



# TRANSFORMING MILITARY TRAINING >>

## Strategies and solutions for the Ministry of Defence

The Ministry of Defence (MoD) plays a crucial role training military personnel in a huge range of skills and competencies. As with other government departments and public sector agencies, the MoD is actively engaged in finding ways to improve quality, introduce new practices and reduce costs.

Atos Origin, in partnership with QinetiQ, a leading provider of technology-based services and solutions to the defence and security markets, were commissioned by the Defence and Intelligence Security Centre (DISC) to evaluate intelligence training processes, recommend solutions and help implement new training programmes that are more effective, make better use of time, benefit from technological innovations, and achieve substantial, provable and sustainable savings.

Our solution transforms training programmes into innovative student-centric modules that promote self-paced learning, support instructors, automate course assessments, marking and management, and deliver highly efficient and personalised training.

# EMPOWERING AND ENRICHING TRAINING FOR STUDENTS AND INSTRUCTORS ALIKE

## THE CHALLENGE

Whilst first-time pass rates on intelligence training courses were already high, DISC recognised they were not being achieved in the most effective and efficient way. Instructors tended to spend a significant amount of time on non-teaching activities, from course assessment and multiple marking to student welfare, general administration or organising and co-ordinating visits to MoD sites around the country.

Courses were also generally taught in a traditional classroom format; instructors usually teaching from the front of the class while students noted-down training information.

This situation placed the burden for practically every aspect of learning on the shoulders of instructors, who were also routinely rotated at the end of their postings – which meant constantly training new ones.

In September 2009, the MoD asked Atos Origin and QinetiQ to look at ways of redesigning courses for the Air Intelligence Wing that tackled and solved all these issues. The objective was to put learning power in the hands of students and free-up instructors to take on more of a coaching role, whilst helping the MoD to become more efficient in intelligence training and meet government savings targets.

## OUR SOLUTION

We started by undertaking a current state analysis of courses that covered the curriculum, assessments and pass rates. We interviewed staff and trainees and analysed their input. We also looked at the methods of teaching and the media used.

All this material was recorded in terms of course days, hours and the percentage of time spent on a vast range of activities. Our analysis showed that time spent on non-teaching work was substantially eating into the overall time allocated to courses. On average:

- » 60% of instructor time was spent on non-teaching activity, including administration support, student welfare, course programming and management
- » 12% of time was spent on course preparation, marking, grading and assessing
- » 28% of time was actually spent on delivering courses, remedial coaching and course observation and feedback.

Overall, the time spent on non-teaching work amounted to over 26,000 hours across all the courses we looked at. Formative and summative assessments consumed over 50% of instructors time. Course work was being marked and marked again two or three times. Course success was almost entirely dependent on instructor-led delivery, with trainees being the recipients of a course rather than pro-active participants.

## COURSE TRANSFORMATION

Our central proposal was therefore to transform courses from instructor-led to student-centric learning. By changing the emphasis from a traditional passive model to a dynamic model, students would be empowered to take charge of their own input, instructors would be freed-up to deliver more focused personal teaching, and a series of time-efficient initiatives could be introduced, bringing far reaching benefits for all. Our recommendations included:

- » Moving to a variety of multiple choice and self-selecting question and answer exam formats to facilitate automated marking and grading, saving thousands of man hours in marking
- » Changing the teaching emphasis from subject matter led to teaching expert led. Previously, courses had been taught by subject matter experts who were not necessarily educators. We suggested a new blend of teaching where expert educators would deliver courses supported by subject matter experts brought in for their front-line military experience
- » Creating live communications links with MoD sites across the UK. Until now, students had visited MoD sites in groups. These visits were extremely time-consuming and expensive to run. By having an MoD expert on-site at a remote location, a virtual site visit could be delivered via a live link into the classroom with two-way information and Q&A sharing between students and a site anywhere in the country
- » Changing to a more flexible instructor posting model. Rather than automatic rotations, we recommended extending teaching posts to five years or more, or offering instructors the opportunity to become career teachers. Not only would this significantly reduce the time, expense and work involved 'training the trainers', but it would promote continuity and consistency while helping to guarantee the quality of training
- » Specialist student welfare provision. Student welfare took up a significant proportion of the thousands of hours devoted to non-teaching activities. A specialist provider could deliver the right type of personal support, efficiently and cost-effectively within a known and agreed budget
- » Partnering with an academic institution to achieve an externally accredited qualification.

## EFFICIENT TRAINING SIMULATION

As part of their course, trainees learned intelligence driving techniques in the surrounding area in order to experience and master real day-to-day urban conditions. But these multiple-vehicle, team-based exercises were extremely time-consuming and difficult to manage efficiently.



The MoD has now embarked upon a training transformation programme designed to strengthen and embed the skills and techniques military personnel need for the 21st Century.

Our partner QinetiQ created a classroom-based prototype simulator which replicates a geo-typical landscape and the urban conditions of driver training in multiple screen and highly realistic 3D. Complex intelligence exercises that require simultaneous driving, map-reading and voice communications between team members and instructors to achieve a pre-determined objective, can take place in a 20-square-kilometre synthetic representation that includes the built environment, changing traffic, weather and day/night conditions.

The simulator can deliver substantial benefits at each stage of an exercise. Planning and reconnaissance times can, on average, be cut in half. Orders and instructions can be confirmed by instant visualisation and re-starting or re-enacting an aborted exercise in order to address problems is much more efficient. Simulation exercises are recorded to provide objective data and analysis of trainees responses under pressure.

Overall, simulation delivers more focused training in isolation, reinforces the correct use of procedures, minimises Health & Safety risks, eliminates travel and logistical costs and reduces a range of ancillary costs such as car fuel and exercise personnel payments. The result is much more rigorous testing of trainee competency leading to more students reaching the required training standard.

## TECHNOLOGY ENABLED

All our course recommendations were underpinned by enabling technology for both trainees and instructors. Giving each student a laptop for the duration of their course, loaded with e-learning applications available 24/7, would help deliver self-directed learning and self-study time, facilitate immediate feedback and automated assessment, and provide instructors with more of a coaching role.

Paper-based course content converted into e-learning applications could be augmented with access to wider MoD online learning programmes; course management would be much better with the ability to store, access, analyse and confirm course and student outcomes at will; and online tutorials could be scheduled into student and instructor timetables.

Overall, technology enabled solutions could provide a completely integrated learning, assessment and management process, and drive far more focused modular trade training for each student. And students and staff would have much greater learning and teaching flexibility to fit in with an individual's postings.

## THE BENEFITS

Our Time, Cost, Performance approach to every stage of the project gave the MoD a clear picture of their current training followed by recommendations based on achieving more effective, less time-consuming and less costly outcomes.

We provided realistic time and cost savings based on solid comparative analysis between the current state of training, our recommended measures and their implementation at every stage of course transformation. As a result, the MoD was able to present a quantifiable Vision and Strategy business case for change that demonstrated quality and efficiency improvements within an agreed budget, over a period of time.

We are now working with the MoD to mobilise, then implement, then embed and sustain the course transformation tools and techniques.

## NEXT STEPS

If you would like to know more about Atos Origin's training and technology-enabled solutions, please email [ukwebenquiries@atosorigin.com](mailto:ukwebenquiries@atosorigin.com) or visit [www.atosorigin.com](http://www.atosorigin.com)

**“WORKING WITH ATOS ORIGIN, WE CAN NOW MOVE FORWARD CONFIDENTLY TO IMPLEMENT A TRAINING TRANSFORMATION PROGRAMME THAT WILL IMPROVE THE EFFECTIVENESS AND EFFICIENCY OF OUR TRAINING. THIS WILL INVOLVE A BLENDED LEARNING APPROACH THAT COMPRISES A POWERFUL COMBINATION OF STUDENT-CENTRIC COURSES AND USE OF E-LEARNING TOOLS TO DELIVER A NEW ERA OF INTELLIGENCE TRAINING EXCELLENCE FOR THE MOD. WE ARE PARTICULARLY EXCITED BY THE BENEFITS TECHNOLOGY AND AUTOMATION SOLUTIONS WILL BRING, AND OF STAYING ABREAST OF FUTURE CHALLENGES. ”**

**Captain Peter Adams, Royal Navy, Director of Training, Defence Intelligence and Security Centre (DISC)**

## ABOUT ATOS ORIGIN

Atos Origin is a leading international information technology (IT) services company, providing hi-tech transactional services, consulting, systems integration and managed operations to deliver business outcomes globally. The company's annual revenues are EUR 5.5 billion and it employs 50,000 people. Atos Origin is the Worldwide Information Technology Partner for the Olympic Games and has a client base of international companies across all sectors. Atos Origin is quoted on the Paris Eurolist Market and trades as Atos Origin, Atos Worldline and Atos Consulting.

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