HCL

INSPECTION/CERTIFICATION
ANALYTICS
Business Transformation Reimagined

As industries are getting rapidly digitalized and disrupted, business transformation is gathering pace across spectrum. Analytics is expected to play a big role in business transformation, especially through inspection and certification. Some of the disruptive innovations are multi-channel information sharing, 3D modeling, color-coded warnings, Interactive Electronic Technical Publications (IETPs), and new-age training modules.

Unavailability of right data, lack of document architecture, lack of visibility into approvals, and version control are critical challenges that have been haunting businesses for quite a while now. Certification analytics intend to address these challenges and create a seamless ecosystem. Solutions range from content modules, certification indexing, and cloud-based storage to invalid document notification, interactive schematics, embedded training, and automated publishing and delivery.

HCL's solutions suite is carefully tailored to benefit clients across domains. Benefits of HCL's inspection and certification analytics-driven services include reduced time for searching documents, easy revision and updating, improved efficiency, and user-friendly navigation among others.

CHALLENGES

UNAVAILABILITY OF THE RIGHT DATA

Unavailability of the right data at the maintenance facility library or database, when data exists in resources such as separate Supplementary Type Certificate (STC) or service bulletin

LACK OF DOCUMENT ARCHITECTURE

Lack of compliance to document architectures (S1000D, FAA Form 8130 etc.) makes it difficult to track, search and maintain data

APPROVALS

It is extremely difficult to keep a track of all approvals (design, production, airworthiness standards etc.) required for different certifications

VERSION CONTROL

The risk of using outdated/wrong documents is more common at facilities which rely on manual/paper based technical documents

DOCUMENT RETENTION PERIOD

All type of documents should be retained for a minimum of 5 years for products and articles and a minimum of 10 years for critical parts. It is difficult to manage such data for paper based documents

DIFFERENT AIRCRAFT CONFIGURATIONS

Manual/Paper based technical publications increase the risk that the maintenance will be conducted for an incorrect aircraft configuration

LIMITED SEARCH CAPABILITIES

Usage of electronic page turners and portable document formats (PDFs) is inefficient due to limited search capabilities and lack of drill down approach. They lack next-generation technologies (3D visualizations etc.) to present and access technical information

DATA VOLUME

Aircraft manufacturers manage more than 3 million pages of certification data. 10% of this content is revised annually

TRENDS

MULTI CHANNEL

Technicians/Inspection Officers now require access to critical information on their laptops, tablets and smartphones.

NEW TECHNOLOGIES

Advanced technologies like 3D modelling, color coded warnings and cautions, voice recognition are leveraged in technical publications.

INTERACTIVE ELECTRONIC TECHNICAL PUBLICATIONS (IETPS)

Class IV and V IETPS, with guided and non-linear navigation, rich multimedia graphics are gaining foothold in the Aerospace and Defense field.

TRAINING

Computer Assisted document tutorial systems, embedded video training and real time feedback mechanisms are gaining traction to improve usability and evaluation.

SOLUTION OVERVIEW

DOCUMENT MANAGEMENT

CONTENT
DIGITALIZATION

CERTIFICATION
INDEXING

ANALYTICS

CONTENT
MODULES

CLOUD BASED
STORAGE

ENCRYPTIONS AND
DATA SECURITy

MULTIPLE
SPECIFICATIONS
SUPPORT

SOLUTION OVERVIEW

INTERACTIVE ELECTRONIC TECHNICAL PUBLICATIONS (IETPS)

INVALID DOCUMENT NOTIFICATION

LOAD ON DEMAND

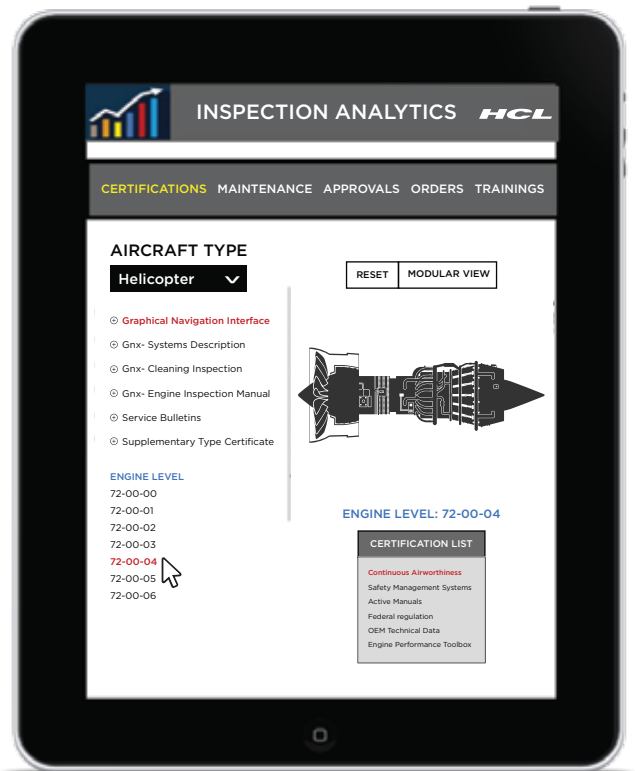**INTERACTIVE SCHEMATICS**

RESPONSIVE DESIGN

AUTOMATED PUBISHING & DELIVERY

PARTS ORDER CREATION

EMBEDDED TRAINING

SOLUTION

Tablet 1 — INSPECTION ANALYTICS (HCL)

CERTIFICATIONS   MAINTENANCE   APPROVALS   ORDERS   TRAININGS

AIRCRAFT TYPE
Helicopter

⊕ Graphical Navigation Interface
⊕ Gnx- Systems Description
⊕ Gnx- Cleaning Inspection
⊕ Gnx- Engine Inspection Manual
⊕ Service Bulletins
⊕ Supplementary Type Certificate

GRAPHICAL NAVIGATION INTERFACE

Tablet 2 — INSPECTION ANALYTICS (HCL)

CERTIFICATIONS   MAINTENANCE   APPROVALS   ORDERS   TRAININGS

AIRCRAFT TYPE
Helicopter

RESET   MODULAR VIEW

⊕ Graphical Navigation Interface
⊕ Gnx- Systems Description
⊕ Gnx- Cleaning Inspection
⊕ Gnx- Engine Inspection Manual
⊕ Service Bulletins
⊕ Supplementary Type Certificate

ENGINE LEVEL
72-00-00
72-00-01
72-00-02
72-00-03
72-00-04
72-00-05
72-00-06

ENGINE LEVEL: 72-00-04

CERTIFICATION LIST

Continuous Airworthiness
Safety Management Systems
Active Manuals
Federal regulation
OEM Technical Data
Engine Performance Toolbox

Tablet 3 — INSPECTION ANALYTICS (HCL)

CERTIFICATIONS   MAINTENANCE   APPROVALS   ORDERS   TRAININGS

AIRCRAFT TYPE
Helicopter

ENGINE LEVEL: 72-00-04
CONTINOUS AIR WORTHINESS

⊕ Graphical Navigation Interface
⊕ Gnx- Systems Description
⊕ Gnx- Cleaning Inspection
⊕ Gnx- Engine Inspection Manual
⊕ Service Bulletins
⊕ Supplementary Type Certificate

ENGINE LEVEL
72-00-00
72-00-01
72-00-02
72-00-03
72-00-04
72-00-05
72-00-06

SAMPLE

⚠ ATTENTION!
This certificate will
expire in 18 days.

FEATURES AND BENEFITS

REDUCED TIME TO SEARCH AND FIND REQUIRED DOCUMENTS

EASY TO REVISE AND UPDATE CONTENT

IMPROVED EFFICIENCY FOR TECHNICIANS AND INSPECTION OFFICERS

ELIMINATION OF ERRORS SUCH AS VERSION CONTROL, EXPIRED CERTIFICATIONS

3D GRAPHICS WITH 1 TOUCH DRILL DOWN APPROACH

USER FRIENDLY, NON LINEAR, INTELLIGENT NAVIGATION

FAA Form 8130, MILSPEC, S1000D, ATA ISPEC 2200 SPECIFICATION SUPPORTED

REAL TIME FILTERING OF INFORMATION

To know more please mail at ci@hcl.com

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