

# Team PALADIN

QinetiQ | KBR | PA Consulting



Case Study



# Transforming the User Experience

Team PALADIN, comprising QinetiQ, KBR and PA Consulting, has delivered training transformation across the UK MOD, wider defence industry and non-defence customers.

Our combined experience is based on designing and evolving training that meets the users' needs in preparation for their respective roles, missions and operations. We are able to draw on our extensive expertise in collective training, mission rehearsal and experimentation.

We work closely with our customers to develop and deliver training that is realistic and relevant. From the outset of our partnerships, we establish a clear link between our customers' operational needs and their training requirements, ensuring the efficacy of our training solutions.

Our teams work collaboratively to transform the user experience by leveraging appropriate technologies and implementing innovative delivery methods and media.

When designing and delivering training, we apply flexibility and a cost-effective approach to meeting training audiences' evolving needs, ensuring optimal use of resources.

For decades, our customers have trusted our teams to design and deliver training whilst maintaining the highest levels of safety and security. We have highlighted examples of our approach in the following case studies.

**Collectively better: Shaping  
and delivering Army training  
for the future**



## **QinetiQ - Unit Based Virtual Training**

QinetiQ has decades of experience in providing British Army units with the ability to conduct Collective Training Level 1 and Level 2 tactics, techniques and procedures, as well as command and control training. QinetiQ was most recently the design authority for the Unit Based Virtual Training (UBVT) system, a widely acclaimed land collective training capability and the crucial forerunner of the British Army's latest deployable combined arms virtual simulation system.

Between 2017 and 2022, QinetiQ delivered training to over 12,000 soldiers at more than 325 events in 60+ locations in the UK and overseas. The UBVT delivery team provided expertise, hardware, software and associated technical and training support systems as a fully managed service supporting all phases, from planning and scheduling to delivery and after-action reviews. With a training capacity of over 225 delegates per day and up to five events running concurrently, the training system was deployed to the point of need. Training was often delivered to units with less than two weeks' notice and additional technology was introduced to enhance training experience, exceeding the contractual requirement for delivery time and scope.

During UBVT events, trainees controlled their own avatar tailored to provide all the appropriate equipment and command tools needed to interact within the synthetic training environment and meet their specific training needs. This ensured optimal realism, with commanders able to tailor scenarios to meet the unit's training objectives. Equipment and delivery teams were carefully managed to meet the evolving demand signal and ensure flexible delivery without disruption.

## **KBR – Integrated Mission Operations Contract**

Since the 1960s, KBR has worked with every US astronaut to support some of the most pressing spaceflight needs of the 20th and 21st century. From mission planning and flight controller training to hardware testing for NASA and other leading commercial space organisations, the team at KBR can be found alongside our customers at every small step and giant leap of the way.

As the strategic training partner for NASA Human Space Flight Missions under the Integrated Mission Operations Contract (IMOC), we have partnered with NASA to provide training since 1968, with the latest recompeted contract awarded in 2023.

At Johnson Space Center, KBR trains crew members and flight controllers on space systems like the robotic arm. To prepare for launch and life on board the space station, KBR leads several simulations in a mock-up environment, including failure scenarios that may occur. Instructors train the space station crew to track all visiting vehicles to ensure the flight path avoids collision.

By developing and delivering realistic and relevant training that leverages appropriate technologies, our teams have fundamentally transformed the trainee experience and improved learning outcomes.

Recent advancements in Virtual Reality (VR) technology have allowed our teams to develop a generic robotics augmented and virtual reality integrated training program to teach Space Station Remote Manipulator System (SSRMS) Operations to astronauts and flight controllers in a flexible and cost-efficient virtual environment.



## PA Consulting – Network Rail Training Modernisation

As a strategic delivery partner to Network Rail Training since 2018, PA Consulting has provided enduring transformational support across the directorate's functions and customers to ensure training meets the needs of the end user and supports operational delivery.

PA Consultings scope includes:

- shaping the training modernisation journey
- strategic and operational model developments
- data-driven needs analysis, linking training interventions to operational performance
- large volumetric demand planning
- synthetically enabled delivery at the point of need

The training directorate has transformed into a technology-enabled intelligent supplier, with a data-driven approach to identifying realistic and operationally linked training needs. This strategic partnership has helped improved operational performance, better serving Network Rail's internal customers and ensuring a cost-effective approach to training. Core to this has been the Training Intelligence Programme (TIP) developed by PA Consulting. TIP applies data analytics and cloud-based digital engineering to identify the right training for individuals and teams, ranging from section (30 staff) to regional level (circa 7,000 staff). The programme has transformed the understanding of how training contributes directly to business performance, moving it from a uniform compliance activity to one that can be targeted to achieve operational effect.

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