Q. Why Use the TFD Data Vault?

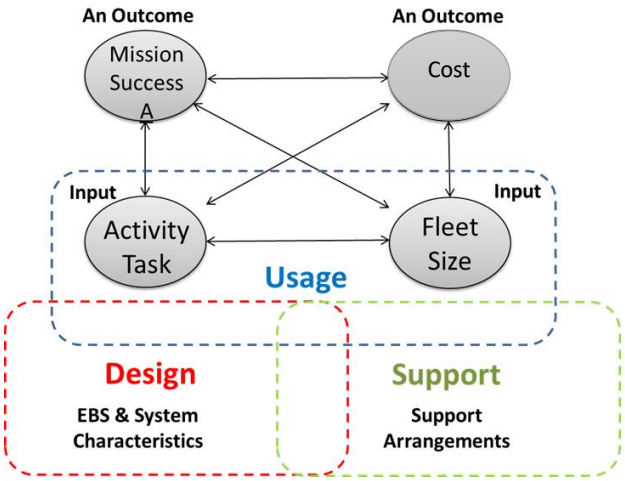
A. To Provide a Single Robust Source of Essential Data for Logistics Modelling & Analysis

You should you use the ***TFD Data Vault*** (***TFD dV***) to:

- Collate the data needed for logistics analysis and modelling for multiple systems.
- Provide a controlled data store.
- Centrally manage logistic data.
- Protect the investment in good quality and trustworthy data.

The *TFD dV* is a comprehensive, robust, common source repository for logistic data.

The cost and output of a Capability are defined by the interaction of its Usage Pattern, its Equipment Design described by the system structure and related attributes such as reliability and maintainability, and the Support System. The critical outcomes of operational performance such as system availability and cost are the result of the complex interaction of these three key features.

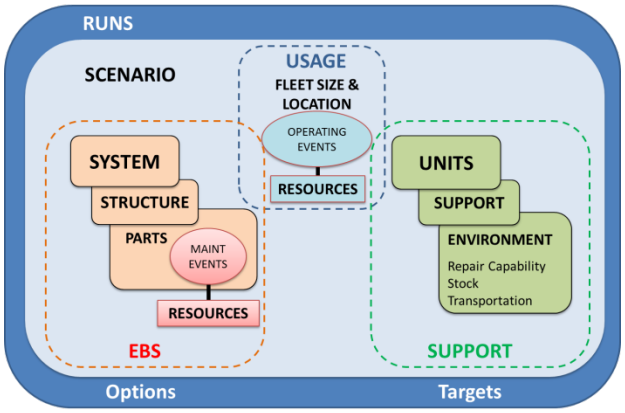


TFD dV

The ***TFD dV*** holds logistic data for systems, their operational usage, constituent components, and all the resources (parts, tools and skills) required for their maintenance in different scenarios. It contains the essential numerical subset of a traditional LSAR that is needed to make logistics decisions but without the specific constraints of LSAR data standards. But all data is subject to rigorous validation on entry against business rules that ensure logic, consistency, coherence and completeness.

The ***TFD dV*** has been specifically designed and evolved over 30+ years to contain all the data needed for logistics analysis and modelling.

Logistic data is typically drawn from many and varied sources with disparate original purposes. While the old adage suggests "*collect data once, use many times*", it can be taken too far with data often misused out of context because it was available. The only true solution to this conundrum is to understand how and why data has been captured, and in what context. If it is then structured in true relational terms, the original meaning is preserved and then can be used. This requires very careful thought on how to structure the data repository.



Fortunately, TFD Group has developed and evolved the ***TFD dV*** as the single dependable source of trusted logistic data in a true relational database that has been specifically designed to contain the data needed for logistic decision making.

Data Sources

Because logistic data is typically drawn from many and varied sources with disparate original purposes, it is often inconsistent, incoherent and incomplete. It is frequently inaccurate because the sources have not been updated to reflect the latest physical state of the system or because data systems do not trap manual entry errors such as multiple versions of part numbers. On one aircraft system, the initial Bill of Materials was 440,000 parts; after cleansing and rationalisation, the real number was only 152,000.

Capturing, collating and assembling conflicting data from multiple sources to identify and select the true data in order to describe systems is, therefore, a potentially difficult and time-consuming task. It is also highly unlikely that all the required data will be available, assumptions and data creation are inevitable and a Master Data and Assumptions List under configuration control is a vital tool.

Data Quality Assurance

The need to assure data quality, by using agreed data standards and applying sound processes throughout the data life cycle, is well recognised. These ideals are not yet universal and most logistic data was either developed historically or is still not assured. Data standards are often 'tailored' locally which destroys their very purpose. This situation is likely to continue and we must accept the reality of having to use legacy data for very many years.

Fortunately, the ***TFD dV*** applies rigorous data validation checks to ensure that only legitimate and logical data can be entered. For example, uploading a recent 'standard' air platform LSAR to the ***TFD dV*** exposed 70,000 errors; this rate is quite common.

Data Cleansing

Data cleansing is, therefore, an inevitable and very laborious burden. But even if the data is cleansed before analytical use, unless the original data sources are also cleansed, the errors will perpetuate and all the good work will be undone when the next update is loaded. The ***TFD dV*** deals with this issue by assigning a Data Quality Attribute to each and every field. This can be set to protect cleansed data from subsequent automated updates. It can also be used to manage progress with the data cleansing process and focus attention on the data fields with the greatest business impact.

Initial Data Sets

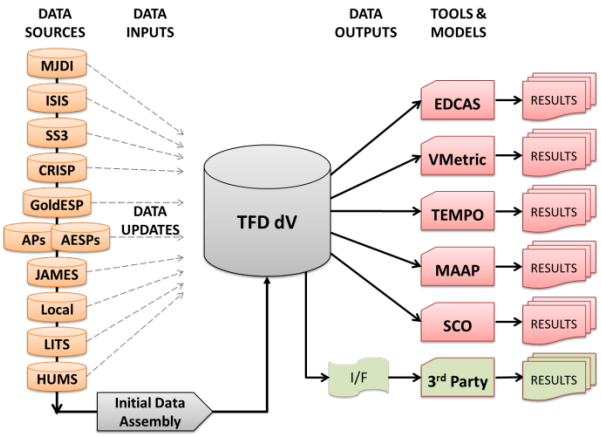
The inevitable data issues mean that building an initial system data set automatically is rarely if ever possible. The error trapping and correction algorithms would be so extensive and source specific for the effort to be futile. Therefore, building the initial data set is likely to be quicker and more straightforward if the task is conducted by a skilled analyst.

There is nothing like building a model of a system to refine the needs for data. Two very appropriate adages come to mind "*The more you use the data, the better it gets*" and *"It's better to model with some data than not to model at all."* To misquote General Eisenhower *"It's not about the model, it's about the modelling".*

That said, once the initial data set is constructed, it is possible to create automated or semi-automated interfaces to the data sources to capture updates. Data maintenance is a vital function which must be sustained. Having suffered the burden of building the initial system data sets for analysis, constant maintenance minimises is essential to minimise delays when further analysis is needed.

The maintenance task is eased by using the TFD Database Executive (***TDX***), a powerful software utility to manage the ***TFD dV***. Use of ***TDX*** minimizes the need for specialist training allowing data maintainers to interact with the data in a natural and intuitive way. For large applications containing many systems, ***TDX*** is a cost-effective solution.

The ***TDF dV*** is the vital core of the powerful suite of logistic support decision tools in the ***TFD Supportability Workbench.*** It provides a trusted source of data for logistics models and analysis.



The ***TFD dV***:

- Was specifically designed and evolved over 30+ years to support logistic support decisions.
- Contains logistic support data in its appropriate context for dependable reuse.
- Enforces data quality during data entry and protects it subsequently from corruption through over-writing by automated uploads.
- Drives the ***TFD Supportability Workbench.***
- Can also drive 3rd Party analysis tools.

The TFD dV is the solution to your data problems.

TFD also provides skilled and experienced analysts who understand the logistic support business to solve your data problems.

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