

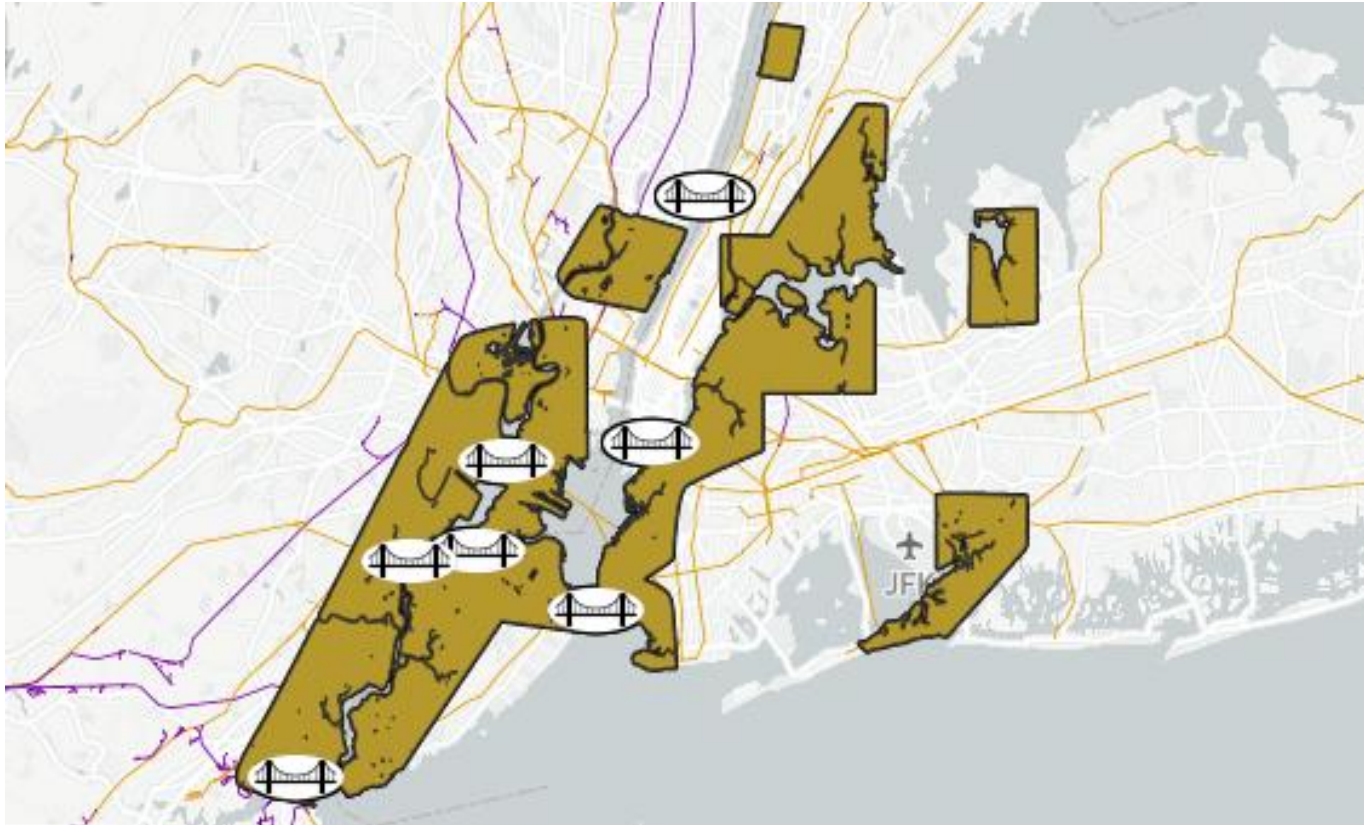


How 'Chaos' In The Shipping Industry Is Choking The Economy



Captain Eric Johansson
Distinguish Professor Maritime Technology and Operations

The Port of New York



Source: Bureau of Transportation Statistics, New York, NY & NJ, [Workbook: PortProfiles2020 \(dot.gov\)](#)

The Port of New York: Freight Profile (2019)

- Annual income: \$206 billion
 - National rank: Number 3
- Vessel Calls: 322 a week
- Tonnage (short ton): 2.63 million a week
 - National rank: Number 3
- Containers (TEU): 101 thousand a week
 - National rank: Number 3
- Vehicles: 11 thousand a week
 - National rank: Number 3
- Dry Bulk (short ton): 231 thousand a week
 - National rank: Number 21

Source: Bureau of Transportation Statistics, New York, NY & NJ, [Workbook: PortProfiles2020 \(dot.gov\)](https://www.bts.gov/workbook/portprofiles2020)

MARITIME DISRUPTERS

- Weather events (Hurricane, etc.)
- Choke Points blockage
- Cyber/Terrorist Attacks
- Pandemic

RISK DETERMINATION

- Risk = Consequence x Probability
Consequence of severity can result in allisions, collisions, or groundings (highest ranking) while failures that are not likely to result in injury or catastrophic loss, carry the lowest ranking.
- Determine Consequence of Failure (COF)
- Determine Probability of Failure (POF)
 - Both require the **study/research** of maritime assets failure due to disrupters

MARITIME RISK

Determine Consequence of Failure (COF)

- Negligible to catastrophic impact
 - Loss of life, cargo, vessel
 - Compromised Supply Chains
 - Environmental Impacts

Determine Probability of Failure (POF)

- Remote to frequent possibility
 - Single Point of Failure
 - Redundant Point of Failure
 - Extreme Weather

MARITIME RISK

COF

- Weather – Supply Chains
- Cyber/Terrorist - Supply Chains
- Choke Points – Supply Chains
- Pandemic – Supply Chains

POF

- Weather – Increased weather events
- Cyber/Terrorist – Reliance on Technology
- Choke Points - Larger delivery modes
- Pandemic – Global movement

MITIGATING MEASURES

- **Extensive study/research** of maritime assets disruption
 - Determine Consequence of Failure (COF)
 - Determine Probability of Failure (POF)
- Research response planning via:
 - Single Point of Failure
 - Human, Electronic, Terminal Gear, connector points, electronic navigation, Government
 - Redundant Point of Failure
 - Planning preparedness
- **Develop/review response plans** (best practice) for responders (first responders, etc.)
 - Develop/review recovery protocol for all stakeholders
 - Prepare/review response assets in key locations regionally
 - Prepare/review recovery faculties, train individuals, etc.

MARITIME COLLEGE

STATE UNIVERSITY OF NEW YORK



AMERICA'S OLDEST AND LARGEST MARITIME COLLEGE
1864