Discussion: Industry's Validation Experiences

Achieving the Desired/Intended Outcome

29th January 2015

EASA Certification Workshop

Type Validation Objectives

- Improve the Effectiveness & Efficiency of Certification Process
  - Eliminate/Minimize Duplicate Certification Efforts
    - Authorities and Industry
  - Resources Can Focus on Key Safety Items
    - Value Added Activities
  - Streamlined Process which Leads to Design Acceptance

Validation: Principles vs Experience

- Familiarization – Establish Certification Basis
  - Accept CA Certification Basis plus Standards Differences (SRD)
  - Identify Validation Items (SRD, new technology, special interest, etc.)
  - Re-negotiate Certification Basis
  - Increasing Number of Validation Items to Include Common Standards
  - Significant Time/Delay Establishing Cert Basis and Validation Items
- Determine Validating Authority Involvement
  - Accept all CA Compliance Determinations
  - Rely on CA for Validation Item Compliance Determinations
  - Limited VA Direct Compliance Determinations
  - Increasing Detailed Review of CA Determinations
  - Proliferation of Issue Papers/CRIs
    - Re-negotiate redundant IP/CRIs
    - Increasing Differences in Acceptable Methods of Compliance
  - Increasing VA Determinations Required
    - Re-review of previously validated design data (past TC/STC, E/TSO)

2014 Industry Validation Experience

- Establishing Validation Certification Basis
  - Significant Time/Delay Establishing Certification Basis and Identification of Validation Items
    - Differences in Interpretation of Specific Rule Intent & Acceptable Means of Compliance
    - Increasing Non-Regulatory "Requirements"

- VA Level of Involvement (LOI) at Project Level
  - High LOI in non-VI Areas - Growing Use of IP/CRI/CAI/etc
  - Validation Principles and Acceptance/Confidence/Trust in CA System Does Not Seem to Be Flowed Down and/or Embraced by Project Level & Technical Staff

2014 Industry Validation Experience (cont.)

- VA Responsiveness at Project Level
  - Inconsistencies in Initial Application to Project Start
  - Reduced Commitment to Project Schedules and Ability to Obtain Status
  - Increasing Turnaround Times for Follow-Up on Open Items
  - Apparent Limited Accountability when Validation Performance Issues Raised

- Agency Organizational Changes and Management Activities Can Significantly Impact Certification/Validation
  - Need for Increased Communications and Planning With Applicants on Expectations for Impact and Mitigation Where Needed
    - i.e. EASA Re-Organization & Validation Project Management
    - i.e. FAA Revised Issue Paper Process (Order 8110.112A & AC20-166A)

Industry Recommendations

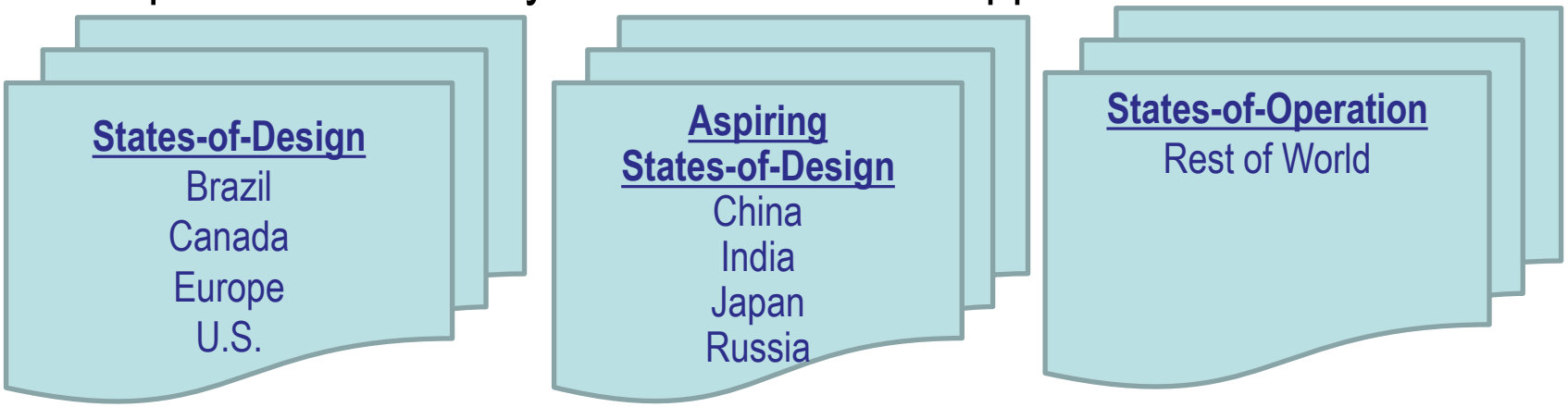
- EASA/FAA Establishment of VIT
  - Continuous Improvement of Validation Implementation/Performance
  - Monitor Validation Implementation & Performance at Project Level
    - Communication, Accountability and Issues Resolution
  - BUT, Limited Industry Visibility and Improvement at Project Level
- Update TIP to Specify Appropriate Areas for Involvement
  - Require Written Justification for Involvement in Any Other Area
- Update Agreement/TIP to Recognize/Accept Design Approvals
  - i.e. E/TSOs, Non-Complex Design Changes & STCs, Simple Products, etc.

Industry Recommendations (Cont.)

- Communication/Guide to Validation
  - International Authorities & Industry Best Practices
  - Applicant Validation Package Content Format
    - Standard Process for Identification of Validation Certification Basis & Validation Items
  - Familiarization Briefing Outline
  - Etc.

Non-State-of-Design Validation Experiences

- State Experience & Activity Affects Validation Approach



- Significant Increased Involvement & Costs
  - Detailed Involvement, Review, Education & Requests for Substantiation Data
  - Shift from Type Acceptance to Type Validation to Type Certification

- Resource Impact on State-of-Design Authority & Industry
  - Can Not Sustain Continuously Growing LOI by All Global States
  - Significant Redundant Activity with No Safety Benefit

Non-State-of-Design Validation Experiences (Cont.)

- Industry Recommendations for States-of-Design
  - Continue to Provide Global Leadership in Aviation Safety
    - Establishment of Airworthiness Standards and Acceptable Methods of Compliance
    - Understanding/Education of Certification Process and Airworthiness Standards
    - Support/Defend Type Certificate Approvals and 3rd State Acceptance
  - Understand Needs of Bilateral and Non-Bilateral States
    - Why Changes in Type Acceptance/Validation Process
  - Authority/Industry Best Practices/Guide
    - Address Needs of non-States-of-Design to Extent Possible
    - i.e. Detailed Familiarization Briefing to Address COS Responsibility

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