



Simplify DoD Program Work Breakdown Structure Compliance with Jama Connect® for MIL-STD-881 Engineering

Department of Defense teams struggle with implementing and using a Work Breakdown Structure (WBS) during the lifecycle of a project. MIL-STD-881, while eloquently providing guidance on how to create and manage a WBS, does not offer practical guidance for its use. A WBS is a tool primarily for organizing work and managing scope, but it doesn't always communicate the "why" or the strategic vision behind the tasks. Without clear communication about the purpose behind the tasks, team members might fail to see the bigger picture, leading to misalignment in execution.

Jama Connect for MIL-STD-881 is a solution designed for systems engineers, program managers, and quality engineers that provides the mechanism to not only manage the WBS itself but also link it to requirements and downstream artifacts across the lifecycle. It is a single platform for companies building complex systems to manage requirements, test, and work breakdown structures throughout the product development lifecycle. It is available as either a cloud or self-hosted deployment option accessed with a web browser so no client-side software needs to be installed. The license model is fully scalable, ensuring rapid deployment and easy adoption of the solution across your system development team with all stakeholders.

Solution Description

Jama Connect for MIL-STD-881 provides a structured method to incorporate a WBS which is a hierarchical breakdown of the work necessary to complete a project. The WBS is an extension of the Product Breakdown Structure (PBS) in that it defines the non-product work necessary for success such as testing, logistics, systems engineering, integration, and project management.

Key Benefits

Improve program monitoring and reporting

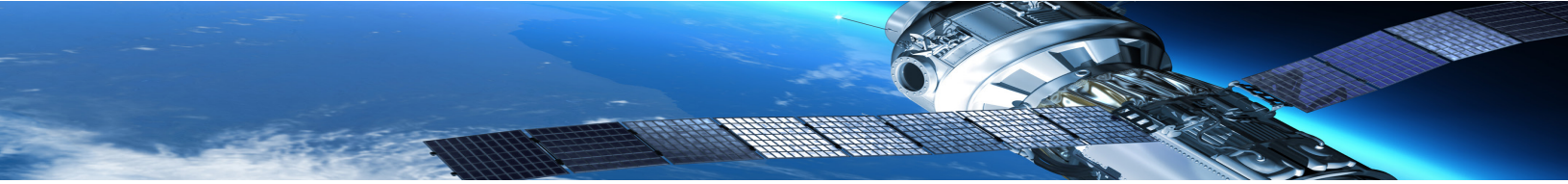
Having a single source of truth for the WBS and related requirements and other artifacts helps program managers to more effectively monitor and report on program work status based on the most complete and up-to-date information.

Improve system engineering planning

Linking the WBS to requirements helps chief engineers and program managers to get on the same page to ensure alignment and clear communications for system engineering planning and the strategic vision behind program tasks.

Simplify change management

Managing a WBS in a way that ensures program status is continuously visible makes it easier to identify, coordinate, and implement changes necessary for desired results.



The solution includes the following:

- Template aligned to the key defense instructions in DoD 5000.02 and the Digital Engineering instructions in DoDI 5000.97
- Multiple export templates and reports
- Training and consulting available through Jama Software's Customer Success programs for WBS integration with requirements and architecture

When structured and used in conjunction with systems engineering principles, cost estimating, EVM IPMDAR, CSDR, and integrated scheduling tools, the WBS allows for program status to be continuously visible so the program manager and the contractor can identify, coordinate, and implement changes necessary for desired results.

A WBS designed in Jama Connect for MIL-STD-881 not only acts as a traceable mechanism between work and design requirements but also facilitates as a coordinating medium between contractor and government. When workflow and status information is enabled in Jama Connect, the system can provide real-time data about program requirements and related artifacts that may be used in other tools for cost estimating, scheduling, and risk management.

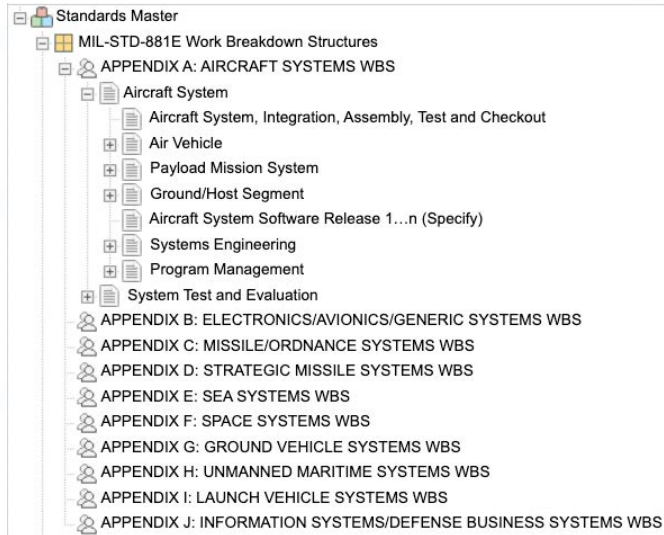
MIL-STD-881E WBS applies to specific categories of defense material:

- Aircraft Systems
- Electronic/Avionics/Generic Systems
- Missile/Ordnance Systems
- Strategic Missile Systems
- Sea Systems
- Space Systems
- Ground Vehicle Systems
- Unmanned Maritime Systems
- Launch Vehicle Systems
- Information Systems/Defense Business Systems
- Common Elements
- Sustainment Cost Reporting Structure (For Information Only)
- Government System Test and Evaluation

A WBS in the Jama Connect solution is organized by the specified prime products at the top, and the systems, segments, subsystems, etc. at successive lower levels. The lowest level contains products, such as hardware and software, for which there is a defined and responsible engineer or manager.

Traceability between system and subsystem requirements is directly supported via parent child relationships enumerated in the MIL-STD-881 Traceability Information Model (also known as Relationship User Diagram) provided in the solution. It is extensible to accommodate a variety of data models representative of various types of end weapons systems. The resulting traceability helps ensure contractors identify the item requirements and their relationship to the WBS.

Managing a Work Breakdown Structure in Jama Connect for MIL-STD-881



The screenshot shows the 'APPENDIX A: AIRCRAFT SYSTEMS WBS' table in the Jama Connect interface. The table has the following columns: ID, WBS#, Name, WBS Level, WBS Type, # of Downstream..., Relationship St..., and Assigned. The table contains 13 rows of data, with the first row highlighted in blue.

ID	WBS#	Name	WBS Level	WBS Type	# of Downstream...	Relationship St...	Assigned
STAND-WBS-1	1	Aircraft System	1	Program	1		
STAND-WBS-2	1.1	Aircraft System, Integration, Assembly, Test and Checkout	2	Program	2		
STAND-WBS-3	1.2	Air Vehicle	2	Program	3		
STAND-WBS-4	1.2.1	Air Vehicle Integration, Assembly, Test and Checkout	2	Contract	3		
STAND-WBS-5	1.2.2	Air Frame	2	Program	2		
STAND-WBS-6	1.2.2.1	Airframe Integration, Assembly, Test, and Checkout	3	Program	2		
STAND-WBS-7	1.2.2.2	Fuselage	3	Program	2		
STAND-WBS-8	1.2.2.3	Wing	3	Program	1		
STAND-WBS-9	1.2.2.4	Empennage	3	Program	1		
STAND-WBS-10	1.2.2.5	Nacelle	3	Program	1		
STAND-WBS-11	1.2.2.6	Other Airframe Components 1...n (Specify)	3	Program	1		
STAND-WBS-12	1.2.3	Propulsion	2	Program	2		
STAND-WBS-13	1.2.4	Vehicle Subsystems	2	Program	1		

Jama Connect for MIL-STD-881 links a WBS to requirements and artifacts for clear communication, alignment, and planning of program tasks with strategic goals.

To learn more, visit us at www.jamasoftware.com/airborne-systems/



Jama Software® is focused on maximizing innovation success in multidisciplinary engineering organizations. Numerous firsts for humanity in fields such as fuel cells, electrification, space, software-defined vehicles, surgical robotics, and more all rely on Jama Connect® requirements management software to minimize the risk of defects, rework, cost overruns, and recalls. Using Jama Connect, engineering organizations can now intelligently manage the development process by leveraging Live Traceability™ across best-of-breed tools to measurably improve outcomes. Our rapidly growing customer base spans the automotive, medical device, life sciences, semiconductor, aerospace & defense, industrial manufacturing, consumer electronics, financial services, and insurance industries. To learn more, visit us at jamasoftware.com.