



MISSION GENERATION SUB-CAPABILITIES

Last Updated: 21 December 2015

The combat support Generate the Mission core capability is broken down into six main sub-capabilities dealing with mission elements. A mission element can range from manned/unmanned aircraft, [nuclear weapons systems](#), and [satellite launch vehicles](#), to applicable support/test equipment and vehicles required for mission generation.

Prepare Mission Element

These are the actions necessary to assess, repair, maintain, inspect, and ready the mission element to commence operations. This includes:

- ✦ **Assessing the status of the mission element:** Actions necessary to appraise overall mission element condition resulting from mission debrief, flight status record, and quality and safety inspections.
- ✦ **Maintaining and modifying the mission element:** Routine maintenance and modification actions required to prepare the mission element for the assigned mission. It includes, but is not limited to, corrosion control and replacement of consumable materiel and components.
- ✦ **Repairing the mission element:** Actions necessary to restore the damaged mission element.

Prepare Payload

This involves configuring and delivering personnel, equipment, or materiel for specific mission needs. This includes:

- ✦ **Delivery for assembly:** The delivery of mission-specific payload components for assembly.
- ✦ **Assembling the payload:** Combines the mission-specific components into the payload (completed units, kits, or assemblies) that are transported.
- ✦ **Distributing the payload for loading:** Transport and distribution of the mission-specific payload in the total quantity required by the date required.

Configure Mission Element

This is a broad capability that includes assembling, loading, fueling, and arming the mission element for a specific mission. It includes delivery of required mission preparation information to the platform. This includes:

- ★ **Preparing the mission element layout and configuration:** The capability to physically configure the mission element to receive the type of payload required.
- ★ **Fueling mission element:** Actions needed to fuel the mission element.
- ★ **Uploading the payload:** Actions required to load the primary payload to accomplish the mission.
- ★ **Configuring systems:** Actions required to ensure integration of mission element and payload, navigation elements, and parameters.
- ★ **Verifying mission readiness:** The performance of mission systems checks and crosschecks.
- ★ **Positioning for initiate and launch:** Actions required to place the mission element for immediate employment.

Launch Mission Element

This is the capability to perform final actions and hand off the system to the element operator to execute the mission. This can include initiating mission systems with the use of satellites. This includes:

- ★ **Performing pre-mission checks:** Preparations for mission execution by mission operators or mission support crews. These actions verify readiness and mission-specific requirements, including verifying loading of the payload on the mission element and taking takeoff weather conditions into consideration.
- ★ **Initiating mission systems:** Sets into motion the mission execution in accordance with mission-specific requirements.
- ★ **Performing final checks:** Final inspection/validation of the mission element prior to mission launch/execution.

Recover Mission Element

This provides the capability to receive and assess status of the mission element. It also includes actions to extract personnel and damaged or disabled equipment under friendly control for return of personnel to duty and equipment to repair. Recovery of information (e.g., imagery and other mission data) collected by the platform during the mission also applies to this sub-capability. This includes:

- ★ **Routine recovery:** Retrieval and restoration of mission elements during non-crisis situations or missions.
- ★ **Crash recovery:** Retrieval and restoration of mission elements during a crash situation.
- ★ **Offloading mission support element payload:** Actions required to download the primary mission payload when that payload was not designed to be expended or was simply not expended or when the next launch requires a change in configuration.

Prepare Launch and Recovery Apparatus

This provides the capability to inspect and analyze the mission element to determine if it can be repaired and estimate initial needs (parts, components, equipment, and personnel) to execute the repair. This includes:

- ★ **Repairing launch and recovery apparatus:** Returns the recovery apparatus to its original or usable and functioning condition resulting from normal wear and tear or mission damage.
 - ★ **Restoring launch and recovery apparatus:** Returns the recovery apparatus to its original or usable and functioning condition to bring the launch and recovery apparatus back to mission status beyond normal maintenance.
 - ★ **Configuring launch and recovery apparatus:** Arranges, sets up, or shapes the recovery apparatus with a view to mission-specific recovery application or use.
 - ★ **Transporting and positioning launch and recovery apparatus:** Moves the launch and recovery apparatus to the location and prepares for use.
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