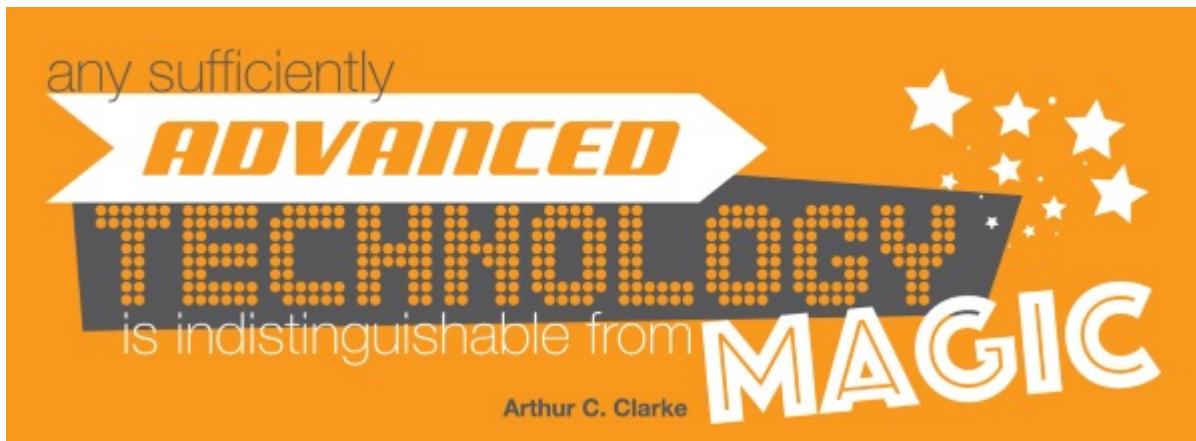


Technology & magic

Description

We recently completed a project to expand and refurbish the [Technology Centre](#) at our head office just north of Oxford. We have a comfortable meeting space with AV facilities, and a lab area with a wide range of equipment. Customers and colleagues are invited in to meet with us about their applications and challenges, evaluate materials and machines, and to take part in training and other learning opportunities.

On one of the walls is a quotation from Arthur C Clarke, the science fiction and science writer and futurist. He said, "Any sufficiently advanced technology is indistinguishable from magic."



Magic. Well, we do not expect to be able to show phenomena which can't be explained by physics and chemistry. Equally, our visitors will not be subjected to sleight of hand or illusion. In fact, we are

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determined to help our customers to understand the science behind our technologies, so that they can use them as efficiently and comprehensively as they can. This learning is quite mutual; we are clear about what a privilege it is for us to have our customers share their design and production challenges and aspirations with us. We respect this, and grow from it.

Evidence of a substance being used as an adhesive dates back to 4000 B.C. Archaeologists studying burial sites of prehistoric tribes found foodstuffs buried with the deceased in broken pottery vessels that had been repaired with sticky resins from tree sap.

Today, we have synthetic polymeric adhesives which can bond to (almost) any substrate and provide structural strength through wide extremes of temperature and exposure to water, weather or chemical attack. We can apply them with exceptional precision to exacting tolerances in processes which are fully controlled and repeatable. Materials can be accurately dispensed in quantities of 0.001ml or less, with positional accuracy of 0.001mm or better. We can cure them in only a few seconds using light emitted from a solid state semiconductor device.

These capabilities would certainly be magic to a prehistoric tribesman. Many of the adhesive chemistries which we offer today, like epoxies and cyanoacrylates, were first offered commercially in the 1950s. To engineers from that decade, the durability, robustness and process-ability of our current formulations would surely impress, if not astound them. And yet my colleagues and I are not fazed by this technology at all; we understand it, we use it, we demonstrate it.

With our help, our Technology Centre visitors can learn about and apply these technologies and the capabilities of our products – to deliver robust and reliable performance for their products. They can determine the return on investment they will achieve by adopting new processes. Critically, many of these processes can deliver significant productivity enhancements, improving their competitiveness and their bottom line. And that, to us, is magic.

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