

Logistics Requirements Funding Summary (LRFS) Cost Estimating Tool (CET)

A Quick Cost Estimator for Logisticians

**SCEA Conference – San Diego CA
June 2010**



Booz | Allen | Hamilton

Agenda

- ▶ Background
 - What is an LRFS?
 - Booz Allen Task Specifics
 - LRFS Relationship to LCCE & POM
 - Challenges in Developing an LRFS
 - Why do you need the LRFS CET?
- ▶ LRFS CET Development
 - Ground Rules and Assumptions
 - The Five-Step LRFS Cost Element Definition Process
 - Data Collection/Cost Model Development
 - High Level Process Map
- ▶ LRFS CET Overview
 - User Interface
 - Example Outputs
- ▶ Summary
 - LRFS CET Benefits



Background

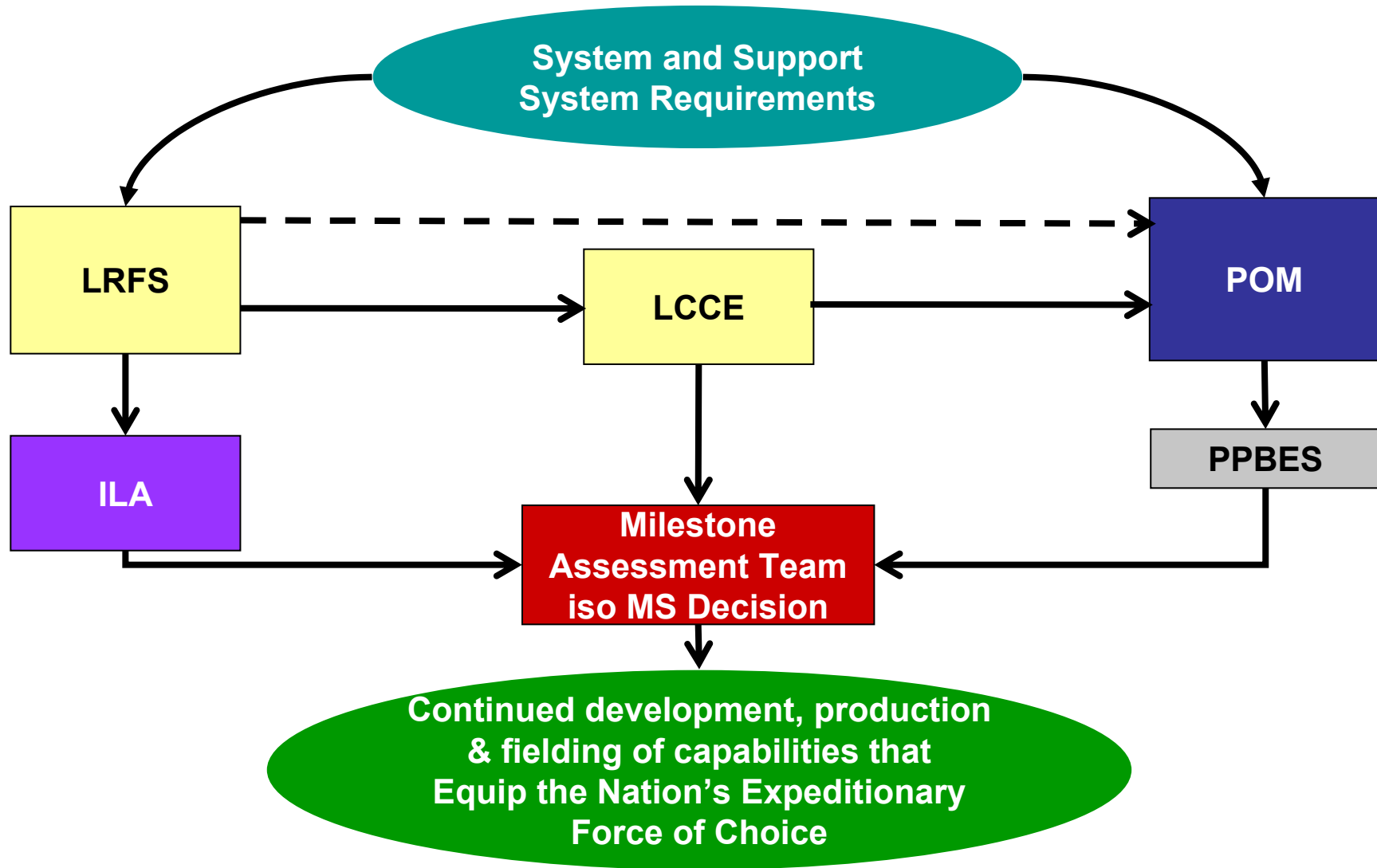


Background – What is an LRFS?

- ▶ Definition: The Logistics Requirements Funding Summary (LRFS) is a breakdown of product support functions and sub-functions to establish a required level of product support. It identifies product support requirements and the funds available to meet those requirements. (source: Defense Acquisition University)
 - LRFS displays requirements versus funding for all ILS elements and related disciplines, by fiscal year and appropriation, and is traceable to logistics support plans.
 - LRFS supports Independent Logistics Assessment (ILA) review process to ensure support funding requirements for each ILS element are appropriately identified, funding is available, and shortfalls identified.



Background- LRFS Relationship to LCCE & POM



Background – Booz Allen Task Specifics

- ▶ Sponsored by Marine Corps Systems Command (MARCORSYSCOM) AC/LCL and AC/PROG
- ▶ Reviewed current DoD, Navy/USMC policies and guidance
- ▶ Conducted a market survey of existing tools relating to LRFS development
- ▶ Conducted data collection and cost estimating methodology development including compiling rates and factors from various sources

Phase I - to be completed in May 2010 –
Developed ten (10) logistics modules that include:

- Maintenance Planning
- Supply Support
- Support Equipment
- ILS Management
- Product and Technical Data
- Design Interface
- AIT / IUID
- Facilities
- Manpower and Personnel
- Training and Training Systems

Phase II - to be completed in May 2011 –
Develop six (6) final logistics modules that include:

- Performance Based Logistics
- Human Systems Integration
- Packaging, Handling, Storage, & Transportation
- Environment, Safety, & Occupational Health
- Computer Resources Support
- Configuration Management



Background – Challenges in Developing an LRFs

- ▶ Lack of cost estimating knowledge in developing LRFs
- ▶ Lack of familiarity of financial management standards by the logistician
- ▶ Lack of standardization in Cost Element Structure (CES) and lack of sufficient supporting details
- ▶ Lack of sufficient data in conducting estimate (i.e., actuals, cost estimating factors, CERs, etc.)
- ▶ Inconsistent allocation of costs to their appropriate cost element (recurring/nonrecurring or functional elements)
- ▶ Inaccurate use of phasing, escalation factors, and appropriations
- ▶ Inconsistent review process



Background – Why do you need the LRFS CET?

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 ILS elements and related disciplines and incorporate statutory and regulatory requirements. The 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
- ▶ Tailorable to meet the program's support objectives
- ▶ Support LCCE, POM submission and budgetary decisions
- ▶ Assist in evaluating a weapon system's logistics costs associated with different proposals in a source selection



LRFS CET Development



LRFS CET Development – Ground Rules and Assumptions (1 of 2)

- ▶ Tool Must Be Excel-based
 - Users are familiar with Excel applications
 - Tool needs to run on existing USMC computers and software
 - Excel is powerful and integrates with VBA well

- ▶ Tool Must Be User-Friendly
 - Visual Basic user interface will guide users through the LRFS development process
 - User interface supports “Turbo Tax” approach for quick cost estimating
 - Tool will collect the information needed that is readily available to users

- ▶ Tool Must Be Designed for Non-Cost Estimators
 - Logisticians using the tool will have little or no cost estimating experience
 - Tool must have existing repository of cost models to develop estimate
 - Tool must provide documentation for cost models to allow users to defend estimates
 - Tool must provide a standard process for estimation within USMC

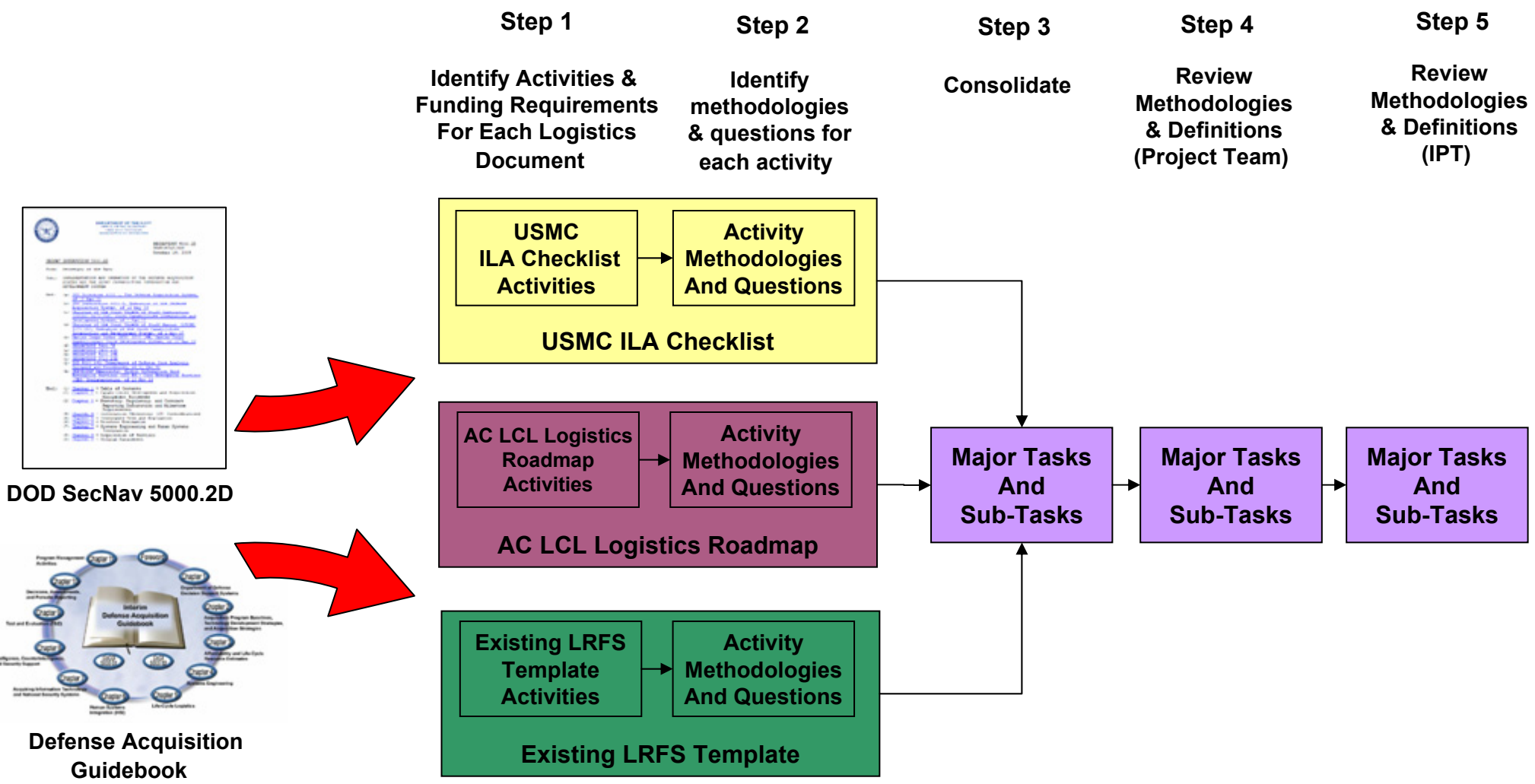


LRFS CET Development – Ground Rules and Assumptions (2 of 2)

- ▶ Tool Must Incorporate New Cost Element Structures (CES) for each LRFS Module
 - Original CES does not include all logistic cost elements for a program
 - Original CES is not standardized or defensible
 - CES must reflect the requirements included in the ILA Checklist
 - CES must be approved by SMEs and IPT members. Extensive SME/IPT participation is required



LRFS CET Development – Five-Step LRFS Cost Element Definition Process

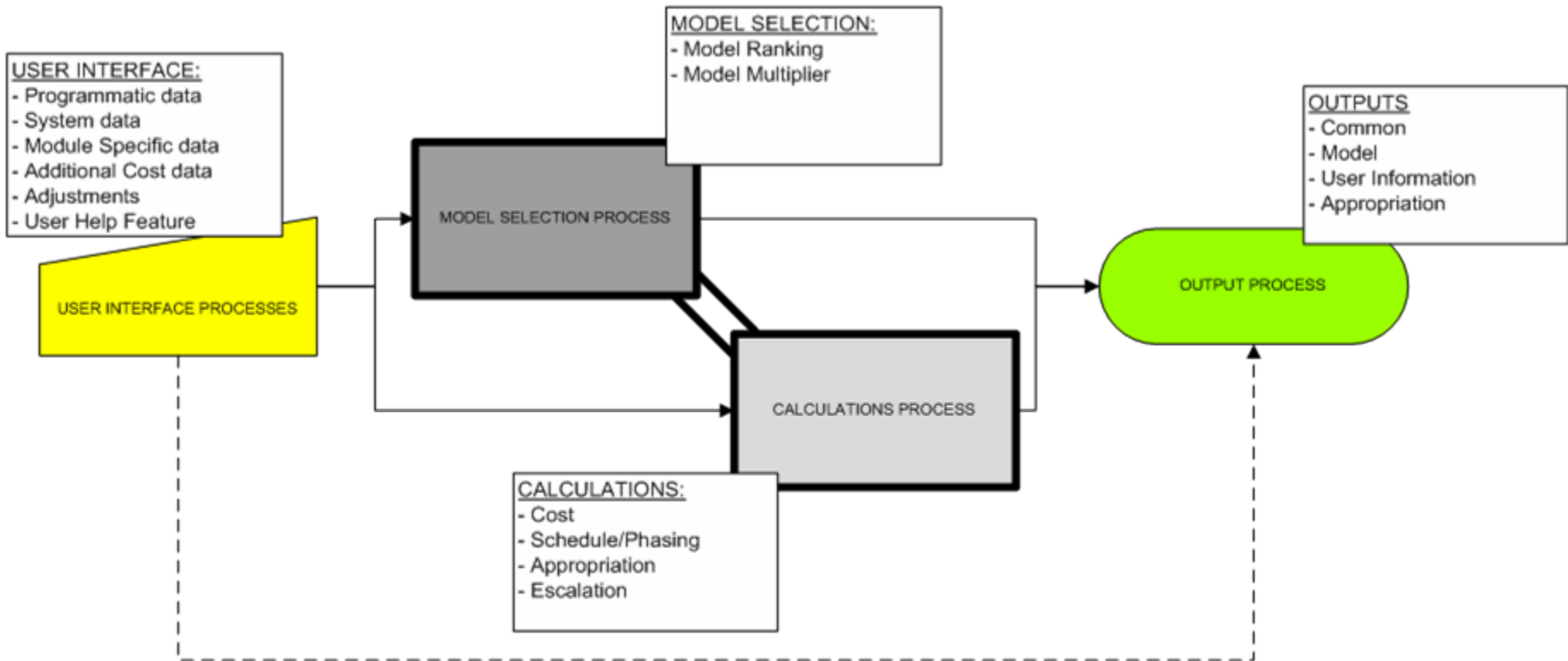


LRFS CET Development – Data Collection/Cost Model Development

- ▶ Data Collection Efforts target the collection of two types of cost models:
 - Level of Effort (LOE) Cost Models
 - Cost Models are based on Logistician SME input
 - Non-LOE Cost Models
 - Cost Models are Developed for
 - Initial Spares
 - Replenishment Spares (Consumables and Repairables)
 - Petroleum, Oil and Lubricants (POL)
 - Demilitarization/Disposal
 - Support Equipment
 - Facilities Costs
 - Data Sources for Cost Models include:
 - Program Cost Data
 - President’s Budget Data
 - Individual Studies Developed
 - US Army and USMC Databases (i.e., VAMOSC, OSMIS, etc.)
- ▶ Cost data supports development of Rates, Factors and Cost Estimating Relationships



LRFS CET Development - High Level Process Map



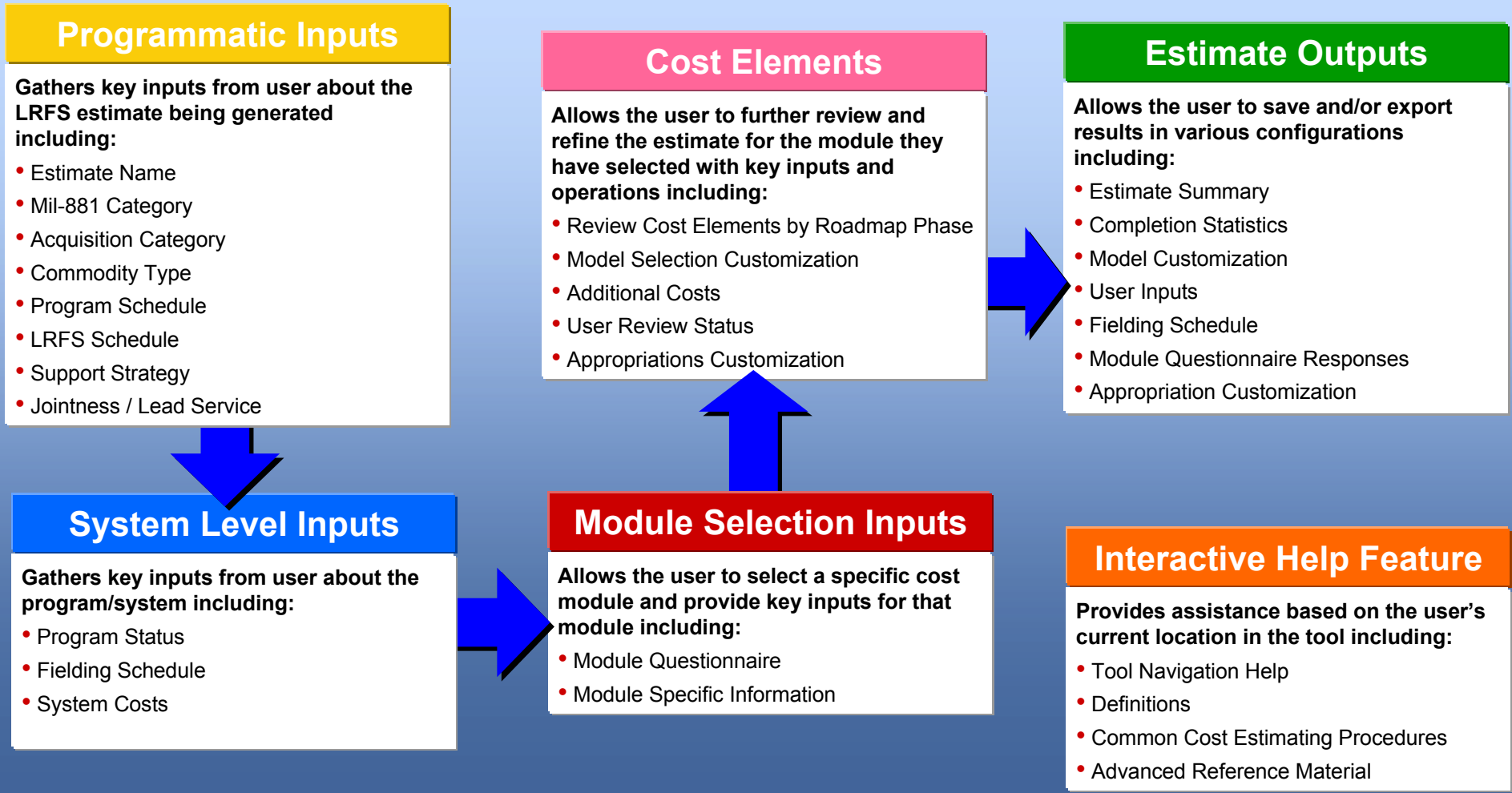
LEGEND:



LRFS CET Overview

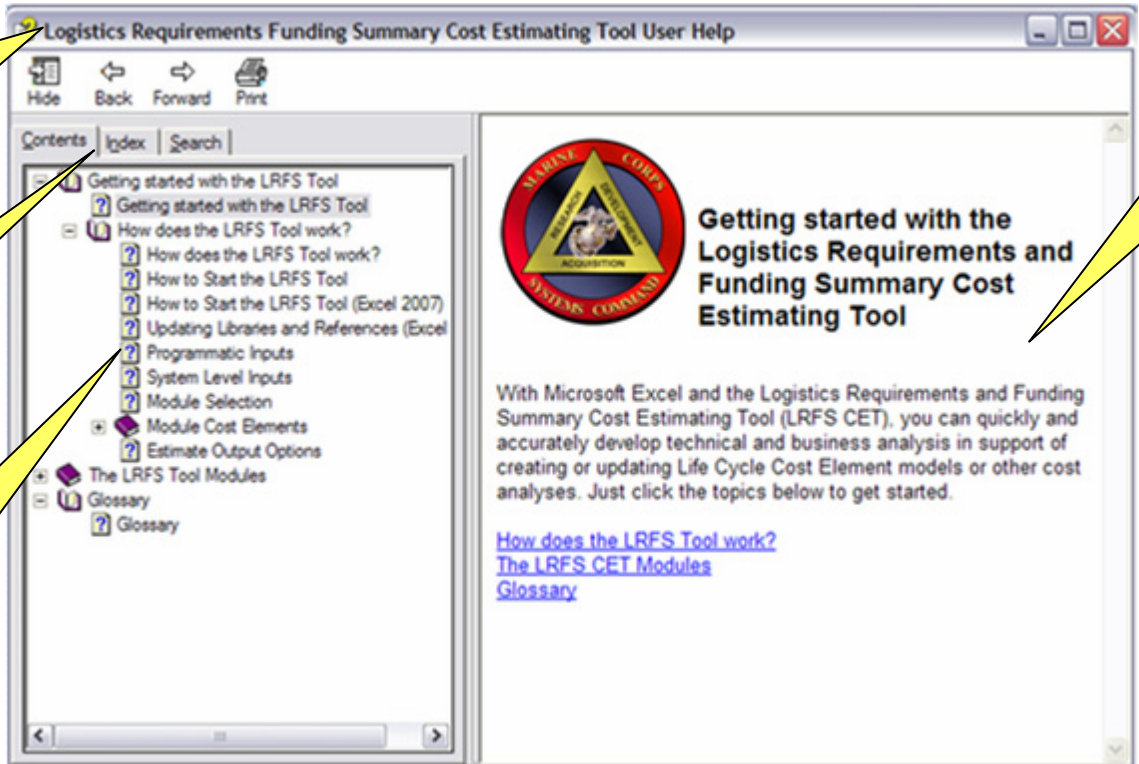
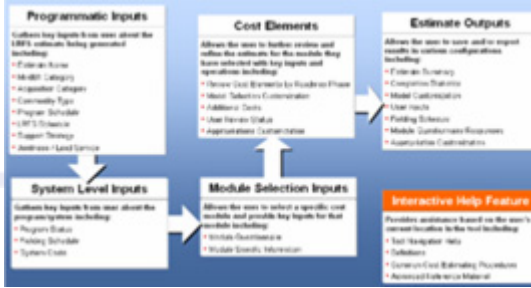


LRFS CET Overview – User Interface



LRFS CET Overview

Interactive Help Feature



Can be accessed from any form in the tool at any time without interrupting the estimate by clicking "help" button

Browse or search capability

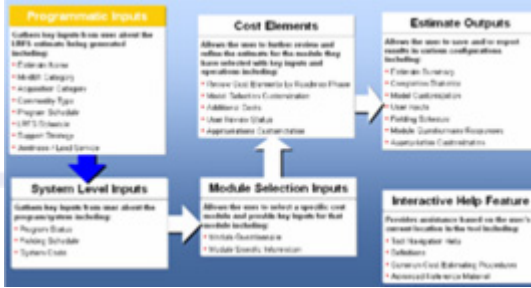
Detailed information available down to the cost element level

Automatically navigates user to appropriate topic based on location in the tool



LRFS CET Overview

Programmatic Inputs Interface



Interface prompts user to provide basic program information

LRFS schedule is automatically generated based on user provided start date and base year

Throughout the tool, "Tool Tips" provide quick information to the user on each data field

Programmatic Inputs

LRFS Program Name: PYITEI

MIL-STD 881 Category: 2. AIS/ERP Systems

Acquisition Category: IAM

Commodity: C2 and Intel Systems

Commodity Description
 The C2 and Intel Systems commodity includes command and control equipment (displays), intelligence gathering equipment (sensors - i.e. Blue Force Tracker) and computing systems (computers). This includes transponder and transceiver equipment needed to transmit signals as well as the software requirements and security requirements associated with sharing information.
This is a description of the commodity you have selected

Program Schedule Inputs
 Select the Milestones required for the program and enter the 4-digit year (yyyy) for each

MDD Milestone A Milestone B Milestone C FRPD

2008 2010 2012 2014 2016

Logistics Requirements Funding Summary Schedule Inputs

LRFS Start Date (yyyy): 2011 LRFS End Date (yyyy): 17 Estimate Base Year (yyyy): 2009

What type of Support Strategy does the program use? Predominantly Organic

Is the United States Marine Corps the lead Service? No - Joint

Please indicate the lead Service: Army

* Items in red are required

Save and Continue Help Save and Exit Tool

User is provided with on-screen explanation of the commodity selected

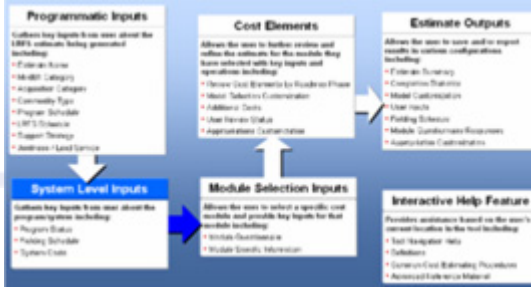
Tool allows user to provide program schedule dates and can accommodate omitted Milestones

User can specify support specifics including strategy, joint program status, and lead service



LRFS CET Overview

System Level Inputs Interface



Interface prompts user to provide basic information on the system

System Level Inputs

Step 1- To identify the program, select **New System**, **Upgraded System**, or **Modified System**

Program Status
 Status Description: A system that is not an upgrade or a modification to any existing systems. Costs can be expected to be higher, as various analyses and documents are required for new starts.

Step 2- The program production schedule may either be manually entered or automatically phased by the LRFS CET. If available, select **Use Manually Entered Schedule** to enter the fielding schedule. If automatically phasing the fielding, select **Use Automatically Phased Schedule** and provide the inputs below to automatically phase a total Approved Acquisition Objective.

Fielding Selection

Total number of units to be fielded: First Year of Fielding (yy):
 Operational Service Life (yrs): Last Year of Fielding (yy) BY2009\$:

Step 3- Three types of cost may be entered for the the system. To enter a cost, select a checkbox and provide a cost in dollars. More than one cose may be entered if available. A cost is not required, but this information will increase the accuracy of your estimate.

Costs
 Roll-Away Cost Average Unit Procurement Cost Program Aquisition Unit Cost

* Items in red are required

Return to Programmatic Inputs | Save and Continue to Module Selection | Help

User can specify the status of the program and view an on-screen explanation of the program type selected

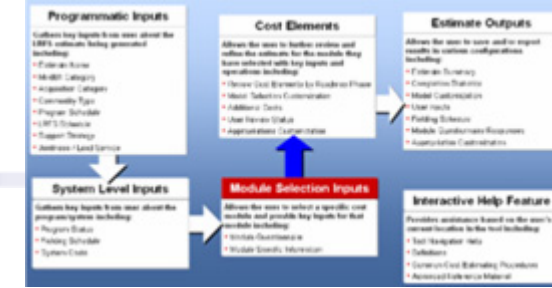
Tool can calculate an automatically phased fielding schedule or user may enter a specific schedule manually

Although not required, the user may specify any or all of three types of system unit costs



LRFS CET Overview

Module Selection Interface



Interface allows user to review and refine module level information

Opportunity is given to provide module specific information based on responses to module questionnaire

User is provided with an on-screen explanation of the cost module selected

User has the opportunity to answer a module specific questionnaire to refine the estimate

Available throughout the tool, users can provide notes for future user reference in the tool and outputs

Module Selection

Instructions:
Step 1- Select a Module to provide additional information

- 01. ILS Management
- 02. Performance Based Logistics
- 03. Training and Training Systems
- 04. Design Interface
- 05. Maintenance Planning
- 06. Support Equipment
- 07. Supply Support
- 08. Human Systems Integration
- 09. Manpower and Personnel
- 10. PHST
- 11. Configuration Management
- 12. Product and Technical Data (D)
- 13. Environmental, Safety and Occ
- 14. Facilities
- 15. Computer Resources Support (
- 16. Automated Information Techno

Module Description
 Automated Information Technology encompasses the process of selecting software, and firmware for tactical automated systems and planning for the life-cycle support of each. Its objective is to decrease the life-cycle cost through use of automated systems that increase the ability of planners at all levels to have visibility of the logistics chain. Included as a subset are programs such as Automatic Identification Technology (AIT) and Item Unique Identification. AIT is a suite of technologies (barcodes, contact memory buttons, radio frequency identification (RFID), etc.,) that facilitate the timely, accurate and efficient collection and transmission of source data that is essential in DoD's effort to provide visibility of all assets, to include those in-transit, in-process or in-storage. IUID is a system of marking items delivered to the DoD with unique item identifiers, encoded in machine-readable symbology and distinguishing an item from all other like and unlike items.

Step 2- Answer Module Questionnaire. Click on **View Module Interview** to answer module specific questions for this module. These answers are used to customize the estimate for this module and the module specific information requested below. **This Step is Required before continuing**

Step 3- Please enter any additional Module Specific information in the table below if known. **This Module Specific Information is optional.** However, additional information provided here will improve the fidelity of the LRFS for the program. If you do not wish to provide module specific information, click "Continue to Cost Element Structure"

Module Specific Information

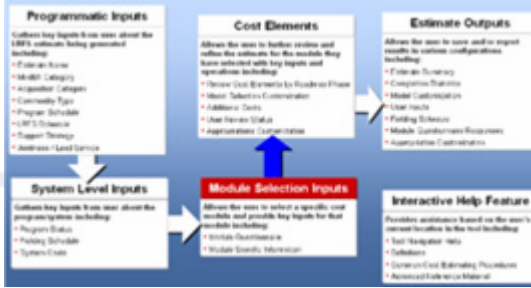
Element	Value	Notes
Requirements Analysis (hours)		1040 Per Contracto No
Requirements Analysis (\$/year)		
Requirements Analysis (years)		
Determine AIT and IUID Requirements (hours)		
Determine AIT and IUID Requirements (\$/year)		
Determine AIT and IUID Requirements (years)		
Develop/Review/Update Program Documents (hours)		

Buttons: Return to System, Help, Cancel, Continue to Cost Element Structure



LRFS CET Overview

Module Interview



Dynamic Interface displays a separate Module Interview for the cost module selected

Module Specific Questions - AIT

Instructions:

Step 1- Please answer the following additional Module Specific questions below if known. **If the required information is not available, select N/A**. However, additional information provided here will improve the fidelity of the LRFS for the program. When all questions are completed, click "Continue to Cost Element Structure"

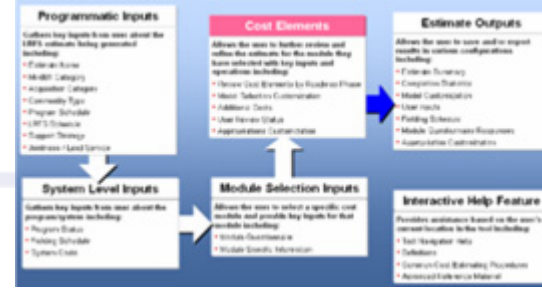
	Yes	No	N/A
1. Is the UAC greater than \$5K, or designated as DoD serially managed/controlled inventory/mission essential?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.1 Does the system PEI include any embedded subassembly, components or parts that are DoD serially managed?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.1.1 Has the Program Office designated the item as requiring IUID?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Will RFID capabilities be utilized?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. How many individual components require IUID markings?	<input type="text" value="50"/>		
	Yes	No	N/A
4. Do legacy items associated with the system require Virtual UII assignment?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.1 How many legacy systems require Virtual UII assignment?	<input type="text" value="50"/>		
5. Which of the following best represents the Initial Maintenance Concept?	<input type="text" value="Interim Contractor Logistics Support"/>		

Return to Module Selection Help



LRFS CET Overview

Cost Element Interface



16. Automated Information Technology (AIT) Elements

Instructions:
Step 1 - Select Roadmap Phase for the current module

Show all Phases | Requirements Analysis | Support Planning | Design for PEI Supportability | Design/Develop Support | Acquire Support Subsystem | Field Support Subsystem | Operations and Support | Disposal

Step 2 - Select a child cost element within the module's Cost Element Structure to view the current cost estimate for the cost element. The cost estimate is initially automatically generated by the LRFS CET and can be customized by adding/editing additional cost data through the Customization Options.

Review Status	Element
NR	16 - Automated Information Technology (AIT)
NR	16.01 - Requirements Analysis
R	16.01.01 - Determine AIT and JUID Requirements
NR	16.01.02 - Develop/Review/Update Program D
NR	16.01.02.01 - Update Acquisition Strategy
NR	16.01.02.02 - Update MCSAMP
NR	16.02 - Support Planning
NR	16.02.01 - JUID
NR	16.02.01.01 - Evaluate Technologies
NR	16.02.01.02 - Identify Solutions
NR	16.02.02 - AIT
NR	16.02.02.01 - Determine Program Needs
NR	16.02.02.02 - Analysis of AIT technologies
NR	16.02.02.03 - Analysis of Facility Requirements
NR	16.02.02.04 - Analysis of Infrastructure Requir
NR	16.02.02.05 - Identify Solutions
NR	16.02.03 - Develop/Review/Update Program D
NR	16.02.03.01 - Update Support Plans
NR	16.03 - Design for PEI Supportability
NR	16.03.01 - JUID
NR	16.03.01.01 - Develop Marking Plan
NR	16.03.01.02 - Conduct JUID Training
NR	16.03.01.03 - Incorporate Requirements into P
NR	16.03.02 - AIT
NR	16.03.02.01 - Develop Marking Plan
NR	16.03.02.02 - Develop AIT Implementation Plan
NR	16.03.02.03 - Develop Facility Requirements
NR	16.03.02.04 - Develop Infrastructure Requir
NR	16.03.02.05 - Develop Metrics for AIT Perform
NR	16.03.02.06 - Incorporate Requirements into P
NR	16.03.03 - Develop/Review/Update Program D
NR	16.03.03.01 - Supportability Plan
NR	16.03.03.02 - MCSAMP
NR	16.04 - Design/Develop Support Subsystem
NR	16.04.01 - Update/Validate JUID-AIT DMSMS A
NR	16.04.02 - JUID
NR	16.04.02.01 - Identify items for marking
NR	16.04.02.02 - Identify locations for marking
NR	16.04.03 - AIT

Element Description
 The cost of labor associated with ensuring that all system support plans are in agreement with the latest programmatic information and assumptions.

TOTAL	FY08	FY09	FY10	FY11	FY12
\$8,212.50	\$0.00	\$0.00	\$0.00	\$8,212.50	\$0.00

Customization Options (Optional Steps):

Step 3 - Customize Models Selected. Click on **Show Models** to view models that are evaluated by the LRFS CET during the model selection process. Models selected by the LRFS CET for the estimate are identified with a "True" in the "Model Employed" Column. These models can either be retained or overridden. Overriding a model can be done by typing "TRUE" in the "Turn Model Off" column to turn off the model or typing "TRUE" in the "Preference Override" column of another model to employ that model.

Step 4 - Customize Additional Costs. Click **Add/Edit additional Costs** to enter/modify additional labor costs for the CES child. These costs will be added to the current estimate generated from the models employed by the LRFS CET and will not override any active model employed.

Step 5 - Review Costs. Click on **Reviewed/Not Reviewed** to confirm or unconfirm that the estimate for the CES child has been reviewed. The Reviewed status of each CES child and parent will be updated automatically.

Step 6 - Appropriations. Click on **Review/Modify Appropriations** to view/modify the appropriations tables for this cost module for any element for any year.

Final Step (Required) Select another phase at the top or click **Save and Continue to Output Options** to export the LRFS estimate. Note: **Save and Continue to Output Options** will save to be validated before exporting.

Dynamic Interface displays specific information for cost module selected

User selected organization of cost elements by AC LCL Roadmap phase allows focus on specific elements at any given time

Cost element list allows user to quickly navigate and identify reviewed and overridden cost elements

Appropriation feature allows users to customize the appropriation for each cost element

User is provided with an on-screen explanation of the cost element selected

Summary row displays phased costs for each cost element

Model override feature allows advanced users to control cost models

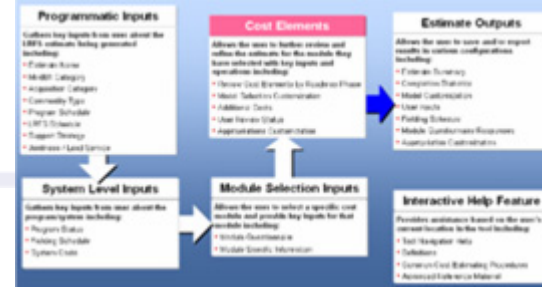
Additional cost feature allows advanced users to add specific costs

Confirmation feature allows users to flag reviewed cost elements



LRFS CET Overview

Additional Cost Interface



Dynamic Interface allows the input of four types of additional costs without leaving the form

User Added Cost Form

Known Costs | Labor | Facilities | Travel

Please select a cost to edit or click add.

New Construction-APPN:MILCON Elect

Appropriation: MILCON | Facility Execution Method: New Construction

Facility Type: Electronic and Communication Maintenance Shop

Facility Measurement Units: SF | Expected Service Life (years): 50

Size / Measure: 1600

Location State / Country: NEW HAMPSHIRE | NEW JERSEY | NEW MEXICO | NEW YORK | NORTH CAROLINA

Location City: CAMP LEJEUNE AREA | CHERRY POINT | FAYETTEVILLE | FORT BRAGG | GREENSBORO

Add Facility | Delete Facility

Cost per Unit (\$): 169.685242

User Inputted Cost per Unit (\$): Override Cost per Unit

Notes: Square footage based on an analogous AIS Program.

Annual number of facilities

TOTAL	8	9	10	11	12	13	14	15
						1		

Back

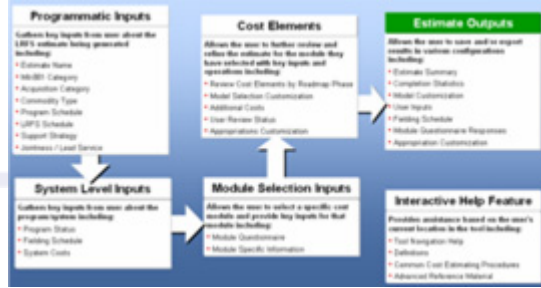
Embedded databases allow user identify cost factors including Travel location, Per diem rates, Facility location, labor rates, and more

Available throughout the tool, users can provide notes for future user reference in the tool and outputs



LRFS CET Overview

Estimate Output Options Interface



Interface allows user to select specific results to output for specific cost modules

Completion statistics illustrate percentage of estimate reviewed by user

Selections allow the output of any model adjustments made

Results can be exported for use in other documents or saved

Estimate Output Options

Step 1-
Please check the LRFS Module(s) you wish to output results from

<input checked="" type="checkbox"/> 01. ILS Management	<input checked="" type="checkbox"/> 09. Manpower
<input checked="" type="checkbox"/> 02. Performance Based Logistics	<input checked="" type="checkbox"/> 10. PHST
<input checked="" type="checkbox"/> 03. Training and Training Systems	<input checked="" type="checkbox"/> 11. Configuration Management
<input checked="" type="checkbox"/> 04. Design Interface	<input checked="" type="checkbox"/> 12. Product and Technical Data
<input checked="" type="checkbox"/> 05. Maintenance Planning	<input checked="" type="checkbox"/> 13. Environmental, Safety, and Occupational Health (ESOH)
<input checked="" type="checkbox"/> 06. Support Equipment	<input checked="" type="checkbox"/> 14. Facilities
<input checked="" type="checkbox"/> 07. Supply Support	<input checked="" type="checkbox"/> 15. Computer Resources Support
<input checked="" type="checkbox"/> 08. Human Systems Integration	<input checked="" type="checkbox"/> 16. Automated Information Technology (AIT)

Step 2-
Please select the outputs desired below for the modules you have selected:

<p>Common Outputs</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Total Estimate Summary (Required) <input checked="" type="checkbox"/> Total Estimate Completion Statistics (Required) <input checked="" type="checkbox"/> Completion Statistics for Each Module(s) Selected <input checked="" type="checkbox"/> Total Estimate Summary for Each Module(s) Selected 	<p>User Information Outputs</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> General User Inputs for Estimate <input checked="" type="checkbox"/> Module Specific Information for Each Module(s) Selected <input checked="" type="checkbox"/> Estimate Fielding Schedules <input checked="" type="checkbox"/> Module Questionnaire Answers for Each Module(s) Selected
<p>Model Outputs</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Models Available in Tool for Each Module(s) Selected <input checked="" type="checkbox"/> Models Turned Off by User for Each Module(s) Selected <input checked="" type="checkbox"/> Models Overridden by User for Each Module(s) Selected 	<p>Appropriation Outputs</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Total Estimate by Appropriation Type <input checked="" type="checkbox"/> Estimate by Appropriation Type for Each Module(s) Selected <input checked="" type="checkbox"/> Estimate Appropriation Table for Each Module(s) Selected

Export Selections to File (MS Excel Workbook) Return to Start of Wizard (Do not export selections) Help Exit the Tool

User provided information can be outputted for future reference

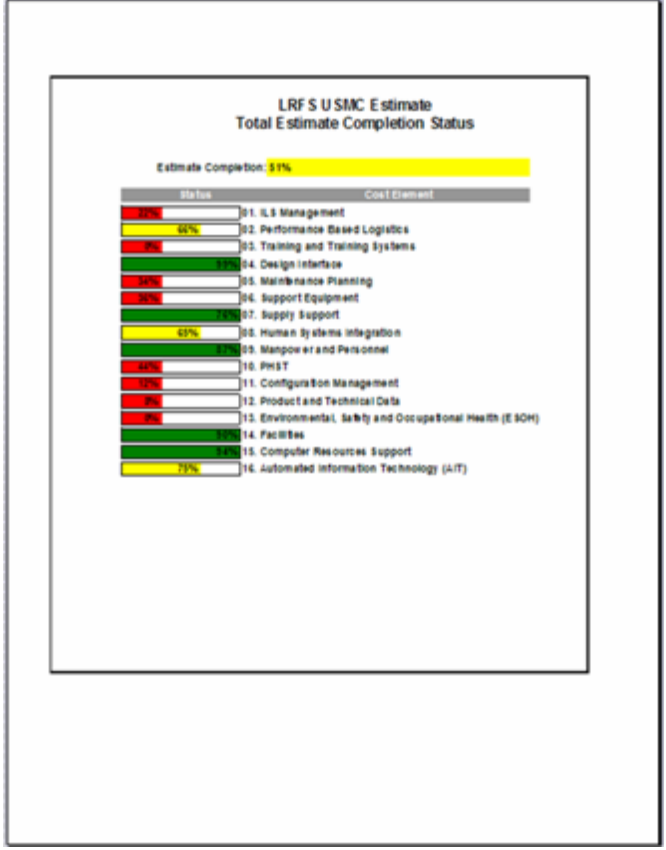
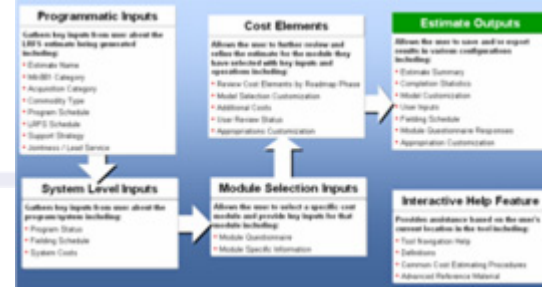
Selections allow the output of the estimate by appropriation quickly and easily



LRFS CET Overview

Cost Estimate Example Outputs

Once the LRFS CET output options have been selected, corresponding data is exported to a separate workbook for use in further calculations, briefs, and documents



ICES	Element	TOTAL	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16
04	LRFS USMC	\$77,748	\$0	\$743	\$713	\$5,877	\$3,845	\$7,482	\$3,568	\$2,757	\$1,266
127	04.01 Requirements Analysis	\$5,460	\$0	\$238	\$238	\$152	\$0	\$0	\$0	\$0	\$0
128	04.01.01 Define Design Interface Requirements Traceability	\$208	\$0	\$152	\$152	\$0	\$0	\$0	\$0	\$0	\$0
129	04.01.02 Develop/Review/Update Program Documents	\$352	\$0	\$88	\$88	\$0	\$0	\$0	\$0	\$0	\$0
130	04.02 Support Planning	\$2,174	\$0	\$0	\$897	\$879	\$325	\$113	\$0	\$0	\$0
131	04.02.01 Provide AOA input	\$225	\$0	\$0	\$113	\$113	\$0	\$0	\$0	\$0	\$0
132	04.02.02 Coordinate System Engineering Plan and Life Cycle Management Statement Plan common issues	\$199	\$0	\$0	\$0	\$326	\$326	\$113	\$0	\$0	\$0
133	04.02.02.01 Develop RMI Design Guidelines	\$225	\$0	\$0	\$0	\$113	\$113	\$0	\$0	\$0	\$0
134	04.02.02.02 Provide input to readiness modeling	\$199	\$0	\$0	\$0	\$113	\$113	\$113	\$0	\$0	\$0
135	04.02.02.03 Assess detailed design environment/system thresholds impacts	\$225	\$0	\$0	\$0	\$113	\$113	\$0	\$0	\$0	\$0
136	04.02.03 Participate in Technical Production/Design Reviews	\$451	\$0	\$0	\$0	\$113	\$113	\$113	\$113	\$0	\$0
137	04.02.04 Outlets	\$873	\$0	\$0	\$0	\$238	\$276	\$0	\$0	\$0	\$0
138	04.02.04.01 Establish Outlets Management Team (OMT)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
139	04.02.04.02 Train OMT	\$20	\$0	\$0	\$0	\$20	\$0	\$0	\$0	\$0	\$0
140	04.02.04.03 Develop OMT/MS Management Plan (OMP)	\$155	\$0	\$0	\$0	\$157	\$157	\$0	\$0	\$0	\$0
141	04.02.04.04 Evaluate Technologies and Tools to Support the program	\$238	\$0	\$0	\$0	\$118	\$118	\$0	\$0	\$0	\$0
142	04.02.05 Develop/Review/Update Program Documents	\$130	\$0	\$0	\$0	\$130	\$0	\$0	\$0	\$0	\$0
143	04.03 Design for SMC Supportability	\$226	\$0	\$0	\$0	\$847	\$179	\$0	\$0	\$0	\$0
144	04.03.01 Define Data and Materials Outlines	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
145	04.03.02 Outlets	\$582	\$0	\$0	\$0	\$483	\$179	\$0	\$0	\$0	\$0
146	04.03.02.01 Establish Formal Program (OMT)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
147	04.03.02.02 Participate in Design Review (DR)	\$157	\$0	\$0	\$0	\$157	\$0	\$0	\$0	\$0	\$0
148	04.03.02.03 Incorporate Requirements into Procurement Request	\$45	\$0	\$0	\$0	\$45	\$0	\$0	\$0	\$0	\$0
149	04.03.02.04 Risk Assessment Predictive Tool	\$168	\$0	\$0	\$0	\$179	\$179	\$0	\$0	\$0	\$0
150	04.03.02.05 Provide logistics input to a BCA to Evaluate Design Alternatives	\$21	\$0	\$0	\$0	\$21	\$0	\$0	\$0	\$0	\$0
151	04.03.03 Develop/Review/Update Program Documents	\$130	\$0	\$0	\$0	\$130	\$0	\$0	\$0	\$0	\$0
152	04.04 Design/Develop Support Subsystem	\$887	\$0	\$0	\$0	\$0	\$0	\$429	\$157	\$0	\$0
153	04.04.01 Provide logistics analysis and assess impacts of engineering efforts	\$113	\$0	\$0	\$0	\$0	\$0	\$157	\$157	\$0	\$0
154	04.04.02 Coordinate logistics and engineering interfaces regarding OMT/MS mitigation planning	\$136	\$0	\$0	\$0	\$0	\$0	\$136	\$0	\$0	\$0
155	04.04.03 Develop/Review/Update Program Documents	\$130	\$0	\$0	\$0	\$0	\$0	\$136	\$0	\$0	\$0
156	04.05 Adjunct Support Subsystem	\$1,629	\$0	\$0	\$0	\$0	\$0	\$841	\$378	\$379	\$0
157	04.05.01 Conduct Workshops	\$473	\$0	\$0	\$0	\$0	\$0	\$157	\$157	\$157	\$0
158	04.05.02 Outlets	\$871	\$0	\$0	\$0	\$0	\$0	\$647	\$162	\$162	\$0
159	04.05.02.01 Validate BOM	\$89	\$0	\$0	\$0	\$0	\$0	\$89	\$0	\$0	\$0
160	04.05.02.02 Validate Possible Obsolete Items	\$162	\$0	\$0	\$0	\$0	\$0	\$162	\$0	\$0	\$0
161	04.05.02.03 Risk Assessment Predictive Tool	\$279	\$0	\$0	\$0	\$0	\$0	\$279	\$0	\$0	\$0
162	04.05.02.04 Provide logistics inputs to a BCA to evaluate design alternatives	\$11	\$0	\$0	\$0	\$0	\$0	\$11	\$0	\$0	\$0
163	04.05.02.05 Participate in Technical Data (TD)	\$481	\$0	\$0	\$0	\$0	\$0	\$162	\$162	\$162	\$0
164	04.05.03 Develop/Review/Update Program Documents	\$130	\$0	\$0	\$0	\$0	\$0	\$130	\$0	\$0	\$0
165	04.06 Field Support Subsystem	\$1,498	\$0	\$0	\$0	\$0	\$0	\$224	\$224	\$224	\$224
166	04.06.01 Outlets	\$813	\$0	\$0	\$0	\$0	\$0	\$198	\$198	\$198	\$198
167	04.06.01.01 Review BOM	\$7	\$0	\$0	\$0	\$0	\$0	\$7	\$0	\$0	\$0
168	04.06.01.02 Review Reliability Data	\$809	\$0	\$0	\$0	\$0	\$0	\$162	\$162	\$162	\$162
169	04.06.02 Monitor/Update Test/Analysis	\$679	\$0	\$0	\$0	\$0	\$0	\$170	\$170	\$170	\$170



Summary



Summary - LRFS CET Benefits



Creates Estimates Efficiently

The LRFS Cost Estimating Tool produces quick cost estimates, and provides results ready for POM inputs and the ILA process

- The LRFS Cost Estimating Tool is capable of automatically generating a complete estimate after the user has provided minimal programmatic information
- User overrides allow the quick and accurate inclusion of more precise data, and the customization of appropriation and cost models
- Exported data are organized to support quick discovery of results for inclusion in other processes, briefs, and documents



Is Easy to Use

The LRFS Cost Estimating Tool prompts the user for data and compiles the inputs directly into relevant cost models

- Little or no training is required to get started
- A step-by-step interface guides users through the cost estimating process with fields designed specifically for people unfamiliar with LRFS Cost Estimating
- Programmatic information requested from the user is often readily available
- Context-sensitive, interactive help feature allows users to browse or search for answers effectively



Produces Justified Estimates

The LRFS Cost Estimating Tool does all the calculations for the user with accuracy

- Interface is designed to allow users to input appropriate data for the estimate
- Uses a repository of documented cost model data
- A review indication helps users keep track of progress and cost elements that have been checked for inaccuracies
- An override indication helps users keep track of what cost elements have modified costs, models, and appropriations




Supports MARCORSYSCOM Mission

The LRFS Cost Estimating Tool supports MARCORSYSCOM initiatives

- Standardize the LRFS Cost Element Structure (CES) and process
- LRFS “feeds” LCCE and not vice-versa
- Logistics requirements are identified for POM submission



Questions?



MARCORSYSCOM
Marine Corps Systems Command
www.marcorsyscom.usmc.mil

ROBIN L. HOWARD
Life Cycle Logistics

CMDR, MARCORSYSCOM (703) 432-3521 (DSN 378)
2200 Lester St (571) 436-8425 (BB)
Quantico, VA 22134-6050 robin.howard@usmc.mil



MARCORSYSCOM
Marine Corps Systems Command
www.marcorsyscom.usmc.mil

DAVID G. MAYLUM
Operations Research Analyst

CMDR, MARCORSYSCOM (703) 432-3841 (DSN 378)
2200 Lester St (703) 432-3538 (Fax)
Quantico, VA 22134-6050 david.maylum@usmc.mil

Charles Gu
Associate

Booz | Allen | Hamilton

Booz Allen Hamilton Inc.
132000 Woodland Park Rd
Herndon, VA 20171
Tel (703) 984-3993
Gu_Charles@bah.com

John Ko
Associate

Booz | Allen | Hamilton

Booz Allen Hamilton Inc.
132000 Woodland Park Rd
Herndon, VA 20171
Tel (703) 984-0596
Ko_John@bah.com

Jeremy Eden
Senior Consultant

Booz | Allen | Hamilton

Booz Allen Hamilton Inc.
8283 Greensboro Drive
McLean, VA 22102
Tel (703) 377-5871
Eden_Jeremy@bah.com

Zachary Pryor
Senior Consultant

Booz | Allen | Hamilton

Booz Allen Hamilton Inc.
132000 Woodland Park Rd
Herndon, VA 20171
Tel (703) 984-1726
Pryor_Zachary@bah.com

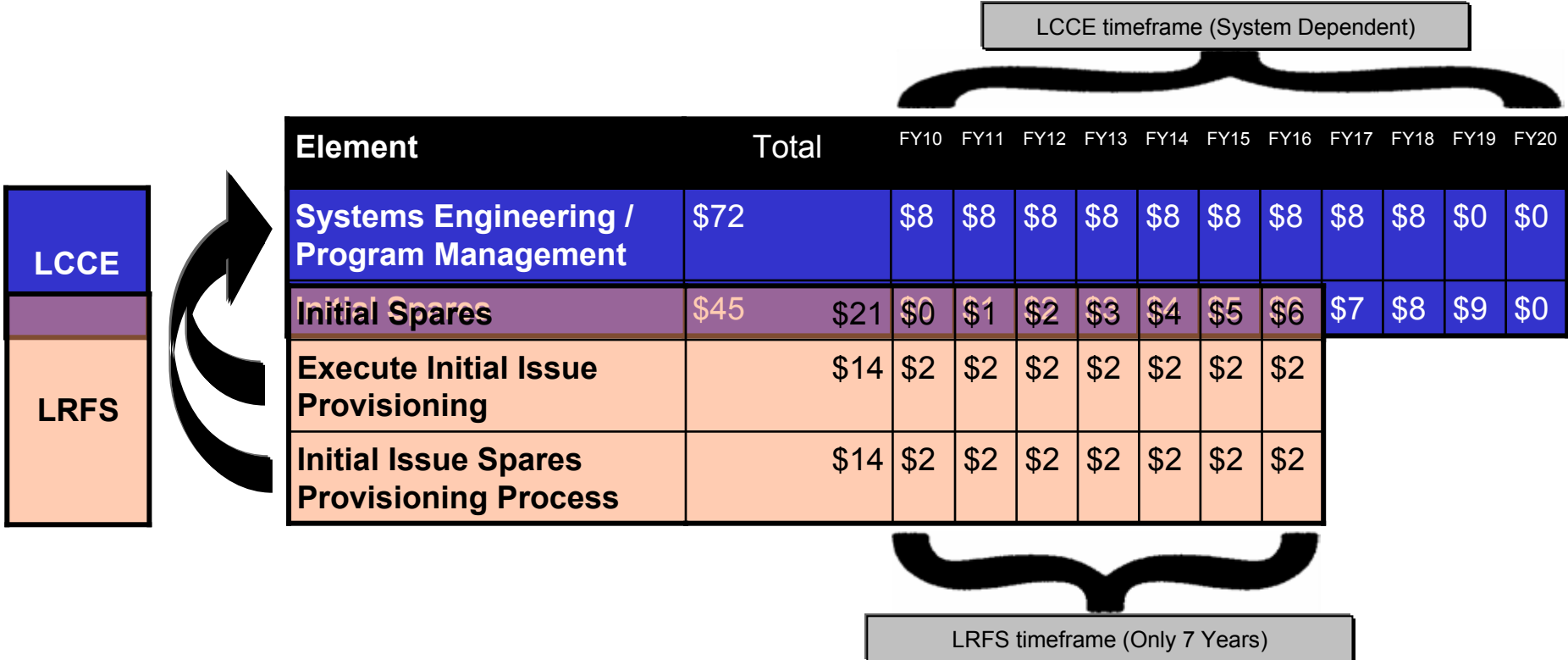


Backups



Venn Crosswalk of the LRFS to the LCCE

- ▶ The LRFS feeds into the LCCE but the two do not merge precisely.
 - The timeframe of interest for the LCCE tends to be longer than the LRFS
 - Some LRFS elements crosswalk directly to the LCCE (e.g.; *Initial Spares*)
 - Other LRFS elements are only a portion of the costs seen in a LCCE element (e.g *Execute Initial Issue Provisioning* and *Initial Issue Spares Provisioning Process*.)



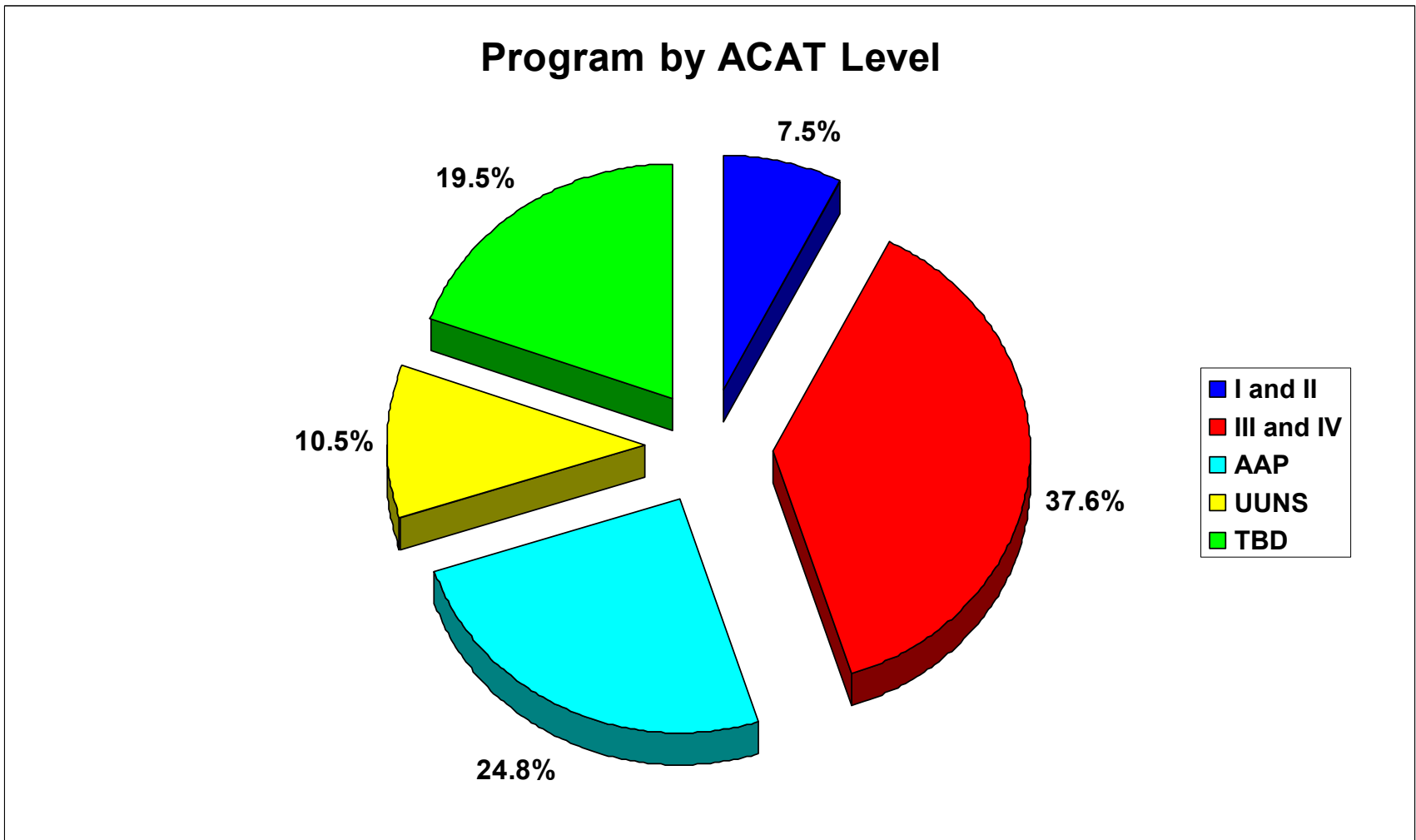
Data Collection – Overview of Current Marine Corps Acquisition Programs

- ▶ An analysis of 133 USMC Acquisition Programs expected to require an LRFS within the next six quarters had the following characteristics:
 - 63% of programs were either ACAT III, ACAT IV, AAP
 - 30% of programs were UUNS or TBD
 - 67% of programs can be categorized under one of the following Program Types:
 - C4ISR
 - Modeling & Simulation Trainers
 - Ground Vehicle Systems
 - Infantry Weapon Systems
 - Satellite Communications
 - 55% of programs were anticipating MS B, MS C or Full Rate Production

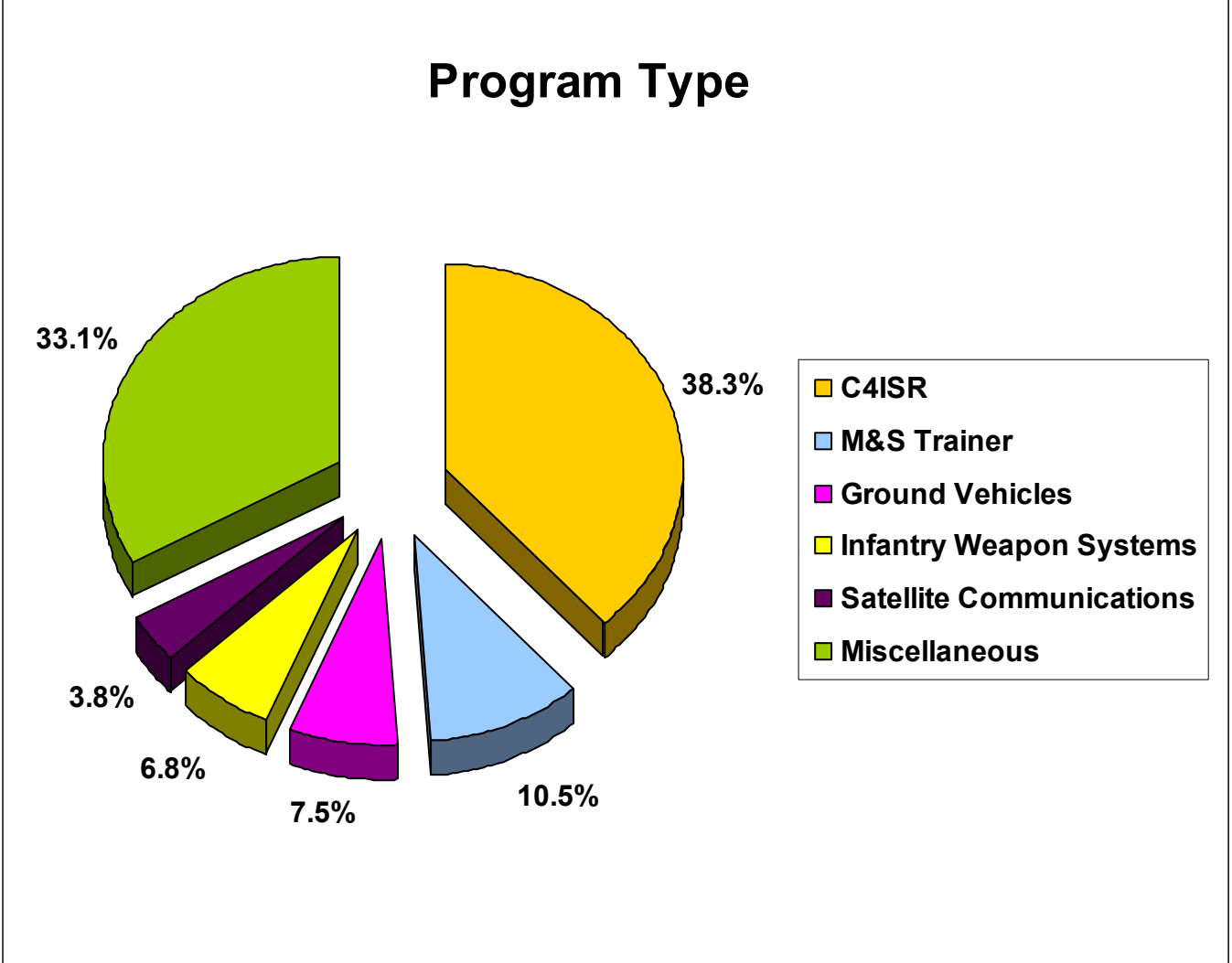
Note: Based on data gathered July 2009



Data Collection – USMC Acquisition Programs Surveyed by ACAT Level



Data Collection – USMC Acquisition Programs Surveyed by Program Type



Data Collection – USMC Acquisition Programs Surveyed by ACAT Level and Next Milestone Decision

	I and II	III, IV and AAP	UUNS	TBD	Total
MDD and A	0.8%	2.3%	0.0%	0.0%	3.0%
B	2.3%	8.3%	0.0%	0.8%	11.3%
C and FRPDR	3.0%	36.8%	0.0%	3.8%	43.6%
Other	0.8%	11.3%	0.0%	0.8%	12.8%
Unknown	0.8%	3.8%	10.5%	14.3%	29.3%
Total	7.5%	62.5%	10.5%	19.5%	100%

