WELCOME TO WARTSILA VOYAGE SOLUTIONS ACADEMY

Graham Wagstaff
THE SMART MARINE ECOSYSTEM JUST GOT ONE STEP CLOSER

TRANSAS IS NOW PART OF WÄRTSILÄ

FLEET OPERATIONS

SIMULATION AND TRAINING

SHIP TRAFFIC CONTROL

WÄRTSILÄ CONNECTS THE DOTS TO THE FUTURE
Transas Company History

Transas (now Wärtsilä Voyage Solutions)

- **TRANSAS (TRANsport SAfety Systems)** was a privately held company focused on development of a wide range of software integrated solutions

- **TRANSAS** held world-leading positions in Maritime: Navigation, Simulation, Shore-based monitoring, Safety and Port Management

- Navigation and Simulation solutions for aviation sector,

- IT-solutions for Defence, Oil and Gas industry, Railway Transportation and other sectors

- **TRANSAS** Main offices are in Singapore, Saint-Petersburg (Russia), Gothenburg (Sweden), Hamburg, Portsmouth, Antibes, Cork, Melbourne Florida, Seattle.

- Transas was acquired by Wartsila in 2018 and is now Wartsila Voyage Ltd
GLOBAL PRESENCE
Global Reach and High Level of Customer Support

At present the Wartsila Voyage Solution Headquarters is located in Portsmouth, UK. The company operates 22 own regional offices and has a global network of partners serving Wartsila customers around the world.
Smart Marine Ecosystem

Data processing
Data analytics
Artificial Intelligence
Decision Support

Fleet Operation Centre
- Collaborative decision making processes
- Situational awareness

Simulation and Training

Port

Vessel Traffic Management System

Local Data Processing And Analytics unit
Sensors – Bridge
Data Collector

Port
Fleet Operations Solution (FOS) is designed to achieve the highest level of safety at sea, increase fleet efficiency and simplify everyday tasks both ashore and on board.

With FOS, the operations are processed seamlessly, the compliance is guaranteed and the workload and costs are optimized.
All tools and data are connected in one operating system with the ECDIS kernel at its core, building the basis for improved operational efficiency and safe processes, with all stakeholders having access to and relying on the same information.
A set of connected intelligent applications inside FOS

Advanced software applications facilitate routine tasks and decrease the workload allowing people to focus on their main objectives.

A-Suite uses artificial intelligence to improve situational awareness and decision support on bridge and ashore.

- Analytics
- Decision Support
- Artificial Intelligence
- Planning
- Maneuvering
- Situational Awareness

A-SUITE

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AIR optimizes vessel route according to a variety of metocean data, as well as traffic separation schemes and regional regulations on acceptable fuel types, using artificial Intelligence technologies.

- Automated fastest and safe route generation and update
- Geometric and weather optimization
- Reduced bridge crew workload
- Efficient fuel consumption
- ECDIS integration
- Safety check and Voyage plan documentation.
AID detects anomalies, i.e. abnormal, unusual and/or dangerous patterns in ship behaviour, real-time and post voyage, in order to increase situational awareness, eliminate the possibility of human error and eventually, reduce risk.

- Automatic anomaly detection and alerts
- Allows to foresee and prevent dangerous situations, including
  - Excessive / extreme maneuvering
  - Near miss collisions / grounding cases
  - Potential loss of ship stability and cargo shift problems
  - Dangerous hull / machinery loads
  - Ignoring critical navigational alarms
AIM – ADVANCED INTELLIGENT MANEUVERING

Track prediction designed to improve situational awareness and reduce the probability of officer in-attention or poor judgment leading to an incident.

- 15-20 minutes reliable ship trajectory prediction for the area (98.5% accuracy)
- Recommendations of safe & efficient maneuvers to avoid collisions
- Prediction of potential collision and grounding events
- Identification of safety distance parameters applicable for the area
The best possible protection against cyber attacks

Sophisticated security compliant cloud platform
- Identity control
- Secure infrastructure
- Security applications
- Compliant to the General Data Protection Regulation coming into force May 2018

VPN
- Firewall IEC 61162-460 standard approved

LAN business segmentation
- Business and private network segmentation with the traffic priority control

Data security validation
- Data integrity and validity checks.
ENHANCED SAFETY & EFFICIENCY ACROSS THE WHOLE VALUE CHAIN

AIR
- safest route
- up to 5-7% fuel savings
- reduced bridge crew workload
- just in time arrival at the port

AID
- automatic anomaly detection
- dangerous situation prevention
- analysis of abnormal patterns in ship and crew behaviour
- ad hoc trainings

AIM
- 15-20 min trajectory prediction
- reduced risks of collisions
- reduced risks of human errors
- safety in congested areas
SHIP TRAFFIC CONTROL

Facilitation and co-ordination of vessel traffic and ports
SIMULATION
Bringing technology, expertise and content together

WEB-BASED TRAINING
CREW TRAINING
TECHNOLOGICAL SIMULATORS
NAVIGATIONAL SIMULATORS

DATABASES AND SCENARIOS
DECISION SUPPORT TOOLS
COMPETENCE DEVELOPMENT

DEVELOPMENT
DIGITAL TWIN

Engine Room and Bridge Simulator Models Linked
Academy Structure and Workflow

**Product Development Managers**

**Navigation Operations**
- **Training Expert**
  - Lee Tobin
  - Responsibilities:
    - Training in Academy
    - Product TRG support
    - Product TRG lesson plans
    - Production of TRG material
    - Recruitment of TRG partners
    - Quality Control of TRG Partners
  - **Training Partners**
    - Regional Training Partners

**Navigation Systems**
- **Training Expert**
  - Jenn Colwell
  - Responsibilities:
    - Training in Academy
    - Product TRG support
    - Product TRG lesson plans
    - Production of TRG material
    - Recruitment of TRG partners
    - Quality Control of TRG Partners
  - **Training Partners**
    - Regional Training Partners

**Technical Systems**
- **Training Expert**
  - Lyndon Bailey
  - Responsibilities:
    - Training in Academy
    - Product TRG support
    - Product TRG lesson plans
    - Production of TRG material
    - Recruitment of TRG partners
    - Quality Control of TRG Partners
  - **Training Partners**
    - Regional Training Partners

**Project Management Office**

**HR Department**

**Sales**

**Training Co-ordination**

**Training co-ordinator**
- **and Commercial Training Expert**
  - Sabrina Millward
  - Responsibilities:
    - TRG Co-Ordination
    - Commercial Training in Academy
    - HR TRG support
    - Sales TRG Support
    - Production of TRG material
    - Invoicing and quotation
    - Quality Control of TRG Partners

**TRG** = Training
Wärtsilä Voyage Competitors

KONGSBERG + Rolls-Royce MARINE

RHEINMETALL DEFENCE

Raytheon

Sperry Marine

FURUNO
Market position

- Maritime simulators
- Maritime electronic charts
- Maritime integrated navigation systems
- Vessel traffic systems
Thank You for Your Attention