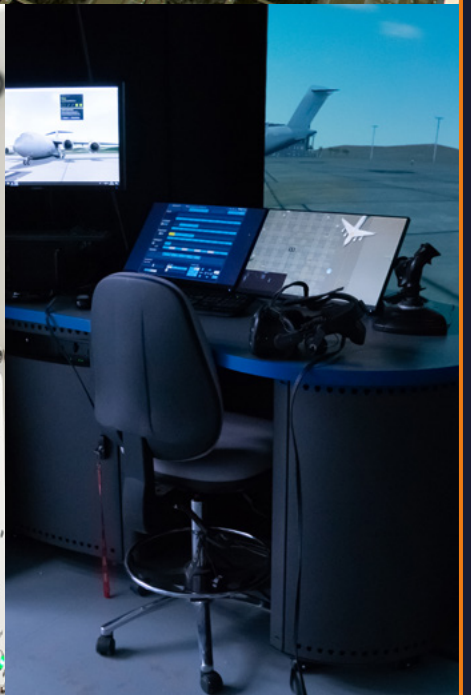
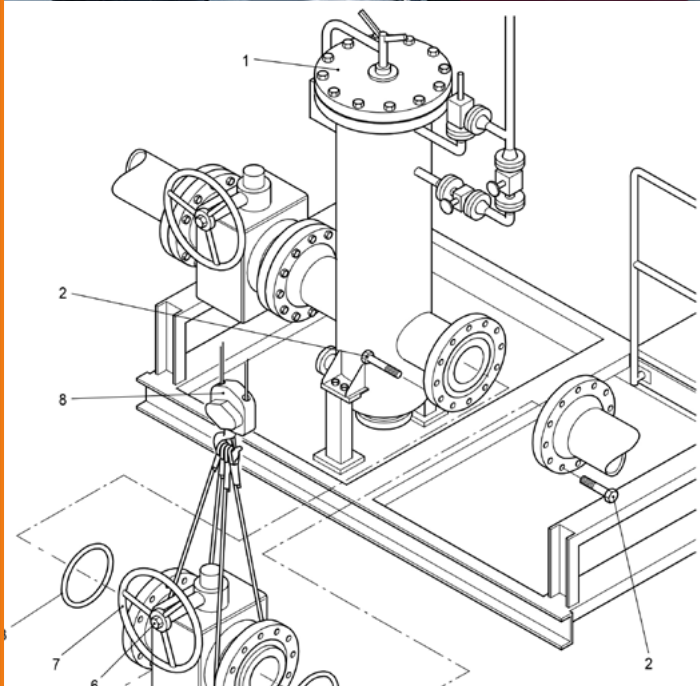
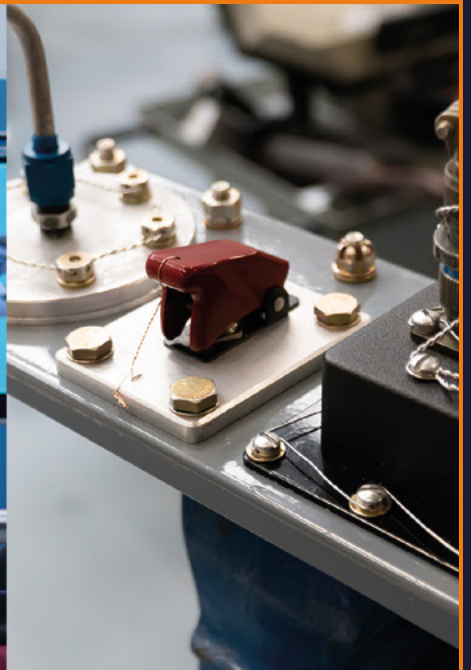




The Integrated Product Support (IPS) Software & Services Company





Pennant Vision

Pennant, the IPS software and services company, provides a suite of software solutions and technical services that support the design, development, operation, maintenance, and training of assets in defence, aerospace, rail, and other safety critical industries.

Introduction

As an SME (Small and Medium sized Enterprise), the Pennant Group has grown significantly over the years, through a combination of organic growth (product and customer development) and through several acquisitions. In addition to our operational centres worldwide, the Group has collaborative arrangements with a strategic range of partners in many countries across the globe.

Pennant continues to be an established supplier to the UK Ministry of Defence (MoD), Canadian Department of National Defence (DnD), Australian Department of Defence (DoD) and other defence organisations. We work with major defence “Primes”, such as BAE Systems, Boeing Defence, General Dynamics, and Leonardo.

The Group has been listed on the London Stock Exchange AIM Market since 1998.

Our History

Pennant International Group was established over 65 years ago.

Founded in 1958, Pennant has evolved over the past six decades, from modest beginnings, into a market-leading technology-led business with a truly global customer base.

With offices worldwide, the Group operates principally in the areas of civil aviation, defence and rail with customers including global defence Primes, government departments, overseas aviation colleges, and rail operators.

The Company was admitted to trading on the AIM market in 1998 and has traded as a public company ever since.

Pennant has embraced emerging technologies, growing substantially and working on larger contracts, producing ever more sophisticated software solutions including emulations and the OmegaPS LSAR product suite.

In 2000 Pennant acquired three UK companies, Solvera Information Services (documentation), SIS (Software) and SIS (Technologies), as well as the overseas branch Omega Logistics International all from parent Solvera plc.

In 2019, Pennant completed the acquisition of Track Access Services, continuing the strategic expansion and further strengthening Pennant’s offering to the rail sector. In 2020, Pennant acquired the Absolute Data Group (ADG) which brings an end-to-end IPS/ILS solution to the industry with the robust S1000D R4i software suite.

In 2023, Track Access Productions was acquired by Pennant to further expand the Rail capability. Furthermore, the Group saw the launch of GenS in 2023 as a successor product to OmegaPS, as well as the integration of GenS with other tools to create Pennant's IPS Software suite.

Today, Pennant has become a firmly established world leading supplier of IPS solutions from LSA, Technical Publications, to training products, and services, supported by a global innovative team.



Our Values

Pennant works to a set of core values that define the way we act as individuals and as a business. We focus on Innovation, Performance, Quality, Respect and Teamwork.



Our Customers



Proud Members of





Our Facilities

The Pennant worldwide team of approximately 140 are an innovative and ambitious group that intends to change how training solutions, technical software and services are sold and delivered to Aerospace, Defence and Civil markets.

Our staff work across sites in the United Kingdom (Pennant's head office is based in Cheltenham, UK), North America and Australasia. Our facilities have grown substantially over the years and now contain over 30,000 sq.ft of production capacity.

140+
EMPLOYEES

30,000
SQ FT IN UK
FACILITIES



It's exciting being part of a Company which has seen large global growth, building upon our vision to be a technology-led software and services company to fulfil the end-to-end needs of our customers.

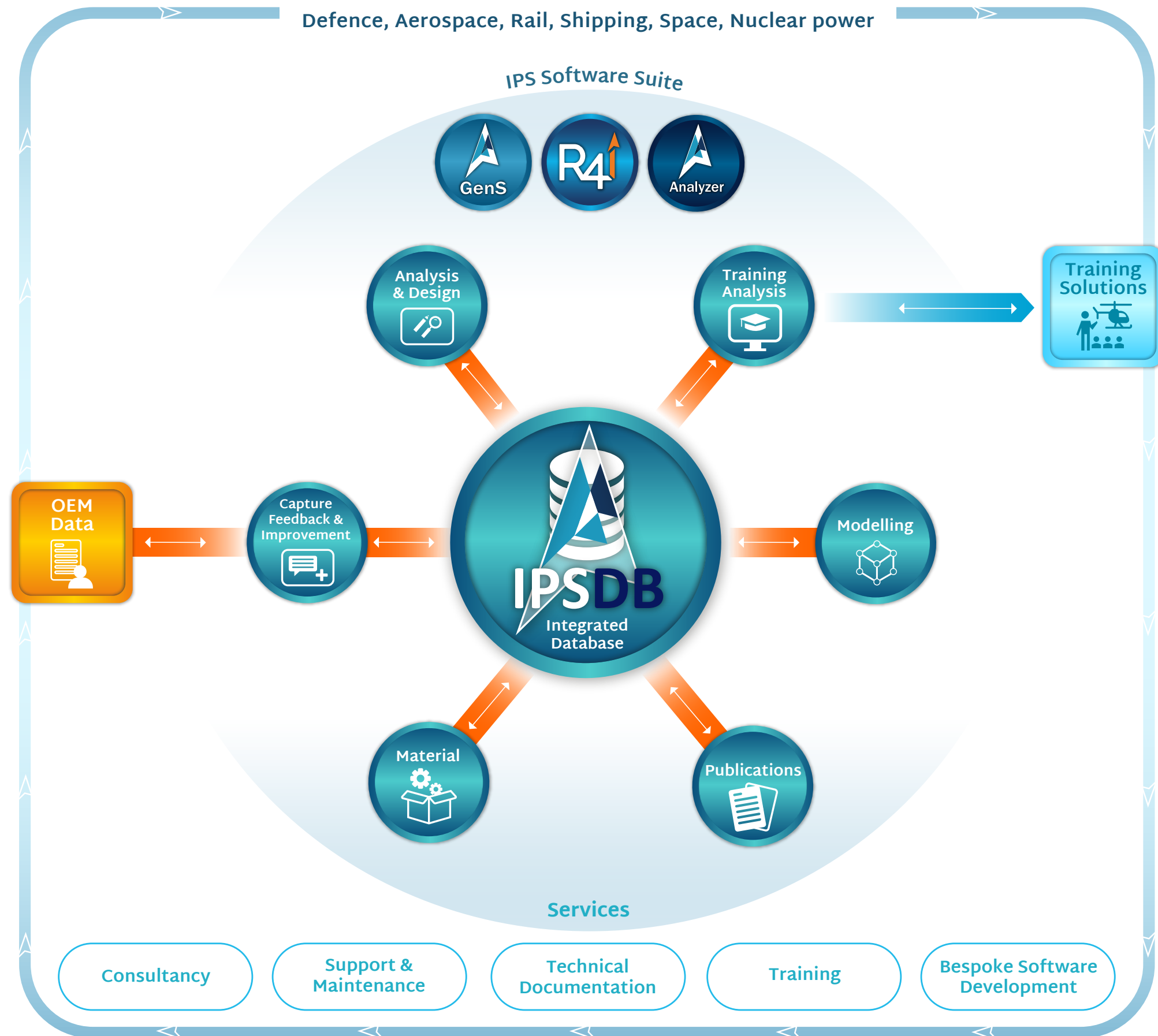
Philip Walker, Group CEO





Pennant IPS solutions

Defence, Aerospace, Rail, Shipping, Space, Nuclear power





Software Solutions

Pennant's software solutions capability encompasses everything from our Integrated Product Support (IPS) Software, Procedural trainers to Virtual Maintenance Trainers and Modular systems.

These range from simple applications to complex systems, and they are designed to meet specific needs, improve efficiency, and enhance overall processes to offer our customers an end-to-end software capability.

Through advanced user interfaces, our software solutions can support the management of complex assets for operators and maintainers, as well as student learning and development, that can be used to satisfy theoretical and practical training elements.





IPS Software Solutions

Pennant offers a comprehensive package of IPS products that includes technical authoring and publication, logistics support analysis, and model-based product support. The package can be augmented to include the distribution of IPS content and supportability to end users and maintainers. Our commercial off the shelf working environment which can be configured to a program's specific requirements and to the business needs of the software users. The various software packages are developed with specific users and functions in mind to provide a capability that is fit for purpose. The software packages employ the same single source of truth back-end database to ensure traceability and integrity of data.

The Pennant IPS Software brands OmegaPS, Analyzer, GenS and R4i have a well-known presence in the LSAR and S1000D market across the globe and across industries. Our IPS Solutions include:

- S1000D Technical Software Development
- LSA Software Development
- ILS/IPS Capabilities with end-to-end solutions
- Configuration Management
- Technical Publications Management
- Technical Writing and Illustrating Services
- S1000D/LSAR Industry Experts to provide Training and Consulting
- Legacy Data Conversion
- Process Improvement

Pennant works to simplify the management and performance of technical process activities for complex product support by providing a straightforward working environment that seamlessly integrates the various product support elements.

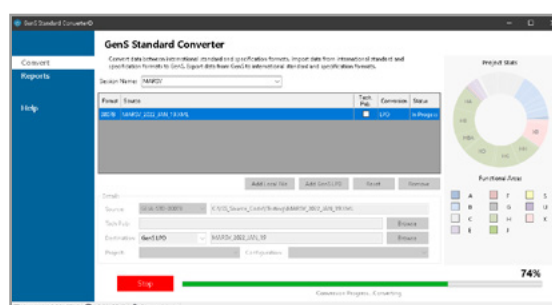
The Pennant Integrated Data Base (IPSDB) is the office single source of truth for all IPS data shared across a powerful suite of Pennant and partner applications.

Customers who typically require an IPS Solution normally tick five of the seven below:

- Build large equipment
- Build complex equipment
- Have equipment with a lot of systems and parts
- Have equipment with a long life – minimum of 10 years
- Have heavy maintenance cycles
- Often release multiple configurations of the equipment
- Must work to industry specifications and are highly regulated



- Manages Logistics Support Analysis data
- Maintains detailed configuration of complex equipment
- Interfaces with ERP Systems
- Is compatible with S1000D delivery standard for R4i and data-sharing with Analyzer

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It's easier and faster with GenS. Key functionality includes, but is not limited to:

- Install Microsoft SQL database and install GenS, login and you are ready to work within 30 minutes.
- Simplify complex data entry, through easy real time data entry and validation, including data tailored to your project's specific needs
- Complete all associated data with Visible (Guided) Data referencing

GenS can be integrated with Analyzer and the R4i Suite to transform Integrated Product Support requirements into a truly integrated secure digital capability.

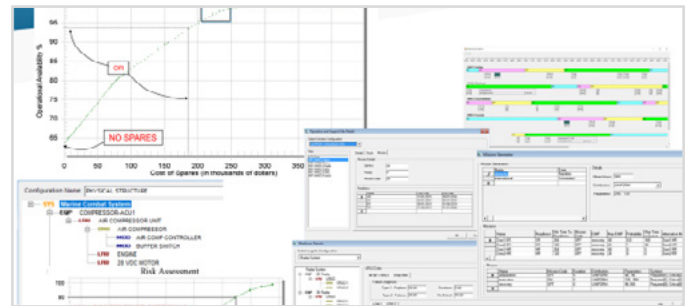


Analyzer

The Analyzer product:

- Fast, accurate and user-friendly optimisation tool
- Identifies preferred product sustainment strategies through options analysis
- Supports operational readiness at an affordable life cycle cost

Analyzer™ uses recognised processes and analytical methods to develop, store and evaluate information about operational equipment and the support environment. The software includes Life Cycle Cost (LCC) Optimisation, Level of Repair Analysis (LORA), Spares Optimisation, and Availability Modelling. It is a key tool for managers, decision-makers, engineers, ILS teams and other staff involved in system design, system acquisition, proposal writing, support solution optimisation, in-service support management and through-life support.



The modular and object-oriented design approach, along with common object libraries, promotes our ability to provide easier system updates and thus maximises concurrency with any training systems' configuration.

R4i Product Suite

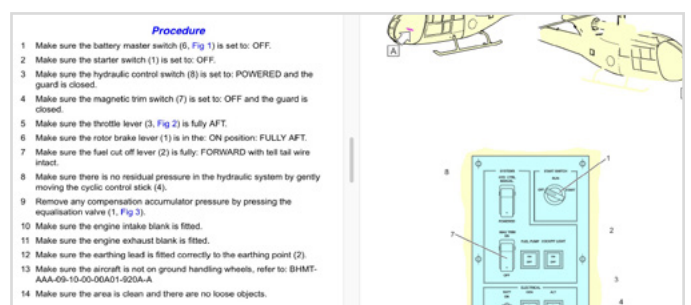
With over a 20-year track record, the R4i Product Suite provides tools to create, manage and leverage S1000D, ATA iSpec 2200 and MIL-STD information, that is vital to the build, operation and maintenance of complex equipment.

The R4i solution:

- Provides CSDB integrated S1000D and ATA authoring options (Authoring & Content Creation)
- Assists with S1000D and ATA Project Deliverables (Management & Processing)
- Achieves Data Exchange, IETP, HTML5 and PDF publishing and distribution goals (Publishing & Delivery)
- Assists with producing documentation written in Simplified Technical English (STE)

The R4i Product Suite is designed to be modular, easy to use and most importantly, robust.

The combined years of experience in IPS standards and that of the ASD S1000D publications specification make Pennant a world leader in the delivery of IPS solutions and Services globally.





Software Trainers

Pennant's software solutions allow contemporary products to be delivered to meet customer needs, that offer advanced user interfaces and capability to support student learning and development.

For over 30 years Pennant has developed software-based solutions, designed to support training methods that may be used to satisfy theoretical and practical training elements.



Simulators and emulators provide the opportunity for students to train on equipment or systems with which they can interact as they would with the real equipment or systems.

Through a set of propagation algorithms within the software engine, together with the component models and simulation connectivity, Pennant can build a fully integrated emulated representation of the desired training system.

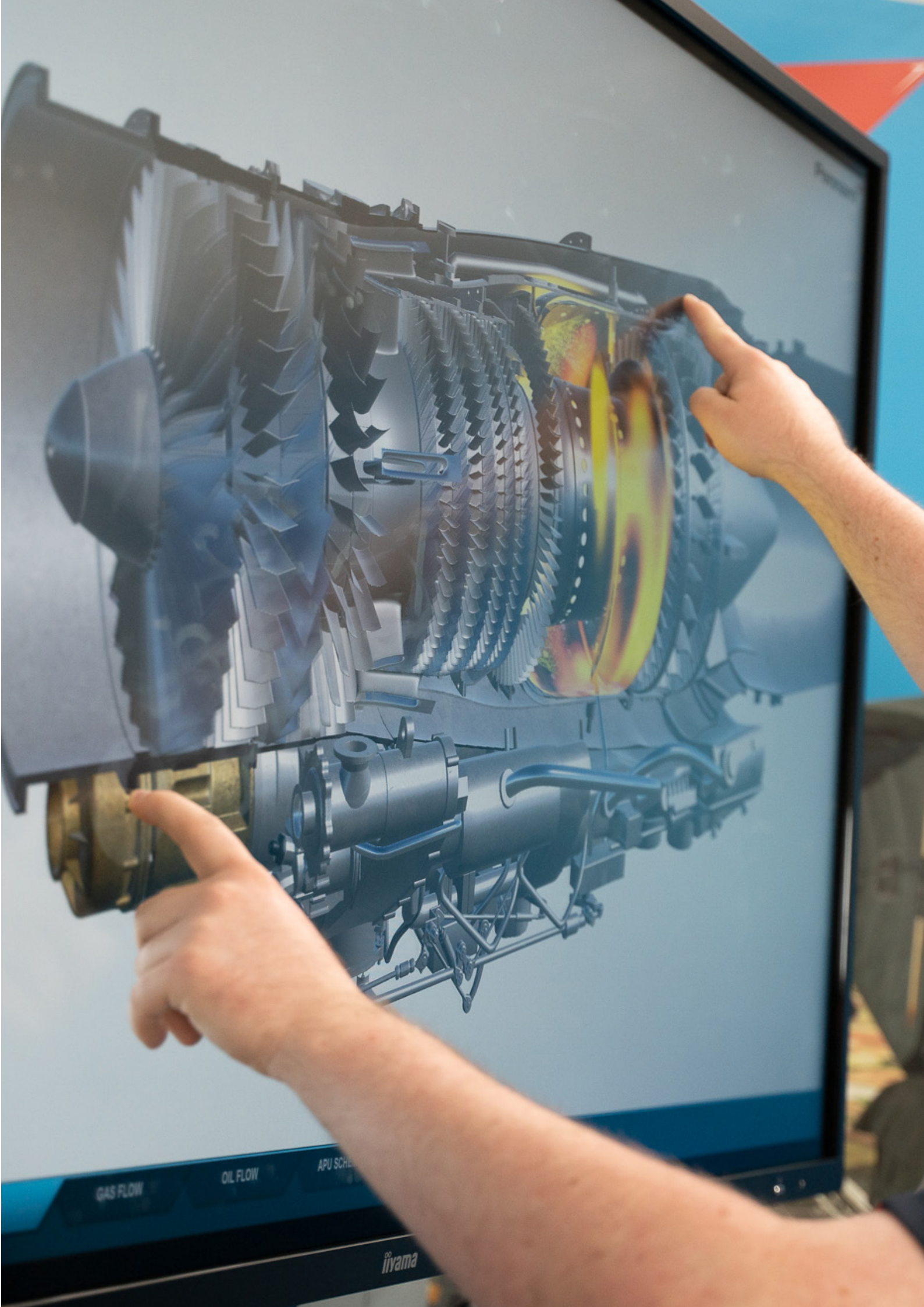
A modular and object-oriented design approach, along with extensive and proven common object libraries, promotes our ability to provide easier system updates and thus maximises concurrency with any training systems' configuration.

These emulation solutions include normal behaviours and the behaviour of the system under fault conditions.



Increasingly, training establishments are relying on virtual reality to transition between theoretical and practical exercises in procedural training. With a suite of impressive solutions, Pennant delivers innovative, effective and high quality training which allows multiple users to inject real-time faults, practice emergency solutions, record responses and review activity easily and safely.

- Pennant's Virtual Reality (VR) product combines high fidelity 3D media, the latest Head-Mounted Display (HMD) technology and motion tracking techniques
- VR provides a fully immersive training experience that is expected from real world, but in a danger-free environment
- Reduces the cost of using real-life equipment and reduces maintenance costs
- Easily portable and suitable for training at multiple locations





Services

Pennant's dedicated service departments have a core level of qualified and experienced teams, with the skills and knowledge to deliver highly professional, reliable and cost-effective services for our customers. We are able to provide support in everything from consultancy, technical publications, training services, bespoke solutions and specific rail industry services.





Our capabilities include:



Training Needs Analysis (TNA)



Courseware Development



Technical Publications, IETMs, S1000D etc.



Competency Mapping to EASA, EMAR,
City of Guilds etc.



In Service Support, Preventative and
Corrective Maintenance



Instruction and Training



Consultancy

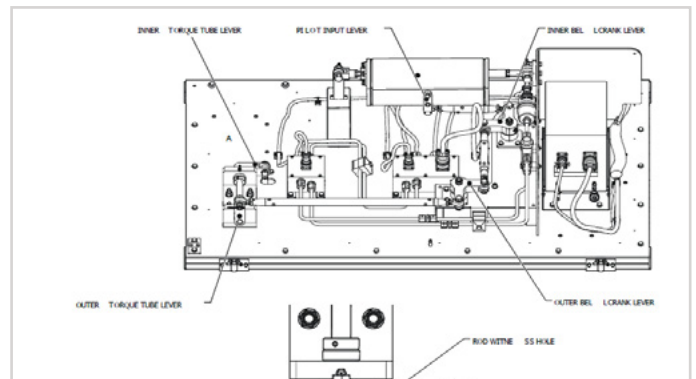
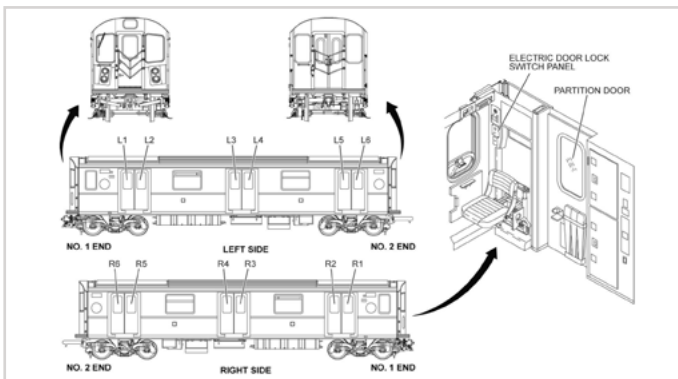


Bespoke Software Solutions

Technical Publications

A fundamental part of Pennant is the Technical Publications capability. This can be anything from a printed owner's handbook to an interactive electronic technical manual (IETM), including intelligent 3D graphics compliant with S1000D, accessible over the internet on a range of mobile devices.

The global Pennant team of authors, illustrators and consultants have the ability to manage, develop, and deliver complex source data into a variety of technical manuals such as Operation and Maintenance Manuals, Parts Catalogues and training courseware utilising the robust Pennant IPS software.



Consulting

As a supplier of market leading products and services, Pennant believes defining and implementing key objectives is pivotal to the successful delivery of projects and initiatives. In the consultancy area, we work with our customers to ensure timely and accurate advice. Solutions and recommendations are presented which result in long-term, successful deployment of our software, services and trainers.

Pennant continues to provide defence departments and industry clients worldwide with expert ILS and IPS consultancy services to assist them to design, plan and execute programs of work that deliver optimal support solutions. Through technology-led consultancy, we guide our customers to deliver capability and system operational effectiveness throughout the entire equipment life cycle, while optimising the total cost of ownership.



Training

The success of the company depends upon the quality of the knowledge of its employees and its training assets, so it is essential to establish the need for training at the earliest opportunity. It is Pennant's aim to provide cost-effective and efficient recommendations, training or otherwise, that support company and customer operational missions and goals.

Pennant can provide specialist instructors who deliver a range of training on our IPS software or training devices. Pennant instructors have a wealth of experience and provide a hands-on approach to training which is employee or student centred, providing the knowledge and skill set customers require of their staff.

Mapping

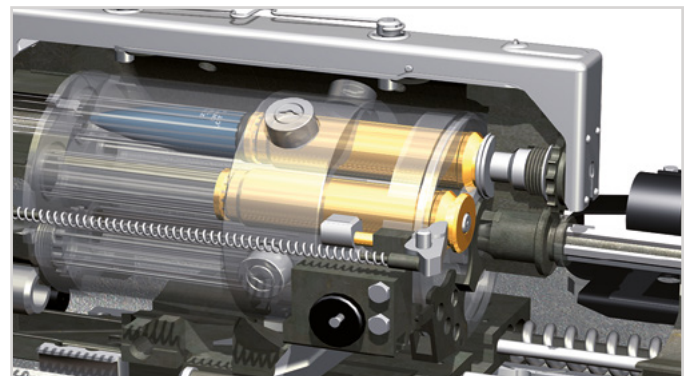
Pennant has undertaken activity mapping practical training tasks on Pennant manufactured training aids against EASA/EMAR Pt66, City & Guilds, FAA and CASA MEA units.

CBT

Pennant has many years' experience in the design and development of Computer Based Training (CBT) for both classroom and self-paced delivery on desktop and mobile platforms.

All our courseware is developed bespoke to the customers technical and training requirements and can be managed using both SCORM and xAPI tracking. We make continual improvements to our courseware as we understand that courseware and media training needs to be innovative and immersive. Training delivery material includes:

- Animated schematics
- Cutaway of components
- Video (Remove/Install/Test/Operate)
- Storyboard/Course Notes





Bespoke Software Solutions

Our development team combines technical expertise and understanding of software, services and training to create tailor-made software solutions. Simulators and emulators provide the opportunity for recruits to train on equipment or systems with which they can interact (to a lesser or greater degree) as they would with the real equipment or systems. Either approach allows trainees to become competent and confident prior to progressing to training with the real equipment.

Support Services and Maintenance

Our dedicated support services department provides reliable and cost-effective customer support services. When Pennant designs new equipment, the support and training requirements are a major consideration.

Pennant believes it is essential to exceed customer expectations. This is achieved by successfully meeting all Service Level Agreements (SLAs) and Key Performance Indicators (KPIs).

Case Study - Aviation Technical Training (RAAF Base Wagga)

2012	Embedded with Customer to develop TNA	2019	Supporting the introduction of new airframes
2013	Contract Award (Rolling Annual Contract) <ul style="list-style-type: none">- Refurbished existing Training Aids- HazMat Remediation - Disposed of obsolete equipment- Delivered modern training aids, Pennant & third party- Created instructor and student resource (Media)	2020	Undertaking deep maintenance and product refresh
2014	Support of 4,000+ items of training equipment from hand tools to ground run aircraft	2021	Provision of instructors due to significant increase in student throughput <ul style="list-style-type: none">- Introduction of new Training Aids- Training Aid refresh program
2016	Created over 100 instructional videos, from hand skills to aircraft movements	2022	Continued introduction of training aids and secondment of our instructional staff to support the teaching programme. Additionally, the introduction of S1000D aligned IETP for specific requirements
2017	Provided Instructor and Developer resource	2023	Continuation of training aid equipment roll-out and of training aid upgrade and improvements where necessary
2018	Mapping to MEA training requirements and development of type training		



Pennant Rail Services

Pennant has years of experience working with rail industry primes and their supply chain, adding value through experience, capability and versatility. The addition of Track Access Services and Track Access Productions to the Group has further strengthened the Pennant Rail offering to the sector.



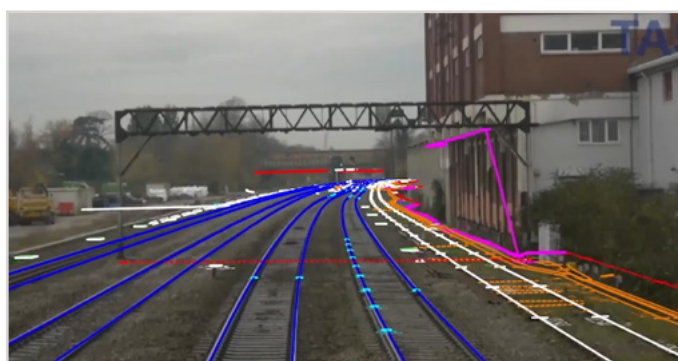
Pennant has been involved in numerous rail projects, showcasing extensive experience and expertise. Successful manuals and training contracts across the world have included the design, production and development of Operator and Maintenance Manuals, Work Instructions, Illustrated Parts Catalogues, Training Courseware, and the delivery of both classroom and practical training.



Other key capability includes:

- Driver training
- Rail simulation & VR
- Railway Survey & Signal Sighting Support
- Training Videos
- Track Access Portal

We are recognised members of the Rail Industry Association (RIA) and are a verified supplier on the Railway Industry Supplier Qualification Scheme (RISQS).







Hardware Trainers

Pennant's history stems from hardware training devices that include hand skills training devices, part task trainers and procedural trainers.





Generic Trainers

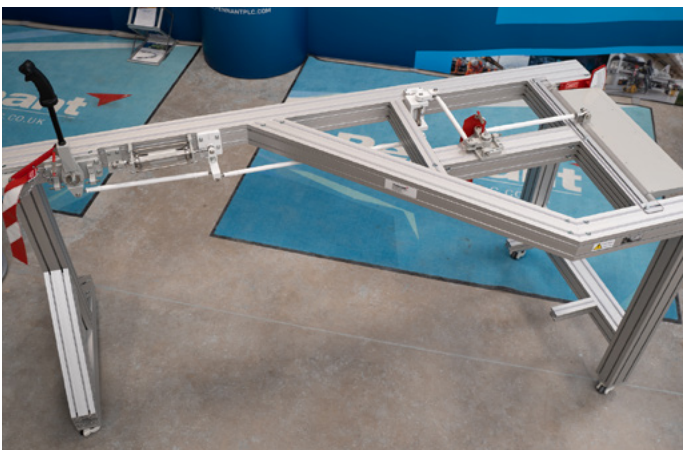
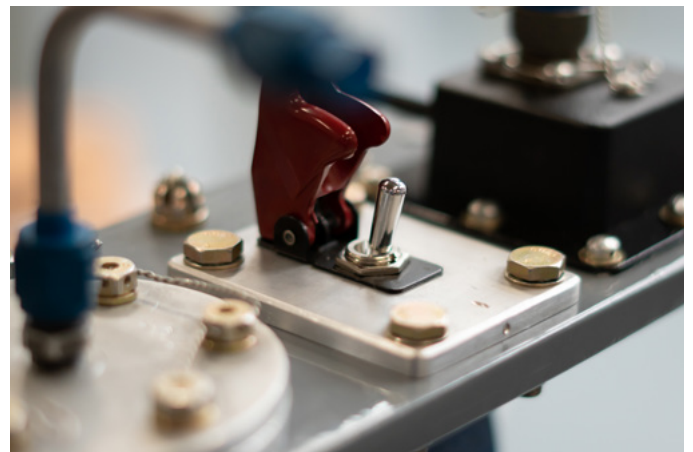
Pennant's range of generic training equipment offers a blended solution enabling students to benefit from a suite of state of the art and modern training aids. These solutions provide operation and maintenance training in a secure training environment before students feel capable and confident to transfer onto real-life equipment, building confidence and developing the necessary hand skills.

The Generic Trainers equipment is used at engineering colleges and academies around the world to support both military and civil specific training. Our Generic Trainers:

- Have been developed to support the practical elements within engineering courses and cover such topics as basic hand skills through to fault diagnostics of large complex systems
- Are aligned to regulatory standards including EASA / EMAR, FAA, City & Guilds and CASA MEA unit compliant organisations
- Are supplied with training aids that supplement student training by providing practical and theoretical solutions from basic handskills through to complex synthetic simulator.

Hand Skills Trainers

Hand skills trainers are valuable tools for developing and refining manual dexterity in various industries. By providing a controlled and focused environment for practice, these trainers contribute to the mastery of fine motor skills, hand-eye coordination, and procedural familiarity, ultimately enhancing the overall competence and efficiency of learners in their respective fields.





Part Task Trainers

The primary purpose of part task trainers is to provide learners with a safe and controlled environment to practice and master specific skills or procedures without the risks associated with real-world scenarios. These trainers replicate a specific part or aspect of a larger system or procedure, allowing learners to focus on developing and refining their abilities in a targeted and controlled manner.



Procedural Trainers

Procedural trainers play a vital role in developing and maintaining high levels of procedural proficiency and ensuring the safe and effective execution of complex processes. By providing a realistic and immersive learning experience, these trainers equip learners with the necessary skills, knowledge, and confidence to perform procedures accurately and efficiently in real-world settings.

