

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



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



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



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

The image displays several screenshots of the USMC LRFS CET software interface:

- Program ABCD Summary:** Shows program details like 'LRFS USMC Estimate', 'Total Estimate Completion Status', and a list of elements with their status (e.g., Management, Performance Based Logistics, Design Interface).
- Programmatic Inputs:** A form for entering program details such as 'LRFS Program Name', 'MIL-STD 881 Category', 'Acquisition Category', and 'Commodity'. It also includes a 'Program Schedule Inputs' section for milestones and dates.
- LRFS CET: Uncertainty Adjusted Output Form:** A table for 'RDTEU Uncertainty Specifications' with columns for 'Confidence' and 'Coefficient of Variation'. It lists various elements like 'ILS Management', 'Performance Based Logistics', etc., with their respective confidence levels (High, Medium, Low) and coefficients.
- Facilities List:** A detailed list of facilities with columns for 'Facility', 'Supporting Analysis', 'Support Planning', 'Design/Develop', 'Support/Performance', 'Field Support', 'Operational Support', and 'Status'. It includes a table for 'Selected Element Cost Summary' with columns for 'MTCM', 'FY00', 'FY01', 'FY02', 'FY10', 'FY11', 'FY12'.
- Facility Detail View:** A window showing detailed information for a selected facility, including a 'Facility Description' and 'Cost Summary'.

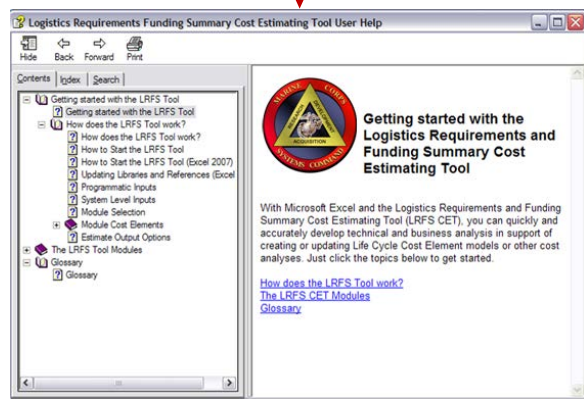
Training Development – USMC LRFS CET Training Approach



Self Taught Training Online



Hands-On Classroom Training



User Help File

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



Logistics Requirements Funding Summary (LRFS) Cost Estimating Tool (CET) Hands-On Training Survey

The LRFS CET Team appreciates your participation in today's training. To help us better improve the training provided, please complete this survey and return it to us prior to meeting. Thank you! Please provide your information below (optional) to clarify your experience prior to the training.

Title	
Name (Last, First)	
Billable (SO, SPWR, Engineer, etc.)	
Approximate Career Field	
Number of Years in Career Field	

Please answer the following questions to the best of your ability based on this training experience with the LRFS CET (circle answer's)

COURSE CONTENT: On a scale of 1 to 7, 7 being the highest, please evaluate the following for this course:

1. Was the content relevant to your personal needs?	Not at all	1	2	3	4	5	6	7	Very
2. Was the subject matter well organized?	Not at all	1	2	3	4	5	6	7	Very
3. Were the materials available? (e.g., visuals, exercises, etc.)	Not at all	1	2	3	4	5	6	7	Very
4. How would you rate the value of having a topic in class?	Low	1	2	3	4	5	6	7	High
5. What level of subject matter knowledge did you have before attending the workshop?	None	1	2	3	4	5	6	7	High
6. What level of subject matter knowledge did you have after attending the workshop?	None	1	2	3	4	5	6	7	High
7. Would you recommend this course to others?	Not at all	1	2	3	4	5	6	7	Highly
8. How would you rate this course overall?	Low	1	2	3	4	5	6	7	High

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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

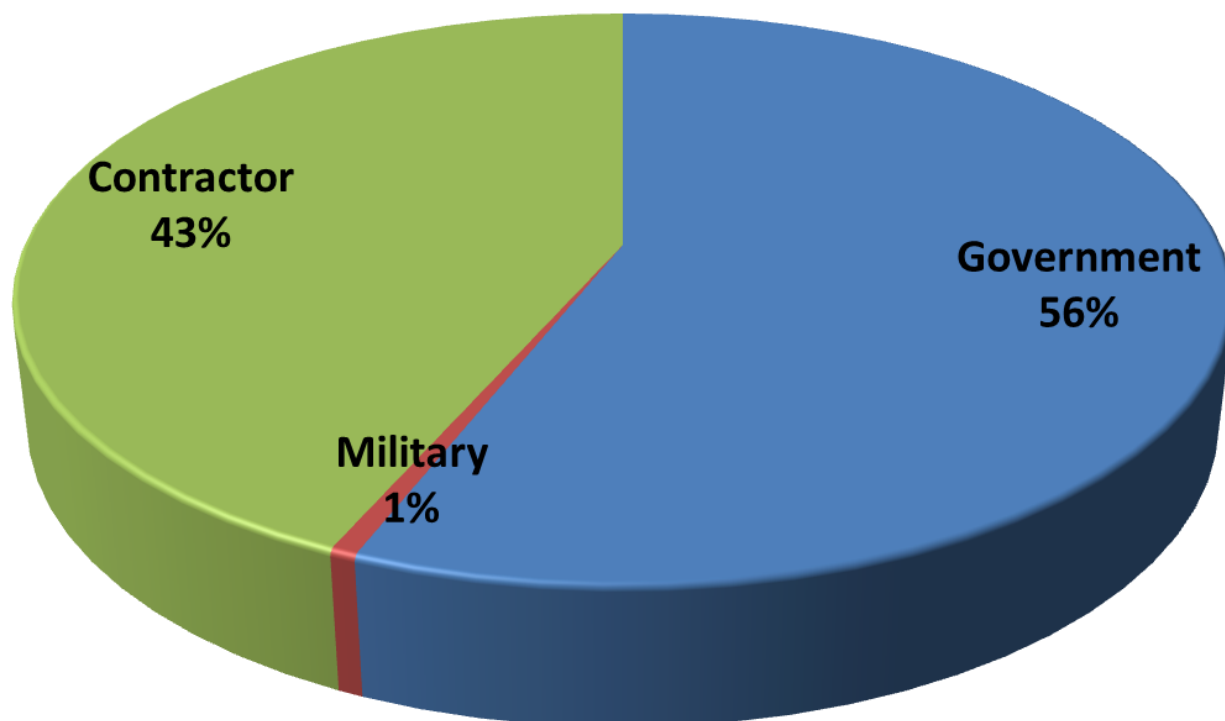
▶ **Timeline**

- 8:00 am to 4:30 pm
- Morning preparation time for materials/laptops
- Five breaks throughout day including lunch



Training Development – USMC LRFS CET Training Participants

USMC LRFS CET Training Participants
(As of March 2012)



Total Training Participants: 166

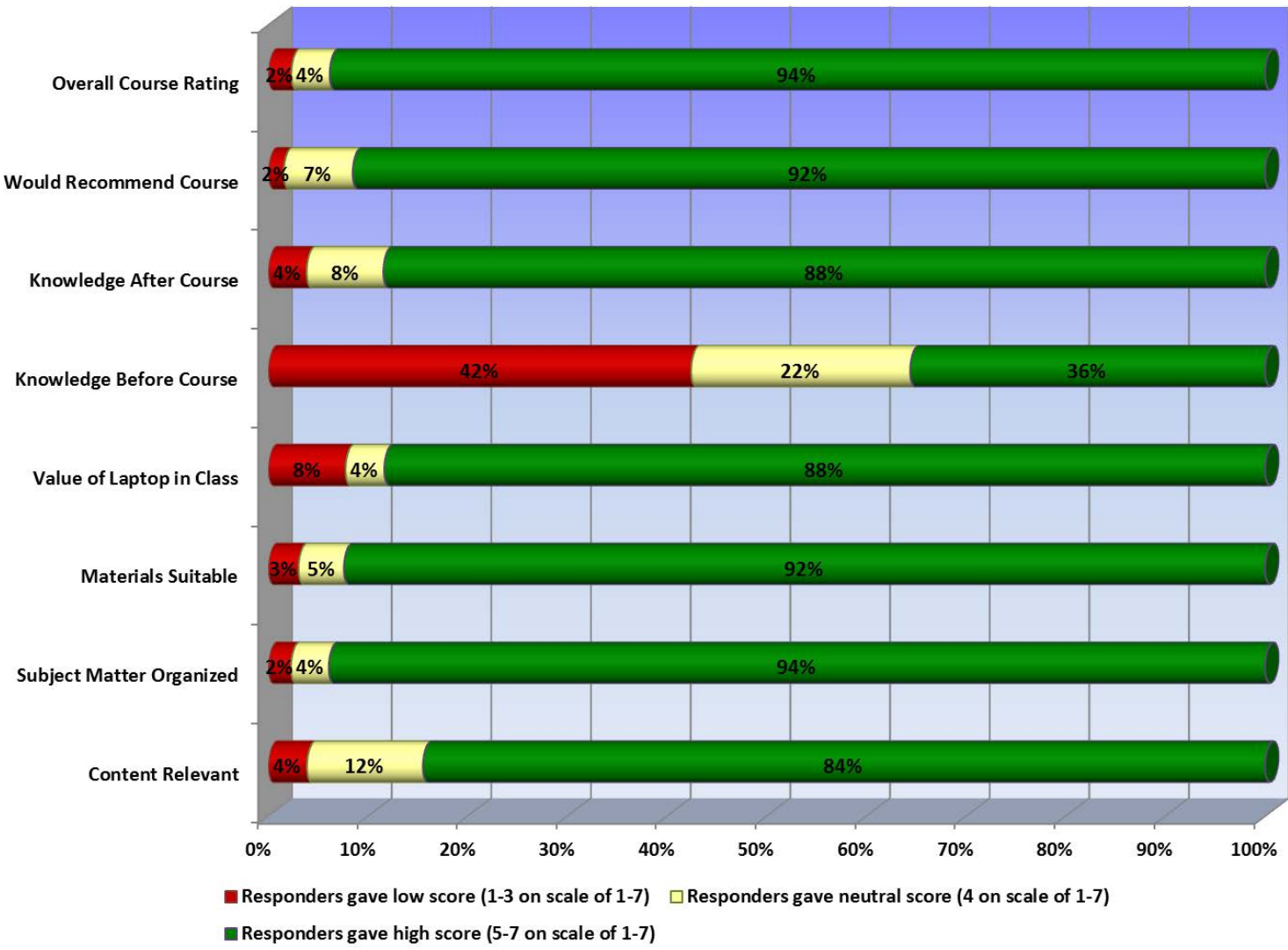
Training Development – USMC LRFS CET Training

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**



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"



Questions?

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