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Maritime Flow Management

- a condition for greener ports

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Speaker

 After serving 18 years in The Royal Netherlands Navy, Pieter joined Tidalis (or previously named "HITT Holland Institute of Traffic Technology B.V."/ "Saab Technologies B.V.") and started his second career in the Vessel Traffic Services (VTS) domain.

✓ In the last 20+ years, Pieter is active in VTS business in Europe, South America and Asia. As a permanent resident in Hong Kong, Pieter has witnessed the deployment and development of the 2nd and 3rd generation of Hong Kong VTS System.



Pieter van Vrijberghe de Coningh Managing Director Tidalis APAC Limited

Decades of experience

But a relatively new name

↗ Maritime software solutions

↗ Offices :

_Belgium

_Canada

_Hong Kong

_Netherlands

_Sweden

7 200+ Employees

Tidalis is the home of real-world-impact and innovative people. We are a team that's been forging ahead with years of experience to deliver top tech assistance to the maritime industry



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Maritime Flow Management

Our solutions

A fascinating mix of real-time processing and operational management tools

Vessel Traffic Services	↗ PortManagement	☐ Pilotage	↗ CoastSurveillance	TerminalOperations	OffshoreProtection	
The indispensable tool to ensure safe and efficient shipping	Manage vessel visits, port operations, property and billing in one integrated solution	Get the right pilot for the job and track progress in real- time	Full situational awareness to make every operation count	Truly multi-functional, multi-modal and multi- commodity	Round the clock monitoring vessel traffic near offshore installations to warn for dangerous situations	Advanced tooling to manage AIS networks that supports the latest developments
FOR PORT AND WATERWAY AUTHORITIES	FOR PORT AUTHORITIES	FOR MARITIME PILOTS	FOR COASTGUARDS	FOR TERMINAL OPERATORS	FOR OFFSHORE INDUSTRY	FOR AIS NETWORK MANAGERS



References

Just a few highlights ↗ Australia

> _Hedland _Great barrier reef

⊿ Asia

_Ho Chi Minh City _Hong Kong

_Shanghai

∧ Europe

_Peel ports

_Port of Tyne

_Rotterdam

Americas

_Port of Los Angeles

Halifax

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Port Hedland

Australia





TRAM-2024-0321 Version pA1 BARA PORTS

srt of Bampier Port of Port Hedland

Great Barrier Reef

Australia, one of the seven wonders of the natural world





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VTS Shanghai

China



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Hong Kong





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Port of Tyne

The new generation VTS systems





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Port of Rotterdam

The Netherlands





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Vessel Traffic Service / Coastal Surveillance

- _In line with IALA recommendations
- _Highly reliable, field-proven, solution.
- _Scalable from single AIS receiver / single display systems to nation-wide coverage
- _Versatile: coastal regions, ports, inland waters and infrastructure protection at sea

'One of the things that has always continued to work in our port in the past two decades is the Tidalis VTS system.'

Telecommunication Manager, Port of Antwerp



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Maritime Flow Management

Port Management / Pilot Dispatch

\square Port Control

_Vessel planning / Visit management
_Collaborative decision making
_Resource management
_Precise billing

_Extensive reporting

'We decided to work with Tidalis because of their track record. They have the best mix of functionality, cost and proven results in the market.'

Captain Allan Gray, President and CEO of the Halifax Port Authority



VTS & AIS Solution

MartimeControl Service Suite Edition (MC-SSE)

↗ Next generation system architecture

_Web front-end

_ Desktop, tablet, mobile

_ 3rd party chart overlays

_Cloud native technology (vs. monolithic)

_On premise

_Open but secure

_ Single sign-on

_ REST API

_Extendibility

_ Small containers



Service-oriented architecture



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Maritime Flow Management

"Flow Management" – conditions & challenges

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3rd party contribution

E.g. using open-source solutions a requirement for better results

_Use industry standards where possible

_Focus on our own added value, use 3rd party products for generic functions

_Only use well supported and proven 3rd party products

_Be able to switch to alternative solutions without loosing everything

⊿ Knowledge

_Customer can gain knowledge from 3rd party resources

_ External Training

 $_$ Web (github, stack overflow, youtube etc)

↗ Infrastructure can be shared with other systems



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Port Management Information Systems

PortControl

- ↗ Single Point of truth for all users
- ↗ Time saving web solution
- ↗ Key for Collaborative Decision making
- ↗ Fast, accurate invoicing
- ↗ Multiple port support



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Multi Dimensional VTMS

- ↗ More optimized arrival planning and route planning (JIT arrival)
- Better communication and transparency between stakeholders is a must
- ↗ Shared Situational Awareness.
- ↗ Less confusing messages on VHF > Silent VTS
- More attention for e-navigation including additional carriage Requirements for vessels? When?



Decarbonization – more and more a safety topic

- ↗ 50% of IMO targets for decarbonization can be achieved through slow sailing – JIT arrival
- ↗ 70% of container vessels is more than 10 years old
- At this moment according to BIMCO average age 14.2 years: highest average in last years. That means alternative fuels in absolute numbers play a limited role.
- ↗ Key to IMO decarbonization targets is better arrival planning – Green lanes as example,

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Next steps:

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- ✓ Identifying Third-Party applications that addvalue to our customers and integrate them as a service into MC-SSE
- ✓ More effort on predictive technologies (ML/AI) – using reliable data sets
- ✓ Improve JIT arrival transparency between actors is required.
- Actively working on adding more dimensions
 surface/air/subsurface/space

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Let's not forget the basics

- ↗ Technology vs. the Human Factor
- Maritime Incidents usually have a very complex cause –court cases provide good insight!
- ↗ Look outside! GPS can be easily interfered with, and many systems depend on it
- ↗ KPI's for actors should be transparent and not conflicting for good JIT planning.
- Besides arrival times, attention should be paid to better coordination with departure time as often same resources are required.

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No matter the size of your operation, we have a solution for you.

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We make the maritime world safe, secure and efficient

○ Get in touch / Pieter van Vrijberghe de Coningh / +852 9022 2990 / pieter.deconingh@tidalis.com

