MIST

Maritime Information Sharing Taskforce

Industry and Public Sector Cooperation for Information Sharing

Ports of Long Beach & Los Angeles

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Industry and Public Sector Cooperation for Information Sharing at the Ports of Long Beach and Los Angeles

Executive Summary

On August 20-21, the Maritime Information Sharing Taskforce (MIST) held a workshop at the Los Angeles/Long Beach Port (LA/LB). This workshop was funded by the Assistant Secretary of Defense, (Department of Homeland Defense) and sponsored by the Maritime Defense & Security Research Program (Naval Postgraduate School), and the Maritime Administration (US Department of Transportation). NPS staff shared early concepts and solicited ideas for implementation from the USCG at the sector , district and headquarters level; talked to Project Seahawk in Charleston; collaborated with MARAD; and included GMSA and GMAII in the workshop design. In addition, we coordinated with the Global Maritime Information Sharing Symposium(GMISS) in King's Point which was looking at similar issues, but from a top down approach.

The MIST advisory team included representatives from NPS, MARAD, NORTHCOM, Pacific Maritime Association, the Port of Long Beach and the Long Beach Police Department. Workshop participants included eight local representatives and four federal representatives. Local representatives included port personnel, the Marine Exchange of Southern California, a facility security officer, and a member of the United States Fleet Forces Command (USFF-NCAGS).

The LA/LB effort was a pilot program that was designed to support the MIST mission:

> *To create a process for international, bi-lateral sharing of maritime threat information between private sector shipping and government agencies. This process must mitigate the concerns of private industry and provide value to both parties.*

Prior to the workshop, we conducted short polls to help us understand the participants needs, designed a web site[1] to support social networking, and structured a workshop to delve into specific issues around information sharing with the private sector. The workshop took a two-pronged approach to gathering input from the private sector:

1. We probed for *key issues, challenges, solutions and measurables* for the sharing of threat information at a local level and
2. We piloted a *process* for on-going practitioner input

Following is a high level discussion of our findings:

Key issues related to sharing maritime threat information

To uncover private sector issues with sharing threat information, the workshop used a structured exploration method that included individual brainstorming, small group discussions, large group synthesis, and pre-workshop surveys. Participants identified positive outcomes and areas ripe for streamlining.

[1] *The web site was not live for the pilot meeting*

Positive Outcomes

When looking at positive outcomes, we focused on identifying key incentives (based on participant benefits) and performance measures. In addition, the participants outlined their preferences for local control, increased collaboration, and higher quality information.

Key incentives and benefits

Since incentives are only effective when they are aligned with the needs of your constituencies, we asked the participants to identify the benefits that information sharing can provide. Not surprisingly, the participants focused primarily on business outcomes as the primary drivers for incentives. These business drivers spanned the full range of business activities:

1. **Financial benefits** topped the list of desired outcomes for sharing of threat information. Participants identified lower costs and personal rewards as desirable financial incentives. In addition, they wanted assistance in recovering from a disaster (more emphasis on business resumption rather than port diversion.)
2. **Operational benefits** were closely tied to financial benefits and the primary benefit was in making supply chain operations more efficient and having consistent and predictable government requirements for information sharing.
3. **Strategic benefits** focused primarily on protecting assets—protecting ships, passengers and contents, making good business decisions, and increasing the use of the ports.
4. **Social benefits** operate as a more tactical basis for incentives and the participants identified workplace satisfaction and keeping customers happy as desirable social benefits.
5. **Ideological benefits** that participants felt would increase their willingness to share information were centered primarily around building trust. Participants called for increasing trust with their customers, the public, and local, state, and federal government. In addition, LB has a political agenda to reduce the environmental impact of the port.

Key performance measures

In the workshop, we wanted to identify specific outcomes for information sharing. The participants identified efficiency and effectiveness measures that ranged from specific measures for accessing information to metrics related to operations:

- Frequency and time to access a single point of contact
- Readership of a weekly information report
- Total response time during an event
- Less time at anchor, fewer delays, fewer ships at anchor
- Fewer violations

Need local control[2]

Participants noted the uniqueness of each port and the importance of local perspectives and networks. They believe that their local command structures are strong and well coordinated. Participants recommended that the LA and LB Port Authority be used as the primary command structure. This body would have a strong connection to MARAD, USCG, Homeland Security, LA/LB Police Department and the LA and LB tenant companies. A joint command center is also in progress and may be useful in the near future. These command structures, as well as the local Marine Exchange and the AMSC should be leveraged for all information sharing activities.

Need increased collaboration

Workshop participants identified several areas where collaboration with government agencies could be improved. First, they feel that the government asks for a lot of information but rarely

[2] *Note: the LA/LB is a large, well funded port and has a number of resources available to them.*

shares it. They also called for increased coordination between federal, state, and local agencies. Fears of negative consequences for reporting—being blamed, being targeted for review, and higher reporting standards—impacted their willingness to share threat information. Building relationships and trust was a key factor in strengthening the collaboration between the private sector and government.

Need higher quality information
Participants wanted more information that was useful and pertinent. They commented that information is often too broad, lacks uniformity, and is difficult to interpret. Participants asked for information that was targeted especially to business continuity—keeping the port safe, tracking ships globally and locally, and speeding recovery efforts.

Key areas for streamlining

The workshop also focused on identifying the sources of poor information sharing and targeting areas that are ripe for streamlining. For the LA/LB participants, the biggest barrier to sharing information is the existence of so many different policies, procedures, and information sharing tools. They want a single source for getting threat information, accessing requirements, and accessing information. Areas that are ripe for streamlining include the government bureaucracy, overall communication, government policies, and access to information.

Streamline the bureaucracy
The participants stressed the importance of reducing government requests and simplifying the command structure. Bureaucratic difficulties spanned federal, state, and local agencies. A key issue for information sharing was the lack of inter-governmental cooperation. Especially noted were the need for one place for information, one way to report, and one person to report to. In addition, participants wanted government to standardize the sequencing and compilation of requirements—especially between the USCG and the CBP. They also identified the USCG as a central agency in their processes.

Streamline communication
Related to streamlining the bureaucracy, is the need for government organizations to work together to distribute information. Too often, the participants felt, communication requirements are unrealistic and overly complex. They need a simple and reliable *process* for exchanging information, not just another 800 number.

Streamline policies
Participants indicated that there were a number of policies that were problematic and that one of the reasons for that is the seeming lack of industry perspectives in the design of policy. Problems include policies that are overly rigid, result in shipping delays, have unrealistic time frames, and are generally unclear. Particularly problematic were the Advanced Manifest System and conflicting USCG and CBP policies.

Streamline access to information
The biggest problems in accessing information were in having too many points of access and in getting access to needed information that is embedded in classified information. In response to these issues, the participants recommended that a local clearinghouse be created that extracts non-classified information from classified, and includes vessel, truck and rail information. The information needs to be organized in a way that is relevant to specific sections of the maritime industry (i.e. cruise, container, bulk, rail, trucking, etc.). There should be a single point of contact for pulling information and a simple mechanism for pushing out information. In addition, participants want a single sign-in and standardized password rules for accessing web sites. Information systems also need to protect the privacy of proprietary information.

Key issues related to improving the MIST process

The MIST process focused on two areas—uncovering key information sharing issues and designing a process for practitioner input. Overall, the workshop was rated highly useful (4.0 out of 4,0) by the participants and they indicated that they would recommend MIST to other ports (3.7 out of 4.0). However, there are two areas that we would like to strengthen—the community building process and the overall coordination and structure.

Community building

Participants recognized the dual need for leveraging local resources and using government resources for support. This finding supports the MIST movement towards a federated model of information sharing in which local ports have a strong voice and government agencies provide support and coordination. For future workshops, we would like to strengthen the linkages between the private sector and government by developing more formalized leadership structures that will help facilitate port coordination, strengthen executive sponsorship, and increase direct support for local information sharing efforts.

Improved Coordination and Structure

As a first workshop, the LA/LB Port workshop was deemed a success by its participants. However, project coordination required much more personnel time and lead time then was expected. This resulted in less participant diversity than was desired and a delay in delivering the web site. For the next workshop, our first goal is to improve the recruiting process and the implementation of the web site. We would like to increase the use of personal communication, pre-workshop surveys, and the web site. In addition, we would like to add three new activities—a pre-workshop reception, a pre-workshop port visit, and a follow-up meeting.

A detailed discussion of these findings can be found in the body of this report.

Introduction

"Commercial shipping is the preponderant presence on the global maritime commons today; it is in many ways the reason a maritime strategy is needed at all. Commercial shippers know that they represent overwhelming and persistent global presence. They do not want to be simply the passive objects of the new maritime strategy. They would far rather be active partners in implementing a strategy that furthers the collective security goals of all states while not jeopardizing the economic goals of any state in the process."[3]

Steve Carmel, Senior Vice-President Maersk

Abstract

The Maritime Information Sharing Taskforce (MIST) is a pilot process for incorporating local, practitioner-level input into the sharing of maritime threat information. The push to share threat information is a direct outgrowth of the terrorist attacks on the United States on September 11, 2001. Driven by presidential directives and congressional laws, the United States government established a series of policies and programs to integrate private sector input into national maritime security efforts. In support of this effort, the MIST team created a pilot project to explore a federated, network-centric process for the sharing of threat information at the local port level. The project included a web site for community building, two brief polls, and a two day workshop. The MIST process resulted in data on providing incentives, measuring performance, leveraging local control, improving collaboration, improving the quality and access to information, and streamlining government processes and policies. In addition, the pilot project surfaced necessary process improvements for MIST in the areas of community building, coordination, and overall structure.

Maritime security before 9-11

Transportation security, prior to September 11, 2001, focused primarily on airport security. The security of our other modes—road, rail, and sea—were largely ignored. The Mexican border was the primary area of focus with roughly three times as many customs inspectors at southern borders than at northern borders.[4] Maritime security at that time emphasized worker protection, toxic releases, and the safety of local businesses and populations.[5] Even before 9-11, there were serious issues with maritime security and the sharing of threat information. The lack of governmental coordination, the difficulty of coordinating policies, the weak relationships between transportation modes, and the relationship between the government and the private sector were all seen as impediments to sharing information.[6] The events of 9-11 made clear the need to address these and other maritime security issues.

Maritime security after 9-11

Following 9-11, there was an increased awareness of our vulnerabilities as a nation. In 2004, The Bush administration responded by issuing the National Security Presidential Directive (NSPD)/Homeland Security Presidential Directive (HSPD), which identified a need for a

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[3] Carmel, S. Commercial Shipping and the Maritime Strategy, *Naval War College Review*, Spring, 2008. Vol.61, No. 2. p39-46.

[4] Szyliowicz, Joseph S.. *Review of Policy Research*, May2004, Vol. 21 Issue 3, p351-368.

[5] Price, Willard. 2004. "Reducing the Risk of Terror Events at Seaports." *Review of Policy Research* 21, no. 3: p329-349.

[6] Szyliowicz, J., & Viotti, P. (1997). Transportation security. *Transportation Quarterly*., p79–95.

comprehensive maritime security policy. What resulted from these directives was the National Maritime Security Policy (NMSP)[7], which included eight supporting plans to help address specific threats and challenges to the maritime environment:

1. National Plan to Achieve Domain Awareness
2. Global Maritime Intelligence Integration Plan
3. Interim Maritime Operational Threat Response Plan
4. International Outreach and Coordination Strategy
5. Maritime Infrastructure Recovery Plan
6. Maritime Transportation System Security Plan
7. Maritime Commerce Security Plan
8. Domestic Outreach Plan

The federal government had a tremendous response to the policy. Today, we have at least 15 federal agencies involved in maritime security (see Figure 1). Each of these agencies has a unique focus and often see themselves as a main focal point for maritime security. Add in state and local government agencies and the commercial sector can easily get lost in the crowd. Fortunately, the NMSP realized the importance of the commercial sector in keeping our waterways safe and called for a cooperative effort between government and the private sector:

> *"The critical infrastructure and key resources of the maritime domain constitute a vital part of the complex systems necessary for public well-being, as well as economic and national security. They are essential for the free movement of passengers and goods throughout the world…Protection of critical infrastructure and key resources is a shared responsibility of the public and private sectors."*[8]

Federal Maritime Security Programs & Agencies

- Department of Homeland Security (DHS)
- DHS Customs and Border Patrol (CBP)
- DHS United States Coast Guard (USCG)
- Department of Commerce (DOC)
- Department of Defense (DoD)
- Department of Justice (DOJ)
- Department of State (DOS)
- Department of Transportation (DOT)
- Global Maritime & Aviation Intelligence Integration (GMAII)
- Global Maritime Situational Awareness (GMSA)
- Joint Interagency Task Force (JIATF)
- Maritime Domain Awareness (MDA)
- Office of the Director of National Intelligence (ODNI)
- Unified Combatant Command (UCC)
- United States Navy (USN)

Figure 1

In addition, the NMSP called for specific accommodations for the private sector, including facilitating faster movement of cargo and people, respecting the privacy of Americans, and accommodating commercial trade requirements.

The 9/11 Commission, when reviewing the attacks on the United States, identified another area where the U.S. response to 9-11 could be improved[9]: According to the Commission, breakdowns in information sharing were a key factor that led to the failure to prevent the attacks. In response Congress passed the Intelligence Reform and Terrorism Prevention Act of 2004[10]. Section 1016 of the law called for the creation of an Information Sharing Environment (ISE), which could facilitate the sharing of terrorism information. The law stressed that the "war on terror must be a national

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[7] U.S. Department of Homeland Security, *www.dhs.gov/xlibrary/assets/NRPbaseplan.pdf* [Accessed January 21, 2007.

[8] Ibid

[9] The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States. By *National Commission on Terrorist Attacks upon the United States*, Thomas H. Kean, Lee Hamilton., Published by W. W. Norton & Company, 2004.

[10] Intelligence Reform and Terrorism Prevention Act of 2004, *Pub. L. No. 108-458* (Dec. 17, 2004).

effort," one in which State, local, and tribal governments, as well as the private sector, are encouraged to participate as full partners. Additionally, in 2007, the National Strategy for Information Sharing (NSIS)[11], reemphasized the importance of private sector participation. Specifically, the NSIS called for the government to build trusting relationships with the private sector, improve two-way information sharing, ensure the privacy of the private sector, and integrate private sector processes.

Again, the government response to the need for information sharing has been robust. Information sharing applications and programs have sprouted up across the full spectrum of commercial and governmental agencies (see Figure 2). As you can see, what has resulted is a massive network of agencies, applications, and programs, each of which offers something unique, but taken together can be overwhelming and difficult to manage.

The private sector, because of their unique position in the maritime environment, can help with some of these challenges.

A sample of information sharing programs and applications

- CBP's *Automated Future Environment* (ACE); *Customs-Trade Partnership against Terrorism* (CTPT); and *Container Security Initiative* (CSI)
- DHS's *Homeland Security Information Network* (HSIN)
- DOD/NorthCom's *Maritime Automatic Tracking Enhanced Reporting system* (MASTER)
- DOT/MARAD's *Maritime Security Safety Information System (*MSSIS)
- FBI's *Infragard*
- An interagency *International Trade Data System* (ITDS)
- Lloyd's commercial data software (Fairplay)
- Maersk's *AIS Data and Vessel Traffic System* (Neptune)
- Regional Fusion Centers
- New York/New Jersey's *Regional Joint Awareness Network* (RIJEN)
- USCG's *Homeport ; and the Maritime Awareness Global Network* (MAGNET)

Figure 2

The value of the private sector

There is little doubt of the impact of the private sector on our nation's economy and maritime security. In the U.S. alone, we conduct 95% of our commercial trade via maritime conveyances—moving over 2,000,000,000 tons of freight a year and handling $264, 000,000,000 in annual commerce. The U.S. maritime responsibility includes 164,000 employees in water transportation and ports; 200,000 foreign sailors; 7,000,000 cruise passengers; and 134,000,000 ferry passengers. And, managing the security of our coasts means that we have to cover over 25,000 miles of inland waterways, 95,000 miles of shoreline, 240+ shipyards, and 1,000 harbor channels.[12]

The complexity of the maritime environment has led many in the maritime sector to look beyond our traditional concept of 'navy'. Admiral Mullen, in 2005[13], first raised the idea of an aggregation of maritime resources, what he called 'the thousand ship navy'. This aggregation includes the world's coast guards, seaborne shipping enterprises (shipping lines, port facilities, and other maritime-related entities), and various governmental and nongovernmental agencies. In Mullen's view, the 'thousand ship navy' was a way to leverage the unique capabilities of our maritime resources and expand our reach and situational awareness. Captain Maynard, in July of 2008,

[11] The National Strategy for Information Sharing: Successes and Challenges In Improving Terrorism-Related Information Sharing. *The White House*, 2007. http://www.whitehouse.gov/nsc/infosharing/index.html. (Accessed September 12, 2008).
[12] Renuart, Victor E., Jr., ; Egli, Dane S., Closing the capability gap: developing new solutions to counter maritime threats. *Naval War College Review*, March, 2008.
[13] Adm. Michael G. Mullen, USN, remarks delivered at *the Royal United Services Institute (RUSI) Future Maritime Warfare Conference,* London, 13 December 2005.

reiterated the importance of expanding our concept of navy to include the private sector. Maynard calls for us to redefine our concept of 'joint forces'[14]:

> *"Our nation's sea service commanders (as with all operational commanders), must be able to practically inject the capacities of the civil sector into the designs of each geographic area of responsibility…For, in the end, for the commercial shipping system to have true value, it must be an international effort coordinated by flag state authorities around the world".*

In his view, to be successful, we must take into account each geographic area and coordinate the activities through central authorities. This combination of localized input and centralized coordination implies the use of a more network-centric approach to maritime security and the sharing of threat information.

A federated approach

Many people involved in information sharing have proposed a federated or networked approach. Federated systems are designed to address the challenges of large, complex domains by leveraging the advantages of both local and central entities. They allow local, bottom up input and use a centralized agency for coordination. There are several types of federated systems. Our political system, for instance, is a federated model, whose goal is to place most of the power with local authorities, with federal authorities having only the authority to ensure that local entities work together. In IT, a federated model is one in which multiple business units, each with their own specific mission objectives, business processes, and funding lines, are loosely-coupled. And in the military, "network-centric warfare" utilizes a federated model with a goal of enhancing the quality of information and situational awareness; enabling collaboration and self synchronization; and supporting the sustainability and speed of command.[15]

When we look at the private sector in action, we find that they are in many ways already following a federated model for collaboration. Private sector shipping, like the network-centric warfighters, have a goal of enhancing the quality of their information (e.g. ship tracking), they have a high degree of situational awareness (through their global network of experienced mariners), they coordinate and synchronize with other companies and transportation providers, and their goal is to sustain operations and speed the movement of goods and people.

Wright[16], in her paper on applying network centric theory to the public/private sector goes on to show how a network centric approach can create advantages specific to the sharing of maritime security information. Using the concepts embedded in network-centric warfare, she sees advantages in:

- Allowing autonomy in the execution of a commander's intent
- Supporting dispersed operations
- Eliminating procedural boundaries
- Improving timeliness, accuracy and relevance
- Speeding decision-making

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[14] Captain J. Stephen Maynard, remarks delivered at *the Marcus-Evans Global Maritime Capabilities Conference, U.S. Naval War College*, New Port, 9 July, 2008.

[15] Wright Candice L., Bridging the Gap in Port Security; Network Centric Theory Applied to Public/Private Collaboration. Naval Postgraduate School, Monterey, CA. March, 2007.

[16] Note: Candice Wright is a former student at the Naval Postgraduate School, an officer with the Long Beach Police Department, and a valuable member of the MIST advisory team.

- Adapting swiftly
- Focusing on achieving desired effects
- Helping to build shared awareness
- Expanding the use of networked sensors

As you can see, a network-centric or federated approach results in a more flexible governance structure that can lead to faster response times and increased situational awareness. In looking at the different levels of governance in maritime security, the MIST team identified the local ports as an important stakeholder in this networked domain and one for which the sharing of threat information is critical.

A port level view

As we looked at existing methods for working with the private sector, the MIST advisory team saw local ports as a nexus for sharing maritime threat information. The ports include stakeholders from shipping lines, cruise lines, barges, railroad and trucking, stevedoring, chandling, shipbuilding, equipment suppliers, engineering, as well as port security personnel. Since the ports provide access to the full range of practitioners involved in maritime security, they were the ideal target for gathering input from practitioners at the local level.

The MIST advisory team talked to a number of entities that were looking at issues related to the sharing of threat information with the private sector. One of these, the office of Global Maritime Situational Awareness (GMSA) was looking at the issue of information sharing from a national perspective. Under the auspices of the U.S. government's Maritime Domain Awareness (MDA) Stakeholders Board, GMSA held a symposium (GMISS) that was designed as an annual event and would be hosted at national and international maritime education centers. Their goal was to bring together representatives of the maritime industry, non-governmental organizations, and government organizations to prioritize issues to be brought before the MDA Stakeholder Board for action throughout the coming year. In our conversations with GMSA, it became clear that we had shared interests and a slightly different, yet complimentary approach. It was decided that GMISS would focus at the national, management level and MIST would work at the local, practitioner level. The MIST focus on the practitioner would be useful since practitioner level input to policy and product implementations is known to improve the adoption of new technologies and processes.[17] To support each other's work, we overlapped our efforts and each looked at incentives for information sharing and ways to streamline government requests. In addition, the MIST team probed for specific goals, gaps, barriers and risks in information sharing that are present at the operational level.

Based on previous research and its proximity to the core team, we selected the ports of Long Beach and Los Angeles as a pilot project. The Ports of Long Beach/Los Angeles, if combined, would be the world's fifth-busiest port complex. In addition, Wright, in her work on bridging gaps in port security, uncovered some key local issues that we could expand upon. In her work she found that:

- 94% of respondents wanted more public/private collaboration
- 96% of the respondents thought that situational awareness was important
- 96% of the respondents thought more training would benefit their respective organizations
- 42% of the respondents were satisfied or very satisfied with the intelligence they received

[17] Ulmann, R.E., Enlow, Yonsuk., Accelerating Technology Adoption Through Community Endorsement. *Geoscience and Remote Sensing Symposium, 2006*. IGARSS 2006.

- 38% report that standard operating procedures exist between public/private stakeholders.

Her research showed that there was a definite desire to share information but that there were gaps in how it was accomplished at the port level. For our first workshop, the MIST team took on the task of probing more deeply into these issues. This report presents the findings from our work.

Findings

From the outset, the MIST organizing team realized the importance of approaching the problem of information sharing from two directions—uncovering key issues related to the sharing of security information at a local level and designing a process for on-going practitioner input. This section presents the data collected from our first objective—identifying the private sector perspective regarding sharing of security information.

Participants identified nine areas that affect the effectiveness of sharing information with the private sector. These nine areas address specific issues concerning incentives for sharing, ways to work with government, issues with collaboration, and issues with the information itself.

Note: *As a pilot project, the MIST workshop was held at the Port of Long Beach/Los Angeles. The pilot included only a small subsection of these ports and thus the findings cannot be generalized. However, the issues that surfaced during the workshop can be combined with follow-up workshops and the data from the larger national effort of the Global Maritime Information Sharing Symposium (GMISS) to identify trends and pinpoint areas for future investigation.*

Incentives and perceived benefits

> *"The goal is to make money for the company—not chase around after government regulatory agencies"*

One of our primary goals was to find out more about what the private maritime sector at the local/regional port level identifies as incentives to share information. This goal was important to us since incentives are the key factor in the adoption of new process and they also provided a point of comparison to the GMISS who was also addressing the issues of incentives.

Since incentives are only effective when they are aligned with the needs of your constituencies, we asked the participants to identify the benefits or value that information sharing might provide. We encouraged them to look at the benefits from a wide perspective by presenting them with a 360 degree value model (see figure 1), that segments value into five areas—financial, operational, social, ideological, and strategic. We then encouraged them to look at the benefits in terms of the impact they had on them (impacts ranged from personal to organizational to global).

Figure 3: 360° of Value
Value Segments and System Impacts

The participants identified operational efficiencies and the resulting financial benefits as the most important benefits of sharing information. In addition, they identified several social, ideological, and strategic benefits to information sharing that can help build buy-in, relationships and trust.

Following is a detailed discussion of the specific benefits that were identified by the workshop participants.

Financial benefits

Financial benefits were at the top of the list of desired outcomes. Specifically, the participants stressed the importance of switching from port diversion to a focus on supporting business continuity. The key financial benefits included:

- Business resumption (top incentive)
- Lower costs to vessels, operators, and customers
- Personal rewards to employees

Operational Benefits

Related to financial benefits were improvements in operational efficiencies that result in cost savings and higher revenues. The bottom line for industry is delivering goods more quickly to distributors and retailers. This was especially true when talking about resuming business processes after an emergency—the port must be able to get itself operating again as soon as possible, and not have their cargo and passengers, redirected. Operational efficiencies included benefits to the port, shipping companies, the cruise industry and other port stakeholders and ranged from the head of the company to the longshoreman. Specific operational benefits that were noted:

- Efficient supply chain operations
- Effective business resumption plans
- Quick vessel turnaround
- More cargo throughput
- Improved logistics
- Consistent and predictable requirements
- Reduced task times
- Improved team communications

Strategic benefits

A key goal for port operators is to encourage shipping companies to use the port. For individual companies it is protecting their assets and increasing their corporate advantage. These two goals are intertwined:

- Improving port credibility
- Protecting ships and contents
- Improving ship security
- Increasing certainty and reliability
- Making good business decisions
- Building good relationships
- Improving customer service and public perception

Social benefits

Participants identified a range of social benefits that could be used to incentivize information sharing. The two key social benefits were happy customers and workplace satisfaction. Specifically, they identified the following social benefits:

- Improved workplace atmosphere
- Feelings of inclusion for all port partners and government agencies
- Workplace rewards such as time off, promotions, and personal recognition
- Credibility and professionalism
- Pride of work

Ideological benefits

Participants identified several ethical and political principles relevant to getting buy-in for information sharing:

- Increased public trust
- Increased trust of government
- Improved safety
- Attaining *best of class* status
- Increased sense of *taking care of my port* by longshoreman (in partnership with shipping companies)

MIST Role

- Communicate the private sector's perspective of benefits and possible incentives to relevant agencies.
- Help agencies align performance measures and incentives to increase relevant information sharing with the private shipping sector.

Performance measures that impact the business operation

"Owners look at how long it takes to turn a vessel around in individual ports & decides upon that data which ports to use."

Participants identified seven performance measures as important:

1. Time to access contact person
2. Total response time
3. Less time at anchor
4. Fewer delays
5. Fewer ships at anchor
6. Reduced violations (due to better information)
7. Sharp rate of decline in violations (when new policies are implemented)

MIST Role

- Research existing benchmark data

Local control

"When you've seen one port, you've seen one port"

The participants stressed the huge variability between ports and that this variability makes implementing a centralized program more difficult. Participants also emphasized the need for recognizing that local resources can be powerful aids in information sharing but that they need support in doing so.

Note: The LA/LB the port has a tenant/landlord relationship and the port authorities are used as a resource and an information funnel by tenant shipping companies. LA/LB also is a large,

cosmopolitan port and the participants were generally happy with the coordination between city agencies. In fact, they are in the process of setting up a joint command center that addresses some key communication issues. However, depending on the port, there may be large variations in the available resources to do this type of coordination.

The participants identified a number of issues related to local control of information sharing:

- Local information is often the most important
- Local incident commands can be a good central agency for information sharing
- Local resources are good for disseminating information
  Successful information sharing needs to target middle management *and* operating level employees
- Information sharing is limited by individual budget constraints and local and regional competition funding
- Ports do not have the resources for managing the information
- Ports, companies, and facility security officers need help and direction when managing information
- Ports and shipping companies need privacy in *commercial value* areas such as loading locations, specific cargo, and quantities loaded
- Information needs to be funneled through the ports
- Labor is a key influencer in information sharing projects

MIST Role
National
- Provide a safe forum for discussion of problems
- Identify and leverage the capabilities of each port
- Look for trends across ports and communicate trends to national policy stakeholders

Local[18]
- Support local systems in disseminating information
- Provide a support network for managing information

Improving collaboration

"It's not a matter of who is sharing, it's who is NOT sharing"

Participants felt that there was little give and take in information sharing and that collaboration was limited. There is not adequate information coming from the government and requests for information suffer from lack of coordination. To overcome these problems, participants felt that the government needed to build trust, overcome fears of retribution and information misuse, and better coordinate government agency information requests and dissemination. Specific issues included the need for:

- More useful information to the private sector (e.g. threat alerts)

[18] Local support is a future recommendation and is tied in to building sustainable communities as discussed in the section on lessons learned.

- Increased coordination between the USCG and CBP; between the DOJ , FBI, and DHS; and between the Ports and DOT-MARAD, the State Office of Homeland Security and Caltrans.
- Better coordination between ports and federal and local law enforcement agencies
- Minimizing competition between agencies where information is used as power
- Minimizing control battles and jurisdiction wars
- Addressing private sector fears concerning the misuse of information by their competitors
- Addressing private sector fears about retribution for reporting (blaming, targeting, and stricter reporting standards)
- Building trust by increasing face-to-face communication, broad participation, and shared experiences

MIST Role
- Facilitate outreach to the private sector
- Provide broad representation of port personnel
- Foster discussions and relationship building between the private sector and government
- Be transparent in our government role

Improving the quality of information and tools

"You can drown in information"

Participants identified a need for information that is relevant and is designed at the appropriate level of detail. They also found that there were too many competing tools. Specifically, participants noted:

- Information is often too broad
- Interpreting the data is often difficult
- There is a lack of data uniformity
- Information needs to be pertinent and targeted to helping them do their jobs better (protect ships, keep the port safe, track ships locally and globally)
- Information needs to help with recovery efforts and business continuity (e.g. salvage operations, sheltering in place, coordination with ground transportation)
- We need to address issues of varying levels of technical competence
- Local and national resources are useful for sharing information[19]
- Homeport is difficult to access (because of password policies), is difficult to use, and since it is run by a regulatory agency, the private sector is reluctant to use it for fear of retribution.

MIST Role
- Improve awareness of existing tools and resources
- Work with practitioners to rate and evaluate existing tools
- Facilitate practitioner input into the design of new tools and resources

[19] See Appendix: useful resources

Streamlining the bureaucracy

"The Coast Guard should be at the top of the food chain"

Not surprisingly, participants stressed the importance of reducing the many different types of government requests and simplifying the command structure. The quantity of rules and the lack of information of who is in charge is frustrating to the participants and even more important causes delays in delivering goods. These difficulties cross over federal, state, and local agencies. The participants identified several issues related to reducing the bureaucracy:

- Government agencies need to share among themselves better
- Government agencies need to provide one place for information
- Government agencies should not duplicate local efforts
- Government agencies should have the role of reporting incidents to others
- Government agencies should sequence and compile all requirements
- Standardization and international localization would be helpful
- Historically, risk assessments have been redundant
- Include/create expedited processes for trusted shippers

MIST Role

- Research social networks related to maritime information sharing
- Establish communication links between private industry and relevant government agencies
- Communicate issues to relevant government agencies so that redundancies, command failures, and communication failures can be addressed.

Streamlining communication

"If there is a breach, you must call 15 people, if you miss one, the terminal operator is charged $10K."

Related to the difficulties of dealing with a bureaucracy, the participants outlined several areas where communication with the government could be improved. The participants want an effective reporting system that gets organizations working together effectively and provides a central contact for notifications and information distribution. For example, the ports are required to call the National Reporting Center immediately during an event. That call then generates a call back in the middle of security managers trying to respond, often before details of the event are even known. They also need to clearly understand the rationale behind specific requirements. Areas that are especially troublesome are:

- There are too many people and 800 numbers to call
- Often agencies don't return calls when the private sector leaves messages
- Port personnel would like more personal interaction with regulatory agencies

MIST Role

- In other workshops, continue to track specific communication and customer service issues and report them to the appropriate agencies
- Determine if the NRC issue identified in LA/LB is common to other ports
- Explore the NRC process further and identify potential local points of contact to discuss process improvement

Streamlining policies

"96 hour reporting? It's unrealistic—the short hauls up and down the coast are quicker than the reporting process"

The participants had difficulty with unclear policies and some specific government programs. They felt that the difficulty with the policies stemmed from a lack of industry input and resulted in regulations that don't make sense to them. Because they feel that policy decisions do not include them, they struggle with contradictory policies that are overly rigid, policies that cause shipping delays, policies that have unrealistic time frames, and policies that are unclear. Specific areas that were identified as being problematic:

- Conflicts between USCG and CBP regulations
- The Advanced Manifest System (unrealistic time frames for short hauls)
- The Restricted Waterways Plan
- The TWIC program
- The Port Security Grant Program
- The Data Volume Centers
- Security requests from land based port suppliers
- Passenger off-loading

MIST Role

- Be a resource for integrating practitioner input into existing policy development processes
- Identify and strengthen current means of operator inputs (e.g. unions and associations)

Streamlining access to information

"We need a big funnel for information—from big, government, federal agencies all the way down to the port/terminal longshoremen"

Participants identified a need for information and requirements to be located in one spot, be easy to access, and be able to handle classified information appropriately. Specifically, they identified a need for:

- Having access to relevant classified information
- Addressing privacy issues

- Gaining access to needed intelligence information (e.g. threat reports and the location of Coast Guard boats)
- Providing a one-stop place for incident reporting (e.g. Seahawk)
- Providing a one-stop place for all maritime requirements
- Standardizing data collection methods
- Providing a single sign-in on web sites and applications
- Getting access to off-site servers
- Configuring company firewalls to keep information secure
- Enable needed electronic information sharing in a cost effective way

MIST Role

- Support the establishment/use of a local one-stop information source
- Become a resource for gathering practitioner input
- Coordinate with GMAII to establish a method for the 'tear off' operational information from classified information

Lessons learned about the process

From the outset, the MIST organizing team realized the importance of approaching the problem of information sharing from two directions in order to create a venue to hear the voice of the private maritime sector and convey that perspective to national policy makers. One direction was to focus on uncovering key issues, identifying challenges, solutions and measurable for information sharing. This direction resulted in the findings discussed in the previous section. In addition, we also wanted to look at developing a process for ongoing collaboration with the private sector in local ports. This approach was driven from the awareness of port diversity in terms of types of shipping, size of port, size of port cities, relationships, strength of Area Maritime Security Committees and other demographics.

Looking back at our pilot workshop, we believe that our original, two-pronged approach to gathering input from the private sector on issues related to the sharing of security information was on target. The LA/LB MIST workshop was perceived very positively by the private sector participants. Three private sector attendees completed the final evaluations and they rated the overall value highly (3.9 out of 4.0). and indicated that they were very likely to recommend the process to others (3.7 out of 4.0). However, looking forward, there is still room for improvement. Specifically, we recommend that the MIST process continue to focus on community building, and improve project coordination and overall structure.

Focus on community building

Even though we were successful at both getting information *and* starting a process for on-going industry input, we believe that the MIST process can be enhanced by using a more structured approach to community building. One such structure that may be helpful is *Communities of Practice* (COP's). COP's are basically "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis."[20]. COP's are nothing new and have been called by various names—*knowledge communities*, *competency networks*, *thematic groups*, and *learning networks*. What is relatively new is the research around creating and sustaining these types of networks. Industry has been leveraging COP's in their information sharing efforts and Wenger et al have found that communities of practice in government are useful structures in knowledge and information management.[21] Examples of communities of practice in government include efforts by the Federal Highway Administration (FHWA), Federal Energy Regulatory Commission (FERC), the Departments of Justice and Treasury, and the White House Office of Management and Budget, among others[22]. The goal of COP's is to build communities where the members can share expertise, provide a forum for discussing issues, promote professional development and ultimately create a mechanism for peer-peer collaboration and information sharing. Communities of practice are designed to help bridge the gaps between organizations by building cross-boundary connections (e.g. between ports; between ports and national security; between management and labor; between east coast and west coast).

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[20] Wenger, E., McDermott, R., & Snyder, W.M., *Cultivating Communities of Practice*, Boston: Harvard Business School Press, 2003.
[21] Wenger, E., Snyder, W.M., McDermott, R., Xavier de Sousa., *Communities of practice in government: leveraging knowledge for performance*. The Public Manager, 2003.
[22] Wenger, E., & Snyder, W.M., *Cultivating Communities of practice in government: the case for sponsorship.* The Public Manager, Volume 32, Number 4, pp. 17-21

We believe that the best practices around the formation of COP's can help us in improving the MIST process by providing a set of well researched recommendations for building communities. Key to the success of COP's is the mandate to empower local connections and build a strong leadership structure in which the communities can be supported. The MIST workshop data clearly supports the need for local control and centralized support for information sharing. Federal and state governments can facilitate this sharing by helping to build and support a decentralized, federated structure that provides for local control, provides federal sponsorship to increase sustainability, and provides on-going support for community initiatives. The first MIST workshop served as a test model for implementing a federated model and provides us with insights on what works and what needs to be improved.

Exploring the federated model

To increase sustainability, the MIST team focused on using a federated or decentralized model rather than a top-down approach for discovering the needs of the private sector. We focused on identifying the local needs and building trust between the local communities and government. Best practices in COP's tell us that a strong leadership structure is key to building sustainable communities and that to be successful we must have:

1. Dedicated community coordinators
2. Strong executive sponsorship
3. Reliable support team

These criteria can be used to evaluate the success of our community building efforts and point the way forward for future efforts.

Dedicated community coordinators

Looking at the first requirement for dedicated community coordinators, our pilot workshop included two local port personnel as local coordinators. Although we couldn't have done it without them, their effectiveness was limited by job and time pressures. For upcoming workshops, we recommend establishing a dedicated community leader, with clearer roles and responsibilities. Community coordinators should be selected by the community itself and will need to be responsible for orchestrating activities, connecting members to each other, shepherding initiatives, and helping to solve problems that arise. For the port of LA/LB, we recommend establishing the coordinator as part of a follow-up meeting. For the next round of workshops, we recommend that the coordinator be selected at the end of the workshop. In addition, we should look to existing communities (AMSC and local law enforcement for example) and leverage their infrastructure whenever possible. Initially, the MIST team can share responsibilities with this local leader, but eventually the leader will need to operate mostly independently. Since this role is often time consuming and demanding, it will require someone who is dedicated to the mission and has the time to devote to it. However, lessons learned from research on other communities of practice indicate that other types of support (release time, and funding for example) will eventually be needed to sustain this position.

Strong executive sponsorship

The next recommended leadership requirement is for an overall executive sponsor. For our pilot workshop, we had a steering committee that included local and national, private and government

members[23]. The steering committee successfully helped us set direction and priorities and served as a liaison to other agencies. However, the steering committee was limited by time constraints and we may not have utilized their input as well as we could have. In the next round of workshops, we recommend clarifying the roles and responsibilities of the steering committee and establishing a schedule for regular planning sessions. We also had an active sponsor who's role grew organically over time and assisted us with implementing technologies and designing the particulars of the workshop. Using MARAD as an independent, non-regulatory sponsor[24] also proved to be very useful in building trust and interest in the workshop. For the next phase, we recommend that the sponsorship process be more formalized. Sponsor roles that were successful in the pilot study included coordinating the strategic direction, establishing a steering committee, establishing functions, and setting priorities. COP research shows that, in addition, the sponsor should have the resources to support team staffing, conduct on-going liaison activities to boards, and recruit and develop community coordinators.

Reliable support team

The final leadership requirement for successful community formation is for a reliable support team. Research on COP's and our workshop data shows that local teams require support for their community-based initiatives. Lack of support can impede progress due to the influences of changes in personnel, varying skill sets, volunteer burnout, and differences in local port communities.

For our initial pilot workshop, our support team included three members from the Naval Postgraduate School. These members successfully completed workshop planning and coordination, designed a web site for information sharing, and acted as a liaison with the steering committees and the LA/LB Port. In the future, we recommend that support be expanded to also include educational activities; coaching for community leaders; managing infrastructure (especially technology); and acting as a liaison among communities and with sponsors to facilitate ongoing learning and stakeholder alignments.

In the long term, building a community that is resilient and self-sustaining requires a strong and stable support structure. In addition, there are two process improvements that we feel will help the workshops run more effectively—improve the overall coordination and structure.

Improve coordination

As a first workshop, the LA/LB Port workshop was deemed a success by its participants. The topics were seen as appropriate and effective by the private sector (except for the tools section). However, project coordination required much more personnel time and lead time then was expected and resulted in less participant diversity than was desired. The four areas of coordination that could use improvement are the recruiting of participants, the coordination of presenters, preparation of the facilitators, and implementation of a web site.

Participants

In our original participant recruiting, we included participants from various levels in the port and in different sectors of shipping. The steering committee early on identified sectors that should be represented but fell short in identifying specific participants. The steering committee used their

[23] Steve Ruggario (Port of Long Beach); Kevin Krick (Pacific Maritime Association); Candice Wright (LBPD); Hal Moore (NORTHCOM); Owen Doherty (MARAD); Wendy Walsh, Anita Salem, Erin Colloton (NPS).

[24] Participants specifically mentioned the negative impact that regulatory agencies had on them providing input.

personal contacts and these were limited to their particular area of interests and did not include a lot of local contacts. In addition, many of the scheduled participants did not show up and three participants who did show up, left early. This left a gap in the number and type of stakeholders represented. The majority of participants identified this as the major limitation of the workshop. In addition, facilitators struggled with managing the balance between local and federal government participation.

For future workshops, we recommend that recruiting be more rigorous and include well defined criteria for participants based on strategic targets and desired characteristics.[25] In addition, we recommend that we:

- Extend the time for recruiting to at least three months prior
- Recruit backups (for no-shows)
- Make better use of existing contacts
- Ask other participants to help with recruiting
- Ask other organizations to help with recruiting (AMSC, FSO and Marine Exchange meetings)
- Discourage intermittent attendance by splitting the workshop into multiple days
- Expand the steering committee to include more private sector people (AMSC, Marine Exchange)
- Reinforce listening and support roles for non-local government participants

Presenters

We had three different federal government presenters who presented background information on maritime security, gave a demo of MarView, and a presentation on GMAII. We selected these presenters based on the relevance to maritime security, clarity of presenting, and their openness to feedback. We also scattered the presentations throughout the workshop to better emphasize interactivity. In addition to these steps, we recommend that presenters:

- Coordinate closely with MIST regarding the goals, topics, and approach
- Avoid using canned presentations
- Include 50% discussion time in all presentations

Facilitators

To increase trust, we chose facilitators that were skilled in facilitation, came from academic and federal programs, and were from non-regulatory and non-partisan agencies. We also had assistance with live note-taking and recording during the general session. In addition to these things that worked, we recommend improving facilitator effectiveness by:

- Providing background material to facilitators on the maritime environment
- Observing the local port environment
- Rotating facilitators through groups
- Improving the consistency of facilitation (note-taking, active listening, and neutrality)

Implementation of the web site

Our initial goal was to have a web site that could serve as a means to prepare participants for the workshop and begin to develop relationships around our topic. We presented a static version to the participants for review and the reaction to the site was generally positive. Unfortunately, we were

[25] Participant recruiting should follow standard practices of audience analysis. This includes understanding the full spectrum of roles and positions to be represented, the prior knowledge or skills that are required, the typical demographics and psychographics of your population, and the strategic importance of different populations.

unable to deliver a live site prior to the beginning of the workshop. We designed the site architecture and navigation structure early on, but were unable to find a partner in developing the site until late in the process. Early attempts to use resources at NPS ran into difficulty because of software/security limitations, lack of on-site development skills, and poor communication. It was only on the third try that we were able to locate an agency (MARAD) that was able and willing to help implement the design and host the site. Long delays in communicating the status of development, difficulties with establishing the operational platform, and poor communication between the designer and the MIST coordinator delayed delivery of the beta site until a week before the workshop—too late to make modifications to the content and site structure. In addition, the student help that was used for developing a list of resources proved inadequate. We highly recommend that we:

- Coordinate with web development team 16 weeks before workshop
- Clarify roles and responsibilities for implementing the web site
- Coordinate tightly between MIST information designers and the MarView web team
- Establish an operational POC at MarView for future MIST efforts
- Hire assistants with knowledge of the maritime environment and with adequate research skills

Improve the structure

The workshop was very successful in identifying key issues and providing a forum for discussion. In general, the pacing of the workshop was good, with only 2 of 8 respondents feeling slightly rushed. Port participants also found the presentations, small group breakouts, and large group discussions very effective (4.0 of 4.0). The workshop gave us an opportunity to gain insight into what did and didn't work and following are our insights into the efficacy of the four types of outreach that we employed: pre-workshop surveys, a web site, and personal contact with local and national interests.

Surveys

Prior to the workshop, we sent out two brief surveys to registered participants. The surveys helped us better understand the particular needs of the LA/LB ports. In the surveys we probed workshop participants to uncover issues related to desired goals, hot issues, and useful resources. In general, the surveys were successful and we recommend that we:

- Increase the use of surveys
- Begin surveys as soon as registration is complete
- Release short surveys regularly and without burdening participants
- Post surveys on the same day of the week
- Send out reminders to increase the response rate

Web site

As mentioned previously, the web site was difficult to implement but workshop participants indicated that it would be useful for future workshops. To enhance usefulness, the original design supported scanning, readability, and ease of use. It also was designed to encourage community interactions by embedding surveys, rating schemes, group calendars, and participant profiles. Because of their support, their national presence, their congressional authority, and their status as a non-regulatory agency, MARAD also proved to be a good partner in the web site. Our recommendations for the future are to:

- Host the site on MarView and coordinate content with them

- Revise the web site to accommodate local and national perspectives, reduce the duplication of resource lists, and correct existing errors
- Design resource descriptions so that the summary is scanable and the details are layered

Local outreach

Local outreach included face-to-face meetings and phone conversations with the private sector. Due to delays in identifying participants, and the summer time frame, we were not able to have as many personal contacts with local individuals as we would have liked. To build trust and a sense of community, we should increase the personal contact that we have prior to the workshop. For future workshops, we recommend that we:

- Increase personal contacts such as telephone and face-to-face
- Attend the AMSC and FSO meetings prior to the scheduled MIST conference
- Add a pre-workshop reception to be held 3 months prior to the workshop
- Add a port visit 3 months prior to the workshop
- Conduct at least one follow-up meeting
- Use the local ports to gather feedback on proposed policies and tools (future)

National outreach

During the planning stages, we reached out to a number of federal organizations to coordinate our goals and widen participation. The MIST team was successful in reaching out nationally and included NORTHCOM, USCG, SEAHAWK- Charleston, GMAII and GMSA. In our early planning stages, we found out about concurrent efforts from GMSA and were able to adapt our structure and build partnerships quickly to align with their objectives and complement their efforts. The MIST workshop also provided high quality presenters from GMAII and MARAD. For future workshops, we recommend that we:

- Increase contacts with state government
- Increase contacts with private sector organizations
- Formalize our official sponsorship relationship
- Align with GMISS and other fact finding organizations objectives
- Clarify expected time commitments and outcomes for presenters

In summary, we need to continue and improve our personal contacts with participants, the pre-workshop surveys, the web site, and the workshop itself. We also need to add some additional activities for community and trust building and recommend that we include an additional reception event, a port visit, and a follow-up meeting. In total, we have seven activities that we recommend be used in sharing information with the private sector:

1. Personal contacts
2. Pre-workshop surveys
3. Pre-workshop reception
4. Pre-workshop port visit
5. Web site
6. MIST workshop
7. Follow-up meeting

However, when looking at what we learned and what needs to be changed, the devil is in the details. So far, we have identified 39 distinct outcomes that the current and future workshops should address. In the tables below, each outcome is tied to the primary activity that should support it

(other activities may support it to a lesser degree). These tables should be used to restructure the content for the next round of workshops.

Outcomes from this workshop

These outcomes were addressed in the pilot workshop and should be continued.

Outcomes	Activities						
	Personal	Survey	Web	Reception	Port visit	Workshop	Follow-up
1. Identify benefits/incentives for sharing information						X	
2. Identify and discuss impediments to sharing information						X	
3. Identify and categorize key issues for the workshop		X					
4. Identify the areas where government requests can be streamlined		X					
5. Get ideas on streamlining government requests						X	
6. Gather lists of local resources			X				
7. Gather local needs, gaps, and priorities	X						
8. Provide access to resources for information sharing			X				
9. Provide a rating and commenting feature for existing resources			X				
10. Provide access to information on attendees			X				
11. Use small groups for brainstorming and individual contribution						X	
12. Identify the impediments to sharing information						X	
13. Get ideas on resolving information sharing problems						X	

Outcomes targeted for the next round

These outcomes are ones that we have identified as being important to the success of MIST and should be included in the next round of workshops.

Outcomes	Activities						
	Personal	Survey	Web	Reception	Port visit	Workshop	Follow-up
14. Get ideas on transferring best practices					X		
15. Prioritize and expand upon results from previous communities		X					
16. Provide historical and background presentations			X				
17. Provide access to local organizations/meetings, and tools			X				
18. Link to a list of national and international organizations and tools			X				
19. Get feedback on proposed policies						X	
20. Establish a process for going forward						X	
21. Probe issues deeply						X	
22. Reduce the amount of content and increase small group time						X	
23. Monitor participants response to our internal processes		X					
24. Build understanding and trust	X				X		
25. Use large groups for synthesizing						X	
26. Recruit more widely				X			
27. Build social networks			X				
28. Understand port operations and security needs					X		
29. Motivate the community				X			
30. Introduce sponsors				X			
31. Establish leaders and procedures for the local community						X	
32. Strengthen relationships with national sponsors	X						

Outcomes targeted for future action

These outcomes will be important to address in the long run and should be included in future planning.

Outcomes	Activities						
	Personal	Survey	Web	Reception	Port visit	Workshop	Follow-up
33. Test tool usefulness, desirability, and usability	X						
34. Build local, social network maps			X				
35. Gather requirements							X
36. Review early stage policies							X
37. Test early stage tools							X
38. Drive participants to on line tools (for evaluation)			X				
39. Conduct national meetings in association with private industry conferences	X						

Appendix

Useful Resources

- Local resources that are useful (from survey):
  - *Local AMSC meetings*
  - *Local meetings with carriers and terminal operators*
  - *Local Marine Exchange meetings*
  - *FSO meetings*
  - *Pacific Maritime Association*
  - *Vendor sales calls*
  - *Visitor discussions*

- National organizations that are useful (from survey):
  - *AAPA*
  - *AMSC*
  - *COAC*
  - *CBP C-TPAT Training Seminar*
  - *Harbor Safety Committees*
  - *Maritime ISAC*
  - *MARAD*
  - *ODNI private sector outreach*
  - *OSAC*
  - *Ship Operation Cooperative Program*
  - *State of CA OHS*
  - *World Shipping Council*

- Conferences that are useful(from survey):
  - *Global Supply Chain Conference*
  - *Marine Exchange Conference*
  - *Maritime Security Conference*
  - *State Governor's Conference*

- Web tools that are useful(from survey):
  - *DOS/OSAC*
  - *GMAII Website*
  - *Homeport-- USCG*
  - *ISAC*
  - *MARAD*
  - *Marine Exchange web site*
  - *National Maritime Intelligence Center*

Methods

To support our two goals of building a process and uncovering information, we designed a pilot process to support future workshops and specific activities to surface key issues.

Pilot process

To help us establish MIST and to solicit ideas for implementation, we worked with the USCG (at the sector , district and headquarters level), Project Seahawk in Charleston, MARAD, GMSA and GMAII. In addition, we coordinated with the Global Maritime Information Sharing Symposium in King's Point which was looking at similar issues. We also established an advisory team to assist us in setting the mission and helping to recruit participants. The advisory team included representatives from NPS, MARAD, NORTHCOM, Pacific Maritime Association, the Port of Long Beach and the Long Beach Police Department. The advisory board established our mission, set the scope and worked to identify likely participants. We also established a research team to design the detailed activities for our first workshop. The research team included representatives from the Naval Postgraduate School and from the Maritime Administration.

Purpose

Our purpose was:

To create a process for international, bi-lateral sharing of maritime threat information between private sector shipping and government agencies. This process must mitigate the concerns of private industry and provide value to both parties.

Scope

Because of the complexity of the domain and the lack of similar programs, the initial effort was viewed as a phased process. The first phase included the formation of a working group that we would task with identifying key strategic, operational, financial, ideological, and social values and resistances[26] . We named this working group the Maritime Information Sharing Taskforce (MIST). Due to time and budget constraints, we decided to pilot the process at the Port of Long Beach and Los Angeles and targeted a cross section of the private and public sector. Based on the results of the pilot workshop, we would recommend future modifications and extensions.

Participant Recruiting

For this initial workshop, we wanted a good cross-section of participants and identified key parameters for recruiting—sectors of maritime shipping (bulk liquid cargo, cruise, and container); sizes of companies; and companies with an international reach. These participants would be selected from local companies at the Port of Long Beach and the Port of Los Angeles. The advisory board was tasked with contacting and getting commitments from the local ports[27]. We also wanted to include some federal representatives and invited representatives from the USCG and CBP, NORTHCOM, GMSII, and DOT/MARAD.

Final attendees included representatives from the following agencies and port stakeholders :

- DOT/MARAD
- NORTHCOM

[26] For example, issues regarding possible retribution for violations, increases in government scrutiny, tightening of regulations, privacy of corporate information, lack of benefits to the private sector, and burdensome processes.

[27] Please look at the Lessons Learned section of this document for a detailed discussion of the issues related to recruiting.

- GMAII
- The Marine Exchange
- The Port of Long Beach
- Container ships
- Cruise Ships
- Long Beach Police
- United States Fleet Forces Command (USFF-NCAGS).

Specific Activities

The MIST activities included a web site, participant polls, and a two day workshop.

Web Site

To support community building and provide a place for information sharing, we designed a web site for use prior to the workshop. The web site was implemented but did not go live prior to the LA/LB workshop. The web site was hosted on MarView, which is a Department of Transportation web site that *"provides the ability to fuse data together to create models and simulations for capacity planning, economic impact analysis, on-demand forecasting, plans for mitigating and reacting to emergency situations"*[28]. The MIST web site was designed for pre-conference information sharing and for community building. It is designed as a social networking tool and provides a place for MIST members to review, edit, and add information relevant to their needs.

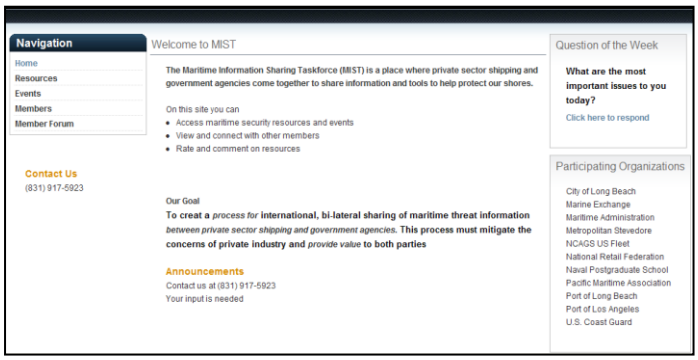


Figure 4: MIST Home Page

The MIST web site included:

- Useful resources
- Member polls
- Member profiles
- A member forum
- An events calendar

Resources

The resource section includes local, state, and federal resources—organizations, meetings, and tools—that might be useful for sharing maritime threat information. Users could also add new, rate and comment on the resources.

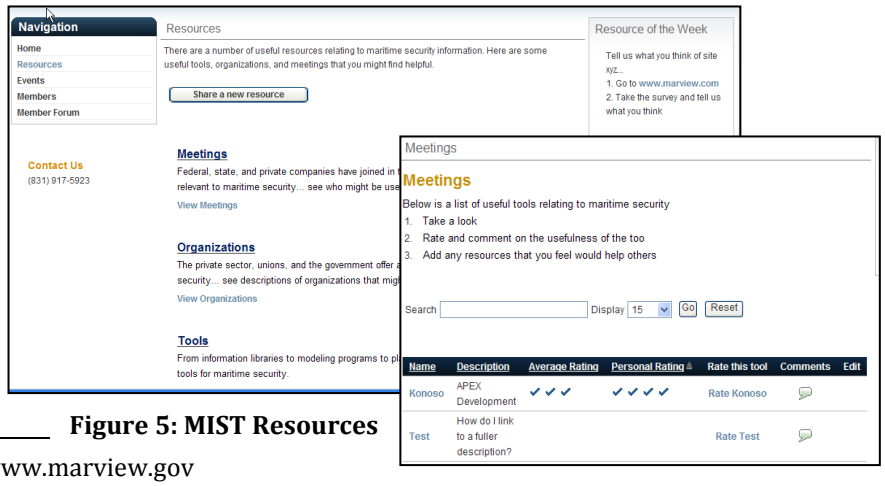


Figure 5: MIST Resources

[28] MarView website. http://www.marview.gov

Member Profiles

To help build a sense of community, we implemented a social network function that allows members to post biographies and contact information.

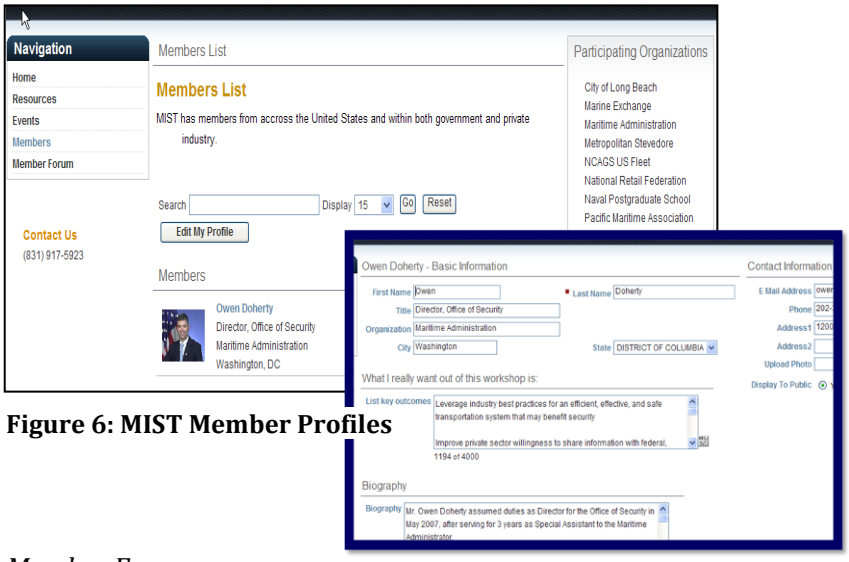


Figure 6: MIST Member Profiles

Member Forum

The member forum provides access to completed polls, new polls, and user comments.

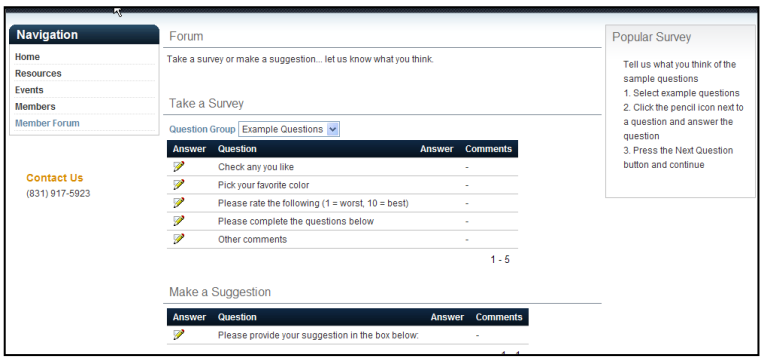


Figure 7: MIST Member Forum

Events calendar

The calendar provides access to local and national events of interest.

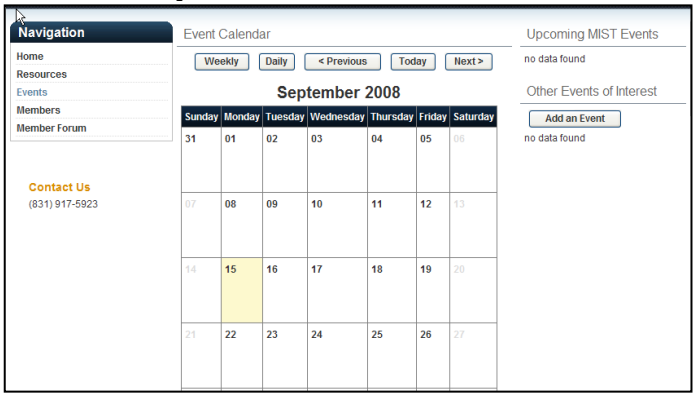


Figure 8: MIST Events

Participant Polls

In order to help us tailor the workshop for our participants interests and to gather information prior to the first face-to-face meeting, we put out two polls. We designed these polls to be brief and quickly answered. Following are the two polls:

Poll 1

1. ***Your role in maritime security is:*** *(mark only one)*
   1. *Facility Operations*
   2. *Vessel Operations*
   3. *Shipper*
   4. *Law Enforcement*
   5. *Other, please specify*
2. ***Your organization is a:*** *(mark only one)*
   6. *Private company*
   7. *Public association*
   8. *Federal agency*
   9. *State or local agency*
   10. *Other, please specify*
3. ***In your daily work, what are your three most pressing problems with sharing information?***
   *(Please list)*_____
4. ***When it comes to maritime security, your organization needs more collaboration between the public and private sector.***
   - *Strongly Disagree*
   - *Disagree*
   - *Agree*
   - *Strongly Agree*
5. ***The area where you need the most public/private collaboration is in:***
   (Please list)
6. ***When it comes to maritime security, the three areas of security that are of MOST concern to you are:*** *(mark only three)*
   - *Access controls and barriers, fences, guards and surveillance equipment*
   - *Shipping, trucking and rail connections*
   - *Passenger vessels (ferries, cruise ships, personal watercraft)*
   - *Cargo inspections*
   - *Cargo theft*
   - *Data management*
   - *Planning for disaster recovery and continuity of business*
   - *Military and law enforcement readiness and response capabilities*
   - *International issues*
   - *Other, please specify*
7. ***When it comes to maritime security, the three areas of security that are of LEAST concern to you are:*** *(Please rank in order of importance)*
   - *Access controls and barriers, fences, guards and surveillance equipment*
   - *Shipping, trucking and rail connections*
   - *Passenger vessels (ferries, cruise ships, personal watercraft)*
   - *Cargo inspections*
   - *Cargo theft*
   - *Data management*
   - *Planning for disaster recovery and continuity of business*
   - *Military and law enforcement readiness and response capabilities*
   - *International issues*
   - *Other, please specify*
8. ***What is the most important issue that you would like to discuss during the upcoming workshop on maritime security?***
   (Please list)

Poll 2

If you haven't already, please take Poll #1 before you begin this poll. Click Here to take Poll #1
Thank you for helping us again. This second poll will help us get a clearer picture of your need for information sharing resources. The poll should take approximately 5 minutes. The answers that you provide in this poll will be summarized for the group, but will not be attributed to you specifically.

The MIST organizing committee

1. ***Your role in maritime security is: (mark only one)***
   - *Facility Operations*
   - *Vessel Operations*
   - *Shipper*
   - *Law Enforcement*
   - *Other, please specify*
2. ***Your organization is a: (mark only one)***
   - *Private company*
   - *Public association*
   - *Federal agency*
   - *State or local agency*
   - *Other, please specify*
3. **My organization should have a role in sharing maritime security information.**
   - ***Yes***
   - *No*

   3b. You have answered that you do not need to share information. Please tell us why you don't need it or what it is that you do need.
4. **Are there any private sector or government MEETINGS that you have found useful for maritime security?** *Meetings can include casual gatherings such as company or local events and formal gatherings such as conferences and workshops.*
   - ***Yes***
   - *No*

   4b. What MEETINGS do you find most useful when working in maritime security? *Meetings can include casual gatherings such as company or local events and formal gatherings such as conferences and workshops.*
5. **Are there any public or private ORGANIZATIONS that you find useful in maritime security?** *(Organizations can include things like associations, agencies, and special interest groups)*
   - ***Yes***
   - *No*

   4b.What ORGANIZATIONS do you find most useful when working in maritime security? *Organizations can include things like associations, agencies, and special interest groups.*
6. **Are there any specific TOOLS that you find useful for maritime security?** *(Tools can include things like web sites, data analysis software, and situational awareness tools)*

   6b. What TOOLS do you find most useful when working in maritime security? *Tools can include things like web sites, data analysis software, and situational awareness tools)*
7. **Please list any other types of resources that you find useful when working in maritime security**.

Workshop

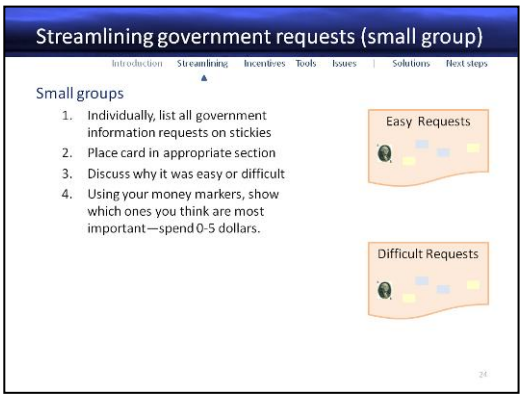
The workshop itself was spread over two days. We designed the workshop to maximize interaction and allow for both individual and group identification of issues. There were two primary facilitators from the Naval Postgraduate School who facilitated small and large group discussions. We also had three presenters who presented background information on MARAD, GMAII, and MarView.

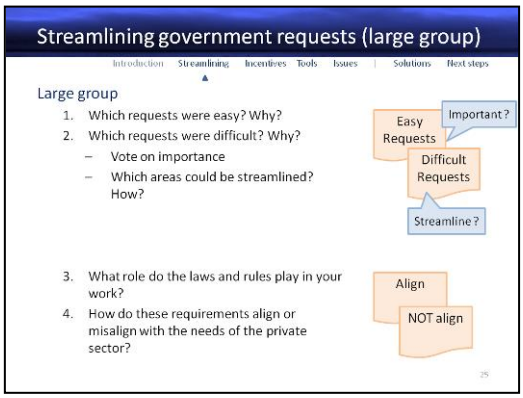
Using PowerPoint as an organizing tool, we had participants do small group brainstorming and large groups synthesis. In the slides (see below), we provided clear instructions to the participants and provided visual clues on process for the facilitators. In the workshop, we explored six areas:

1. Streamlining government requests
2. Incentives for information sharing
3. Centers of Gravity
4. Issues in information sharing
5. Solutions for information sharing
6. Next steps

Streamlining government requests

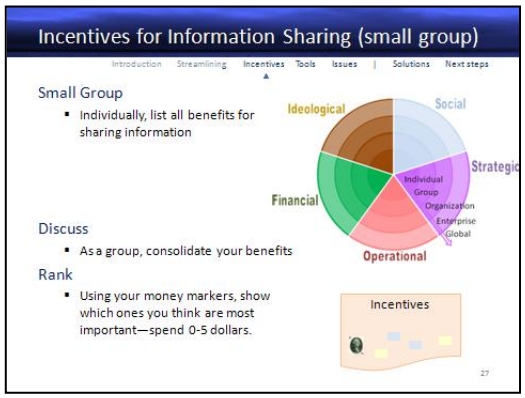
In this section, we had participants identify, discuss, and rank government requests that were difficult. The participants used one dollar stickers to mark those items that they felt were the most important.

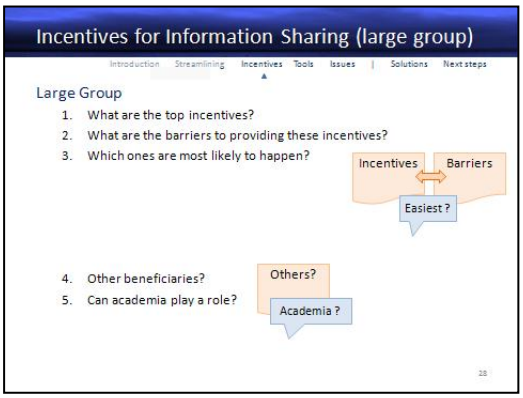




Incentives for information sharing

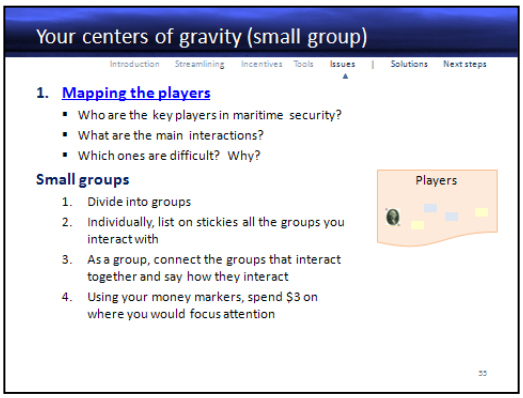
Using a 360 degree value model, we had participants identify, discuss, and rank specific benefits that could be used to incentivize the private industry.





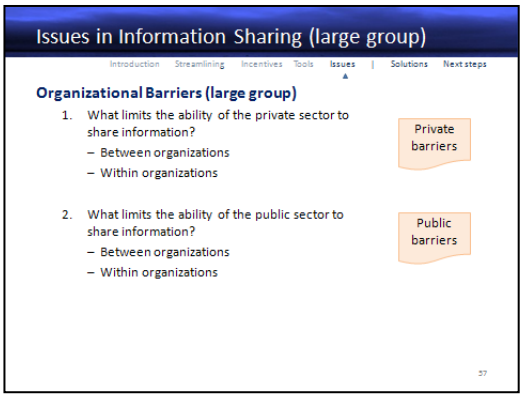
Centers of Gravity

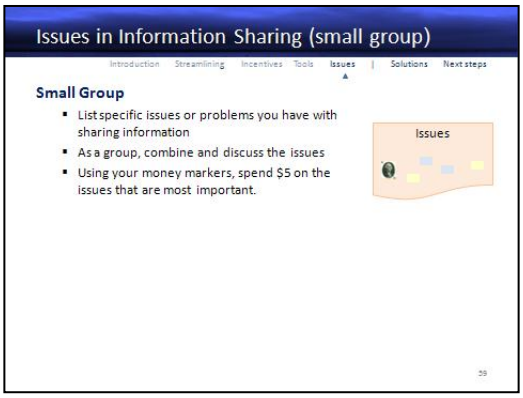
In order to help us understand who all is involved in the sharing of threat information, we had the group draw relationship maps of their local port.



Issues in information sharing

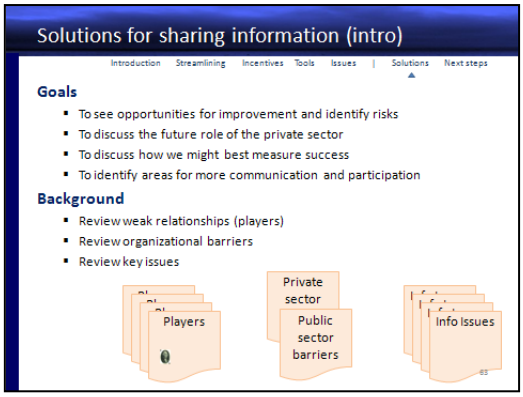
In this section, we first had participants work with the relationship maps to identify things that limit the ability of the identified players. We then had participants identify, discuss, and rank specific issues.

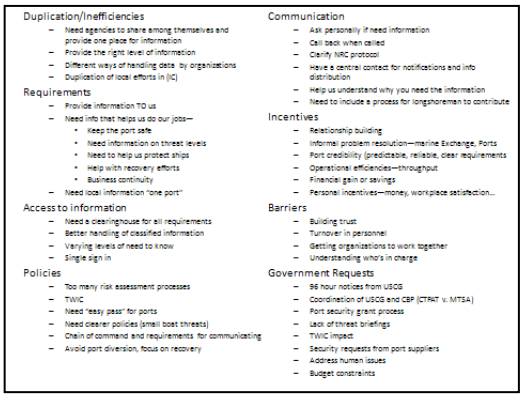




Solutions for Information Sharing

We spent the majority of day two discussing solutions to earlier identified issues. We first presented them with a summary of issues from the day before:





Duplication/Inefficiencies
- Need agencies to share among themselves and provide one place for information
- Provide the right level of information
- Different ways of handling data by organizations
- Duplication of local efforts in (IC)

Requirements
- Provide information TO us
- Need info that helps us do our jobs—
  - Keep the port safe
  - Need information on threat levels
  - Need to help us protect ships
  - Help with recovery efforts
  - Business continuity
- Need local information "one port"

Access to information
- Need a clearinghouse for all requirements
- Better handling of classified information
- Varying levels of need to know
- Single sign in

Policies
- Too many risk assessment processes
- TWIC
- Need 'easy pass' for ports
- Need clearer policies (small boat threats)
- Chain of command and requirements for communicating
- Avoid port diversion, focus on recovery

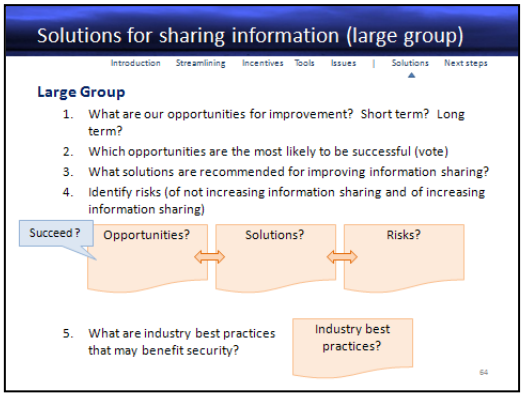
Communication
- Ask personally if need information
- Call back when called
- Clarify NRC protocol
- Have a central contact for notifications and info distribution
- Help us understand why you need the information
- Need to include a process for longshoremen to contribute

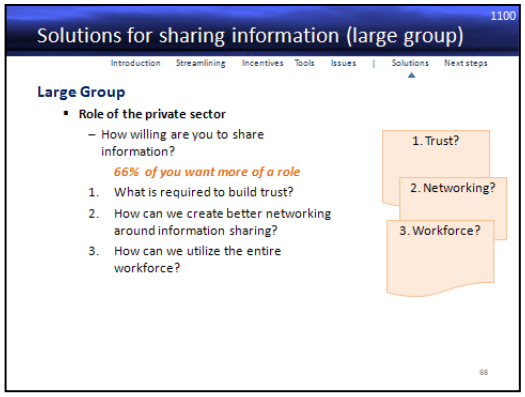
Incentives
- Relationship building
- Informal problem resolution—marine Exchange, Ports
- Port credibility (predictable, reliable, clear requirements
- Operational efficiencies—throughput
- Financial gain or savings
- Personal incentives—money, workplace satisfaction...

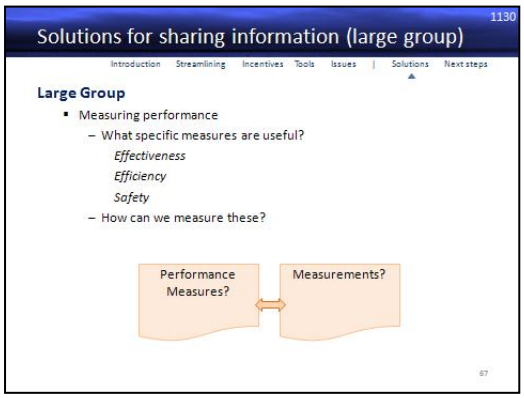
Barriers
- Building trust
- Turnover in personnel
- Getting organizations to work together
- Understanding who's in charge

Government Requests
- 96 hour notices from USCG
- Coordination of USCG and CBP (CTPAT v. MTSA)
- Port security grant process
- Lack of threat briefings
- TWIC impact
- Security requests from port suppliers
- Address human issues
- Budget constraints

We then ranked the importance of each issue and discussed possible solutions for resolving the key issues.







Next Steps

The final activity for the workshop was to discuss how we could move forward and communicate better.

Agenda

Maritime Information Sharing Taskforce- MIST
LA/LB Symposium- August 20-21
Agenda

Wednesday, August 20

0800-0900	Registration- Networking
0900-0945	Introduction to MIST- introductions, some background on National Intelligence (Tim Phillips, GMAII), an overview of the project and desired outcome of the symposium (Wendy Walsh, NPS & Owen Doherty, MARAD)
0945-1045	Streamlining government information requests- some background on Maritime information sharing (Owen Doherty, MARAD) and discussion of government information requests(Anita Salem, NPS)
1045-1130	Exploring incentives for information sharing- Looking across the value segment (Anita Salem & Wendy Walsh, NPS) and a discussion of private sector incentives
1130-1300	Lunch
1300-1400	Looking at current tools for information sharing- Defining usefulness (Anita Salem, NPS) and a discussion of specific tools (Tim Phillips, GMAII, Louis Effe, MARAD)
1400-1430	Break
1430-1700	Issue Exploration- Outline relationships, present key questions, and break into small and large groups for brainstorming goals, gaps, barriers and risks (Anita Salem & Wendy Walsh, NPS, Owen Doherty, MARAD facilitate)

Thursday, August 21

0830-0900	Check in and networking
0900-1030	Solution Exploration- Review goals, gaps and risks, prioritize problems, brainstorm ways to overcome problems, review possible solutions, brainstorm ways to measure success. (Anita Salem & Wendy Walsh, NPS, Owen Doherty, MARAD facilitate)
1030-1100	Break
1100-1230	Solution Exploration (con't)- Review goals, gaps and risks, prioritize problems, brainstorm ways to overcome problems, review possible solutions, brainstorm ways to measure success. (Anita Salem & Wendy Walsh, NPS, Owen Doherty, MARAD facilitate)
1230	Adjourn

List of acronyms

AAPA	American Association of Port Authorities
AMSC	Area Maritime Security Committee
CBP	Customs and Border Protection
COAC	Departmental Advisory Committee on Commercial Operations of Customs and Border Protection and Related Functions
C-TPAT	Customs-Trade Partnership Against Terrorism
DHS	Department of Homeland Security
DoD	Department of Defense
FSO	Facility Security Officer
GMAII	Global Maritime Awareness Intelligence Integration
GMSA	Global Maritime Situational Awareness
HSPD	Homeland Security Presidential Directive
ISAC	Information Sharing and Analysis Center
LA/LB	Los Angeles/Long Beach
MARAD	Maritime Administration
MDA	Maritime Domain Awareness
NSMS	National Strategy for Maritime Security
NSPD	National Security Presidential Directive
NY/NJ	New York/New Jersey
ODNI	Office of the Director of National Intelligence
OGMSA	Office of Global Maritime Situational Awareness
OHS	Office of Homeland Security
OSAC	Overseas Security Advisory Council
USCG	United States Coast Guard

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