

Alex Mulholland BSc (Hons) CEng MIET SFMA



Alex Mulholland is the Head of Supportability Engineering in Edinburgh for Leonardo MW. Alex has been championing strategic change to the approach taken in product and support solution design to focus on showing how the solution will deliver what is needed of it, when subjected to actual operational and maintenance environments. Through this desire to improve the effectiveness of Supportability Engineering he has forged a close working relationship with the MIRCE Academy since early 2003, using and developing its knowledge, equations and philosophy to enhance modelling, estimating and risk management processes.

Alex started his career in the mid-eighties as a Mechanical Technician Apprentice with Ferranti Plc (now Leonardo MW). During his apprenticeship, he was placed in the Spares and Publications Department as part of his rota of departments. Here he found a passion for support service modelling and supporting products in operation.

On completion of his apprenticeship he joined the Spares and Publications Department, where he spent the next 6 years developing spares models and technical manuals. Whilst on a training course, a chance encounter with a team of Navy Technicians, led to some frank and open discussions on: the need to increase the accuracy of descriptions and maintenance tasks; effective use of the tools they have and the reality of spares availability. This lesson cost Alex many pints of beer, but the encounter convinced him of the need to get much closer to the Users, to have any chance of understanding how to support the equipment in the environment it would be used in.

Driven by this life lesson, Alex applied for a Job in the Integrated Logistics Support Department at Crewe Toll in Edinburgh in the mid-nineties. Where he worked in various roles: from design analysis of Reliability, Maintainability and Testability to Support Solutions Design and Support Services Delivery. As Alex's career progressed from a Senior Supportability Engineer to Supportability Engineering Functional lead, he continued to promote the need to consider Supportability at every stage of the equipment design process.

As his experience and responsibility increased, so did his appetite to effect changes that would make a real difference to the "Functionability" of the product. To this end he has introduced improvements in the Supportability Engineering process to ensure that reliability

assessments take account of expected failure mechanisms and not just random component failures.

Alex's efforts in the field of Supportability Engineering were recognised by the MIRCE Akademy in May 2012 with an Honorary Fellowship. Subsequently, in an effort to gain wider recognition of the real engineering behind Supportability Engineering, he applied for professional registration with the Institution of Engineer and Technology. In July 2013 he successfully presented his views on the engineering approach to Supportability and was accredited as a Chartered Engineer.

Not being satisfied with that he knew his understanding of the probabilistic world and the stochastic processes driving it was not strong enough, so Alex returned to his Studies with both the Open University and the MIRCE Akademy. In July 2017 after another 5 years of study he succeeded in upgrading his Ordinary Batchelor of Science Degree to an Honours Degree (27 years after starting it!) and in the process added a Diploma in Statistics to his tool box.

In September of 2016, Alex presented a technical paper ("The shape of things to come: A look at the different ways we approach predicting in-service reliability of new equipment.") covering work he performed on modelling warranty costs using traditional and MIRCE Modelling approaches. This clearly showed the power of the MIRCE Modelling techniques and the insight that can be gained when you are not distracted by having to "adjust the model for life phases" (the infamous "bath tub"). In recognition of this business related application of MIRCE Modelling and Methods, the MIRCE Akademy voted it as their paper of the year. In addition to this accolade, to recognise Alex's continued endeavours to apply and spread the use of MIRCE Mechanics, Modelling and Methods, the MIRCE Akademy awarded Alex a position as a Science Fellow of the MIRCE Akademy, the second time he had upgraded his standing in 2017.

As Head of Supportability Engineering and an active Member of the MIRCE Akademy, Alex is committed to continuing to explore and develop the MIRCE Philosophy. He is able to now work not only with the design engineers, to help them understand better how their design can be expected to perform in the hands of the Customer, but also with Directors and VPs to help them understand, through the application of MIRCE Management, how they can realise their business plans more effectively and consistently.