

## **Keep your Eyes on the Horizon**

*Forget the life vests; there are more reliable ways to stay buoyant if the floods rise, says Mike Lucas of Autodesk*

As the UK economy braces itself for recession, just in case the doom-mongers' predictions prove accurate, organisations across industry are asking themselves what measures they can take to ensure they stay lean and mean, without risking their competitive edge or attention to customer delivery.

When business conditions get tough, companies generally have two choices: (1) stop spending on anything unnecessary (which often ill-advisedly includes marketing and IT) and pocket any savings as insurance against tough times, or (2) invest strategically, both to ensure that the firm remains in the public eye (via marketing), and in key assets like technology, which ensure you keep delivering to customers when others can't (because they have cut back too keenly on staff and resources).

Those that get this right – ie those that continue to invest strategically to boost the business before, during and beyond the grey days – typically weather the storm most effectively.

### **No more frantic paddling upstream**

This applies doubly in manufacturing, where sustaining business in a ruthlessly competitive climate is a constant challenge. Here, firms face an ongoing dilemma of whether to play in the volume, commodity discount game and keep slashing margins, or invest their way into a new value bracket. In the second scenario, the usually justified assumption is that customers will willingly pay more for better product quality; unique additional value; reliable, fast delivery; and strong aftercare.

If they're honest, most businesses would prefer to be in this game, instead of killing themselves just to break even. Strategic use of the latest technology makes this eminently possible, enabling companies to deliver more, and, crucially, do things differently - to the potential delight of customers.

It's not all doom and gloom for the manufacturing industry in any case: a recent CBI Industrial Trends survey suggests that the sector has remained resilient in the face of the expected economic slowdown, and that demand has exceeded expectations. The quarterly poll found that orders growth had been maintained, with export orders in particular remaining healthy. What's more, over a quarter said total new orders had increased in the three months to January, compared with just 17% who reported a slide in business.

The challenge now is to maintain this position.

### **If a picture paints a thousand words, imagine what a 3D digital prototype can do**

One way to keep improving customer delivery, while keeping costs and wastage to a minimum is to employ digital techniques at the design and prototype stage, which can have an untold impact on efficiency and customer service.

When times are good, digital prototyping enables manufacturers to get their products to market faster, ensuring they take full advantage of high consumer spending and demand for products. When times are leaner, it gives them a vital competitive edge, while saving time and use of resources.

The ability to rapidly generate highly accurate detailed, dynamic, 3D digital prototypes on screen, based on real data, means potential problems can be spotted and addressed early on, and that engineers have more scope to play around with a broader spectrum of design variations, without incurring delays or unnecessary costs. This means they can bring better products to market, faster.

### **Halve costs, deliver early**

Leading-edge manufacturers are well aware of this. Aberdeen Group, in its report, *The Digital Product Development Benchmark Report: Migrating to a Paperless Process (March 2007)*, cites findings that best-in-class manufacturers typically build just half the number of physical prototypes as the average manufacturer - halving development costs and enabling them to get products to market up to 58 days faster than average.

Digital design also vastly reduces the risk of error as data is input, extrapolated, updated and re-used, and frees up engineers to think creatively about new design variations. This is because digital prototyping enables any number and scope of changes to be made quickly and without adding to costs. Once these have been agreed and incorporated into a final design, a physical prototype can then be generated, cost-effectively, and safe in the knowledge that this is now unlikely to be changed.

Being able to show customers an early example of a product is another appealing benefit of digital prototyping, enabling the design team to get detailed feedback that will ensure that the finished article meets and exceeds client expectations.

This offers an exciting opportunity for sales and marketing, too, making it much easier and economically justifiable for companies to develop speculative prototypes to persuade existing customers and new prospects what the company could do for them, given the chance.

The only real limit is the team's imagination, since today's tools are intuitive and easy to use with minimal training, ensuring a rapid payback.

Whether the market takes a sharp dip this year or not, firms with sophisticated 3D digital prototyping facilities will find they have an extra layer of protection, and an extra tool with which to propel themselves from the doldrums. That's got to be worth putting to the board.