

Emergency Management/ Homeland Security Education Regional Academic Collaborative Region I

After Action Review/Improvement Plan
September, 2017

The After-Action Report/Improvement Plan (AAR/IP) aligns the collaborative engagement objectives with preparedness doctrine to include the National Preparedness Goal and related frameworks and guidance.

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ENGAGEMENT OVERVIEW

Exercise Name	Emergency Management/Homeland Security Higher Education Regional Academic Collaborative Region I
Exercise Dates	Wednesday, August 29, 2017
Scope	The collaborative engagement was a one-day, four-hour long event for academics and practitioners from FEMA Region I held at Dean College in Franklin, Massachusetts. The engagement consisted of presentations sharing examples of successful and forthcoming efforts to move academic and research outputs to emergency management practice followed by small-group discussion and subsequent presentation of discussion outcomes.
Engagement Theme	Practices of collaboration among faculty, researchers, students, and emergency management practitioners within Region I.
Purpose	To build awareness, identify untapped opportunities, and capture successful regional practices of collaboration with faculty, students, and research working with emergency management practitioners.
Objectives	<ol style="list-style-type: none"> 1. To bring together emergency management and homeland security academics and practitioners to share efforts and discuss opportunities. 2. To capture the proceedings of the workshop in a shareable document to promote on-going collaboration.
Sponsor	FEMA Emergency Management Higher Education Program
Participating Organizations	31 participants attended the engagement representing a variety of public and private academic institutions, organizations, and government agencies. A comprehensive list of participants is available in Appendix A.
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EXECUTIVE SUMMARY

On Tuesday, August 29th practitioners, academics, and combinations of the two from FEMA Region I met at Dean College in Franklin, Massachusetts, to discuss collaboration among faculty, students, researchers, and emergency management organizations. The engagement provided a forum for members of the Region I emergency management community to share successful and emerging collaborative practices, engage in discussion, and form new relationships. The Region I collaborative engagement took place six days after a similar event was held in Region IX and marks the second iteration of an ongoing project to support regional relationship building and collaboration.

Sponsored by FEMA's Emergency Management Higher Education Program, the engagement began with an overview of the Higher Education Program, followed by participant self-introductions, and then segued into a series of presentations. Presenters from Norwich University, Rhode Island Community College, University of New Haven, Massachusetts Maritime Academy, Dean College, the Boston Consortium, MIT Urban Risk Lab, University of New Hampshire, and the Naval Postgraduate School University and Agency Partnership Initiative shared research and effective collaborative practices. Presented strategies for constructing bridges between the academy and practice included internships, engaging emergency management practitioners and members of the public in research, addressing needs of the local emergency community as part of coursework, academic program development, seeking former and present practitioners for adjunct positions, and utilizing pre-existing resources in curriculum development and delivery.

Time was allotted for questions following each presentation. Providing space for questions afforded presenters the opportunity to further share their experience and knowledge while allowing participants to pull specific information from them. After, participants broke into small groups organized around themes that arose during the presentations. The organizing themes were: internships for international students, teaching aids, and academy outreach to practitioners. Participants from each thematic group then shared key points and potential strategies resulting from their discussions, followed by questions and comments from the group.

Through forming relationships within the emergency management community, participants described how they were able to enhance education, create shared value between colleges, emergency management organizations and the public; provide students with opportunities to gain practical experience and exposure; position students to be marketable; and move research to practice. Beyond illuminating a variety of effective strategies presently in use throughout the region, the engagement also demonstrated the value of continued collaboration among the participants and the emergency management community. An immediate outcome of this collaboration session is that several members are now working to have a collaborative presence at the upcoming International Association of Emergency Managers (IAEM) conference.

ENGAGEMENT PRESENTATIONS

After brief opening remarks from the facilitator and participant introductions, the engagement transitioned into presentations focused on collaborative practices delivered by in-person, as well as virtual, attendees. Presenters shared their strategies for connecting the academy and practice and the outcomes they had been able to produce. Central to the approaches discussed by presenters were internships and providing emergency management organizations with opportunity to come onto college campuses.

Chuck Nettleship: Peer to Peer/NSA Cyber Center for Excellence

Chuck Nettleship, from Norwich University shared two projects: FULCRUM and the Decide platform. Looking to form private and public relationships inclusive of both projects, Chuck began by introducing FULCRUM, noting that the name will be changing. He explained that FULCRUM is a “counter violence extremism prototype” developed by five students from Norwich. The beta version of FULCRUM was “developed for the Department of Homeland Security’s – Peer2Peer: Challenging Extremism competition.” Having won the competition, the students are now trying to move FULCRUM to market, where it may be used by the private sector or the federal government. However, Chuck noted it will most likely be used by the latter. If achieved, FULCRUM’s movement to market will also constitute an integration of research into practice, given its development within the academy.

Pointing to extremist websites as a means of radicalization, Chuck explained the goal of FULCRUM is de-radicalization through “countering the narrative.” FULCRUM targets the process of radicalization by replicating extremist organization’s websites which directs individuals to the FULCRUM platform. Once the FULCRUM platform has been accessed, individuals are then assigned a “de-radicalization partner” who works to prevent them from “going down the wrong path.” Chuck also introduced the Decide platform “that helps organizations prepare for the unpredictable” cyber threats. Decide offers a “limitless array” of live cyber threat exercises to help organizations plan and prepare for actual threats and evaluate their degree of readiness and capacity to recover.

Joe Arsenault: Practitioner Collaboration – Conferences to Internships

Joe Arsenault from the Community College of Rhode Island (CCRI) shared an effective strategy for joining an academic institution with practice. The Rhode Island Emergency Management Agency (EMA) holds an annual conference on hurricane preparedness, which was historically held at a hotel at significant expense to EMA. Joe explained how he approached EMA, introduced CCRI’s degree program in emergency management and suggested EMA hold the conference at the college instead, stating, “It will be a win-win for both of us.” Having now held the conference at CCRI for three years during the summer, Joe acknowledged that it is “a lot of work...bringing the different elements together... [but a] perfect opportunity to showcase your program [and] a perfect opportunity to engage with practitioners.” Later, he expressed the importance of holding the conference mid-summer by sharing that it had once been held too

close to the start of the fall semester and it interfered with students coming onto campus to purchase books.

In 2017, the conference brought 300 participants to campus, which was co-sponsored by the International Association of Emergency Managers (IAEM). There were 404 attendees the prior year. Beyond saving EMA money and advertising the program, Joe explained the conference provides students with the chance to gain exposure and interact with practitioners in an “informal setting.” Joe noted later that “every ounce of exposure we can get for our students is huge.” Throughout the conference, students act as ambassadors for CCRI’s program, interact and network with participants including vendors, and attend and participate in breakout sessions. Joe noted the conference has led to student’s finding jobs as well as internships. When the question of inviting students from other schools to help with conference was raised, Joe responded that all students are invited and added that Massachusetts Maritime Academy students have volunteered in the past. The value of bringing practitioners onto campus was clearly conveyed throughout Joe’s presentation. It was also articulated that any event, regardless of size, has the potential to create value for the students, the program, and the agency or organization.

Wayne Sandfords: Successful Internship Programs

Presenting virtually and representing the University of New Haven, Wayne Sandford’s presentation was centered on collaboration in the form of internships and providing opportunities for students to work with emergency management organizations as a component of coursework. The University offers a certificate in emergency management, a Bachelors in homeland security, and a graduate degree in emergency management that is delivered on-campus, as well as online. Wayne noted the university encourages undergraduate students to do an internship and graduate students to write a thesis. Interestingly, Wayne explained the majority of graduate students are electing to take on an internship, which is taking the university “aback,” and leading to the forming of new relationships. He suggested the rise in internships may be connected with students looking to gain practical experience so they will be increasingly marketable following graduation. In reference to on-campus international students, Wayne mentioned the university is having difficulty finding them internships.

Wayne explained that to find student internships, the program works with “local towns through Connecticut’s Emergency Managers Association,” noting that over the summer or semester, generally six or seven students are placed in internships within the local towns. Wayne further explained that the program has been “somewhat successful” at arranging state level internships and added that after interning with the state, some students have been hired. However, Wayne mentioned state level internships are not available to international students, as being a U.S. citizen is a prerequisite to working in Connecticut’s Department of Homeland Security and Emergency Management.

The private sector was presented as the area where the program has been most successful at placing interns. The success was attributed, in part, to a group in Hartford, Connecticut, called “Contingency Planners.” The Contingency Planners group was described as being instrumental in locating internships. Wayne presented Yale University as one of their more “successful

business connections.” Through the university itself and the connected Veteran Affairs hospital, Wayne explained that Yale consistently takes a few students every year.

Students are also provided the opportunity to gain experience within the University of New Haven through volunteering on the university’s emergency management team. As volunteers, students are able to gain experience by updating plans and assisting with exercises. Additionally, a strategic planning course offered through the graduate program provides another avenue for students to gain practical experience, as well as exposure. Each semester the course “adopts a different agency within the state” that the students then develop a strategic plan with. Wayne noted that “The students learn a lot in the class, and the organization benefits.” For example, through the course students had the opportunity to develop a strategic plan with Connecticut’s Durham Fair and were able to “change the way they do business.” Wayne also briefly spoke to the value of their active alumnus network in finding both students and graduates jobs.

Maryanne Richards: Massachusetts Maritime

Maryanne Richards from Massachusetts Maritime Academy shared collaborative practices currently taking place within the college. A key enabling factor highlighted toward the end of the



presentation was the support of career services from the president of the academy. Maryanne connected the top-down support to the fact that one of the “selling points [of Massachusetts Maritime] is job placement. Students do not want to come to Massachusetts Maritime unless they think they have a chance of getting a good job.” The college follows what was described as a “Learn-do-learn” philosophy “where everything...is experiential.” An examples of experiential learning included the entire

freshman class having a three-day experience aboard the Kennedy, the college’s training ship. Other examples include emergency management students taking an annual winter-time trip to Florida where they work for Habitat for Humanity and also volunteering in Haiti. Through experiential learning, students are provided with a “growing experience, resume builder” and they become “more aware of [their] major.”

Maryanne expressed the importance of providing students with opportunities such as exercises and drills where they can interact with emergency management professionals. She explained that “Anytime someone will come to the campus, we are happy to host them.” Student participation in on-campus exercises and drills is encouraged by the college so that “they are networking with professionals and picking their brain.”

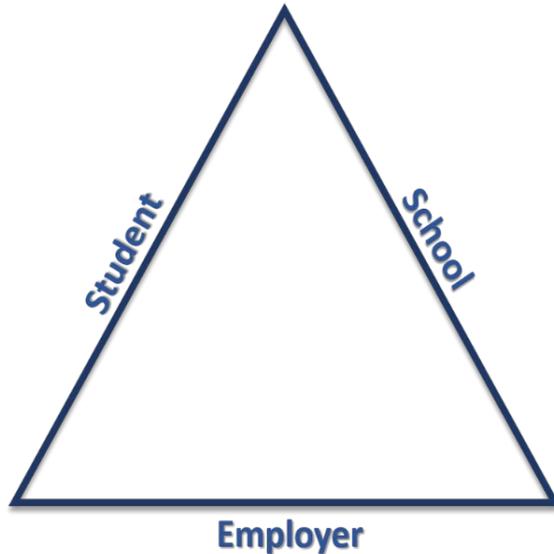


Figure 1. The Triangle of Internship Value

Massachusetts Maritime requires undergraduate “shore side,” or degree program students to have two “Cooperative Education Experiences” or “co-ops,” also identified as internships. Due to the college’s March start date, summer as well as winter internships are available to students.

Maryanne addressed how she finds internships: “It is a lot of me doing things like this, like coming here today...I will go to any conference or meeting, or convention the faculty suggests I go to and just listen and meet people...any kind of outreach.” Maryanne explained that she conducts internship site-visits to observe the work the student is doing and receive feedback from both the employer and the student.

Maryanne described a successful internship as one that creates a triangle of shared value

between the school, the student, and the employer (see Figure 1). She stated that “We all have to benefit or it’s not going to be successful. It’s my job to make sure the employers are happy [and] that the students did help them. It’s definitely a learning experience first and foremost, but if the employer doesn’t really get something out of it they probably aren’t going to be happy.” In assigning internships to students, Maryanne first works with organizations to determine their needs. She described how students are pre-screened, which includes their academic standing as well as interests. Resumes are then sent to the organizations who are then able to select students. Also discussed were the 30 to 35 on-campus employer presentations, electronic job boards, newsletters, and program graduates utilized as pathways to building relationships and developing internships

During the presentation, Maryanne drew attention to the advisory boards the college has for each academic discipline. Comprised of industry members, the advisory boards provide feedback on the preparedness of graduates as they enter the workforce and can inform the college if there are new certificates the students will need. Maryanne also highlighted the variety of workshops that the college offers, “including resume workshops, interview workshops, how to look for a job, how to clean up your social media...we do lots of workshops and we can change them up all the time.”

At the end of the presentation, Maryanne put forth the idea of schools sharing a booth at IAEM. Ray Perry, also from Massachusetts Maritime Academy, showed support for the idea, citing the specialization of some college programs as a great way to connect attending students with programs they are looking for.

Continuing, Ray suggested that it would be beneficial to send students to do internships at colleges and universities where there exists a developed EM program, i.e. one that has a designated Emergency Manager and participates in our Higher Ed. Forum. Most schools, particularly larger ones, face the same challenges as a town's Emergency Management program and thus should offer an intern a more comprehensive learning experience. For example, although MA Maritime offers fantastic graduate and undergraduate level EM degrees, it is a small school and thus its EM department assigned to protect the school is small and probably not as desirable for an intern as a large university might be.

Pete Savo: From Practitioner to Adjunct, Supports Recruitment and Retention

Pete Savo from Dean College, the engagement's host, shared his strategy of recruiting practitioners for adjunct positions as a means of building a bridge between the academy and practice. Part of the college's focus is to position their students to be employable. In effort to do so, Pete works to "put professors in front of them that they can network with...but more than that, have the talent to prepare them to be successful outside...in the real-world." To find the professors fitting the prior description, Pete turns to practitioners. Through the use of social media, Pete finds practitioners and works to bring them into the college: "I use social media to find practitioners... [if I have] a specific course that needs a professor, a specific talent, I go to LinkedIn and find people in my local area who have that skill set and I approach them.... I find practitioners that have the skill sets to prepare my students to be marketable." Later, Pete stressed the importance of the search for practitioners being "persistent."

Part of Pete's search is to find practitioners who have "become a professor" as an item on their "bucket list" and have "bright shiny eyes...the sincere smile and laughter...that have the skill to build a bond with my students, [and] with the institution." After they are recruited, practitioners are helped to develop syllabi, trained on how to adapt their experience to teaching, and introduced to the systems and philosophies related to maintaining the school's accreditation. Additionally, Pete stressed the importance of the adjuncts responsibility to teach at a speed and style appropriate for the students.

Pete connects placing practitioners who correspond to the characteristics mentioned above to a positive student experience that positions them to be marketable. Through their experience, practitioners can impart "best practices" to students. Pete explained that "industry best practices do not come from books, they come from the field...keeping



people alive...that experience translates into an education we can share with our students...practitioner knowledge is rarely found in books.”

As practitioners are integrated into the program, their “knowledge becomes the knowledge base, the practitioner becomes the network...the person who cares.” Pete stressed the importance of being passionate in ensuring the students have what they need, as the student has lot of choices but “they picked us, they selected us because we had something they were looking for.” In response to Pete’s presentation, Ray Perry offered that “there needs to be a balance...you might want practitioners, but you also need the professors and I think the students need that...it’s not just for the students, adjuncts need professional professors and professional professors need adjuncts.” He added that both the professional professors need to come together, citing personal experience where interacting with professional professors was “immensely” helpful to him.

June Kevorkian: Developing Practitioners to Teach

June Kevorkian from the Boston Consortium delivered a brief version of her presentation to avoid repeating similar information Pete had just delivered. The Boston Consortium, established in 1995, is a consortium of 17 Boston area colleges and universities. Their mission is to serve as an external resource to promote collaboration. June explained that emergency management is one of over 20 Consortium communities of practice she works with in her role with the Boston Consortium. She highlighted that the Consortium Emergency Management Community of Practice are planning an Emergency Management Symposium on December 14th and 15th, where practitioners and academics will have the opportunity to interact with one another.

Switching topics, June posed the following question: “Think back, you all must have someone that you remember as the most outstanding teacher you ever had. What were those characteristics? What made that person stick in your mind?” Referring to the passion, compassion, and practical experience, of the participants, June asked “How do you transfer that wonderful compassion and knowledge from experience into becoming a good educator?” In answering the question, June reached back to Pete’s presentation and cited his process for recruiting practitioners for adjunct positions. June offered that through a practitioner’s “passion to tell what they have learned” through storytelling, identified as a powerful educational tool, they can provide students with a valuable blend of conventional text-based education and their own experience.

David Moses: Massachusetts Institute of Technology, Urban Risk Lab

David Moses, from the Urban Risk Lab at the Massachusetts Institute of Technology (MIT), began by noting that although the Urban Risk Lab is located within MIT’s School of Architecture and Planning, they work across the university with academics in a variety of disciplines. David shared two projects described as “action research, out in the world, outside of the academy” driven by two ideas: “Connect[ing] everyday needs to post-disaster needs, and figuring out ways to connect everyday citizen’s efforts to prepare and respond with all the work the government is doing to prepare and respond to natural disasters.” The presentation then turned to the Urban Risk Lab’s PREPHub (Emergency Preparedness Hubs) project. PREPHubs were described as useful infrastructure embedded in “urban public spaces...that people use in an everyday case” but also go to during an emergency such as neighborhood parks and sidewalk

plazas. The infrastructure embedded in the PREPHubs is designed to serve a purpose within a routine, everyday context while also performing critical functions during a disaster. For example, David described how a “selfie-booth” can transition into a check-in station during an emergency.

It was explained how placing PREPHubs in open public spaces were found to influence people to prepare ahead of an emergency while also giving them a place to go when one occurs. David noted that PREPHub’s are created through a co-design process within the communities they are placed in. Also within the context of their design, David noted the PREPHubs are modular and “can be deployed...to meet different site conditions...they are flexible but consistent and iconic so that they work as a network throughout the city.” Aiding the design of the PREPHubs are the production facilities at MIT, which enable the Urban Risk Lab to “rapidly iterate” and build prototypes in house.

The second project shared was Real-Time Flood Mapping and Preparedness, also identified as “Risk Maps,” developed in Jakarta, Indonesia where it was developed in “close partnership” with the local emergency managers. Jakarta was described as being prone to flooding during monsoon season, requiring the pumping of water out of the city and over a sea wall. David also identified Jakarta as having “one of the highest social media uses of any city in the world.” Through the use of bots, the Risk Maps project leverages social media activity already taking place in Jakarta to map floods. The bots search for information pertaining to flooding and provide members of the public with a “Risk Evaluation Matrix” interface where they can report observed conditions without having to download an app. David expressed that citizens are “the best water sensors you could have because they are everywhere and actively working in the city.” The reports collected from citizens by Risk Maps are added to a map available to anyone in the city and are also sent to Jakarta’s Central Emergency Office where the citizen information is combined with “flood gauge information and pump activity” allowing for real-time flood mapping.

In February 2016, during the project’s second year of use, a link was provided to the public-facing map within the popular transportation app, Uber, to help Uber drivers navigate through the city. Through its ability to collect information from citizens, aggregate it on publicly available maps, and send it to the emergency management office, the Risk Map project connects the observations of Jakarta’s public with the expertise found in the emergency management office. David mentioned the project provided the Urban Risk Lab with the opportunity to figure “out how to navigate from the top down to the bottom up and really connect those two together.”

Following David’s presentation, the facilitator conveyed the importance of building and maintaining an awareness of the efforts in “our own backyard.” Wendy Walsh raised the question of “How can we have better awareness of what is happening in our own backyards so it can be shared?” She stressed the importance of the regional community self-organizing around the important task of building this awareness so research and other efforts can be shared.

Fay Rubin: Cooperating Technical Partners Program

Faye Rubin from GRANIT State GIS Clearinghouse, a research institute located within University of New Hampshire, shared the Clearinghouse’s affiliation with FEMA’s Cooperating Technical Partners (CTP) Program which began in 1999.

The Clearinghouse was the first university CTP designated by FEMA and is affiliated through the mitigation division of CTP due to “their involvement with floodplain management.” Through the CTP program, FEMA “looks for partners with technical expertise that have resources that they can leverage” so they may complete projects in a timely and cost-effective manner. Faye explained that the Clearinghouse has data sets as well as technical GIS expertise, connections with local communities, and financial management knowledge that FEMA can leverage.

As a CTP, the Clearinghouse began with a small pilot project, converting paper floodplain maps to digital format, then in the next year performed the same task on a county-wide scale. By 2009, the Clearing house had “progressed through a series of steps” and had begun working with the state office of energy and planning to develop a statewide business plan, offering data services and hosting. Following the advent of the FEMA Risk Mapping Assessment and Planning program (Risk MAP) Faye explained the Clearinghouse “moved into a different phase where we started to do data development and floodplain maps.” When the Risk MAP program expanded beyond flood maps and began to create “other products affiliated with the flood maps that help communities better understand the data and how to engage in floodplain management,” the Clearinghouse followed with this new direction. Faye explained how the Clearinghouse engaged in Risk MAP’s Discovery process. Through the Discovery process, the Clearinghouse worked with citizens to generate data points based on the community member’s observations, which “are then used to prioritize stream reaches for future flood plain mapping activities.” Faye explained that students work in the Clearinghouse on where they perform basic “GIS tasks [and also] get exposure to floodplain management issues.” Additionally, Faye stated there had been a few occasions where they had gone out to assess culverts and engaged students from the university’s engineering school.

Steve Recca: Cooperating Technical Partners Program

Steve Recca of the Naval Postgraduate School (NPS) Center for Homeland Defense and Security (CHDS) discussed the role of the University and Agency Partnership Initiated (UAPI) in “enabling universities to get the materials and support” useful for program development and maturation. UAPI provides support by leveraging curricula, research, and professional resources made available through CHDS. Whether universities are starting a program or looking for additional support, partners can access materials – lectures, course syllabi, video presentations, and library services – that can be incorporated into programs without cost. He explained that “UAPI is also a network hub for you to connect with other partners, get information on other programs, access the materials we have, all for free.” Steve concluded the presentation by speaking to the value of FEMA’s Annual Higher-Education Program Symposium located at the Emergency Management Institute and UAPI’s similar two-day summit.

ENGAGEMENT DISCUSSION

The presentations provided an open forum for sharing effective collaborative practices with members of the Region I emergency management academic and practitioner community. Space for questions following each presentation offered participants the opportunity to share their own experiences and insights, raise issues, and have open discussion. After the presentations, the group broke into small groups focused on three different areas: International internships, Teaching aids, and Community outreach. When the group reassembled, one participant from each group shared key points from their discussion with the rest of the engagement.

David Jannetty: Outreach in the emergency management community

David Jannetty, from Post University, and his group discussed the theme of outreach. To begin, David stated that towns frequently do not have a lot of emergency management staff and suggested that students could be used to supplement their efforts. Additionally, students could gain experience while bolstering ongoing efforts through volunteering on the local emergency management board, attending meetings, and volunteering for exercises. In further relation to exercises, it was suggested that students could become involved in the year or longer planning process leading up to exercises. Extending student involvement beyond participating in exercises grants them the opportunity to gain valuable experience, network, and gain a deeper understanding of their role as a practitioner. As exercises are designed around objectives, students could focus on one objective and have ownership over its development, execution, and evaluation. Furthermore, opportunity may also exist for students within the emergency management teams at the colleges they attend.

Beyond traditional emergency management organizations, it was also offered that students could engage with members of industry, such as oil companies, who have extensive emergency management experience within the context of their practice. During the discussion, David asked, “How do you convince practitioners they need CERT teams?” Following the thread of CERT teams, David Barber from MIT shared that he runs a CERT class during free periods to avoid conflicts.

Marc Lieber: Teaching Aids

Marc Lieber from Massachusetts Maritime Academy began with stating that “The challenge is to keep instructors updated on the latest information and trends in the field” and then subsequently integrate the updates into the educational process. During the summary of his group’s discussion, Marc suggested it would be of benefit to create a central point of contact for all available teaching resources including scenarios for exercises, policies, relevant articles, case studies, and media. As presented, the suggested task was the “blending” of available information and making it available through a single interface. Marc’s brief presentation appeared to suggest that a comprehensive knowledge management system for homeland security and emergency management was desired. Steve Recca of the NPS and Wendy Walsh from the FEMA Higher Education Program shared that educational resources are readily available on their respective websites; [The Center for Homeland Defense and Security’s University and Agency Partnership](#)

Initiative (<https://www.uapi.us/>), FEMA Higher Education (<https://training.fema.gov/hiedu/>), as well as the Homeland Security Digital Library (HSDL) (<https://www.hsdl.org/c/>).

Chuck Nettleship: Internships for International Students

Chuck discussed the issue of finding international students internships; a problem identified earlier in the day during Wayne Sandford's presentation. Similar to Marc Lieber's comments pertaining to knowledge management and sharing, Chuck suggested it would be of benefit for universities and practitioners to share with each other their lessons learned regarding international students and internships that "could help us open a door." David Moses shared that the MIT Urban Risk Lab uses relationships with international students and has found that their first language helps "get projects off the ground" outside of the country.

MOVING FORWARD

As the presentations were analyzed following the engagement, it was discovered that the collaborative practices shared by presenters led to the production of value in four dominant common areas, pictured in Figure 2: value for Students, value for communities (the public) value for organizations (emergency management organizations and agencies) and value for schools. Expanding on the triangle model introduced by Maryanne Richards, the common areas of value creation were found to be heavily interrelated by practices that had a demonstrated capacity to create value in more than one area. Furthermore, the areas of value creation themselves were also found to be interrelated. For example, value produced for students could be shared by the school, communities, and any involved organizations such as those sponsoring internships (see Table 1). Ultimately, value created in the first three areas represented in Figure 2 was demonstrated to eventually flow to communities.

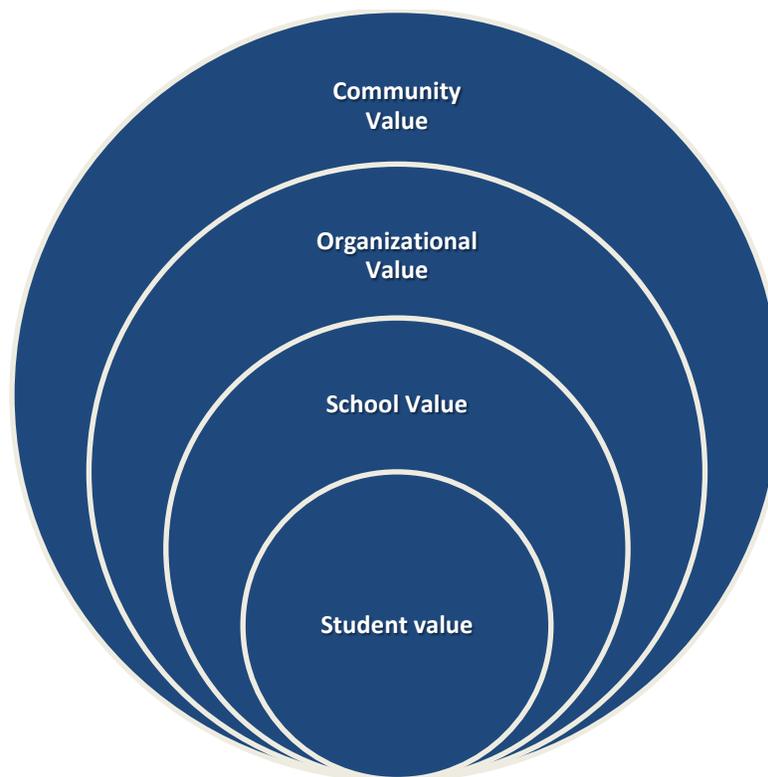


Figure 2. Value Created through Collaborative Practices

Through the example of three collaborative practices shared during the engagement, Table 1 expands on Figure 1, examining how value created by collaborative practices can be shared by students, schools, organizations, and communities. The interrelatedness of the value created by collaborative practices suggests that their adoption or creation can be intentionally directed toward producing value across multiple stakeholder groups.

Collaborative Practice Examples	Value Created by Practices	Value Flow
Bringing emergency management organizations onto campus (e.g., conferences, drills).	Students gain access to professional network; Students gain exposure to practitioners and practice; Students find jobs and internships	Students
Internships	Students gain practical experience; Potential pathways to jobs are created; Improves educational experience	Students
Recruiting practitioners for adjunct positions	Students gain access to professional network; Enriches student experience through connecting passion, compassion, and practical experience storytelling with text-based education; Students marketability increases; Students learn best practices	Students
Bringing emergency management organizations onto campus	Showcases program; Provides opportunity for school to be involved with practice; Program has opportunity to be involved with practice	Schools
Internships	Maintains/strengthens relationship between school and sponsoring organization; Creates a “selling point” for the school; Produces graduates prepared to function effectively in practice	Schools
Recruiting practitioners for adjunct positions	Strengthens program; Creates practical knowledge base within the school; Adds balance to professional professors	Schools
Bringing emergency management organizations onto campus	Saves agency or organization money; Provides space and additional resources; Creates opportunity to find interns or employees	Organizations
Internships	Meets the needs of sponsoring organizations	Organizations
Recruiting practitioners for adjunct positions	Students gain connections to emergency management organizations; Students learn best practices and become prepared to effectively function within the “real world” as a member of an emergency management organization; Organizations gain effective practitioners	Organizations
Bringing emergency management organizations onto campus	Exercises, drills, and conferences improve emergency management organization’s service to communities; Students graduate with practical experience and are prepared to be of value to the community they serve	Communities
Internships	Students graduate with practical experience and prepared to be of value to the community they serve	Communities
Recruiting practitioners for adjunct positions	Professional network provided by practitioners improves flow of graduates to practice; Students enter practice equipped with a practical knowledge base including best practices	Communities

Table 1. Collaborative Practices, their Outcomes, and the Value Created

Following the presentations, participants self-organized into groups with each focused on one of three areas: internships for international students, outreach in the emergency management community, and teaching aids. As members from each group presented the results of their discussion, they were able to share potential collaborative practices while receiving further constructive feedback from participants.

The collaborative engagement provided a four-hour-long and loosely structured forum for members of the region to come and share the collaborative practices their organizations have developed and engage in discussion. The presentations delivered an array of collaborative strategies and demonstrated capacity to add value across multiple areas. As value is created through collaboration, it flows outward to the public—which the emergency management community serves, through the movement of students and research to practice.

SUCCESSSES AND AREAS FOR IMPROVEMENT

Planning, Logistics, and Technology

Strengths: The engagement was well-attended by members of the Region I emergency management community. Attendees were largely from public and private academic institutions, though there were also representatives from an insurance company, local government, and FEMA. Of the 31 invitees, 26 attended in person and 5 participated virtually. Invitations for the engagement were successfully distributed on-time, via email. The invitations included the engagement brochure and a corresponding Eventbrite link for zero-cost registration, which allowed the engagement facilitator to track the number of attendees. Dean College provided the engagement with an ample amount of space and accommodations. Pete Savo and staff from Dean College performed a technology test before the start of the engagement to ensure it would work during the meeting.

Symposium Content

Strengths: The engagement was largely constituted by presentations that provided a semi-structured space for members of the regional emergency management community to share effective collaborative practices used by their organizations. In between each presentation, the facilitator provided an opening for participants to pose questions, share insights, and offer feedback and suggestions. Following the presentations, participants had the opportunity to break into thematic groups and engage directly in a collaborative practice.

Area for Improvement 1: Nearly all of the engagement was captured through the Business Skype platform, with the exception of a few minutes during the first presentation and the ending of the engagement, when participants shared key points from their small group discussions. Additionally, due to the discussion component occurring over lunch it was not captured at all. Gaps in the narrative captured created discontinuities for the virtual participants and for the reporter.

Action: Continue to gain mastery over the Skype platform and ensure recording is taking place throughout meeting.

Area for Improvement 2: The recorded presentation suggested that virtual attendees were only to see the first slide of each presentation.

Action: Determine if the Skype platform prevents virtual attendees from seeing all of a presenter's slides and work to manage this constraint.

APPENDIX A: ENGAGEMENT PARTICIPANTS

Last Name	First Name	Email	Affiliation
<i>Attended in Person</i>			
Abruzzese	Anthony	abruzzes@bu.edu	Boston University - MA
Anger	Cynthia	cyanger@post.edu	Post University - CT
Arsenault	Joseph	jarsenault3@ccri.edu	Community College of Rhode Island - RI
Backstrom	Engrid	ebackstr@endicott.edu	Endicott College - MA
Barber	David	dbarber@mit.edu	Massachusetts Institute of Technology - MA
Bersin	Jeremy	bersin@mit.edu	Massachusetts Institute of Technology - MA
Comiskey	John	jcomiske@monmouth.edu	Monmouth University - NJ
Damelio	Teresa	tdamelio@glatfelters.com	Glatfelters Insurance - PA
Fioravanti	Emil	efioravanti@umassd.edu	University of Massachusetts Dartmouth - MA
Gruber	Craig	c.gruber@northeastern.edu	Northeastern University- MA
Jannetty	David	djannetty@post.edu	Post University - CT
Kevorkian	June	jkevorkian@boston-consortium.org	The Boston Consortium - MA
Lieber	Marc	mliieber@maritime.edu	Massachusetts Maritime Academy - MA
Mazmanian	Brian	brian_mazmanian@harvard.edu	Harvard University - MA
Moses	David	dpmoses@mit.edu	Massachusetts Institute of Technology - MA
Nettleship	Chuck	cnettl@norwich.edu	Norwich University - VT
Perry	Raymond	rjperry6704@hotmail.com	Massachusetts Maritime Academy - MA
Pirelli	Nick	npirelli@stoughton-ma.gov	Town of Stoughton - MA
Ramsay	James	james.ramsay@unh.edu	University of New Hampshire – NH
Recca	Steve	sprecca@nps.edu	Naval Postgraduate School – UAPI – CO/CA
Richards	Maryanne	mrichards@maritime.edu	Massachusetts Maritime Academy - MA
Rubin	Fay	fay.rubin@unh.edu	University of New Hampshire – NH
Sandford	Wayne	wsandford@newhaven.edu	Norwich University - VT
Savo	Pete	psavo@dean.edu	Dean College - MA
Stewart	John	john.stewart@fema.dhs.gov	FEMA Region I - MA
Vincent	Donald	donald.vincent@fema.dhs.gov	FEMA Region I - MA
Walsh	Wendy	Wendy.walsh@fema.dhs.gov	FEMA NTES/Higher Education Program - MD
<i>Attended Virtually</i>			
Damelio	Teresa	tdamelio@glatfelters.com	Glatfelters Insurance - PA
Green	Danielle	danielle.green@associates.fema.dhs.gov	FEMA NTES/Higher Education Program - MD
McKee	Bob	JRMckee@bu.edu	Boston University - MA
Patenaude	Blythe	pjoybaker@aol.com	International Network of Women in EM
Smith	Bernice	bernice.smith@fema.dhs.gov	FEMA
<i>Sent Regrets</i>			
Awotona	Adenrele	adenrele.awotona@umb.edu	University of Massachusetts Boston - MA

APPENDIX B: ENGAGEMENT BROCHURE

Emergency Management/Homeland Security Higher Education Regional Academic Collaborative Region I

August 29, 2017 -10:00 p.m. - 2:30 p.m.

Dean College - 89 West Central Street, Franklin, MA. 02036

Virtual Participant Information will be provided prior to the event

Purpose: To build awareness, capture successful regional practices of collaboration with faculty, students and researchers working with emergency management practitioners as well as to identify untapped opportunities.

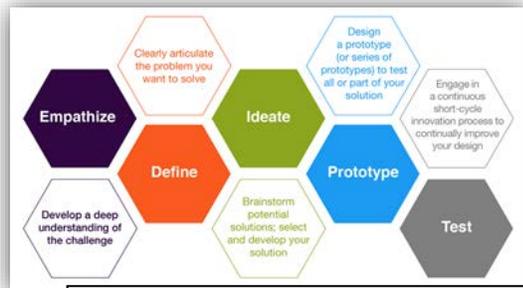
Desired outcome: To support regional community connection and collaboration as well as create a dynamic regional specific guidebook to identify academic and broader community resources, capabilities and expertise to support on-going regional academic and practitioner partnership.

Agenda:

10:00–10:30- Welcome & Introductions

10:30–11:30- Successful regional practices to be briefed in 5-7 mins with a couple minutes for questions:

- Peer to Peer/ NSA Cyber Center of Excellence- Phil Sussman- Norwich University
- Practitioner Collaboration- Conferences to Internships- Joe Arsenault- Rhode Island Community College
- Successful Student Internship Programs- Wayne Sandfords- University of New Haven & MaryAnne Richards, Massachusetts Maritime
- Practitioners as Adjuncts- Recruitment & Retention- Pete Savo- Dean College
- Developing Practitioners to Teach- June Kavorkian
- MIT Urban Risk Lab- David Moses
- Cooperating Technical Partners Program Inquiry- Fay Rubin
- Center for Rebuilding Sustainable Communities after Disasters- Adenrele Awotona



<http://citl.illinois.edu/paradigms/design-thinking>

11:30–12:30- A discussion of stakeholders in the region. Who cares about academic and practitioner collaboration? Are there challenges that these group face? What is possible in this collaboration?

12:30–1:30- Small group dialogues to develop idea pathways to practice- (Over lunch in the Cafeteria)

1:30–2:30- Small group sharing with the whole group, next steps, wrap up & gratitude

Individuals requiring accommodations, including sign language interpreters, Communication Access Real-time Translation (CART) and other reasonable accommodations should contact Kate McCarthy-Barnett, Regional Disability Integration Specialist at 617-816-6351 or kate.mccarthybarnett@fema.dhs.gov at least 7 to 10 business days prior to date of event.