



CAM FTMC Introduction

**Flight test management
at a glance**

**CAM FTMC
Flight Test Management Connectivity**



CAM FTMC Introduction

Mission Statement



Aerospace Test and Flight Test Engineering (TE&FTE) requires standardized Information systems infrastructure and applications with the flexibility to handle the ever changing testing and quality assuring processes for decades.



CAM FTMC Introduction



Why ?

T&E Manageability

Resource Management

Engineering Transparency

Planning and Estimate Control

Program Cost & Budget Control

NOTE:

The Aerospace Industry and its Affiliates are facing these days the biggest consolidation Processes ever in History



CAM FTMC Introduction

Current Aerospace Testing Scenario



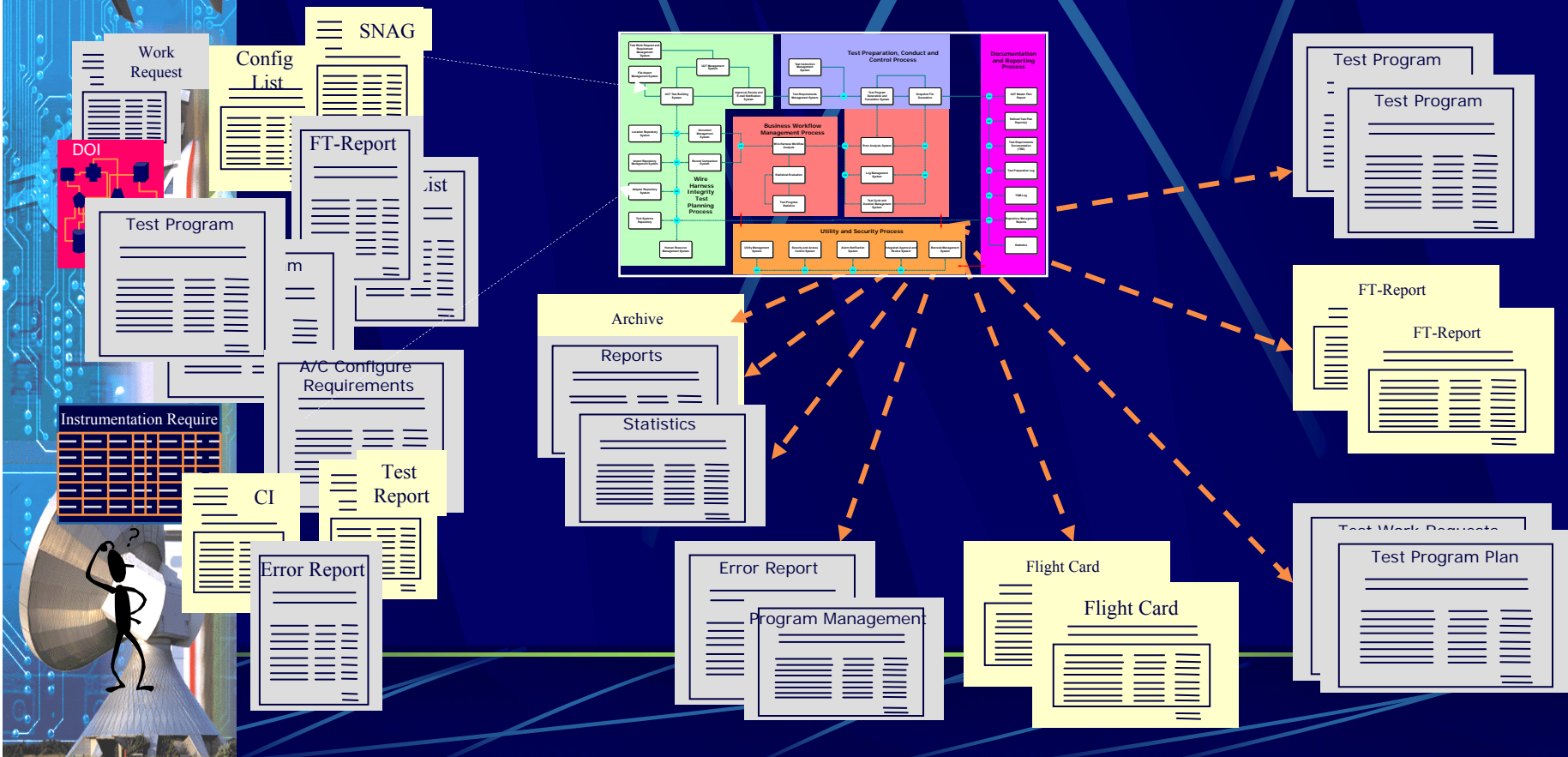
Current (Flight) Test Scenario

requires

CAM FTMC Roadmap

provides

Standardized Output Requirements



CAM FTMC Introduction

The pathway to reduced granularity



CAM FTMC

Reusability

Total

Reduced Granularity

Refined

Document Management

Aircraft Test Configuration Management

Mission Planning

Resource Management

Instrumentation Management

Statistics

Approval and Review

PDM and QA Requirements

Test Program Management

Repository Management

Test Requirement Management

Precision



CAM FTMC System Introduction



The CAM FTMC System is the Result of more than 10 Years intensive Research and Development in the Aerospace Industry to standardize Test and Evaluation (T&E)

It incorporates five (5) Business Processes

Test
Planning
Process

Mission
Command
&
Control
Process

Reporting
&
Publishing
Process

Business
Workflow
Management
Process

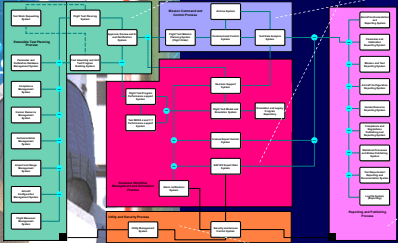
Utility
Management
Process

CAM FTMC Basics

Roadmap Relation to Information Flow



L1 through L4 present the Information Sources for CAM FTMC



CAM FTMC Roadmap



CAM FTMC Basics

T&E Model (Data Flow)



General Corporate T&E Information (Data) Flow

Design Engineering → Quality Assurance

Workflow Management Processes

Test Management → Flight Test Operations

Test Planning Processes

Test Operations → Mission Command & Control

Reporting & Publishing Processes

Production → Compliance Authorities

Implemented CAM FTMC Workflow Management

Result: Data Flow within CAM FTMC T&E Model

Utility & Security Processes



CAM FTMC Basics

T&E Structural Model Constraints



By embedding CAM FTMC within the Customer T&E Organization, Information will be transformed into Data. Data made available to the user thereby concurrently avoiding workflow redundancy and creating engineering transparency.



CAM FTMC

**FLIGHT TEST PROCESS
IMPROVEMENT**

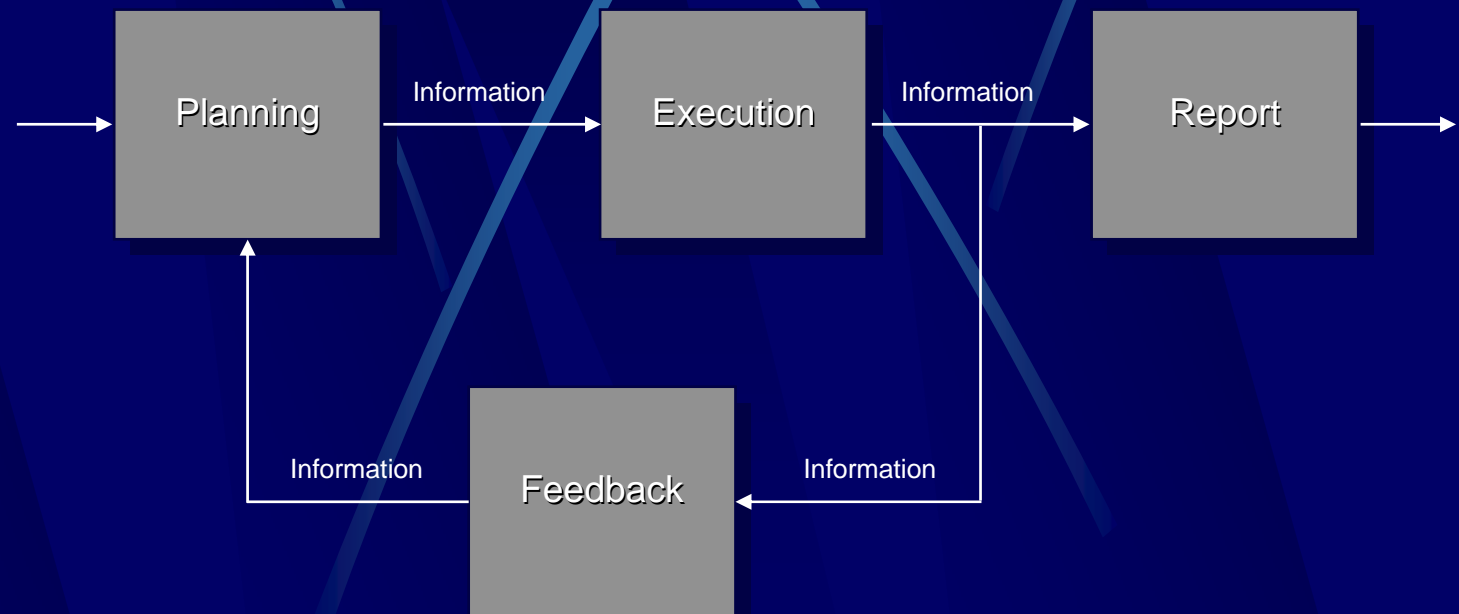


VISION


- An enterprise-wide tool-set for the efficient creation, distribution and maintenance of flight test information as data objects instead of inert characters on a page.




Flight Test Process



GOALS

- 
- Cut documentation costs.
 - Provide resources for development of new documents through reuse of existing materials and efficient preparation of new elements.
 - Automate electronic transfer of information across process boundaries.
 - Improve customer satisfaction by making documentation more accessible and easier to use.

Critical Issues


- 
- ❏ Shall be hardware and software independent.
 - ❏ Shall use web browsers for business tools to manage documents.
 - ❏ Shall convert SGML/JAVA Beans to HTML on the fly allowing viewing of current content of any document real time.
 - ❏ Shall provide control over documentation data types.
 - ❏ Shall use current word processors.

Critical Issues (cont.)

- ✚ Writers shall not have to learn any Markup Language.
- ✚ Shall allow authors to share common content and only have to write about new/different content.
- ✚ Shall allow different disciplines to focus on their areas of expertise and eliminate overlapping efforts.
- ✚ Must support sharing common content across document, team, and program boundaries.



Critical Issues (cont.)

- 
- Shall provide all parties involved in the development and approval of a document access to the online document so they can review real-time versions of the document on demand.
 - Review and approval cycle shall take place electronically.
 - Shall allow programs to customize documents, but control the way changes are made

Critical Issues (cont.)

- ❑ Shall provide an audit trail for every change made to a document.
- ❑ Shall allow input of repeated information automatically.
- ❑ Shall test documents to ensure that they are complete and that entered data complies with specification values.



Data Elements



CAM FTMC

End of Introduction



Dedicated to Quality and Reliability



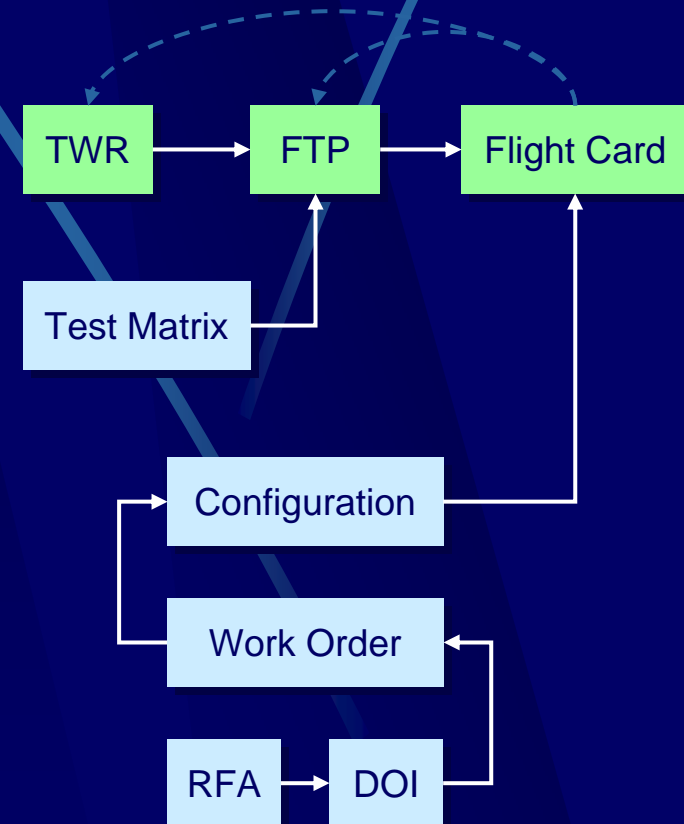
CAM FTMC supports the Eurofighter project



The Core Process

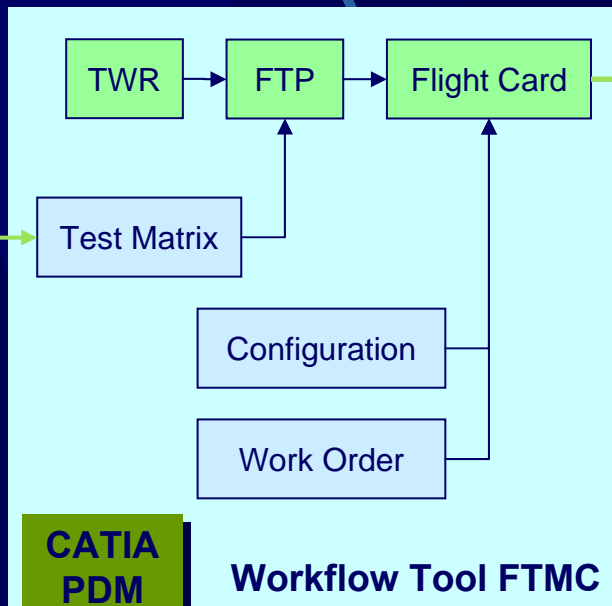


FTMC is dedicated to cover the Planning Process of Flight Testing
Affected Process Steps are
Test Work Request (TWR)
Flight Test Program, including Test Matrix (FTP)
Flight Card
Work Order and Configuration Management



Integration of FTMC

Planning

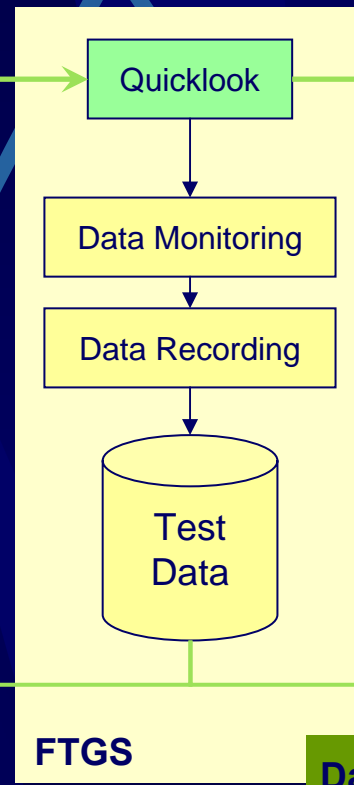


CATIA
PDM
SAP R3

Representative Data e.g.:
Flown/ not flown/ Alt./ Ma/ AoA / ...

Workflow Component

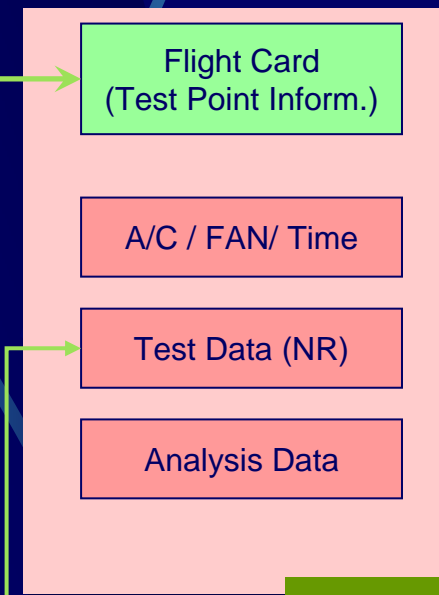
Flight



FTGS

Daily Schedule

Analysis



SAP R3
PDM
INTRANET
Disk Drive

Report Component

