

Coda Octopus Martech

The flexibility of Coda Octopus Martech's offering is a strength but, as Managing Director Paul Baxter confirms, can also present problems: "Our strengths are being able to do everything from first contact through design to production. One difficulty we face is that flexibility and breadth of capability mean our focus isn't always clear to others. Our specialism is solving technical engineering problems to a very high standard, which has led us down a very diverse path."

Coda Octopus Martech started 25 years ago working almost exclusively for the Defence Research Agency. It now still works predominantly as an engineering house in the defence industry but also for similarly demanding industries such as nuclear and medical. "We design and develop technology for others," remarks Paul. "It's high end engineering so our customers often have challenging problems."

Bespoke Products

The nature of the work means everything is bespoke, customers often coming with ideas that sometimes they have patented and occasionally develop into longer term products. Examples are a chemical decontamination oven that is developing into a product for defence customers and a domestic fire sprinkler test package. "The customer didn't have the means to develop it but encouraged us to look at it," recalls Paul. "We did it over a lengthy period and they wanted to buy a large number but owned the intellectual property rights. There are examples where we are developing our own IPR but most of what we do is highly bespoke."

The company has also developed for group company Coda Octopus Marine Products a pan and tilt unit that was required to swivel in two dimensions to position its sonar precisely, had to be very robust, lightweight and able to operate at depths of 3,000 metres. An innovative solution for deploying cargo nets under helicopters also had to be very robust, able to withstand radar radiation and a foolproof design.

Requirements can vary from a basic idea to a detailed specification and Martech works at all levels. Common amongst products are their specialised nature and the need to work closely with customers to understand their requirements and develop something that meets them. The process, as Paul outlines, is invariably demanding: "Often a customer comes to us with an idea of how something's going to be done but not necessarily a concrete solution. We try to innovate and part of the challenge is we're trying to invent as we go along without quite knowing what the solution is. The customer still wants a price up-front so we're trying to provide that for something that's not been invented."

Legacy Work

Customers include blue chip defence and medical companies although, in the context of the work, some may only come back every few years while others have repeat business on a more regular basis. Many concentrate on their core business and use Martech to develop bespoke test equipment or specialised components outside their normal activities. A common need is work for obsolete or legacy products that are still important for their customers but not part of current business, which requires reverse or re-engineering and an understanding of needs.

"We do some fantastic work but there's often no other opportunity for it, either because it's so specialised for that customer or the IPR is protected," states Paul. "We're learning new skills but there's generally no continuous market for the products we've invented. Sometimes they are produced in hundreds or even the low thousands over a period."

High volume production isn't something Martech undertakes, generally focusing on design, production of prototypes, final assembly and quality control. Most manufacturing is sub-contracted to specialist companies while embedded firmware coding is handled in-house and other software development is undertaken by a team at Coda Octopus Marine Products in Edinburgh or at Coda Octopus Colmek in Salt Lake City. The work requires the recruitment of highly qualified people and the company has recently taken on an apprentice to develop required skills further.

Growing Customer Base

There was some contraction during the recent downturn as companies retained non-core work in-house and there are on-going changes to the customer base as firms are acquired and operations moved elsewhere. But the situation has improved steadily since 2010 and the customer base is starting to grow although, as Paul points out, the nature of the business means it's not straightforward: "The gestation period for these projects can be very long so we can start talking to somebody with a real need but it sometimes takes months or even years to see these projects through. We're trying to add some non-defence customers, those with similar high expectations to defence customers. We're also trying to target subsea companies, since the technology links nicely into our sister company offering, and to consciously identify technology we can add to our portfolio."

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