ACCELERATING **IDEAS**
PROPELLING PERFORMANCE
REDEFINING **ENGINEERING**
& ENTERPRISE
SOLUTIONS

BAeHAL®

ex
pertise
cellence
perience

▶ REAL TIME & EMBEDDED SYSTEMS IV&V

▶ DESIGN SERVICES

▶ SIMULATION

▶ TECHNICAL PUBLICATIONS WITH MULTIMEDIA

▶ ENTERPRISE RESOURCE PLANNING

▶ IT SERVICES

BAeHAL SOFTWARE LTD

ABOUT
BAeHAL

Established in 1993 BAeHAL is a joint venture of BAE Systems, UK and Hindustan Aeronautics Limited, India. BAeHAL provides engineering and IT solutions to Aerospace and Defence Customers. Our Success is based on outstanding care of clients and knowledge of their individual business needs

BUSINESS VERTICES

ENGINEERING SOLUTIONS

REAL TIME AND EMBEDDED SYSTEMS, IV & V

DESIGN SERVICES

SIMULATION

TECHNICAL PUBLICATIONS WITH MULTIMEDIA
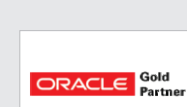
BUSINESS SOLUTIONS

ENTERPRISE RESOURCE PLANNING

IT SERVICES

IN ASSOCIATION WITH

IFS

DASSAULT SYSTEMES

NEWGEN
One world. One workplace.

vmware

SIEMENS
Ingenuity for life

CISCO

Check Point
SOFTWARE TECHNOLOGIES LTD.

Microsoft

hp

acer

ORACLE Gold Partner

TREND MICRO

Vision

"To be a world-class company in providing high technology and quality software solutions and services for global business needs in Aerospace, Defence and other chosen areas".
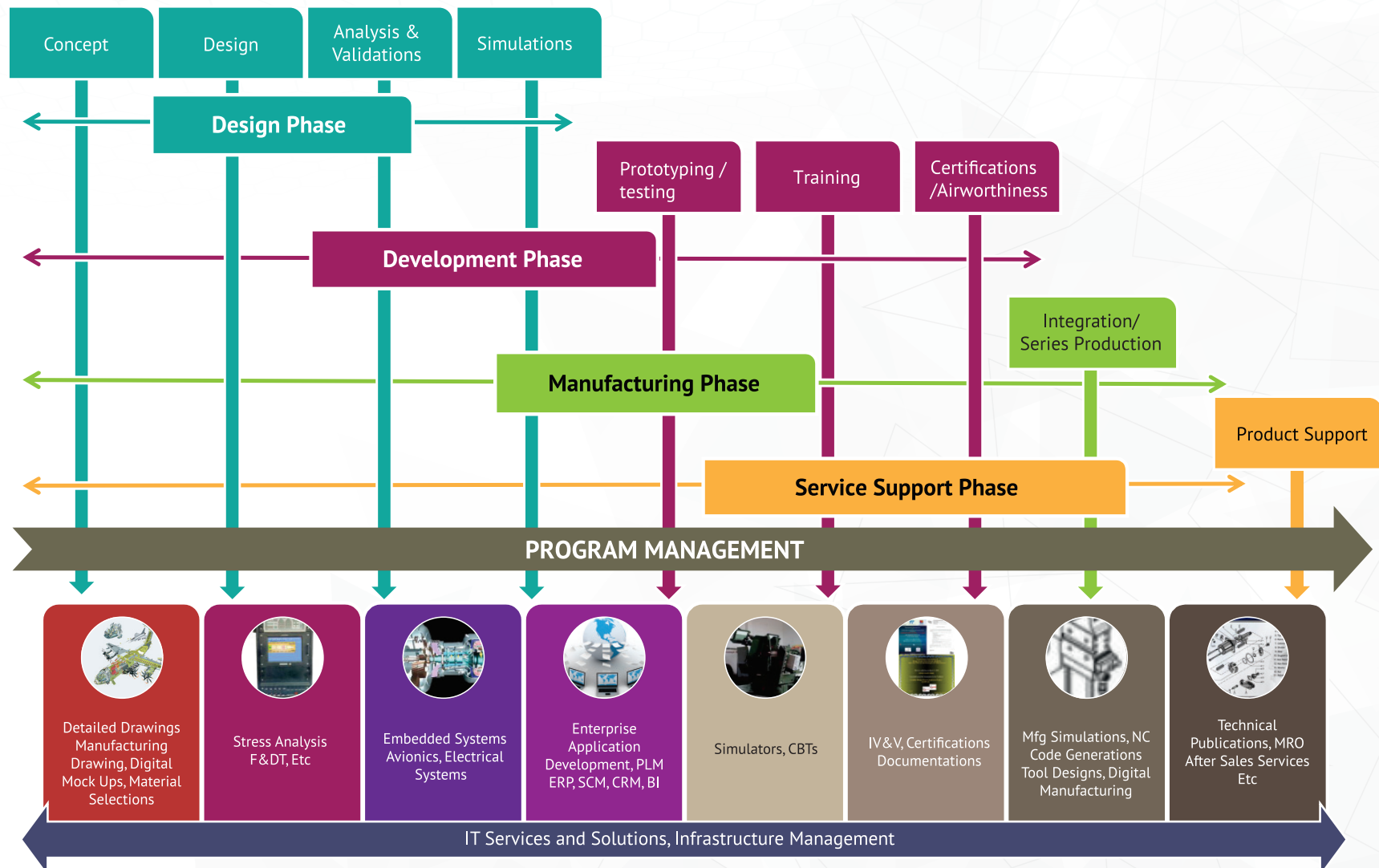
Mission

"To achieve these objectives by providing solutions and services meeting customer needs, value for employees and satisfaction to shareholders, vendors and for the society at large".

WHY
BAeHAL

SOLUTIONS FROM CONCEPT TO RETIREMENT

| Concept | Design | Analysis & Validations | Simulations |

Design Phase

| Prototyping / testing | Training | Certifications /Airworthiness |

Development Phase

Integration/ Series Production

Manufacturing Phase

Product Support

Service Support Phase

PROGRAM MANAGEMENT

| Detailed Drawings Manufacturing Drawing, Digital Mock Ups, Material Selections | Stress Analysis F&DT, Etc | Embedded Systems Avionics, Electrical Systems | Enterprise Application Development, PLM ERP, SCM, CRM, BI | Simulators, CBTs | IV&V, Certifications Documentations | Mfg Simulations, NC Code Generations Tool Designs, Digital Manufacturing | Technical Publications, MRO After Sales Services Etc |

IT Services and Solutions, Infrastructure Management

VALUE
PROPOSITION

FLEXI BUSINESS MODELS AND PRICING

- Commitment to cost competitive business models for business optimization
- Flexible payment terms

COST REDUCTION

- Alternative solutions for cost reduction and value addition for cost reduction
- Commitment to aggressive pricing

HIGH QUALITY, ROBUST DELIVERY

- On time, high service quality
- Commitment to customer requirements
- Commitment to high quality of deliverables

RICH DOMAIN EXPERTISE AND HIGHLY SKILLED TEAM

- Over 10600 man years of experience
- Successfully executed large contracts
- Expertise to handle complex and large value contracts
- One stop solution provider from concept to retirement for avionics systems

OFFSETS

- Defense offset eligibility
- MSME Certification for offset multiplier

ACCREDITATION AND CERTIFICATIONS

| ISO 9001:2015 | AS 9100:2016 Rev D | ISO 27001:2013 | SEI CMMI Level 3 |

REAL TIME
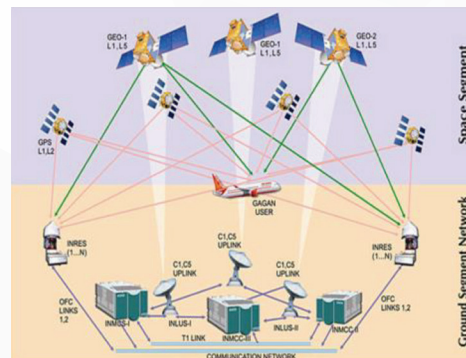## & EMBEDDED SYSTEMS

Real Time Systems

BAeHAL has capabilities in the development and testing of Real Time Embedded Systems in the Aerospace and Defence sectors for safety-critical and mission-critical systems/software.

Services

- Real Time Software Development
- Ship Weapon Interlock Safety Systems
- Avionics Test Rigs
- Solid State Flight Data Recorders
- Flight Control Systems
- Glass Cockpit Displays
- Advanced Electronics Instrumentation Systems
- Flight Warning Systems
- Flight Management Systems
- Electrical Load Management Systems
- Fuel Management Systems
- Operational Flight Programs
- Space Applications

Major Projects

- Ship Weapon Interlock and Safety System
- Avionics System Integration Rig
- Software for Solid State Flight Data Recorder
- Automatic Flight Control System
- Development of Open Systems Architecture Mission Computer Software
- Software Integration Rig & Open/ Closed Loop Test Rig
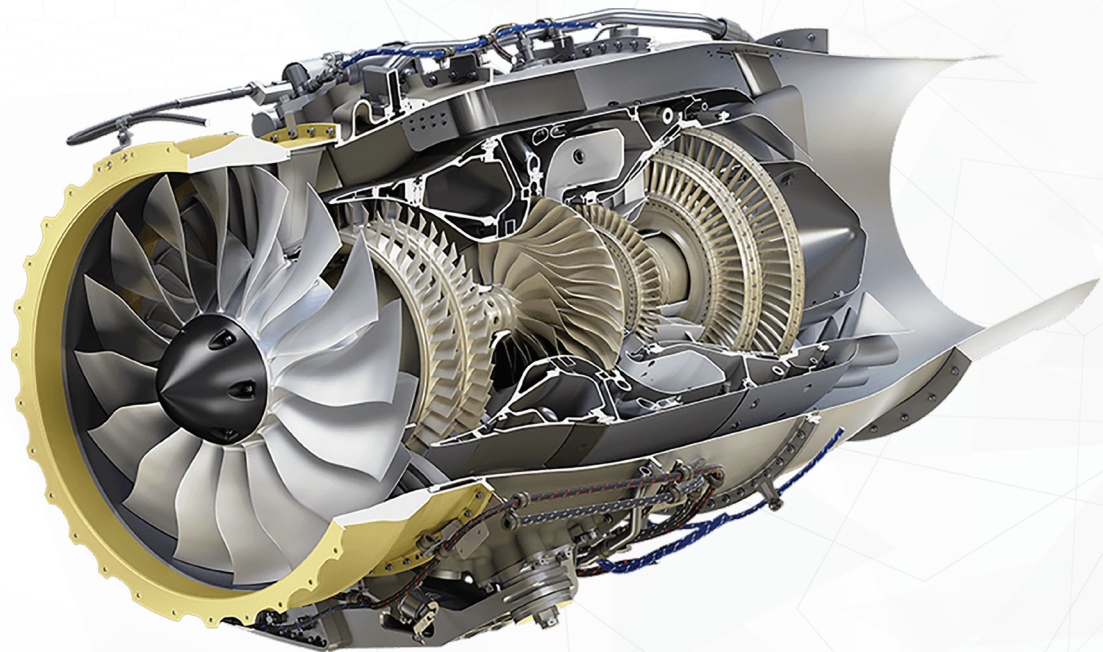- INLUS – RFU Monitor & Control Processor software

REAL TIME
& EMBEDDED SYSTEMS

Independent Verification & Validation

BAeHAL provides Independent Verification and Validation (IV&V) services for safety and mission critical application software in Airborne and Weapons systems. Based on IV&V evaluation, the software product is certified by certification agencies. The services include product & process verification and validation throughout the software development life cycle based on customer specific standards. IV&V processes include code evaluation through analysis, review, inspection and conformance to specification, design and coding standards.

REAL TIME
& EMBEDDED SYSTEMS

Independent Verification & Validation

Services

- Formal Software Verification of Aero Engines
- Formal Verification of Safety & Mission Critical Software
- Requirement Based Testing for Safety/ Mission Critical Systems
- Verification and Validation of Project Lifecycle Artefacts
- Expertise in Industry Standards
- Support for Certification of Software
- Full Life Cycle IV&V (Requirement to Acceptance and Certification)
- Software Testing (Black testing, White box Testing, Hardware-Software Integration testing)
- Standards : DO-178B/C , DOD-STD-2167A and IEEE 12207, Tools: LDRA, RTRT, IPL ADA Test, RHAPSODY, RATIONAL ROSE, ARTISAN

Major Projects

Software Testing of:
- Full Authoritative Digital Engine Controller Engine Application Software
- Airborne Radar Software
- Integrated Standby Instrument System
- Flight Control Software
- Mission Computer Software
- Solid State Flight Data Recorder
- Electronic Warfare Indicator
- Cockpit – Control Display Unit
- Fuel Management – Fuel Quantity Indication System
- Automatic Train Protection System

SIMULATION

BAeHAL offers simulation and hardware-software integration solutions for Operation, Maintenance and Training on various systems for Aircraft, Ships, Land vehicles and Defence equipment on turn key basis.

Expertise in

- Avionics Part Task Trainers (APTT) for Fighter Aircrafts
- Navigation & Weapon Systems Maintenance Simulators (NWSMS)
- Ship Machinery Control Simulators
- Virtual Aircraft Training Systems
- Virtual LRU Testing Trainer for Helicopters
- 3D Virtual Reality trainers
- Engine Ground Run Simulators for Fighter Aircrafts
- Full Mission Simulator (FMS)
- Cockpit Procedure Trainer (CPT)
- Flight and Navigation Procedures Trainer (FNPT)
- Flight Training Device (FTD)
- Avionics Upgrade for Simulators
- 6 DOF /3 DOF motion Simulation
- Control Loading system Simulation
- Data Acquisition System
- Projection System design and Installation

BAeHAL Offers

- Virtual Daily Inspection Trainers
- 3D Walkthrough of hangers and other repair/maintenance infrastructures
- Component assembly-disassembly Trainers
- Cockpit Familiarization Trainer
- Comprehensive Maintenance of Simulators
- Engine Ground Run Simulators
- FSR services at AF stations
- Legacy System upgrade &maintenance
- Obsolescence Management
- Fixed Base Full Mission Simulator (FBFMS)
- Machinery Control Room Simulator (MCR) for Naval Ships
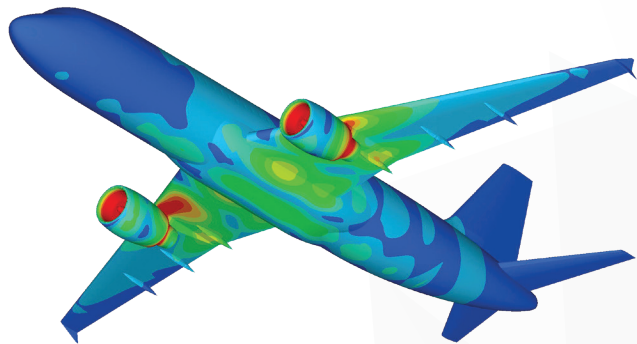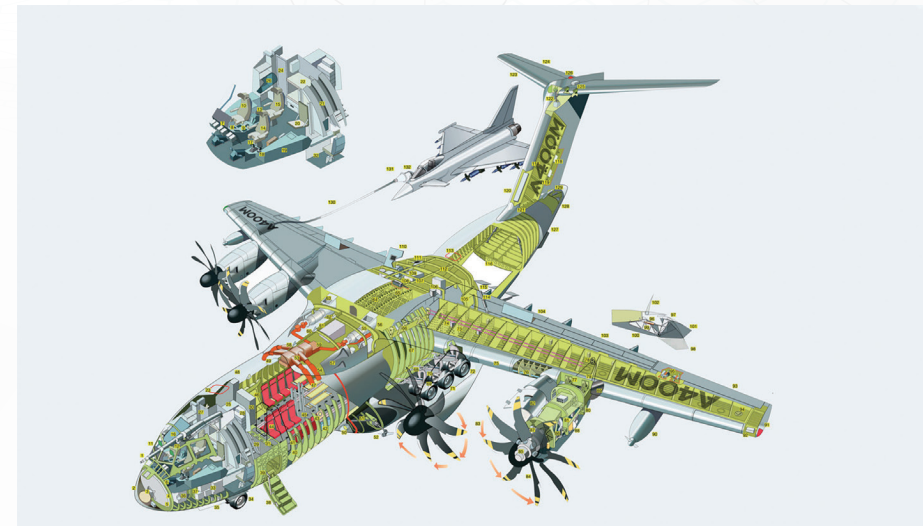- Aircraft System Maintenance Simulator (ASMS)

DESIGN
SERVICES

Solutions in the areas of CAD/ CAE, Mechanical Systems Design, Casting Simulation and Product Life cycle Management. BAeHAL engineers have rich domain expertise in Aerospace & Defence.

Design

- Structural Design
- Composite Design
- Sheet metal Design
- Digital Mock-Up (DMU)
- Installation Design for Hydraulics System
- Electrical Harness Installation Design
- Drafting & Detailing of Machined & Composite parts
- High-End Digitization
- Reverse Engineering
- Tool Design

Engineering Analysis

- Frequency Response Analysis for Structural Coupling Test
- Damage Estimation On Metals Crack Propagation
- Fatigue analysis and life estimation
- Ground Vibration Test Analysis
- Frequency & Transient Response Analysis
- CFD
- Thermal Analysis
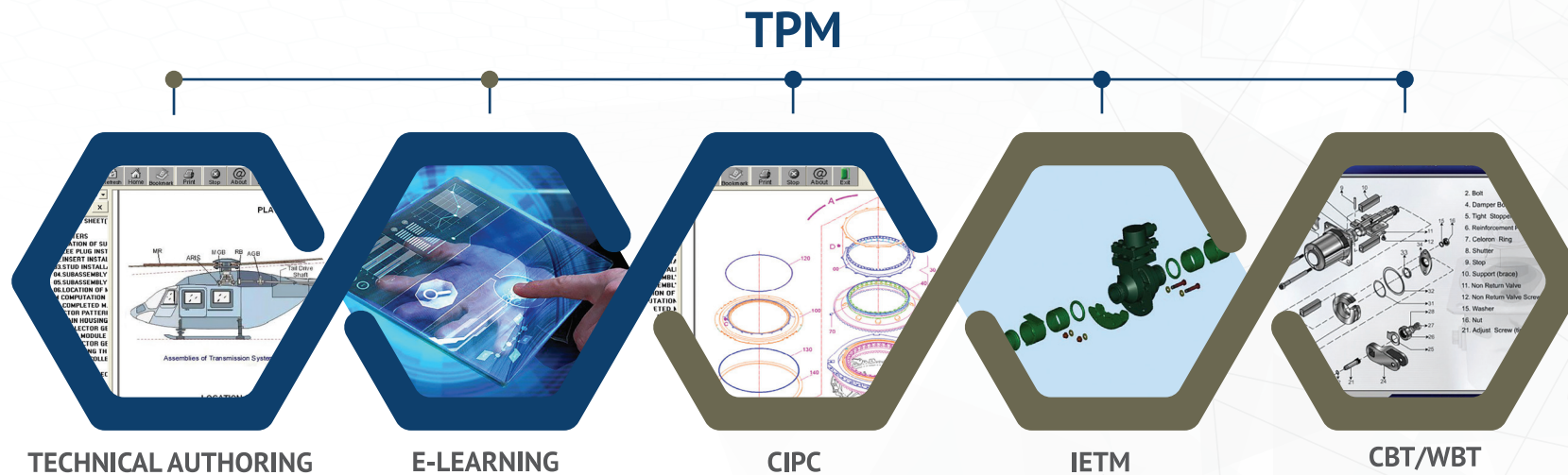- Aero-Elasticity Analysis

DESIGN
SERVICES

Major Projects

- Design, Analysis & Optimization of Air Frame structure
- Generation of 3D Electrical Wire Harness for LCA Naval Trainer
- Limited Series Production Standard DMU for LCA Naval Trainer
- Wing design and Twin element Aero foil Wing design and Analysis
- Digital Mock-up Activities for Unmanned Aerial Vehicle Technology Demonstrator
- Integrated Structural Dynamic Analysis for UAV
- Design and Drawing generation for Drop tank for LCA.
- Structural Design & Analysis of Improved Aircraft Configurations (UCAV)
- Digital Mock-up Activities for LCA Air Force MK-I

- Structural design and Electrical wiring design & Testing
- Generation of 3D CAD models, drawings for Gen 3 & pre-production series Turbocharger Engine components
- Digital Mock Up activities for Airbus Single Aisle A321 Neo
- Design for Optimization of Light Utility Helicopter (LUH)
- 3D Modelling of Engineering Drawings, Digitization and E-documentation of Towed howitzer Artillery Dhanush Gun
- 3D Modelling of Engineering Drawings, Digitization of Kaveri Gas Turbine Engine

TECHNICAL PUBLICATIONS
WITH MULTIMEDIA

TPM

TECHNICAL AUTHORING | E-LEARNING | CIPC | IETM | CBT/WBT

BAeHAL offers end to end solutions in the areas of Technical Publication and different multimedia products.
BAeHAL is the only company in India to have authored complete sets of technical and pilot's manuals, Interactive Electronic Technical Manuals (IETM) for different types of Military aircraft both fixed and rotary wing

Services

- Technical Authoring and illustrations (Aircraft Maintenance Manuals, Maintenance Manuals for land based systems, Maintenance Manuals for ship based systems ,operating manuals for Airborne systems/ shipborne systems/ land based systems)
- Interactive Electronic Technical Manuals(IETM) Level 3 & 4 for maintenance and operations
- Computer Based Training packages for maintenance and operations of Aircraft ,ship and land based weaponry
- Conversion of Manuals to Standard Generalised Mark up Language (SGML)
- Web Based Training package development
- Learning Management System Hosting and embedding E- Learning materials
- Catalogue transfer to Excel / database format

Product Segments

Technical Authoring / Developing IETM /Developing CBT/ LMS hosting and embedding E-Learning materials for :

• Flight control Systems (Fly by Wire System)
• Aircraft Structures (Fuselage, Wings, Doors etc.)
• Aircraft Fuel System (Hydraulic System and Pneumatic System)
• Aircraft Avionics Systems
• Aircraft Undercarriage System
• Ground Support Equipment
• Power plant Systems (engine and accessories)
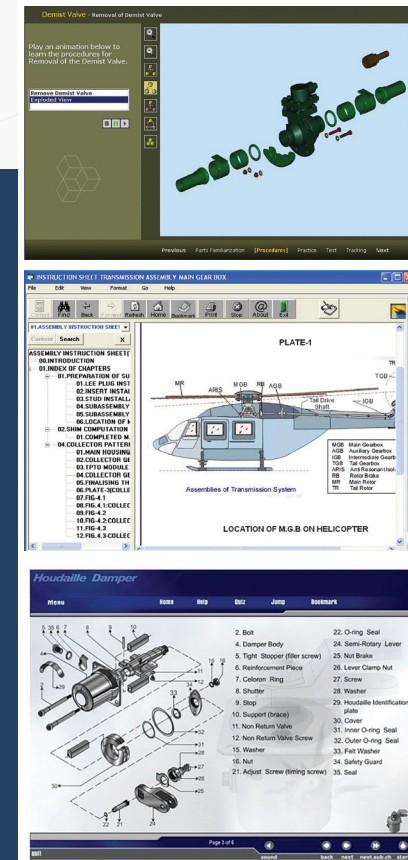• Aircraft Interiors
• Aircraft Cockpit Systems

Major Projects

• Pilot Operation Handbook and O-Level Maintenance Manuals
• Aircraft Maintenance Manual on Airbrake System
• Conversion of Manual from ATA to AECMA Specification in SGML Format
• Computer Based Training for Maintenance
• Illustrated Parts Catalogues
• Interactive Electronic Technical Manuals
• Interactive Electronic Technical Manual for Machinery Control Room Simulator
• Computer Based Training
• E-Learning Packages

Expertise in Standards

• ATA 100
• S1000D
• ATA iSpec 2200
• ASD-STE 100 SIMPLIFIED TECHNICAL ENGLISH SPECIFICATION
• AvP 70
• AvP 77
• DITA (The Darwin Information Typing Architecture or Document Information Typing Architecture).
• Different MIL standards for IETM :MIL-PRF- 87268A, MIL PRF-87269A and MIL-Q-87270

Expertise in Tools

• Adobe Photoshop
• Adobe S1000D suite
• Adobe Framemaker
• Inmedius IETM tool
• Epic Editor, Styler & Publisher
• Autocad
• Tech illustrator
• Isodraw
• E- Learning Software tool
• Corena S1000D suite with CSDB
• Trilogi S1000D suite

IT
SERVICES

BAeHAL delivers innovative enterprise solutions ranging from application development & IT infrastructure to system integration.
The capabilities in enterprise application and system integration span across diverse technologies to cater to Defence, Aerospace and other industries.

Services

- Application Development
- Document Management System Implementation
- Migration and Re-engineering
- System Integration
- Application Testing & Maintenance
- Business Intelligence
- Enterprise IT Infrastructure

Major Projects

- Custom Application Development (.NET & JAVA)
- Document Management System (Using COTS & Open Source)
- Digitization and Record Management Services
- Workflow Management Systems (Using COTS & Open Source)
- IT Infrastructure Support Services (DC &DR)
- Video Analysis using (AI & ML)
- Private Cloud (IAAS, SAAS, PAAS)
- Business Intelligence Application & Reporting
- Oracle Database Support Services
- IT HW / SW Sales and support Services
- IT AMC Services
- Business Objects

ENTERPRISE
RESOURCE PLANNING

BAeHAL provides ERP solutions for Aerospace, Defence and Engineering organisations. BAeHAL has a strategic alliance with IFS (India), which is a subsidiary of IFS (Global), one of the leading worldwide suppliers of enterprise business applications. IFS applications are based on component based Technology, offering Enterprise application components for Manufacturing, Financials, Engineering, Maintenance, Human Resource and MRO (Maintenance, Repair & Overhaul).

Services

- Business Process Re-engineering
- System Study "As Is" and "To Be"
- Implementation and Support
- Management Information System (MIS) Report & Process Report Development
- Data Migration
- Creating Interfaces with Application Software
- Database Administration
- Training on ERP

Major Modules

BAeHAL has implemented one of the largest ERP Systems in the Indian Aerospace and Defence sector. Key work areas include:

Customisation

- Training
- Deployment
- Post Implementation Support

Major Models

- Material Management
- Finance
- Manufacturing
- Maintenance, Repair and Overhaul
- Human Resource & Payroll

ERP SOLUTION
AT A GLANCE

odoo
Flexible, Modular, Easy to use, Cost Effective

BAeHAL Offerings:

- BAeHAL offers Odoo ERP to small and medium enterprises.
- Odoo customisation and implementation.
- Post implementation Support and maintenance.

MANUFACTURING

- Manage Manufacturing orders
- Schedule and Plan production
- Define Flexible Master Data
- Customize operations
- PLM
- Quality
- Maintenance
- WorkCentre Control Panel

PURCHASE

- Clean and fast with modern user interface
- Requests for Quotations
- Vendor management
- Manage orders
- Manage invoicing
- Handle Products
- Analyse and Forecast
- Multi company rules

SALES

- Sell More Efficiently with modern User Interface
- Create Professional Quotes
- Manage Orders and Contracts
- Streamline Communication
- Maintain Products and Prices
- Intuitive Reporting
- Customer follow-Ups

CRM

- Sell Faster with modern User Interface
- Track every lead to convert it into a won opportunity
- Manage Leads and Opportunities
- Manage Costumers
- Efficient Communication
- Reporting

BAeHAL

HUMAN RESOURCES

- Manage Recruiting
- Manage Employees
- Manage Expenses
- Manage Leaves and attendance with biometric integration
- Manage appraisals
- Manage Fleet
- Payroll

ACCOUNTING

- Accounts Receivable and Payables
- Pay bills
- Bank and Cash
- Easy Reconciliation
- Advanced Access rights
- Multi-currency, companies, users and journals support
- Performance Reports
- Legal Statements
- Analytic Accounting
- Assets and Revenues

INVENTORY

- Clean and fast with double entry inventory management
- Basic stock Operations
- Advanced Routing
- Enhance Productivity time
- Replenishments
- Traceability

PROJECT MANAGEMENT

- Develop Project groups
- Plan and Schedule project activities
- Estimate activity resources
- Validate and control project
- Plan HRM
- Quantitative risk analysis
- Time track every project activity
- Issue log analysis

........and 300+ apps from odoo app store

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