

**Community Resilience Panel:  
Data, Metrics, & Tools (DMT) Standing Committee Meeting**

**MEETING DATE:** Friday, January 27, 2017  
**TIME:** 12:00 – 2:00 PM EST  
**ISSUE DATE:** March 26, 2017

**ATTENDEES:**

<b>Attendee</b>	<b>Affiliation</b>
Megan Clifford [Chair]	Argonne National Laboratory
Paolo Bocchini [Vice-Chair]	Lehigh University
Ting Lin [Secretary]	Marquette University
Aaron Marks	Dynamis, Inc.
Andrea Higdon	University of Kentucky
Brendan Doyle	EPA
Ellie Graeden	Talus Analytics
Floyd DesChamps	The Desner Group, LLC
Frank Lavelle	ARA
Jay Raskin	Jay Raskin Architect
Jerry Brashear	The Brashear Group LLC and National Institute of Building Sciences
Keely Maxwell	EPA
Ken Harrison	NIST
Liesel Ritchie	NIST Fellow
Mat Heyman	Impresa Management Solution
Molly O'Donnell	Boulder County Collaborative
Richard (Dick) Wright	American Society of Civil Engineers
Wenjuan Sun	Lehigh University

**DISTRIBUTION:** Attendees and Data, Metrics, & Tools Standing Committee  
**NOTES BY:** Ting Lin, Marquette University

**1. Welcome**

Megan Clifford (Chair) called the meeting to order and thanked attendees for participating. Megan thanked the committee for a productive December meeting and provided an overview of agenda items for this meeting.

Regarding the question about the impact of the new administration on the Community Resilience Panel (CRP), there is no change in the foreseeable future. We will continue serving on and contributing to the Panel led by Jay Raskin as this is important work for the country.

## 2. Meeting Logistics

The DMT committee documents, including past meeting minutes (see “1. Meetings”) and member contributions (see “3. DMT Links & Documents”), are shared among members via Dropbox. The folder related to this meeting is “1. Meetings\h. 27Jan2017\_Telecon.”

Megan proposed a motion to approve the December 2, 2016 Meeting Minutes. The committee unanimously approved (see “2-DMT Committee Meeting Minutes 12-2-16\_DRAFT”).

Megan reviewed the January 27, 2017 Meeting Agenda and proposed a motion. The committee unanimously approved the agenda (see “1-DMT Committee Meeting Agenda\_1-27-17\_DRAFT”).

Megan reviewed the following document with the committee:

- Community Resilience Panel Coordinating Committee (CRPCC) meeting minute (see CRPCC Meeting Minutes at [https://crpanel.nist.gov/?page\\_id=935](https://crpanel.nist.gov/?page_id=935) with the corresponding update, including continued cross-collaboration, in Section 3 below);
- DMT committee roles and responsibilities document (see “3-DRAFT DMT Committee Roles and Responsibilities for review\_1-27-17” with corresponding committee discussion in Section 4 below);
- Resilience Knowledge Base (RKB) Taxonomy (see “4-RKB Submittal CRPG 1-9-17” with corresponding committee discussion in Section 5 below); and
- Proposed plan for Miami meeting on March 9<sup>th</sup> to 10<sup>th</sup>, 2017 (see CRP Meeting Agenda “5-March Meeting Schedule, 1-23-17” and DMT Meeting Agenda “6-DMT Committee Meeting Agenda 3-9-17\_DRAFT” with corresponding committee discussion in Section 6 below).

## 3. Updates on CRPCC Meetings and DMT Committee Members Serving on Other Committees

**CRPCC Updates - Megan:** The Panel website has migrated to <https://crpanel.nist.gov/>. NIST is still evaluating project coordination software. We will use Dropbox until project software is ready to migrate materials. For now, we primarily use email for communication to ensure document access.

Ronda Mosley led a short survey effort for local communities. This effort is currently undergoing vetting by NIST. Megan thanked Ronda and the CRPCC for highlighting community needs from our last DMT in-person meeting in Colorado, and for the recent community survey that will help inform our DMT work.

The CRPCC voted to approve the NIST Guide as the first **RKB** document.

In the December 2016 DMT meeting, the DMT Committee unanimously approved DMT Working Group C’s recommendation paper entitled “Recommendation Paper: Including Portfolio Management Practices into NIST Guide and RKB” led by Leanne Aaby with contributions from Jerry Brashear, for CRPCC review. Leanne presented this recommendation paper in the January 2017 CRPCC meeting ([https://crpanel.nist.gov/?page\\_id=935](https://crpanel.nist.gov/?page_id=935)). The work was well received by the CRPCC and demonstrated our role to fill a resilience gap. The NIST Fellows followed up with Megan to discuss the DMT recommendation paper and the NIST Economic Decision Guide. The CRPCC consists of leadership from

each committee and representatives from federal agencies. This recommendation paper serves as a great model that DMT could use as a template.

Megan summarized updates from the CRP committees:

- The Buildings and Facilities Committee is applying the NIST Guide Steps 1-6 for different hazards.
- The new Communication Committee Chair, Kathryn Condello, is setting up goals for communication to stakeholders.
- Megan is sharing the DMT Committee Roles and Responsibilities document with the new Social and Economic Committee Chair, John Plodinec.
- The Transportation Committee is working closely with the Transportation Research Board in the National Academies.
- The Water and Wastewater Committee is moving quickly with a large number of documents collected as a committee to review with their own taxonomy.

**Committee Discussion:** In response to Floyd DesChamps's question of whether Ronda's survey went through local communities and relevant associations, Megan and Jay mentioned the CRP's effort to contact communities at various levels. Jerry Brashear brought up the importance of understanding infrastructure needs in local communities. For instance, in his recent survey in the water sector on how to do risk in asset management, he found that sometimes the survey may not be directed towards the right people. People who run the systems in real time tend to know risk and reliability best. There could be missing information via surveys. We should make a greater effort to reach out to individuals. His findings from his recent project highlighted the importance of face-to-face communication.

Megan indicated that Jerry brought up good points to bring gaps and needs to the table, which could also be relevant for the RKB. Our in-person meeting in Colorado gave us an opportunity to understand Molly O'Donnell's experience implementing the NIST Guide. This topic is worthy of further discussions at the committee and CRPCC levels: we need to talk to community users – via meetings or calls – regarding their needs and challenges, and use them as a resource to review documents.

Mat Heyman has contacted associations and knows relevant documents. He reached out to Steve Cauffman (NIST) and Terri McAllister (NIST) to ensure the Panel is informed about real life community needs and the level to which they can handle information. Megan thanked Mat for his effort and applauded DMT committee member Jeff Rubin's vitally important contribution to make sure we connect the dots.

**Action Items:** Megan suggested DMT committee members contact Ronda or Jay regarding ideas for survey distributions. Mat will reach out to Ronda directly. Mat will contribute the sustainability survey document to DMT (created during the meeting, see “3. DMT Links & Documents\Submitted documents\2015 Sustainability Survey Report Final”). Jerry, Leanne, and Megan will continue discussions with the NIST Fellows on the DMT recommendation paper.

**Cross-Collaboration:** DMT members serving dual roles on other committees provide the full committee additional context for Panel activities.

- Paolo is a DMT representative on the Transportation Committee, which had no recent updates.
- Liesel Ritchie is a NIST Fellow from the Social and Economic (S&E) Committee interested in cross-collaboration with the DMT. She commented that the DMT structure and proposals have been helpful to the S&E Committee in developing more concrete and impactful proposals, e.g., for setting up S&E Miami agenda, especially in areas where DMT and S&E overlap. Liesel thanked the DMT for sharing with S&E.

Megan noted that DMT went through extensive discussions over the last year, and the recent document on roles and responsibilities helped guide the most effective use of committee members' limited time.

- DMT representatives Keely Maxwell and Jeff Rubin attended recent S&E meetings.
- Ting attended the Buildings and Facilities (B&F) Committee's meetings: B&F is sharing the RKB taxonomy with potential B&F-specific modifications. B&F Vice-Chair Rachel Minnery is the B&F representative in the RKB; B&F Chair Don Scott plans to submit an abstract for the American Society for Testing and Materials (ASTM) conference on behalf of hazard scenario teams. Given consensus across committees to contribute to the RKB, Megan is delighted to hear that B&F is already pursuing this and would be interested to see B&F product.

#### 4. Review and Discussion of Updated DMT Committee's Roles and Responsibilities

Megan shared the revised version of DMT Committee's Roles and Responsibilities based on feedback from our last committee call. The key roles of the committee remain the same: reviewer and proposer. In the reviewer role, Megan further distinguished *initiated* review (e.g., of documents already identified by DMT committee members in our shared Dropbox) vs. *requested* review (e.g., by Brenda Doyle from EPA). Since everyone believes that review should not be just for NIST, Megan changed the original reference to "NIST" to include "NIST and other agencies as well as non-profit documents" for potential recommendation and inclusion in the RKB. There is no change to the proposer role. An example of this role is Group C's recommendation paper that could be used as a template to identify gaps. Megan encouraged Jerry and Mat to continue contribution based on needs identified from their projects. There are no changes in the introduction and conclusions.

Ken Harrison (NIST) commented that DMT has a good process to address Panel needs. He is working on tool development and interested in the capabilities of different tools, with an eye towards modeling needs. He hopes to contribute to the DMT effort. Frank Lavelle would like to see a distinction between *published materials* and *materials under development*. Megan agreed with the proposed distinction and added that DMT will review against a set of established criteria applying taxonomy. She provided an example of requested DMT review from EPA, to understand what is actually requested and provide feedback to authors.

Frank asked about Megan's thoughts on how to prioritize review, and whether the review priority would be "first in first out." Megan responded that she discussed prioritization with Ting and Paolo. We are currently not sure about the demand – whether the demand would be one document a day or a month, and what would start coming to DMT. Frank proposed allowing the Chair to determine priority, to maintain balance. For example, if one organization requests that fifteen documents be reviewed, then DMT may not be able to fulfill that request. It may be better to rotate responsibility for review across different organizations if the level of effort becomes a challenge. Megan suggested the following modification "priority and frequency of review will be at the discretion of the committee leadership," which Frank echoed.

In response to Liesel's inquiry regarding whether the criteria include whether the materials are already published, Megan mentioned that the Energy Committee established criteria regarding document source and whether it has been peer-reviewed. We do not want to turn into peer reviewers in areas for which we are not qualified.

Regarding proposer responsibilities, Megan summarized how Ting, Paolo, and Megan broke DMT into working groups A, B, and C to identify what would be most useful for NIST Guide Steps 1-6. Group C, with contributions from Leanne, Jerry, Frank, and Megan, commented on the recommendation paper drafted by Leanne and share with the DMT committee to vote to move forward to the CRPCC. Megan encouraged committee members to continue identifying gaps to put on paper, even if it is a short one-pager, to make sure the DMT committee can review and discuss them to help shape some of the actions by Panel sponsors moving forward. Megan proposed adding an appendix to include a template/flowchart of the recommendation paper, which Paolo thought would be a good idea and Jerry agreed wholeheartedly.

Regarding timeline, Megan proposed DMT focus on initiated review and proposer roles in FY2017. Frank suggested that DMT start with initiated review before the proposer role. Paolo mentioned that DMT already has many documents contributed by committee members, and Megan considered a priority list as part of the Miami agenda.

Jerry brought up the question of whether DMT will be in a position to review or comment on documents generated by NIST or NIST contractors. Megan hopes we will be able to provide input. Jerry was concerned about the recent release of the NIST Economic Decision Guide (short brochure posted online), and thought DMT review prior to NIST document release could be one of the biggest DMT Committee contributions.

**Action Items:** This Roles and Responsibilities document is open to committee feedback, via email or tracked changes. Megan will incorporate three changes based on the DMT committee's suggestions and share the next revised version with the committee. Megan will also take Jerry's comments back to Steve Cauffman (NIST) to make sure that we are part of the process.

## 5. Review and Discussion of RKB Taxonomy

Megan invited Jay to present the RKB taxonomy spreadsheet, which was shared first in the CRPCC and now with the DMT committee. Jay mentioned that the RKB taxonomy was presented at the first Panel meeting in Gaithersburg, MD by the National Security Council. Josh Barnes led this effort at the federal level. The RKB taxonomy was adapted by Jesse Keenan to identify resources and elements for the RKB and its future website. The current RKB taxonomy, reviewed by Jesse Keenan and Steve Cauffman, includes elements such as author, agency, title, date, funding, and a 100-word description. It is work in progress, with room to add categories based on committee submissions including DMT's. DMT's help in setting up criteria is still very important.

**Committee Discussion:** Regarding how the RKB taxonomy will be used, Jay mentioned that the RKB taxonomy will be completed as part of any document submission. Jerry suggested making the RKB searchable, while Jay responded that this is currently on hold since there is not enough information about the actual structure of web page yet. Jerry pointed out that as practitioners, it will be enormously valuable to access the needed documents in an efficient way. Paolo pointed out that some submissions do not require as many entries. Jay responded that there could be committee decisions on how much detail to include regarding a particular document, while the Panel tries to make sure that different categories are covered. In the future, there can be updates in categories to fill in. Jerry suggested a dropdown menu of

choices to make access more user friendly. Jay agreed. Megan thanked Jay for his presentation and encouraged committee members to contact Jay with more feedback.

## 6. Proposed Plan for Miami Meeting

Committee members should have received emails from the Panel Administrator regarding the upcoming Miami meeting, including registration and agenda. Committee participation and feedback is important.

Prior to this committee teleconference, Megan had a call with Paolo and Ting to discuss what would be good use of committee time in Miami. She believes we should have a test drive of our clarified DMT reviewer role and responsibilities. Committee members can review a small set of documents to apply RKB taxonomy and Energy Committee evaluation criteria.

Ellie Graeden suggested choosing two to three documents to read in advance and complete the taxonomy before attending the Miami meeting. We can select one document and hold discussions regarding how to use the taxonomy in Miami. Megan agreed that this could encourage committee participation as remote participants can still be engaged. Paolo suggested starting with only one document, which was initially seconded by Ken. Megan brought up prioritization. Prior to this committee teleconference, Paolo contacted Jeff Rubin, a user on the ground and a main DMT contributor who has identified multiple critical resources. Jeff helped select five priority documents (see folder 3. *DMT Links & Documents\Submitted documents\Priorities for Jeff*), among his submissions, for the DMT committee to review and discuss in Miami. Frank suggested adding review of a computer-based tool to test the RKB taxonomy in a different way. Megan mentioned that the DMT helped review a tool developed by a NIST fellow in the past. Mat suggested reviewing three resources instead of one, potentially including a technical paper, a general document, and a tool. The committee could break out into groups, each reviewing one resource, and share results with the committee. Mat's proposal was seconded by Frank, Brendan, Paolo, and Ellie. Megan then led the committee through Jeff's five priority documents, and the committee selected three. One selected document (see *EPA-resilience\_tools\_inventory\_0216*) provided the background and documentation for the EPA tool, EnviroAtlas, for which Brendan requested DMT input. Brendan planned to invite colleague Laura Jackson to present this tool, which integrates well with Jeff and Jay Wilson's work in Cascadia. In response to Floyd's question regarding whether this is a public tool, Brendan stated that EnviroAtlas was published via EPA web (<https://www.epa.gov/enviroatlas>) last year, with current refinement on dashboard to be more customer/practitioner-driven. Megan suggested a webinar with EPA to start tool presentation for reviewers. Ken and Mat agreed that the selected tool would be a good example for requested review. Megan proposed the resilience measures from the National Research Council (see *NRC-community\_resilience\_framework\_wkshop\_report\_0115*) as a document for initiated review, which Paolo, Frank, Ting, and several others seconded. Mat pointed out the importance of decision making and implementation. Molly O'Donnell suggested adding a local example for review, which led to the selection of local community implementation from Los Angeles County (see *DMPHP-LACo\_disaster\_resilience\_project\_0816*). Mat commented that this selected list represents a good mix.

**Action Items:** The fourth Panel in-person meeting is in Miami on March 9-10, 2017 – please register at [https://crpanel.nist.gov/?page\\_id=5067](https://crpanel.nist.gov/?page_id=5067).

As a result of this discussion, the DMT committee identified two priority documents and one tool to perform initiated and requested reviews, applying RKB Taxonomy (presented in this meeting) and Energy Committee Evaluation Criteria (discussed in our last meeting). Each committee member is responsible for reviewing one document or tool prior to the in-person meeting in Miami. The committee will convene and discuss further in Miami. Committee members should email Ting to ensure Dropbox or document access.

Megan, Paolo, and Ting will follow up with the DMT committee regarding: (1) How to sign-up for document review; (2) How to select a document to review; and (3) How to run through criteria and apply taxonomy. Ting will check with the CRPCC regarding conference line availability to encourage more DMT participation for committee members unable to attend in person in Miami.

## **7. New Business**

Megan thanked the committee for their active participation. She looks forward to our next in-person committee meeting in Miami on March 9-10, 2017.