

Thrust project

What skills do we need to turn our dream into reality?

Dick Barton, Butch Dalrymple-Smith, Len Newton and Matthew Kear:

DICK BARTON: My real name is Graeme Andrew Barton, and the reason I'm involved on the project is because of the engine that Richard Noble has chosen to use for this project. It's out of an RAF Phantom, a reheated Spey and I worked on the Phantom fleet for 17 years. I was on squadrons for 14 years and I know that engine very well. So luckily or otherwise, I became involved in the project.

There are so many angles to a project like this. There are the designers that are inputting. There are the people that are manufacturing, whether it's the craft itself or any of the control systems. And it's the engineers for the control systems.

But it's also the people with the practical skills to put this together. And that's the nice part of being part of a team which has so many disparate qualities. It's a joy when you're a bit stuck on a way forward and you can go to other people and bounce a few ideas off and you will always find a way forward.

LEN NEWTON: My name is Leonard Newton and my role in the project was building the models for the previous to the 3.2 B and making sure that they ran on local lakes and such like to do some testing of the models.

When we started, we had just a model. Well, it wasn't a model, it was a wooden model, which was, it was scanned and then made into a mesh. And then I had the drawings to to make the model, make a framework and do all that.

And then obviously we didn't have an engine, so I had to resurrect one of my engines to run it. In later times, after Crusader 1, 2 and 2, sorry 1, 2.1 and 2.2, then Crusader 3 came along and we needed a bigger engine because my engines weren't powerful enough. So then we bought an engine, which is a little. The only thing that we did find was that all the engines out there are designed for aircraft. So when you fit it in a boat, it should be the same as far as you're concerned.

But when you get a blast of water in through the the front housing, they had all electronics in there. So all the Hall sensor for the revs the starting procedure and everything was built inside little chips inside the front of the engine, which in an aircraft is safe because it's air blowing past nothing else. But when you get water splashing through from when you're doing this sort of thing, it wrecked it.

So I had to take all the electronics out, make a separate box, put all new electronics in another box and then feed it back into the engine again. So that's what, how you evolve things that I mean, it marinised it basically that's what I did and it works now. It's still working, you know, two-three years down the road.

BUTCH DALRYMPLE SMITH: You actually learn more from failures than you do from success every time. If something works first time, I wouldn't say it's dull because it's wonderful, but you don't actually learn anything because you already know it.

But the moment that you have a failure, you can use that to increase your knowledge to understand things better and so failure is really an opportunity more than a set back.

MATTHEW KEAR: Hello, I'm Matthew Keir and my role on the project is I'm part of the team that is responsible for integrating all of the electronics like what we call the avionics, all of the actuators in control, and then actually doing the programming for all of the control algorithms that actually automate how the boat manoeuvres.

Often it is preconceived that engineers and mathematicians there is a notion that all of these people sit behind desks and sit on their computer all of the time. Whereas I spend the vast majority of my life on the road travelling, working on vehicles like this, which has a really lovely blend of hands on as well as some of that in depth technical work.

So it is definitely possible to have that balance whereby you're doing the deep technical stuff on the computer, but you're also hands on with a vehicle as well. And I think that's something not a lot of people realise you can do.