Cost Estimating Training for Non-Cost Estimators

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Agenda

- ▶ Background
  - – What cost estimating training for non-cost estimators means
  - – What cost estimating training for non-cost estimators does not mean
  - – Who is the non-cost estimator?
  - – Reasons some avoid cost estimating and tool training
- ▶ Example Training Development
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Background

Background – What Cost Estimating Training for Non-Cost Estimators Means

Cost estimating and cost estimating tool training allows program participants to contribute more relevant information during program development. This training can include the participants that **would not ordinarily be involved in the cost estimating process, but have a impact or be impacted by the results of a cost estimate.** Training enables non-cost estimators to:

- Provide more accurate and detailed information up front to avoid unforeseen hurdles in the later development stages of a program

- A more efficient, effective, and accurate means of providing information to cost estimators and budget process contributors later in a program schedule

- Provide experience and expertise required to assist in specific analytical processes for a program

- Promote collaboration within an analytical process to assure properly validated, documented, and accurate results

- Increase influence and process ownership of a program to assists the non cost estimator instead of just providing data and awaiting decisions

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Background – What Cost Estimating Training for Non-Cost Estimators Does NOT Mean

While advantageous, training provided to non-cost estimators DOES NOT:

▸ **Eliminate cost estimators from the process**
  – Complete and validated cost estimate build-ups are still required

▸ **Happen quickly**
  – One course or tool training does **NOT** a cost estimator make

▸ **Assure success**
  – "Things still occur" that can eliminate any ground gained by the non-cost estimator

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Background – Who is the Non-Cost Estimator?

Cost estimating and tool training can be very beneficial to many participants throughout a program's life cycle including:

▸ **Engineers**
  – Determines performance requirements and capability during development, upgrade, and modification

▸ **Logisticians**
  – Determines logistics requirements for development, operation, and disposal

▸ **Program Managers**
  – Coordinated requirements, costs, and performance during development, operation, and disposal

▸ **Schedulers**
  – Provides input costs during development

▸ **Subject Matter Experts (SMEs)**
  – Provides input to program requirements development

▸ **Support Personnel**
  – Are directly effected by costs during operations

▸ **Trainers**
  – Provides input and are effected by costs during development and operations

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Background – Reasons Some Avoid Cost Estimating and Tool Training

Many non-cost estimators avoid training that involves cost estimating or tools for a number of the following reasons:

▸ **"It's Black Magic"**
  – Cost estimating requires extensive higher level mathematics and is too complicated to understand
  – There isn't any data available early in a program so it can't be done

▸ **"It creates more work for me"**
  – A full cost estimate build-up is always required
  – The data and estimate must be perfect

▸ **"It doesn't help me"**
  – It only impacts those involved in budgeting or financials
  – The process or it's impact on a program can't be influenced

Example Training Development

Training Development – Training for the United States Marine Corps (USMC) LRFS CET

The USMC LRFS Cost Estimating Tool (CET) is an **Excel-based user-friendly tool** designed to allow program managers and logisticians to **quickly generate LRFSs** for all types of Marine Corps programs. The LRFS CET includes a **library of cost models for all the IPS elements** and related disciplines and incorporate statutory and regulatory requirements. The USMC LRFS CET enables users to:

- Provide a more efficient, effective and accurate means of developing LRFSs

- Provide visibility of logistics support requirements

- Inform resource and assessment sponsors of logistics support requirements

- Serve as the format for presentation of support and associated funding requirements throughout program development at all acquisition milestone decision forums

- Can be tailored to meet the program's support objectives

- Support LCCE, POM submission, and budgetary decisions

- Assist in evaluating a weapon system's (or information system's) logistics costs associated with different proposals in a source selection

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Training Development – USMC LRFS CET Training Approach

USMC LRFS Cost Estimating Tool Training Package

Self Taught Training Online

User Help File

Hands-On Classroom Training
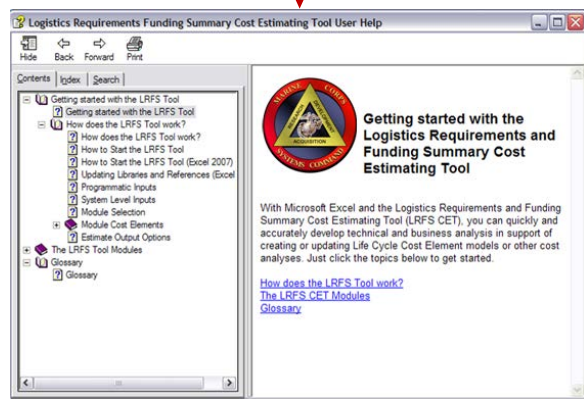
Training Development – USMC LRFS CET Hands-On Classroom Training Materials

Hands-on classroom training participants are provided with curriculum in both printed and electronic form. The materials are divided into the following three sets:

▸ **Background Briefing Materials**
   – Training agenda
   – Development/tool background

▸ **Participant Training Materials**
   – Participant Training Guide
   – Participant Training Data

▸ **Supplemental Training Materials**
   – Supplemental Training Guide
   – Supplemental Training Data
   – Supplemental Training Data File

▸ **Follow-Up Training Materials**
   – USMC LRFS CET SharePoint Site
   – Hands-On Training Survey

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Training Development – USMC LRFS CET Classroom Training Implementation

Hands-on classroom training is conducted on a monthly basis with special exceptions. The following best practices are applied when possible:

▶ **Environment**
- – Classroom seating arrangement
- – No more than 30 participants per class
- – Participants bring/use their own laptops
- – All instruction is projected on screen
- – "Parking Lot" for extended discussion items

▶ **Personnel**
- – Five instructors
- – Two USMC representatives
- – One support staff
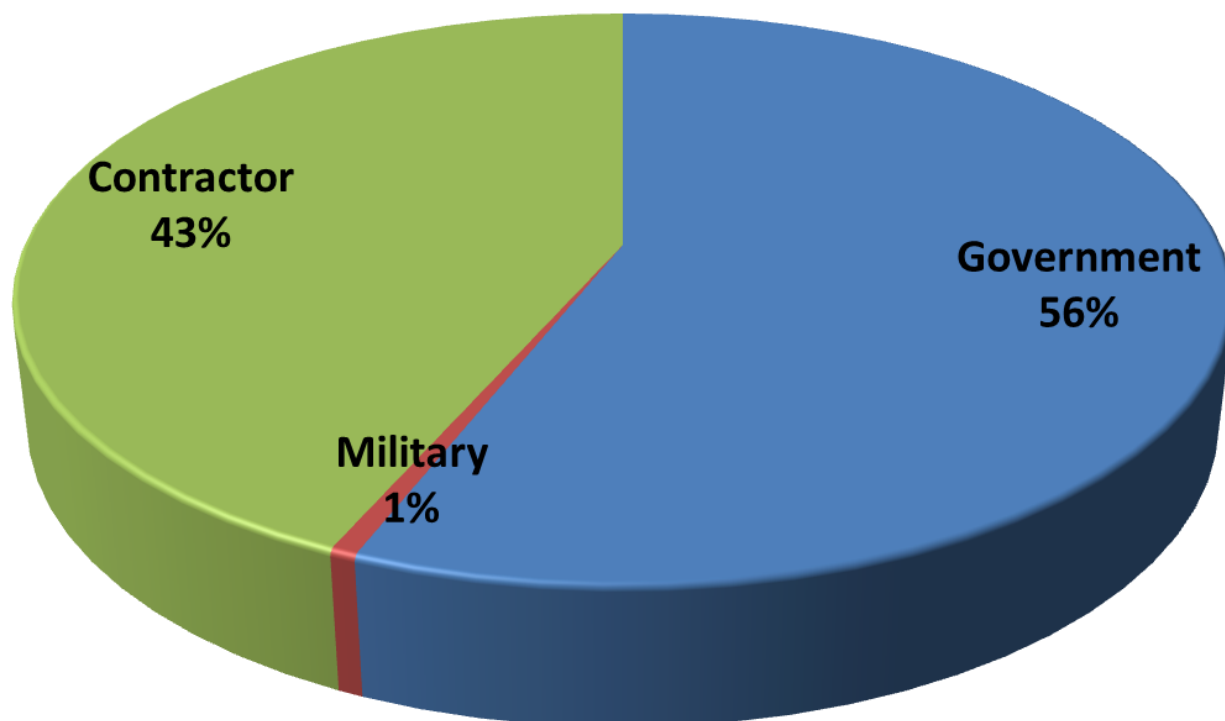
▶ **Timeline**
- – 8:00 am to 4:30 pm
- – Morning preparation time for materials/laptops
- – Five breaks throughout day including lunch

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Training Development – USMC LRFS CET Training Participants

USMC LRFS CET Training Participants
(As of March 2012)

- Contractor 43%
- Government 56%
- Military 1%
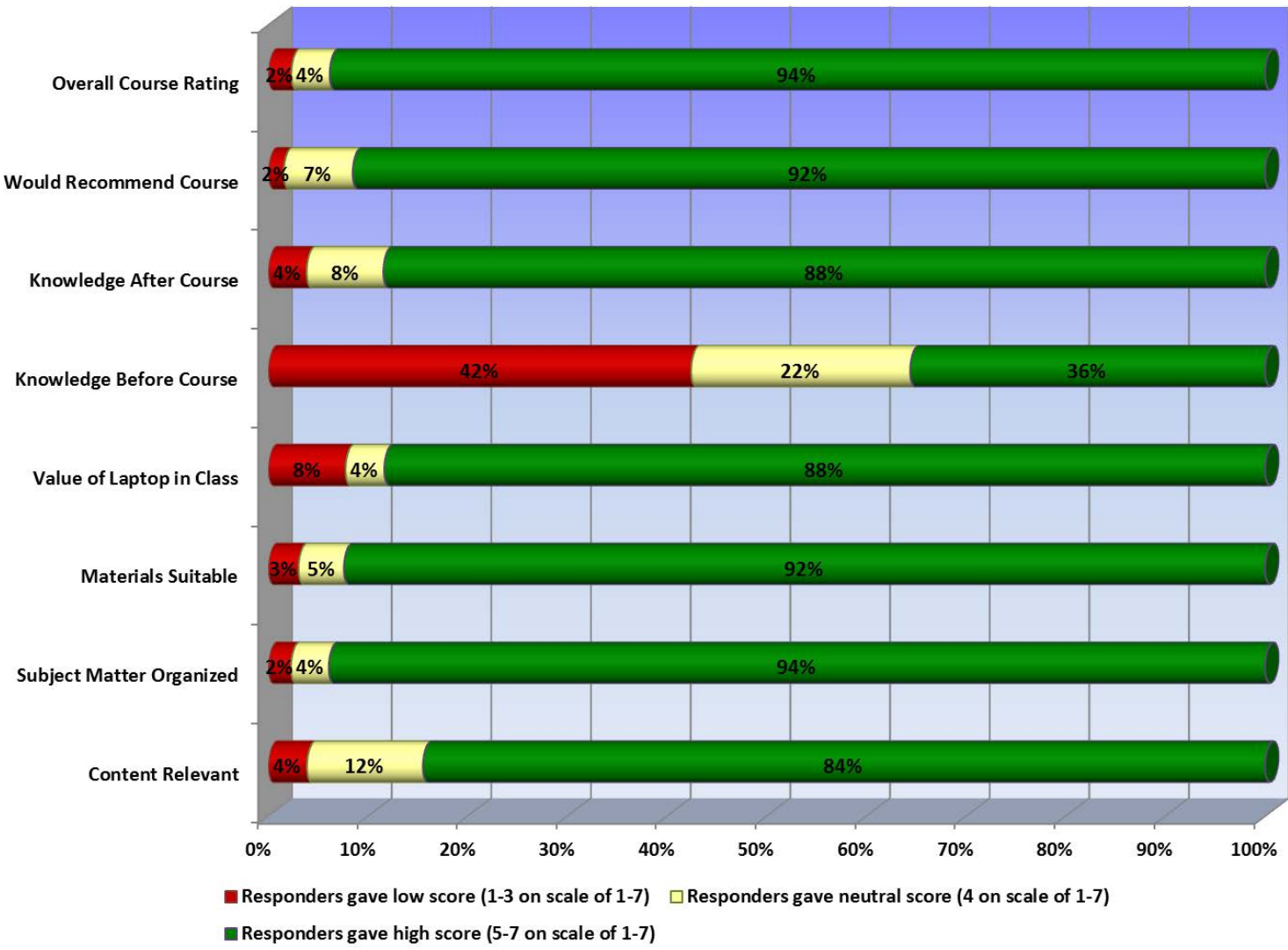
Total Training Participants: 166

Training Development – USMC LRFS CET Training Lessons Learned

Survey Data

▸ **130 survey responses of 166 participants (81% response) over 9 training sessions**

▸ **Laptop and printed materials available in course ARE A MUST HAVE**

Overall Course Rating: 2% 4% 94%

Would Recommend Course: 2% 7% 92%

Knowledge After Course: 4% 8% 88%

Knowledge Before Course: 42% 22% 36%

Value of Laptop in Class: 8% 4% 88%

Materials Suitable: 3% 5% 92%

Subject Matter Organized: 2% 4% 94%

Content Relevant: 4% 12% 84%

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

■ Responders gave low score (1-3 on scale of 1-7)   □ Responders gave neutral score (4 on scale of 1-7)

■ Responders gave high score (5-7 on scale of 1-7)

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Summary

Automated tools to perform analysis and estimating are becoming more popular as faster timelines/greater accuracy are demanded, budgets/manpower are reduced, and organizations strive to streamline and standardize processes. **The difference between a quick fix and a seasoned analytical VBA tool is often decided by the following:**

▸ **Maximize the solution**
  – Tools should be designed to address current and future analysis, not customized to only satisfy the needs of a single program

▸ **Utilize best practices**
  – Although formal programming practice is not required, intelligent interface, good documentation, and efficient design should be sought after when building analytical tools

▸ **Jump in the water is great!**
  – Don't be intimidated by VBA tools. Try upgrading previously built tools or take small steps while building new ones. Each success will lead to further attempts. "The more you learn, the more you will want to know"
  – VBA forums and internet resources are an excellent source for information. "If you can think of it, the code has probably already been written"

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Questions?

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