

CSX's Service Metric Methodology Frequently Asked Questions

- **What are service metrics and how are they defined?**

Service metrics are data that are used to help measure the operating performance of a railroad. While there are many different indicators of a railroad's performance, CSX monitors performance and reports externally on train velocity, terminal dwell and cars online. CSX advises users not to rely solely on these metrics to assess overall company performance as they may be misleading when viewed in isolation.

- **Train velocity** – The speed of a train from origination to destination, including the amount of time a train dwells in a yard for a crew change, pick-up or set-off of traffic (also known as “intermediate dwell”).
- **Terminal dwell** – The amount of time a car dwells at a terminal, even if arrives and departs on the same train.
- **Cars online** – The number of active freight rail cars on rail lines operated by CSX, excluding rail cars that are being repaired, are in storage, have been sold, or are private cars at a customer location for more than one day.

- **How do the new performance metrics differ from those measured previously?**

CSX revised the way it defines train velocity, terminal dwell and cars online to more accurately measure operational performance. Utilizing these performance measurements, CSX is able to more effectively identify ways to improve asset utilization.

- **Train velocity** – CSX's new definition has been revised to include a train's end-to-end time, and accordingly, speed. The previous definition only counted time on line of road, and excluded intermediate dwell time for crew changes, freight car pick-up or set-off, or other work events at an intermediate yard. The updated definition includes intermediate dwell, reflecting the true speed of a train from origin to destination, and will help identify all opportunities to move trains faster and more reliably from origin to destination. The inclusion of additional time in train velocity has the effect of reducing speed when compared to the prior methodology.
- **Terminal dwell** – CSX's new definition has been expanded to include all car dwell time encountered on an end-to-end trip. The previous definition excluded the amount of time a car spent at a terminal during an intermediate work event if it arrived and departed on the same train. The updated definition includes intermediate car dwell for terminal work events when a car arrives and departs on the same train.

This change more accurately reflects all time that a car dwells, and will help identify opportunities to improve asset utilization. The inclusion of these additional dwell events has the effect of reducing terminal dwell when compared to the prior methodology, as intermediate dwell on the same train is often less than dwell events on cars that change trains, which reduces overall average dwell time.

- Cars online** – CSX’s new definition measures the number of active freight rail cars on rail lines operated by CSX. The previous definition included all cars that were last reported on a line operated by CSX, which counted several categories of inactive freight rail cars, including cars that are being repaired, are in storage, have been sold, or are private cars dwelling at a customer location for more than one day. The exclusion of these inactive car categories enables focus on movement and utilization of active cars on the system. As inactive cars become active again, they will be included in the active cars online count. The exclusion of inactive cars has the effect of reducing the number of cars online when compared to the prior methodology.

Definition Changes

CSX has changed methodology on some metrics reported publicly

Velocity		Dwell		Cars Online	
Former	Line of road miles per hour	Former	Car time at terminal, excluding cars on the same train ID	Former	All cars on CSX, as determined by RailInc
Future	Total miles traveled per hour, including intermediate dwell of the train	Future	All car time with a terminal work event, including through cars on same train ID (e.g. crew change)	Future	RailInc cars on CSX, excluding cars stored, under repair, sold, and private cars ex online inventory
Change Reason	Includes full trip of a train and ability to diagnose overall speed profile (in support of improvement in asset cycle)	Change Reason	Includes all dwell with ability to diagnose all events impacting car movement (in support of improvement in asset cycle)	Change Reason	More accurate measurement of active cars on line, i.e. cars for which CSX is focused on real-time, efficient movement
Effect on Metric	Reported velocity will be lower	Effect on Metric	Reported dwell will be lower	Effect on Metric	Reported cars online will be lower

Restated historical data in new methodology to be available on csx.com

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- Why did CSX revise the way it measures performance?**
 CSX revised the way it defines train velocity, terminal dwell and cars online to more accurately assess operational performance. Utilizing these performance measurements, CSX is able to more effectively identify ways to improve asset utilization.

- **How does CSX calculate the new service metrics?**
 - **Train velocity** – The end-to-end speed of a train from origination to destination, including the amount of time a train dwells in a yard (also known as “intermediate dwell”). Velocity is calculated for road trains by dividing train-miles by total hours operated (velocity is not calculated for local and yard trains, passenger trains, foreign trains or maintenance of way trains). System-wide average train speeds are reported for the following train types:
 - Intermodal
 - Manifest
 - Coal Unit
 - Grain Unit
 - Ethanol Unit
 - All trains
 - **Terminal dwell** – The amount of time a car is dwelling at a terminal. Dwell for a single car is the total time, in hours, that a car spent in a given terminal. Aggregated dwell is calculated by dividing the total number of hours cars spent in terminals by the total count of cars dwell events (excludes bad-order cars, maintenance of way cars and stored cars).
 - **Cars online** – The number of active freight rail cars on lines operated by CSX, excluding rail cars that are being repaired, are in storage, have been sold, or are private cars at a customer location for more than one day. Cars online is a weekly average of the total number of active cars reported on CSX lines each day from Saturday to Friday.
- **When will CSX begin using the new performance metrics?**

CSX revised its internal definitions for train velocity, terminal dwell and cars online early in its transition to Precision Scheduled Railroading to more accurately measure the company’s operational performance. Effective immediately, CSX’s revised service metrics will be updated weekly and posted online at www.csx.com/servicemetrics. Please note that CSX’s new metrics differ from data reported by other U.S. railroads, and are not directly comparable.
- **How comparable are the new service metrics to the service metrics reported previously?**

To assist users in analyzing the company’s historic performance, CSX has restated 2016 and 2017 train velocity and terminal dwell performance data using the new definitions and is making that data, along with 2017 cars online data, available on its website, www.csx.com/servicemetrics. Please note that CSX’s new metrics differ from data reported by other U.S. railroads, and are not directly comparable.
- **Are CSX’s new service metrics comparable to other Class I railroads?**

CSX’s new service metrics are not comparable to other U.S. Class I railroads.
- **Will CSX continue reporting service metrics to the American Association of Railroads (AAR)?**

CSX’s revised service metrics are not comparable to AAR reporting practices and/or other U.S. railroads, and will not be reported to the AAR. CSX’s revised service metrics, however, will be made available online at www.csx.com/servicemetrics. CSX will continue its required reporting of EP 724 data to the Surface Transportation Board in the prescribed methodology on a weekly basis.

- **Does CSX have to report service metrics?**

Yes. CSX, along with all other Class I's, is required to report service metrics and performance data to the Surface Transportation Board (STB) on a weekly basis as part of the Board's EP 724 requirements.

- **Why is CSX using two different methodologies to report performance data?**

CSX is required to report EP 724 data to the Surface Transportation Board in the prescribed methodology on a weekly basis.

For management purposes, CSX revised the way it defines train velocity, terminal dwell and cars online to more accurately measure operational performance. Utilizing these performance measurements, CSX is able to more effectively identify ways to improve asset utilization. CSX's revised service metrics will be made available online at www.csx.com/servicemetrics.