Global Liner Performance
November Report 2014

Content

Global Executive Summary

From a European perspective, ~~Rotterdam and Antwerp, which~~ the ports are clearly reflected ~~points in the Asia-North Europe~~ the US west coast, where co~~stakeholders in the industry.~~ container delivery, which decli~~ 45%, respectively. Finally, the ~~Visakhapatnam due to dockwor~~

From a global perspective, sche~~shows that global container de~~ Line was the most reliable carr~~and CSAV with a schedule reli~~improvement from September to ~~
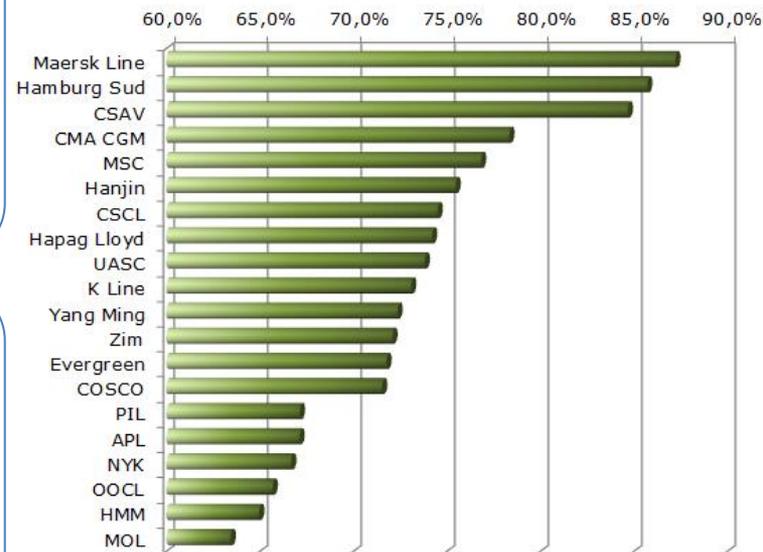
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Trade lane Summary

The severe congestion in the Los Angeles/Long Beach port complex continues to have a negative impact on the related trade lanes' performance as schedule reliability has declined in Transpacific EB and WB and in the North America-Oceania and Oceania-North America trade lanes.

At the same time it is also visible that congestion has eased in the North European hubs as schedule reliability has increased by 11 percentage points from September to October. This is good news for both shippers and carriers engaged in the trade lanes to and from North Europe.

Container Delivery Summary

Data from INTTRA shows that the trade lanes connected to North America continue to be affected by the congestion in California, while the ease of congestion in North Europe means that container delivery has improved, which follows the development we have seen in schedule reliability from September to October. The largest changes continue to be on a Y/Y level e.g. container delivery has declined by 19, 22 and 24 percentage points in the Asia-Indian Subcontinent, Africa-Europe and Transpacific EB trade lanes, while performance has improved by 11, 16 and 20 percentage points in the Europe-South America, Asia-ECSA and ECSA-Asia trade lanes.

Global Top 20 carrier ranking - October 2014

	60,0%	65,0%	70,0%	75,0%	80,0%	85,0%	90,0%

Maersk Line
Hamburg Sud
CSAV
CMA CGM
MSC
Hanjin
CSCL
Hapag Lloyd
UASC
K Line
Yang Ming
Zim
Evergreen
COSCO
PIL
APL
NYK
OOCL
HMM
MOL

Source: SeaIntel - Global Liner Performance report - November 2014

Global Reliability Developments

Global developments

Schedule reliability increased for the second consecutive month as the performance increased by 1.6 percentage points to 74.6% in October. The development liner also means that the Y/Y-gap has been narrowed further to 5.7 percentage points in October, compared with a Y/Y-gap of 10 percentage points back in August. In October schedule reliability is based on 11,164 vessel arrivals, which is an all-time record high.

Date from INTTRA shows the timeliness of container delivery increased for the third consecutive month from 58.8% in September to 61.2% in October. The development means that the performance is only 1.2 percentage points below the level we saw a year ago. Two months ago the difference was 10.8 percentage points. Container delivery is based on 3.393.360 container deliveries.

Global schedule reliability

Global timely container delivery
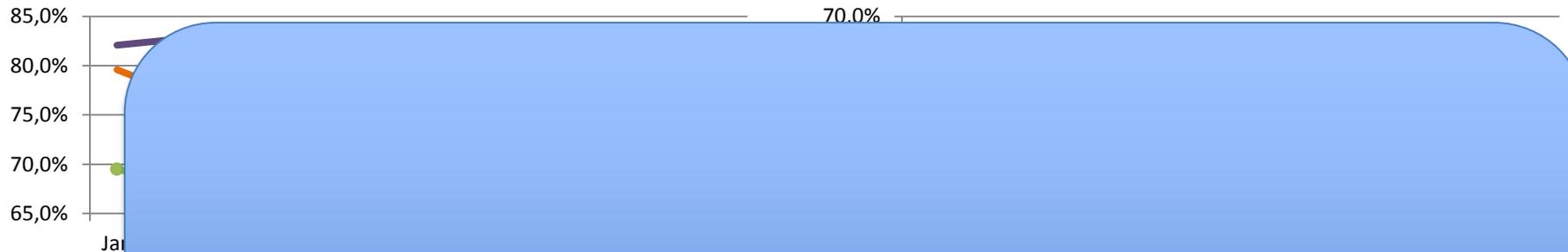
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Global											
Schedule Reliability											
Timely Container Delivery											
Change	-10,6%	-14,8%	-5,3%	-9,6%	-8,9%	-8,6%	-8,5%	-10,8%	-6,9%	-1,2%	

Global developments

In October M... carriers with a schedule reliability of 87.2%, 85.7% and 84.7%, ... eir performance from September to October as the Top3 c... tively. At the other end of the scale, we find MOL, HMM ... tively.

The i... e Top20 carriers as 10 carriers have recorded an impro... rded a decrease. CSAV, Hamburg Süd and Zim have ... schedule reliability increased by 7.8, 5.4 and 4 perce... a decrease in their performance of 2.6, 3.1 and 3.4. ...

In te... e most since last month as they have improved their ...

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Top-20 carriers
APL
CMA CGM
COSCO
CSAV
CSCL
Evergreen
Hamburg Sud
Hanjin
Hapag Lloyd
HMM
K Line
Maersk Line
MOL
MSC
NYK
OOCL
PIL
UASC
Yang Ming
ZIM

Global Top 20 carrier ranking - October 2014
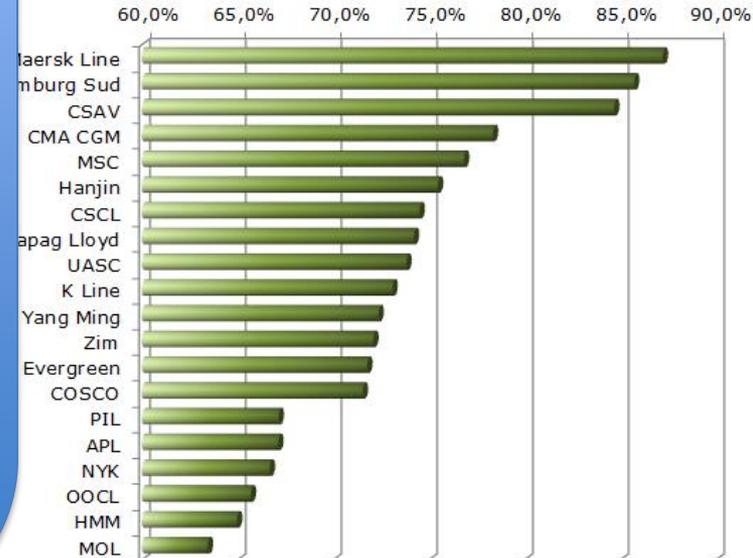
Source: SeaIntel - Global Liner Performance report - November 2014

Niche carriers global performance

Global developments
In the niche carriers segment, Independent Container Line (ICL) is the only carrier who has reached a schedule reliability of 100%. The 100% schedule reliability is obtained through their stand-alone service in the Transatlantic trade lane operating between Antwerp and Liverpool and Chester and Wilmington. ICL is followed by Niver Lines, ACL and Wallenius-Wilhelmsen who reached a performance of 98.8%, 98% and 98%, respectively.

At the other end of the scale we find Seaboard Marine, OEL and Linea Messina with a schedule reliability of 20%, 24% and 30.3%, respectively.

Performance across niche carriers is much more diverse than seen across the global top-20 carriers. This greater diversity is partly explained by the lower number of measurements available for niche carriers – and hence uncertainty increases – and partly because niche carriers are exposed to very different markets.

Top ranking niche carriers - October 2014
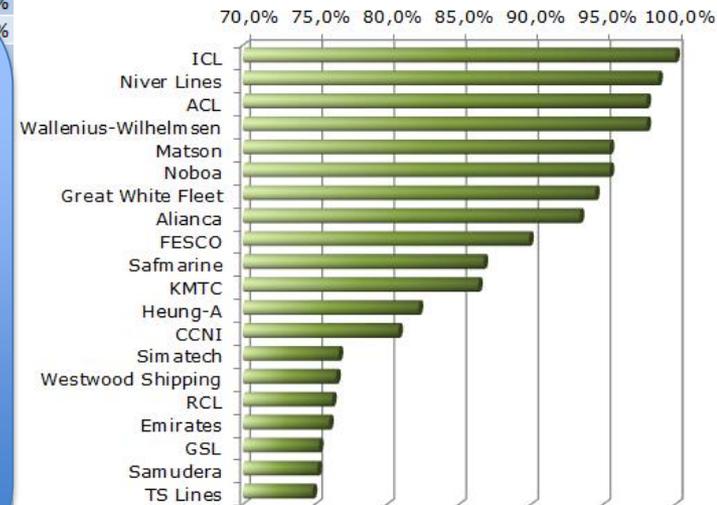
Source: SeaIntel - Global Liner Performance report - November 2014

Tradelane developments

From a trade lane perspective, the improvement in global schedule reliability is also clearly visible as we go through the month-on-month development on the individual trade lanes. 22 trade lanes have recorded an improvement in performance from September to October, two trade lanes have remained at the same level, while nine trade lanes have seen an overall decrease in performance.

The severe congestion in the Los Angeles/Long Beach port complex continues to have a negative impact on the related trade lanes' performance as schedule reliability has declined in the Transpacific EB and WB trade lanes and in the North America-Oceania and Oceania-North America trade lanes.

At the same time it is also visible that congestion has eased in the North European hubs as schedule reliability has increased by 11 percentage points from September to October. This is indeed good news for both shippers and carriers engaged in the trade lane. The Transatlantic trade lanes continued the improvement we have seen since March. Nevertheless, the performances continues to be on a lower level than in the same period last year.

Looking at the Y/Y development, we find that the Transpacific EB and Africa-Europe trade lanes have seen a decline in schedule reliability of 24 and 21 percentage points, respectively.

Tradelane	okt-13	sep-14	okt-14	Monthly change	Annual change		Tradelane	okt-13	sep-14	okt-14	Monthly change	Annual change
Transpacific EB	81%											-14%
Transpacific WB												0%
Asia - North Europe												%
Asia - Mediterranean												%
Europe - Asia												%
Transatlantic EB												%
Transatlantic WB												%
Europe - South America												%
South America - N. Europe												%
South America - Med.												%
N. America - South America												%
South America - N. America												%
Europe-Oceania												%
N. America - Oceania												%
Oceania - N. America												%
Asia - Oceania												%
Oceania - Asia												

SAMPLE

Trade lane developments

Global improvement in container delivery is also visible from a trade lane perspective as only six trade lanes saw performance decrease from September to October, while four trade lanes maintained the same performance and 23 trade lanes improved performance.

Data from INTTRA shows that the trade lanes connected to North America continue to be affected by the congestion in California as the Transpacific EB, North America-Oceania and Oceania-North America saw a decrease in performance. As congestion has eased in North Europe, we also see an improvement in container delivery on North Europe based trades, which follows the development we have seen in schedule reliability from September to October.

The largest changes continue to be on a Y/Y level e.g. container delivery has declined by 19, 22 and 24 percentage points in the Asia-Indian Sub., Africa-Europe and Transpacific EB, while the performance has improved by 11, 16 and 20 percentage points in the Europe-South America, Asia-ECSA and ECSA-Asia trade lanes.

Tradelane	okt-13	sep-14	okt-14	Monthly change	Annual change		Tradelane	okt-13	sep-14	okt-14	Monthly change	Annual change
Transpacific EB												-4%
Transpacific WB												0%
Asia - North Europe												%
Asia - Mediterranean												%
Europe - Asia												%
Transatlantic EB												%
Transatlantic WB												%
Europe - South America												%
South America - N. Europe				SAMPLE								%
South America - Med.												%
N. America - South America												%
South America - N. America												%
Europe-Oceania												%
N. America - Oceania												%
Oceania - N. America												9%
Asia - Oceania												-6%
Oceania - Asia	69%	72%	73%	1%	4%							

Container data provided by
INTTRA

Oceania - Asia developments

After four and five months of continuing declines in schedule reliability and container delivery, respectively, we have in October recorded an improvement in both measures which is in line with the development we have seen in the previous years, where the measures overall decline in the period from May to September and then increase in the end of the year. Schedule reliability and container delivery increased by 0.4 and 2.5 percentage points to 75.2% and 60.6%, respectively. If the measures continue to follow the seasonal pattern we have seen in the past two years, we can expect that the measures will improve in the coming four to seven months.

In October PIL, NYK and CMA CGM were the most reliable carriers in the trade lane with a performance of 84.1%, 83.8% and 83.8%, respectively.

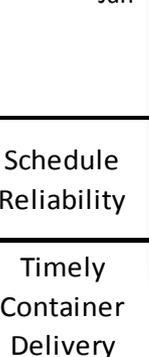**Difference between schedule reliability and container delivery**
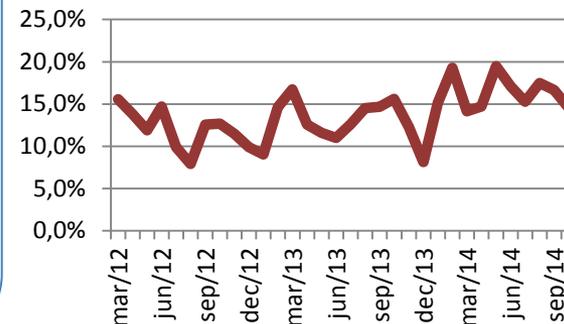
Asia - Oceania schedule reliability
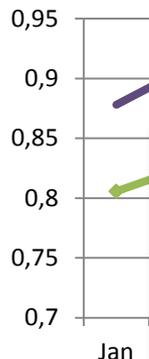
Asia - Oceania timely container delivery

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		Dec
Schedule Reliability		3,4%
Timely Container Delivery		5,2%

Asia – Oceania – Carrier Performance

Asia - Oceania	okt-13	nov-13	dec-13	jan-14	feb-14	mar-14	apr-14	maj-14	jun-14	jul-14	aug-14	sep-14	okt-14	6-month trend
PIL	83,7												84,1%	Decreasing
NYK													8%	Decreasing
CMA CGM														Decreasing
MOL														Decreasing
Hapag Lloyd														Decreasing
COSCO														Decreasing
OOCL														Decreasing
Hamburg Sud														Increasing
APL														Decreasing
ANL														Decreasing
Maersk Line														Decreasing
Evergreen														Decreasing
Yang Ming														Decreasing
Hanjin														Decreasing
K Line														Decreasing
TS Lines														Decreasing
CSCL														Decreasing
Sinotrans														Decreasing
MSC														Decreasing
RCL														Decreasing
UASC														Decreasing
HMM														Decreasing
Swire														Decreasing
GSL														
STX Pan Ocean														
ZIM	83,3													

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Asia – Oceania – service specifics

Carriers	Service	# of arrivals	% on-time	Carriers	Service	# of arrivals	% on-time
ANL / CMA CGM / OOCL / PIL	ANZEX / ANZEX / NZN / NCS					22	63,6%
MOL / OOCL / PIL / Yang Ming	AAB / AAA 1 / AAA 1 / AAA 1					43	100,0%
MOL / OOCL / PIL	AAT / AAA 2 / AAA 2					11	45,5%
ANL / APL / NYK	AAX / AAX / AAX					18	44,4%
ANL / CMA CGM / CSCL / OOCL	AANA / AANA / AUS 2 / AEA 2					34	55,9%
Hapag Lloyd / MOL / NYK / OOCL / PIL	NZ2 / NZX / NZS / NZS / NZS					20	60,0%
COSCO / Evergreen / K Line / MOL / NYK / OOCL	NAE / NEAX / ESACO / AU2 / ANA 2 / AEA 3					45	82,2%
ANL / COSCO / K Line / Maersk Line / MOL / NYK / OOCL	SAS / SAS / ESACO-B / MSAS / AU 1 / ANA 1 / AEA 4					33	100,0%
Hamburg Sud / Hapag Lloyd / HMM / Maersk Line / MSC	Northern Loop / AAN / FA 1 / Boomerang / New Wallaby Service					44	72,7%
MSC	Capricorn					9	100,0%
APL / Hamburg Sud / Hapag Lloyd / HMM / Maersk Line / MSC	CAS / AAUS WK / AAS / FA 2 / Yoyo / Panda service						

Performance by services for Sep 2014-Oct 2014

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Definition of Schedule Reliability and Container Delivery

Schedule Reliability:

Schedule reliability performance is a measure of the actual on-time performance of individual vessel arrivals in ports around the world. Each month SeaIntel, measures more than 11,000 vessel arrivals on average, in more than 270 ports, which is the underlying data for the monthly global performance, as well as the individual trade lane and service performance. Please note, that trade lane and service performance is based on a two month rolling average. This means that the performance in the March report is based on vessel arrivals in both January and February.

The definition of "on time" has in accordance with the widely used calendar-day definition been settled as arrival within plus or minus 1 calendar day from the proforma schedule. While we would prefer to measure performance on a +/-24-hour basis, this is not possible, as the majority of carriers only publish their schedules on a calendar day basis, and we as thus limited by the available data.

For more detailed information on the methodology used in calculating schedule reliability, we kindly advise our readers to consult the methodology section.

Container Delivery

Container delivery performance is a measure of the actual on-time door-to-door on-time performance of individual containers delivered to customers around the world. Each month, SeaIntel's data partner, INTTRA, tracks the performance of close to 3 million containers, measuring whether the containers are delivered on-time in accordance with what was agreed on the Bill of Lading.

The difference between schedule reliability and container delivery is, that the vessel might arrive on time in the port, but the container will not be delivered to the customer on time e.g. the container cannot get through customs clearance as a number of document is missing or the truck that should deliver the container to customer is picking the container up too late and it get caught in a serious traffic jam on its way to the customer.

Please note, that trade lane performance is based on a two month rolling average. This means that the performance in the March report is based on container delivery in both January and February. The definition of "on time" has in accordance with the calendar-day definition been settled as arrival within plus or minus 1 calendar day from the proforma schedule. For more detailed information on the methodology used, we kindly advise our clients to read the methodology section.

General Methodology
In order to benchmark the container carriers on schedule reliability, we have established a quantifiable methodology for measuring the reliability performance of ocean carriers.

For users already familiar with our methodology, we can advise that no fundamental changes have been made to the overall methodology since the report issued on 15 June 2012, although with the March 2014 report, some technical changes have been made in the way trade lane performance is calculated. These changes, as detailed below, have not affected the Global carrier scores, and have only had limited impact on trade lane scores.

On-time measurement
The definition of "on time" has in accordance with the calendar-day definition been settled as arrival within plus or minus 1 calendar day from the proforma schedule.

We have from the beginning of November 2011 been recording both schedules and actual arrival times by the hour for carriers which provide this information. Additionally, we have added a fourth data source, namely information concerning actual arrival by the hour directly from some carriers.

We have been in dialogue with a number of carriers particularly on the topic of measuring on calendar day versus measuring arrivals down to the hour or minute. At SeaIntel Maritime Analysis we are of the principal opinion that data should be as detailed as possible, but also that data must be comparable. As the vast majority of container carriers do not provide schedules beyond calendar days, we have chosen to maintain our existing methodology, focusing purely on calendar days in order to ensure comparability across carriers. As more carriers provide schedules by the hour, we may revise the methodology, or include specific analysis of by the hour performance.

Global Performance
*** UPDATED METHODOLOGY FROM MARCH 2014 REPORT
Global schedule reliability performance of the container carrier industry is measured on the basis of all vessel arrivals recorded in SeaIntel's Global Liner Performance database, also arrivals not currently covered by a trade lane. Importantly, each vessel arrival is only counted once in the global performance, irrespective of the number of container carriers that may be onboard a given services.

Container delivery performance is based on data supplied by SeaIntel's data partner, INTTRA, and is based on close to 3 million monthly container deliveries. The data is provided on a country-country level, so there may be slight misalignments with the schedule reliability trade lane data which is sourced on a port-port level. Importantly, the data provided by INTTRA does NOT contain information on individual container carriers, and SeaIntel cannot provide container delivery performance for carriers.

As of the March 2014 Global Liner Performance report, a minor change has been implemented in the methodology for calculating the global container delivery performance. In the past, global container delivery performance was calculated as a running two-month average, in line with how trade lane performance is calculated, but as of the March 2014 report, we have changed the methodology so the global container delivery performance is only calculated for the month in question, so it is in line with the calculation of global schedule reliability performance. The effect of changing the calculation method has been minimal, with individual monthly performance changing less than 3% as a result.

Carrier Performance
*** UPDATED METHODOLOGY FROM FEBRUARY 2014 REPORT
As of the February 2014 Global Liner Performance report, a major technical update has been implemented in the methodology for how individual carrier performance is calculated, although the effect on the actual performance results is very minimal. Up to the February 2014 report, carrier performance has been calculated based entirely on whether a carrier was onboard a service or not, and if a carrier was onboard a service, their performance would be calculated based on all the port calls of the service, irrespective of whether the carrier in question was actually offering a product for the entire round trip.

As an example, Carrier A may offer a service consisting of a specific number of port pairs on competing Carrier B's string, usually through a slot purchase/charter agreement. In the past, both carriers would receive the same performance for those services, although carrier A only offers a product between a specified set of port-pairs of Carrier B's round trip service. This has now been changed, so each carrier are scored exclusively on the services/port pairs/regions they offer.

This is an improvement of the underlying database we have wanted to perform for a long time, but we have simply not been able to do it before, as it has been a major technical undertaking that has taken several months of parallel development, effectively requiring a complete redesign and restructure of the entire GLP database, which already is the World's most comprehensive database of carrier schedule performance. While it has been an absolutely immense technical challenge, the resulting change in performance scores has been absolutely minimal, with monthly global scores changing less than 0.1 percentage points as a result of the change in methodology.

While the effect on results has been minimal, we are very pleased with this comprehensive methodological update, as it is absolutely imperative for SeaIntel that we always strive to provide the best and most correct data and analysis to our customers. If you have any questions or comments to this change in methodology, or any other questions about the GLP report or other SeaIntel services, please do not hesitate to contact Mr. Morten Thomsen at m.thomsen@SeaIntel.com

Trade Lane Performance
*** UPDATED METHODOLOGY FROM AUGUST 2013 REPORT
In the original database design, we assigned each service to an overall trade, e.g. Asia-Europe or Transpacific, and then we would calculate trade lane performance by measuring the number of arrivals that were on-time into a given head haul region, so e.g. for Asia - North Europe we would calculate the number of arrivals on Asia-Europe services into North European ports, and then count the number of arrivals that where on-time.

While this worked fine in the beginning when only measuring a subset of the global network, it has become increasingly difficult to maintain, as some trade lanes require very special attention, e.g. Asia - Middle East, where we would include Asia - Europe services, but only on the westbound call into the Middle East.

The maintenance became even more cumbersome with the increasing service disruptions and restructuring, where a service may change scope for an extended time period. Further, some trades were notoriously difficult to measure, e.g. the Middle East - Europe trade, where we would include Asia - Europe services, but only if they had made a call in the Middle East, which meant that with increasing port omissions and service restructures, we essentially had to monitor each port call on many services, and then trace back all the previous calls, to see if they had called the planned regions. Adding to this were the challenges from butterfly and pendulum services, and an increasing number of services that could not be assigned to a specific trade, but had to be handled manually. With more than 10.000 vessel arrivals each month, this was becoming impossible to do.

New Trade Lane Methodology
As of the August 2013 report, we have instituted a new trade lane methodology, where we do not assign a given service to any specific trade. Instead we trace the previous region calls that each vessel has made, irrespective of the service it is on, and then assign trade lanes based on the rotation. So if a vessel calls a European port, we trace back in the rotation and see what regions it has been to, so if the vessel has called ports in e.g. Asia, ISC and Middle East regions, that European port call is automatically assigned to the Asia-Europe, ISC-Europe and Middle East-Europe trade lanes.

The algorithm that calculates this is very complex, and as of the August 2013 report, we have recorded more than 275.000 scheduled arrivals and more than 240.000 actual arrivals, and this massive size and complexity has required a completely new database system and front end management system to maintain the database.

The benefit of the new methodology and database structure is that we do not have to re-calculate all the trade lane performance scores manually, and we should be able to produce the report much faster going forward. Further, we have been able to include all ports in trade lane calculations, so the basis is now more than 270 ports.

<u>Data Collection</u>
Most of the carriers have schedules available on their website, which include port rotation (both head haul and backhaul), vessel names and day of arrival. However, some carriers do not have such accurate schedules available on their website. In these cases we have used the carrier's port to port search tool on their websites and composed the schedules through that tool.

The schedule data reflects proforma schedules 15 – 45 days into the future.

We are aware, that in a few instances there might be a discrepancy between some of the schedules a carrier places on their website and the schedules they provide through an EDI or XML feed. To ensure consistency in the measurement methodology, we have elected to focus on the schedule information provided through carrier websites. In cases where we have received data directly from the carriers, and we see a discrepancy between the website proforma and the carrier-submitted proforma, we have used the proforma information which matches the definition of a liner service – namely the regular arrival/departure.

The reason for making this choice is that the schedules on the website are a de-facto display of the carrier's product portfolio towards all potential and existing customers. Data transmitted through EDI or XML, on the other hand, constitute only a partial information flow, as it is designed to reach only a number of existing customers.

This choice of methodology also implies that a small part of the scheduled arrivals might not be part of our analysis, in the cases where they were not stated on carrier websites at all.

We use six different sources to identify the vessels' actual time of arrival: the carriers' own websites, information from ports, Track and Trace data submitted by Shippers, terrestrial AIS data, satellite AIS data, and data provided directly by carriers.

Our primary source to identify the vessels' actual arrival is the carriers' own websites. In those cases where the carriers do not update their websites with actual arrivals, we obtain arrival information from the individual ports, or from Track and Trace data submitted by Shippers with cargo onboard the vessel. If neither of those sources can identify the actual arrival of the vessel, we use AIS data, both terrestrial and satellite, to locate a vessel's geographical coordinates and to determine, when the vessel called the port.

When several carriers are cooperating on the same services through e.g. a vessel sharing agreement, alliance service or on slot charter, the actual schedule reliability will count for all the carriers involved in the relevant service. All carriers participating will be fully measured on the service performance. A more accurate measurement would entail weighting the reliability, in proportion to the share of the vessel assigned to each carrier. However, this information is rarely, if ever, announced by the carriers, hence the only methodologically consistent approach is to assign full value to each carrier using the service.

<u>Coverage</u>
The Global Liner Performance database covers the majority of the deep sea service identified from 60 different carriers.

Services:
Currently, the GLP database cover more than 270 active services and more than 165 inactive services, based on more than 380.000 individual vessel arrivals, across 33 major trade lanes.

We have elected to exclude very short services, as schedule reliability becomes difficult to calculate with very short round trips. As an example, a very short 7-day round trip would by definition be on-time if the vessel is one day late. If the vessel becomes late by 7 days, it could be argued that it is now back on time, as the rotation has just been shifted by a week. We may include shorter services in the future, as well as additional services

Ports
The GLP is based on actual arrivals in more than 270 different ports around the world.

Carriers
Currently, 60 different carriers are included in the schedule reliability measurement. The 60 carriers include all the Top20 carriers, as well as a range of smaller niche carriers.

Vessels
The schedule reliability report is based on the tracking of more than 3.000 different vessels, in more than 6.000 vessel / service combinations.

Data aggregation
When calculating performance by trade lane we are calculating on the basis of a 2-month rolling window. As an example "February" performance for a tradelane includes data from January and February, whereas "January" includes data from December and January. This methodology is chosen to ensure that measurements best possibly reflect genuine changes in performance, and are not prone to large statistical fluctuations which can be associated with covering only a short timespan. Further, when measuring performance over a two-month period, we ensure that enough data points are available on a service and trade lane level. We only include service and carriers on the trade lane level, if a minimum of five vessels arrivals have been recorded over a two-month period.

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Data concerning container reliability and performance measurements related to the container level are provided by INTTRA. Further information about INTTRA can be found at www.INTTRA.com

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