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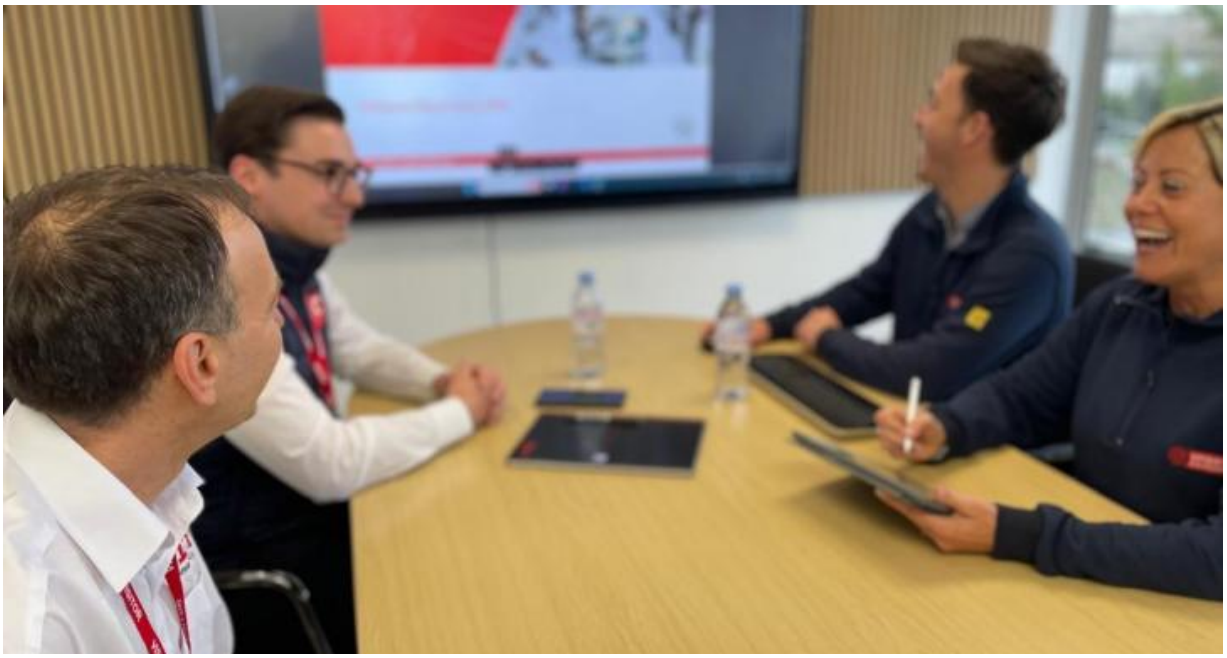
OFFSHORE ELECTRONICS AND ETC: MANUFACTURING EXCELLENCE THREE DECADES IN THE MAKING



Just outside of Brighton in East Sussex, you'll find Energy Technology & Control (ETC).

Founded in 1988, the company makes combustion control solutions for a range of industrial applications. Reflecting the priorities of many businesses today, ETC's products are not only designed to cut energy costs but also emissions.

Standout lines include burner management systems and fuel air ratio controls – the important yet often unseen equipment that makes heavy industry more efficient.

This range has diversified over the past 30 years, much like ETC's work with Offshore Electronics. The two companies now share a long history, having both started working together in the early '90s. But the ties go well beyond the number of years they've worked together.

What really sets this partnership apart is collaboration. It's a word that's often bandied about in business – usually to describe what are fairly conventional processes between two companies. This is not the case for Offshore and ETC. It's collaboration in the truest sense of the word.

Here, we're talking about a highly effective alliance based on shared knowledge and trust. It really stands out in a market that is all too often distant and highly transactional – that is, the dynamic between an OEM and its contract electronics manufacturer (CEM).

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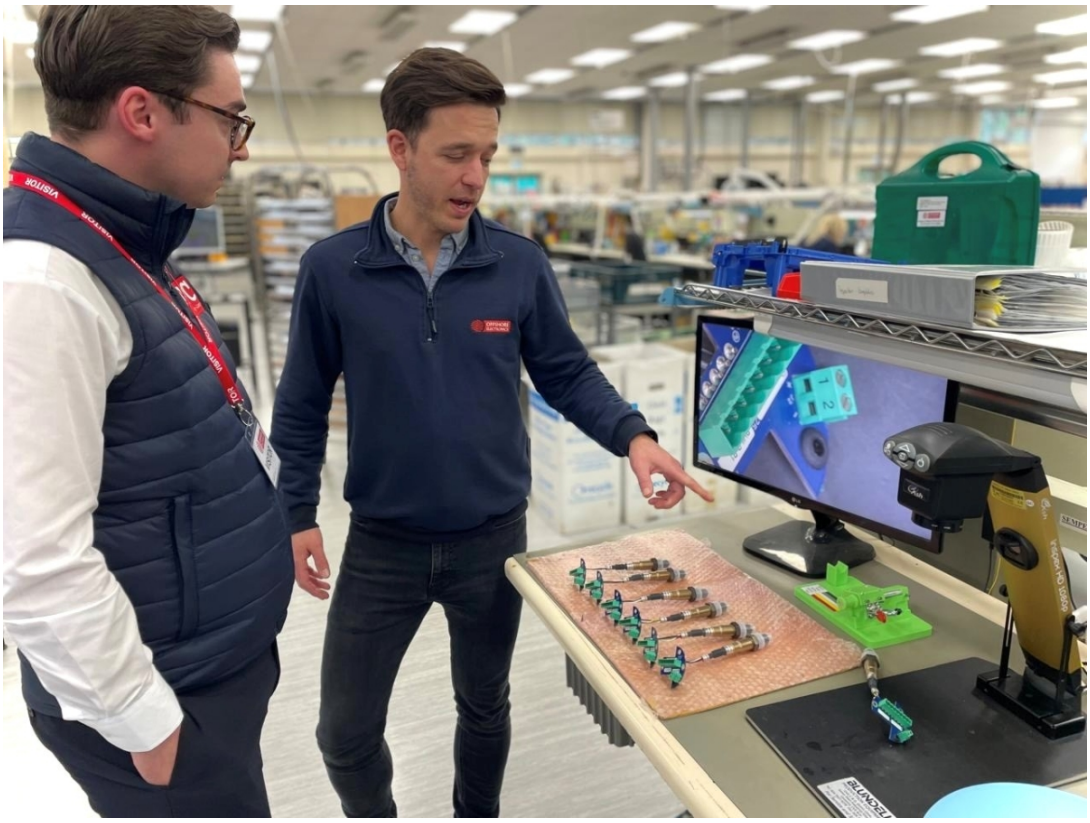
It's all about accuracy

It will come as no surprise to learn that accuracy is everything for a company that sells control systems. Granted, this is important for most companies developing electronics of some kind, but it's especially key for those who sell to customers that prize it above all else.

Chemical producers, for instance, need to know their fitted burner systems are delivering heat at a consistent temperature for a specified time, and the measurements given on the dashboard accurately reflect what's happening inside. If this fails, the whole batch could be ruined, quickly sending a company into the red.

From the first day, this has been the challenge set for Offshore when building ETC's printed circuit boards (PCBs). "Our fundamental requirement is precision and a high-degree of repeatability" says Aaron Lee, the company's Procurement Manager, "because these qualities are essential for the dependability of critical systems in industrial environments. We're selling confidence to our customers, so in turn we need that from the companies we partner with."

Offshore has not only responded to this challenge over the past three decades, but continues to strengthen the relationship by seeking improvements across the entire ETC manufacturing workflow. Aaron describes this as a "continuous feedback loop" extending across the teams that make up Offshore's different departments, such as production, quality, technical sales and procurement.



Above: ETC's Aaron Lee and Offshore Electronics' Technical Director Dan Attewell inspecting the latest run of oxygen probe assemblies at Offshore's manufacturing headquarters.

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Industry outliers

It would be unfair to suggest the mutual benefits shared between Offshore and ETC were there from day one. Instead, it's been an ongoing evolution moving from a standard buyer-supplier brief in 1994 to something that's far more strategic today.

This may seem obvious – after all, almost all work between businesses starts out like this. Still, it's important to highlight because OEMs and CEMs rarely end up this way, or even last longer than a few months let alone three decades.

The typical model sees a business shipping out work overseas to maximise margins. There is rarely ongoing dialogue once the contract is signed and the goods are shipped. And because there are many CEMs of this kind, if one fails to deliver, OEMs can simply look elsewhere for something similar.

Above: Shared understanding of what 'good manufacturing' in electronics looks like has defined Offshore's work with ETC.

While at first glance this seems good for the bottom line, it's a way of working that often ends up costing more in the long run. And the distance between the two organisations is a much bigger problem when you're aiming for PCBs with a high-degree of precision and repeatability. If there's even a minor QC issue, it's likely to take considerably longer to solve when those in charge of production are thousands of miles away.

"Offshore has become more than just a supplier to ETC," adds Aaron, "they are an essential partner in our ongoing success and growth. The team's ability to meet and adapt to precise requirements has strengthened our position in the market, allowing us to deliver increasingly sophisticated and effective products. The same cannot be said for the majority of OEMs and their outsourced manufacturing partners."

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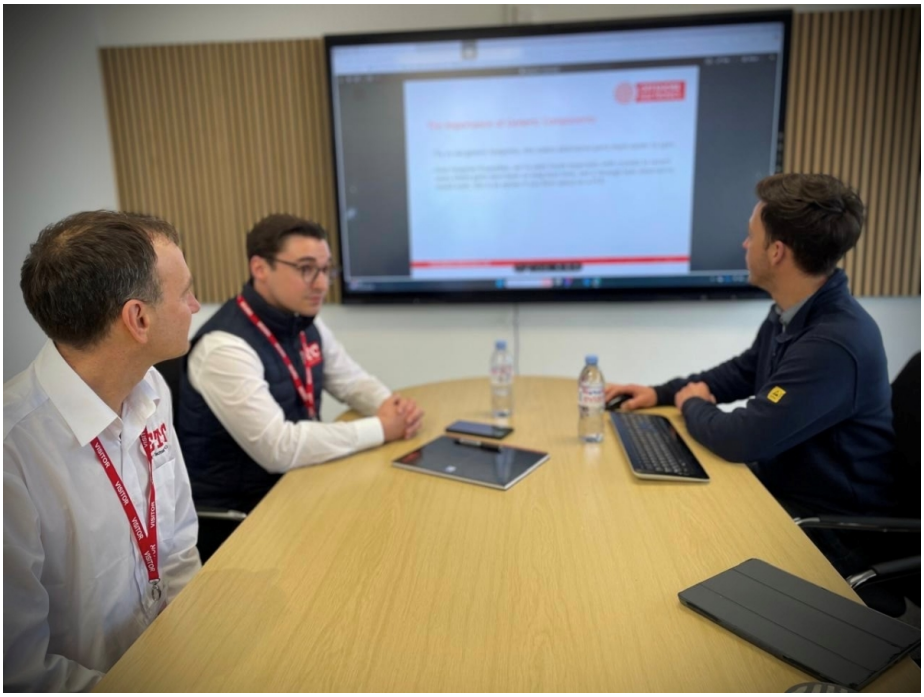
Invaluable improvements

Meeting the brief. That's the clearest indication of success between a buyer and supplier. However, there's a stronger marker that's common throughout the best partnerships in business: continual and measurable improvements over time. This is something that's clear in the work between Offshore and ETC. "Thanks to Offshore's quality, technical sales and procurement teams, we've made some major improvements in recent years," says Aaron. "These include improved quality controls and smarter purchasing strategies. With these in place, ETC has been able to increase product reliability, cut down on waste and streamline operations – all while continuing to meet the strictest industry standards."



Above: Offshore's DFM process has kept production costs down, even as ETC's designs have become more complex.

Arguably the most important change, however, can be seen through the DFM process. DFM, or design for manufacturability, is key to making an OEM's design more efficient and cost-effective. It identifies potential manufacturing challenges early on in the build process, minimising the chances of costly redesigns or adjustments at a later stage. With a good DFM process, a company can massively reduce its time to market, maintain product quality and – most importantly – keep overheads low.

Knowledgeable CEMs are especially important to this process, not least when staff are experienced electronics engineers, like Offshore. These teams are able to bridge the gap between product design and production, ensuring all of the great features built into a product do not cause the project to move into the red.

"DFM has been a major focus for us," adds Aaron. "Offshore's engineering and NPI team works alongside ETC to turn early-stage designs into fully realised prototypes and production-ready products. By simplifying our manufacturing operations, Offshore has created real cost savings and much shorter lead times. We see the impact of this on the balance sheet, but really you cannot put a price on this type of service. It's invaluable."

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