



UGS

*Transforming the
process of innovation*

Configuration Driven Sustainment

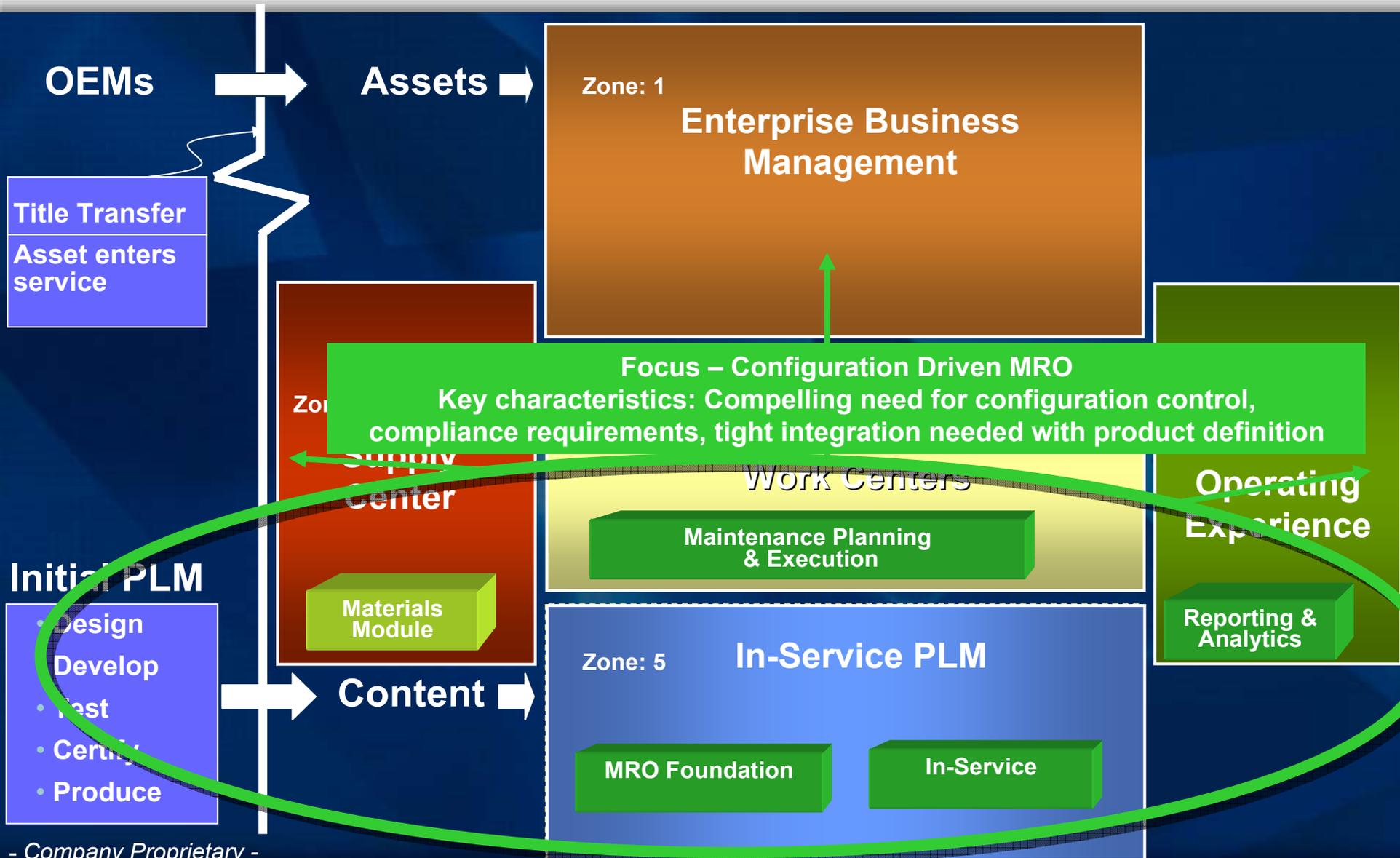
Chris Schrand
Director, MRO Business Management
PLM World 2006

TEAMCENTER



What is the UGS MRO Solutions Set ?

Teamcenter MRO Landscape





Why Configuration Driven MRO ?

Our Value Proposition for Configuration Driven Maintenance



1. MRO Cycle Time Reductions

- Removing tasks from critical path
- Reducing times of tasks on critical path

2. Improved Asset Availability

- Reduced MRO Cycle Times
- Improved Predictive Maintenance

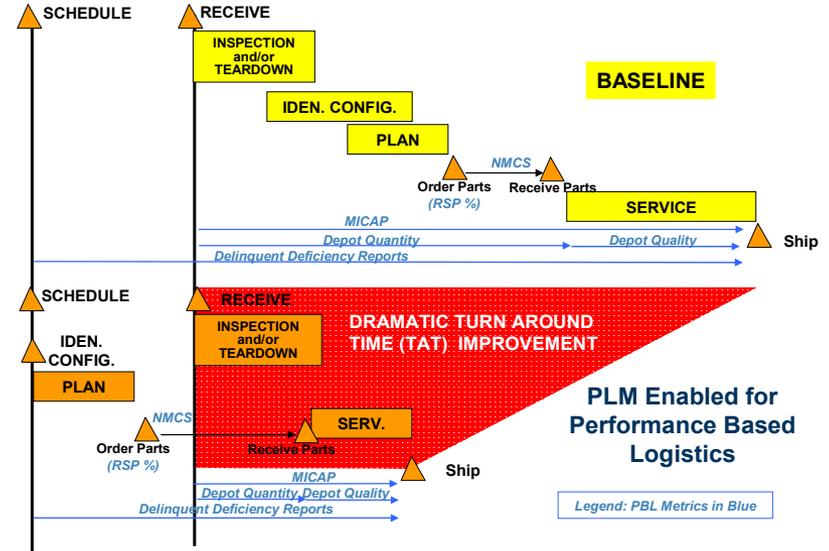
3. Improved Productivity

- Planning & Execution resources
- Reduced compliance costs

4. Improved use of Working Capital

- Turns Increase
- Better Tracking of what's available and lifing information
- Better usage of existing inventory
- Decrease costs by eliminating excess or obsolete inventory
- Better knowledge of available substitutes and alternates in the right context

PLM Value in MRO Cycle Time



Configuration Driven MRO



Why Configuration Driven MRO ?



Our Value Proposition for Configuration Driven Maintenance

5. Improved Configuration Management and speed of Change

- Rapid, targeted incorporations of modifications and upgrades

6. More proactive & less reactive maintenance – learning organization

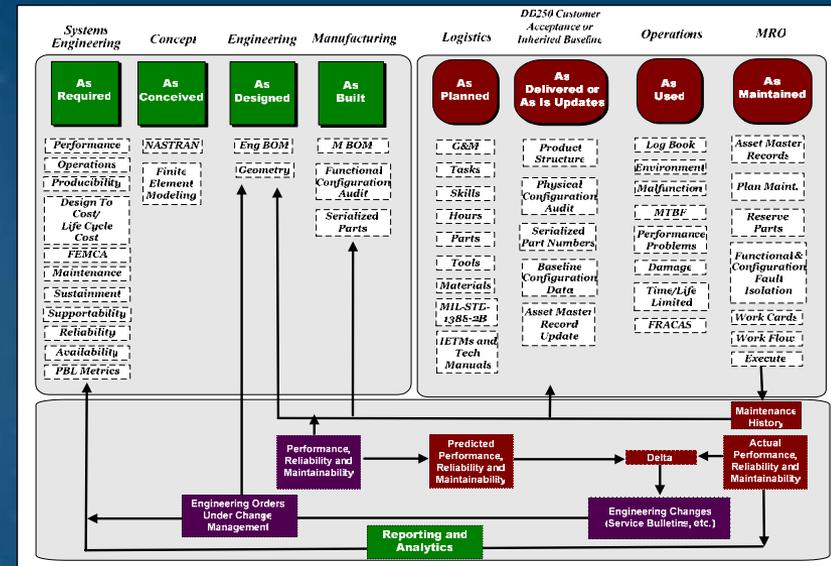
- Ability to analyze what is really effective/necessary
- Improved forecasting

7. Improved Quality of next generation product (DFM)

- Feedback loop, joining Engineering, Manufacturing, Logistics & Sustainment

8. Enables Service and Performance Based Contracts

- Demonstrate achievement of contractual metrics (component uptime, reliability, useful life)
- Ability to adjust maintenance and materials management based on analytics and contract
- Improved information on operational performance of components & equipment



Configuration Driven MRO



Configuration Driven MRO



In-Service

Maintenance Execution

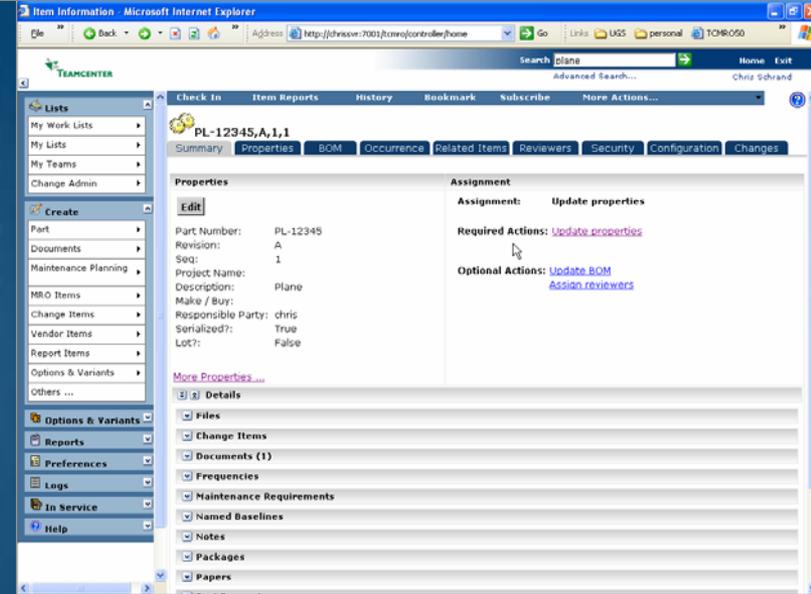
Maintenance Planning

Reliability Analysis

Materials Ordering

Capability

- ▶ Serialized structure management and lifecycle integration
- ▶ “Lifing” information (utilization, hours, cycles,...) enabling predictive maintenance
- ▶ Alternates, substitutes & usage information enabling Materials Planning from valid configurations
- ▶ Asset traceability/ visibility

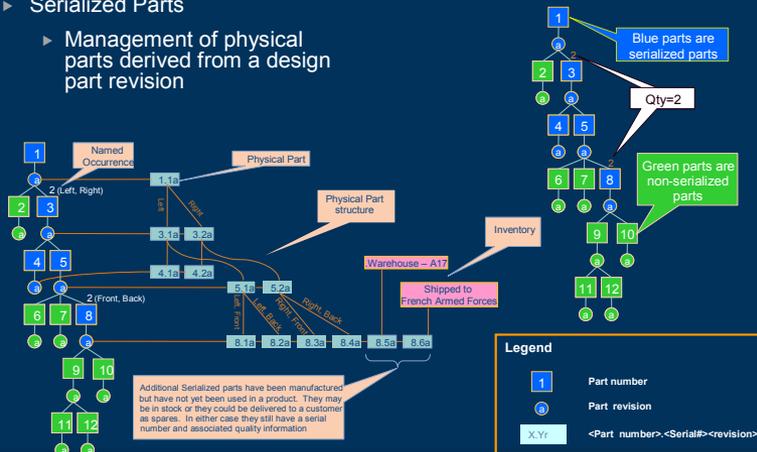


Serialized Configuration & Change Management



Serialized Parts

- ▶ Management of physical parts derived from a design part revision

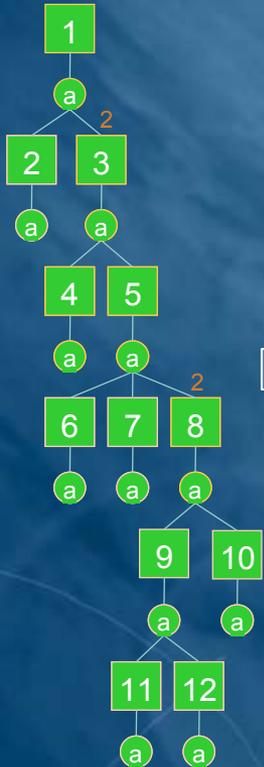




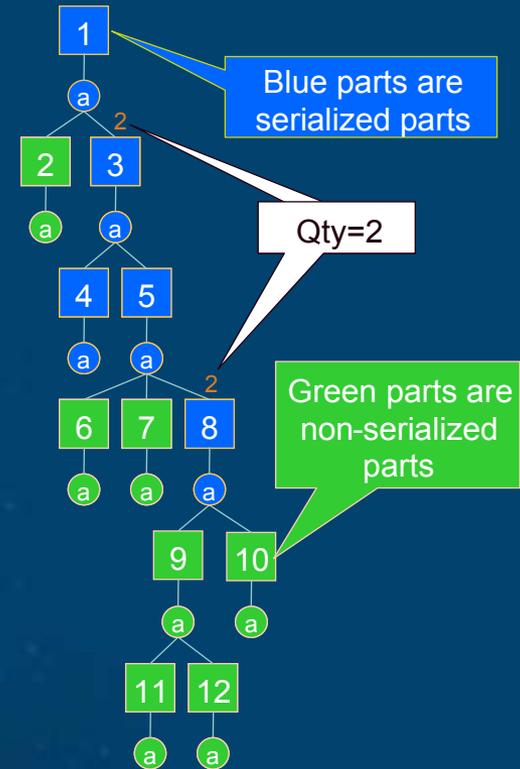
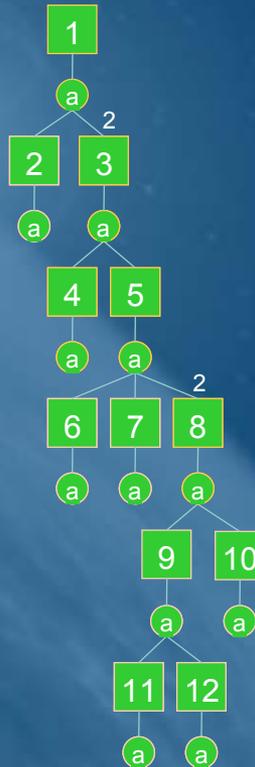
Asset Definition



Engineering



Asset Definition



Supplier Data
(IPC/PLMXML)

Legend



Part number



Part revision

X.Yr

<Part number>.<Serial#><revision>



Alternate/Substitute Parts



- ▶ Capture of possible and actual incorporation of substitute parts in a product structure comprising serialized & non-serialized parts



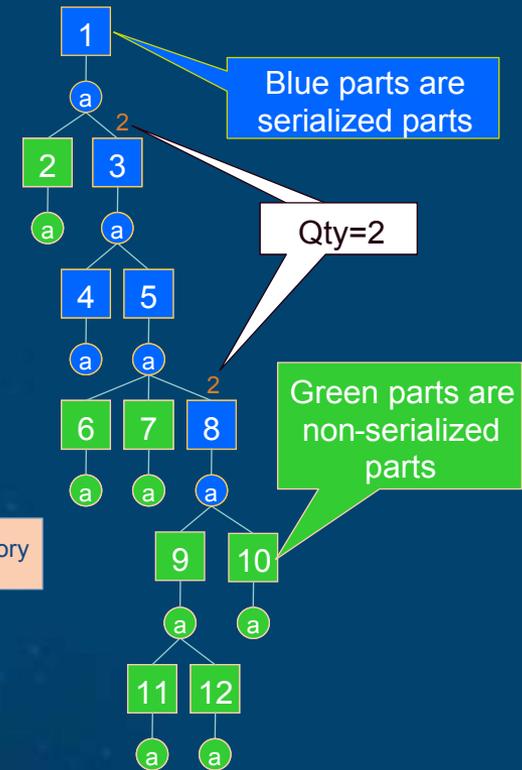
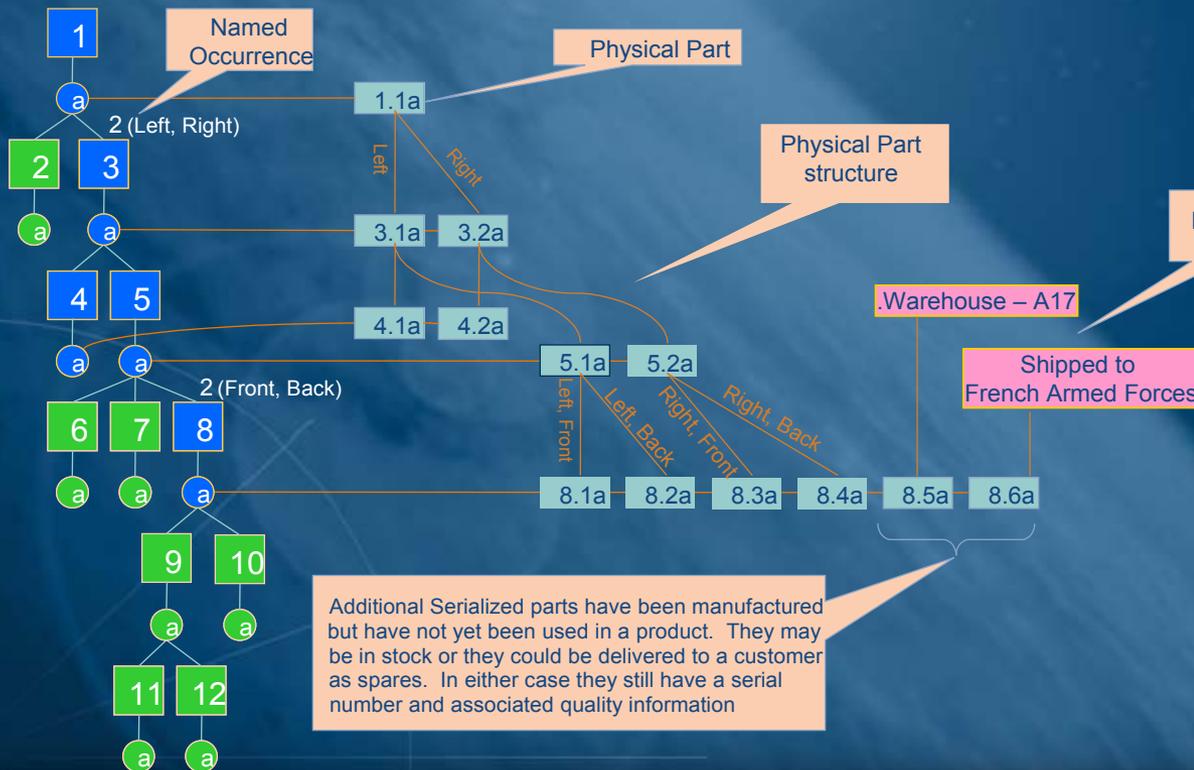


Serialization



Serialized Parts

- Management of physical parts derived from a design part revision



Legend

- 1 Part number
- a Part revision
- X.Yr <Part number>.<Serial#><revision>



Life Characteristics Definition



► Utilization Parameters to be captured for Serialized Parts.

- Hours, Cycles, Landing, Meter Readings
- Formula Driven from other Parameters (Abbreviated Cycles)



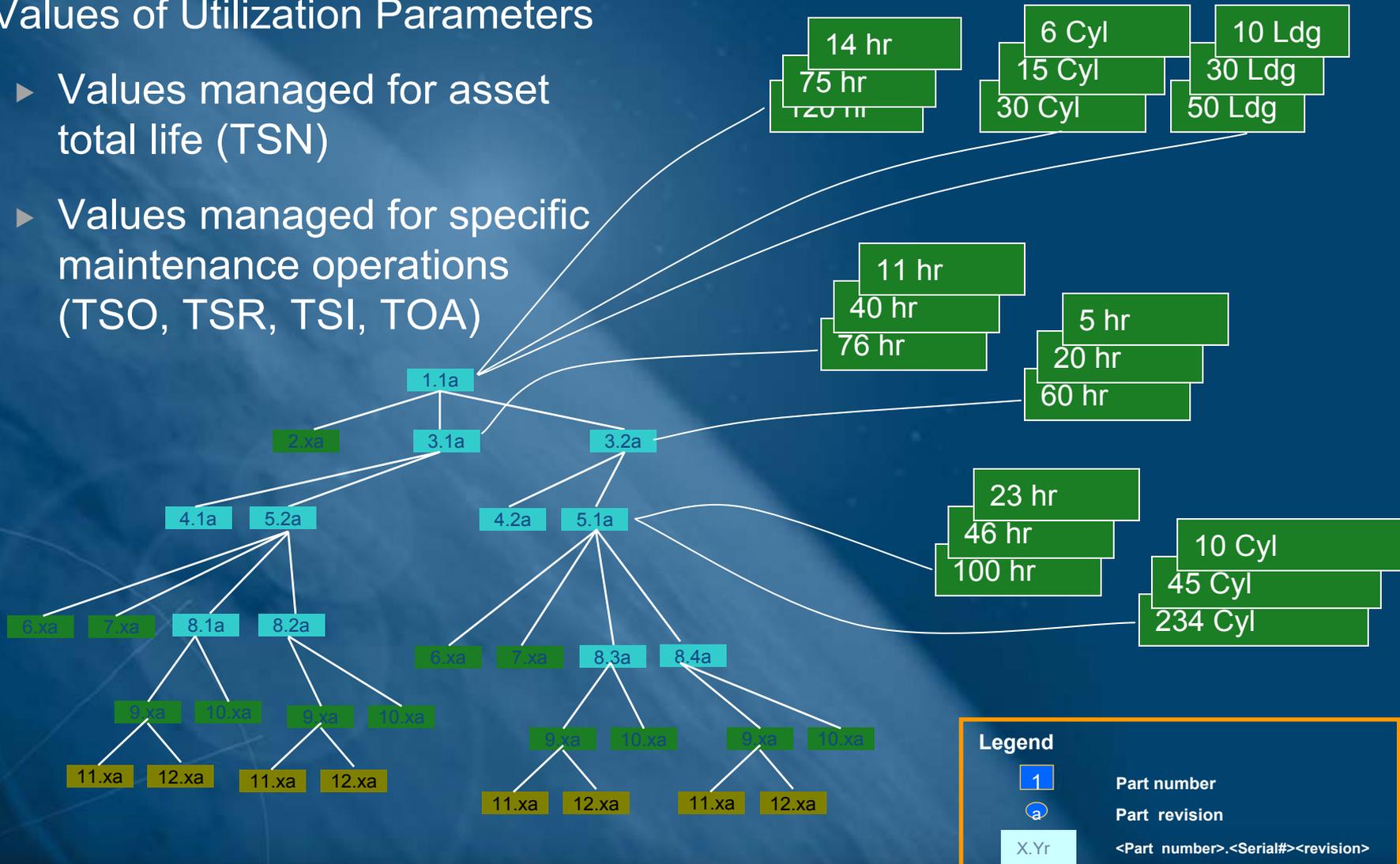


Life Utilization



▶ Values of Utilization Parameters

- ▶ Values managed for asset total life (TSN)
- ▶ Values managed for specific maintenance operations (TSO, TSR, TSI, TOA)



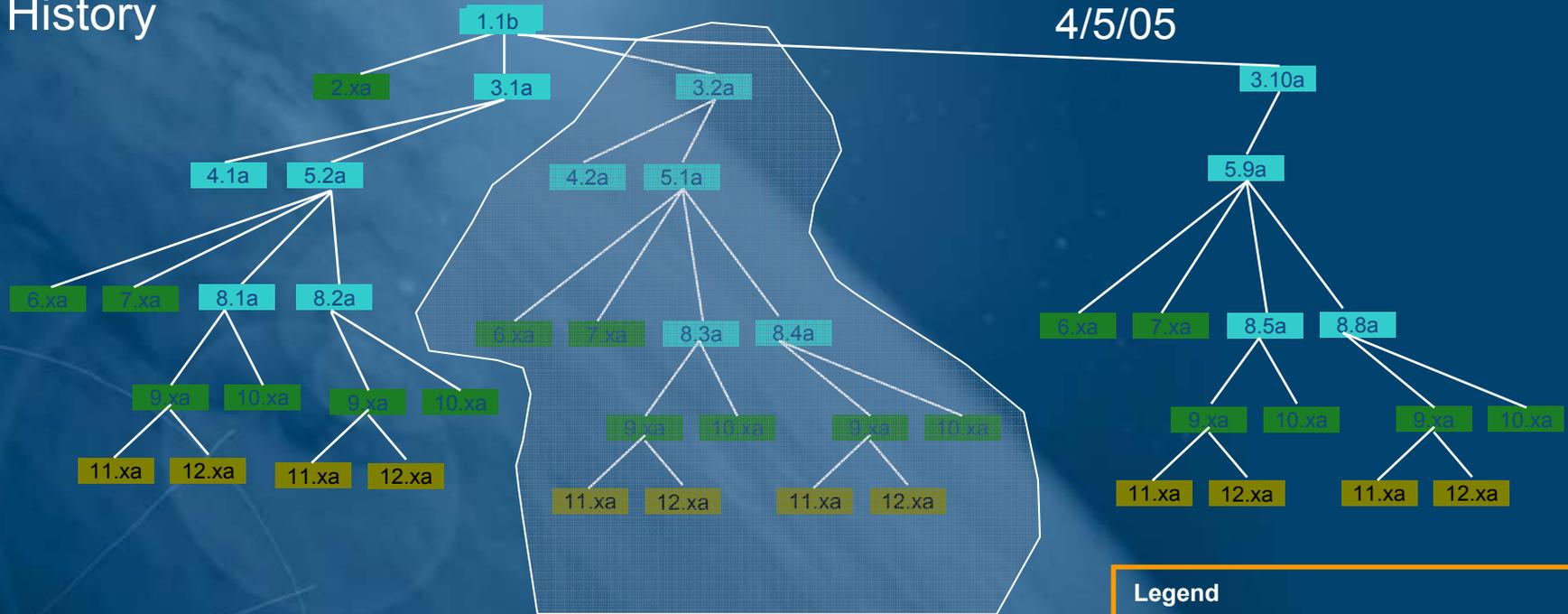


Physical Structure



- ▶ Single Physical Structure
- ▶ Revision Control
- ▶ Date Effectivity
- ▶ History

Install
4/5/05



Disassemble
4/1/05

Legend

1

Part number

a

Part revision

X.Yr

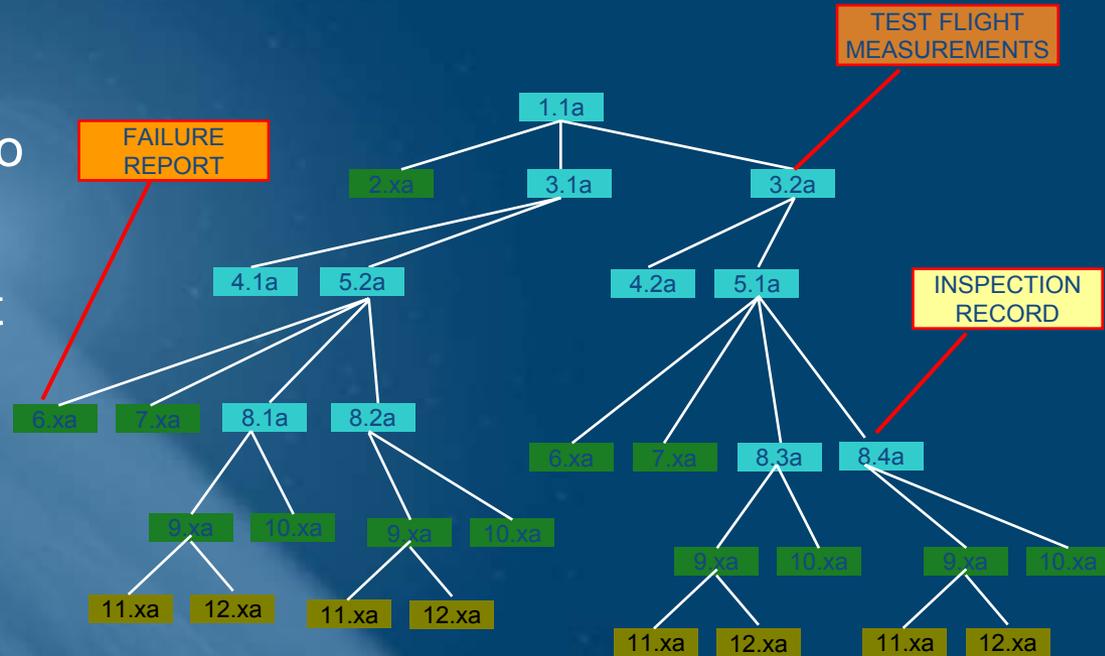
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Physical parts documentation



- ▶ Physical Parts Documents
 - ▶ Management of documentation related to physical parts
 - ▶ May be serialized or not



Legend

1

Part number

a

Part revision

X.Yr

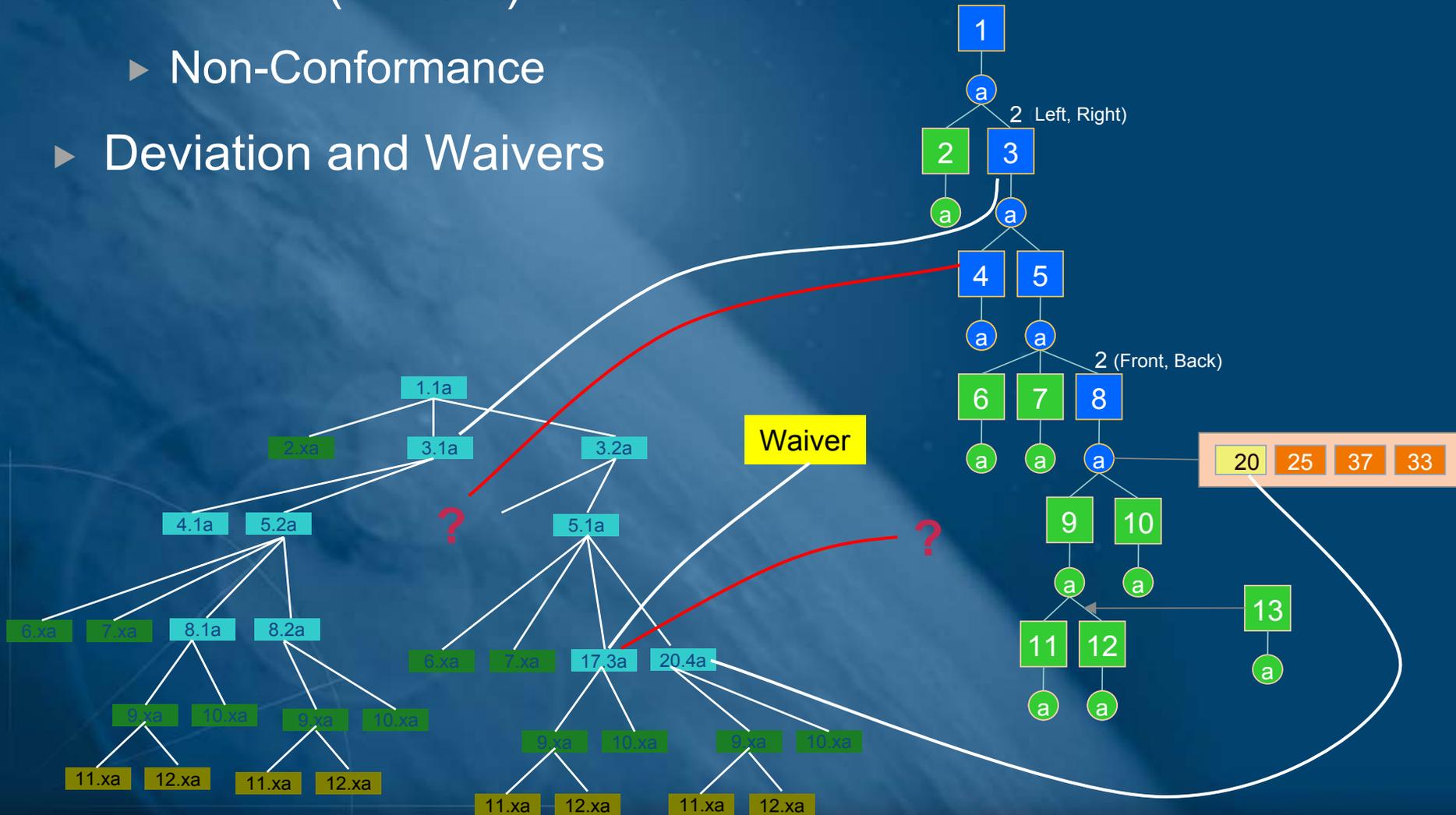
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Validation



- ▶ Definition (Neutral) vs. Actual
 - ▶ Non-Conformance
- ▶ Deviation and Waivers





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Demo

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Questions and Answer

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