UID Compliance and Beyond – Item Identity Management

KC10 UID Program

Case Study

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UID Implementation Framework –

If you are going on a journey, you better have a map.

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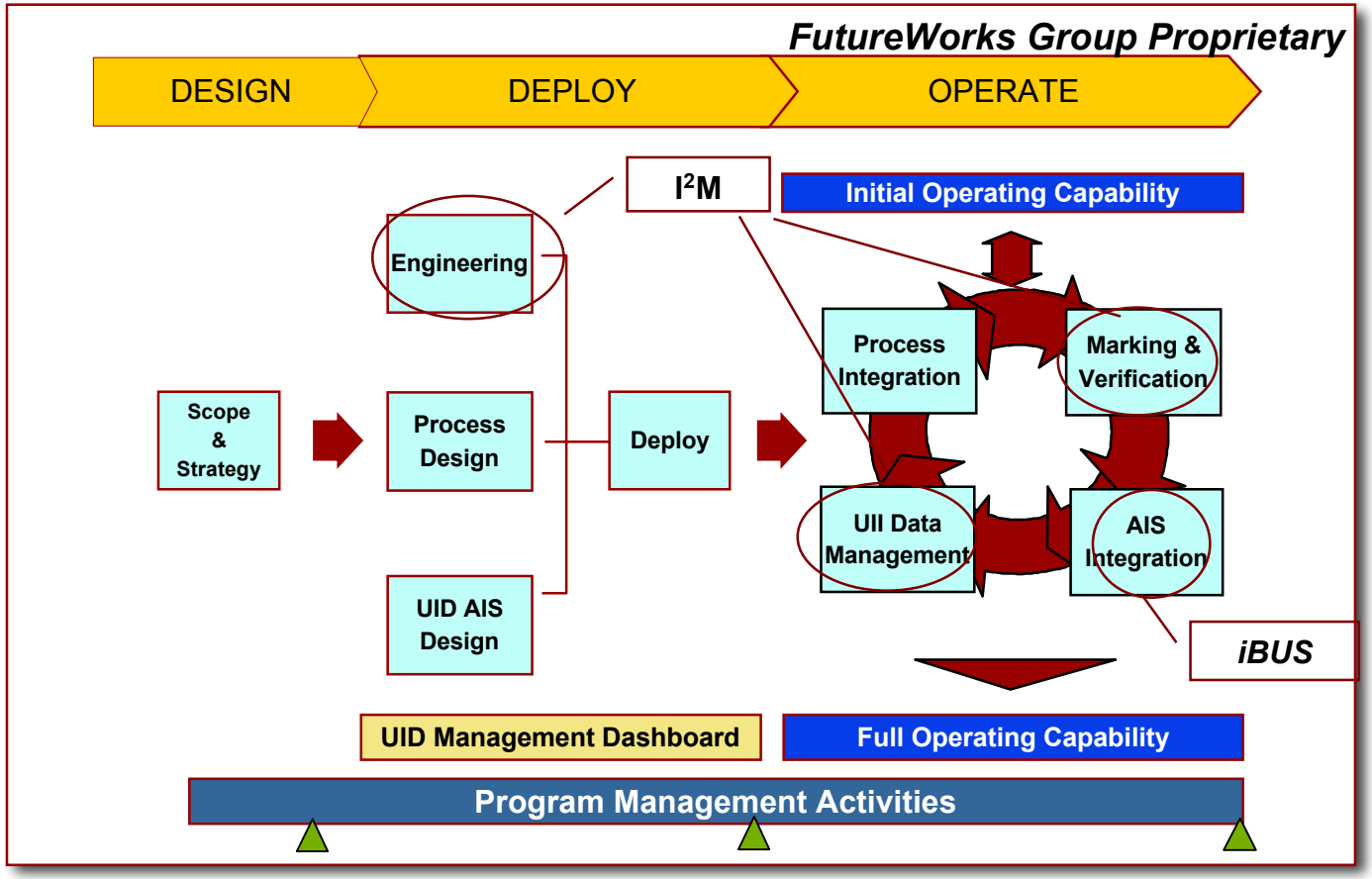

▲ - Program Milestone and Mgmt Review

FwG's proprietary UID Implementation Framework provided a guide for the program. FwG provided implementation support and a turnkey UID solution.

Program Introduction

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Using the UID Implementation Framework as a starting point, the Program Management set the following Key Performance Indicators (KPIs) for the KC10 UID program.

1. Meet and exceed DOD requirements for the UID journey
2. Create a manageable process for UID lifecycle management
3. Maintain all UID costs within reasonable budget (using existing tools and capabilities where possible)
4. UID must add more value than simple compliance

UID program has met program goals to date.

Goal 1: Meet and Exceed DOD Requirements

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KC10 CLS UID program summary

- 2nd year of the marking program
- Legacy parts marking
- GSE and aircraft parts (LRUs)
- 3 locations
- Approx. 200 unique part numbers
- Laser marking on labels
- All 59 aircraft marked
- Over 3,400 LRU and GSE items marked
  - Construct 2
  - Recently added virtual UID assignment
  - Suppliers providing UID support

Goal 2: Create a Manageable Process

KC10 has initiated a known/controlled process for UID assignment and management across the fleet and sites using FutureWorks' Item Identity Management solution

- Identify parts to be marked
- Load data into UID management system
- Use opportunistic marking effort to physically mark parts,
  - mark selected GSE and aircraft parts while they are in the warehouse or at a CLS maintenance operation facility
  - mark selected parts on the aircraft and during C-check process
- Maintain the data in a KC10 data repository for further use
- Send UID data to DOD Registry via GEX for UID compliance

Goal 3: Maintain costs

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Cost management is extremely important for all programs. KC10 used the following program tenets to ensure cost reasonableness of the program.

- Use and re-use existing capabilities
- Marking selected items of high value and that can be used for program management through SIM or RCM applications
- Getting approval from OEMs for marking parts without engineering analysis costs
- Getting support from vendors to participate by not removing UID labels assigned by the program
- Design the system to be used by “blue-suitors” and other currently deployed resources
- Push to the field as quickly as possible – Simple Steps… Kept Simple

Goal 4: Obtaining value by using the IUIDs

Focusing on ROI for the program has allowed the program to move beyond simple item marking to using the mark for program management purposes.

- The mandatory minimum data that must be collected for item traceability and management purposes is:
  - CAGE code of the manufacturer (MFR) or Supplier (SPL)
  - Part Serial Number (SER) or Unique Component Number (UCN)
  - Current Part Number (PNR)
  - Action company's CAGE code (ACO)
  - Action Date (ACD)
  - Action Code (ACT). Approved Industry Action Codes are given on the next slide
- These common data elements are defined in the Common Support Data Dictionary [ATA CSDD]
- ISO 8402 reinforces the ATA spec, defining traceability and data standards for item tracking

Source: *Chapter 9; ATA Spec2000 E-Business Specification for Materials Management*

Goal 4: Adding value through the UID –Configuration Control

Simple configuration management is defined as knowing which parts are on an a platform and which items might differ between specific tail numbers.

The FutureWorks' Configuration Control mechanism allows the PMO to define specific aircraft configurations and then link that data to a handheld device capable of scanning 2D matrices to ensure that the aircraft is configured as desired.

- UID-based configuration management tool allows the PMO and field teams to assess and track aircraft and part configuration.
- Aircraft configuration defines the specific avionics boxes that are on a given tail number (current to the last data entry)
- Avionics part configuration allows tracking of software configuration for avionics which release software changes without associated hardware changes

This leads to value creation – increased asset visibility, reduced down-time, increased throughput, etc.

Next Steps

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Building on the use case for UID

- Continue to grow the use case for IUID information in the KC10 ecosystem
- Expand the usage of the hand-held scanner tools being deployed to the field during the 3rd quarter of 2009
  - ✓Configuration control
  - ✓Image Capture
  - ➢Serialized Item Management
    - Aid lifecycle visibility
    - Allow supplier integration/ involvement
    - Allow inventory check-in and check-out
  - ➢Create "keyboard wedge" for existing applications like GOLD and reliability centered maintenance applications, etc.

- Continue program enhancements through data integration via web pages, web services or other legacy system integration to exploit new data availability and the user-friendly, highly available IUID management system

Program Summary

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- The KC10 program is well into the deployment phase and is moving from IOC to FOC.
- KC10 is rolling out the Item Lifecycle Management scanner-based tools
- KC10 is testing simple AIS integration capabilities linking UID data and data gathered through hand-held scanners to GOLD, to inventory events, and to a newly envisioned reliability centered maintenance system.
  - These scanner-based and AIS enabled systems will allow automated registry updates in a continued effort to support the DOD requirements for UID.
  - The process changes and enhancements being implemented at the bases and by the contractor continue to increase system efficiency and user acceptance.
- The KC10 program is continuing to push these applications to the Air Force maintenance personnel to accelerate value creation and capture.

Serialized Item Management – Industry Action Codes

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A short list of the Event codes available to create more robust item records and to reduce hand-entered data into legacy systems include:

- MRK – Marked By (initialization) Unit
- NFG – Manufactured By
- SHP – Shipped To
- INS – Installed On/In
- RMV – Removed From
- RPR – Repaired By
- OVH – How Overhauled / Remanufactured
- EXC – Exchanged With
- SLD – Sold To
- BUY – Bought From
- DES – How Destroyed
- WHR – Warehoused At
- OTH – Other (Requires the mandatory data element of a description) – freelance note
- RCD – Received From
- UPG – Upgrade New Part Number is
- INP – Inspected / Tested / Adjusted What
- ODO – Original Design Activity Is/Was
- CDO – Current Design Authority Is

FwG's SIM Manager links industry-standard Action Codes with GOLD and DOD UID action codes to allow for greatest usability and future-proofing.

Source: *Chapter 9; ATA Spec2000 E-Business Specification for Materials Management*