Slide deck: CARD Training 29March2019.pptx

# TABULAR CARD TRAINING (TITLE SLIDE)

Welcome to the Training presentation for the tabular Cost Analysis Requirements Description (CARD). Participants will receive instruction on how to populate tabular CARD tables. Tabular CARD introduces a reporting structure that will improve data capture and analytic capabilities.

# CARTOON

To begin with something light…

We sincerely believe that tabular CARD is something new that will make things roll more smoothly for you (especially down the road with annual CARD updates). We do not think tabular CARD is another rock in your already heavy workload.

# OUTLINE

First, we will cover tabular CARD background and a few basic items.

Second, general features of the tabular CARD that occur across several types of tables will be presented.

Third, how to use these tables to describe your program.

*(Specific instructions and examples for populating each tabular CARD table will be covered in an optional extended session.)*

# TABULAR CARD BASICS (BREAKER SLIDE)

Let’s discuss a few basic items including tabular CARD background.

# CARD BACKGROUND

The new CARD tables serve several objectives. Not only do they serve legacy use as data required to estimate costs at a sufficient level of detail for developing Independent Cost Estimates (ICEs) required to support program and milestone reviews. They also will serve as a record of program evolution. Tables are designed to support future automation via a database and to be used for analytics.

The Office of Cost Assessment and Program Evaluation (CAPE) is engaged in several efficiency initiatives including updating the guidelines for the preparation and maintenance of the CARD. Converting to standard tabular reporting by commodity class will decrease the amount of effort required of program offices to complete the CARD and establishing annual CARD updates will capture changes in the acquisition program and improve the ability to develop and defend credible budgets.

# CARD BACKGROUND (cont’d)

Commodity class CARD tables are available on the CADE website in conjunction with the release of the updated CARD guidance. The tables feature a Work Breakdown Structure (WBS) that are Mil Std 881C product extensions which will also align with standard Cost and Software Data Reporting (CSDR) requirements and parameters defined to align with the future CSDR Technical Data Report (*do not refer to this as “1921-T”*). When populated and updated, tables will provide the technical, programmatic, and operational characteristics necessary to develop and maintain acquisition program cost estimates.

References that accompany this training include the Cost Analysis Guidance and Procedures Instruction (5000.73) dated June 9th, 2015, DoD Cost Analysis Improvement Memo dated January 9th, 2017, and the Guideline for the Preparation and Maintenance of the Cost Analysis Requirements Description.

# Information Necessary to Develop a Cost Estimate

Estimating methodologies and resulting estimates (e.g., POE) should not be included in the CARD. The CARD succinctly describes the key technical, programmatic, operational, and sustainment characteristics of a program and provides all of the program information necessary to develop a cost estimate.

# CARD WORKBOOK OVERVIEW

Tabular Card tables exist today as Microsoft Excel workbooks. Excel is being used at this point in time given its wide availability and analyst familiarity. Excel simply provides a readily usable straightforward row and column format. Each table is an Excel worksheet with a color-coded tab by purpose. These four purposes - describe WBS cost drivers (green), describe quantity (blue), describe deep detail (brown), and describe program context (purple) - are the outline for the next section of this training material.

The top rows of each sheet contain table header information. The table proper begins with a yellow-shaded row giving a name for each column. The left-most column(s) name each row. Most of the tables give you great latitude in row-naming which is described in table-by-table instructions.

A long term vision is to transition tabular CARD to a web-based Cost Assessment and Data Enterprise (CADE) database to maximize configuration control and contribute to analytic capabilities in the future. In the meantime, working with Excel workbooks is the medium for tabular CARD.

# TABLES IN THE CARD WORKBOOK

There are many types of CARD tables provided, each of which meets a specific estimating need. Along with general program context, tabular CARD was designed to capture descriptions of the system, quantity profiles, manpower requirements, Operating and Support (O&S) data, and other detailed information.

The Prime Mission Product (PMP) is described in terms of hardware and software via a table for each. The content of these tables along with the Size Weight and Power (SWAP) and Heritage tables support cost estimating via parametric methods. Content of these tables also support analogy selection and scaling. Program quantity is essential to estimating via any quantity calculation such as cost improvement curves. The Quantity table is time phased for time phasing the costs by year. The quantity per ship set of each configured end item is enabled via the Configuration table. The Manpower table (which is also time-phased) supports staff-loading estimating methodologies. Cost drivers for common elements (sometimes referred to a below the line elements) are accommodated via the Nonhardware Technical Table.

Two detailed tables are provided for situations encountered by certain commodities at mature program stages. Detailed parts methodologies such as priced bills of materials are accommodated with a detailed Parts table. For methodologies that require line replaceable unit detail, a detailed LRU table is provided. For operating and support phase constants an O&S table is provided. These constants provide essential information which, along with the two time-phased tables for Quantity and Manpower, supports O&S cost estimating methods. Many parameters from other tables such as the PMP table and LRU table will also likely be used in O&S estimating. A separate table for Software Maintenance is provided. The two software tables (for Development and Maintenance) are aligned with elements of the SRDR.

Tables are also provided for other essential cost estimating needs. The Program table provides program, subprogram, and designation naming as well as top-level linkage to DAMIR and DCARC metadata. The Milestone table provides dates necessary to compute schedule segment durations and to support estimate time-phasing. The contracts table describes contract information such as start and end dates. The Roles table provides distinction of responsibilities between contractor(s) and Government. The Budget Plan table provides a reference point for affordability analysis – comparing the estimating outcomes of the program as described in this CARD against some known budget values. The WBS/CRS Definitions table provides WBS element descriptions.

# Tailoring of Content & Detail by Phase & Program Uniqueness

While commodity-specific CARD tables provide an ample starting point for CARD creation, each program is different and tailoring the CARD tables is fully expected. Tailoring is not only available (for most tables) it is indeed encouraged. Work with your service cost agency analyst and your CAPE analyst as you tailor your tabular CARD so that everyone’s estimating needs are accommodated.

Program maturity drives the level of detail available (and expected) for a given tabular CARD. For example, acquisition programs at Milestone A generally have a lack of program definition and data, precluding the completion of the tables. Acknowledge these gaps and uncertainty within the program and work with the CAPE analyst / Service Cost Agency analyst to tailor the CARD to reflect them while still capturing assumptions that will mitigate the gap for cost estimating purposes. The CARD users (cost analysts) should not be forced to define acquisition programs.

The tables may appear daunting upon first look but do not be discouraged. Rather than regarding each cell of each table as a requirement – view each as opportunity to describe your program. Given the requirement for annual CARD updates, subsequent CARDs will see an increase in the amount of program definition and data available for populating the tables as the program matures.

# Unknowns, Uncertainty, NAs, and TBDs

While a lack of detail is fully expected for early program CARDs, there are guidelines that will aid each subsequent update.

It is acceptable to populate cells / fields of parameters that are not used by the acquisition program with NA for Not Applicable. If the parameter is expected to be used to describe the program but the values are unknown at this time, it is acceptable to populate the cell / field with TBD for To Be Determined. The use of TBD should be minimized, however; CARD reviews will assess TBDs for appropriateness and mitigate them if required for cost estimating purposes.

In general, you do not want to leave a cell blank. As it will appear to be an item not-yet-examined and is waiting to be filled for this version of your CARD.

Again, work with the CAPE analyst / Service Cost Agency analyst to ensure everyone’s needs are met.

# MARKINGS AND SECURITY

It is important that CARD adhere to what their program requires and IAW their program security classification guide (SCG) and their organization’s practices.

CARD tables containing sensitive data and must be marked accordingly: Unclassified, for official use only (FOUO), Classified, etc. Refer to the program SCG and its date to identify the classification of technical parameters before populating the CARD template, and determine how classified parameters need to be handled. Do not specify the classification level of a CLASSIFIED parameter as “S” or “TS” in the CARD tables. In some cases, security issues or compilations can occur solely by indicating the classification level of a particular parameter. Tables that contain sensitive contractor parameters should be marked “Contains Contractor Proprietary Data.” Always adhere to the organization’s security policies and procedures. Contact your CAPE analyst for the proper transmittal method.

# TABLE FEATURES (BREAKER SLIDE)

Now that we have covered the general overview, now we’ll jump into general table features

# PARAMETER NAME, VALUE, AND UNITS

Tables are constructed of columns and rows. Rows are pre-populated with parameters by commodity WBS. Each parameter row has a name and unit of measure associated with it. Tables will need to be populated with the parameter value, the source of that value, and any notes that further amplify or clarify the rows contents. A drop-down choice list is used to denote the value pedigree: whether the parameter is a planned value or an actual value.

In the interest in reducing burden, references to existing documents are permitted in lieu of direct value entry for these selected tables only (PMP Technical; Nonhardware Technical; SWAP; Heritage; Parts; Construction). When a Program Office chooses to provide reference documents in lieu of parameter inputs for the designated Tables, the Program Office must:

i. for every blank parameter, whether core or non-core, specifically annotate the reference document and its date, e.g., Draft CDD as of 26 Feb 2015, in the Parameter row and Source column;

ii. place an “X” in lieu of the Parameter Input if the Parameter Input is blank and referenced in its Source column; and

iii. provide all reference documents when it submits its CARD.

# PRE-POPULATED PARAMETER COLUMNS

Tables contain a number of pre-populated columns. Descriptions of the parameter are found in the Definition column. Future database connectivity and search capabilities transcending programs are supported by the VocabularyID column. The Repeatability column identifies when it is useful and appropriate to copy and paste a row in order to capture multiple entries of the same parameter, e.g. Material Mix. Some fields have discrete allowable value and contain a drop-down menu for added convenience. These range from simple Yes/No choice lists to full lists of potential choices.

When tailoring and adding new parameters, add information for these columns and unit of measure as well. When doing so write “New” in the VocabID column.

# UNCERTAINTY

Parameters value columns are usually populated with a single value. If instead it is desirable to capture a range of values, hidden columns for low, high, and margin may be expanded that provide the capability to capture those inputs. The Low and High columns simply bound a potential value and not intended to serve as confidence level bounds typically used in formal cost risk and uncertainty analysis. (However if you wish to express confidence levels do so in the Notes columns.) Unit of measure should be the same all parameter value columns.

You can also use the margin field to express value inputs.

# DESIGN SPECIFICATIONS

Design Specification columns may also be unhidden and populated with Objective and Threshold values using the same unit of measure as the parameter value. These columns are typically for use at the parent level.

Threshold and Objective inputs need to be in the same unit of measure as the input value.

# ALTERNATE DATA (aka MULTIPLE POINTS of VIEW)

While the tables are presented here (and when Excel is open) as though one primary point of view (typically the program of record) is contained, there are additional (hidden) columns to accommodate multiple points of view. Unhide and populate columns to capture parameters for not only the program position, but also for example an independent review team’s position. This feature may also be used to express the Government’s opinion and the contractor’s opinion, of in the case of pre-millstone A or B when multiple competing contractor’s point of view may be represented. Note the columns are only used when applicable and otherwise remain hidden.

There are other paths to representing different points of view. Entirely separate workbooks can the used as well. This may be especially useful if not all potential users of the CARD have permission to see both points of view. It may also be the WBS differs so much that it is too awkward to show both in a single table. Also, if the alternate POV only pertains to a few parameters simply copy that row and parenthetically name it as an alternate POV.

# REPEATABLE ROWS

Select rows are pre-populated with a “Y” in the Repeatable column. These rows will contain either “1…n” or “1…n Specify” after the parameter name. Copy and insert paste these rows to capture as many instances of the parameter as needed, providing each new row with a unique descriptive name.

# UNITS QUALIFIER

Unit Qualifier becomes useful when name, value and unit of measure do not adequately capture the characteristics of the parameter. Examples: when a single WBS element contains a repeated parameter, Unit Qualifier distinguishes each row; when the Unit of Measure is defined as “Quantity,” Unit Qualifier captures the type; when the Unit of Measure is defined as “List,” Unit Qualifier illuminates atypical choice selections. When a choice list ends in “Other” and you select Other, you should describe what “other” means in the context of the existing choice list.

# TABLE TAILORABILITY

In general, do not add columns to the CARD tables in the Microsoft Excel workbook. Rows may be inserted or copy /pasted as needed to adequately describe the acquisition program. Each table section of the brief contains the specifics regarding tailorability.

# DESCRIBING YOUR PROGRAM IN TABLES (BREAKER SLIDE)

The next section describes an overall strategy for CARD table population.

# COST DRIVERS DESCRIBED IN TABLES

As mentioned many of the tables are organized by WBS. Cost drivers vary by WBS element and while most of the PMP hardware cost drivers are in the PMP Technical Table, the total cost driver picture may lie in several tables. This is due to the uniqueness of certain WBS elements, their row and column shape, sheet repeatability, and due to the interest of segregating commodity-specific tables and common generic tables.

The next series of charts discuss individual topics/tables.

# DESCRIBING YOUR PMP IN TABLES – SIZE, WEIGHT, AND POWER

Size, weight, and power are recognized cost drivers for hardware are contained in the SWAP Table. Table needs to be populated with the parameter value, the source of that value, and any notes that further amplify or clarify the rows contents. Denote the value pedigree in the top row provided: whether the parameter is a planned value or an actual value. This table should be completed for the entire hardware WBS.

# DESCRIBING YOUR PMP IN TABLES - HERITAGE

Heritage is a recognized cost driver for nonrecurring development effort. Developing entirely new designs from scratch simply more effort than inheriting/modifying a design from a predecessor system. Cite the percent new design and the predecessor system in each case the value is less than 100%. Some guidance and considerations for determining percent new design include (this info and more is in the cell comment):

0% - 10% Existing design. May include previously qualified units, build-to-print units, and units with minimal changes from a prior unit. TRL is expected to be high (e.g. TRL 9) in this range.

10% – 40% Minor design changes. May include minor design changes due to component swap out for obsolescence and minor enhancements for producibility. TRL is expected to be high (e.g. TRL 8-9) in this range.

40% - 60% Moderate design changes. Based on prior design. May include problematic parts obsolescence (e.g. forced design changes or new vendor) as well as downstream impacts. Unlikely to include any significant changes to form, fit, or function (see below). TRL is may be moderately high in this range (e.g. TRL 7-8).

60% - 90% Mostly new design or major redesign. This range suggests a significant design effort. More than 50% of the item by weight is modified and will typically undergo some form of qualification testing. Typically includes development and testing of engineering, prototype, or qualification models. Usually includes changes to form, fit, or function. Parts obsolescence and downstream impacts may be more severe in this range. TRL may be in the 6-7 range.

90% - 100% Complete new design. Minimal design heritage. Typically includes development and testing of engineering, prototype, or qualification models. TRL may be 6 or lower.

# DESCRIBING YOUR PMP IN TABLES - HARDWARE

Recognized cost drivers for hardware (beyond size, weight, power, heritage) are contained in the PMP Technical Table. Each commodity workbook contains that commodity’s unique cost drivers by that commodity’s WBS. Table needs to be populated with the parameter value, the source of that value, and any notes that further amplify or clarify the rows contents. A drop-down choice list is used to denote the value pedigree: whether the parameter is a planned value or an actual value.

# DESCRIBING YOUR PMP IN TABLES - CONSTRUCTION

This Table is an extension of the PMP Hardware Technical Table and shares the same column structure and input requirements. This table provides cost drivers specific to construction projects. Descriptions of three types of projects are enabled: new construction, modifications/additions, and minor construction. The parameters for each are in grouped rows which may be copied, pasted and renamed for each applicable WBS element.

# DESCRIBING YOUR PMP IN TABLES - SOFTWARE

Software is an integral part of all systems today, and exists at many levels within the system. Each software element of the WBS requires entries on the Software Development Table. Note rows and columns are transposed as unique attributes in each SW release and CSCI are described in columns. Insert columns as needed and label the columns as appropriate. Note cell shading. White cells underneath Release column pertain to Release-level parameters only. White cells underneath CSCI column pertain to CSCI only. If you do not have CSCI-level data, then leave only one CSCI column pair and populate that column for the release. And name the column approximately.

A Software Resources Data Report (SRDR) may be required from the development vendor if the cost of any delivered SW end item indentured to a weapon system exceeds $20 million. However, SW items developed for lower level sub-systems or components may not cost enough to require an SRDR. Additionally, prior to MS B, the CARD likely includes planning data for a reference system or for an analogous system, as opposed to actual data for the system to be developed during MS B. The SW Development template allows the program to provide the reference system or analogous system SW technical data in the CARD to support early cost estimates. Additionally, as the actual system is developed, this template allows the program to collect technical data for SW items that do not meet the threshold for an SRDR.

# DESCRIBING YOUR PMP IN TABLES – Without the Software Dev Table

The work breakdown of the system on the PMP HW Technical Table includes rows for embedded SW items, with a summary of the technical data fields for a SW end item from the SW Development Table. These fields can be used as an initial location for pre- MS B reference system or analogous system data, or as the final technical data for very small SW end items rather than using a SW Development Table. However, all SW items from the PMP HW Technical Table should have a corresponding SW Development Table to capture the actual data for the SW being developed on-contract.

# O&S TABLE

For operating and support phase constants an O&S table is provided. These constants provide essential information which, along with the two time-phased tables for Quantity and Manpower, supports O&S cost estimating methods. Many parameters from other tables such as the PMP table and LRU table will also likely be used in O&S estimating. A separate table for Software Maintenance is provided. The two software tables (for Development and Maintenance) are aligned with elements of the SRDR.

This table is similar in structure to the other technical data tables. It is not time-phased. The essential parts time-phased parts of O&S are on the Quantity Table and the Manpower Table. This table is for static values or constants.

# QUANTITY DESCRIBED IN TABLES

The Quantity table is time phased for time phasing the costs by year. This is typically for the primary end items (top-level WBS elements).

The quantity per ship set of each configured end item is enabled via the Configuration table. This is typically at the child-level WBS elements.

Manpower (headcount quantity) is enabled time phased as well.

# QUANTITIES TIME-PHASED TABLE

Development, procurement, deployment, sustainment, and disposal quantity requirements are captured in the Quantities and O&S Time-Phased table to support quantity-based calculations in program cost estimates. Sample quantity categories are pre-populated in the first column of the table and the header row is reserved for fiscal year of the quantity requirement.

Populate the Item Name column with Prime Mission Product (PMP) End Items and other items usually described as a series of values (sorties, users, transactions, etc.). Populate the header row with the fiscal year values in which the quantities are required. Depict the entire quantity stream and avoid Prior or To-Complete columns. Use the drop-down menu in the Estimate or Actual row to identify quantities as planned or actual. Additional columns are provided to capture Long Lead Requirements, Unit of Measure, and quantity source.

# QUANTITIES TIME-PHASED TABLE (All Rows)

The quantity table is pre-populated with Prototype, Procurement and Concurrent Production, Deliveries, and Inventory or Fielded Density rows. Populate Procurement and Concurrent Production rows with quantities as procured or funded. Deliveries and Inventory and Fielded Density rows should be populated with delivered quantities. Inventory and Fielded Density rows should depict end-of-life quantity ramp downs. The quantity table also has rows for Operational Activity, Disposals, Overhauls or Scheduled Depot Maintenance, Hardware Modification Kits and Hardware Modification Installs, NDI Refresh Events, Training Events, and Base Activation quantity requirements. Operating Tempo (OPTEMPO) quantities should be input by Location or operational state. Select operational usage concepts are depicted, and additional operational usage measures should be inserted as needed. There are no provisions for capturing static OPTEMPO per item values in the Quantities and O&S Time-Phased table; they belong in the Operating and Support (O&S) table

# CONFIGURATION TABLE

This table identifies the composition of configured end items. Mapping subsystems/component quantity-next-higher-assemblies to end item quantities permits understanding of total quantity necessary for proper rate/learning curve analysis. Values entered will be the ship-set quantity per end item. The rows are WBS items which may be further divided into subsystem or specific parts if needed. The columns represent end-item configurations. Each named column should correspond to the end-items named in the Acquisition Quantities Time-Phased Table. The column names shown in the empty Table are examples only – customize columns to suit the program being described.

# TABLE-TO-TABLE THREADS (1 of 2)

The columns on the Configuration Table should match the rows on the time-phased Quantity Table. (Think: matrix math will provide the total quantity by child element.)

# TABLE-TO-TABLE THREADS (2 of 2)

Think ahead also to the WBS and how the cost, quantity, and technical data will tie together.

# MANPOWER TIME-PHASED TABLE (1 of 3)

Headcounts are captured in the Manpower Time-Phased table, supporting the staff-loading cost estimating methodology by providing inputs necessary to estimate program manpower cost estimates. Personnel categories are pre-populated for each section.

Depict the entire staffing stream and avoid Prior or To-Complete columns. Use the drop-down menu in the Estimate or Actual row to identify quantities as planned or actual. It is recommended to calculate the staffing requirements using Full-Time Equivalent (FTE) as the Unit of Measure for the Manpower Time-Phased table. The Constant per System Value column can be populated to capture staffing requirements on a per system basis instead of time phasing them. Insert rows to capture contractor staffing if needed.

# MANPOWER TIME-PHASED TABLE (2 of 3)

Depicted on this slide is a breakout of System Program Office at the summary level

# MANPOWER TIME-PHASED TABLE (3 of 3)

Depicted on this slide is a breakout of Operate at the summary level. Copy and paste sections as needed to capture all relevant staffing. Tailor the Operating and Support breakouts to service norms as needed.

# DETAIL DESCRIBED IN TABLES

Three detailed tables are provided for situations encountered by certain commodities at mature program stages. For methodologies that require line replaceable unit detail or any detail pertaining to removables, a detailed LRU table is provided.

For detailed parts methodologies such as priced bills of materials are accommodated with a detailed Parts table. This is typically useful for COTS-heavy programs. GFE is designated on the Parts table. While there is not a pre-named table for GFE, it is acceptable to clone the Parts Table and make one exclusively for GFE if desired. (At this point re-emphasize that ANY table can be cloned to represent two topics when it helps convey program content.)

# LRU TABLE

This Table arrangement is suitable for any listing of Line Replaceable Units. This level of detail is necessary for bottom-up estimates, maintenance estimating, and performing component analysis. The table is oriented to show parts by row with part numbers/names in the fifth and sixth columns. Use the first two columns to show WBS elements as needed for organization. Use the next two columns to show WUC codes/names as needed for organization. Think of the first four columns as tags to the LRUs – the primary intent of the table is to provide a place to list information about the LRUs one row at a time. There is nothing to “roll-up” to WBS level – the WBS is here only for identification.

Use this table to further describe Level of Repair Analysis (LORA) information for each LRU.

Enter mean time between failures (combined). And if available, enter MTBF by Controllable and Induced.

Enter Condemnation Rate - scrap rate.

Enter Level of Repair (Organizational, Intermediate, or Depot).

Finally enter who owns the support tail: Cite if responsibility of supporting this item belongs to this program. If not cite the organization responsible.

# PARTS TABLE

This Table arrangement is suitable for any listing of parts or equipment such as Bill Of Material (BOM), a spares package, or support equipment at a given location. This level of detail is necessary for bottom-up estimates, maintenance estimating, and performing component analysis. The table is oriented to show parts by row with part names in the third column. Use the first two columns to show WBS elements as needed for organization.

This table will typically be used for select WBS elements that are largely COTS or catalog-like information. This may be a fully priced bill of material with 100% of the element’s content. Or it may just the highest cost items – say 80% of the cost. Or it may be all the parts past a certain threshold – say everything $1000 or higher. Usage of the Parts table will vary by program, commodity, and maturity.

If tiered pricing is available/applicable, repeat the three stepladder columns as needed to convey completely. Tiered pricing is expressed in “stepladder” fashion with price dependent on a lot quantity range.

1. Stepladder Low Quantity: the step’s lower range of quantity

2. Stepladder High Quantity: the step’s upper range of quantity

3. Stepladder Price: the step’ unit price.

# PROGRAM TABLES

Tables are also provided for other essential cost estimating needs. The Program table provides program, subprogram, and designation naming as well as top-level linkage to DAMIR and DCARC metadata. The Milestone table provides dates necessary to compute schedule segment durations and to support estimate time-phasing. The Roles table provides distinction of responsibilities between contractor(s) and Government. The Budget Plan table provides a reference point for affordability analysis – comparing the estimating outcomes of the program as described in this CARD against some known budget values. The WBS/CRS Definitions table provides WBS element descriptions.

# PROGRAM TABLE

The Program table provides program, subprogram, and designation naming as well as top-level linkage to DAMIR and DCARC metadata.

# MILESTONE TABLE

The Milestone table provides dates necessary to compute schedule segment durations and to support estimate time-phasing.

A row is provided for each milestone and may be further tailored by inserting additional rows to convey additional program pertinent milestone dates. Enter complete dates, month, day, and four-digit year.

For additional columns to express alternative points of view, hit Ungroup button near the top of the spreadsheet. When expanded, take care to label each alternative design in the first column heading cell.

# CONTRACT TABLE

This Table provides an overview of each program Phase to include contracting strategy, competition, and individual contract and lot information. This data can be found in the Acquisition Strategy. Start/End dates are needed to estimate time-sensitive costs. Contract information is necessary to frame estimated contract costs and to subsequently link to contractor-submitted cost reports. The life cycle phase appears in the first column of the Table - every contract or MIPR needs to be tagged with its phase.

# CONTRACT TABLE (cont.)

Complete additional columns as noted.

# ROLES TABLE

The Roles table provides distinction of responsibilities between contractor(s) and Government.

This table identifies the primary suppliers and performers. For PMP elements, this is necessary to calculate contract loads by vendor tier. For non-PMP elements it is usefully for depicting relative participation by the Prime and the Government.

# WBS/CRS DEFINITIONS TABLE

The WBS/CRS Definitions table provides WBS element descriptions. Substantially self-explanatory.

# REPEATING TABLES IN A CARD WORKBOOK

While many of the tables are needed only once per program or per CARD workbook. However, some may need to be replicated to address separable content. When doing so, rename the tab (sheet name).

Examples shown – largely self-explanatory.

# Potential Data Sources to Consider

The program documents and contractor deliverables listed on this slide are useful references when populating the CARD tables.

# Closing Slide

Trainer contact information by Service listed.

# END

In conclusion …