# Appendix 14
# Work Breakdown Structure

# For

# Information Management and
# Communications Support (IMCS)

**14.1    Work Breakdown Structure (WBS), Work and Financial Reporting**

**14.1.1    Report Costs for Customer Organization**

The costs incurred under this contract should be organized in such a manner to allow the customer community to see their cost, down to the type of service, activity and task order level.  The goal is to allow each customer to identify where their funds are being expended to meet their service needs.  The expectation is that the customer community will use this data to understand their communications and technological utilization, understand what is driving their costs, and identify areas where they see a potential for improvement.  The data will also be used by IT Management to understand the cost associated with operating, maintaining, sustaining, and responding to service requests for the various systems used in providing information services to the Kennedy Space Center.

Costs shall be segregated and reported by customer and WBS element to the ~~second and third~~ **level** of the WBS as stated ~~below~~ **in 14.3, with the appropriate activity designation reported.**  This will allow system and service managers to address system wide costs that support the technical services across the contract by WBS element. Provisions shall be made to allow costs to be collected by government provided cost allocation as well as by special projects or activities that make use of standard contract services that are general in nature and may benefit multiple customers.  In addition, a cost summary shall be provided that sums all costs to the **first** level by WBS Element.

Current customers include Shuttle, Constellation, Launch Services, Space Station, Life Sciences, Institutional, and Center Management and Operations (CMO).  Further breakdown may be required for funding codes and customers which will be reflected in the work order report and in scheduled monthly reviews.

**14.1.2    WBS and Cost Assignment**

The WBS is organized by service and work type activities.  Work may take place for specific organization, mail code, service, function, or in a physical location.  The type of work, mail code, and location (site, facility, room) are necessary to schedule/assign work, are a key component in cost assignment, and will be further defined in a joint managed Rule Set.  Work descriptions in Maximo/Work Order Report must be well documented to further determine customer charging.  Reporting includes the task information and the resources expended to perform or support the task.

Resource utilization will be assigned to a customer or customers based upon a combination of the work performed, customer mail code, the work location, and that location's related occupancy/responsibility.  Project or mission support activities may carry a unique project code that supersedes other rules and may allow cost collection and reporting by project and WBS element.  These project codes will be related to specific customer(s) and will provide the necessary cost sharing allocation information.

In addition, the monthly work order report will be provided as a supplemental report to the NF 533 Financial Report (DRD-MS-03), which will be broken out by customers and provide every work order associated with Direct and any General type of allocation of hours.

Task Order Services (CLIN 002) shall be presented in the NF 533 format in a separate volume. Each task shall have its own unique tab which provides all elements of cost for that particular effort.

### 14.2 WBS Structure Organization

### 14.2.1 Level I - Major Support

Top-level major support.

### 14.2.2 Level II - Services

This will consist of the various Information Management Support Services within each Level I WBS.

### 14.2.3 Level III – ~~Activity~~ Specific Services

This will consist of the specific Information Management Support Services within each Level II WBS. ~~Every Level I/II WBS will contain the following standard Level III work elements.~~

### 14.2.4 Level IV – Activity

**Every WBS required for reporting will contain the following standard activity work element. The activity should be identified by a dash and appropriate number.**

**-1** Operations/Maintenance
Support for day-to-day operations of WBS element. Includes the following: console manning, system monitoring, mission support, fulfilling PRD requirements, trouble tickets, validations, maintenance, preventive maintenance, outage management, return-to-service, maintenance agreements/licenses, service contracts, and training in support of current systems.

**-2** Service Request
Support for all customer driven non-recurring requirements. May involve modifications, additional services, changes, new equipment, upgrades, minor and major moves, facility leases and equipment leases.

**-3** Sustaining Engineering
Support for changes and modifications to systems to provide additional service capacity, add features to software to reduce operational risk, replace obsolete hardware and software, or consolidate services. Predominantly, this would be internally generated requirements, not associated with a request from a customer.

**-4** Systems Engineering
Support for design and requirement analysis, system capacity analysis, design reviews, operations concept development, systems engineering planning documents, requirements gathering, project management and Systems Engineering and Integration, evaluation and testing of COTS software and hardware.

**-5**  Depot Repair

Support for all repairs to system and system components that are performed at an on-site repair facility.

### 14.3    IMCS Level I, ~~and~~ Level II, and Level III WBS ~~Structure~~ Reporting Requirements

**WBS 1.0  Management Support**

- 1.1    Phase-In/Phase-Out (Since phase-in occurs prior to contract start, this WBS only pertains to phase-out activities at the end of the period of performance.)

- 1.2    Financial Management

- 1.3    Contract Management

- 1.4    Technical Performance Management

- 1.5    IT Security Compliance

- 1.6    Security Management

- 1.7    Mission Assurance

- 1.8    Training

- 1.9    Logistics

    - 1.9.1    Property/Inventory Management

    - 1.9.2    Shipping/Receiving/Inspection Services

    - 1.9.3    Material Service Center Services

    - 1.9.4    Vehicle Management

**WBS 2.0  Safety and Health**

**WBS 3.0  Technical Services**

- 3.1    Computer Services

    - **3.1.1  Data Center Operations**

    - **3.1.2  Software Engineering**

3.2    Cable Plant Services

3.3    Transmission Services

3.4    Networks, Telephones, and Network Security Perimeter

    3.4.3    Telephone Services

3.5    Imaging Services

    3.5.1    Surveillance Television

    3.5.2    Media Production and Distribution

    3.5.3    Spacecraft Processing, Launch, and Landing Imaging

    3.5.4    Non-Engineering Imaging

3.6    Graphics Services

3.7    Audio/Visual (A/V) and Presentation Support Services

3.8    Timing Services

3.9    Voice Communications

3.10    Electromagnetic Measurement and Analysis Services

3.11    Publications Services

3.12    Printing, Reproduction, and Microimaging Services

3.13    Engineering Data Center

3.14    Library Services

3.15    Maximo Application Support Services

3.16    Forms Services

3.17    IT Security Services

3.18    Center-Managed Outreach Services

**WBS 04  IDIQ Task Order Services (CLIN 002)**

**14.4    WBS Examples**

<u>Some examples of work are as follows:</u>

**Example 1:**  Replace a broken Paging and Area Warning speaker at the SSPF.

The **reported** WBS element would be:

>  WBS 03.9**.x-1** Voice Communication; Paging and Area Warning System Services; Operations/Maintenance

This effort would be an operations/maintenance activity ~~effort~~.  Location Code would be SSPF (or facility number) and the room number.  Based upon this data, the customers associated with the SSPF (either entire facility or that room) would be assigned the associated cost.  The customer would see their cost and have visibility to the nature of the cost both in their volume of the 533 at that WBS and in the Monthly Work Order Report.

**Example 2:**  Provide XA (External Relations) launch photo support.

**The reported WBS element would be:**

>  WBS 3.5.4**-2**   Imaging Services; Non-Engineering Imaging; Service Request

The effort ~~request~~ is driven by a Customer Service Request.  The XA project code and the work activity effort would be used to identify and collect costs associated with the activity.  This particular cost would be charged to the "CMO Customer" and be reflected in their volume of the 533 as well as the Monthly Work Order Report.

**Example 3:**  Perform major network upgrade to SSPF/2<sup>nd</sup> Floor (Task Order #5 to CLIN 002):

**The reported WBS element would be:**

>  WBS 4.0 – TO-005 (IDIQ – Task Order #5)

This is a Task Order under CLIN 002 that will be reported in a separate volume of the NF 533.  This Task Order #5 will be reported under separate tab and will be separately funded.

**Example 4:**  Replace a 24-port network switch with a 48-port network switch in SSPF because the 24-port switch is nearing full capacity.

The **reported** WBS element would be:

WBS 3.4.**x-3**   Networks, Telephone, and Network Security Perimeter; Network Services; Sustaining Engineering

This effort would be a Sustaining Engineering effort because the work is associated with preemptively increasing service capacity.  Location Code would be SSPF (or facility number) and the room number.  Based upon this data, the customers associated with the SSPF (either entire facility or that room) would be assigned the associated cost.  The customer would see their cost and have visibility to the nature of the cost both in their volume of the 533, and in the Monthly Work Order Report.

**Example 5:**  The Constellation program requires the creation of a system requirements document for all communication systems that will be needed on the new Mobile Launcher (ML).

There would be several **reportable** WBS elements associated with this effort:

WBS 3.2.x-**4**

WBS 3.3.x-**4**

WBS 3.4.x-**4**

WBS 3.5.1-**4**

WBS 3.5.3-**4**

WBS 3.8.x-**4**

WBS 3.9.x-**4**

This effort would be a Systems Engineering effort because the work is associated with creating engineering planning documents.  The customer associated with this work is the Constellation Program.  The customer would see their cost and have visibility to the nature of the cost both in their volume of the 533, and in the Monthly Work Order Report.

**Example 6:**  The PRD calls for various transmission assets to be up to support a Shuttle launch.  The transmission planner needs to create Support Documents (SD) for the technicians to follow.

The **reported** WBS element would be:

WBS 3.3.x-**1**  Transmission Services; Operations/Maintenance

This effort would be an Operations/Maintenance effort **activity**.  Based upon this data, the customers associated with this request would be the Shuttle Program, and would be

assigned the associated cost.  The customer would see their cost and have visibility to the nature of the cost both in their volume of the 533, and in the Monthly Work Order Report.

**Example 7:**  Repair a broken OIS-D End Instrument (EI) that was removed from Pad A.

The **reported** WBS element would be:

> WBS 03.9.**x-5**  Voice Communication; Operational Intercommunications System; Depot Repair

This effort would be a Depot Repair **activity**. ~~effort~~  Location Code would be Pad A (or facility number).  Based upon this data, the customers associated with the Pad A would be assigned the associated cost.  The customer would see their cost and have visibility to the nature of the cost both in their volume of the 533 at that WBS and in the Monthly Work Order Report.