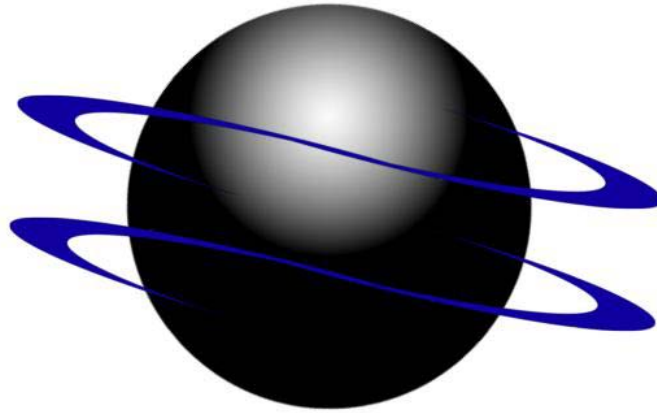


# Adversary Missile Production Model

Version 2.0



## Missile Assembly and Checkout Cost Model

The Missile Assembly and Checkout Cost Model enables Intelligence Analysts (IAs) to accurately track costs and schedules throughout the manufacturing, assembly, transit, and sustainment of threat missile systems. The model provides cradle-to-grave modeling and planning of missile classes such as Short Range Ballistic Missiles (SRBMs), Medium Range Ballistic Missiles (MRBMs), Intermediate Range Ballistic Missiles (IRBMs), Intercontinental Ballistic Missiles (ICBMs), and all types of cruise missile; the model may also be used for virtually any other multi-component deployed system; i.e. Surface to Air Missils (SAMs). The model takes into account weather impacts, workload effects, and ripple-down effects of various bottlenecks in the development lifecycle. It highlights and identifies such bottlenecks that enable IAs and exploitation officers to **isolate issues and risks early in the threat development and thus predict the affects downstream**. The model determines the impacts to threat deployment due to schedule slippage, and predicts potential funding profile requirements for threat systems. Additionally, the model supports garrison deployment prediction, and provides a series of graphical outputs to highlight a myriad of

different metrics. The Diagram 1 shows output data and execution flow.

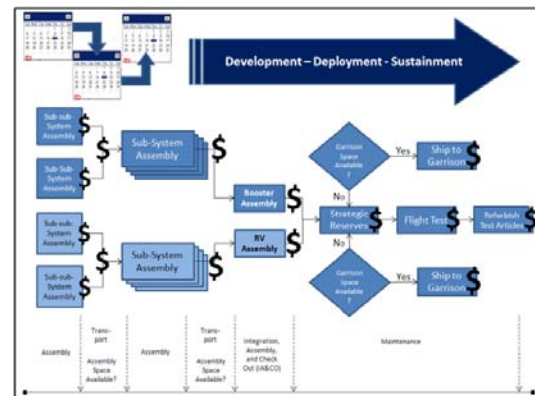
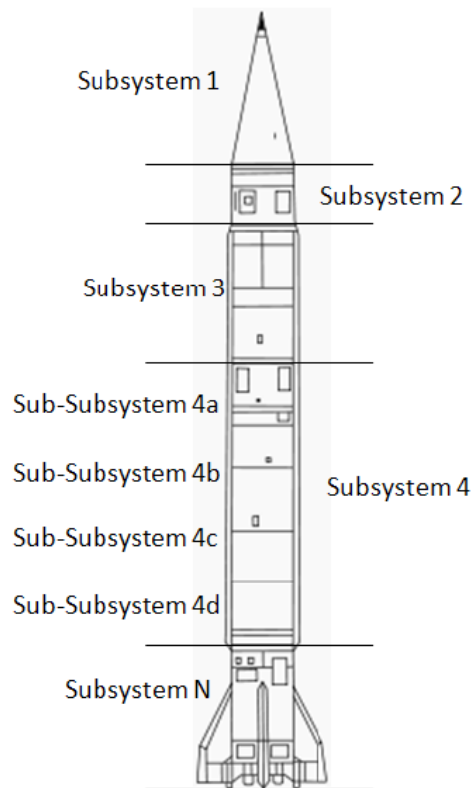


Diagram 1: Data and Execution Flow

## Sub System Development

The model tracks the delivery and assembly of the pertinent components. The user has the option of modeling sub-components of the sub-components until the desired level of fidelity is met. The model calculates the running costs including holidays and off time, as well as the costs and bottlenecks of delivering the components to the next assembly point. The model predicts where risks will potentially derail the program downstream.



### Weapon Assembly

User's define the location of the final assembly point, and the method of delivery for each sub-system. The tool modeled the deployment of the Ground-based Mid-Course Defense system to known facilities, as well as modeling the deployment of the system to multiple OCONUS locations for cost comparison purposes. Analysis was performed to identify cost savings/losses, and physical accessibility of the locations and if sub-assembly occurred at the OCONUS location, or at a CONUS facility.

### Deployment Preparations

The tool accurately represents the physical limitations and costs associated with pre-deployment preparations. For fixed locations, this might require digging silos, assembling and transporting launcher control equipment, and for mobile weapons systems, it might include filling and transporting canisters and site preparation.

In either case, various issues will arise that affect the costs and schedules; such as inclement weather.

### Deployment and Shipment

The model enables the user to define the methods of final deployment and/or shipment. In most cases, this is by way of rail transport, but may also include road convoys. In many cases, it might include both types of travel for different legs of the transit route. The tool provides cost and schedule estimates for each method of transit.

### System Refurbishment

Every system must be refurbished and maintained during its lifecycle. These functions, depending on their frequency and duration, can be costly and adversely affect the operational readiness. The tool not only represents this situation, but enables decision-makers to evaluate and modify the operational tactics, techniques, and procedures (TTPs) to ensure system availability.

### Weapon Launch

The tool accounts for missile launches, such as test launches, and incorporates those into inventory assessments and updates storage capacities accordingly.

### Graphical Output

To be useful, a model must provide results in a timely and readable manner, even those questions that are not always obvious. The tool does that in abundance. Users are able to graphically track systems and sub-systems which are in development, completed, in transit, in storage, and in the field.

### For more information Contact:

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