OCIANA®: World's First AI Powered Collaborative Berth Scheduler

OCIANA's Collaborative Berth Scheduler will connect ships, pilotage authorities and ports to support Green Digital Shipping Corridors and environmental protection thus promoting the overall efficiency of the maritime supply chain.

In partnership with Canada Steamship Lines, Montreal Port Authority, Laurentian Pilotage Authority and Clear Seas, OCIANA's latest capability will streamline vessel berthing through AI Predictive Analytics to support Just-in-Time Arrivals (JIT).

#### Relevant UN SDGs



# Key Objectives of OCIANA's Collaborative Berth Scheduler

To allow ports, pilotage, and shipping lines to exchange near real-time data via a common platform, enabling digital planning and operational optimisation:







OCIANA® will be accessible to all maritime stakeholders globally. Benefits include:

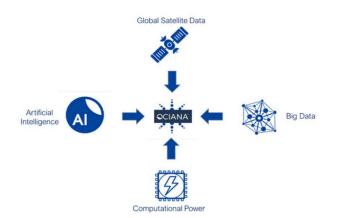
- real-time performance monitoring of global emissions
- information on vessel movements and vessel berthing delays in real-time
- enhanced planning and coordination as it pertains to berthing windows
- decision-making intelligence for dynamic environments
- support for route optimisation



JIT Arrivals with OCIANA® will:

- enable ships to optimise their steaming speed, thereby lowering fuel consumption, and reducing emissions
- facilitate increased vessel productivity based on factors such as berth availability, vessel size and more accurate depth information
- minimize time at anchorage and therefore reducing congestion in the port area
- maximise berth occupancy
- optimize human resource schedules through improved coordination
- enhance intermodal coordination
- reduce delays to maritime stakeholders

# **OCIANA** Platform



OCIANA® incorporates the latest developments in Artificial Intelligence and Big Data analytics to improve maritime situational awareness and provide real-time decision-making intelligence:

### Multi-Source Data Analytics:

- To ingest a wide range of data sources including global AIS data, an array of satellite data, and weather data; OCIANA® also ingests IoT data
- Spatially and temporally correlates the data and employs AI algorithms
- Output from the AI/ML trained models can be accessed through the online application or API

### Partner Communication:

• An embedded communications channel enables multiple users to share information in real time

lavigate Tomorrow Toda

• Advanced chat and collaboration tools

|     | DRAFT                     |                     |           |        | 1         | 0                            |             | n                                    |        | 0                 | Vessel Information               | Port History                   | ETA                          | 10.00              |                       | Sales Turter   |             |
|-----|---------------------------|---------------------|-----------|--------|-----------|------------------------------|-------------|--------------------------------------|--------|-------------------|----------------------------------|--------------------------------|------------------------------|--------------------|-----------------------|--|-------------|
|     | Date Filter<br>vals/Check |                     |           | -      |           | I Cargo                      |             | Cargo                                |        | senger            | RF MARINA ()<br>IM0: 9580986     | MMSI: 256770000                | Call sign:                   | 2HA2926            |                       | _ 41   |             |
| Ē   | TODAY                     |                     | Year      | *      |           |                              |             |                                      |        |                   | Ship type                        | Tanker                         |                              |                    | 12                    | 0  |             |
|     | JAN 01                    | - DEC 31            | 2024      |        | 10        | 0                            | 0           | 0                                    | 0      | 0                 | Ship subtype                     | Cherrical/Pro                  | ducts Tanker                 | 7                  | 1 -1                  |  |             |
|     |                           |                     |           |        | Container | Break Bulk                   | Liquid Bulk | Solid Bulk                           | Cruise | Ferry             | Country of Registry              | Malta(MLT)                     |                              |                    |                       | and the second s | 50.7        |
|     |                           | REFRE               | H AIS/H   | ۶Ø     |           |                              |             |                                      |        |                   | Port of Registry                 | Valletta(9130                  | )                            | •                  |                       |  |             |
|     | AIS/IHS L                 | ast Updates         | 115:37 21 | 24-08  |           |                              |             |                                      |        |                   | Gross tornage<br>Draught         | 13239                          |                              | - 8                |                       |  |             |
|     |                           |                     |           |        |           |                              |             |                                      |        |                   |                                  |                                |                              |                    |                       |  |             |
|     |                           | Vessel<br>VISTULA M |           |        | IGTP RA.  | Berth<br>60-61 - Bert        |             | tainer Ship Fr                       |        | ene ⊽ I<br>pe Ray | ETAJATA 1<br>2024-08-24 03:04:27 | Distance to De., 9 1<br>1220.9 | Time to Ar., 1<br>24:11h:28m | Name V I           | 2024-08-25 05 29 30   | Distance to Da., V 1   | Time to A   |
| ÷   |                           | ID PIONEER          |           | STMGJV | IGTP RA   | 60-61 - Bert                 |             | vtainer Ship (Fi<br>k Carrier        | AL CI  |                   |                                  |                                | 2d:11h:28m                   | eow<br>NW          |                       |  | 3kt 10kt 53 |
|     |                           | AZORESEC            |           |        |           |                              |             | veral Carpo                          |        | e Rav             |                                  | 828.4                          | 24:101:38m                   | 50W                | 2024-08-25 10 28:47   |  | 2xt 19h 02  |
|     |                           | PLYCA               |           |        |           |                              |             | Ro Cargo Ship                        |        | pe Ray            | 2024-08-25 06:14:36              | 1005.2                         | 3d:14h:38m                   | 60W                | 2024-08-25 08 38 42   | 1004.2   | 4d:17h:00   |
|     |                           | FORTUNAG            | PAC .     |        |           |                              |             | veral Carpo                          | N      |                   |                                  |                                |                              | 50W                | 2024-08-21 19:33 59   | 60.7   | Det DOPUS   |
| 11  | 1                         | MUNTORM             | THE       |        |           |                              | Ge          | veral Carpo                          | 94     | au-harnois Lo     | 2024-08-2120 55:11               | 127.0                          | 0d:05h:19m                   | Ste, Catherine L., | 2024-08-22 00 22 24   | 146.7  | Det DEPu 5  |
|     | 1                         | MSC Tuppe           | 0         | STMOJA | IGTP RA.  |                              | Co          | Nainer Ship (Fi                      | 4L G   | çe Ray            | 2024-08-26 05:49:45              | 1626.1                         | 44141414m                    | 60W                | 2024-08-27 06:12:51   | 1751.5   | 5d:16h:20   |
| 11  | 1                         | MAAS CON            | FIDE      |        |           |                              | 84          | k Carrier                            | N      | 4.                |                                  |                                |                              | NA                 |                       |  |             |
|     | 1                         | MSC SAGE            | TAIL      |        |           |                              | Co          | tainer Ship (Fi                      | al. G  | pe Ray            | 2024-08-21 18:30:50              | 278.8                          | 0d:02h:55m                   | cow                | 2024-08-22 20:54:57   | 576.0  | 1d:05h:19   |
| 11  | 7                         | RF MARINA           |           |        |           |                              | Ch          | mical/Product                        | s T Ci | çe Ray            | 2024-08-21 01 39:01 🛃            | 0                              |                              | EON .              | 2024-08-23 08:01:29   | 165.4  | 1d:101:25   |
|     |                           | BOW TRUE            | арн       |        |           |                              | Ch          | mical/Product                        | sT. N  |                   |                                  |                                |                              | 60W                | 2024-08-19 20 25:04 💟 | 0  |             |
| 100 | 7                         | FURE VITE           | N.        |        |           |                              |             | enical/Product                       |        | au-harnois Lo     | 2024-08-212146:55                | 47.9                           | 0d:06h:11m                   | Ste. Catherine L., | 2024-08-22 01:25:17   | 66.9   | Dxt:06h:41  |
|     |                           | CLI PRIDE           |           |        |           |                              | 00          | veral Carpo                          | 6      | ce Ray            | 2024-08-26 07:34:45              | 1123                           | 40191669m                    | 66/11              | 2024-08-27 09:58:51   | 1632   | Ed 191/22   |
| 1   |                           |                     |           |        |           |                              |             |                                      |        |                   |                                  |                                |                              |                    |                       |  |             |
| -   | 1                         | Montreal E          | -press    |        |           | 78-79 - Bert                 | h 2 Co      | tainer Ship (Fi                      |        | çe Ray            | 2024-09-01 08:30:48              | 2927.4                         | 10d:16h:55m                  | 60W                | 2024-02-02 10 54 54   | 3042.8   | 154:194:19  |
| -   |                           |                     |           |        |           | 78-79 - Bert<br>78-79 - Bert | h 2 Co      | vtairee Ship (Pi<br>vtairee Ship (Pi |        | çe Ray<br>çe Ray  |                                  | 2927.4<br>955.0                |                              | 60W<br>60W         |                       | 3042.8<br>1071   |             |

### Incoming Vessels - Leveraging OCIANA's ETA Prediction and Intelligent Geofences

| TODAY Year +   | 2               |                 | (                |                 |             | 0           | Ves  | asel information                           |           |     |         | ETA                    | ALVA.          | 100      | - OPD   | HAP IN NEW WIND |
|--|-----------------|-----------------|------------------|-----------------|-------------|-------------|--|--|-----------|-----|---------|------------------------|----------------|----------|---------|-----------------|
| JAN 01 - DEC 31, 2024 pply Oute Filter Te: - nene selected - | Genera          |                 | Bulk             |                 |             | 0<br>icoger | 1840   |  | <br>69.   |     | Call st |                        |                | - 43     |         | 200             |
| ART BROOM - •  | 28<br>Container | 0<br>Dreak Dalk | 0<br>Liquid Bulk | 0<br>Solid Bulk | 0<br>Cruite | 0<br>Furry  | Ship top<br>Ship suff<br>Country<br>Post of R<br>Gross to<br>Draught | type<br>of Registry<br>Registry<br>religit |           |     |         |                        | 1              | 1        |         |                 |
| COLIANI DETTINGS   |                 |                 |                  |                 |             |             |  |  | 1         |     |         | ACTUAL                 | CONFIRMED      |          |         | ACTIONS         |
| ERMAN A  |                 | . 11            | INNIAL G         |                 | 800714      | a <b>*</b>  | VENDEL   | a . •                                      | 160 A . * | ALD | rs .    | Time of Arrival        | Yeas of Depart | **       | NOTES + | action.         |
| 972 / OEX 2  |                 | м               |                  |                 | 55 - Dar    | ÷1          | +  |  | 12548     | •   |         | 2023-08-01 10:27:00 AM | 2023-08-27 11  | 27.00 PM |         | 8.0             |
| 672/9EX2   |                 | . M             |                  |                 | \$7-be      | 8.2         | 4  |  | -         | •   | .8      | -                      | -              |          |         | 2 D             |
| RAMP   |                 | vi              | NJ.              |                 | _           |             | 4  |  |           | •   | .8      | -                      |                |          |         | R 🖬             |
| 72/06X2  |                 | 0               | ut.              |                 |             |             |  |  |           |     | .8      | -                      |                |          |         | 2 N 🖬           |
| letitice 12  |                 | 0               | et               |                 | 76-77-1     | Berth 1     | 4  |  | 12545     | •   |         | -                      |                |          | -       | 2 E             |
| AED-CANADA (ST LAMMENCE) SERVICE (DAM                        | NALA EXPRES     | 52) M           | isomeuse         |                 | 65 - Ber    | 0.1         | 4  |  | 4215      |     | .8      | -                      | -              |          |         | 2               |
| ED-CANADA (ST LAWRENCE) SERVICE (CAR                         | VADA EXPRES     | 52) M           | iscriment        |                 | 47 - Ber    | ÷ 3         |  |  | 5018      | •   |         | -                      |                |          |         | - M 🖬           |
| RED-GANADA (ST LAWRENCE) SERVICE (GAR                        | GADA EXPRES     | 12) M           | ******           |                 | St-De       | 0.1         | 4  |  | 4216      |     | .8      | -                      | -              |          |         | 20              |
| AED-CANADA (ST LANRENCE) SERVICE (CAN                        | AGA EXPRES      | \$2) O          | et.              |                 | -           |             | 4  |  | 5018      |     |         | -                      |                |          |         | 2               |
| ED CANADA (ST LAWRENCE) SERVICE (CAR                         | ALA EXPRES      | 12) M           | isonere          |                 |             |             | ÷  |  | 2712      |     | .8.     |                        |                |          |         | - 28 🖬          |
| RED-GANAGA (ET LAMRENCE) SERVICE (GAN                        | GADA EXPRES     | 92) M           | and the second   |                 | 57 - Ber    | n 3         | 4  |  | 5401      |     |         |                        |                |          |         | 2               |
| HED-CANADA (ST LAWRENCE) SERVICE (CAR                        | AGA EXPRES      | 52) M           | ficereset.       |                 | 55 - Ber    | 61          | 4  |  |           |     |         |                        |                |          |         | 20              |
| RED-CANADA (ST LAMBENCE) SERVICE (CAR                        | VACA EXPRES     | 12) M           | autoritation and |                 | 47 - Def    | 6.3         | -4   |  | 5000      |     |         | -                      |                |          |         | 80              |
|  |                 | 12) M           |                  |                 | 14-Det      |             |  |  | 2045      |     |         |                        |                |          | -       | 20              |

#### In the Harbour - Leveraging OCIANA's Port Analytics

| Schedule Entries - Leveraging            |  |
|--|--|
| <b>OCIANA's Liner Service Automation</b> |  |

| DRAFT          | r        | PUBLISHED                                    | ePAN: DETROIT EX      |                | Call sign:           | VRLX4                 | Vessel Info     | rmation | Port           | History     |                  | ETA        |                             |     |                    | OPEN | MAP IN N | W WIND |
|----------------|----------|--|-----------------------|----------------|----------------------|-----------------------|-----------------|---------|----------------|-------------|------------------|------------|-----------------------------|-----|--------------------|------|----------|--------|
| ASTER          |          |  | Commodities           |                |                      | 0                     | DETROIT         | EXPRES  | is 🔿           |             |                  | *          | 139122                      |     |                    |      |          |        |
| ly Date Fil    | iter To: |  | Master name           |                |                      |                       | IMO: 95         | 10169   | NNSt           | 47777630    | Call sig         | n: VRLX    | 1012                        |     |                    |      |          |        |
| ny Date Fi     | elds     | -  | Country of Registry   |                |                      | _                     | Ship type       |         |                | Cargo ships |                  |            | 56                          |     | 1.4.4              |      |          |        |
| TODA           | or 1     | Month -                                      | Port of Registry      |                |                      |                       | Ship subtype    |         |                | Container S | hip (Fully Cellu | lar)       | 100                         |     | O                  |      |          |        |
|                |          |  | Length                |                |                      |                       | Country of Reg  |         |                |             | China(HKG)       |            | 7                           |     | 24                 |      |          |        |
| JUL            | 01 - JI  | JL 31, 2024 🕨                                | Beam                  | -              |                      |                       | Port of Registr |         |                | Hong Kong   | (9877)           |            | =                           |     |                    |      |          |        |
|                | 1.0      | EFRESH AUS/THS (2)                           | Moulded breadth       |                |                      |                       | Gross tormage   |         |                | 41286       |                  |            | •                           |     |                    |      |          |        |
| 4.07.09.00     |          | odated 15:45 2024-08                         | Maximum summer draugh | t (salt        |                      |                       | Draught         |         |                | 11.4        |                  |            |                             |     |                    |      |          |        |
|                |          | Service Info<br>Service Name 🛛 🎔             | t Vessel 9 :          | Terminal Info  | Derth 4 9 1          | Initial Ro<br>Accisal | 9               | 1 Depa  | rtare          | ¥ 1 - 1     | iour 9 1         | Status 9 1 | Change Requested<br>Arrival | ¥ : | Departure          | 9.1  | Sear1    | P = 1  |
| ction          |          | Service Name 🛛 🎔                             | t Vessel 9 t          | Terminal 9 1   | Berth 4 9 1          | Accival               | 9               | 1 Depe  | rtare          | ¥ 1 1       | iour 9 1         | Status 9 1 | Arrival                     | 71  | Departure          | 9.1  | Sour*    | 9 : 1  |
| 10             |          | MSC / HARAG-LLOYD / O                        | L. Ontario Express    | PARKLAND ES    | BERTH 94             |                       |                 |         |                |             |                  |            | 2025-10-16 1 39 PM          |     |                    |      |          |        |
| 10             |          | HWM9-LLOYD/OCCL -                            | Toronta Express       | STMS/MOTP C    | BERTH 80             |                       |                 |         |                |             |                  |            |                             |     |                    |      |          |        |
| 10             |          | MSC/HARAG-LLOYD/O                            | L. Liverpool Express  | STNO/MOTP C    | BERTH 79             |                       |                 |         |                |             |                  |            |                             |     |                    |      |          |        |
| 10             |          | HAMAG-LLOYD / OOOL -                         |                       | STING/MOTP C   | BERTH 77             |                       |                 |         |                |             |                  |            |                             |     |                    |      |          |        |
| 1 ⊠            |          | MSC - CANADA GULF BR                         |                       | STING/MGTP C   | BERTH 77             | 2024-07               | 1-03 3-31 PM    | 2024    | -07-24 0 56 Pi | v 1         | IPAN             | Pending    | 2024-07-25 7:00 Ah          |     | 2024-07-26 12:00 P | st   |          |        |
| 10             |          | TRAMP  | MSC Nurla             | STNS/MGTP C    | BERTH 76             |                       |                 |         |                |             |                  |            |                             |     |                    |      |          |        |
| 1 0            |          | MSC - CANADA OULF 89                         |                       | TERMONT MAL.   | BERTH 62             |                       |                 |         |                |             |                  |            |                             |     |                    |      |          |        |
| 7 Ø            |          | MSC - MED-CANADA (ST                         |                       | TERMONT MAL.   | BERTH 05             |                       |                 |         |                |             |                  |            |                             |     |                    |      |          |        |
| 7 (2)<br>7 (2) |          | MSC - MED-CANADA (ST                         |                       | STMOUMOTP R.,  | BERTH 02             |                       | 5-28 2:28 PM    |         | -08-28 4 26 P  |             |                  | Continued  |                             |     |                    |      |          |        |
| 7 (2)<br>7 (2) |          | MSC - MED-CANADA (ST<br>MSC - MED-CANADA (ST |                       | STING/WGTP R., | BERTH 60<br>BERTH 59 |                       | 1-04 518 PM     |         | -07-11 1/18 PM |             |                  | Rejected   | 2024-07-22 1 33 PM          |     | 2024-07-24 1/33 PM |      |          |        |
| 1 12           |          | MSC / HAPAG-LLOYD / O                        |                       | STNG/VETP R.   | BERTH SP             | 2024-00               | Care Long PM    | 2026    | -ur-ue 110 Ph  |             |                  |            |                             |     |                    |      |          |        |
| 7 U<br>7 U     |          | MSC - MED-CANADA (ST                         |                       | STMQ/ULTP R    | RENTH SA             |                       |                 |         |                |             |                  |            |                             |     |                    |      |          |        |
|                |          | MEC - MED CANADA (ST                         |                       | STMOMOTP R.,   | BERTH 58             |                       |                 |         |                |             |                  |            |                             |     |                    |      |          |        |
| 1 12           |          |  |                       |                | BERTH 55             |                       | 1-16 2:00 PM    | 2024    | -07-25 100 P   |             | PAN              | Pending    |                             |     |                    |      |          |        |
| 10<br>10       |          | MSC - CANADA GULF BR                         | IL. 00CL 52, Lawrence | STMOMOTP R.,   |                      |                       |                 |         |                |             |                  |            |                             |     |                    |      |          |        |

| DATA SOURCES          | PUBLICHED  | MAST     |        | Today   | > We    |           | ~    | A        | 0004 | - Aug 10  | 0.0004     |           |             | HERULE ENT |     |  |                              | 0   |  |
|-----------------------|--|----------|--------|---------|---------|-----------|------|----------|------|-----------|------------|-----------|-------------|------------|-----|--|------------------------------|---|--|
|                       |  |          |        |         |         |           |      |          |      |           |            |           |             |            |     | ePAN:  |                              | -   |  |
| Laper Visibility      | <ul> <li>Collapse All</li> </ul>   | 4 Sun Au | 9 2024 | 5 Mon A | ag 2024 | 6 Tue Aug | 2024 | 7 Wed Av | 2024 | 8 Thu Aug | 2024       | 9 Fri Aug | 2024        | 10 Sat Aug | 200 |  |                              | 97212300  | -  |
| Combined +            | ✓ STMG/MOTP CAST   |          |        |         |         |           |      |          |      |           |            |           |             |            |     |  |                              |   | nign:                                    |
| Legend                |  |          |        |         |         |           |      |          |      |           |            |           |             |            |     | Commod<br>Master of                                |                              |   |  |
| Pending Requests      | BERTH 76   |          |        |         |         |           |      |          |      |           |            |           |             |            |     | Country o  |                              |   |  |
|                       |  |          |        |         |         |           |      |          |      |           |            |           |             |            |     | Port of Re   |                              |   |  |
| Change Change         | BURDS 77   |          |        |         |         |           |      |          |      |           |            |           | Liverand Ex |            | -   | Levels   | <i>y</i> ,                   |   |  |
| atest Status          |  |          |        |         |         |           |      |          |      |           |            |           |             |            |     | Deam   |                              |   |  |
| Departed              | BERTH 78   |          |        |         |         |           |      |          |      |           |            |           |             |            |     | Modeled  | breadly                      |   |  |
| At Berth              | and the ca   |          |        |         |         |           |      |          |      |           |            |           |             |            |     | Maximum  | summer                       | -   |  |
| Confirmed<br>Proforms | BERTH 79   |          |        |         |         |           |      |          |      |           |            |           |             |            |     | Vesse  |                              | t History   | ETA                                      |
|                       |  |          |        |         |         |           |      |          |      |           |            |           |             |            |     | MSC L  | FIGH /                       | x   |  |
|                       |  |          |        |         |         |           |      |          |      |           |            |           |             |            |     |  |                              |   |  |
|                       | BERTH 00   |          | kpress |         |         |           |      |          |      |           |            |           |             |            |     | IM0:9320   | 4390445                      | 1:37212309  | sign:                                    |
|                       |  |          |        |         |         |           |      |          |      |           |            |           |             | )          |     | 1M0:9320   | 439MM5                       | Cargo sh  | sige:                                    |
|                       | DERTH BD   |          |        |         |         |           |      |          |      |           |            |           |             |            |     |  |                              | Cargo sh  | sige:                                    |
|                       | ✓ STMG/MOTP RACINE   |          |        |         |         |           |      |          |      |           |            |           |             | )          |     | Map type   | 404                          | Cargo sh<br>Containe                                    | sign:<br>ps<br>Ship (Ful                 |
|                       |  |          |        |         |         |           |      |          |      |           |            |           |             |            |     | Ship type<br>Ship subt<br>Dountry of<br>Port of Re | gpe<br>f Registry<br>spintry | Cargo sh<br>Containe<br>Celluler)<br>Panamal<br>Panamal | aligen:<br>pos<br>r Shrip (Full<br>PMAN) |
|                       | <ul> <li>STMG/MGTP RACINE</li> <li>DERTH 58</li> </ul>                   |          |        |         |         |           |      |          |      |           | WSC Leigh  |           |             |            |     | Ship type<br>Ship subt<br>Country o                | gpe<br>f Registry<br>spintry | Cargo sh<br>Cortaine<br>Cellular)<br>Panamai            | aligen:<br>pos<br>r Shrip (Full<br>PMAN) |
|                       | ✓ STMG/MOTP RACINE   |          |        |         | MIC Day | Gircanti  |      |          |      |           | VISC Leigh |           |             |            |     | Ship type<br>Ship subt<br>Dountry of<br>Port of Re | gpe<br>f Registry<br>spintry | Cargo sh<br>Containe<br>Celluler)<br>Panamal<br>Panamal | aligen:<br>pos<br>r Shrip (Full<br>PMAN) |
|                       | <ul> <li>STMG/MGTP RACINE</li> <li>DERTH 58</li> </ul>                   |          |        |         | MIC Day | Gircanti  |      |          |      |           | VISC Leigh |           |             |            |     | Ship type<br>Ship subt<br>Dountry of<br>Port of Re | gpe<br>f Registry<br>spintry | Cargo sh<br>Containe<br>Celluler)<br>Panamal<br>Panamal | aligen:<br>pos<br>r Shrip (Full<br>PMAN) |
|                       | <ul> <li>STMG/MGTP RACINE</li> <li>DERTH 58</li> <li>DERTH 59</li> </ul> |          |        |         | MIC Day | Gircanti  |      |          |      |           | VISC Leigh |           |             |            |     | Ship type<br>Ship subt<br>Dountry of<br>Port of Re | gpe<br>f Registry<br>spintry | Cargo sh<br>Containe<br>Celluler)<br>Panamal<br>Panamal | aligen:<br>pos<br>r Shrip (Full<br>PMAN) |

Gantt Chart - Leveraging OCIANA's Predictive Analytics

For more information, contact us at: sales@gsts.ca

