

**ANALYSE.
DESIGN.
DELIVER.
ASSURE.**

Aquila Learning and ALaRMS™.
The future of training management for
demanding and high risk occupations.

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Aquila | Learning

INTRO.

ALaRMS™.

The future of training management systems for demanding and high risk occupations.

The Aquila Learning and Risk Management System (ALaRMS) is an end-to-end training management system specifically designed for high-risk and high-compliance industry (such as aviation and defence). The system offers full training management and delivery capabilities with added tools that uncover risk associated with training gaps.

ALaRMS offers an incredibly user friendly and efficient way to manage, deliver and assure entire training systems in accordance with systems approach to training principles. It is modular by design and links all training activity, this drives greater insights and analytics for evidence based decision making. The result is effective, efficient and safe training and operations.

ALaRMS is a web based application built on the latest technologies. It can be deployed to your own servers or managed remotely in the Aquila Cloud.

The system is optimised for desktop, tablet and smart phone. This gives students, instructors and training management staff flexibility to access the system from any location and at any time.

ALaRMS™. AQUILA LEARNING AND RISK MANAGEMENT SYSTEM.



A Training Management System built for organisations operating in high-risk environments.

- Designed with a 'systems approach to training' methodology at its core.
- Seamlessly ties together analysis, design, delivery and evaluation/assurance into one integrated TMS.
- Added tools that identify risks associated with training gaps and training delivery.
- Modular design that can be built sequentially from analysis to assurance depending on your needs.
- Intuitive and user friendly interface.
- Optimised for PC, Tablet and Smart Phone.
- Future proofed technologies including Microsoft ASP.Net Core, SQL and Vue.js.
- Easy integration with other systems via XAPI, SCORM and AICC compatibility.

WHY IS ALaRMS™ CRUCIAL TO YOUR ORGANISATION?



Its all about being effective, efficient and safe.

If you employ people to conduct roles that require a high degree of training and assurance to stay safe and effective, then investment in training management is incredibly important.

Creating an optimised training system with ALaRMS (through detailed analysis, design, delivery and assurance) will ensure the training you employ is efficient, effective and keeps your people and assets safe in a variety of high-risk environments.

This becomes incredibly important when an organisation needs to:

- ensure training meets the true operational requirements.
- ensure that all training gaps are understood and mitigated.
- ensure training is continually improving.
- create efficiencies while optimising training delivery.
- justify spend on expensive training programmes.
- prove how training was delivered and to what standard following an incident.

ALaRMS™ MAKES TRAINING MANAGEMENT AGILE.



Traditional training management process is too slow.

We believe systems approach to training is the answer for the management and assurance of training in complex and high risk industries. However, in its traditional form, this process can be a huge challenge because:

- it is incredibly time consuming and requires heavy oversight and governance.
- it is labour intensive requiring large teams of people.
- it has to manage huge amounts of data and is open to human error.
- it has to keep up with the changing needs of the organisation or operational capability.

But, ALaRMS™ is a game changer.

- ALaRMS makes SAT incredibly agile and responsive.
- ALaRMS is a Force Multiplier, saving up to 75% of the time and manpower required for through life management of training.
- ALaRMS helps to reduce human error.
- ALaRMS enables evidence based decision making through analytics.
- ALaRMS ensures training is effective, efficient and safe.

ALaRMS™ IN ACTION: Royal Air Force P8 Poseidon Force.

Following a successful Government Tender, ALaRMS was procured by the UK Ministry of Defence's new Maritime Patrol Aircraft Programme; the Boeing P8 Poseidon.

The aim was to provide an effective training management system that drives effective, efficient and safe training (and workplace operations) in one seamless digital process.

ALaRMS has been a success since going live in January 2019; Training Management and Assurance activities have been reported to be 75% faster and more efficient; allowing for much faster and more accurate delivery of training tasks such as Analysis, Design, Delivery and Assurance.

Human error sits at zero Analysis Errors made; powered by ALaRMS automated and standardisation functions.



Standardisation is at 100% for Role Analysis, Role Performance Statements, Training Analysis, Training Performance Statements, Lesson/Assessment Plans and Specifications.

ALaRMS will now be used across the entire P8 Poseidon Aircrew, Engineer and Operations Staff domain, allowing efficient through life management of training and assurance.

ALaRMS will play an integral role in the scheduling and resource management at the new P8 Training Facility in RAF Lossiemouth, managing complex training resources and conflicts.

Every instructor and student has their own unique profile that will record and archive their entire training history, giving one consolidated record.

‘Having an application that was specifically built to manage and assure aviation training end to end is hugely beneficial. We can achieve so much more in a short amount of time, knowing that the training we produce is compliant with military training principles such as DSAT and is fully optimised’. – Sqn Ldr Rich Jones (RAF)

ALaRMS™ IN ACTION: Royal Air Force College, Cranwell.

ALaRMS was chosen as the preferred Training Management System by the Royal Air Force for the launch of the 'Modern Initial Officer Training Course' (MIOT).

MIOT is a forward thinking and dynamic shift in the way initial officer training is delivered. It offers flexible training paths to a number of different cohorts and recognises prior experience and qualification. This allows the RAF to get fully trained Officer's to the front line quicker and in a more cost effective way, without compromising quality.

To manage this new way of training, the RAF required a next generation training management system that offered agility yet retained a systems approach to training core (in accordance with UK Defence Systems Approach to Training methods).

With its end to end capability and intuitive user experience, ALaRMS was chosen from a number of other industry leading learning management systems.

ALaRMS went live at the RAF College Cranwell during July 2020 and is bringing huge efficiencies to the way training is analysed, designed, delivered and assured.

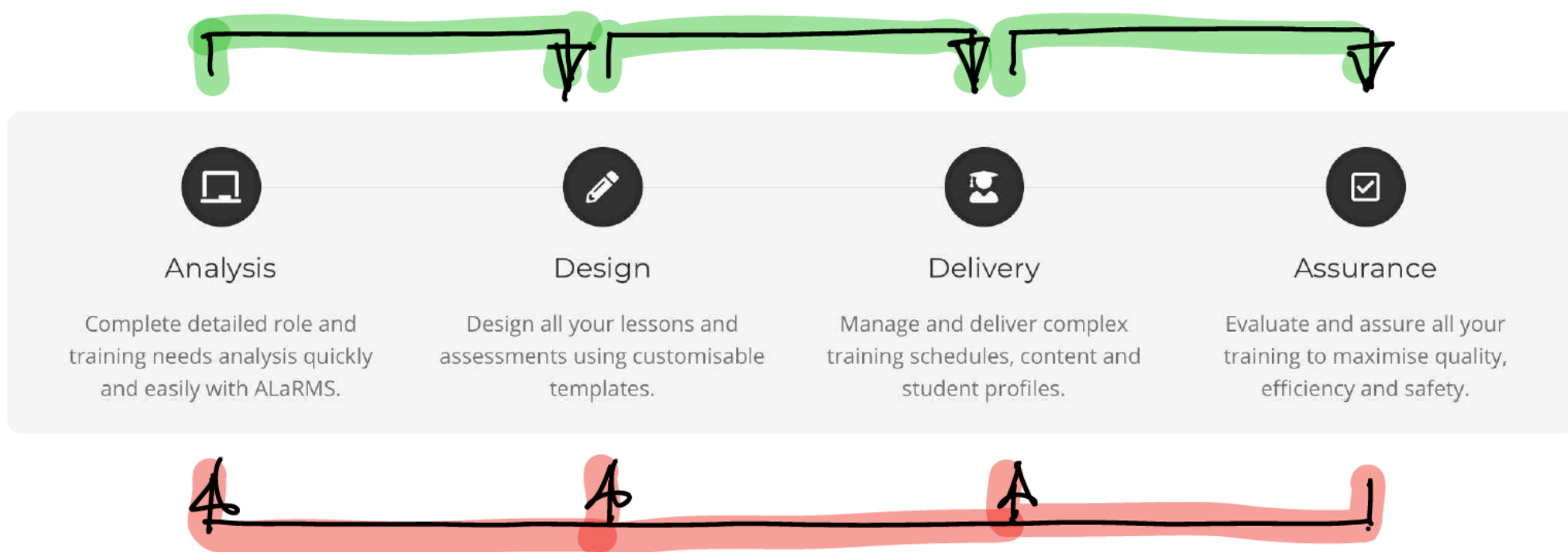
ALaRMS will be with the college for the foreseeable future where it is expected to manage and deliver training to an annual cohort of 1000 students and 100 staff.

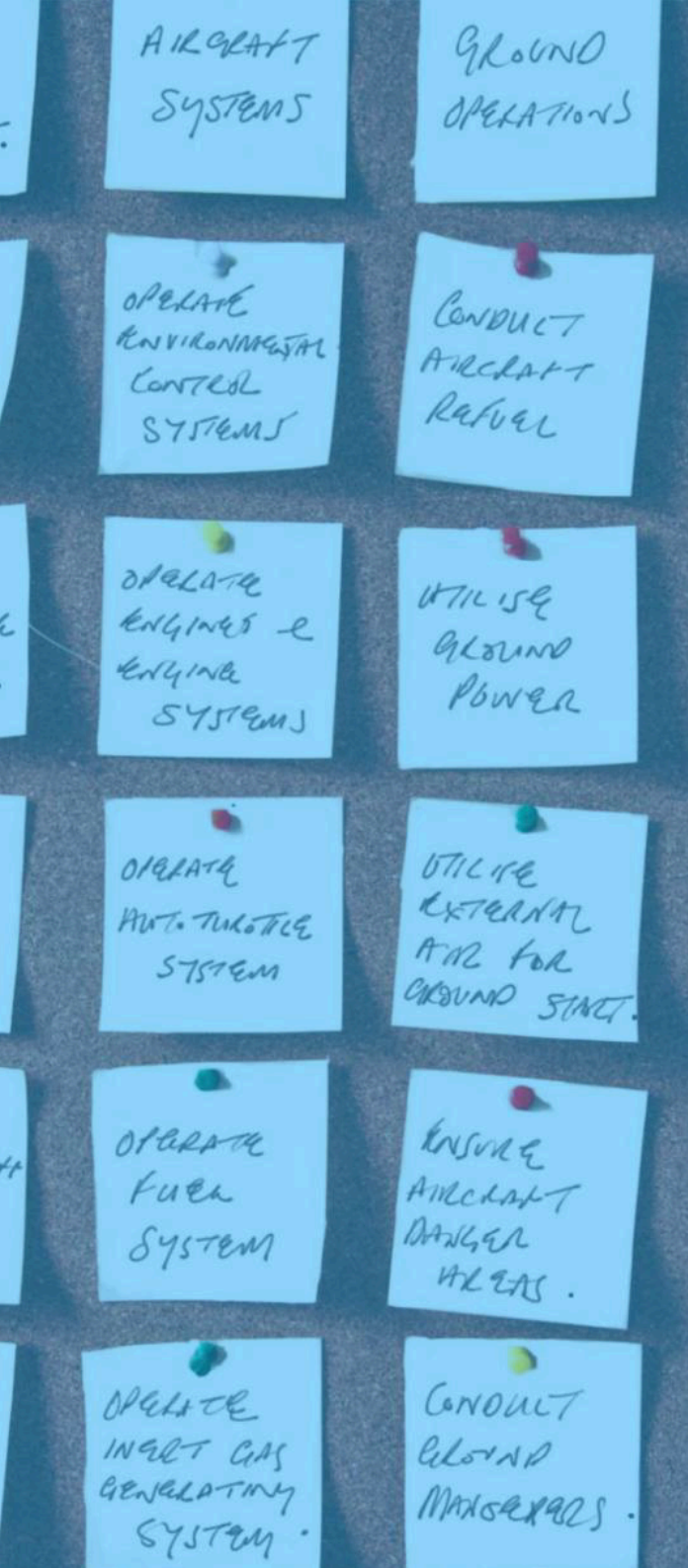
Mark Radbourne, Managing Director at Aquila Learning said: 'Supplying the RAF College Cranwell with our ALaRMS technology is a huge privilege. We look forward to providing Cranwell with state of the art training management technologies well into the future'.



DIGITISE YOUR TRAINING MANAGEMENT AND DELIVERY PROCESS.

The training process employed within the ALaRMS software application is built from decades of experience training the Royal Air Force's Aircrew, Engineers and Support Staff. The process is fully compliant with UK MOD Defence Systems Approach to Training and is easily configured to other methods such as the Canadian Forces Individual and Team Education System; the United States Department of Defence Instructional System Design; and Australian Department of Defence Systems Approach to Defence Learning (among others).





ALaRMS™ ANALYSIS: Make easy work of complex role, options and training needs analysis.

Role and Team Analysis. Really understand what you are training for and start your training design journey. ALaRMS™ offers an incredibly user friendly role and team analysis tool, maximising detail and minimising time spent capturing it.

Options Analysis. Easily analyse methods, media, fidelity, environment and costings to meet your requirements.

Training Analysis. ALaRMS™ makes easy work of identifying which elements of the role should be training formally, which elements should be trained in the workplace and which elements are to be carried as training gaps. This is incredibly important as a decision making tool to identify the size, type and cost of training to be delivered while getting a clear picture of the true training gap.

ALaRMS™ ROLE ANALYSIS.

- Digitised tools and easy to use features that speed up the role analysis process and data entry.
- Hierarchical role analysis and scalars with automatic sequential numbering system.
- Quickly build Job Duties, Tasks, Sub Tasks and Task Element layers.
- Develop performance, conditions and standards.
- Complete knowledge, skills and attitude analysis.
- Complete difficulty, importance and frequency analysis.
- Auto-data upload for legacy analysis data sets.
- Auto-generated formal documents that are configurable to your organisations requirements (e.g. UK MOD Role Performance Statements).
- Full version control and archive through life.

The screenshot displays the 'Aquila Learning' software interface for 'ROLE ANALYSIS - PILOT'. The interface is divided into several sections:

- Search...**: A search bar at the top left.
- ADMIN**: A navigation menu on the left side.
- ANALYSIS**: A sub-menu on the left side, including 'Role Analysis', 'Learning Analysis', 'DESIGN', 'DELIVERY', and 'ASSURANCE'.
- ROLE ANALYSIS - PILOT**: The main content area, showing a hierarchical tree of tasks and sub-tasks. The tasks are numbered sequentially, starting from 11 (PREPARE THE AIRCRAFT FOR FLIGHT) to 16 (CONDUCT CRUISE PROFILE). Each task has associated sub-tasks (ST) and performance conditions (C).
- Performance**: A section on the right side, showing performance conditions for the selected task. It includes a 'Condition' dropdown menu with 'Inherit' selected, and a list of performance conditions such as 'Given NATOPS', 'To be conducted as PF', 'To be conducted as PNF', 'Whilst airborne', 'Given aeronautical charts', 'Given local orders', and 'Given group orders'.
- Standard**: A section on the right side, showing a 'Standard' dropdown menu with 'Inherit' selected, and a list of standards such as 'Without significant error', 'NATOPS Flight Manual Performance Supplement', 'Without reference to NATOPS unless checklists are required', and 'Without reference to NATOPS unless conducting abnormal op'.
- Training Category**: A section on the right side, showing a 'Training Category' dropdown menu with '2' selected.
- Options Analysis**: A section on the right side, showing 'Physical Fidelity' and 'Functional Fidelity' options, both set to '0'.

ALaRMS™ TRAINING OPTIONS ANALYSIS.

- Complete detailed training options analysis in a quick and easy digitised format.
- Link training options directly to the role analysis and individual tasks.
- Complete detailed fidelity analysis using configurable matrixes for standardisation and quality.
- Complete detailed methods and media analysis.
- Complete detailed cost analysis against each resource and task requirement.
- Complete auto-uploads of existing data.
- Auto-generation of formal options analysis reports at the click of a button.
- Full version control and archive through life.

The screenshot displays the ALaRMS™ Training Options Analysis interface. The top navigation bar includes 'Admin Portal' and a 'Draft' status indicator. The main content area is titled '12 - START AND TAXI THE AIRCRAFT' and features a 'Save' button. The interface is organized into several sections:

- Training Category:** A dropdown menu showing 'T 2'.
- Options Analysis:** A section containing several fidelity analysis dropdowns:
 - Physical Fidelity:** 'P 3'
 - Functional Fidelity:** 'F 3'
 - Environmental Fidelity:** 'E 2'
 - Cultural/Tactical Fidelity:** 'C 2'
- Methods:** A section with a '+' icon and a list of training methods, each with a red 'x' icon:
 - Practical Sim Lesson
 - Practical live fly
 - Computer Based Training
 - Computer Aided Instruction
- Equipment:** A section with a '+' icon and a list of equipment types, each with a red 'x' icon:
 - Dynamic Mission Sim
 - Rear Crew Trainer
 - Instructor
- Notes:** A text input field.
- Subtasks:** A list of subtasks:
 - 1.2.1 - Conduct pre-start crew briefing
 - 1.2.2 - Conduct engine start

The left sidebar contains a list of tasks categorized by phase: 'BEFORE TAXI', 'TAXI THE AIRCRAFT', 'TAKE OFF', 'AFTER TAKEOFF AND CLIMB PROFILES', 'CRUISE PROFILE', and 'OPERATING AREA PROCEDURES'. The top right of the interface includes buttons for 'Publish', 'Copy to Learning', 'Show RPS', 'Show TOS', and 'Back'.

ALaRMS™ TRAINING ANALYSIS.

- Digitised tools and easy to use features that speed up the training analysis process and data entry.
- Hierarchical analysis and scalars with automatic sequential numbering (that is directly linked to the Role Analysis for audit and assurance).
- Quickly build Training Objective, Enabling Objective and Key Learning Point layers.
- Develop performance, conditions and standards per task item.
- Auto-data upload of existing analysis data.
- Auto-generated formal documents that are configurable to your organisations requirements (e.g. UK MOD Formal Training Statements).
- Full version control and archive through life.

The screenshot displays the Aquila Learning software interface for a Learning Analysis - PILOT. The interface is organized into several sections:

- ADMIN:** Search bar and navigation options.
- ANALYSIS:** Role Analysis and Learning Analysis (selected).
- DESIGN:** Lessons / Assessments, Training Path, Surveys, and Student Reports.
- DELIVERY:** Courses and Schedule.
- ASSURANCE:** Risk Management, Evaluation, and Analytics.

The main content area shows a list of learning objectives for a crosswind landing task, including:

- 110.5 - Execute a cross wind landing
- 110.5.1 - State the three techniques for crosswind landing
- 110.5.2 - Describe the de-crab technique
- 110.5.3 - Describe the touchdown in crab technique
- 110.5.4 - Describe the sideslip technique
- 110.5.5 - Demonstrate a crosswind landing using all systems in normal and abnormal conditions
- 110.5.6 - State the crosswind limits of the aircraft
- 110.6 - Execute an overweight landing
- 110.6.1 - State the weight that qualifies as an overweight landing
- 110.6.2 - State when an overweight landing can be conducted
- 110.6.3 - Explain the performance considerations that should be made when conducting an overweight landing
- 110.6.4 - Explain the use of the autobrake system during an overweight landing
- 110.6.5 - Explain the procedure to be followed if the stopping distance is of concern
- 110.6.6 - Describe how aircraft speed should be controlled during an overweight landing
- 110.6.7 - Describe the landing runway and what considerations should be made about distance, slope and wind
- 110.6.8 - Describe the landing procedure for an overweight landing
- 110.6.9 - Demonstrate an overweight landing ensuring that relevant considerations have been made.
- 110.7 - REACT TO LANDING EMERGENCIES
- 110.7.1 - Conduct a landing at emergency approach speeds
- 110.7.2 - Conduct a one engine landing
- 110.7.3 - Execute a landing with hydraulic systems failures
- 110.7.4 - Execute Landing on a Flat Tire
- 110.7.5 - Execute a Partial or All-Gear-Up Landing
- 110.8 - EXECUTE A LANDING WITH FLAP MALFUNCTION
- 110.8.1 - Execute the Trailing Edge Flaps Up Landing drill
- 110.8.2 - Execute the All Flaps Up Landing drill
- 110.8.3 - Execute the LEADING EDGE FLAPS TRANSIT drill
- 110.8.4 - Execute the Trailing Edge Flap Asymmetry drill
- 110.8.5 - Execute the Trailing Edge Flap Disagree drill
- 110.9 - CONDUCT DITCHING
- 110.9.1 - Evaluate external conditions that may effect ditching
- 110.9.2 - Set up the aircraft for ditching
- 110.9.3 - Conduct a single eng ditching
- 110.9.4 - Conduct a two engine ditching
- 110.9.5 - Conduct a no engine ditching
- 110.9.6 - Launch liferafts
- 110.9.7 - Conduct ditching drill
- 110.9.8 - Transmit emergency message

The right-hand side shows a 'Performance' section with various conditions and standards, including 'Core', 'Legislated', and 'Accred' checkboxes, and a 'Standard' dropdown menu.

ALaRMS™ DESIGN

MODULE: Say goodbye to mountains of paperwork.

ALaRMS™ brings an incredibly intuitive and efficient method of course design to your finger tips.

Linking training objectives back to the analysis phase for audit purposes, ALaRMS™ allows you to design training that meets your specific operational requirements.

Fully customisable templates help you to manage standardisation and maintain quality from one central administration function.

- Build lessons and assessments.
- Sequence complex courses.
- Build training forms, reports and reviews.
- Build evaluation surveys.
- Import or link to multimedia training content e.g. SCORM.
- Easily integrate with other systems.



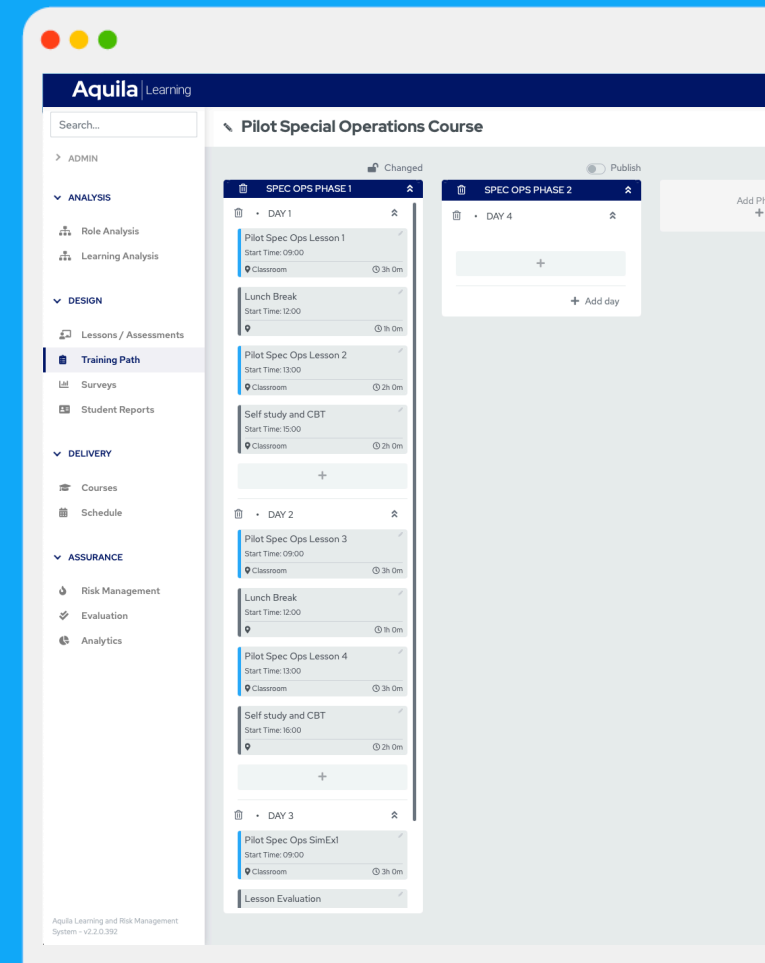
DESIGN LESSON AND ASSESSMENTS GUIDES.

- Design Lessons and Assessments using customisable templates to drive standardisation and quality management.
- All lessons and assessments are digitally linked to training objectives and key learning points to provide audit, assurance and analytics.
- Lesson and Assessment Templates are fully customisable to the organisations preference to drive standardisation and quality.
- Manage all lessons and assessments from a central design interface.
- Upload or link learning and delivery content direct to lesson and assessment plans.
- Full version control and archive.
- All changes are automatically pushed to instructors and students through their training profiles and schedules.

The screenshot displays the Aquila Learning interface for a lesson titled "Pilot Recurrent SimEx 1 (Emergencies)". The interface is divided into a left-hand navigation menu and a main content area. The navigation menu includes sections for ADMIN, ANALYSIS (Role Analysis, Learning Analysis), DESIGN (Lessons / Assessments, Training Path, Surveys, Student Reports), DELIVERY (Courses, Schedule), and ASSURANCE (Risk Management, Evaluation, Analytics). The main content area features a search bar, a breadcrumb trail (Lesson Objectives > Details > Lesson Introduction > Lesson Development > Lesson Consolidation), and a "Locations" table with entries for "CBT Room 2h 0m", "Dynamic Mission Sim 2h 0m", and "Briefing Room 0h 30m". Below this is a "Supporting Media" table with columns for NAME, DESCRIPTION, and LINK. The table lists "Engine Failure" (Emergency Procedure Video), "Instructor PowerPoint" (Lesson Presentation), and "Student Pre Briefing" (For students to complete before the lesson.). A "3 records" indicator is visible. The interface also includes a "Supporting Media" section with a "QFIBI" dropdown, a "Number of Instructors" field set to "1", and a "Methods & Media" section with buttons for "Theory Lesson", "Practical Sim Lesson", and "Computer Based Training". A "Headset" dropdown is also present. The main content area contains several text blocks of Lorem Ipsum placeholder text under the headings "Preparation", "Risk Assessment", and "Notes". The footer of the interface reads "Aquila Learning and Risk Management System - v2.0.392".

SEQUENCE COMPLEX TRAINING WITH TEMPLATES THAT STANDARDISE DELIVERY AND SAVE TIME.

- Produce entire course templates that link individual lessons, assessments and evaluation surveys into sequenced events.
- Reuse course templates (or 'Training Paths') multiple times to automatically schedule entire course programmes.
- Auto-conflict management to quickly identify double bookings and scheduling errors.
- Quick and easy features to amend training such as 'drag and drop'.
- Full version controlling for audit, archive and analytics.
- Colour coding for easy identification of lesson and assessment types, locations, methods and media.
- Manage multiple training paths from one central design interface.



FULLY CONFIGURABLE ELECTRONIC REPORT FORMS AND SURVEYS.

Design and distribute digital forms for recruits, students and instructors to use anytime and anywhere.

- Training evaluation surveys.
- Student feedback forms.
- Progress reports and periodic reviews.
- Assessment reports.
- End of course reports.
- Flying training reports (such as the UK MOD F5000 Series).
- All forms are automatically recorded and archived to a personal profile.

The screenshot displays the Aquila Learning system interface. The top navigation bar includes 'Aquila Learning' and a 'Dashboard' menu. The main content area is titled 'REPORT - INITIAL INTERVIEW'. The form contains several sections: 'Report' (with a sub-section 'Initial Interview'), 'Student' (with a dropdown menu 'Select student...'), 'Date' (with a date picker 'yyyy-MM-dd'), 'OASC Board Grade', 'OASC Board Score', 'Appearance and Bearing', 'Manner and Impact', 'Speech and Powers of Expression', 'Motivation', and 'Breadth and Depth of Outlook'. At the bottom, there is a question: 'Stated that they are not in trouble with the Police, have not taken drugs and do not have any financial problems since starting MIOT?' with radio buttons for 'Yes' and 'No'. Below this is a text area for 'Further comments or remarks' and a field for 'Fit Cdr's Name'. The footer of the interface reads 'Aquila Learning and Risk Management System - v2.2.0.392'.



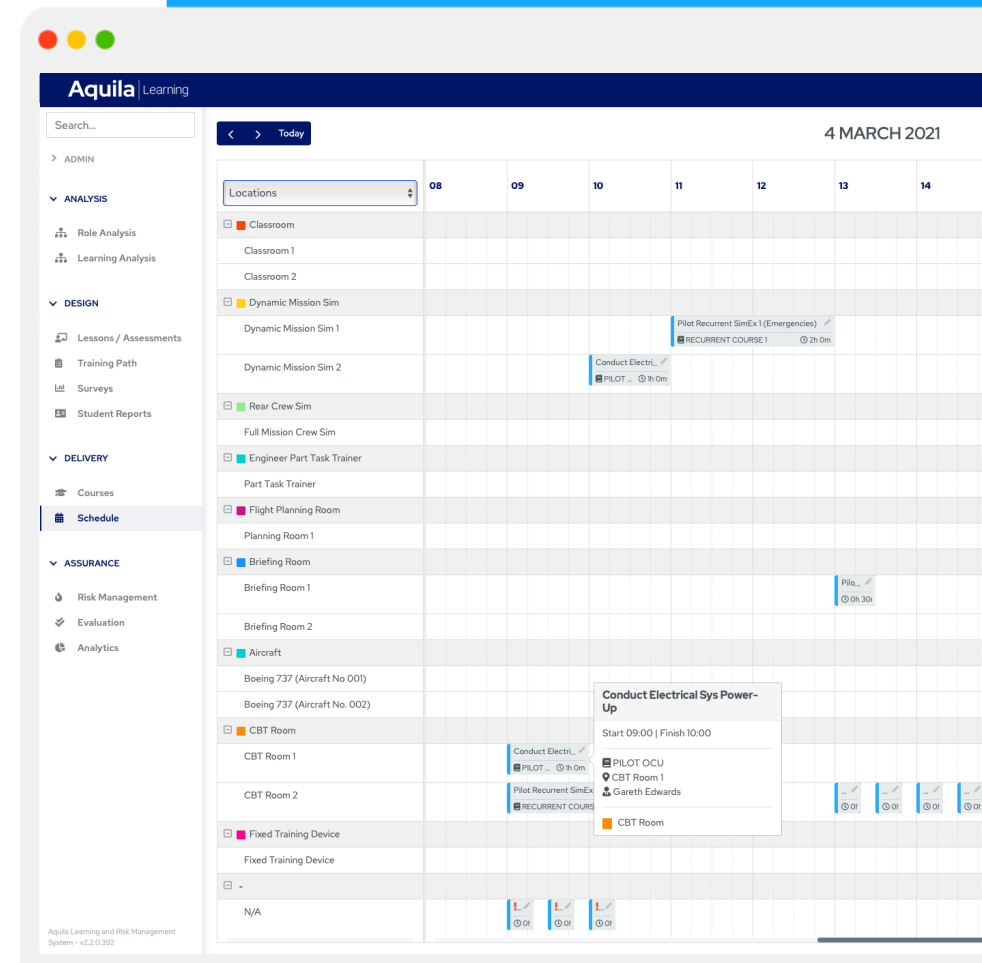
ALaRMS™ DELIVERY MODULE: Schedule, manage and deliver complex training.

ALaRMS™ offers dynamic learning management and content management with its delivery tool.

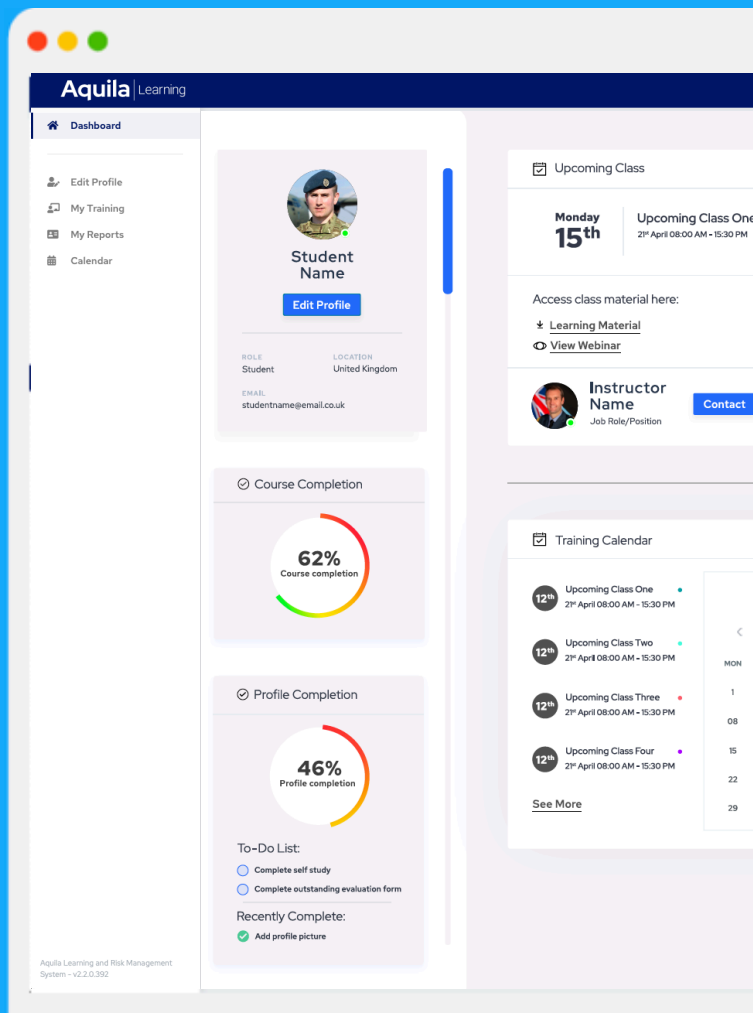
- Easy delivery of multimedia content, accessible from PC, tablet or smart phone.
- Administration of training to multiple users, training devices and resources.
- Detailed student and instructor profiles with version control and archive.
- All aspects of the ALaRMS™ delivery tool are linked back to the analysis and design tools to provide ultimate assurance and audit capabilities.

SCHEDULE ENTIRE COURSES AT A TOUCH OF A BUTTON.

- Quick and easy course setup.
- Auto-scheduling of entire courses, including lessons, assessments, flex-time and evaluations.
- Quick and easy amendments to timings, locations, resources, students and instructors.
- Push changes to student and instructor profiles.
- Auto-conflict management.
- Multiple schedule views.



USER FRIENDLY ADMIN, STUDENT AND INSTRUCTOR INTERFACES.



- Optimised for PC, tablet and smart phone.
- Intuitive and easy to use interface.
- All the information and content you need, when you need it.
- Deliver content from multiple sources with XAPI and SCORM compliance.
- Full student and instructional calendar with change notifications.
- Easy to view course details and progress information.
- Full training records and archived history for every student and instructor.

ALaRMS™ ASSURANCE MODULE: Manage quality of training and risk through detailed evaluation, audit and assurance.

Evaluate and assure all your training to maximise quality, efficiency and safety.

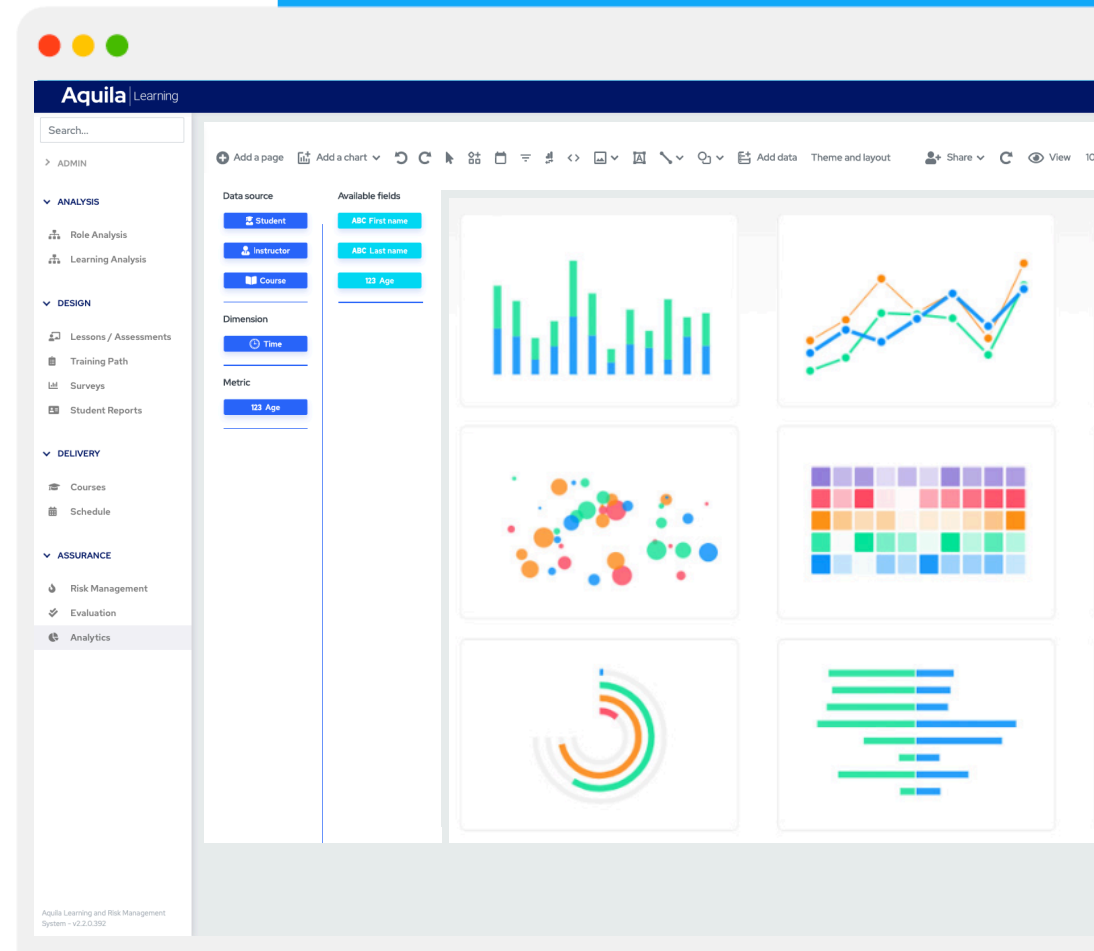
- Manage digital training evaluation surveys.
- Automatically generate digital audit reports.
- Complete data analytics across the entire training system.
- Complete risk analysis and reporting.
- Export and share data.



PRODUCE INSIGHTS AND ANALYTICS THAT REALLY MATTER.

ALaRMS™ analytics tool puts big data at your finger tips, helping you to analyse trends, create management statistics and provide valuable assurance on all training activity.

- Pipeline management.
- Training data analysis.
- Risk analysis.
- Trend and management statistics.
- Student performance.
- Training optimisation.
- Link training to the safety management system.



MANAGE RISKS TO TRAINING, WORKPLACE OPERATIONS AND LIFE.

- Automatically record training gaps for onward analysis of risk to life, output standards and workplace operations.
- Record and analyse training risks against each job role and course.
- Export data for accountable management and wider stakeholder review.
- Analyse data and trends.
- Correlate training gaps and risks with wider organisation risk or safety data.
- Easy to use and configurable Risk Matrixes.
- Easy to use risk analysis features to record proactive and reactive measures.

The screenshot displays the Aquila Learning software interface. The main dashboard shows a 'RISKS' section with a search bar and a list of risk items. A 'Risk To Training Table' is overlaid on the screen, showing a matrix of risk severity (Impact) versus likelihood. The table is color-coded from red (high risk) to green (low risk).

Severity of impact of training	Likelihood						
	7 Extreme (will definitely occur frequently)	6 Severe (will definitely occur regularly)	5 High (will definitely occur on occasion)	4 Moderate (will probably occur regularly)	3 Low (will probably occur on occasion)	2 Very Low (likely to occur on occasion)	1 Minimal (unlikely to happen)
6 Total (Trg Failure)	10	10	9	8	7	6	5
5 High (Trg Compromise)	10	9	8	7	6	5	4
4 Significant (Trg activity Compromise)	9	8	7	6	5	4	3
3 Moderate (Trg Supporting Effect Fails)	8	7	6	5	4	3	2
2 Low (Low impact to Trg activity)	7	6	5	4	3	2	1
1 Negligible	6	5	4	3	2	1	1

Below the table, there is a 'Remarks' field with the text: 'RTI. Maintenance will be scheduled out of hours and there is a higher risk of Sim 1'. There are 'Cancel' and 'Save' buttons at the bottom of the table.

Note: Screen shot shows the UK MOD DSAT QMS Risk Matrix. This can be customised to reflect your requirements.

