



Port Resilience & Recovery Overview





Lesson Topics



- Port Resiliency & Introduction to Marine Transportation System Recovery (MTSR)
- MTSR Planning & Preparedness



Port Resiliency & Introduction to MTS Recovery



- Port Resiliency means:
 - Ensuring freight successfully arrives;
 - Is suitably processed; and
 - Departs the port as efficiently as possible





Resilient Port Determination



- Factors Used to Determine How Resilient a Port is Include:
 - Redundant Cargo Handling Capability
 - Identifying primary steps involving:
 1. **Operations** - Cargo movement, manifesting, & storage processes
 2. **Process Management** – Who is in-charge of these processes
 3. **Status of Processes** - Who / Which agencies kept informed of processes
 4. **Operational & Procedural Decision Making** - Who has a decision-making role in changing operating rules / procedures when a disruption occurs



Complexity of Ports



- Ports are Complex Entities – They Involve:
 - A Three-layered Structure -
 1. **Physical / Logistical Layer** – Physical transportation systems (vessels, truck, rail)
 2. **Information Layer** – Movement of goods driven by information flow (supplier, retailer, customer)
 3. **Regulatory Oversight Layer** – Policy / guidance for commerce and security. Enforces standard rules across the industry
 - Structure ensures safe/secure port operations
 - Focused on the supply chain – International movement of goods





Vulnerability of Ports



- Ports are Subject to a Variety of Vulnerabilities Associated with:
 - **Technological Failures - physical & cyber-related**
 - Vessel & Port Facility Equipment
 - Computer Networks & Operational Technology Systems
 - **Human Failures**
 - Terrorist Attacks
 - Operator Errors
 - Industry Disputes (labor strike)
 - **Natural Disasters**
 - Hurricanes, Floods, Earthquakes & Tsunami
 - **Organizational Failures**
 - Poor Interagency Coordination
 - Poor Training
 - Excessive Bureaucracy





Stakeholder Involvement



- **Port Facilities Could Interact with Various Stakeholder Groups**
 - Some Stakeholders May Interact with Each Other
 - Each Stakeholder May Have it's own Priorities
 - They Could Include:
 - Port Authorities
 - Terminal Operators
 - Port Labor Force
 - Maritime Vessel Operators
 - Local, State, & Federal Governments
 - Local Fire & Police Departments
 - Freight Brokers, Carriers, & Shippers
 - Port Advisory / Planning Councils
 - Maritime & Trade Associations



Resiliency Planning



- Adds Capacity & Capability
- Enables Ports to:
 - Maintain Operations
 - Quickly Restore Operations
- Key: Acceptable Level of Service
- Two Planning Focus Areas
 - Prevention
 - Recovery



Marine Transportation System (MTS)



The Marine Transportation System



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Marine Transportation System (MTS)



What is the Marine Transportation System?

Who are the Stakeholders?

Why Should you be Concerned?





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Nationally – The MTS Could Include...



Hundreds to Thousands of Miles of Navigable Channels and Rivers

Numerous Port Facilities

Multitude of Intermodal Connections

Large Number of Aids to Navigation

Link to Multiple Railway and Numerous Roads or Highways

Millions of Dollars to a Nation's Economy

Large Number of Jobs



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MTS Disruptions – Cause & Effect



When a MTS Disruption Occurs – Recovery Measures Should Include:
Emergency Measures, Operations, & Activities in the Incident & Non-Incident Areas used to –
Facilitate the resumption of commerce and re-establish basic functionality of the MTS

MTS Recovery Includes Both:

Structural Measures – Aids to Navigation Replacement, Blocked Channel Clearance, etc.

Non-structural Measures – Directions, Orders, or Emergency Procedures Given by Higher Authority





All-Hazard Approach to MTS Recovery



Measures Implemented When MTS Disrupted by:

Man-made Incidents

Terrorist Attack

Marine Casualty

Mass Rescue

Environmental Disaster

Natural Disasters

Hurricane

Flood

Earthquake / Tsunami





MTSR Incident Management Tools



Information Management

Common Assessment and Reporting Tool (CART)



Visual Display of the Incident

GIS-Based Tools

Operational Management

Vessel Prioritization Tools



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The U.S. Coast Guard Leverages Several Tools to Assist with Developing the Common Operating Picture; Courses of Action, and Reporting



MTSR

Marine Transportation System Recovery

CART

Common Assessment and Reporting Tool

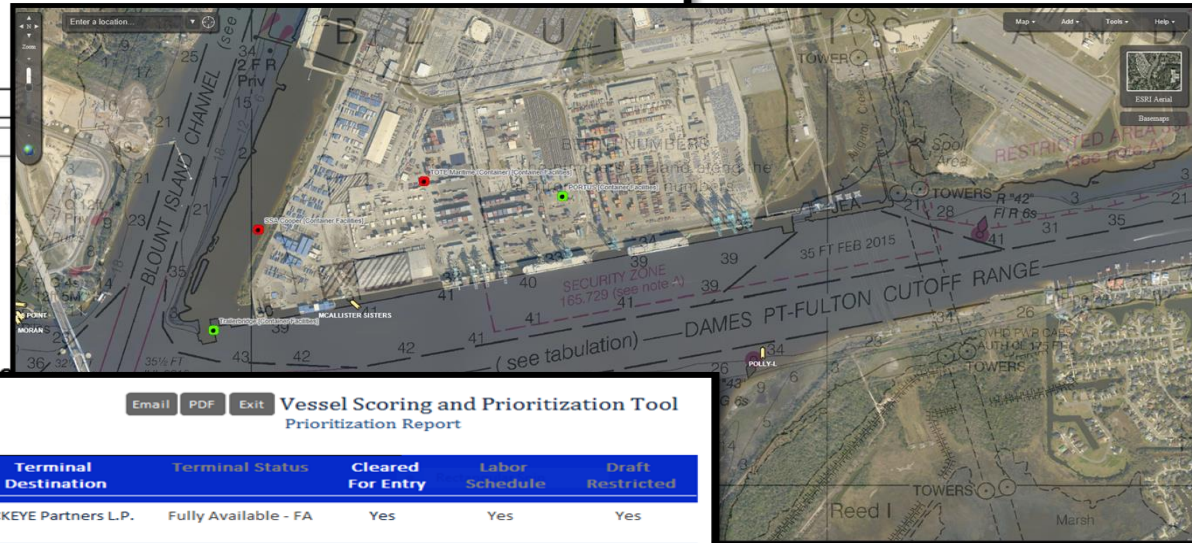
Welcome to the Marine Transportation System Recovery
Common Assessment and Reporting Tool

First Time Participating?
[Click Here To Register](#)

User Name:

Password:

[Forgot Password](#)



[Email](#) [PDF](#) [Exit](#)

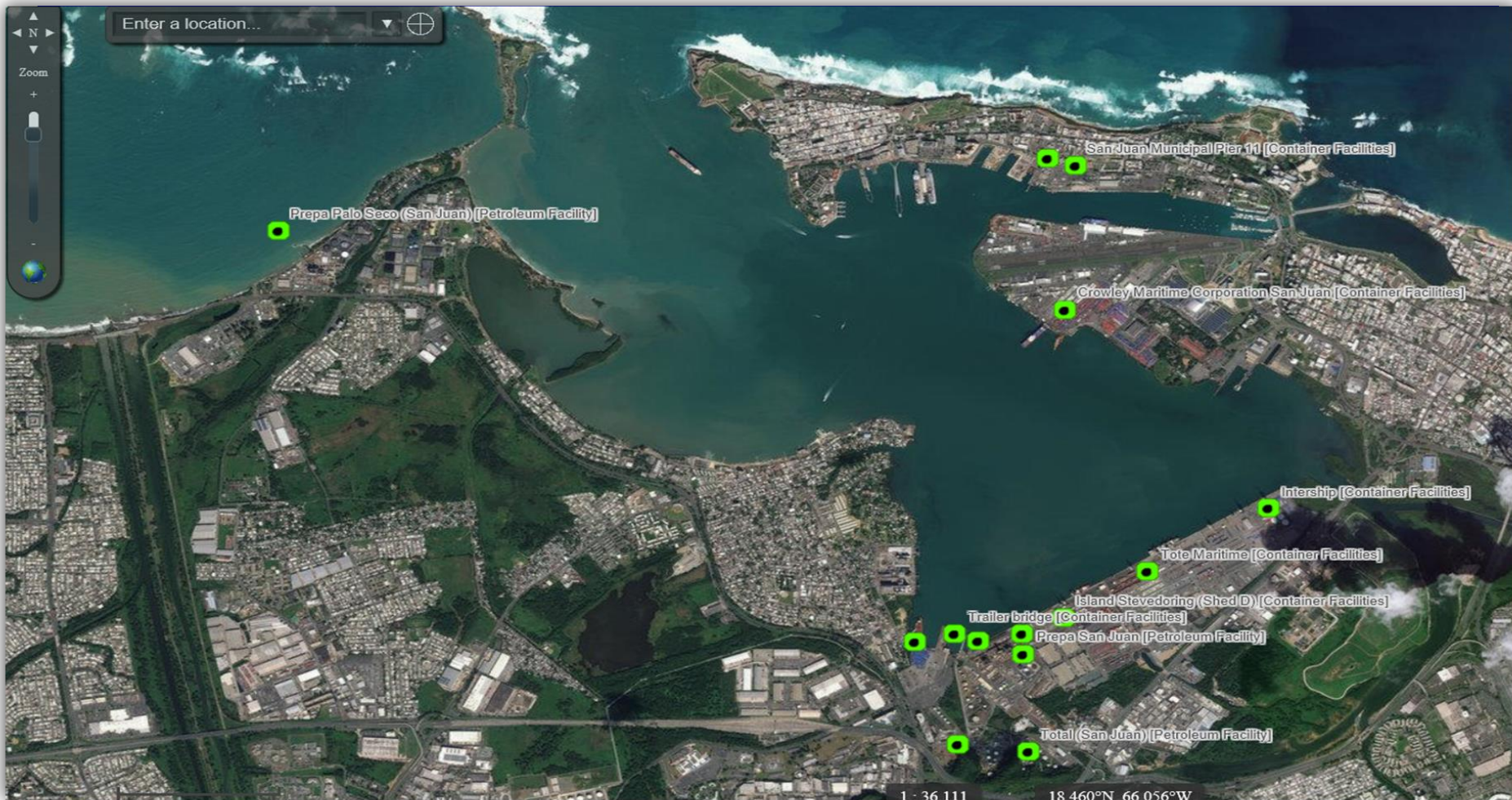
Vessel Scoring and Prioritization Tool
Prioritization Report

Vessel	Score	Critical Cargo	Terminal Destination	Terminal Status	Cleared For Entry	Labor Schedule	Draft Restricted
SAMPOGRACHT	7.384	Regional Energy Related Cargoes	BUCKEYE Partners L.P.	Fully Available - FA	Yes	Yes	Yes
DISNEY DREAM	6.088	Just In Time Cargo	Port Canaveral: Cruise Terminal 8	Fully Available - FA	Yes	Yes	No
LOKHOLMEN	5.6	All Other Cargoes	Blount Island Marine Terminal	Fully Available - FA	Yes	Yes	No
GALAXY ACE	0	Not Selected		Not Selected	Not Selected	Not Selected	No Selected
FELICITY ACE	0	Not Selected		Not Selected	Not Selected	Not Selected	No Selected
DIAMOND HIGHWAY	0	Not Selected		Not Selected	Not Selected	Not Selected	No Selected
FS IPANEMA	0	Not Selected		Not Selected	Not Selected	Not Selected	No Selected
HOJIN	0	Not Selected		Not Selected	Not Selected	Not Selected	No Selected
CARNIVAL LIBERTY	0	Not Selected		Not Selected	Not Selected	Not Selected	No Selected
COLUMBIA HIGHWAY	0	Not Selected		Not Selected	Not Selected	Not Selected	No Selected

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GIS Tools





Vessel Prioritization



Main Menu

- Upload Arrival List
- Reset Tool
- Vessel Scoring Page
- Add/Edit Vessel Details
- Vessel Prioritization Report
- Common Assessment And Reporting Tool
- Administration
- Video Tutorial
- About

The tool will enable you to upload the vessel arrivals list from MISLE. Once uploaded you can add specific data by clicking "Enter Data to Current Arrival List. This feature will allow you to add data that will help to calculate a score for each vessel.

If data from a previous upload exists, simply click "Reset Tool" to delete all data and start with the newest MISLE list.

If necessary a user can enter a vessel manually by clicking "Enter Vessel Manually."

To view scores and ranking click the "Vessel Prioritization Report."

The administration section will allow users to edit selection fields, edit point values, add options, and delete options.

Vessel Arrivals Scoring and Prioritization Scoring Tool Exit Tool

Select Your Sector Certain features will not be enabled until you select a sector.

Vessels Not Cleared For Entry	Vessel Name	Score
FELICITY ACE	SAMPOGRACHT	7.384
DIAMOND HIGHWAY	DISNEY DREAM	6.088
CARNIVAL LIBERTY	LOKHOLMEN	5.6
	FELICITY ACE	0.488
	DIAMOND HIGHWAY	0.488
	CARNIVAL LIBERTY	0.488
	GALAXY ACE	0
	FS IPANEMA	0
	HOJIN	0
	COLUMBIA	0

[Click to Refresh](#)

On both lists to the left you can click on the name to open up The Vessel Detail Form to view all the data that is in the database and edit the vessel's information.

****Warning: Data in the two lists to the left do not automatically update. To refresh the information on both charts simply click "Refresh."*



MTSR Incident Management – MTS Disruptions



- MTS Recovery Post-Incident Priorities -

- Include Incident Management – Response Approaches Designed to:

- Maintain Concept or Idea of an “Open Port” or “Restricted but Open Port”
- Mitigate impact on the MTS, trade and the economy
- Identify resources, agencies involved, incident effects, and course of action for the recovery of maritime infrastructure
- Prioritize MTS Recovery operations
- Identify & prioritize cargo flow and streams
- Coordinate operational elements conducting salvage of “things” blocking critical waterways
- Report the status of the MTS disruption to decision makers / incident command





Typical MTSR Incident Management Phases



- MTS Recovery could involve Operations in Two Phases

1. **Operational Phase: Short Term Recovery**

- Period of time where impacted infrastructure & supporting activities within the incident have been:
 - Returned to service, or capable of operations or service at some level
- Response activities achievable within 90 days or less

2. **Project Phase: Long-Term Recovery**

- Period of time where impacted infrastructure & supporting activities have been:
 - Returned to pre-incident conditions or service, or
 - Have the capacity or capability to operate or provide service at pre-incident levels
- Mitigation strategies aimed at long-term recovery make take longer than 90 days





Incident Management – MTS Recovery Functional Deliverables



- Managing MTS Disruptions Depends On:
 - An Established **Function** that is Able to Perform & Deliver the Following to Incident Management:
 - Track & Report the Status of the MTS
 - Understand Critical Recovery Pathways
 - Recommend Courses of Action
 - Provide an Avenue for Stakeholder Input
 - Provide Decision Maker / Incident Commander with Recommended Priorities



MTS Recovery Unit (MTRSU)

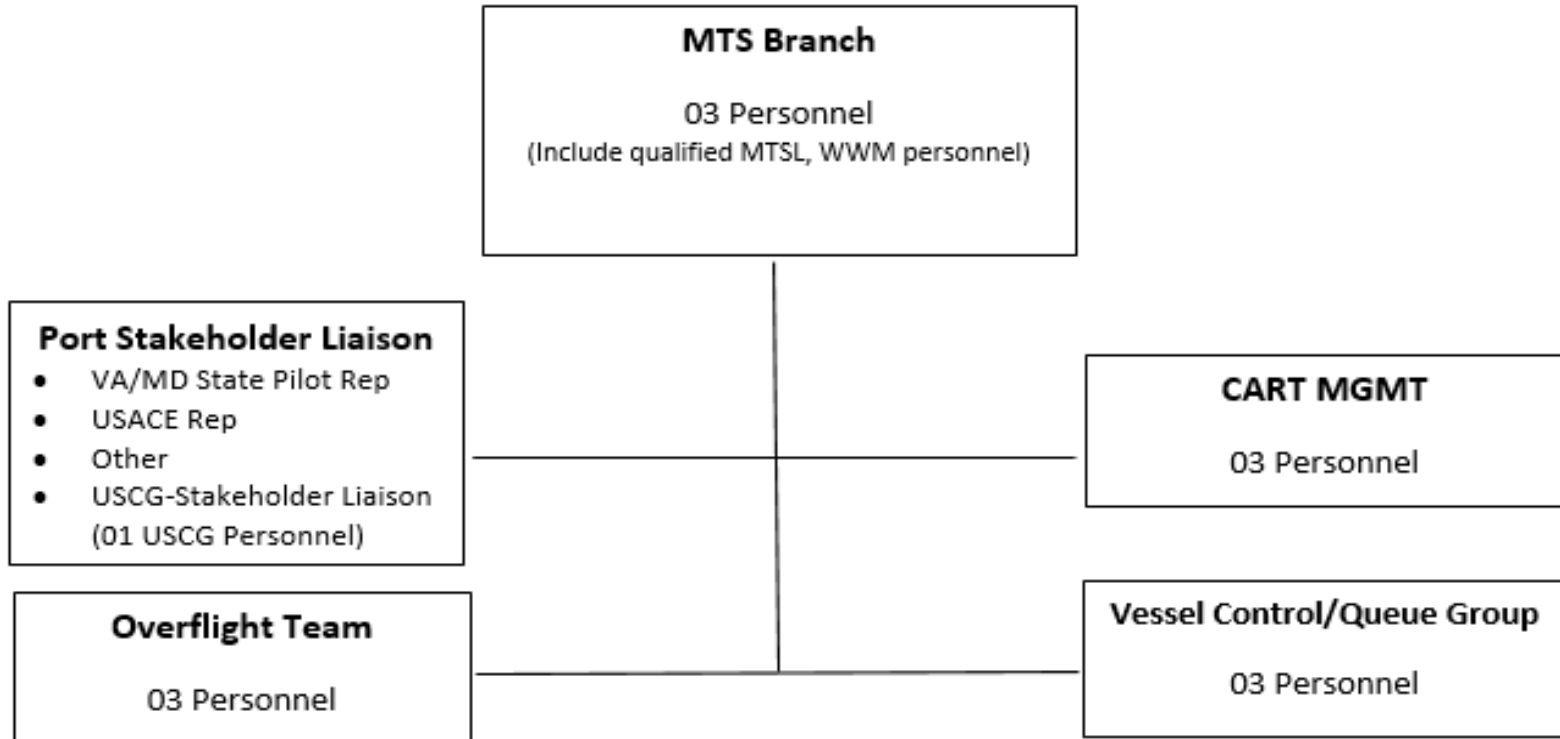


- A Typical MTRSU – Basic Description
 - A Functional **Unit** within the Planning Section of an Incident Command System (ICS) Organization
 - Established for Incident that Causes a Transportation Disruption within the MTS
 - Primarily Staffed by Government Personnel
 - Augmented by Local Maritime Stakeholders, Port Partners, & Industry Experts





MTS Recovery Unit (MTRU)

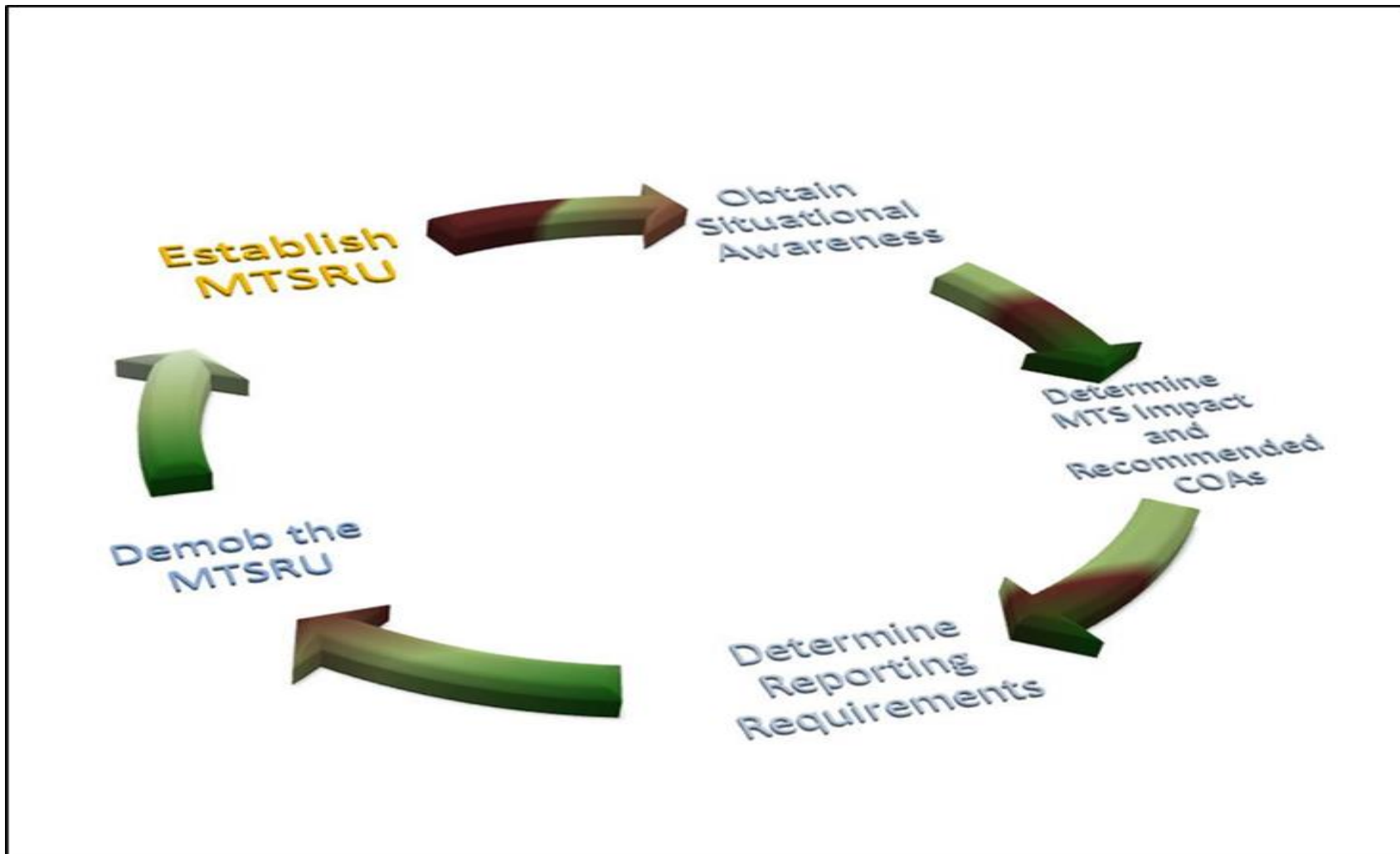


- MTSR Unit Staffing





MTS Recovery Management – Key Success Factors





Questions



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