



Elevating Ferry Efficiency with Advanced Cargo & Stability Management

By Markus Tompuri, NAPA

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Quick intro

About me:

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Quick intro

About NAPA:

- World-leading software and data services for ship design and operation for 35 years.
- De facto standard for ship stability and safety for passenger ships.
- Our cutting-edge solutions support all world-leading cruise line and ferry fleets — both onboard and onshore.
- Thus, we are deeply aware of the industry's unique needs and evolving challenges.

Our Customers:



ROYAL CARIBBEAN CRUISES LTD.



VIKING LINE



wasaline



Today's agenda

- 1 Ferries and RoRo – current stability and cargo management needs
- 2 New stability technology to meet current market needs
- 3 New intelligent features and onboard applications
- 4 Data-driven ferry operations: the ship-to-shore connection
- 5 Discussion: Q&A and Comments

Current challenges in stability & cargo management



Criticality of safety, while maintaining efficiency



Frequent and fast load changes



Maintaining safety & efficiency on tight schedules



More intuitive, reliable & fast load calculation



Better emergency support – SRtP and Type 4



Sync between Ship and shoreside

Need for tailored stability solution:

- ✓ Supports crew with the right stability tools & calculations
- ✓ Offers predictability and precision planning of voyages and operations

Stability Solution to match demanding ferry operations

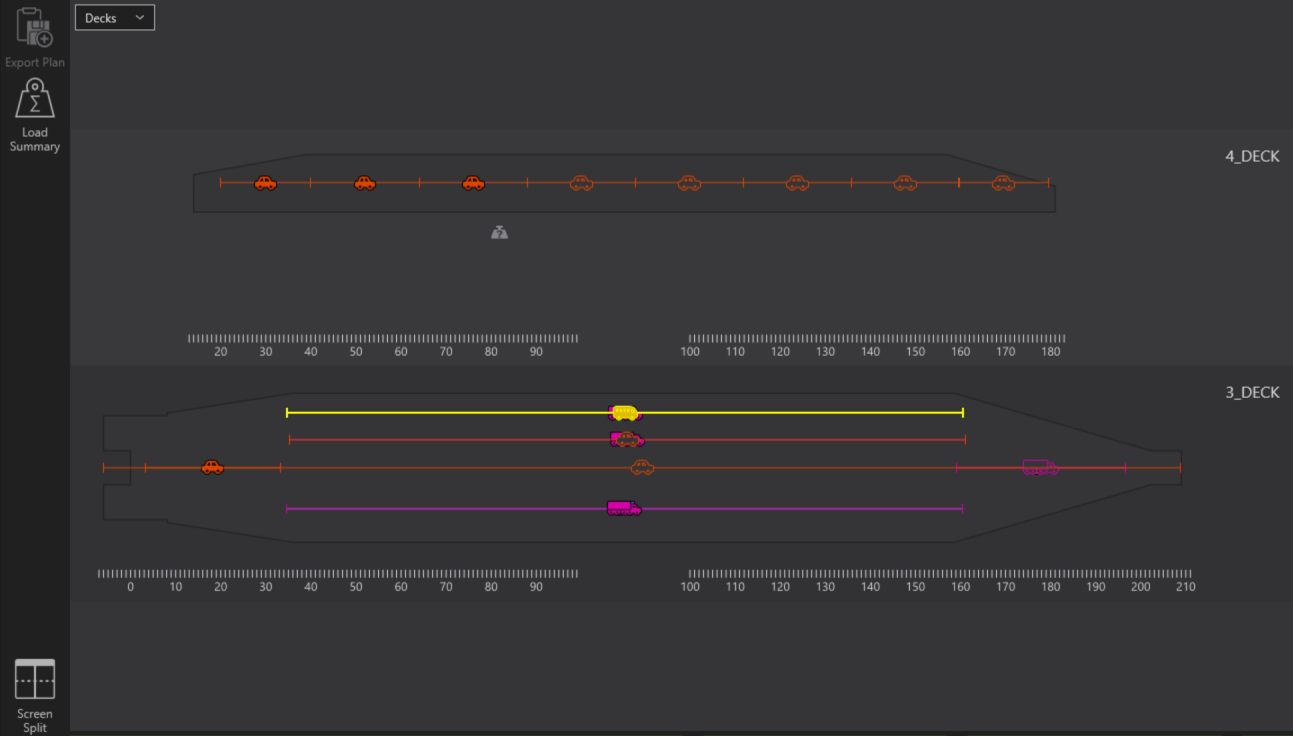
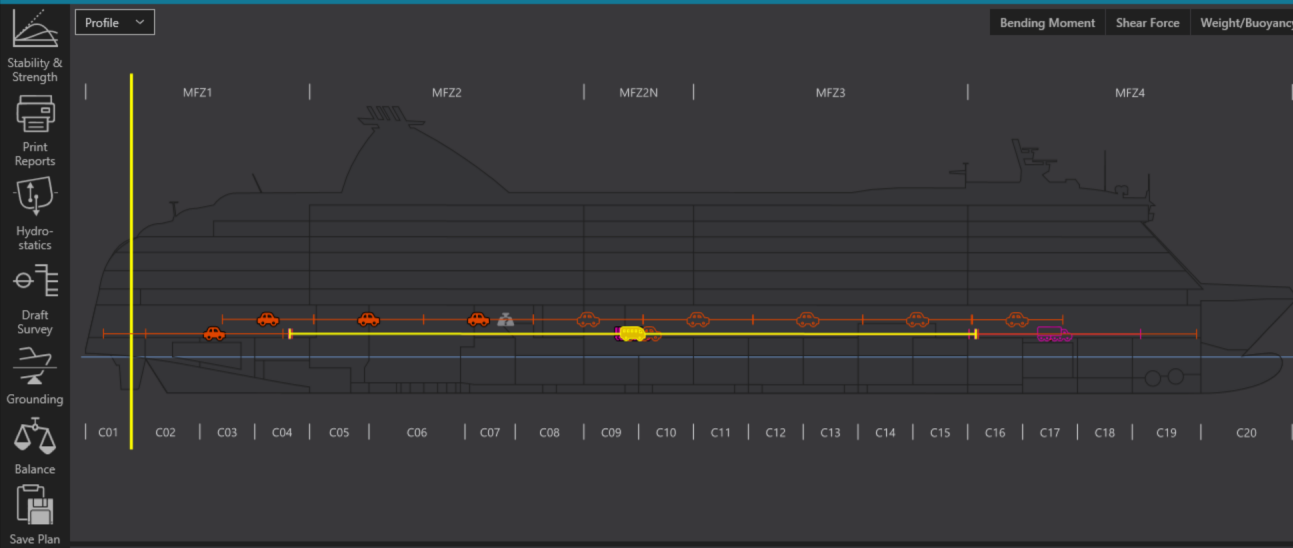
- NAPA Stability already onboard major cruise ships
- Real-time access to stability data on shoreside
- Hyper-realistic simulations for precise voyage planning and predictability
- Faster response in emergencies – Type 4 approved; Safe Return to Port
- Designed to be cyber secure and lifelong resilience.
- Now introducing – NAPA Stability for Ferries.



Advanced Cargo Loading Feature

Faster, more intuitive, and reliable load and cargo management.





Cargo												Tanks	Dry Spaces	Mass loads	Doors & Escapes	Openings	Damages
TYPE	UNITS	UNIT WT	WEIGHT	LCG	TCG	VCG (DECK)	LENGTH	XMIN	XMAX	STATUS	CARGO SHIFT						
4_DECK																	
Car	12	2.00 t	24.00 t	155.00 m	-8.64 m	+0.7 m	16.00 m	147.00 m	163.00 m	OFF	OFF						
Car	12	2.00 t	24.00 t	137.60 m	-8.64 m	+0.7 m	19.20 m	128.00 m	147.20 m	OFF	OFF						
Car	12	2.00 t	24.00 t	118.40 m	-8.64 m	+0.7 m	19.20 m	108.80 m	128.00 m	OFF	OFF						
Car	12	2.00 t	24.00 t	99.20 m	-8.64 m	+0.7 m	19.20 m	89.60 m	108.80 m	OFF	OFF						
Car	12	2.00 t	24.00 t	80.00 m	-8.64 m	+0.7 m	19.20 m	70.40 m	89.60 m	OFF	OFF						
Car	12	2.00 t	24.00 t	60.80 m	-8.64 m	+0.7 m	19.20 m	51.20 m	70.40 m	ON	OFF						
Car	12	2.00 t	24.00 t	41.60 m	-8.64 m	+0.7 m	19.20 m	32.00 m	51.20 m	ON	OFF						
Car	12	2.00 t	24.00 t	24.00 m	-8.64 m	+0.7 m	16.00 m	16.00 m	32.00 m	ON	OFF						
4_DECK subtotal			72.00 t	42.13 m	-8.64 m												
3_DECK																	
Car Aft	10	2.00 t	20.00 t	14.60 m	0.00 m	+0.7 m	24.00 m	2.60 m	26.60 m	ON	OFF						
Car Mid S	20	2.00 t	40.00 t	87.60 m	7.20 m	+0.7 m	120.00 m	27.60 m	147.60 m	ON	OFF						
Car Fwd	15	2.00 t	30.00 t	161.60 m	0.00 m	+0.7 m	30.00 m	146.60 m	176.60 m	ON	OFF						
Trailer PS	4	20.00 t	80.00 t	87.80 m	-9.70 m	+0.7 m	120.00 m	27.80 m	147.80 m	ON	OFF						
Trailer SB	7	20.00 t	140.00 t	87.60 m	7.20 m	+0.7 m	120.00 m	27.60 m	147.60 m	ON	OFF						
Bus	2	15.00 t	30.00 t	87.80 m	-9.70 m	+0.7 m	120.00 m	27.80 m	147.80 m	ON	OFF						
Semi truck PS	8	28.00 t	224.00 t	87.80 m	-9.70 m	+0.7 m	120.00 m	27.80 m	147.80 m	ON	OFF						
Semi truck SB	10	28.00 t	280.00 t	87.60 m	7.20 m	+0.7 m	120.00 m	27.60 m	147.60 m	ON	OFF						
Semi truck Fwd	3	28.00 t	84.00 t	161.60 m	0.00 m	+0.7 m	30.00 m	146.60 m	176.60 m	ON	OFF						
Semi truck Mid	2	28.00 t	56.00 t	88.20 m	-5.00 m	+0.7 m	120.00 m	28.20 m	148.20 m	ON	OFF						
Car Mid Center	11	2.00 t	22.00 t	88.20 m	-5.00 m	+0.7 m	120.00 m	28.20 m	148.20 m	OFF	OFF						
Car Mid P	0	1.00 t	0.00 t	90.80 m	0.00 m	+0.7 m	191.20 m	-4.80 m	186.40 m	ON	ON						

TOTALS	WEIGHT	LCG	TCG	VCG
Listed cargo	972.00 t	85.12 m	-0.85 m	10.59 m
Difference (unknown cargo)	N/A			
Total observed cargo	972.00 t	85.12 m	-0.85 m	10.59 m

Observed floating position

Harbor density: t/m³

Portside heel: deg

Starboard heel: deg

Unknown cargo lies inside ship.

Unknown cargo: NOT LOADED

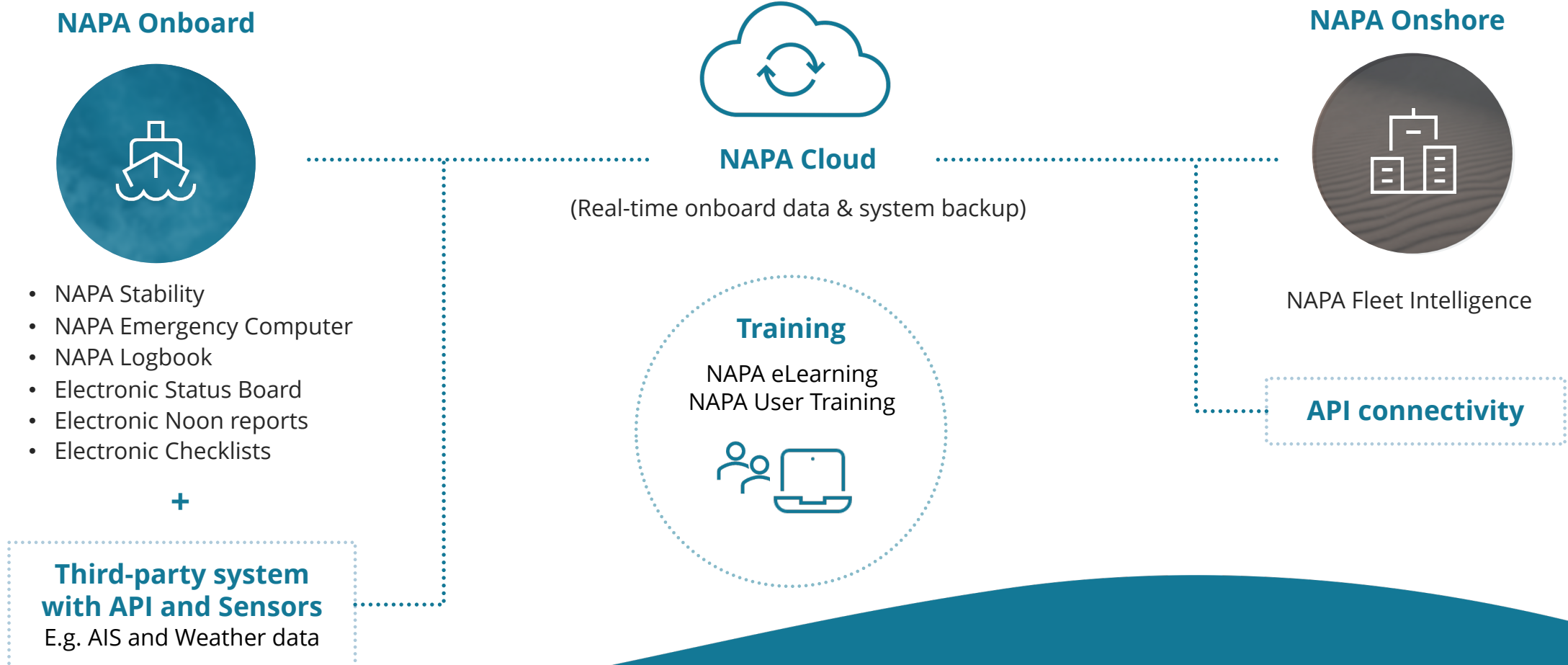
Unknown cargo position: 65.56 m S 0.06 m

Calculated weight: -891.18 t

Damage Stability: Water on Deck feature

More precise damage stability management *with results at-a-glance.*

NAPA Ecosystem: Ship-to-Shore real-time data flow



Modular set-up on shoreside

Pick and choose the modules of to meet your exact needs.

- 1 Fleet View
- 2 Stability Monitor
- 3 Stability Computer
- 4 Emergency
- 5 Logbook
- 6 Regulatory Reporting
- 7 Voyage Optimization
- 8 Voyage Reporting
- 9 Technical performance
- 10 CII Simulator
- 11 Analyzer
- 12 Custom Reports

Already onboard leading fleets

Sea trails and ship installations with:



Onboard seven vessels



Onboard Silja Serenade,
and MS Baltic Queen

How can we help you with your fleet's needs?

Q&A and discussion.





Thank you,

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