Analytic Support for FEMA Disaster Operations: Training Review and Way Forward

Final

28 May 2011
Homeland Security Studies and Analysis Institute

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The Institute’s research is undertaken by mutual consent with DHS and is organized as a set of discrete tasks. This report presents the results of research and analysis conducted under

Task 10-17.14, Training Review and Way Forward

The results presented in this report do not necessarily reflect official DHS opinion or policy.
ANALYTIC SUPPORT FOR FEMA DISASTER OPERATIONS: TRAINING REVIEW AND WAY FORWARD

Final

28 May 2011

Prepared for the Federal Emergency Management Agency Response Directorate

Office of Training, Exercise, and Doctrine
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**INTRODUCTION**

The Federal Emergency Management Agency’s (FEMA) Response Directorate oversees the delivery of federal disaster-response services and assistance to local and state governments and individuals affected by disasters. The Response Directorate tasked the Homeland Security Studies and Analysis Institute (the Institute) to provide independent, objective, and technical analyses on key issues facing the directorate’s senior leadership. The Response Directorate committed to strengthening skill sets across the workforce in support of FEMA’s core mission. The Response Directorate’s Training, Exercise, and Doctrine Office (TED) spearheads this effort.

This report reviews the Institute’s efforts in support of FEMA training during the past year, to provide context for FEMA staff that may be tasked to emulate the Institute’s pilot efforts in future stages of FEMA Qualification System (FQS) design. The report also provides a brief summary of ongoing and recommended initiatives and their impact on TED’s capacity to support the Response Directorate into the future.

**BACKGROUND**

This review was conducted under the Institute's Core research program. In accordance with the Department’s Homeland Security Studies and Analysis Institute contract, five percent of all task-order funds are allocated to Core research, which addresses emergent, crosscutting, and/or integrative issues of interest to the entire Department. In this case, funds were allocated from Task 10-17, Analytic Support to the FEMA Disaster Operations Directorate.

Task 10-17 is a follow-on effort to an earlier task, Task 09-39, which began in September 2009, following several months during which an Institute analyst served on-site in the FEMA Response Directorate to assist with special projects. The focus of Task 09-39 was threefold: initiate a doctrine development program and begin creating doctrine for disaster response operations; integrate that doctrine into current and projected FEMA training programs; and conduct studies and analyses related to disaster operations. The sponsor employed 09-39 so widely that project resources were eventually exhausted. Sustained demand led to the creation of Task 10-17.

During the early stages of Task 10-17, Homeland Security Studies and Analysis Institute analysts and subject matter experts developed FEMA’s first incident management and support keystone doctrine, which dramatically changed how FEMA supports and manages incidents. The doctrine, now approved by FEMA, mandates compliance with the principles of the National Incident Management System (NIMS) and requires the use of the Incident Command System (ICS). The doctrine also significantly affects FEMA’s incident management and support organizations and responder qualifications and training, and led to the development of the FEMA Qualification System (FQS.)

The Institute’s analysis under Task 10-17—which involved training, doctrine, and analysis—produced recommendations that FEMA could use to implement changes in policy, programs, and operations. The

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efforts of the Institute’s training team in particular provided the FEMA Response Directorate with a greater capacity to do the following:

- Comply with NIMS and ICS requirements at the incident management level
- Identify gaps in existing incident management training
- Employ performance-based criteria for qualifying disaster workforce positions
- Create pathways for progression from entry level to senior levels in over 300 identified incident management positions
- Quantify progressive training requirements for each incident management position
- Recommend courses of action to most efficiently and effectively incorporate new doctrine into training
- Identify challenges arising from the inclusion of new doctrine into existing training
- Use incident management doctrine and disaster workforce competencies, activities, and tasks to develop performance-based objectives for courses
- Achieve efficiencies in formal training through curriculum mapping
- Create more coherent plans of instruction to train more effectively and efficiently

**Task Scope and Approach**

The Training, Exercise, and Doctrine Office is composed of three units, each responsible for one of the functions in the office’s eponymous name. By design, the Training Unit improves the readiness of the FEMA’s disaster workforce through training and professional development and supports FEMA’s credentialing goals. The Doctrine Unit conducts comprehensive reviews and revisions of the Response Directorate’s guiding documents, identifies voids in those documents, and creates new documents to guide FEMA response operations at the incident, regional, and national levels. The Exercise Unit contributes to the development and execution of operational exercises by providing response-oriented consultation, advisement, and program-expert knowledge. That unit also coordinates with other agencies to provide critical participation in national-level response exercise.2

Ideally, TED would author doctrine, design organizational constructs, create training, and conduct exercises—all in sequence. Subsequent revision cycles would also begin with doctrine. The realities of fiscal year 2010, however, forced the Response Directorate to move forward with all four of these efforts simultaneously. The Training Unit bore the heaviest burden by creating systems to train and qualify incident management personnel while doctrine was still evolving.

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2 “Response Directorate 101” presentation.
To support a “system of systems” approach (figure 1)—to enhance TED’s ability to support the FEMA disaster workforce—the Institute designed the 10-17 Task Execution Plan (TEP). Within an overarching model for training analysis (figure 2) that the Institute developed, the Institute also developed methodologies for each of three key training activities for application during the spring of 2010, as follows:

- **Analysis of doctrine for course design**: Compare existing FEMA Disaster Response course material to new doctrine. Using the Analyze-Design-Deliver-Implement-Evaluate (ADDIE) model of instructional design (figure 3), identify gaps and conceptual conflicts between existing courses and new doctrine. Apply the results to course design and development of specific course materials.

- **Curriculum description**: Determine an appropriate structure for the FEMA Disaster Response curriculum through analysis of response doctrine and incident management performance requirements.

- **Career professional development planning**: Survey prospective sources of career-track professional development for full-time, career-track employees within FEMA Disaster Response. Identify points of integration between career professional development and the FEMA Disaster Response curriculum.

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The following review of training efforts speaks to the aforementioned burden that the Training Unit bore—and carried successfully, to certain accomplishments—with the Response Directorate moving forward in 2010 with all TED activities simultaneously.

**TRAINING REVIEW**

The original vision for Task 10-17 placed heavy emphasis on course and curriculum analysis. However, the effort developed along different paths, due in part to insights gained during the course analysis that had begun under Task 09-39. As a result, in August 2010 the Response Directorate redirected the Task 10-17 training efforts to focus on developing performance standards for all incident management personnel.

As the Institute’s training team initiated the qualification system analysis, the doctrine team was already far into its task of developing draft incident management doctrine. Much of the doctrine’s impact on the qualification system would result from doctrine’s compliance with NIMS, especially in the use of ICS. Institute analysts and subject matter experts relied heavily on their knowledge of doctrine to guide progress in focus groups analyzing the qualification system.

To mitigate the potential for “stovepiped” training, exercise, and doctrinal efforts, the Institute encouraged its analysts to participate in multiple Task 10-17 efforts. The training task, for example, has both benefitted from and contributed to other critical TED efforts. During the spring of 2010, the training team participated in the doctrine task to capture insights relevant to the training work. Training team

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4 The Institute originally developed this model when authoring the *Five-Year NIMS Training Plan*. 
analysts used knowledge gained from that task to ensure that deliverables for qualification system analysis were compliant with the new incident management doctrine. More recently, Institute analysts used the results of analyses of the qualification system and the curriculum to inform the Response Directorate’s renewed focus on training.

As Task 10-17 reached the conclusion of its period of performance in April 2011, the training team began participating in another Institute task in support of TED. In this case, training team analysts used knowledge gained in the qualification system analysis to assist the exercise team in evaluating FEMA’s no-notice Thunderbolt exercises. Additionally, during May, training team members supported the upcoming National Level Exercise 2011.

To enable the Response Directorate to better prepare for critical decisions regarding training—future FQS efforts in particular – the following summary describes the training team’s three efforts under Task 10-17: the course and curriculum analysis, the qualification system analysis, and the document production that supported the latter analysis.

Course and Curriculum Analysis

Course Analysis/Evaluation

In March 2010, the Response Directorate tasked the Training Unit to identify the impact of new doctrine on training, and to prepare directorate personnel to execute new doctrine. The Task 10-17 course analysis assisted the Training Unit in determining the effort required to bring courses into compliance with doctrine. The Training Unit used these findings to inform the design of the new course on doctrine.

The training team worked in two phases to meet the Training Unit’s goals. First, the training team analyzed 20 Response Directorate courses to ascertain their alignment to new doctrine. During this phase, the training team also integrated activities with the doctrine team by facilitating three doctrine conferences aimed at developing the manuals for incident management and support. Through those conferences, the training team also aimed to gain further insight into the scope of the upcoming curriculum and qualification system analyses.

For the second phase, Institute analysts conducted, from April through July 2010, formative evaluations of four new doctrinally related courses:

- L 774, Response Operations Overview
- L 779, Orientation to Disaster Response Operations
- L 825, Incident Action Planning

Formative evaluations shape the delivery of courses, while summative evaluations focus on the subsequent impact of course delivery.

The Emergency Management Institute designates courses delivered at their institute with an “E,” and courses taught at other classroom settings with an “L.”
The training team delivered the Preliminary Course Materials and Resource Analysis to the Training Unit, recommending modifications to the curriculum management system and enhancements to the plans of instruction. The team also prepared a template for the plans of instruction, and a job aid for course designers. The team’s summative analytic findings of the course analysis included the following:

- Very little existing course content contradicted new keystone doctrine. Although keystone doctrine was authored after the design of the operations courses, the absence of “how” and “why” content in operations courses indicates room for improvement in course and curriculum design.

- All course units should refer to applicable doctrine in course materials, readings, and reference lists (org charts updated, specific language of tenets/principles used where applicable, etc.).

- Some courses require prerequisite mastery of doctrinal content. Doctrinal content should appear at the earliest logical point in training.

- Links between terminal learning objectives (expressed in some plans of instruction only as a course purpose) and enabling objectives (sometimes referred to as unit objectives) were not uniformly developed in all courses.

- Many courses did not include tests to measure student learning as described in the Emergency Management Institute’s (EMI) Curriculum Management System Guidebook.

The Institute’s training team recommended courses of action for prioritized modifications to the 20 disaster response courses, based on the level of effort required—that is, the Training Unit’s ability to achieve maximum results with limited resources (table 1). By pairing four courses of action for preparing instructors and students with four courses of actions for modifying the curriculum, the Institute provided the sponsor with the flexibility of 16 options to meet their requirements for importing new doctrine to

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7 Homeland Security Studies and Analysis Institute, “10-17 Course Analysis for New Doctrine” (presentation, March 10, 2010).

existing courses. Institute analysts then recommended one course of action for each of the 20 courses analyzed.

<table>
<thead>
<tr>
<th>Effectiveness of Delivery</th>
<th>Course of Action for Preparation of Instructors and Participants</th>
<th>Course of Action for the Training Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest</td>
<td>1 Classroom learning</td>
<td>A Modify entire course</td>
</tr>
<tr>
<td></td>
<td>2 Distance learning</td>
<td>B Modify doctrine-related content and context</td>
</tr>
<tr>
<td></td>
<td>3 Learning via read-ahead</td>
<td>C Modify doctrine-related context</td>
</tr>
<tr>
<td>Lowest</td>
<td>4 No prior doctrine instruction</td>
<td>D No modification to existing course</td>
</tr>
</tbody>
</table>

Table 1. Courses of Action for Curriculum Modification

Curriculum Analysis

To aid the course analysis effort, the Institute’s training team catalogued terminal and enabling learning objectives from each of the 20 operations courses, and organized them under broad categories of leadership, professional, and technical objectives. This allowed the Institute to look for evidence of doctrinal content along a broad range of topics and from entry level through senior positions in the disaster workforce. Such an effort would provide the Training Unit with the ability to answer many questions, including the following:

- What courses are needed to support readiness qualifications?
- How should those courses fit into the curriculum?
- How are competencies and terminal learning objectives related?
- What are the impediments to a qualified, ready staff?
- Who are the coaches and evaluators? How will they measure performance equitably?
- How will performance be tracked to inform the curriculum?
- How will performance be tracked to inform the qualification system?

Although the existing courses proved to be almost totally devoid of doctrinal topics, the data revealed the following possibilities for future curricular improvement:

- Courses appeared to leave gaps in some topic areas and overlaps in others
- Courses presented common material inconsistently, suggesting modular design alternatives for consistency and economy of effort

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9 “10-17 Training Curriculum Framework.”
• Courses appeared designed to answer training needs, but did not reflect the need to consider the impact of an agency’s policy or a strategic leader’s guidance

• Courses were not organized into a coherent framework

Training team analysts brought insights from the course analysis to the qualification system analysis when they attended the latter’s meetings and focus groups during May 2010. The training team conducted a training gap analysis on the position qualification sheets and Position Task Books (PTBs) produced in the focus groups. The analysis provided a summary of focus group conclusions and preliminary recommendations for the design and development of the Response Directorate curriculum and many of its courses.

**Recommendations**

• Use policy and doctrine to guide course and curriculum content.

• Provide doctrine training at the earliest possible stage.

• Base terminal learning objectives on FQS behaviors/activities.\(^{10}\)

• Link course terminal learning objectives to *enabling* learning objectives.

• Measure student learning.

• Employ curriculum frameworks to eliminate gaps and overlaps in courses, and achieve deliberate outcomes.

• Use the ADDIE model in course construction and review.

**Qualification System Analysis**

Between May 2010 and January 2011 the Institute facilitated 29 focus groups to complete cadre-specific FQS products for all incident management positions across 25 cadres.\(^{11}\) By the completion of the effort, Institute analysts had created position-specific products for 322 incident management positions (figure 4). This section describes the products of the FQS effort, the two phases of the process, and some of the challenges that Institute analysts and subject matter experts faced during the focus groups. Following that are recommendations for the upcoming FQS analytic efforts for the regional and national levels.

**Products**

During the focus groups, the cadres created organization charts, qualification progression flowcharts, position qualification sheets, and PTBs in compliance with ICS. These products formed the basis for progressive qualification at incident management positions through objective measurement of performance.

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\(^{10}\) *Terminal learning objectives* are those objectives to be completed by completing *enabling learning objectives*.

\(^{11}\) Some required a second session.
Training Review and Way Forward

5. Level of Effort

Mondays

Feb Mar

2010

5 12 19 26 3 10 17 24 31 7 14 21 28 5 12 19 26 2 9 16 23 30 6 13 20 27 4 11 18 25

Figures 4. Task 10-17 Training Workflow
Organization Charts

Organization charts depict the ICS-compliant positions of which each cadre is composed. Institute analysts created versions for Level I, II, and III disasters, to validate each cadre’s ability to expand and contract to meet demand. Although the organization charts were not deliverables for the qualification system analysis, they served as important facilitation tools.

Almost all cadres revised their structures for incident management. Following the completion of the last FQS focus group, the Institute provided the revised organization charts to the Doctrine Unit for use in the upcoming revision of the *Incident Management Handbook*.

Qualification Progression Flowchart

The system-wide flowchart provides paths for progression from entry level to increasingly senior level positions in the incident management organization. It provides a basis for professional development that did not exist prior to the FQS.

Position Qualification Sheets

Position qualification sheets identify required FQS experience and training for each position. Training focus groups analyzed existing training by creating a competency/training matrix for the cadre’s positions. In the matrix, the focus groups determined which competencies had foundations in existing formal training, which competencies required training that did not yet exist, and which competencies could be gained adequately through on-the-job training. The focus groups used the resulting information to produce training requirements in the position qualification sheets.

Position Task Books

The predecessor to the FQS employed a qualification scheme based on experience, knowledge, skills, and abilities. Personnel pursued qualification as *trainee*, *basic qualified*, *fully qualified*, and *expert* at each position. (Table 2 will show these as “BQ,” “FQ,” and “E.”) This system produced personnel whose level of qualification was difficult to track, and whose performance standards were not clearly expressed. Tables 2 and 3 are excerpts from the previous credentialing system for Federal Coordinating Officers (FCOs).
Table 2. Excerpt of FCO Credentialing Plan: Required Experience, 2010 (Produced by FEMA)

<table>
<thead>
<tr>
<th>FCO Experience</th>
<th>BQ</th>
<th>FQ</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Complete one deployment to a JFO at a Level III disaster as a Trainee FCO.</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Complete one deployment to a Level II disaster in a support role as a Trainee FCO.</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Complete FCO Orientation Course.</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Complete one of the professional contribution requirements for CEM accreditation.</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Work in one state emergency management office for three days.</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Participate in a Tier IV or Tier III National Exercise Program (NEP) exercise.</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Participate in one bi-annual FCO Operations Review.</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Knowledge, Skills, and Abilities for Credentialing of FCOs, 2010 (Produced by FEMA)

<table>
<thead>
<tr>
<th>FCO-Specific KSAs</th>
<th>T</th>
<th>BQ</th>
<th>FQ</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ability to analyze information, make quick and appropriate decisions, and resolve problems</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>2. Ability to apply lessons learned to mentor other FCOs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. Ability to communicate clearly and concisely</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>4. Ability to communicate with mass media outlets in order to relate disaster information</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5. Ability to facilitate and coordinate to achieve results</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>6. Ability to identify issues and recommend policy and organizational changes to the Agency</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. Ability to identify unique customer needs, tailor plans and strategies, and implement within agency policy</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>8. Ability to independently lead a complex multi-agency disaster response</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

The FQS Position Task Books are official records of the successful execution of tasks prescribed for each position. Each PTB contains tasks, many of which are illustrated by indicators. Tasks are organized under behaviors/activities.
Tasks—each of which must be signed by an evaluator—should:

- Be a logical and necessary unit of work.
- Be observable and measurable or produce an observable and measurable result.
- Have one action verb and one object.
- Be a specific act done for its own sake.
- Be independent of other actions.
- Have a specific beginning and ending.
- Occur over a short period of time.

Indicators—which exemplify situations for task execution—should:

- Be illustrative without forming comprehensive checklists.
- Help the evaluator know what to look for.
- Help define the evaluation of qualitative tasks.

Behaviors/activities (with corresponding Office of Personnel Management [OPM] competencies) serve as overarching topics for groups of tasks. The FQS focus groups employed the following considerations when authoring the behaviors/activities:

- Behaviors/activities should appear in a time sequence within the PTB.
- The range of competencies needs to be defined, with appropriate detail for the position. The following are two examples:
  
  - Specialist: more technical, less management
  - Group Supervisor: less technical, more leadership and management
- There should be vertical integration within a functional area.
  
  - Technical competencies and tasks progress appropriately along a path for qualification.
- Consider requirements for coordination within the cadre and with other cadres.

The behaviors/activities address the following three broad developmental areas:

- **Professional** – communicating and working to achieve the FEMA disaster response mission
- **Leadership** – leading and managing oneself and others
- **Technical** – Performing position-specific actions in a disaster response

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12 Focus groups originally organized groups of PTB tasks under descriptors called *competencies*. At the same time, the FEMA FQS working group—the entity that the focus groups worked under—opted to employ OPM’s competencies as organizing constructs. The Institute’s training team followed the Training Unit’s direction to rename the PTB competencies as behaviors/activities.
The application of these criteria resulted in vastly changed performance metrics. Table 4 represents an excerpt from 16 pages of performance standards for FCOs qualified to work at Level III incidents.

**Phase One: Pilot**

Originally intended for application only to the Operations Section, Planning Section, and Hazard Mitigation Branch, the pilot phase entailed conceptual planning for three cadre focus groups and the implementation of the FQS. This effort produced position-specific products for 47 positions and substantial recommendations for subsequent focus groups. The pilot focus-group effort resulted in the creation of system design principles – guidelines to be used during the following effort by Institute analysts and subject matter experts in resolving competing priorities and facilitating for the creation of FQS products (see “Analytic Challenges” page 14.)

<table>
<thead>
<tr>
<th>TASK</th>
<th>CODE</th>
<th>RECORD NUMBER</th>
<th>EVALUATOR INITIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>112. Conduct an initial appraisal of the types of assistance most urgently needed.</td>
<td>D-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>113. Develop a plan for managing the incident and establishing the JFO.</td>
<td>D-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>114. Accept the formal transfer of operational control of the incident.</td>
<td>D-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>115. Coordinate the finalization and execution of the FEMA-State/FEMA-Tribal agreement.</td>
<td>D-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>116. Plan and schedule the signing of the FEMA-State/FEMA-Tribal agreement.</td>
<td>D-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>117. Ensure the proper distribution of the FEMA-State/FEMA-Tribal agreement.</td>
<td>D-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>118. Draft an FCO executive summary.</td>
<td>D-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>119. Determine whether other Federal agencies are, or should be, operating under their own legislative authorities or under Stafford Act authorities.</td>
<td>D-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>120. Ensure that local citizens and public officials obtain the assistance for which they are qualified.</td>
<td>D-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- DRCs [Disaster Recovery Centers]</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Kickoff meetings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Applicant briefings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Community Relations</td>
<td></td>
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</tbody>
</table>

Table 4. FQS PTB Excerpt for FCO for Level III Incidents
Phase Two: Expanded Effort

Due to the complexity and dynamic challenges associated with the effort, FEMA tasked the Institute to facilitate the remaining 26 focus groups. This expanded the original effort—a new phase that lasted from July 2010 through January 2011. The new execution timeline necessitated the simultaneous execution of focus groups (figure 4), requiring a vast expansion of the Institute’s training team. Training team leadership and Institute subject matter experts conducted training for new teammates on NIMS, ICS, FEMA, keystone doctrine, and focus group processes in mid-September 2010.

Challenges

The FQS effort met a series of challenges head-on. Analytic challenges resulted from the increasing complexity and number of positions within the FQS. Participant challenges related to focus group population. Leadership challenges stemmed from the varying levels of participation in FQS focus groups by senior Response Directorate leaders. Procedural challenges grew from the need to preserve consistency in a growing population of Institute analysts assigned to the Task 10-17 training team.

Analytic Challenges

The pilot phase, as noted above, entailed three cadre hierarchies with 47 positions. The expanded effort encompassed 25 cadres and 322 positions in a single, integrated hierarchy. The vast increase in complexity created the potential for training bottlenecks and rippling changes between cadre positions. The following explains how the Institute handled those challenges.

Prevent Qualification Bottlenecks – Institute facilitation teams listened carefully to the inputs that the FEMA focus group participants provided. Facilitators ensured that cadre progression paths excluded bottlenecks that could threaten the Response Directorate’s ability to meet the demand for qualified personnel. Such bottlenecks could be caused by a requirement for nonexistent training, excessive requirements for prerequisite qualifications, or other systemic impediments to the maintenance of a population of qualified personnel.

Prevent the “Ripple Effect” – Institute staff recognized that one cadre’s FQS work often affected that of other cadres. Institute facilitators studied cadre relationships prior to each focus group, then tracked and moderated changes to any one FQS product that could affect other products. During focus group execution, facilitators remained alert not only for the need for dialogue between cadres, but also for challenges not anticipated at the outset of the FQS effort. At all times, Institute staff and subject matter experts adhered to the following system design principles:

- Base the discussion on performance:
  - Focus on the PTBs.
  - Focus on observable, measurable tasks.
  - Ensure that the required training supports the performance needs expressed in the PTBs.

- Establish consistency through the use of common professional tasks at each organizational level.

- Ensure an “entry level to FCO” progression for all possible positions.

- Ensure that the supervisor qualification requires broad experience in positions and the functional areas subordinate to those positions.
Ensure that this qualification mimics the Operation Section chief requirement of qualification in two programs.

- Minimize positions that are rarely developed.
- Leverage cadres, but break down cadre stovepipes.

**Participant Challenges**

The rich and varied experiences that the FEMA participants brought to the focus groups was an essential ingredient in the creation of viable FQS products. Those same experiences varied the group dynamics, which were complicated by the standard churn of personnel joining and leaving focus groups, and the need to prepare participants for their duties.

*Churn in Group Rosters* – Cadres were often unable to provide the sponsor—and the Institute—with an accurate participant roster for a given focus group, inhibiting the Institute’s ability to properly resource for that group. Additional participants often attended unannounced—in mid-process—requiring Institute staff to repeat much of the effort, to prepare the new participants to contribute to the effort.

*Preparing Participants* – Participants often arrived at the Institute with no awareness of or preparation for their duties. On occasion, participants lacked the requisite experience to contribute to the effort. Some of these individuals revealed that they had been sent for the training opportunity. Many focus group participants were unfamiliar with ICS principles and practices, which prompted Institute analysts and subject matter experts to devote additional resources to baseline ICS training for focus group participants.

**Leadership Challenges**

Because schedule constraints frequently forced the Institute to facilitate several focus groups concurrently (figure 4), senior FEMA leaders could not maintain during this extended-effort phase the presence that was possible during the pilot phase. In their absence, Institute subject matter experts informally represented FEMA leadership, leveraging both their credibility gained from prior contributions to FQS development and their experience as leaders in notable disaster response efforts.

As that informal representation of FEMA leadership illustrated, subject matter expert credibility proved critical. Many times, these experts countered the considerable skepticism with which many FEMA personnel regarded FQS, due to their negative experiences with previous credentialing efforts. Institute facilitators leveraged considerable experience with the FQS process and superior knowledge of ICS to guide participants who experienced doubt or confusion concerning their focus group’s tasks.

**Procedural Challenges**

The inclusion of the entire incident management community in this extended-effort phase required a more disciplined process to achieve the consistency of the pilot effort’s results, while still employing enough flexibility to accommodate the significant differences between the 25 cadres. To accommodate the expansion, the Institute did the following:

- Trained additional analysts and subject matter experts on NIMS, ICS, FEMA, keystone doctrine, and focus group processes
- Held daily meetings *after* the focus groups to discuss issues of process and consistency
- Dedicated resources to monitoring the consistent execution of concurrent focus groups
• Tracked cadre inputs to position titles and mnemonics
• Made continuous updates of presentation materials to incorporate lessons learned from previous focus groups
• Updated PTB “backbones” for future focus group use
• Tracked backbone changes and their impact on the work of past focus groups

Recommendations
The Institute recommends the following in the upcoming FQS analytic efforts for the regional and national levels:

• When considering sequenced or concurrent execution of focus groups, balance the analytic, participant, leadership, and procedural challenges.
• Allow for growth in analytic efforts. The FQS for the entire incident management community was projected to encompass fewer than 200 positions, but grew to 322 positions by the conclusion of the effort.
• Incorporate inputs at the first stage of design. Reorganizing FQS tasks under OPM competencies at a late stage of the focus group process caused Institute analysts to expend significant labor resources on rework.
• Selecting the right participants and stabilizing group rosters will ensure the most rapid progress and the best quality products. This will reduce “buy-in” costs during FQS implementation.
• Maximize participation by senior agency officials. This will contribute to participant buy-in and faster, more efficient focus group execution.
• Avoid bottlenecks. Progressive qualification schemes must balance the desire to establish high performance standards with the need to provide a supply of qualified personnel and trainees for each position.

Document Production
Realizing the need to capitalize on the insights of the greater incident management community, Institute analysts designed the qualification system analysis with the capacity to incorporate changes to the foundational FQS documents as focus groups progressed. Such a capacity depended on a deliberate effort to create and track changed documents for use in future focus groups, and to periodically update products from completed focus groups. Analysts also used the update process as a means for incorporating feedback from cadres regarding draft documents after the focus groups disbanded.

The process of producing updated, finished documents from draft cadre worksheets took place in three distinct phases: a post-focus group edit, a system-wide consistency analysis, and final formatting/production. Following a description of those phases are some recommendations about future FQS efforts.
Phase 1: Post-Focus Group Edits

Immediately following the conclusion of each focus group, the Institute began a technical edit of the cadre’s draft products, crosschecking the various documents for consistency in position names and mnemonic identifiers. The Institute delivered draft FQS products to the Training Unit, which routed them to each cadre for review. This review allowed cadre members the opportunity to verify the accuracy of products, and to conduct an additional spiral of product development. The Training Unit collected cadre edits and returned them to the Institute for inclusion in the final editions of the products. Although all cadres provided feedback, some did so with broad summaries instead of amended documents, and others did not respond for over four months—until deadlines for final inputs had passed.

Phase 2: System-Wide Consistency Analysis

The system-wide consistency analysis for all materials included a check for the consistent application of backbone behaviors/activities (horizontal consistency) and for the appropriate progression of technical behaviors/activities (vertical integration). The latter entailed a review to ensure that the technical competencies consisted of the proper position-specific skills, and that the competencies built along a qualification progression path. Uniform application of backbone competencies and tasks provided system-wide consistency across the incident management organization.

Evolution of the Backbones

Among the hallmarks of the Institute’s approach to the FQS work was the application of backbone templates across all PTBs. These backbones, which Institute subject matter experts developed, address the professional and leadership skills prescribed for multiple positions across the incident management organization.

The backbones resulted from the pilot phase, where Institute analysts and subject matter experts produced prototype PTBs for the Operations Section positions (table 5). Common tasks from these generic positions became the backbone for all Operations Section positions and eventually for all incident management positions.

Backbone behaviors/activities provide a critical integrating function (both vertical and horizontal) across all FEMA incident management positions. They assure that all FEMA responders can perform common professional tasks at each organizational level. They provide a common standard of performance for ICS processes, leadership/supervision, deployment, incident check-in, internal and external communications, safety, incident planning, transition, and demobilization requirements. Backbone behaviors/activities are especially critical during the implementation of new FEMA doctrine and the ICS.

The Institute used backbone behaviors/activities, tasks, and indicators as the starting point for all cadre focus groups after the Operations and Planning focus groups. Cadres provided input for technical behaviors/activities that related to the specific functional responsibilities of each position. Technical behaviors/activities transformed a generic specialist PTB, for example, into a cadre specialist with appropriate tasks.

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13 “Behaviors/activities” were called “competencies” during development.
Position Title
Specialist
Crew Leader
Manager (in Operations Section)
Manager (in other sections)
Task Force Leader
Group Supervisor
Unit Leader
Branch Director (in Operations Section)
Branch Director (in other sections)
Section Chief
Officer
Advisor
Lead Advisor

Table 5. Backbone PTBs

The intent of the backbone behaviors/activities remained the same throughout the FQS focus groups, but Institute analysts and subject matter experts strove constantly to improve the clarity and functionality of the PTBs. Using cadre feedback, the analysts and experts created a succession of nine different versions of the backbones in the focus groups (table 6).

Backbone Content in Position Qualification Sheets

As the PTB behaviors/activities evolved, training prerequisites evolved with them. Where backbone behaviors/activities standardized the performance requirements of common tasks, common training prerequisites formed backbone material for position qualification sheets. These training prerequisites addressed professional and leadership competencies that were common across all FEMA positions.

Updating PTBs with the Latest Backbones

Although the PTB update process was mechanically simple, news of the update raised concern among cadres whose members felt they had added important tasks and indicators to the backbones within their PTBs. The considerable effort expended by cadres during the focus groups instilled them with an investment in their products—and a resistance to edits. Therefore, the Institute undertook any changes to backbone competencies, tasks, and indicators for each cadre’s products with prudence and due consideration.

Updating previously produced PTBs with the “final” version of the backbones became a major focus during the second phase of document production. Beginning in November 2010 and continuing through the end of March 2011, the Institute intended to employ version seven as the final version of the backbones. Institute analysts developed “change guides” to detail the exact differences between the version five and seven backbones, version six and seven backbones, etc. These change guides detailed a systematic process to update the backbone PTBs.

14 Institute analysts and subject matter experts introduced the Lead Advisor position to manage span-of-control of advisors in the Equal Rights, Legal, and Alternative Dispute Resolution cadres. Institute analysts ensured consistency in supervisory responsibilities assigned to the Lead Advisor in all three cadres, but did not create a formal backbone for the position. A Lead Advisor backbone would make a logical addition to the backbones for future FQS efforts.
Some cadres, however, developed FQS products of great complexity. Post-focus group analysis revealed that the customized backbones presented no real advantage to those cadres, but did reduce the FQS’s horizontal consistency. To achieve training efficiencies and consistency in the qualification standards, the Training Unit directed PTB updates to remove most cadre-specific edits to backbone tasks. The Hazard Mitigation (HM) and Individual Assistance (IA) cadres were among the exceptions to this direction. HM made substantial edits to the backbone competencies and effectively designed backbones for the various groups for their cadre (insurance, grants, etc.), resulting in a complex structure involving 53 position titles. PTB updates for this cadre required dedicated labor and frequent communication with HM leadership. Similarly, IA products evolved so significantly during post-focus group review at FEMA that an Institute analyst spent two weeks in close contact with IA leadership while updating the IA PTBs, position qualification sheets, and flowchart.

**Phase 3: Final Formatting and Production**

The final phase of the production work involved transforming the products described in Phases 1 and 2 into fully formatted PTBs with tables. This phase began in mid-February 2011, after the conclusion of the final focus group. The Institute’s training team established priorities for processing position qualification sheets and PTBs, and divided subsequent work among the team.

In addition to the anticipated production workload, the training team responded to emerging Training Unit interest in OPM competencies. The training team then produced a system-wide analysis of FQS competencies in December 2010. Subsequently, the training team amended the PTB structure to include the OPM competencies and refer to each preexisting competency as a behavior/activity.

The Institute’s training team next generated fully-formatted tables from the PTB worksheets, inserting them between common front matter and back matter that the Response Directorate provided. (The front and back matter contained standard information for each PTB, including instructions for the evaluator and trainee.) Each PTB received—a conservative estimate—at least 75 minutes of effort (60 minutes to generate the fully formatted book and at least 15 for the quality assurance process.)

**Recommendations**

The Institute recommends the following considerations for the production of future FQS documents:

- Employ backbones that are based on the section whose personnel are the “main effort” of the system.
- Incorporate backbone content in qualification sheets at the outset of subsequent FQS efforts.
- Do not update draft focus-group products until the entire sequence of focus groups is complete. Making updates during backbone evolution ensured unscheduled rework and caused difficulties in tracking changes.
- Establish specific timelines and formats for cadre feedback, and communicate them to cadres.
- Provide adequate time for final document production following cadre feedback.
- Incorporate long-term feedback into the design effort. Knowing their feedback will be incorporated provide cadres with the vision for moving forward with new FQS documents.
<table>
<thead>
<tr>
<th>Version</th>
<th>Cadre</th>
<th>PTBs</th>
<th>Actions Taken to Produce the Next Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Operations, Planning</td>
<td>22</td>
<td>Operations had no backbones to work from and developed the first version during their focus group. Planning used some of the information from the Operations focus group but mainly developed independent backbones.</td>
</tr>
<tr>
<td>1</td>
<td>Hazard Mitigation, Individual Assistance</td>
<td>65</td>
<td>Mitigation used the Operations backbones and made major modifications. Through a long process, their modifications helped to lead to version 2 of the backbones.</td>
</tr>
<tr>
<td>2</td>
<td>Updated to version 3 prior to use in focus groups</td>
<td>n/a</td>
<td>ICS subject matter experts, in consultation with the Operations focus group, updated the backbones to make a version 3—a combination of Planning, HM, and ICS subject matter expert recommendations.</td>
</tr>
<tr>
<td>3</td>
<td>Security, Hazard Mitigation</td>
<td>33</td>
<td>Security added “security” to the safety competencies that were carried through to the other backbones and into version 4.</td>
</tr>
<tr>
<td>4</td>
<td>Alternative Dispute Resolution (ADR)</td>
<td>2</td>
<td>ADR recommended a few minor changes to the backbones. Mike Mara, Dave Nelson, and Mike Madden worked together to make changes to the backbones, for a version 5, before the start of the PA focus group.</td>
</tr>
<tr>
<td>5</td>
<td>Public Assistance, Comptroller, Long-Term Community Recovery, Equal Rights, Legal Affairs, Geospatial Information Systems, Disaster Field Training Office, Air Operations, Staging Area, Human Resources</td>
<td>68</td>
<td>FCO added a competency about Unit Logging.</td>
</tr>
<tr>
<td>6</td>
<td>Federal Coordinating Officer (Part I), Financial Management</td>
<td>9</td>
<td>Version 6 was improved by making minor edits and changing verbiage and wording, which turned into version 7.</td>
</tr>
<tr>
<td>7</td>
<td>Safety, Logistics, Information Technology, Contracting, Disaster Emergency Communications, MERS, Environmental and Historic Preservation, External Affairs, Federal Coordinating Officer (Part II)</td>
<td>123</td>
<td>Backbone competencies were reworded, combined, and nested within OPM competencies to make a final version 8.</td>
</tr>
<tr>
<td>8</td>
<td>Most Current Version</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6. Backbone Version History
THE WAY FORWARD

The FEMA Administrator’s top priority remains the strengthening of the nation’s resilience to disasters.15 In June 2010, FEMA’s Response Directorate supported this priority by committing to the creation of a new strategic approach to developing the agency’s existing talent into future leaders, hiring the best talent available to the agency, and strengthening skill sets across the workforce in support of FEMA’s core mission.16 The Response Directorate has made significant strides toward a functioning training and education system.

Figure 5. TED Initiatives, Summer 2011

Figure 5 illustrates the major TED initiatives—explained further below—portraying them within the context of a functioning system designed to prepare FEMA personnel to perform in their incident management roles. Within the graphics for Doctrine, Training and Exercises, the programs are portrayed in green, orange, and uncolored squares. Green portrays programs that are complete or near completion. Orange indicates works in progress. Uncolored squares indicate elements suggested by the Institute training team’s observations from the various analytic efforts of the 10-17 training task.

Table 7 lists those initiatives with estimates of their impact on the Response Directorate’s efforts to professionalize the disaster workforce, both in the near term (one to two years) and the far term (three years and beyond). An initiative of high criticality would seriously degrade TED’s efforts if not completed, where initiatives of medium or low criticality would have less impact. The table indicates a

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15 FEMA P-806, “FEMA Strategic Plan Fiscal Years 2011-2014” (February 2011).

Relative level of effort required. Low level of effort signifies a small group analytic effort. Medium level of effort signifies an effort requiring collaboration and interaction between several groups of people, and small group analysis. High level of effort signifies an effort involving several groups of participants and an analytic effort involving significant change of operating procedures and constructs. In addition to initiatives portrayed in the graphic, the table includes FQS efforts planned for national and regional FQS incident support efforts.

<table>
<thead>
<tr>
<th>Way Forward</th>
<th>Near-Term Impact</th>
<th>Far-Term Impact</th>
<th>TED Level of Effort Required</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMH</td>
<td>Low</td>
<td>Medium</td>
<td>Low</td>
<td>In work by Doctrine Unit</td>
</tr>
<tr>
<td>FEMA Leadership</td>
<td>Low</td>
<td>Medium</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>FEMA Mentoring</td>
<td>Low</td>
<td>Medium</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Learning Management System</td>
<td>Low</td>
<td>High</td>
<td>Medium – to – High</td>
<td>L.O.E. depends upon LMS/FQS integration</td>
</tr>
<tr>
<td>Development</td>
<td></td>
<td></td>
<td></td>
<td>requirements</td>
</tr>
<tr>
<td>Curriculum Framework</td>
<td>Medium</td>
<td>High</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Course Design</td>
<td>Medium</td>
<td>Medium</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>FQS Guide</td>
<td>High</td>
<td>High</td>
<td>Low</td>
<td>In work by Training Unit</td>
</tr>
<tr>
<td>FQS for National Incident Support</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
<td>Doctrinal changes in work by the Institute</td>
</tr>
<tr>
<td>FQS for Regional Incident Support</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Doctrinal changes in work by the Institute</td>
</tr>
<tr>
<td>AAR Process</td>
<td>Medium</td>
<td>Medium</td>
<td>Low</td>
<td>In work by Exercise Unit</td>
</tr>
<tr>
<td>TEDEX Org Manual</td>
<td>Medium</td>
<td>Medium</td>
<td>Low</td>
<td>In work by Exercise Unit</td>
</tr>
<tr>
<td>TED Feedback</td>
<td>Medium</td>
<td>High</td>
<td>Low</td>
<td></td>
</tr>
</tbody>
</table>

Table 7. Program Impact Versus Level of Effort Required
The Institute recommends that the TED consider all initiatives with respect to their ability to:

1. bring sustained functionality to TED,
2. bring resilience and agility to TED, and
3. provide essential guidance in a fiscally constrained environment.

**Doctrine Initiatives**

**Incident Management Handbook**

The *Incident Management Handbook*, which had earlier served as a source of guiding data for the Institute’s training team, has now become the beneficiary of training team efforts. Organization charts and task competency data developed by Institute analysts and subject matter experts are now being used to inform the creation of a new *Incident Management Handbook*. This effort, currently in progress, will provide relevant information of high utility to the disaster workforce.

**Leadership Publication**

Qualification at senior incident management positions requires mastery of increasingly complex leadership behaviors/activities. This is typical within operational hierarchies. While leadership at entry-level positions can be prescribed in terms of basic tasks, senior leaders rely on personal experience and principles to create solutions for their subordinates.

When leaders create solutions, they do so within the norms of a culture. During the course of the 10-17 training task, Institute analysts frequently encountered a perception among many at FEMA that the agency’s mission and people have developed a unique organizational culture. Other successful organizations, from IBM to the U.S. Marine Corps, have employed cultural narratives to great advantage. Relatively short, compact works, these documents use historical narrative to exemplify their organizations’ ethos, adding immeasurably to the cohesion of those organizations at all levels. Although listed as low and medium impact in the near and far term, respectively, the extremely low effort required to publish a FEMA cultural narrative makes it a viable way forward when resources prohibit more costly initiatives.

**Mentoring Program**

The FQS focus groups frequently discussed the role of the coach/evaluator in trainee qualification. While they quickly came to grips with the coach’s obligation to instruct tasks as the trainee executed those tasks, the focus groups were less clear on the role of the seasoned professional in guiding the professional development of their protégées. Mentoring programs provide the impetus for decentralized professional development efforts with low design costs and little or no annual maintenance costs.

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Training Initiatives

Learning Management System

Typical learning management systems perform the functions listed in table 8. In organizations with substantial in-house training programs, learning management systems integrate with other databases supporting the organization’s mission.

<table>
<thead>
<tr>
<th>For Students</th>
<th>For Faculty</th>
<th>For Managers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure the accomplishment of prerequisites</td>
<td>Track enrollment</td>
<td>Track employee qualification</td>
</tr>
<tr>
<td>Deliver course content</td>
<td>Measure student achievement of objectives</td>
<td>Integrate with operational databases</td>
</tr>
<tr>
<td>Test the delivery</td>
<td>Establish requirements for facilities</td>
<td>Support job analysis and establishment of individual training standards</td>
</tr>
<tr>
<td></td>
<td>Track obligation and expenditure of funds</td>
<td>Schedule training opportunities</td>
</tr>
<tr>
<td></td>
<td>Provide a vehicle for course revision</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tie the system to curriculum frameworks</td>
<td></td>
</tr>
</tbody>
</table>

Table 8. Sample Learning Management System Capabilities

The Training Unit currently uses two learning management systems for EMI independent study courses: the EMI Learning Management System and the FEMA Employee Knowledge Center (FEKC). The EMI system tracks online learning for non-FEMA audiences, whereas the FEKC tracks online learning for FEMA Permanent Full-Time personnel and for Disaster Assistance Employee (Reserve) personnel as well. In addition to tracking routine learning opportunities, the FEKC also supports a separate DFTO course catalog intended for training offered following Stafford Act disaster declarations.

The learning management system design considerations for TED are as follows:

- Capacity to track the entire disaster response community
- Capability to maintain FQS records of training
- Integration with records of PTB completion and final position qualification
- Management and tracking of cadre qualifications by cadre managers
- Integration with the Automated Deployment Database
- Inclusion of the record of resident training
- Tracking the obligation and expenditure of fiscal year training funds
Compliance with emerging DHS-wide learning management system standards

The Institute lists this effort as medium to high, as it can only be determined by a requirements analysis and selection of a specific approach to development, delivery, and implementation. This initiative is likely to require several years to design and execute. Until complete, the initiative will bring no positive impact upon the Training Unit’s ability to accomplish its mission. In the far term, however, the Training Unit will be unable to perform its mission without a fully functional learning management system.

Curriculum Framework

Curriculum frameworks provide coherence to educational efforts in accredited institutions at every level of education. They typically array broad outcomes that serve as threads throughout the curriculum, and list level by level the terminal objectives that support the achievement of the outcomes. Outcomes are, however, typically selected using top-down guidance—not deduced from grouping existing tasks and competencies.

The Response Directorate’s Course Consolidation Workshop recently took initial steps to examine the coherence of their training effort, mapping courses associated with an array of disaster response positions. This effort, expanded into the realization of a curriculum framework, would require a low level of effort, and would provide a disproportionately high ability to affect disaster response training in the far term by increasing the efficiency of the Training Unit’s efforts.

Course Design

Analysis of the training courses revealed several inconsistencies in course design. The courses in question fail to meet standards established in EMI’s Curriculum Management System Guidebook. Using the results of the course analysis, the Training Unit is capable of ensuring that future courses meet established design standards at no cost. The Task 10-17 course analysis results also suggest that future courses can be designed at a greatly reduced cost if all courses are built with modular units that can be reassembled and delivered in varying combinations for different audiences.

FQS Guide

The guide provides the constructs for using FQS products created by the Institute under Task 10-17. The FQS will not function without the guide. Against the extremely low level of effort required to complete it, this is a particularly high-value and time-sensitive initiative.

FQS for National Incident Support

This initiative is the national analog to the FQS effort that the Institute recently completed for incident management. Observations and lessons learned during the incident management FQS process indicate that the national effort appears to be slightly less ambitious, due to the smaller number of personnel affected, their common location, and the relatively small doctrinal changes that the FQS process entails. However, the FQS incident management effort demonstrated that factors considered insignificant at the effort’s outset were regarded as significant by its conclusion. This effort may also entail personnel, leadership, or other challenges that are not yet apparent. The Institute estimates a medium level of effort will be required to complete this initiative.
**FQS for Regional Incident Support**

The FQS initiative for regional response hinges upon the incident support community’s acceptance of the *Regional Incident Support Manual*. Due to potential complexities, this effort may prove to be the most challenging. While the incident management FQS initiative was sometimes challenging because of the need to impose ICS compliance, it did not alter the operational constructs at incident management organizations. In contrast, the regional incident support effort may entail “re-engineering” regional organizational structure. Institute analysts believe that the need to perform incident management activities prior to Stafford Act declarations at the regional level will prompt some resistance to change from within the incident support community. For this reason, the level of effort attributed to this effort is high.

**Exercise Initiatives**

The Exercise Unit is successfully executing a variety of events that validate the performance of various incident response staffs. Additionally, the Exercise Unit staff is developing an after-action review process and reviewing an organizational manual that the Institute submitted for review in March 2011. Both of these are listed as low level of effort as is consistent with other initiatives described here.

**TED Feedback Initiative**

While this initiative transcends the mission of the Exercise Unit, it appears here because the Exercise Unit possesses the best skill sets for authority over it. The Exercise Unit routes exercise products to directorates and departments outside of TED. By employing exercise feedback within TED, its three units would gain the feedback loop needed to ensure the functionality of TED programs in the face of new challenges.

Because this effort entails analysis and design that occur within TED, the Institute characterizes the level of effort as low. The internal use of this effort promises a relatively short design period, promising impacts during the fiscal year after design begins. Because of this, the Institute estimates the near- and far-term impacts as medium and high, respectively.