How does a Modular Air System support the future air power concept?

An Interview with Richard Eastment OBE,
Business Development Director

Richard was a RAF pilot for 30 years. He has over 7000 hours of flying, 3000 of which were as a Hawk Qualified Flying Instructor. He spent 6 years in the Ministry of Defence as an Operational Requirements officer running the Simulation and Training Aircraft office. He joined British Aerospace in 1998 and spent 12 years with them in various BD and Training roles. In 2013 he set up his own consultancy specialising in military procurement, training aircraft and flight simulation.

Q: How is AERALIS planning to collaborate and work with future combat air programmes, not just in the UK but around the world?

A: What we know about future air programmes is that nobody is quite sure what they are but that they will be extremely expensive. If you are spending a lot of money on very expensive front-end systems, you need to reduce your spend on all the support functions to be able to fly those aircraft. One way that we can address this is to reduce the cost of training and other support functions by using our modular design. We're working quite closely with a couple of air forces already on how we can reduce these costs. Initially we're looking at how to reduce the cost of training aircrew. Then we will go further and look at the cost of flying other sorts of modular air platforms in support roles, including unmanned aircraft.

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Q: How is AERALIS technology complementing future air programmes?

A: The essential part is to reduce logistic costs quite dramatically on all the supporting systems. We have a technology using a common core fuselage that enables us to put a mix of engines and air structures around it to produce variants of technically the same aircraft. This will reduce the support costs of a range of aircraft that are used to support the Front Line aircraft.

Q: How well does AERALIS support air forces' capabilities across the globe?

A: Again, it's very much the ability to provide a family of aircraft with considerably reduced support and running costs which enables them to keep a frontline combat air capability while reducing all the support costs which go alongside it. And specifically, because we are using a very modular system, the modular avionics will drive it as much as the modular air platform. You are reducing the support costs of lots and lots of different types of kit.

Q: Are you able to tell me a little bit more about the types of Capability that you might be reducing the costs on?

A: I think we're starting off looking purely at training aircraft, advanced and basic, reducing the cost of training by 30%. But as we develop the concept and talk to other companies in the UK and overseas, it's obvious that there are lots of other roles as air forces use this class of aircraft for purposes such as companion training, air display aircraft, target aircraft, and possibly going as far as entering the manned/unmanned teaming world if future systems go down the road of using unmanned systems combined with manned aircraft. We have had conversations about all of these concepts. Once you have the common core fuselage and avionics sorted out, it's surprisingly simple to be able to combine a number of those other roles.

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Q: How will AERALIS support unmanned vehicles?

A: Air Forces will be using a fairly limited number of high-end vehicles that won't fly very often, and AERALIS can support the training and logistics of these unmanned vehicles. How you pay for this and how you train people to fly both the manned and unmanned variants is still open for discussion and that's one of things we're focusing on. But using AERALIS to train manned/unmanned teamed air crew looks highly promising and cost effective going forward and gives you a lot of capability at limited cost. A modular approach to this mix of manned and unmanned platforms will be very disruptive and open up a completely new way to think about Capability.