

Andy Warman, Business Improvement Director, AMS

INTERVIEW TRANSCRIPT

Andy, can you please introduce yourself?

My name is Andy Warman. I am the Business improvement director for the Integrated Systems Division within AMS.

Who are AMS?

AMS is a 50/50 joint venture company between Finmeccanica in Italy and BAE Systems in the UK.

What does AMS develop?

We are a world leader in the provision of integrated defense and electronic systems; employ some 7 1/2k people, and turnover in excess of 1.2 bn euros. We operate in over 130 countries and develop complex Defense Information Systems consisting of command(er) & control, sensors and weapon's sub-systems complete with associated tracking systems.

When did you begin using the Fagan Defect Free Process?

We introduced the Process initially into the AMS – Naval Command and Control business back in 1996. Initially, Michael Fagan Associated trained more than 150 of our Software and System engineers. AMS was immediately able to put into practice the methods and skills learnt, successfully introducing Inspections into a critical project the day following training.

Change is always difficult – How easy was it to deploy the process?

Interestingly, the Project Management Team's initial reaction was that the process was far too expensive. In practice, we found that although Inspections cost 3 times more hours for a given piece of work when compared with existing processes, they found more defects. Typically inspections find defects at a cost of 3.6 hours per defect. The earlier reviews cost 5.1 hours per defect.

What were the main benefits of using the process?

The value of using inspections is dependent on the lifecycle phase of the project. Clearly the earlier you can find and fix defects, the better. For example, a defect found in the requirements phase can cost four hours to correct, but the same defect found in the design phase costs up to eleven hours to correct. This is because more work-product already has defects injected.

How did the process affect cycle time?

AMS produces high value, low volume systems. We don't produce high volume products. Therefore, an important aspect of our development work is that integration is successfully completed to schedule. The use of inspections within the development process has reduced integration duration by 15-20%.

And the return on investment...?

Using the calculation introduced in the training course, we typically achieve an ROI of 3:1. The combination of training and subsequent demonstrable business benefit led to AMS winning a National Training Award in the UK.

Were there other less tangible benefits?

The formality of the inspection meetings has proven to be an excellent mechanism for new recruits to quickly learn new product and domain areas within our systems. They learn by discussing the material with experienced staff.

So how many inspections have you done?

Within my business division, AMS has inspected over 1.5 m lines of product in some 62,000 separate inspections. This has resulted in finding and fixing in excess of 22,000 operational defects before test and integration.

What effect has this had on delivered defects?

AMS has successfully delivered product where either zero or very low densities of operational defects were reported post delivery. This is excellent for customer satisfaction.

And your future plans for wider use?

The process is now widely accepted across AMS, both in the UK and Italy. By the end of this year we forecast that my business division alone will be conducting 300 inspections per month. AMS constantly seeks to meet and exceed our customers' expectations, and we expect the Fagan Defect Free Process to be a key contributor to continued customer satisfaction.