

TIPP – Technology Insertion Planning Process

Technology and Performance Evolution Planning: Leveraging the advantages of commercial technologies into today's complex systems brings both programmatic and technical challenges to the acquisition office and the contractor.

These challenges include:

- determining the optimal time to procure hardware for a system in development;
- establishing the quantity of resources to be procured in support of a development effort;
- ensuring that the system components are not obsolete at the time of initial system delivery;
- developing a plan to refine sparing requirements in the context of the shorter life cycle of commercial products;
- upgrading system mission performance with advances in technology to minimize cost and impacts to the platform.



ASSETT's Technology Insertion Planning Process (TIPP) tool a decision support application that:

1) Tradespace Configuration Window is used to setup time frame of your analysis and the data which you wish to be captured

2) Configure Tradespace Years:
Start: Is the year when your Architecture is initially defined
Stop: Is the year the Analysis is completed
Apply Button: Stores the changes you have made
Note: The start year can be any year >= the first entry year in the WBS (discussed later) (if you don't have any hardware introduced into the architecture, you can't run an analysis).

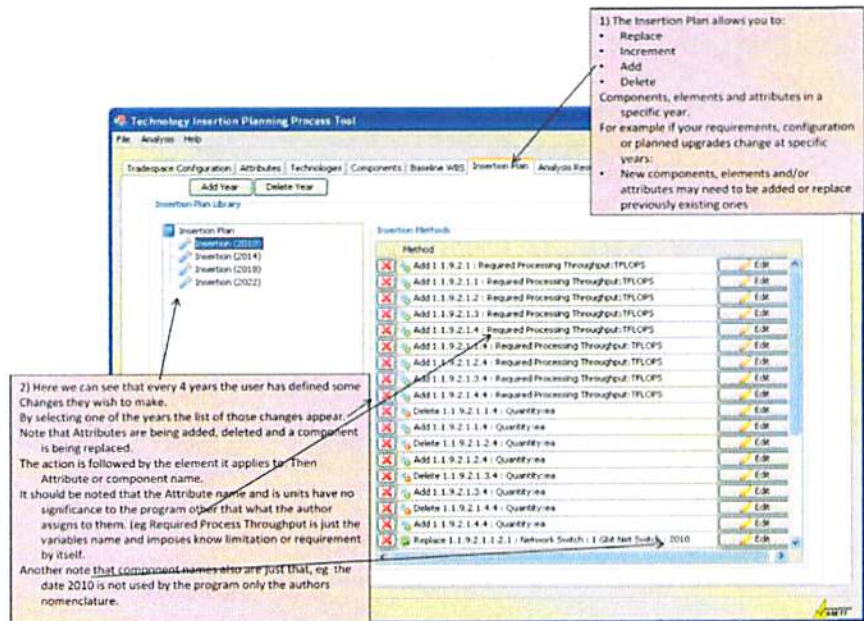
3) Configure Tradespace Attributes: is the location where you would drag and drop an attribute which you wish to view results "summarized" over all of the years in the Tradespace (more on this in the next page)

4) Configure Summary Report:
It not where the Analysis Data will end up.
It configures which years you wish displayed (performed by checking the boxes)
The attributes you wish displayed (again dragged and dropped from the attribute menu)
And the order which you wish the attributes are to appear in the Analysis Data

- Provides the Program Manager and/or Chief Engineer with the ability to analyze alternative approaches for system upgrades driven by
 - new mission needs,
 - obsolescence issues,
 - fleet inputs (gaps).
- Provides a convenient mechanism to
 - document the current system baseline technologies, and
 - project the evolution of those technologies over the lifecycle of the system.

TIPP is highly configurable, allowing the user to define key trade-off parameters for the alternatives being evaluated.

- Product Profiles are developed once and used across multiple systems.
- Cost Models are developed with inflation/deflation factors and can be reviewed and approved by Cost Engineering.
- System Baseline Configuration information can be downloaded from the developer's or Navy Databases.



1) The Insertion Plan allows you to:

- Replace
- Increment
- Add
- Delete

Components, elements and attributes in a specific year.
For example if your requirements, configuration or planned upgrades change at specific years:

- New components, elements and/or attributes may need to be added or replace previously existing ones

2) Here we can see that every 4 years the user has defined some changes they wish to make. By selecting one of the years the list of those changes appear. Note that Attributes are being added, deleted and a component is being replaced.
The action is followed by the element it applies to. Then Attribute or component name.
It should be noted that the Attribute name and its units have no significance to the program other than what the author assigns to them. (eg Required Process Throughput is just the variables name and imposes know limitation or requirement by itself.
Another note that component names also are just that, eg the date 2010 is not used by the program only the authors nomenclature.

TIPP is a repeatable process which uses an objective approach to planning technology insertions over the system's life cycle and provides baseline and objective supporting information to inform the decision-making process.

The TIPP application is expandable to include additional attributes and technologies (e.g. non-electronics).

TIPP is one of several tools within the OA-TIME suite designed to help the Program Manager and Chief Engineer maintain fleet superiority, while minimizing Total Ownership Costs (TOC). OA-TIME provides tools that synchronize schedules, assess risks, predict the impacts of technology, and estimate costs across systems and platforms within the enterprise.

ASSETT — the partner of choice for complex systems engineering services and support.



ASSETT, Inc.
11220 ASSETT Loop, Suite 101
Manassas, VA 20109
Phone: 703.365.8950 • Fax: 703.366.3579 • info@asset.net • www.asset.net