination corridor will make little sense. The most detailed view one could have is by subdivision but for this view to be meaningful stakeholders would need to understand the physical construct of the network and equally importantly the relative operational significance of any given subdivision to network operations.

For example, declining train speeds on CN's Edson subdivision which runs from Edmonton to Jasper – the highest density subdivision on CN's network – would be more significant to the overall health of the network than declining train speeds on CN's Manning subdivision which runs from Roma Junction to High Level in northern Alberta. Having said this the fluidity of the Manning subdivision may be very important for certain traffic originating in this region.

An important distinction for train speed measures as it pertains to network health and ultimately service performance is whether trains are operating on mainlines versus secondary or branch lines. This segregation would be important and appropriate for reporting performance in this area.

Trains Held

Trains delayed or held, like train speed would not fit easily into a destination corridor segmentation for the reason stated above. In this instance the same geographic segmentation as proposed for train speed would be appropriate here, namely – mainline versus non-main line.

Cars Not Moving

This metric would benefit from a more detailed geographic segmentation than the train speed or trains held metrics. Cars, whether loaded or empty, can become idle for extended periods of time for various reasons including:

- local train and yard operations are distressed resulting in loaded or empty cars sitting at origin regardless of their destination;
- mainline train operations are disrupted resulting in cars being set out on line or sitting for extended periods of time in rail yards
- destination terminals – e.g. Vancouver – or interchanges have issues and the railways are holding back traffic to avoid creating congestion on line or adding to existing congestion in the destination terminal and therefore allowing cars to sit at origin locations.

Empty cars are more problematic to report by destination corridor as these cars are moving toward loading points across the network that do not necessarily fit into manageable corridor definitions. Furthermore, depending on the car type – i.e. private versus railway controlled – cars may be initially destined to distribution hubs across the railways' networks where they will subsequently by directed to their final loading points.

Request:

1. Report average train speed data by system and province segregated between mainline and non mainline operations.
2. Report trains held data by system and province segregated between mainline and non mainline operations.
3. Report **loaded** cars not moving by:
    - system
    - province
    - destination corridor – specifically
        i. Vancouver
        ii. Prince Rupert
        iii. Thunder Bay
        iv. Eastern Canada
        v. Western Canada
        vi. USA via western gateways
        vii. USA via eastern gateways
    - network location (origin, enroute, destination)
4. Report **empty** cars not moving by:
    - system
    - province
    - network location

Question 12: Would it be helpful to include additional metrics, such as car cycle times? If so, how should car cycle times be calculated and reported? Which commodities and corridors should we capture? What practical or reporting challenges could this create for railways?

Response:

Car cycle times are a good metric to understand asset utilization and by extension can provide insight into how well the railway network may be operating. When the rail network is operating at its best car cycles will be at their lowest and vice versa.

Car cycles are an established and long-standing tool used by railways to both plan their fleet requirements on an annual basis and to assess asset utilization on an ongoing basis. Historically railways calculate cycle times based on fleet definitions (car types) as opposed to commodities although they do as part of annual planning activities associate car types to individual commodity groups specifically to be able to gauge the fleet requirements for those car types that are interchangeable across different commodities – e.g. boxcars.

Methodology is the challenge and it may be different for railway common fleets versus private shipper fleets. Traditionally the railways calculate cycle times for railway owned or controlled cars using a "sum of segments" methodology. In other words, loaded and empty car movements are broken into segments including origin loading time, loaded transit, destination unloading and empty transit. Calculating cycle performance for a given time period is done by identifying each segment that completes for a given car type within a selected corridor (origin – destination) and dividing the total car days for each segment by the number of trips or cars for that segment to calculate the average time for that segment. This calculation is done for each segment in the cycle and the average of each segment is added to arrive at a total average cycle time for the fleet or car type in question.

Railways do not, as a matter of course, calculate cycle performance for private shipper fleets because the movement of these cars is effectively controlled and directed by their owners (shippers). For such fleets it is more common to calculate cycle performance for each car individually and then take the average of all cycles in total or within individual corridors.

The inclusion of car cycle measures is important for stakeholders to understand the utilization of car fleets as this can be an important indicator for other areas of performance such as order fulfillment performance for railway supplied cars. This metric is particularly important for shippers operating private car fleets as railway performance in this area has a direct impact on the efficiency of their logistics chains and their return on investment. For consistency, cycle performance should be measured using a single methodology for both railway controlled and private cars.

Request:

- create car cycle performance measure for railway controlled and private car fleets;
- report cycle performance by fleet, commodity and origin-destination province;
- report cycle performance for railway controlled and private car fleets separately;
- include in reporting both average cycle times and the number of cycles measured for each car type / commodity / corridor combination;
- report performance monthly
- establish appropriate threshold for reporting purposes – e.g. minimum number of cycles per month for a given car type / corridor combination

Question 13: Would it be appropriate to capture some additional measures beyond train speed, such as average train length, the number of trains operated and the average train-kilometres? If so, which one(s) would be most essential in understanding performance?

Response:

Understanding average train length and the number of trains operated can provide good contextual information at a minimum regarding network operations and potentially in combination with other metrics insight into performance. The railways are very public, and consistent, in their comments regarding the need to operate shorter trains during cold weather in winter. There is however no publicly available evidence that their operating practices mirror their comments. Adding metrics for the number of trains operated and the average length of those trains would provide that evidence and provide transparency into railway network health and service, particularly during the critical winter months which traditionally experience poorer service than at other times during the year.

Number of Trains Operated (train starts)

This metric should be distinct from the requested contextual data regarding the average train speed measure. While train starts can be driven by factors other than network fluidity such as changes in traffic volumes it is, particularly during the winter months, an important gauge of whether the railways are operating at a consistent level.

If implemented this metric should be done with the appropriate geographic segmentation for all train types including so-called local trains which are currently excluded from average train speed metrics.

Average Train Length

Average train length is a complementary measure to the train starts or trains operated metric. This metric is currently reported by CP as part of its annual report, albeit at a very high level of aggregation. For railways this is seen as an efficiency measure however in this context it can provide meaningful insight as to how train operations are changing throughout the course of a year – particularly during winter months when railways cite the running of shorter trains as key to maintaining operational efficiency and fluidity.

Consistent with the trains operated metric this metric should be done with the appropriate geographic segmentation for all train types.

Regional Reporting

Regional reporting for these two metrics should be established on the same basis. Trains originate in multiple locations across the railways' network and capturing train starts by individual location is impractical. Reporting based on system and province would be suitable and consistent with the regional reporting sought for train speed measures.

Request:

1. Report average train length and number of trains operated for all trains segmented by train type consistent with average train speed measures.
2. Report data segmented by system and province.

We see no value in reporting average train kilometers as this will not shed light on network health or service performance.

Question 14: Would it appropriate to capture the average length of haul?

Response:

Average length of haul much like average train kilometers will be driven by changes in shipment patterns and while they may coincidentally align with a decline in railway performance the metric in and of itself will yield little if any information with respect to service performance or system health.

We see no value in adding a performance measure in this area.

Sec. 3.6.2 Transitional Metrics – Dwell Time Metrics

Question 15: For metric 5, are there additional causes to include? Should railways be able to report multiple causes? Should we standardize the length of hold under metric 5? If so, what would be an appropriate threshold?

Response:

Reporting for this metric through the initial 19 weeks shows that on average trains held for "other causes" represent 92% of cases for CN and 83% of cases for CP with the remainder attributable to crew and locomotive delays. Such a disproportionate grouping in combination with a lack of geographic information as to where trains are being delayed significantly diminishes the value of this measure.

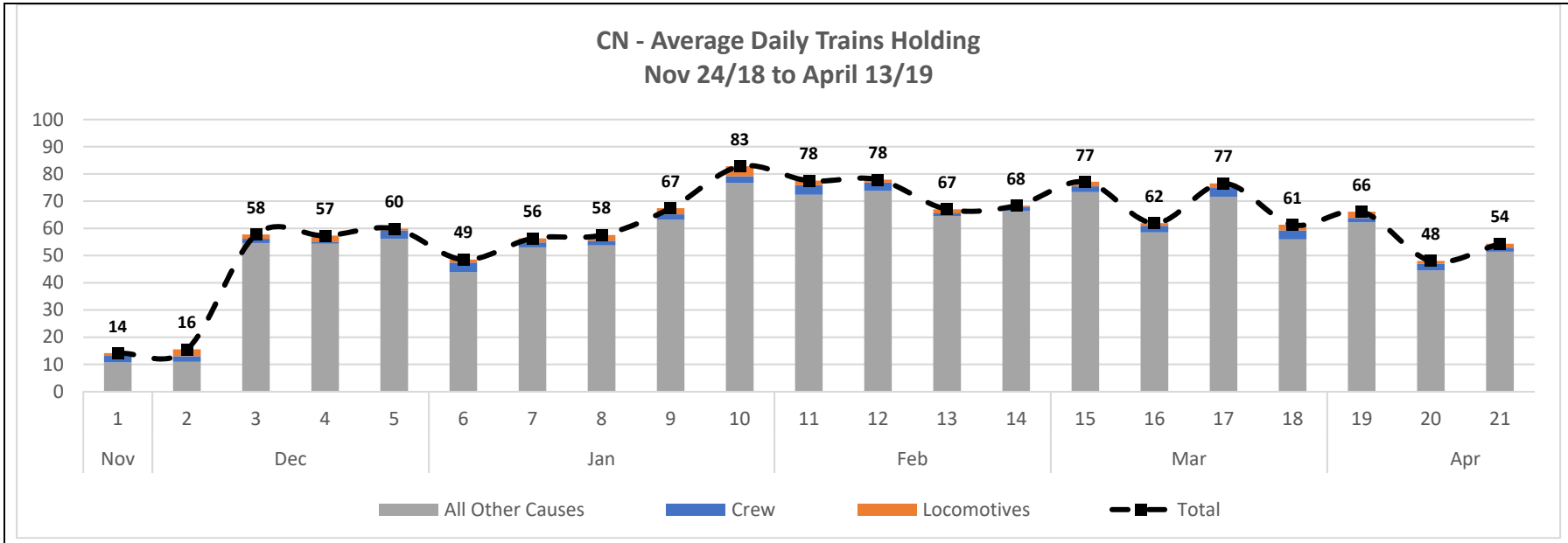
Train delay reasons should be expanded beyond the existing reasons for crews and locomotives to include the following:

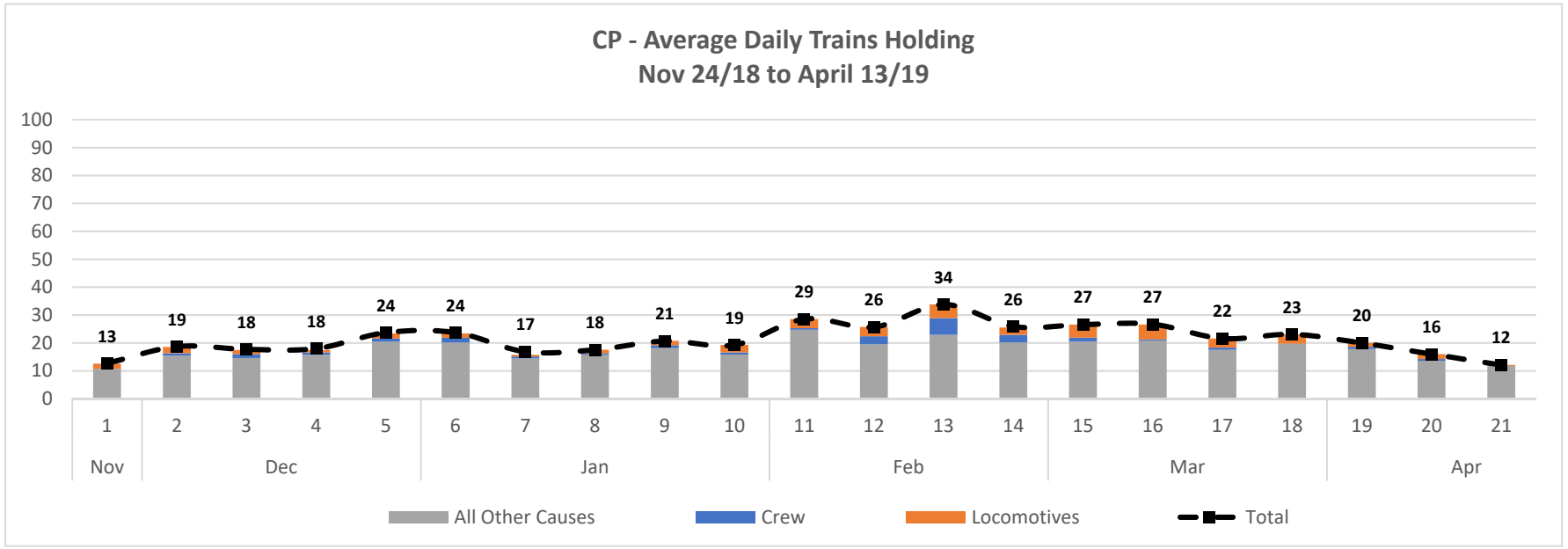
- engineering work / track maintenance;
- mechanical failure (freight cars);
- service / network disruption (including weather)

The threshold for reporting delays should be standardized across railways. The STB had initially defined this metric with a threshold of 6 consecutive hours although this was eliminated in the final rule publication. Currently STB reporting is based on no identified threshold. During the STB process railways argued that even a 6-hour threshold would capture trains held as part of normal operations and that this would be misleading and result in false indicators of service problems. The STB dismissed this argument stating that while it recognized that trains held within that context will be captured under this metric *"… the data will provide value over the course of time by allowing the agency to monitor trends and spot aberrations."*

Based on current methodology statements published by CN and CP, CN uses a one-hour threshold and CP uses a six-hour threshold. While we cannot conclude with certainty to what extent this difference in reporting threshold influences the difference in the number of trains held being reported by CN and CP the data do clearly show that through the initial 21 weeks of reporting CN on average reports 3 to 4 times as many trains held per week than does CP. (see charts below). Drawing meaningful conclusions from this data is further complicated by the fact that the data is not normalized – i.e. we do not know what percentage of trains operated are being reported as held by each railway.

A case can be made for either threshold being appropriate although recognizing that the STB decided that all delayed or held trains should be reported regardless of elapsed time it is reasonable for Transport Canada to adopt the same threshold and require all reporting railways to report on this basis.


CN - Average Daily Trains Holding
Nov 24/18 to April 13/19
100
90
80
70
60
50
40
30
20
10
0
14
16
58
57
60
49
56
58
67
83
78
78
67
68
77
62
77
61
66
48
54
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
Nov
Dec
Jan
Feb
Mar
Apr
All Other Causes
Crew
Locomotives
Total


CP - Average Daily Trains Holding
Nov 24/18 to April 13/19
100
90
80
70
60
50
40
30
20
10
0
13
19
18
18
24
24
17
18
21
19
29
26
34
26
27
27
22
23
20
16
12
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
Nov
Dec
Jan
Feb
Mar
Apr
All Other Causes
Crew
Locomotives
Total

Request:

1. Establish a common threshold for all reporting railways for measuring trains delayed
2. Enhance train delay reasons to include:
    a. engineering work / maintenance
    b. mechanical failure (freight cars)
    c. service / network disruption
3. Enhance reporting by requiring the reporting of "percent of trains operated held" in addition to the absolute number of trains held.

Question 16: Would it be helpful to include the cause of holds under metric 6? Should a regional or corridor aspect be reflected in this metric?

Response:

Railways likely do not have in place internal processes to identify the reasons associated with the non-movement of cars for 48 hours or more and would see the need to do so as imposing a significant burden on them. They would be correct in this regard and there is little value to be derived from a broad categorization of "delay reasons" around cars not moving. In this instance the value provided from this measure is in understanding the change in the number of cars, either loaded or empty that are not moving in a timely manner and where on the rail network cars are not moving.

Having said this, while a rise or decline in cars not moving will provide insight into potential impacts on network fluidity the publication of this metric using only absolute values results in:

a) the inability to know if the increase or decrease in the number of cars not moving is coincident with changes in traffic levels but does not necessarily reflect a proportional change or a signal that the health of the network is changing whether for the positive or the negative.
b) the inability to compare the performance or relative health of the railways given that the absolute number of cars not moving is not linked to volume levels and changes in those levels over time.

This issue can be resolved by enhancing this measure using normalized data **in combination** with the absolute data currently published. This would entail reporting the percentage of total cars on line – including by geographic region - not moving for 48 hours or more. Using this approach would allow users to understand if increases in cars not moving are disproportionate with changes in overall traffic levels and would provide a good basis for comparing the performance of the railways.

The inclusion of a geographic element is required to provide the necessary insight as to where problems may be occurring or developing. See response to Question 11 above regarding the appropriate geographic segmentation.

Request:

1. Report cars not moving based on the geographic / regional segmentation identified in the response to Question 11 above.
2. Enhance reporting of this metric to include, in addition to the existing absolute count of cars, the percentage of total cars on line not moving for loads and empties separately, by commodity grouping, by geographic segmentation.

Question 17: Are there other metrics to include that would provide more insight into network capacity and performance?

Response:

Other than those items identified in direct response to preceding questions the single most important metric to be added is order fulfillment. Please see the response to question 28 for a full discussion of this issue.

Question 18: Is reporting based on terminal size (based on throughput) the most appropriate way to identify which terminals are captured under metric 2, weekly average terminal dwell time? Should the metric capture more or fewer terminals? Are any key terminals not currently captured?

Response:

Based on the methodology statements published by the railways, terminal dwell time is calculated for the ten (10) largest terminals on their Canadian networks based on the number of cars processed. Only the reporting railways know the extent of coverage that reporting on these ten terminals provides. In other words, whether the measure as currently defined is capturing 50%, 70%, 90% of terminal throughput.

Different terminals will have varying degrees of relevance for different industry sectors regardless of their size. The fact that a rail yard or terminal is not one of the ten largest on the railway's network does not mean it is not of critical importance to shippers based on the location of their production facilities or their traffic flows.

Determination of whether additional or different terminals should be included in reporting would best be achieved by having the railways provide a list of their respective top 20 terminals across the country along with the average weekly throughputs by commodity for each to allow stakeholders representing individual industry sectors to determine which if any additional terminals should be included in the measures.

Intermodal

While CN distinctly identifies and measures dwell time for its Brampton Intermodal terminal it is not clear based on the published methodology whether all other terminals reflect solely carload traffic or a combination of Intermodal and carload traffic. This is also true for CP. CN has thirteen (13) Canadian Intermodal terminals while CP has seven (7) in Canada. Intermodal operations are usually distinct from railway terminals that process carload traffic and should be measured distinctly. They are a critical operational component of the railway for grain and other commodities representing 44% and 38% of CN and CP carloads respectively in 2018.

Contextual Data

Simply reporting average dwell time for a terminal without context reduces the effectiveness of this metric and runs the risk of having stakeholders draw incorrect conclusions from the data. To enhance transparency average dwell times should be published in conjunction with the number of cars and intermodal units (containers/trailers) measured.

Performance Standard

Similarly, the absence of a performance standard for comparing actual dwell performance limits both transparency and the understanding of stakeholders when viewing the data. As noted in our introductory statement to this questionnaire response, dwell time is a function of scheduled train arrivals and

departures, train connections and local switching assignments. Given that these activities are all scheduled there exists the basis from which to create a performance standard for terminal dwell.

Request:

1. Implement terminal dwell time measures for CN and CP intermodal terminals for traffic connecting through these terminals measured using parameters and rules consistent for the measurement of carload traffic contained in the existing methodology. Intermodal traffic should be measured on a unit (container) specific basis and segregated into sub-commodity groupings – e.g. grain, forest products, consumer goods, etc.
2. Identify additional carload terminals to be measured based on shipper input to the Transport Canada consultation process based on car throughput data to be provided by the railways for the top 20 terminals for each railway.
3. Enhance performance reporting for terminal dwell (carload and intermodal) by including the number of units (carloads / containers) underlying the reported performance.
4. Establish a performance standard for dwell for each terminal included in performance reporting.

Question 19: Should metric 4, weekly average dwell time at origin, include reporting by geographic region, such as by province? Would this create any confidentiality concerns for certain commodity types? Additionally, should metric 4 be expanded to report dwell time for cars other than unit trains.

Response:

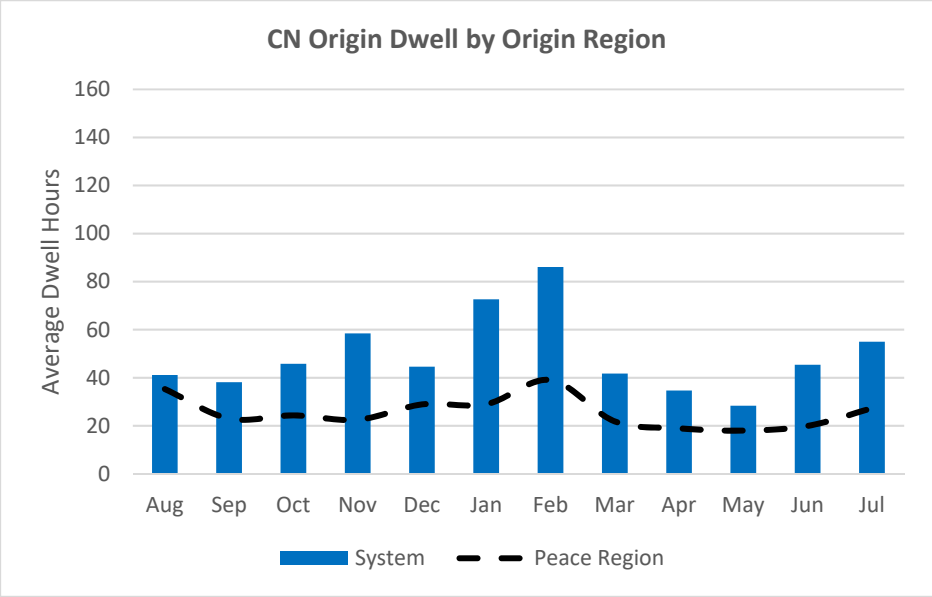
Yes, origin dwell measures should include reporting by geographic region.

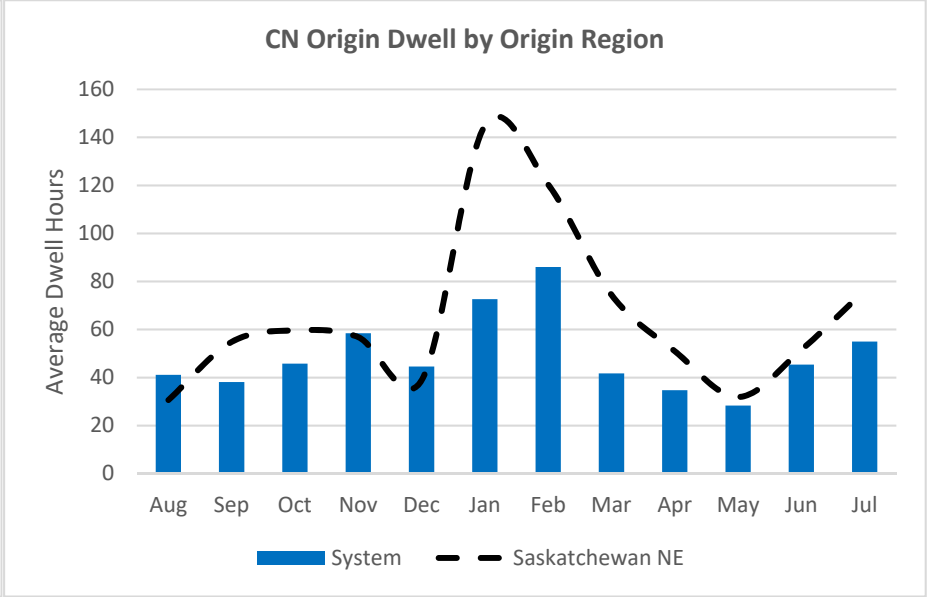
No, confidentiality should not be an issue in adding more detail to the information provided.

Regional Reporting

Reporting of origin dwell time on a regional basis is important to provide visibility on service quality across the rail networks. The charts below provide a good illustration of why this is important. These charts show average monthly dwell time for ATC shippers in the Peace Region and NE Saskatchewan as compared to the overall system average for the 2017-18 grain year. While arguably trends are similar the absolute performance from region to region can be significantly different.

As we can see origin dwell times in the Peace Region were consistently lower than the system average. By comparison average dwell times for shippers originating in northeast Saskatchewan were generally higher and materially so during the January – March period in 2018 when CN's service issues for the grain industry were the most severe.





For the grain industry there are currently two similar, albeit slightly different, regional definitions published by the Grain Monitor and the Ag Transport Coalition for performance measurement. ATC regional definitions are slightly broader in some cases and regions are not identical for each railway because ATC regions were designed for individual shipper and industry reporting and thus designed to ensure confidentiality of shipper data for a relatively concentrated population. The current regional definitions used in these two reporting streams are summarized in the table below.

Origin Region	Grain Monitor	Ag Transport Coalition	
	(CN & CP)	CN	CP
Manitoba		Y	Y
Manitoba East	Y		
Manitoba West	Y		
Saskatchewan South		Y	
Saskatchewan North			Y
Saskatchewan SE	Y		Y
Saskatchewan SW	Y		Y
Saskatchewan NE	Y	Y	
Saskatchewan NW	Y	Y	
Alberta Central		Y	Y
Alberta North	Y		
Alberta South	Y		
Peace Region	Y	Y	

While these regional delineations were developed specifically for western Canadian originated grain, we believe they would be suitable for other commodities as well. Our recommendation would be to use the Grain Monitor regional definitions principally because they are consistent across both railways.

With respect to other commodities we believe that Transport Canada should seek input from shippers in those sectors to define the appropriate regional definitions for performance reporting. However, as a starting point Transport Canada should consider the following definitions in addition to the regions defined in the table above.

The proposed regional definitions, if adopted, will need a more precise definition at a station level.

Province	Region
British Columbia	BC South
	BC North
Ontario	Ontario South
	Ontario North
Quebec	Quebec North
	St. Lawrence Region
	Montreal / South
New Brunswick	New Brunswick
Nova Scotia	Nova Scotia

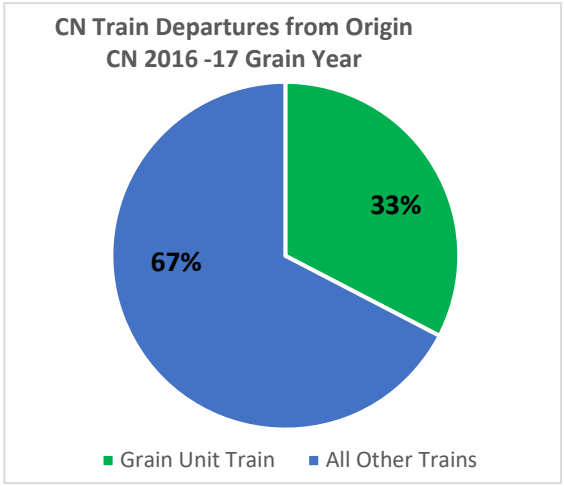
In addition to segmentation by origin region there is value in understanding origin dwell performance by destination corridor as this view can be instructive to stakeholders. In this regard we propose using the destination corridor definition provided in our response to question 11 pertaining toto metric 6 – cars not moving for 48 hours or more.

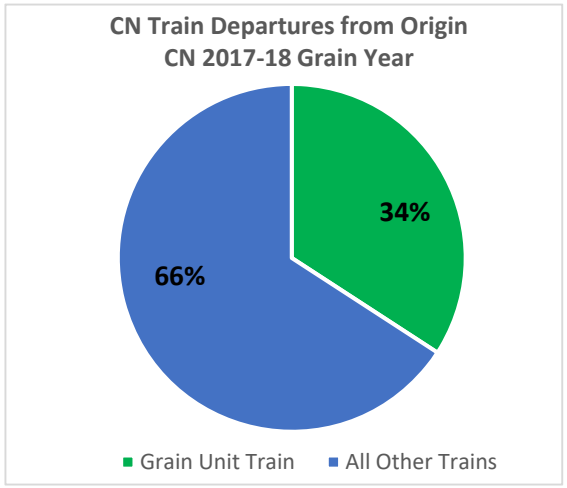
Expanding Beyond Unit Trains

Yes, origin dwell measures should be expanded to include all traffic and not limit this metric to traffic originating on a unit train.

Dwell time at origin is a rail car issue and not a train issue. Other than in selected business sectors such as coal, sulphur and potash, unit train operations are not the principal train service type at origin. This is true for most of the railways' carload business including grain. Limiting this measure to traffic that originates on unit trains results in the omission of significant segments of railway traffic both within individual sectors such as grain and potentially omits traffic for entire sectors such as forest products.

In examining this specific issue, a recent ATC study looked at the train types that originate grain traffic on CN's network for ATC shippers. The study looked at ATC shipment data for 393,000 CN originated rail car shipments for the 2016-17 and 2017-18 grain years. For each of these shipments, movement records were analyzed to identify the train id reported by CN at the initial departure from the origin station. The charts below summarize the findings of the analysis.





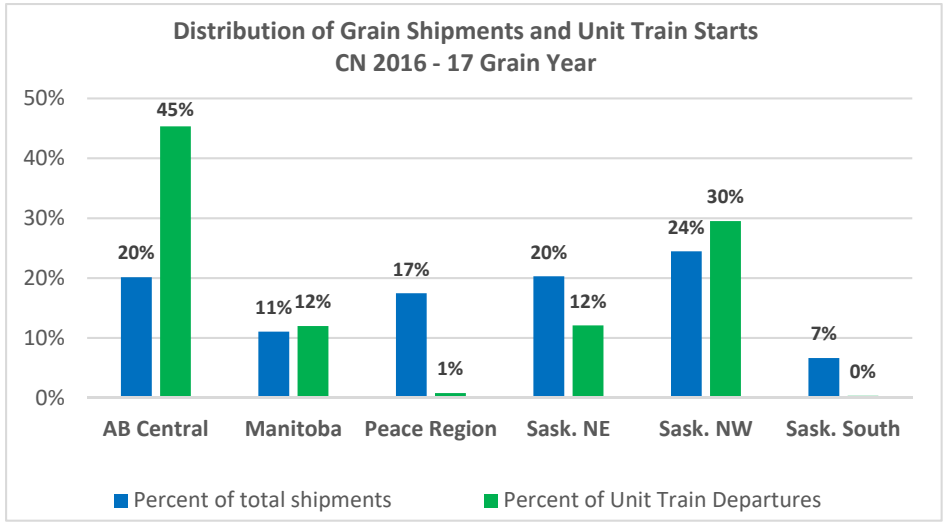
As the charts show "G" series unit trains – those currently included in transitional performance measures based on CN's published methodology - represented only 33% of all origin train departures during this time period or approximately 131,000 of 393,000 total trips. As such, based on the current methodology used by CN fully two-thirds of all CN grain traffic for this shipper group is currently omitted from origin dwell measures.

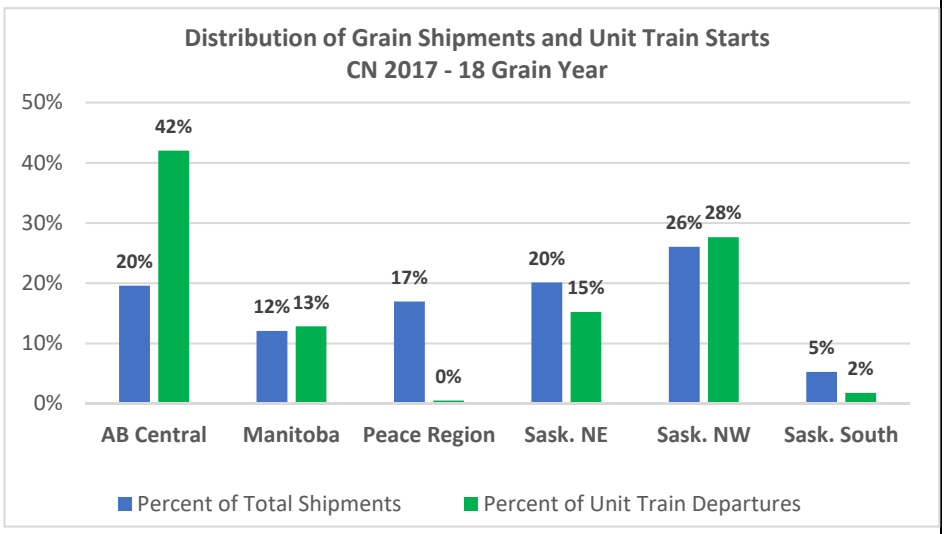
While restricting this measurement to unit trains will affect small to medium sized shippers disproportionately because they do not ship in unit train lots, the data show that significant portions of traffic will also be omitted for the largest grain shippers who ship in less than unit train lots and even unit train shipments that do not originate on a designated unit train. A significant portion of full train shipments originate at origin on CN 500 series trains (local) and subsequently move to destination on a "G" series train with that train originating at a rail yard beyond the origin. However, because they do not depart origin on a designated unit train the current definition would exclude them from the measures.

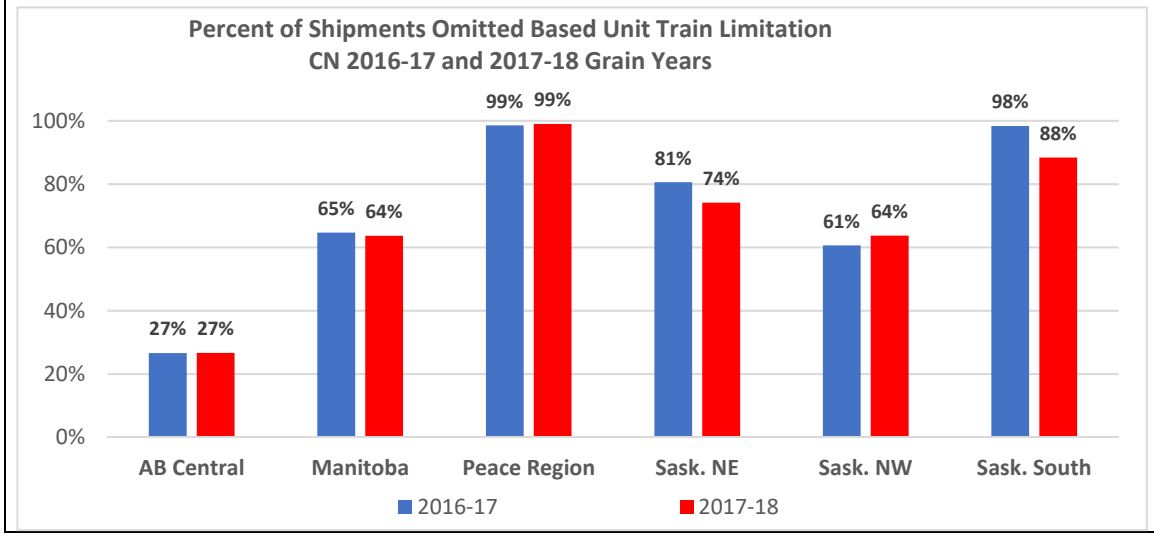
It is equally important to understand the effect of limiting origin dwell measurements to unit trains on the ability of the measures to provide a representative view of performance across the railways' entire networks. To assess this our analysis looked at the same 393,000 trips grouping the trips into six (6) origin regions. The percentage of total trips and unit train originations was then calculated for each origin region. The charts below summarize the findings of the analysis.

As can be seen in the charts below limiting origin dwell calculations to unit trains does not provide a representative view of performance across the entirety of CN's Western Canadian grain network. Notably:

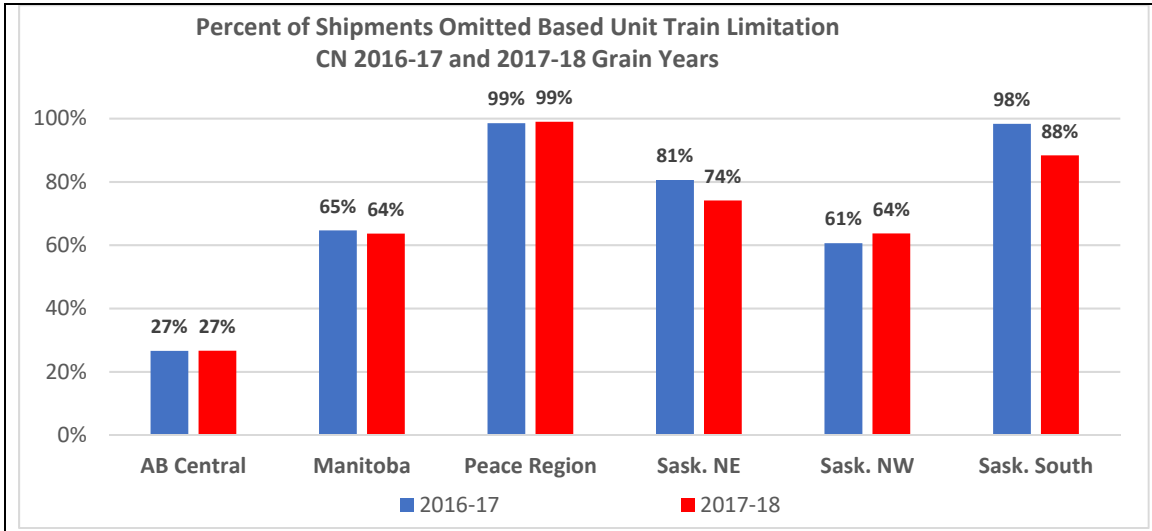
- CN's Alberta Central region while representing only 20% of total grain shipments for CN accounted for 45% of all unit train originations;
- Peace Region and southern Saskatchewan origins while representing 22-24% of total CN shipments account for less than 1% of all unit train originations on CN's network.







Therefore, based on the current definition for the measurement of origin dwell not only will two-thirds of all CN traffic be omitted from this measure there will be significant gaps across the railway network and more regions than not on CN's network will not see most of the traffic represented in this metric. A comparable analysis for CP is not possible because ATC does not have in its data train id information for CP movements. However, based on ATC shipment data it is estimated that limiting origin dwell performance measures will omit a minimum of 17% of CP grain traffic from the measures.



This will disproportionately affect small and medium sized shippers that ship in less than unit train lots and that do not participate in CP's Dedicated Train Program.

Request:

1. Revise the definition for metric 4 to require the measurement of dwell time for all loaded traffic regardless of train type.
2. Implement performance reporting by region as follows:
    a. system
    b. province
    c. origin region (regional definitions to be confirmed through shipper consultation)

Question 20: Should metric 2 include reporting by commodity type? If so, why? How might this be helpful for shippers? Would this create any confidentiality concerns and/or practicality issues with reporting?

Response:

Yes, reporting railway terminal dwell time by commodity type would be a very useful enhancement to the existing metric. Having visibility at a commodity level will allow users to understand whether cars carrying certain commodities are dwelling longer than others and in combination with regional reporting, where this may be occurring.

Commodity based reporting should use the standardized commodity groupings identified in the introductory section of this document.

Request:

1. Add reporting by commodity group based on a standard commodity group definition to be used for all metrics reported on a commodity basis. (see proposed commodity groupings in introduction to questionnaire response)
2. Require the publication of intermodal terminal dwell times for intermodal traffic segregated into sub-commodity groupings – e.g. grain, forest products, consumer goods, etc.

Question 21: Should metric 4 include reporting for weekly average dwell times at interchange? Would this be practical to report? Alternatively, is the other data collected in metric 5 (number of trains holding per day) and metric 6 (number of cars unmoved in 48 hours or more) a good enough proxy?

Response:

The issue of measuring dwell time for traffic at interchanges was considered in the STB rule making process upon which the current transitional performance measures are based. The STB initially considered adding an interchange component to this metric but ultimately decided not to track dwell time at interchanges.

The STB decision was based on concerns raised by railways that measuring the elapsed time at interchange would be difficult, because railways do not operate with a common understanding of when a train is considered "delivered" or "accepted" at interchange. In addition, railways do not share common practices for measuring elapsed time at interchange. The STB explained in its decision that it believed this additional information would not materially help the monitoring of service performance, in light of the other data it would collect, such as dwell at origin, terminal dwell, trains holding, and cars that have not moved in two days or longer.

Given the inconsistency in railway reporting practices for managing and notification with respect to interchange traffic we would recommend that dwell time for interchange traffic not be included in the measures.

Question 22: Should the list of train types by commodity in metric 4 reflect a different mix of commodities, and/or include other train types, such as intermodal and manifest trains? Is it beneficial to use a consistent list of commodities across the various metrics that report by commodity or train type?

Response:

As noted above in the response to question 19 **origin dwell measurements should be based on cars and not trains** in order to ensure the capture of the maximum amount of traffic possible across all industry sectors.

The expansion of this measure on a car-commodity basis should include the measurement of Intermodal traffic originating at Intermodal terminals. While an Intermodal terminal is not generally thought of as the "origin" station because Intermodal containers are moved from their loading point to the rail terminal by truck the terminal is the origin of the rail movement. Intermodal is a critical transportation mode for grain and other commodities and a significant operational component of the railway representing 44% and 38% of CN and CP carloads respectively in 2018.

Dwell time for Intermodal traffic originating at a terminal should be measured from in-gate of a container at the terminal until its departure from the terminal on a train. **The measurement must be based on the dwell times for individual containers**.

Request:

1. Require the publication of origin dwell times for Intermodal traffic at origin Intermodal terminals.
2. Require the publication of origin dwell times for intermodal traffic segregated into sub-commodity groupings – e.g. grain, forest products, consumer goods, etc.
3. Add reporting by commodity group based on a standard commodity group definition to be used for all metrics reported on a commodity basis. (see proposed commodity groupings in introduction to questionnaire response)

Question 23: Is measuring throughput through other key points or segments in the network important to your industry? Are there other indicators or geography to measure times and throughput at discreet points in the network that would be of specific use?

Response:

Question 24: Do you have any other suggestions for improving visibility into dwell time?

Response:

In addition to requiring the measurement of dwell performance for all loaded railway cars at origin and the reporting of performance on a regional and standardized commodity basis as noted in our response to questions 19 and 22, this measure can be further improved by providing contextual data, specifically the reporting of the number of units (rail cars and intermodal units) measured underlying the reported performance. For the measure to be meaningful and for stakeholders to be able to contextualize changes in origin dwell performance it is critical that they understand how many cars are included in the average dwell calculation.

Request:

1. Require the publication of the number of cars and Intermodal units measured in the calculation of origin dwell in each instance.

Sec. 3.6.3 Transitional Metrics – Cars Loaded and Billed, and Order Fulfillment Rates

Question 25: Which grains should be captured in metric 7 (weekly grain cars loaded and billed by province) and metric 8 (grain car order fulfilment)?

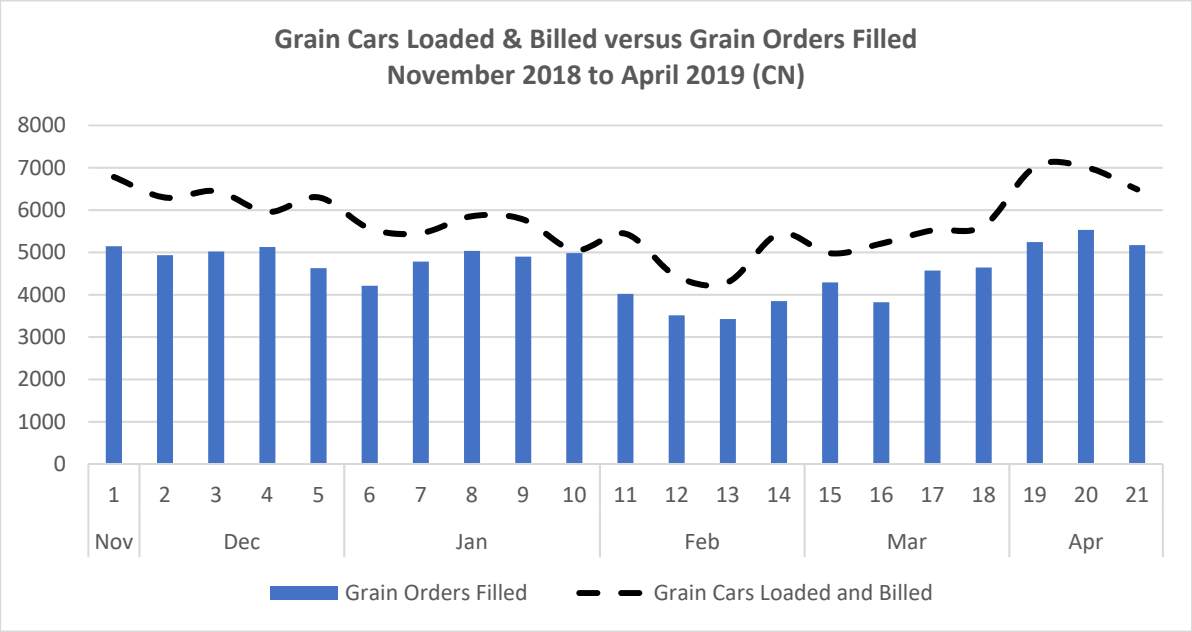
Response:

CP's published methodology for this metric defines grain as per "the Canada Transportation Act (S.C. 1996, c.10, Schedule II (Sections 147 and 155), Grain, Crop or Product. Both methodologies refer to specific STCC (Standardized Transportation Commodity Code) lists. Based on Schedule II of the Canada Transportation Act this definition for grain would include canola oil and meal.

There is little doubt that all the products identified in Schedule II must be included in service and performance reporting however a case can be made that canola oil and meal shipments should be reported on distinctly.

Metric 7 – Grain Cars Loaded and Shipped

This measure as currently defined includes all commodities contained in Schedule II and all cars loaded whether railway controlled or private cars. As currently constructed this measure lacks the required transparency and can be confusing to stakeholders, particularly when viewed alongside metric 8 – grain orders placed and filled. The chart below reflects reporting by CN since November 2018 for these two metrics.



As we can see there is a significant difference between the number of cars reported as loaded and billed as compared to the number of grain orders filled. This is principally because the cars loaded and billed metric would include traffic moving in private cars and presumably shuttle train movements in railway controlled cars neither of which use the railway's car ordering process and thus would be excluded from the orders filled metric.

For clarity this metric should be de-constructed to reflect the number cars loaded and billed by commodity sub-group and car type. This would provide stakeholders with a clearer view of grain performance particularly when looking at other grain metrics.

Metric 8 – Grain orders placed and filled

This metric should reflect only those grains where shippers place orders with the railways through their grain car ordering systems.

Regional Reporting

For both metrics 7 and 8 measures are currently reported on a system basis and by province. We are of the view that this measure would benefit from a further disaggregation of current geographic reporting to include publication of measures by origin region and destination corridor. Definitions for these regions and corridors should be on the same basis as outlined in our response to question 19 above.

Destination corridor data for grain orders placed and filled is available for all orders placed through the railways' car ordering systems as well as for all grain cars loaded and billed as this is based on destination included in the billing documentation submitted by shippers.

Request:

1. Remove canola oil and meal from the current grain definition for metric 7.
2. Create new commodity groups for metric 7 called "Canola Oil" and "Canola Meal"
3. Add reporting dimension or metric 7 to segregate cars loaded and billed by "railway-controlled" and "private" cars
4. Enhance regional reporting by adding reporting by origin region and destination corridor for both metrics 7 and 8.

Question 26: Could other service and performance metrics (such as metric 11) adequately capture the information on grain car supply currently reported under metric 7? If so, what changes would we need to make to ensure they are useful?

Response:

For clarity, metric 7 – grain cars loaded and billed – is not a measure of grain car supply as referenced in the question above. It is rather a measure of the number of grain cars loaded and billed or released to the railway for movement. As discussed in our response to question 25 because it includes private cars and commodities such as canola oil and meal it is not, in its current form, a realistic portrayal of "grain car supply" as that is commonly thought of in the grain industry. The term "car supply" in the grain industry is commonly understood to reference the supply of railway owned or leased rail cars for grain excluding private cars unless those cars are operating under a specific railway program such as CN's Fleet Integration Program (FIP) where they are managed and distributed as part of the railway's common fleet.

Replacing metric 7 with metric 11 would require the following changes to metric 11

- Grain traffic would need to be reported on the same commodity basis as identified in the response to question 25
- Originated traffic and traffic received in interchange would need to be reported separately.

  Not doing so would eliminate the principal benefit of a restructured metric 7 which is to provide visibility on the volume of grain being shipped from Canadian origins. Not reporting interchange traffic distinctly, in the absence of metric 7 would result in a misleading view of grain shipments due to the risk of double counting shipments in situations where one railway originates a movement and subsequently interchanges it to another such as traffic moving under the CN-CP co-production agreement in southern British Columbia.

- Commodity based reporting under metric 11 would need to clearly delineate between railway controlled and private rail cars

For these reasons we recommend retaining metric 7 with the proposed adjustments.

Question 27: Should metric 7 cover other commodities? If so, which ones? Would this create confidentiality concerns? If so, how could we address them? If metric 7 were to include a geographic component, what would be the most appropriate approach for this? Can we use the same geographic divisions for all commodities? Note: We ask shippers to address these questions for each commodity they propose to add to this metric.

Response:

We defer to other commodity groups to comment on the value of expanding metric 7 to include commodities other than grain.

Question 28: How should railways measure car order fulfilment? How should railways measure demand?

Response:

Order fulfillment is a critical measure of railway performance for those industry sectors that rely on the supply of railway owned or leased rail cars to move their products to market. We believe that this metric provides the clearest view of performance that freight shippers who depend on railway supplied equipment are receiving week in and week out.

Shippers plan their respective logistics operations based on expectations of rail capacity to be supplied by the railways and the timely supply and movement of such capacity. The lack of timeliness in car supply can create problems for shippers in both upstream production processes and downstream transportation processes. For grain shippers this may involve capacity issues at country elevators and at tidewater terminals. For forest products shippers the lack of timely car supply may result in the need to store product, such as pulp and paper products, outside of warehouses resulting in product handling and product degradation issues.

It is recognized that order fulfillment measures are not appropriate for all railway business segments, but they are critical for some. The STB declined to pursue this issue in 2016 because it was looking for a performance metric that was broadly applicable across much of the railways' business. Applicability across all commodity sectors or even for all the traffic within a given sector such as grain should not be a criterion in assessing the value of this metric or whether to proceed with its inclusion in service and performance reporting under Bill C-49. In its adoption of STB measures, including measures specific to the grain industry, Transport Canada effectively acknowledges that universality is not required for inclusion of metrics.

Measuring Demand

The issue of what constitutes demand has long been debated between shippers and railways. It is the position of grain shippers, and we believe shippers in other industries, that demand needs to reflect "true shipper demand" as opposed to demand accepted by the railways. These views of demand are fundamentally different because one represents the desire of the market to ship its commodities while the other reflects the railways' willingness to move those commodities within the capacity it is prepared to provide. In other words, so-called "railway demand" reflects constrained demand based on arbitrary capacity limitations imposed by the railways.

As such demand should be defined as follows for all industry sectors for which order fulfillment is to be calculated.

- Total car orders placed by shippers in the railways' car ordering systems on a weekly basis including any orders rationed or cancelled by railways
- Excluding orders self cancelled by shippers

Measuring Order Fulfillment

For order fulfillment metrics to be meaningful they must measure the timeliness of order fulfillment – measuring total cars ordered and supplied without context to timeliness does not accurately reflect the quality of railway service and the negative impact on shippers of not providing cars in a timely manner.

Specifically, performance should be calculated as follows:

Total Cars Supplied for a Want Week = % On time order fulfillment
Total Cars Ordered for a Want Week

CP DT Train Performance

Measuring order fulfillment performance for CP Dedicated Train (DT) shipments is somewhat problematic however, far from insurmountable. While ATC currently does this as part of its performance measurement program the ATC process involves a high level of shipper involvement on a weekly basis to ensure that the correct orders are reflected in demand for measurement.

This situation arises from the process currently employed by shippers to enter DT orders to CP's car ordering system – a requirement of CP - and most importantly the ongoing administrative management of these orders. Currently a number of DT shippers enter their orders into CP's car ordering system weekly but do not actively manage these orders in the system on a week to week basis to align the view of shipper demand for this service with the operational decisions being made week to week regarding the management of their logistics chains. This lack of active management, including the cancellation of surplus orders in a given week and the re-submission of those orders for a future week, results in an inaccurate picture of shipper demand on a week to week basis in CP's car ordering system – presumably the source for CP reporting of grain cars ordered. The ATC measurement process recognizes this and to ensure the accurate measurement of CP's performance in this area with respect to shipper expectations ATC actively engages with shippers on a weekly basis to correct demand to ensure the railway is only measured against demand that reflects the shippers' pipeline management requirements and expectations.

Measuring order fulfillment performance for DT shipments can be done accurately simply by ensuring shippers participating in this program actively manage their orders in CP's car ordering system which would be the basis for calculating shipper demand.

Contextual Data

To effectively provide insight into performance it is necessary to understand the absolute number of cars ordered and supplied. These values should be reported in conjunction with the calculated on-time performance.

Regional Reporting

Much like origin dwell measures, among others, regional reporting is critical to understanding if shippers are receiving an equivalent level of service across the country and by extension whether the rail system is performing as it should be. Order fulfillment performance and the accompanying data should be reported where applicable based on origin region and destination corridor.

Based on prior railway statements it appears as though destination corridor is only known for grain car orders as car ordering systems for other commodity groups such as forest products do not require shippers to identify destination when placing their orders. For sectors other than grain, performance should be reported by origin region if destination corridor data is not available.

Request:

1. Establish a performance measure for order fulfillment for all commodities that order railcars from the railways through traditional car ordering systems.
2. Report performance based on timeliness of order fulfillment weekly stated as a percentage success rate.
3. Include publication of contextual data for this metric, specifically the number of railcars ordered and supplied each week.
4. Provide regional reporting for all commodities where data is available by origin region and destination corridor.

Question 29: Is province by province reporting appropriate, or would another approach (such as by corridor) be better?

Response:

See response to question 28 above.

Question 30: Should metric 8 capture grain moving in non-manifest trains? If so, how? Should we use a version of the STB's metric 10 (grain shuttle turns per month)?

Response:

This metric should not be limited to grain traffic that will move in manifest train service as currently defined.

The manifest train service criteria / description established by the STB for this metric was intended to capture all grain traffic not moving in either unit train or shuttle train service which in the U.S. equates to grain cars ordered through traditional car ordering systems. This definition is not appropriate in the Canadian context. In Canada most grain cars, including CP Dedicated Trains, are ordered through the railways' car ordering systems regardless of the train service they move in. Exceptions to this would include grain cars moving in shuttle service and private car movements.

Despite the metric's current definition CN reporting to date under the transitional metrics appears to include all grain car orders placed and filled without consideration to train service. For CP the reported data for grain car orders placed and filled appears to exclude Dedicated Train orders which represent 85% of CP's grain business. This is inconsistent with CN's approach and more importantly makes it impossible to understand the success, or lack thereof, CP has in filling orders because the data represents only 15% of grain traffic.

Request:

1. Metric 8 should be expanded to capture all orders placed, filled and past due placed through the railways' car ordering systems without limitation based on train designation.

Question 31: Should the car order fulfillment metric (metric 8) cover commodities other than grain? If so, which ones? Would this create confidentiality concerns? If so, how could these be addressed? If you are interested in seeing a geographic component, what would be the most appropriate approach for this? Can we use the same geographic divisions for all commodities? Note: We ask shippers to address these questions for each commodity they propose to add to this metric.

Response:

Yes, per the response to question 28 above.

We do not believe that extending this to other commodities that order railcars through the railway car ordering systems poses any risk to confidentiality.

Question 32: Are there other metrics to include that would provide more insight into a railway's ability to meet demand?

Response:

Sec. 3.6.4 Transitional Metrics – Other Metrics

Question 33: Are there any other metrics of specific benefit to your understanding of service and performance that you would like to see in the regulations? Please provide as much detail as possible, including details of the proposed metric, the commodities to which it would apply, whether there may be issues with feasibility or confidentiality, and an explanation of the benefits you expect it would have.

Response:

The transitional performance metrics currently include the measure of average train speed. CN and CP define this metric as:

> *"…the line-haul movement from origin to destination. The average speed is calculated by dividing train-miles by total hours operated, excluding yard and local trains, passenger trains, maintenance of way trains."*

Currently this is only reported on a system basis, which limits its utility in identifying local or regional issues. Our response to this questionnaire identifies the need to have this metric enhanced by providing both regional reporting and adding contextual data (see Question 11). These changes may improve the value of this measure however that is unclear until we can see the data.

One of the shortcomings of this measure as an indicator of network health or fluidity is that it measures only traffic that is moving and excludes cars – both loaded and empty – that are not moving. Traffic that is not moving - whether sitting at origin, in terminals or set out on-line – and the build up of that traffic over time tends to be a strong indicator of both network health and more importantly service levels to shippers.

CN currently publishes car velocity data on its website and defines it as:

> *"…the average miles per day traveled by loaded and empty, active system, foreign and private cars on company lines…that takes into account the train speed from origination yard to destination yard as well as the time (in hours) that the railcar spends in a yard."*

What is not clear is whether this metric omits loaded and empty cars that are not moving. We would surmise this to be the case and if correct, like train speed, limits the definition of fluidity or efficiency to those assets that are indeed moving.

Corridor Velocity

We believe that a measure of corridor velocity that encompasses loaded and empty cars and includes all cars whether they move in a given time period (e.g. day) or not would provide a more meaningful and accurate measure of network health and by extension service performance. This measure is like CN's car velocity measure other than it is expressed in terms of velocity (miles per hour) as opposed to distance traveled (miles.). Velocity is calculated by totaling the miles travelled for each rail car – whether it moves or not -on the railway each day and dividing by 24 hours to arrive at a velocity expressed in miles per hour (alternatively kilometers per hour).

As is the case with other measures, to be meaningful this measure cannot be reported solely at the system level. It is critical that there be regional reporting and the appropriate contextual data. As such this measure should be reported based on the following parameters:

Regional Reporting

- System
- Province
- Destination corridor

Contextual Data

To provide the necessary context in reporting it is necessary to publish the car velocity data with the following contextual data:

- Number of cars measured (loads and empties reported separately)

Commodities

This measure should be applicable to all cars, both loaded and empty, for all commodities using the same commodity breakdown as for other measures.

Waybill Data

Sec. 4.2.1 Waybill Data – Reporting Railways

Question 34: What approach would you recommend for determining which railways should report waybill data, and what information they should report? With what frequency? Why?

Response:

Waybill data should be reported by any railway that originates rail traffic in Canada including traffic originating on short line railways affiliated with the Class 1 railway.

Sec. 4.2.2 Waybill Data – Timeliness

Question 35: Is a 30-day delay suitable for the LHI file submission? Can we shorten the delay and still expect the data to be complete and useful? Should we consider ways for railways to revise the data if we shorten the reporting delay?

Response:

It is desirable for LHI data to be reported and filed with the government as soon as possible in order to ensure that the Canadian Transportation Agency has the most current data available for analysis when addressing LHI applications from shippers.

The LHI data is reported by individual rail car trip with specific waybill and operational information appended to the summary record. For a trip to be included in reported data the rail car must complete the loaded portion of its movement. Rail car trips terminate daily and in theory are available for reporting daily. Although there is likely a data processing step to be undertaken by the railways to create the consolidated waybill/movement record for reporting to the government it is not necessary that this processing wait until the end of a month. Furthermore, it should not, given the sophistication of railway information technology systems, take the railways 30 days to process the data and report it to the government.

Section 76 (3) of the Canada Transport Act identifies the time limits for reporting of LHI data as follows:

> *The class 1 rail carrier shall provide the information described in subsection (2) on a monthly basis, no later than the last day of the month following the month to which the information relates.*

Our response is predicated on the belief that the Agency is receiving LHI data electronically and storing the data in its own database from which customized reporting can be done to support individual applications as they are filed. Given this, there is no requirement for submitted data to be associated with a specific month – that relationship will be explicit in the data by virtue of each record containing a start and end date to the movement. It is assumed that upon receiving the data the Agency undertakes the necessary data transformation steps to assign each record to a defined time period (month / year) for reporting purposes.

This being the case any record received at any time can be assigned to its proper time frame and does not need to be submitted as a "package" of records relating to a specific month. It is not, therefore, unreasonable to require the railways to submit LHI data weekly on the same schedule as is established for the reporting of service and performance data.

Sec. 4.2.3 Waybill Data – Adequacy for Long-Haul Interswitching Purposes

Question 36: Are there any additional fields that should be captured for the purposes of establishing LHI rates?

Response:

Sec. 4.2.4 Waybill Data – Network Studies

Question 37: How should we publicly report the rate data, taking into account that information can only be reported to the public in aggregate, and in a way that protects confidential information? How could this information complement the weekly service and performance metrics? What type of information would you like to see us study and report on, and how would this information be useful to you?

Response:

Additional Data for Internal Transport Canada Monitoring

Sec. 5.1.1 Weekly Traffic Data

Question 38: What challenges would CN and CP face if we introduced a requirement to submit simplified waybill traffic data on a weekly basis (similar to the data currently reported voluntarily over the winter), on a year-round basis? Is it feasible to include additional fields on a weekly basis, such as dangerous goods code?

Response:

See response to question 35.

Sec. 5.1.2 Car-Level Event Data

Question 39: Would it be feasible for CN and CP to prepare a comprehensive car data file that would combine waybill-based commodity origin-destination information with train movements and itineraries with associated car events?

Response:

Ultimately the railways can produce nearly any combination of data elements related to operational and waybill data. This is effectively what the structure of the LHI data requires.

Car event data is created by railways and stored in their respective operating systems based on what occurs to a railcar or container – e.g. departure from origin, arrival at terminal, placement at customer for unloading. This detailed level of reporting for all cars on the railways system is critical to rail operations for both loaded and empty cars. Within the railways systems' these individual events for a car for a specific movement or trip are aggregated to create what is known as a car history record that shows all the events reported for the movement of a car. This car history record is subsequently associated with the waybill for this movement which contains related commercial information such as rate, rate authority, routing among others.

While the railways certainly could produce this type of data it is questionable what value it would have to Transport Canada if the car event data were limited to "discrete" events as referenced in question 40 that follows. Selecting specific events for inclusion for such data would require Transport Canada to identify the specific events desired. ATC has spent nearly 7 years working with car event data as part of its performance measurement program and as such are intimate with the structure of the data, its strengths and its weaknesses. In our experience analysis of such data to draw meaningful conclusions about performance, if this is in fact the intent, requires access to all data for movements and cannot be done through the selection of discrete events.

Question 40: Could an integrated car traffic file (waybill plus train movements plus discrete events) be transmitted daily through an electronic feed or similar web service?

Response:

Within the parameters of the response to question 39 above there is no technical limitation to the daily transmission of data by the railways.

Assessing Regulatory Impacts

Question 41: What changes to railway data collection systems did you need to make to comply with the transitional data requirements? How adaptable are your data collection, storage and reporting systems, and how much time would you need to make further changes to them?

Response:

Question 42: Would specific demographic groups – based on factors such as gender, sex, age, language, education, geography, income or ethnicity – be especially impacted by the collection and publication of this data? If so, what would the impacts or benefits be?

Response:

Additional Information

Please include any additional information you wish to provide.

Response:

As identified by Transport Canada in the consultation discussion document, the Government of Canada established Canada's Grain Monitoring Program (GMP) in 2001 to provide stakeholders with assessments of the Western Canadian grain handling and transportation system (GHTS) in an independent, neutral and timely way. This independent verification of system performance remains critical to establishing both a common understanding of performance and creating confidence among stakeholders with respect to the accuracy of reported performance.

While the recommended improvements to the service and performance metrics detailed in this survey will ensure they provide important insight on rail performance, the grain sector continues to see the importance of maintaining the GMP in parallel to the service and performance metrics. The grain sector also recommends that the Transportation Information Regulations (TIR) be strengthened to ensure that the data railways are required to provide allows the GMP to fulfill its mandate and to capture information on all elements of the GHTS. For example, in parallel to the introduction of Bill C-30 - the Fair Rail for Grain Farmers Act – Transport Canada committed to the collection of more detailed information from rail carriers to allow the GMP to monitor more elements of the GHTS. However, the data being collected from the railways has not been sufficient for the GMP to develop the metrics government identified as necessary. The Grain sector recommends the following changes to the TIR to ensure the Government's intended outcomes are fulfilled.

Transportation Information Regulation (TIR) Terminology

The Transportation Information Regulations (TIR) set out the requirements for rail carriers in Canada to provide data and information to the Minister of Transport pursuant to their operations. Included in these regulations are the railways' obligations with respect to reporting of information for the Grain Monitoring Program (GMP). It is important that the requirements outlined in the TIR use terminology consistent with railway and rail freight industry practice and the generally accepted definitions for those terms. Furthermore it is critical that there be a clear understanding between the government, railways and any third parties, such as the Grain Monitor, on the meaning of each term used in the regulations to ensure the correct data is provided by the railways in a consistent manner across all railways to ensure its usability and integration with other provided data.

Railcar order fulfillment information

The data requirements, as currently described in Section 10.2 (1) (a-d) of the Transportation Information Regulations, with respect to the provision of information by railways in respect of order fulfillment for grain shipments are not, as currently described, sufficiently precise and accurate to allow for the development and publication of order fulfillment measures. The following is required:

Data Fields:

- Number of cars ordered by shippers in each want week (before railway adjustments)
- Number of cars cancelled each week (by railway and by shippers separately by want week)
- Number of cars Planned/ Allocated in each grain service week by want week
- Number of cars supplied each grain service week by want week

Segregations:

- By Origin Province
- By Destination Corridor:
    - Vancouver
    - Prince Rupert
    - Thunder Bay
    - Churchill
    - Domestic Western Canada
    - Eastern Canadian ports
    - Domestic Eastern Canada
    - United States/ Mexico
- By Origin Line Type
    - Main Line
    - Branch Line
- Shipper Name

Containerized grain

Grain shipped in containers continues to be an important transportation mode for the grain sector. However, there is no complete, accurate and timely monitoring of these important supply chains. The TIR should collect information on the movement of containerized grain in both domestic and international containers for all car cycle and traffic measures. This will allow the GMP to provide continuous and effective monitoring of the entire grain handling and transportation system.

Long Term Independent Monitoring

The Grain Monitoring Program has, for the better part of the past twenty years, demonstrated the value that an independent performance monitoring organization can bring to the goal of providing objective, fact-based information to the national discussion around the performance of the Canadian grain handling and transportation system. Its success in this area has been driven by the organization's subject matter expertise and the development of strong relationships across all stakeholder groups through continual consultation leading to broad support among both industry and government.

The Grain Monitoring Program provides a foundation and road map for the establishment of a broader independent monitoring entity focused on the Canadian rail freight logistics sector for all industry sectors. It is imperative that the value and expertise created within this organization be preserved and extended for the benefit of all rail industry stakeholders in concert with Transport Canada's long-term data policy initiatives in the realm of performance measurement.