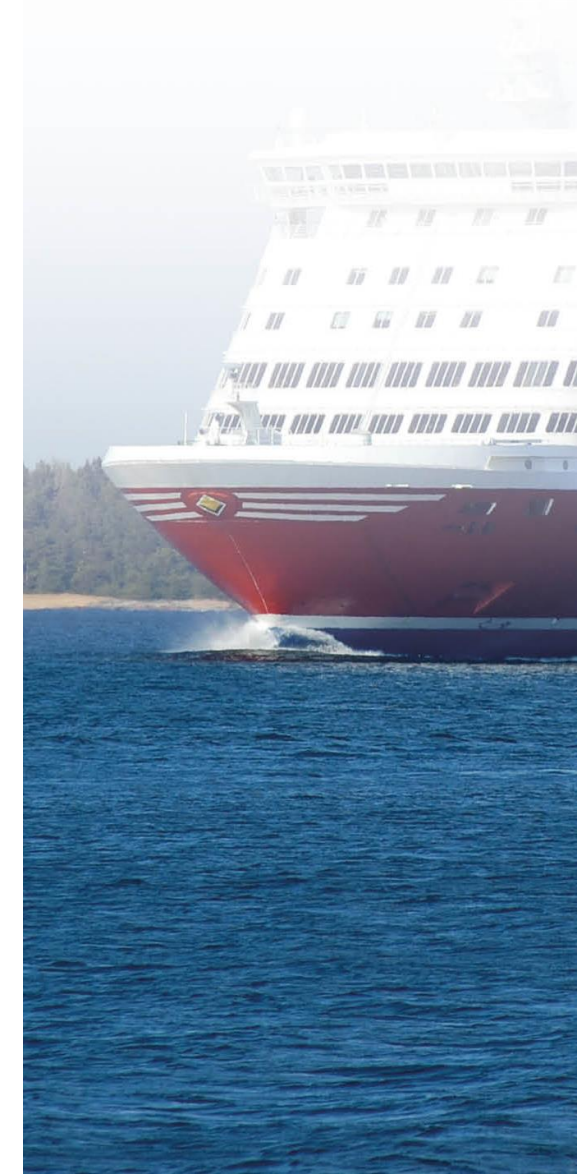


Morning agenda

- 1000-1030 Keynotes
- 1030-1100 The RTF project
- **1100-1200 What's in it for me?**
- 1200-1330 Lunch



Intermodal (Ferry) Real Time Information System Rostock - Gedser - Nykøbing F



Project part-financed by the EU

Project „Interface Plus“ 2010 – 2015



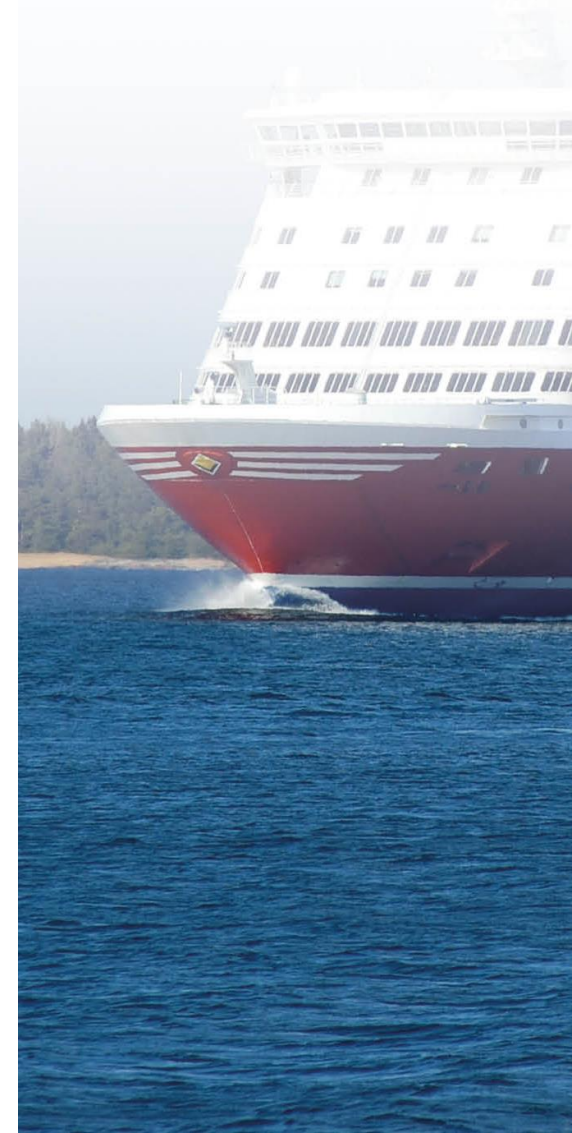
Goals

Door 2 Door Real Time Information for the travel chain:
(Berlin)- **Rostock – Gedser – Nykøbing** - (Copenhagen)

Increase in attractiveness for the travel connection and
facilitate and enhance comfort for:

- trip planning
- traveling (connection traffic/ next options in real time)

Target Group: Foot Passengers

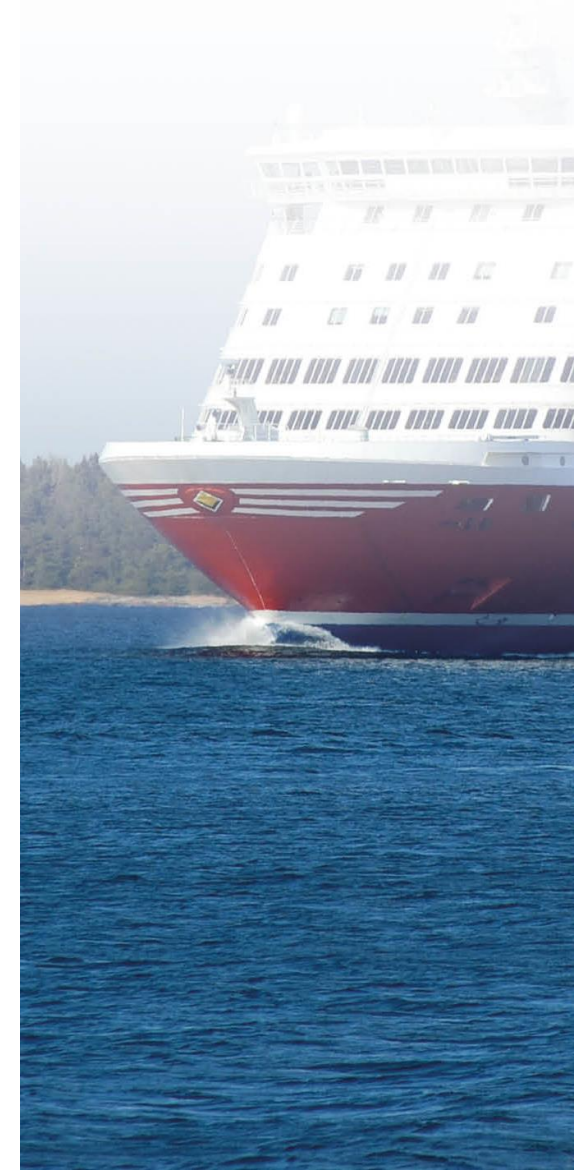


Project „Interface Plus“ 2010 – 2015

Partners



- VVW - Public Transport Association Warnow
- Rostock Port
- Scandlines
- Municipality of Guldborgsund
- Movia (Rejseplanen)

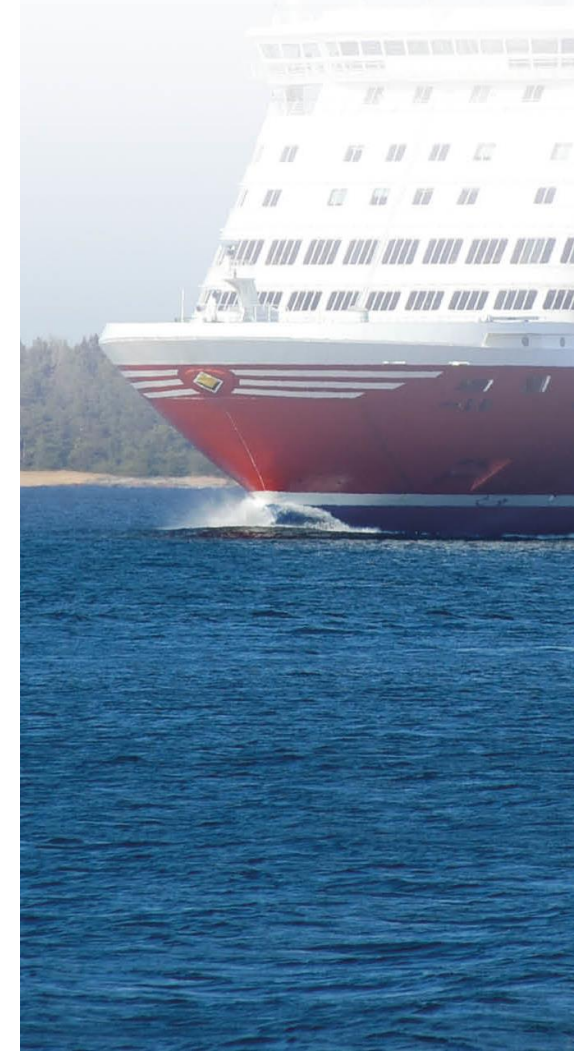


Project „Interface Plus“ 2010 – 2015

Main Challenges



- Connecting 6 different travel information systems from 2 countries with very different requirements in real time
- Connecting 3 different transports means (trains, ferry, buses) from very different domains (public transport, shipping) in real time
- Partly develop completely new systems – Real-time information for seagoing ferry vessels developed from scratch.

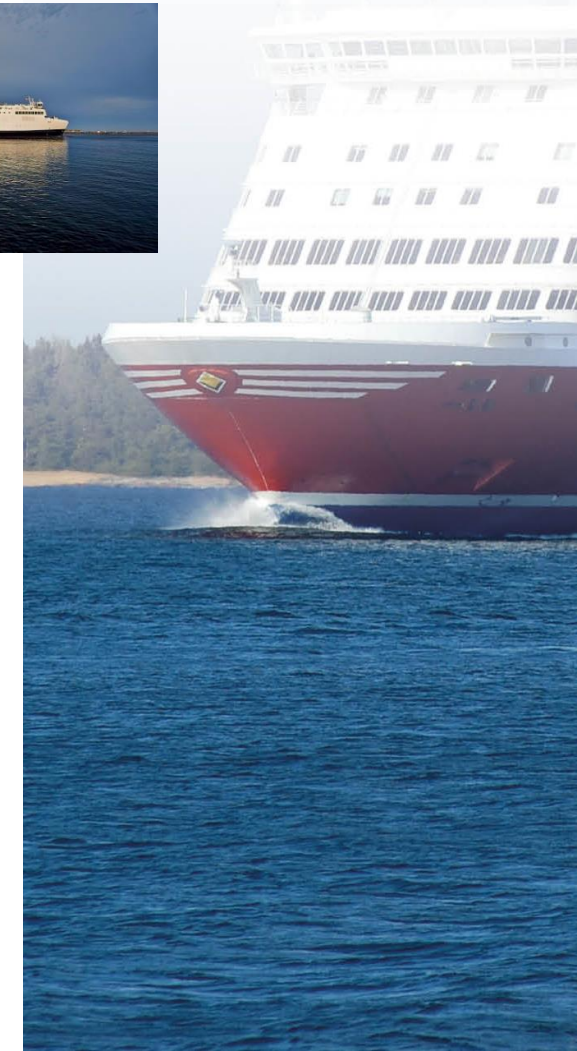


Project „Interface Plus“ 2010 – 2015

Main Results



- Ferry Real Time Information System (“FRIS”) for Scandlines Ferrys Rostock-Gedser (based on AIS + own self-learning prediction algorithms)
- Port of Rostock Passenger Terminal Information System (Scandlines in real time/ TT-Line, Stena Lines, SOL, Finnlines with schedules and cancellation)
- Intermodal (Ferry) Real Time Information in journey planners (Deutsche Bahn, VVW, Rejseplanen)
- Real Time Information inside transport means and at station boards along the whole transport chain



On Board Displays Scandlines Ferry “Berlin”






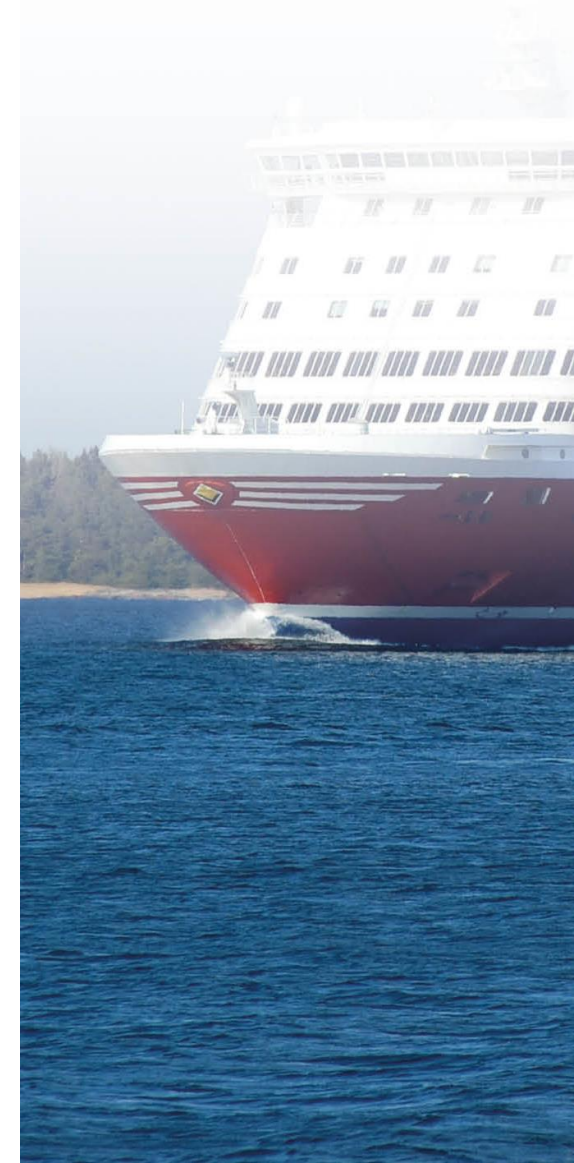
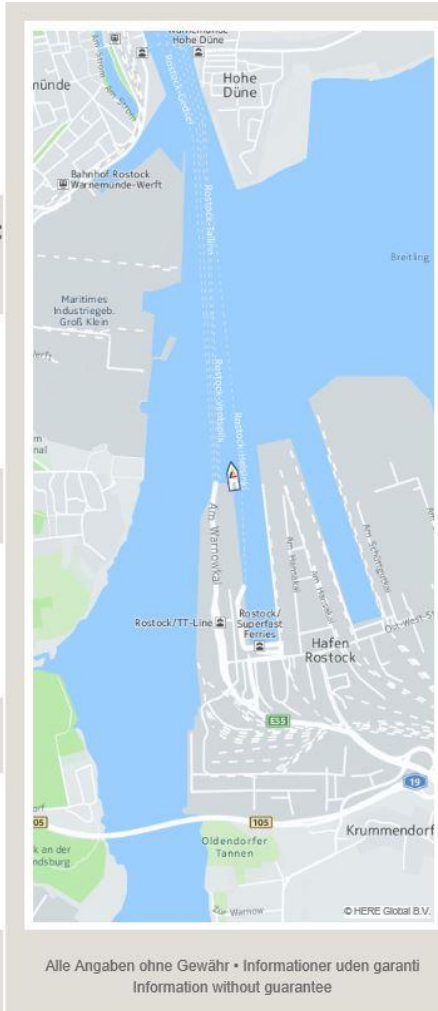
Real
Time
Ferries



23:41

Rejseinformationer • Reiseauskunft • Travel Information









Linje Linie Line	Fra Von From	Afgang Abfahrt Departure	Til Nach To	Ankomst Ankunft Arrival
 Scandlines	Rostock	23:45 23:45	Gedser Færge	01:45 01:45
				5 min
 740	Gedser Færge (...)	04:39	Nykøbing Falste...	05:18
	Retning: Nykøbing F St.;			
				3 min
 Togbus G...	Nykøbing F St.	05:30	Vordingborg St.	06:10
	Retning: Vordingborg St.;Cykler kan ikke medtages			



On Board Displays Scandlines Ferry “Copenhagen”

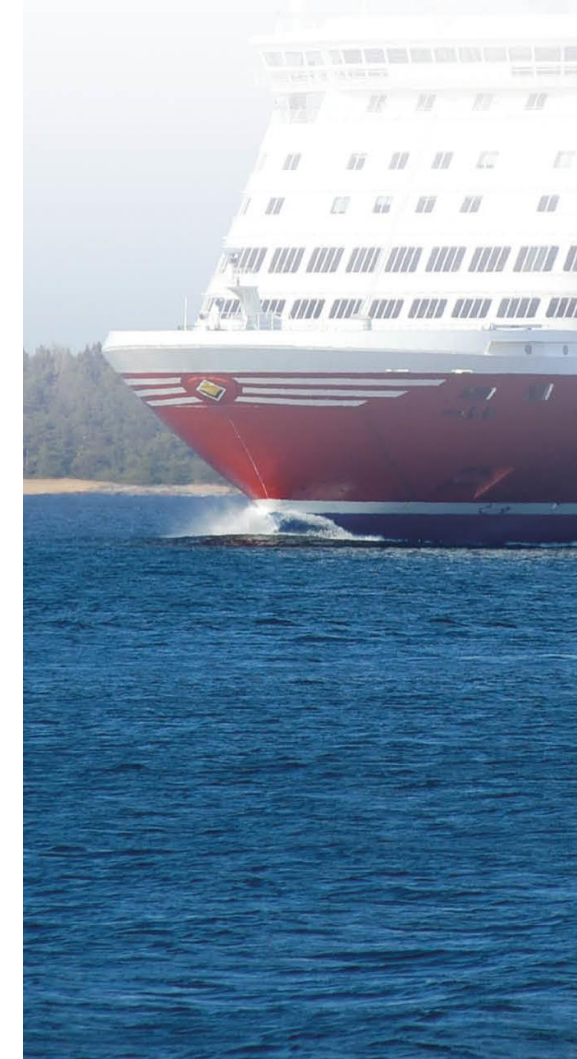


Reiseauskunft • Rejseinformationer • Travel Information

		Linie Linje Line	Haltestelle Busstoppested/Station Stop/Station		Zeit Tid Time	Heute I Dag Today	
			SCL	Gedser	ab • dep	07:00	07:00
				Rostock Scandlines	an • arr	08:45	08:47
				Fußweg • Gangafstand • Footpath ca. 5 min			
			Shuttle	Rostock Scandlines	ab • dep	09:00	
				Rostock Seehafen Fähre	an • arr	09:05	
			Fußweg • Gangafstand • Footpath ca. 0 min				
			49	Rostock Seehafen Fähre	ab • dep	09:31	09:31
				Rostock S Lütten Klein	an • arr	09:43	09:43
				Fußweg • Gangafstand • Footpath ca. 4 min			
			S2	Rostock-Lütten Klein	ab • dep	09:56	09:56
				Rostock Hbf	an • arr	10:09	10:09



Alle Angaben ohne Gewähr • Informationer uden garanti
Information without guarantee



FRIS - Ferry Operator Web-Tool for schedule planning, dispatching and real time



Passenger-Information-System
 Public Transport Association Warnow





























WELCOME
 DEPARTURES
 PLANNER
 TRACKING
 SUPPORT
 LOGOUT
 DE

Departures

Search departures

Date	Line	Direction	Vehicle	Action
Wed 18.09.19	SCL Rostock/Gedser	All Directions	All Vehicles	 

Founded departures

Line	Scheduled Departure	From To	Date / Time / Estimation		Vehicle	Information	
	07:00	Gedser Rostock Scandlines	Wed 18.09.19	07:00 0	SCL Copenhagen		
	08:00	Gedser Rostock Scandlines	Wed 18.09.19	08:45 +3	SCL Berlin		
	09:00	Rostock Scandlines Gedser	Wed 18.09.19	09:00 0	SCL Copenhagen		
	11:00	Gedser Rostock Scandlines	Wed 18.09.19	11:00 0	SCL Copenhagen		
	11:00	Rostock Scandlines Gedser	Wed 18.09.19	12:45 0	SCL Berlin		
	13:00	Gedser Rostock Scandlines	Wed 18.09.19	13:00 0	SCL Berlin		
	13:00	Rostock Scandlines Gedser	Wed 18.09.19	14:45 0	SCL Copenhagen		
	15:00	Gedser Rostock Scandlines	Wed 18.09.19	15:00 0	SCL Copenhagen		
	15:00	Rostock Scandlines Gedser	Wed 18.09.19	16:45 0	SCL Berlin		
	17:00	Gedser Rostock Scandlines	Wed 18.09.19	17:00 0	SCL Berlin		
	17:00	Rostock Scandlines Gedser	Wed 18.09.19	19:00 0	SCL Copenhagen		
	19:15	Gedser Rostock Scandlines	Wed 18.09.19	19:15 0	SCL Copenhagen		
	19:15	Rostock Scandlines Gedser	Wed 18.09.19	21:15 0	SCL Berlin		
	21:30	Gedser Rostock Scandlines	Wed 18.09.19	21:30 0	SCL Berlin		



Passenger-Information-System
 Public Transport Association Warnow







WELCOME
 DEPARTURES
 PLANNER
 TRACKING
 SUPPORT
 LOGOUT
 DE

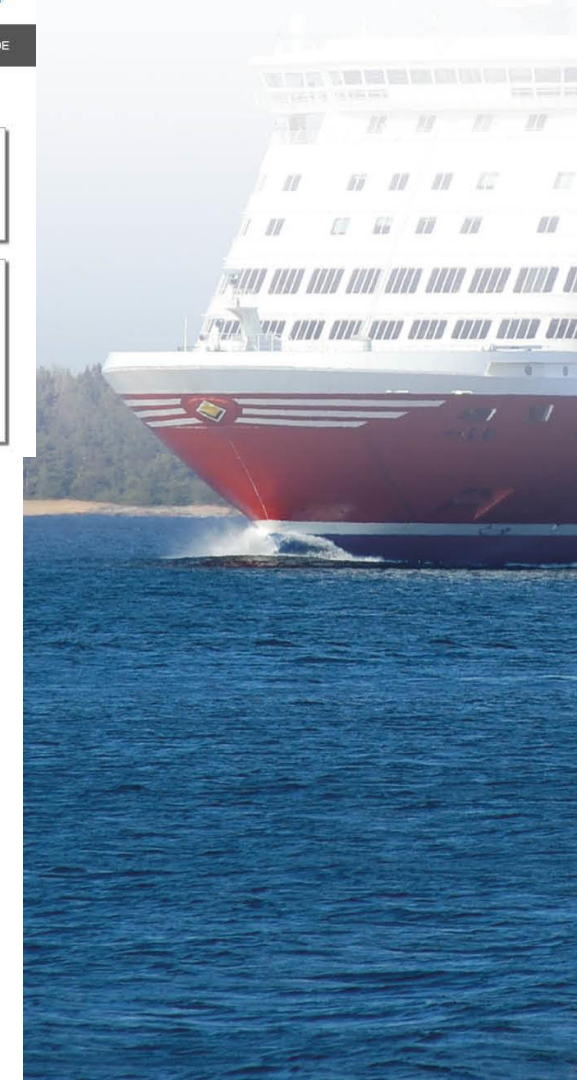
Departures

Search departures

Date	Line	Direction	Vehicle	Action
Thu 12.09.19	SCL Rostock/Gedser	All Directions	All Vehicles	 

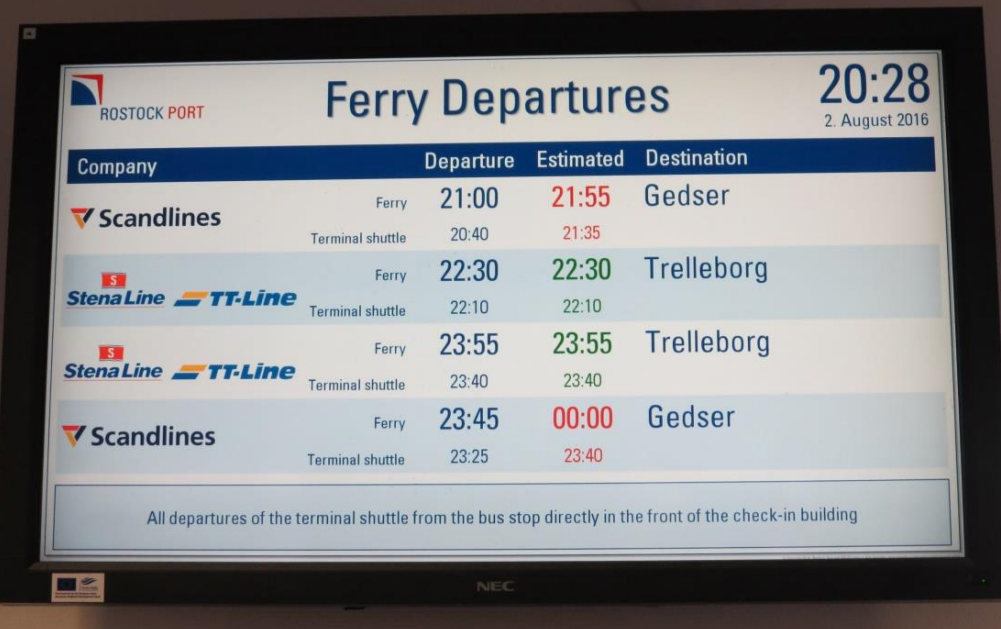
Founded departures

Line	Scheduled Departure	From To	Date / Time / Estimation		Vehicle	Information	
	23:45	Gedser Rostock Scandlines	Thu 12.09.19	23:45 +2	SCL Copenhagen		
	23:45	Rostock Scandlines Gedser	Fri 13.09.19	01:45 +6	SCL Berlin		



Passenger Terminal Displays - Rostock Port (DE)

Ferries and terminal bus



ROSTOCK PORT

Ferry Departures

20:28
2. August 2016

Company		Departure	Estimated	Destination
Scandlines	Ferry	21:00	21:55	Gedser
	Terminal shuttle	20:40	21:35	
StenaLine TT-Line	Ferry	22:30	22:30	Trelleborg
	Terminal shuttle	22:10	22:10	
StenaLine TT-Line	Ferry	23:55	23:55	Trelleborg
	Terminal shuttle	23:40	23:40	
Scandlines	Ferry	23:45	00:00	Gedser
	Terminal shuttle	23:25	23:40	

All departures of the terminal shuttle from the bus stop directly in the front of the check-in building

Public transport



ROSTOCK PORT

Nahverkehr

08 22
26. März 2015

	Abfahrt	Linie	Ziel
RSAG vvw	12 Minuten	45	HP Lütten Klein über: Schmarl Zentrum
RSAG vvw	42 Minuten	45	HP Lütten Klein über: Schmarl Zentrum
RSAG vvw	42 Minuten	49	Hauptbahnhof Süd über: Dierkower Kreuz - Kröpeliner Tor (City Center)

Bitte folgen Sie der Ausschilderung zur Haltestelle „Seehafen Fähre“

Bus zur Stadt / Hauptbahnhof
Bus to City and Main station



Station Boards - Rostock Port

public transport

Linie	Ziel	Abfahrt	ab
19	Dierkower Kreuz	21 min	C
45	HP Lütten Klein → ☺	08:35	C
TB	Rostock Scandlines	08:40	A
45	HP Lütten Klein → ☺	51 min	C
Seehafen Fähre			

terminal bus

Linie	Ziel	Abfahrt	ab
TB	Rostock Scandlines	10 min	A
TB	Rostock TT-Line	25 min	A
TB	Rostock Stena Line	14:30	A
TB	Rostock TT-Line	15:00	A
Seehafen Fähre			



Station Boards - Rostock City



Station Boards - Gedser Port and Nykøbing F Main Station (DK)

Port of Gedser

Bus		15 05
Linje	Til	Afgang
740	Nykøbing F. St.	15.30
740	Nykøbing F. St.	16.07

Tog Train		
Afgange fra Nykøbing F. station		
Linje	Til	Afgang
RE	Østerport st	16.10
PP	Nakskov st	16.18
ICE	København H	16.41
PP	Nakskov st	16.48

Færge Ferry		
Til	Afgang	
Rostock, Anleger-Scandlines	15.30	
Rostock, Anleger-Scandlines	17.45	
Rostock, Anleger-Scandlines	20.00	

GULDBORGSUND

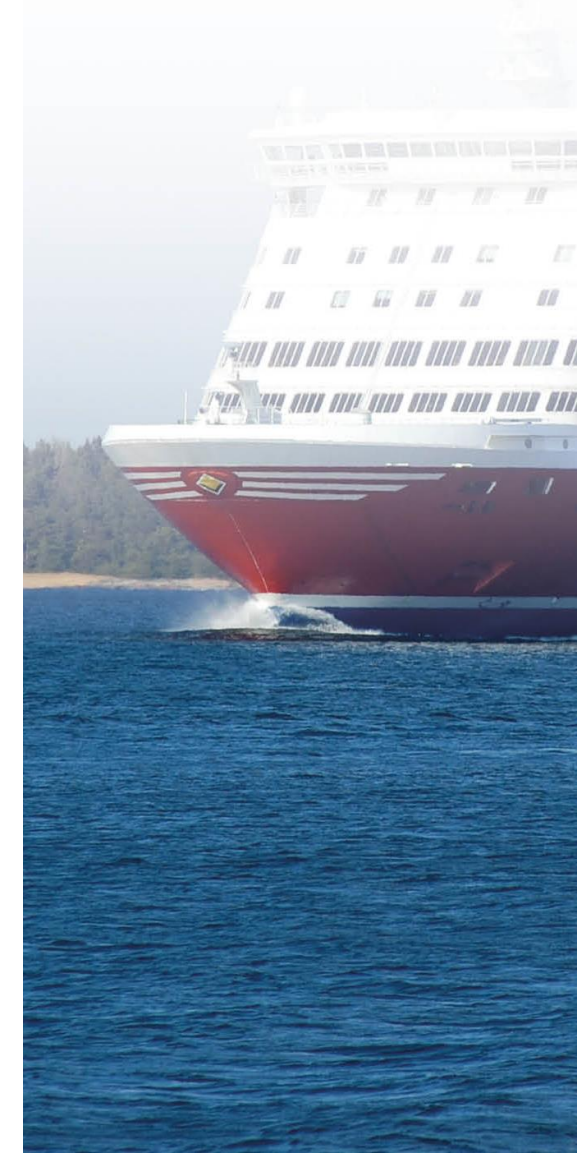
Nykøbing F Main Station

Bus		11 55
Linje	Til	Afgang
702	Middelaldercentret	12.10
727	Stubbekøbing Havn	12.12
734	Nørre Alslev St.	12.13
730	Njstet Rtb.	12.15
741	Bøteskoven	12.15
740	Gedser Færge	12.35
702	Middelaldercentret	12.40
730	Njstet Rtb.	12.45
742	Marielyst Torv	12.50
734	Ørehoved Havn	13.09

Tog Train		
Linje	Til	Afgang
RE	Østerport St.	12.10
PP	Nakskov St.	12.17
PP	Nakskov St.	12.47
ICE	København H	12.48
RE	København H	13.10
ICE	Hamburg Hbf	13.12
PP	Nakskov St.	13.17
RE	København H	13.41

Færge Ferry		
Forventet rejsetid til Gedser er 40 min.		
Til	Afgang	
Rostock, Anleger-Scandlines	13.30	
Rostock, Anleger-Scandlines	15.30	
Rostock, Anleger-Scandlines	17.45	

With info about trains to Copenhagen



Journey Planner VVW (Rostock) Internet and App



Freitag, 13.09.19

Rostock Kröpeliner Tor ab 07:55 an 11:42 3:47 4 Nicht verfügbar

Details Zwischenhalte Preis Karte Textansicht

ab 07:55 Rostock Kröpeliner Tor Bussteig B
Richtung: Hafenallee/Toitenwinkel
Linie der Rostocker Straßenbahn AG (RSAG), Info: 0381 8021900, behindertengerechtes Fahrzeug
nächste alternative Fahrtmöglichkeiten:
Tram 1 ab 08:05, Tram 4 ab 08:11, Tram 1 ab 08:15, Tram 1 ab 08:25

an 08:08 Rostock Dierkower Kreuz Bussteig C
Fußweg ca. 2 Min.

ab 08:10 Rostock Dierkower Kreuz Bussteig G
Richtung: S Lütten Klein
Linie der Rostocker Straßenbahn AG (RSAG), Info: 0381 8021900, behindertengerechtes Fahrzeug
nächste alternative Fahrtmöglichkeiten:
Bus 19 ab 08:41, Bus 49 ab 09:10, Bus 19 ab 09:41, Bus 49 ab 10:10

an 08:29 Rostock Seehafen Fähre Bussteig C
Fußweg ca. 3 Min.

ab 08:40 Rostock Seehafen Fähre Bussteig A
Richtung: Rostock Scandlines
behindertengerechtes Fahrzeug, Terminalbus für Fahrpassagiere, Info: 0160 5470829
nächste alternative Fahrtmöglichkeiten:
Shuttle ab 10:40, Shuttle ab 12:40

an 08:45 Rostock Scandlines
Umstieg

ab 09:00 Rostock Scandlines
Richtung: Gedser
Linie der Reederei Scandlines, Info: 0381 77887766
<http://www.intercombi-ticket.de/de.html>, <http://www.intercombi-ticket.de/en.html>, Informationen zum InterCombi-Ticket:
www.intercombi-ticket.de
nächste alternative Fahrtmöglichkeiten:
Fähre ab 11:00, Fähre ab 13:00

an 10:45 Gedser
Fußweg ca. 2 Min.

ab 11:03 Gedser Faerge
Richtung: Nykøbing F St.

an 11:42 Nykøbing F St (Bus)
Bus 740
Richtung: Nykøbing F St.
Fahrradmitnahme begrenzt möglich, Fahrradmitnahme begrenzt möglich
nächste alternative Fahrtmöglichkeiten:
Bus 740 ab 12:03, Bus 740 ab 13:03, Bus 740 ab 14:03

Dauer: 3:47; Verbindung besteht: Mo - Fr, nicht 3. Okt, 28. Okt bis 11. Nov 2019
Hinweis: Start/Ziel mit äquivalentem Bahnhof ersetzt

Übersicht

Rostock Kröpeliner Tor
Nykøbing F st

Start/Ziel mit äquivalenter Haltestelle ersetzt

04:38 08:42
4:04h 5x
Start/Ziel mit äquivalenter Haltestelle ersetzt

07:55 11:42
3:47h 4x
Start/Ziel mit äquivalenter Haltestelle ersetzt

SPÄTER >

Bitte beachten Sie:
Alle Angaben sind ohne Gewähr.

Details

Fr., 13.09.2019

07:55 11:42
3:47h 4x

Shuttle → Rostock Scandlines
5 Min., 1 Halt
Nächste alternative Abfahrten:
10:40, 12:40

08:45 Rostock Scandlines
Umstieg

09:00 Rostock Scandlines
Fähre → Gedser
1 Std. 45 Min., 1 Halt
Nächste alternative Abfahrten:
11:00, 13:00

10:45 Gedser
Fußweg 2 Minuten (2 m)

Journey Planner Rejseplanen (DK)

Internet and App



12:03 14:45 +5

2 t 42 min, 1 skift

Vis pris Køb billet Detaljer ^

Send Følg Udskriv

12:03 Nykøbing F St.

Til fods 59 m, 2 min

12:05 Nykøbing Falster St. (Brovejen)

Bus 740 → Gedser Færgehavn

40 min, 21 stop undervejs
Kører ca. hvert 60 min

12:45 Gedser Færge (Jernbanevejen)

Til fods 139 m, 5 min

13:00 Gedser Havn (færge)

Færge → Rostock, Anleger-Scandlines

1 t 45 min
Sejler ca. hvert 120 min

14:45 +5 Rostock, Anleger-Scandlines

Telekom.de LTE 17:18

Zurück

AB 17:42 2 STD. 3 MIN. / 0 UMST. AN 19:45

Bei dieser Verbindung werden Verspätungen erwartet.

Gedser Færge

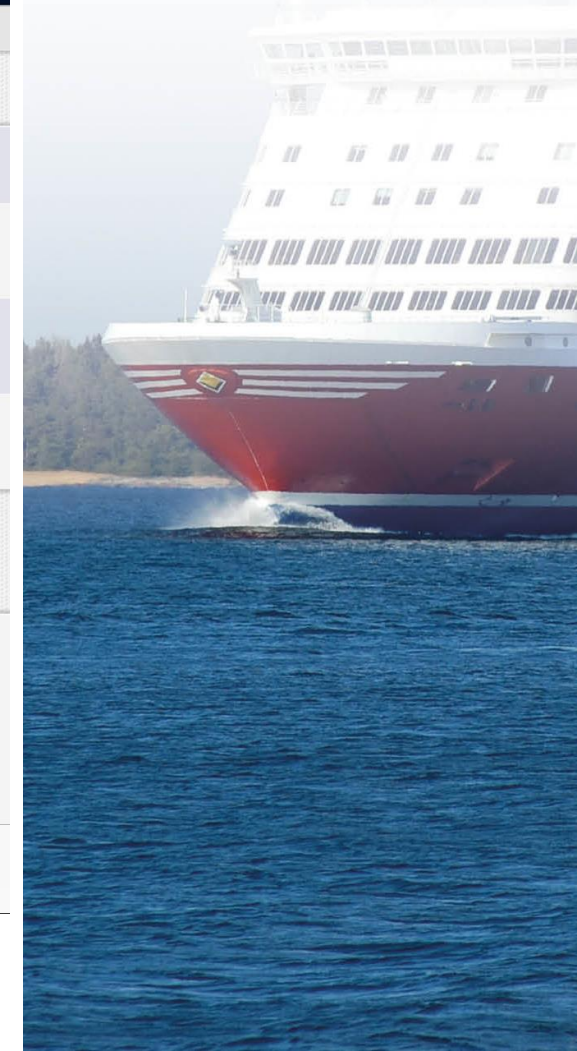
17:42 Gehe 150 m nach Gedser Havn (færge)

17:45 Nimm Færge nach Rostock, Anleger-Scandlines

19:45 Sie haben Ihr Ziel erreicht: Rostock, Anleger-Scandlines

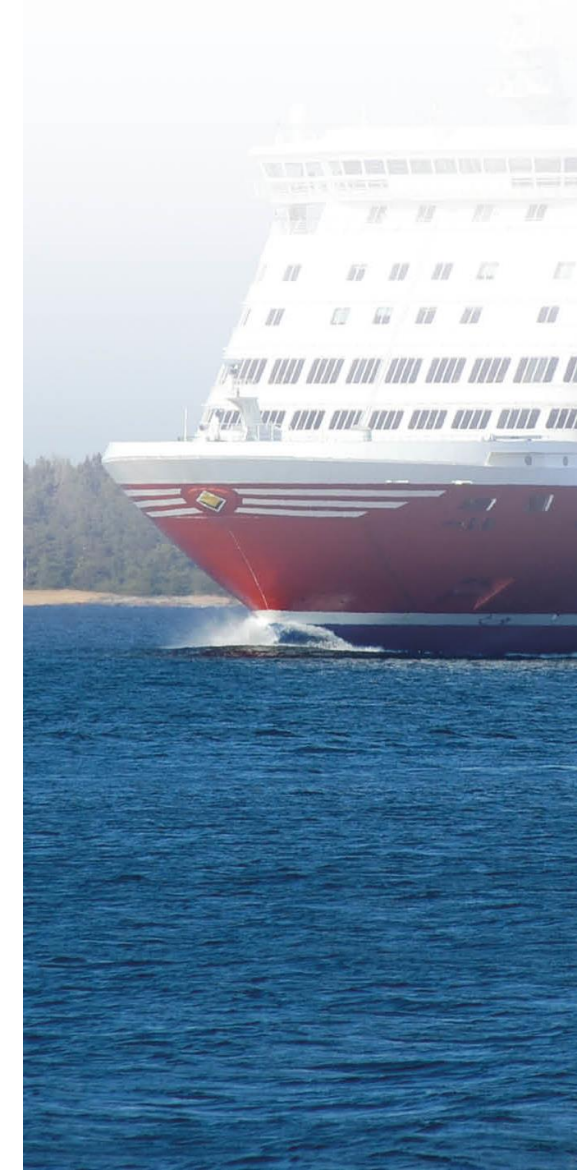
Preis(e) anzeigen Auf Karte anzeigen Teile Fahrt

Fahrplan Abfahrten Verkehrslage Mehr



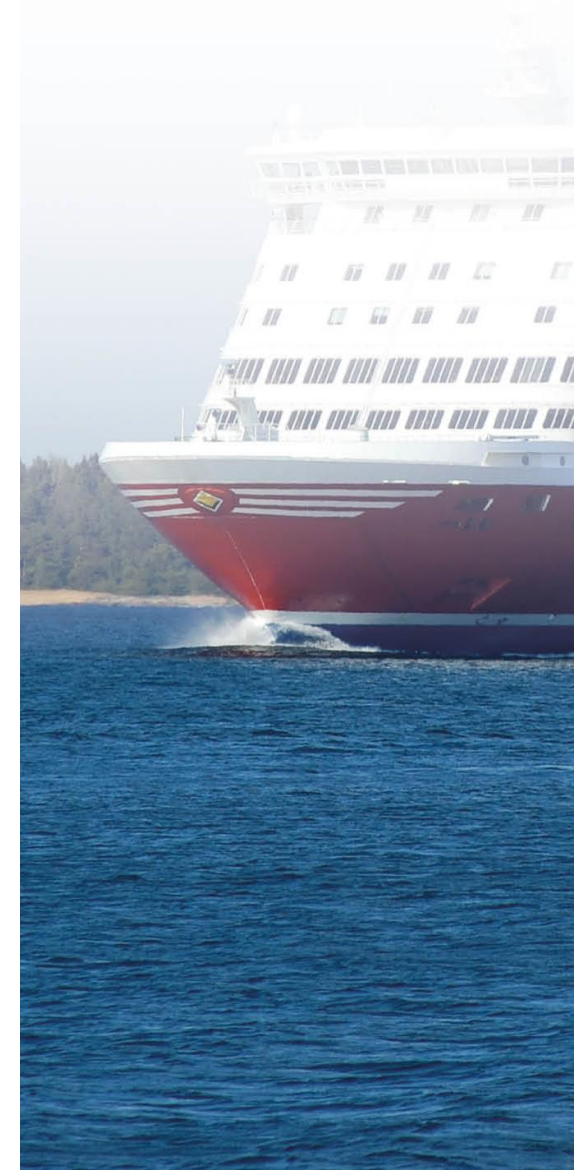
What's in for me? Benefits for Scandlines (and other ferry companies in Rostock):

- Improved passenger satisfaction - enhancing the comfort of the journey
- Automatized, fast and reliable information in case of deviations, cancellation etc.
- Wide spreading of information(automatic feeding of prominent nationwide journey planners)
- Optimization of different internal processes:
 - Automatized shuttle bus ordering in Port of Rostock in accordance with ships' real time arrival/ departure
 - Better information to stevedores etc. in case of delays
- Meeting EU Passenger Rights
- ...



What's in for me? Benefits for the Port of Rostock:

- Uniform and homogeneous passenger information in the ferry terminal (schedules and cancellation of all ferry operators + real time info for Scandlines)
- Enhanced comfort of stay in the terminal
- Optimization of internal processes:
 - Automatized terminal bus ordering service for all ferry operators in accordance with ship's real time arrival/ departure
- Improved information about public transport connections between port and city (incl. connection protection for delayed ferry's)
- ...



We learned a lot in this EU project. And we use it to achieve even better results in RTF

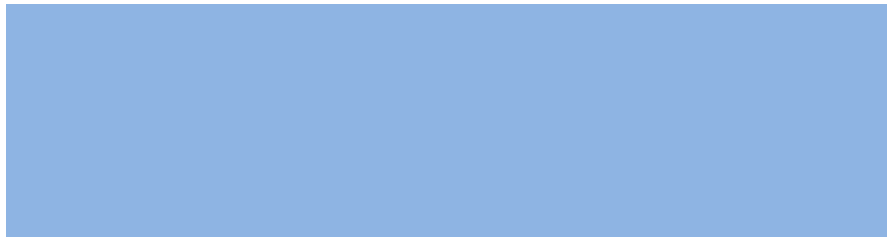
Thank you for your attention

www.realtimeferries.eu



Added values of ferry real time data from the point of view of a logistics service provider

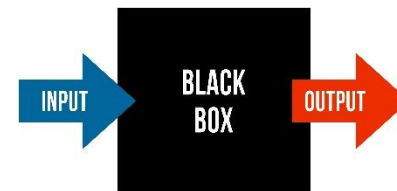
Jens-Uwe Uhlich
Schenker Deutschland AG



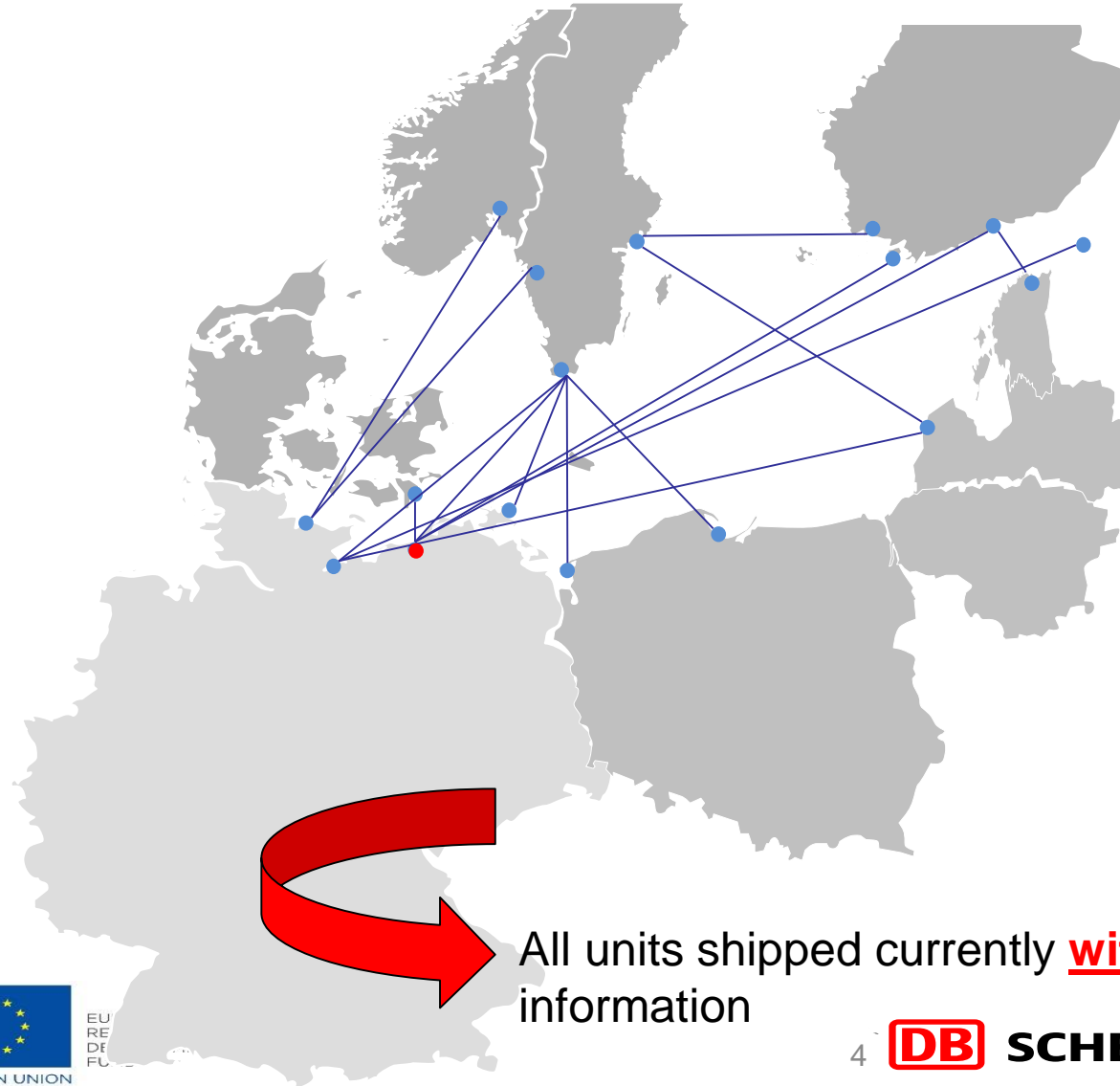
1st RTF Conference Rostock
September 18, 2019

- Current situation & DB Schenker use case
- Operative solutions
- Advantages with real time data

- ferry destination between Rostock and Trelleborg is one of the main routes for DB Schenker in south/north V.V.
- Real time information on ferry delays/earliness, cancellations, changes of berths, etc. are not automatically available and can only be accessed conventionally by phone, fax or e-mail
- Dispatcher and lorry driver do not receive timely information about changes and can not respond to that
- We work like in a black box



RTF project – output base



potential volume
in the Baltic Sea
controlled by Schenker

For example:

- FI-DE 13.000 units p.a.
- FI-SE 20.000 units p.a.
- DK-DE 5.000 units p.a.
- FI-IT 6.000 units p.a.
- SE-IT 6.000 units p.a.
- NO-DE 5.000 units p.a.
- DE-SE 15.000 units p.a.

All units shipped currently without real time
information

Consequences in case of delay/cancellation

- Hard factors
 - no possibility to plan reliable uses of staff and equipment (lorry, trailer, tugmaster, fork lift, etc.)
 - overtimes of staff
 - inefficient / low utilization of the capacities and logistic facilities
 - delays in delivery and waiting times for subcontractors
- soft factors
 - low performance in the whole supply chain due to lack of information
 - bad KPI performance - more and more a relevant indicator for delivery reliability on a clients side

- flexible check-in & boarding time handling for arriving trucks: truck driver mobile phone app
- Just-in-time pick up of unaccompanied trailers in the port area

- **Use Case #3: optimizing processes of large forwarding companies related to ferry passages**

- Up-to-date foot pax and/ or car pax travel time prognosis via travel planners & ticketing APPs of „third party providers“ (google, etc.)
- Convenient & safe on-time arrival by car to the ferry departure
- On-board information for foot pax & car pax on connecting public transport options & road traffic situation



Quelle map: Interreg Baltic Sea Region

targets:

- development of an own APP or „a hybrid window on desktop“, to receive automatically the real time data of the ferry in case of disorders
- automatically transfer of information to the involved target groups (via APP)
- future integration into our used transport management system (TMS)

target groups:

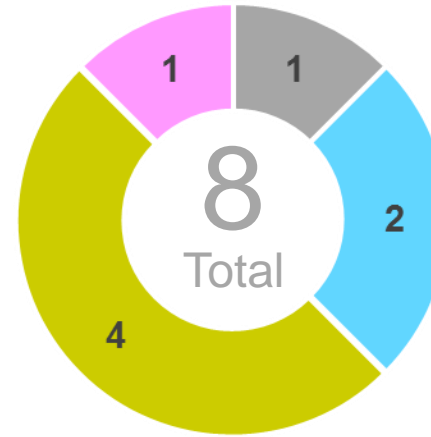
- dispatcher road / trailer
 - to reroute of lorries
 - to inform the involved parties
- dispatcher warehouse
 - to plan the capacities of staff, technic, equipment, etc.
- dispatcher rail / train/intermodal and dispatcher customs
- lorry driver, clients, consignees

Departure ▼

May 23, 2019 14:30
Time to departure: 01:15

Days without a delay: 130

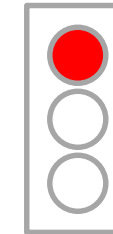
Trailerstatus



Stena Line - Skane

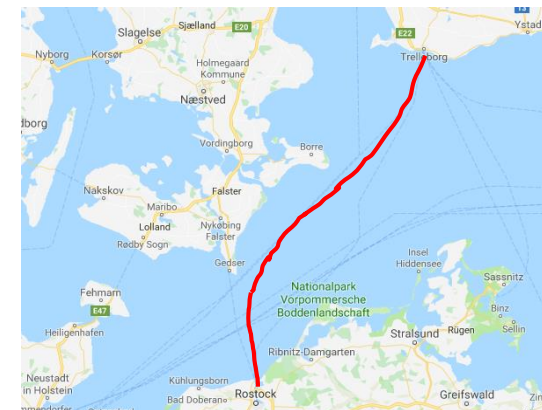
STD: 15:00
ETD: 15:45

Delay: 00:45 min
reason: previous trip



■ picked goods ■ at BSG ■ on storage area ■ shipped

Date	Ship name	STD	ETD	STA	ETA	Info	ILU
23.05.19	Skane	15:00	15:45	21:00	21:45	Delay	SEQA0012345 SEQA0012346 SEQA0012347 SEQA0012348 SEQA0012349 SEQA0012350 SEQA0012351 SEQA0012352



added value/benefits for DB Schenker

DB Schenker

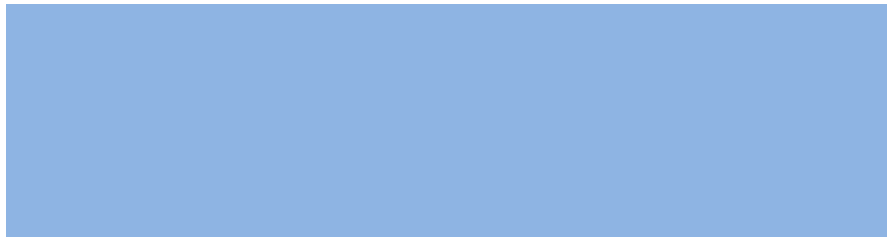
- information as a most important **intangible** good
- improvement of planing process along the whole supply chain
- improvement of customer service
- increase of customer satisfaction
- improvement of capacity utilization
- reduction of overtimes of warehouse staff
- reduction of waiting times of lorry driver
- harmonizing of dashboards and uniform measurement of KPIs
- Improvement of the supply Chain Visibility (standardized rules and methods)

consignees

- real time data about the delivery status
- further processing of information into different areas like warehouse, production, customer service, etc.

Added values of ferry real time data
from the point of view of a logistics
service provider

Many thanks for your attention.



1st RTF Conference Rostock
September 18, 2019

Stena Line Digital Transformation 2017->

A cognitive journey - moving from paper to digital across the organisation



- Information exchange
- improve operational efficiencies and performance
- sustainable ferry journeys
- Improve customer satisfaction
- reduce cost
- reduce workload
-

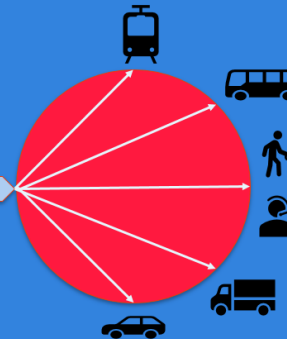
Real Time Ferries Project

DATA SHARING

- Terminal Information
- Time Table
- Time Table Updates
- Real Time Data



STENA SHIP, SE GOT PTA 18.45 ETA 18.50



Information sharing

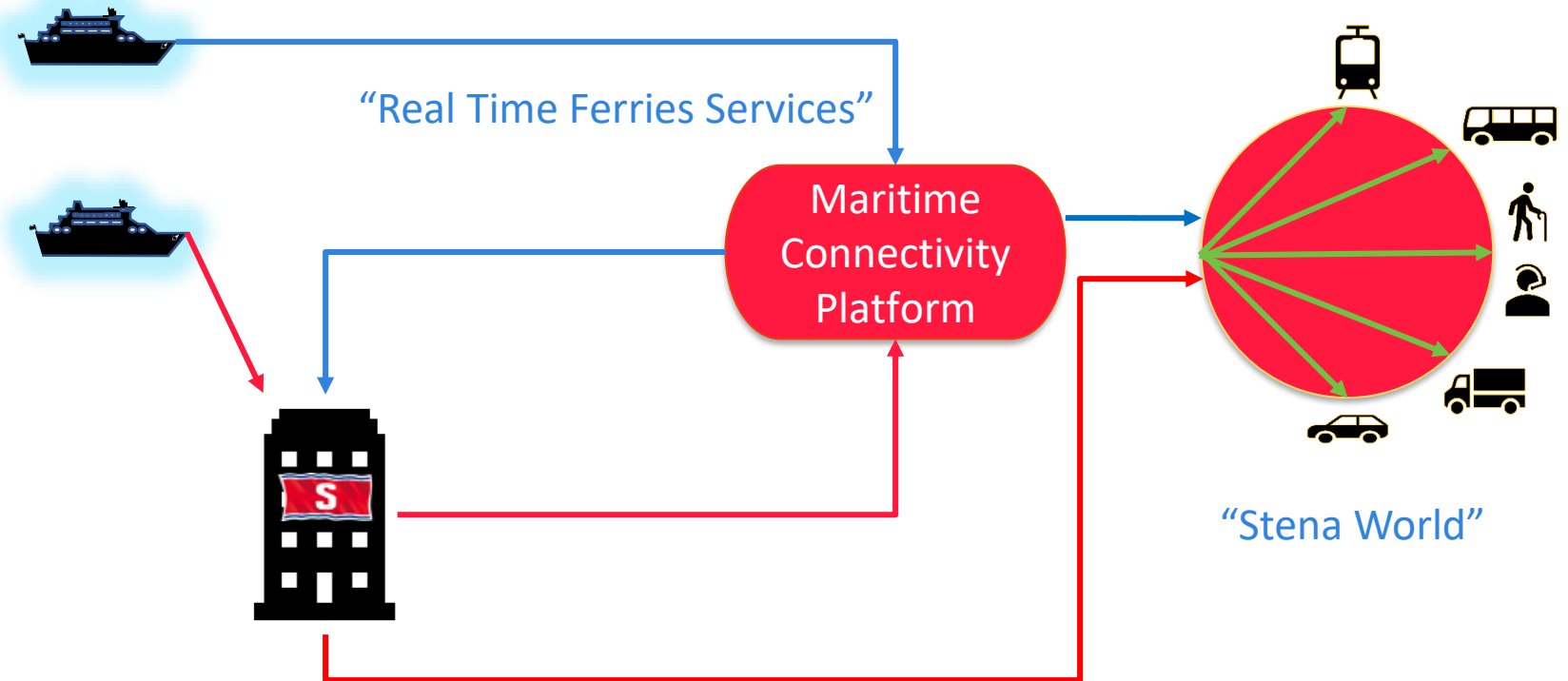
- Internally
to support Stena Operations
- With partners
added value & efficiency
- With customers
Prompt travel information
- Public
Shared and accessible via WEB

How to implement RTF in Stena Line?

Without adding new systems, increase workload and jeopardize safety

There are alternatives.....

- Machine to Machine information exchange
- Use International standard format
- Safe integration with bridge equipment
- Minimize human interaction
- Control of the information exchange

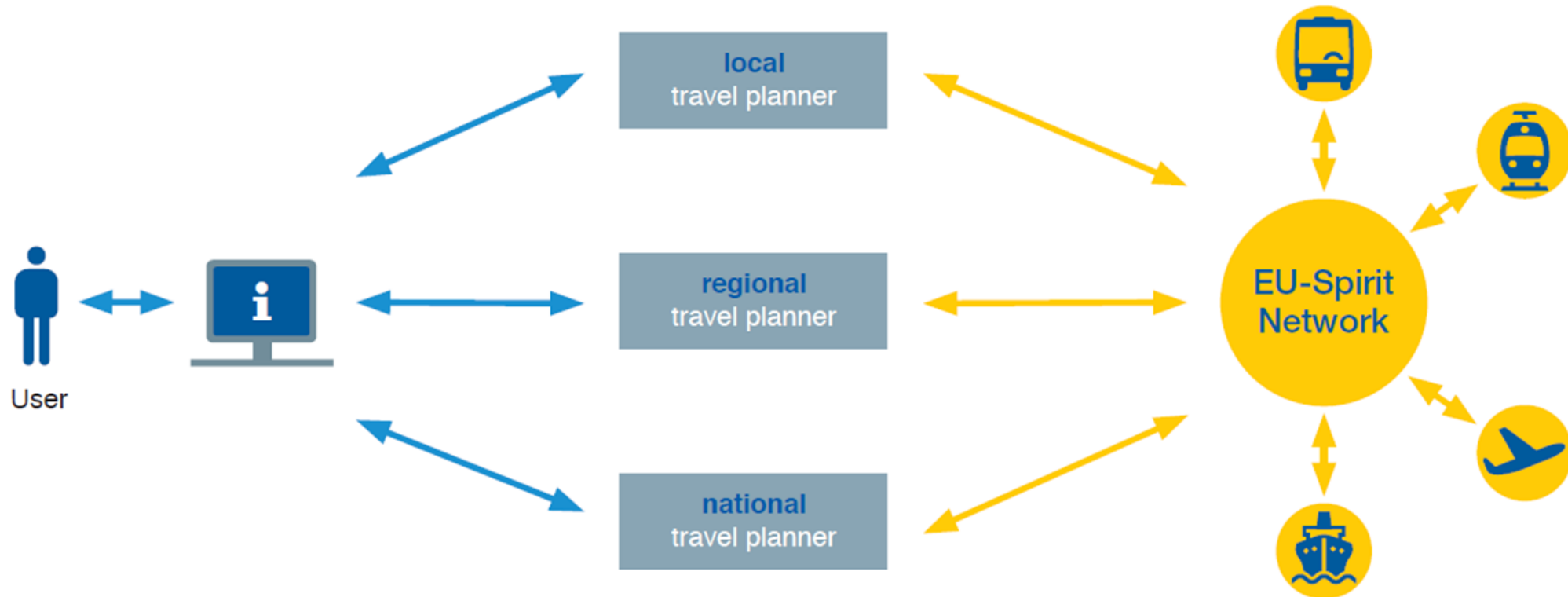




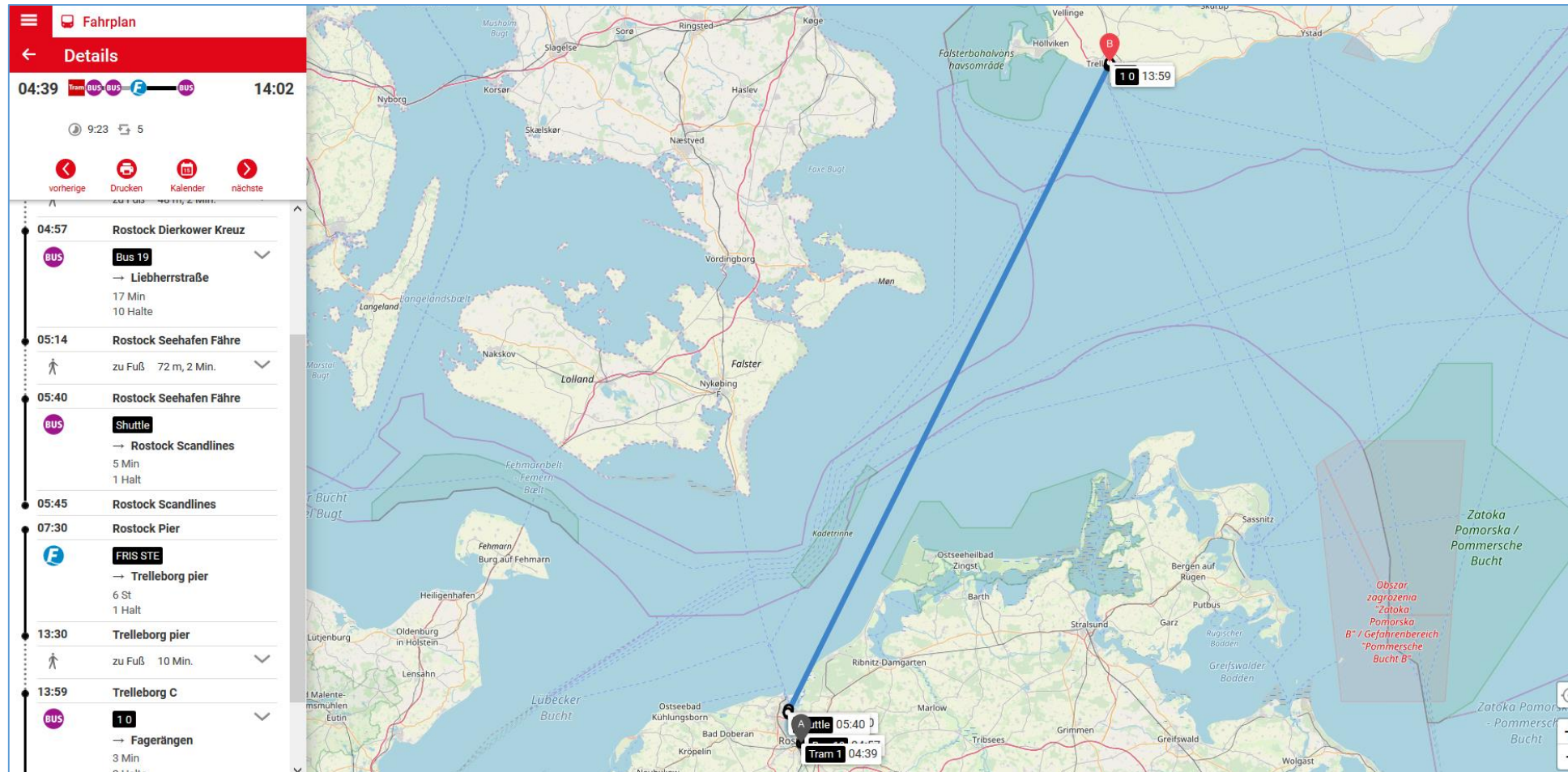
PANEL: What's in it for me? – What value is there for ferry lines, ports, logistics companies and public transportation?

Jürgen Roß, VBB
Rostock, 18th September 2019

Cross-linking within the EU-Spirit network



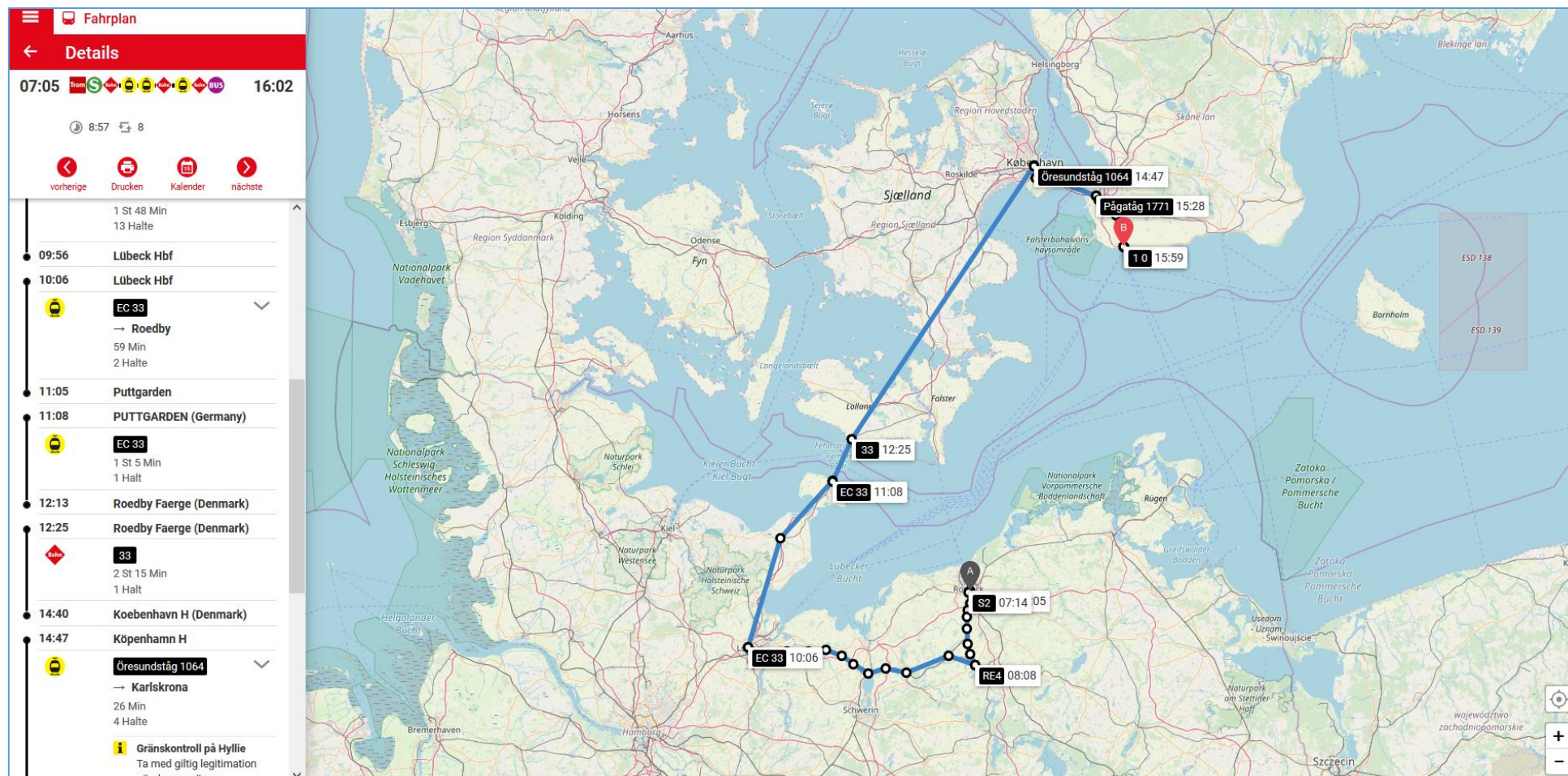
EU-Spirit today (1): travel information (scheduled data)



**Rostock, Steintor IHK
→ Trelleborg, Allén**

Date 19. September 2019
Via Ferry => Trelleborg
Departure 04:39 AM
Arrival 14:02 PM
Duration: 09:23
Transfers: 4

EU-Spirit today (2): travel information (scheduled data)



Rostock, Steintor IHK
→ Trelleborg, Allén

Date 19. September 2019
By train via Hamburg /
Copenhagen
Departure 07:05 AM
Arrival 16:02 PM
Duration: 08:57
Transfers: 6

Do you have questions?

Juergen Ross

Division Head of
Planning and Customer Information

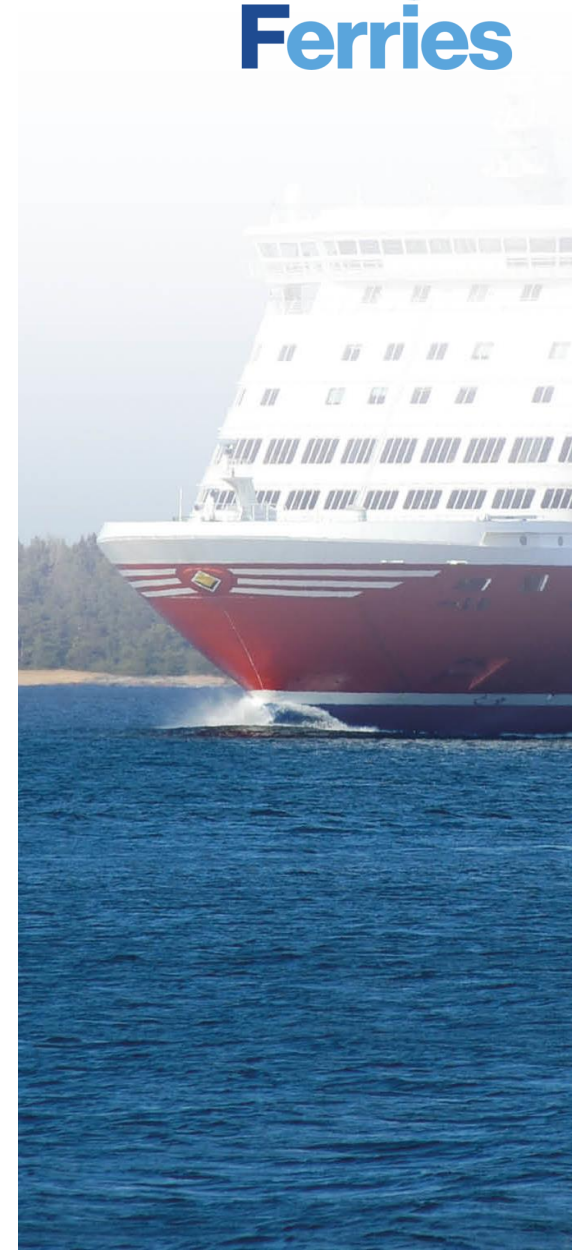


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Thank you!

It's time to get visible!

Real Time Ferries – *sharing real time departure and arrival times for ferries in the Baltic Sea Region to facilitate passenger and goods transport*

www.realtimeferries.eu

