



GREAT LAKES
ST. LAWRENCE
SEAWAY SYSTEM

Mariner's Workshop

SLSMC – January 25, 2022

Draft Information System

- DIS stats
- Validation process and documentation
- Testing and confirmation of DIS tool

Draft Information System - DIS

DIS Transits				
Date	2018/19	2019/20	2020/21	2021/22
MLO Upbound	80	77	57	78
MLO Downbound	229	218	254	263
MLO TOTAL	309	295	311	341
NR Upbound	33	32	11	13
NR Downbound	342	359	386	377
NR TOTAL	375	391	397	390
<i># of ships with operational DIS</i>	38	37	35	35

DIS Validation & Documentation

- DIS meets specs
- Ship equipped with updated high-resolution bathymetric charts for DIS.
- Ship equipped with the latest up to date electronic charts for DIS.
- DIS tool is configured to the correct Seaway ship type.
- AIS is operational and accurate at all times when navigating Seaway waters.
- International Association Classification Society letter regarding DIS approval.
- Software version of DIS Tool.
- Shipping company certified letter attesting that all navigation officers are trained in the use of the DIS Tool.
- Copy of DIS manual document explaining the DIS functions are onboard the ship.
- Confirmation that the DIS Tool is viewable from the conning position.

DIS Testing – Ocean Ships

6 Trial Tests

- **Six trial tests**
 - 2 (1up/1dn) simulated tests at max. permissible draught with DIS set to 8.15m
 - 2 (1up/1dn) at max. permissible draught with ballast added to maximum permissible DIS draught of 8.15m
 - 2 (1up/1dn) at max. permissible DIS draught of 8.15 metres
- Tests are to verify that DIS Tool, equipment and alarms are working properly and maneuverability of the ship is not adversely affected.
- Tests monitored by an onboard Seaway Ship Inspector as well as pilotage authorities. Pilotage authorities will determine whether their attendance is required.
- **Testing will only be conducted after agreement between the ship operator, Seaway and pilotage authority.**
- Once tests have been satisfactorily completed a review will take place and any concerns must be satisfactorily addressed before approving the use of the DIS Tool.
- **Bow thruster must be operational**

SLSMC – Enabling Navigational Technologies



1998

Traffic Management System (TMS) implemented

Modernized scheduling and predicting of vessel traffic in the MLO & Welland Canals. Providing operator with key information to make navigational traffic decisions



Automatic Identification System (AIS) implementation in Great Lakes

2002

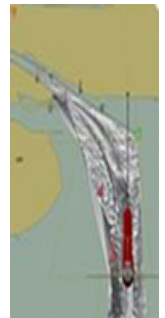
Providing updated maritime and navigational information to mariners



Draft Information System (DIS)

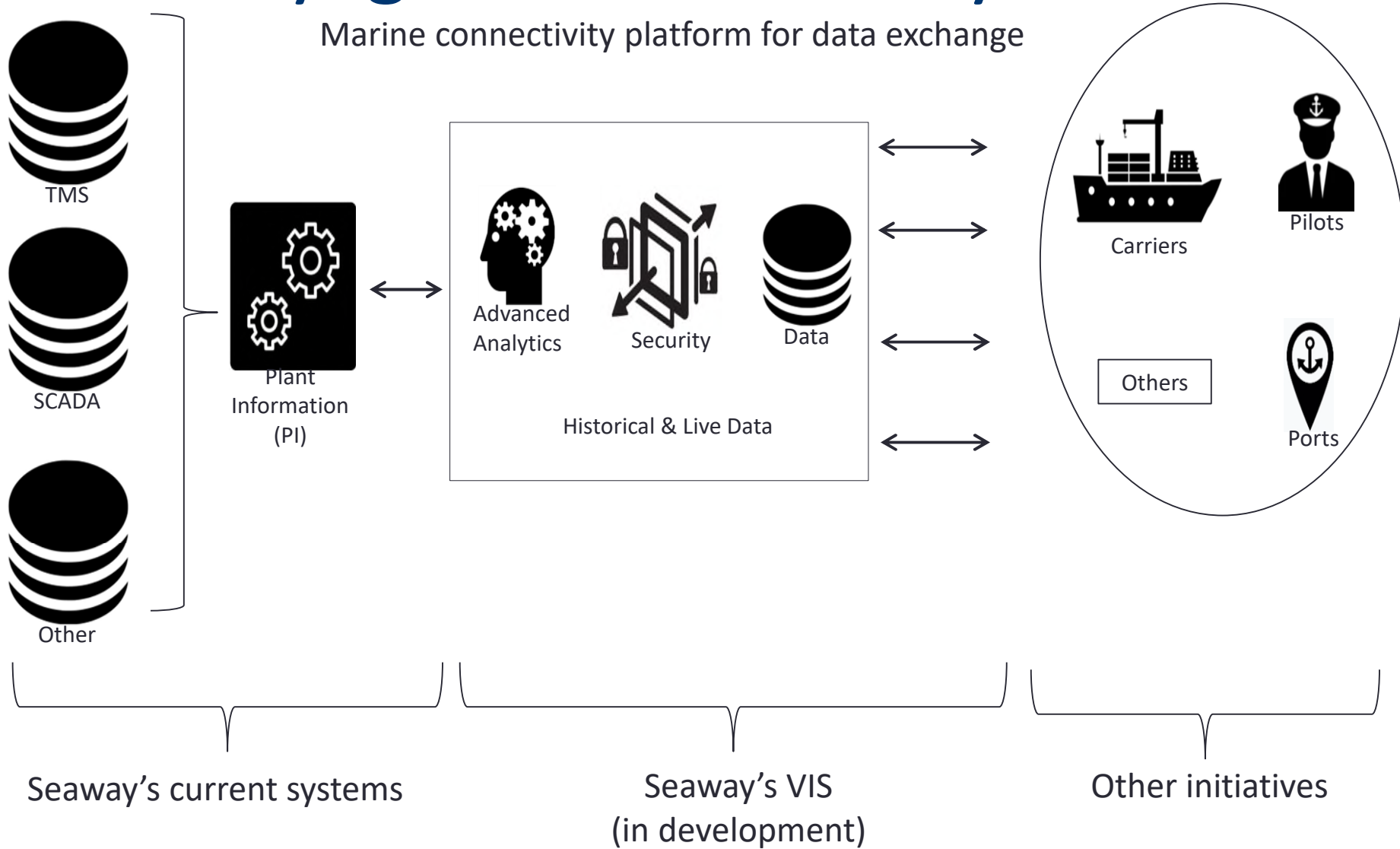
2009

Allow equipped vessels to carry more cargo (deeper draught)



Voyage Information System

Marine connectivity platform for data exchange



VIS - Phase 1

- Transit Planning
 - Improve ETA calculations based on previous work by VOLPE
 - Historize ETA
- Seaway Connectivity Platform
 - Create structure and sample application
- Traffic Management System
 - ETA delivery using connectivity platform
- Lock/Bridge Operations
 - Real-time information delivery demonstration

Main output is to improve ETA at key waypoints and demonstrate delivery of information to vessels and other stakeholders

VIS- Stakeholder Outreach

In the near future, outreach to stakeholders to discuss

- benefits of VIS
- information available to exchange
- information beneficial to obtain
- applications used

Welland Canal – Season Extension

- Third year of pilot program
- Little to no ice impacting navigation

Transits Through Lock 1			
Date	2019/20	2020/21	2021/22
01-Jan	3	5	4
02-Jan	4	1	3
03-Jan	5	3	5
04-Jan	4	6	6
05-Jan	2	1	2
06-Jan	1	3	1
07-Jan	2	1	1
Total - Jan	21	20	22