

# MANUFACTURING MATTERS

Interview with  
**ROD CLARKE**  
MANAGING DIRECTOR  
BVM EMBEDDED INTELLIGENCE



In a series of interviews with the directors of Dynamics Consultants, manufacturers talk about their ambitions and reveal the issues which are mission-critical for them to address in achieving their goals.

The interviews will be brought together as a report to be published by DECISION magazine and then as a digital book.



VERY OFTEN, THE success of British manufacturing comes from the fact that we don't just make something. In the process, we also apply problem-solving skills, which results in production being able to efficiently deliver a customised product.

That's certainly the approach of Rod Clarke, as the managing director of embedded computer and components company BVM is increasingly focusing on customising in order to compete with the mass production that has turned his product type into a commodity and put pressure on prices.

Accordingly, BVM, which design, manufacturer, and distribute to OEMs and systems integrators worldwide, is targeting 20% per year growth over the next three to four years, fuelled by an increased demand on customisation, with the proportion of production accounted for by custom design growing from 40% to 80%. Customisation can range from "a few tweaks" to a complete redesign.

"We don't do speculative design," explains Clarke. "Customers will come and ask us if we can solve a problem."

As an example of 'bespoking' a product, Clarke says one customer wanted a sixteen-channel video input in their system, which analyses video images

for security purposes. "We brought in the motherboard from Taiwan and then worked out how to get the extra channels on to it. We came up with a solution using very high speed electronics."

Another approach is to tailor mass market products so they meet the specific requirements of niche markets such as railways, the military and nuclear sectors. Generic products will continue to be important to us but on a smaller scale because they are very price sensitive, says Clarke. "What happens is that we do the hard work in development and then the buyer looks for the cheapest price. It then becomes a commodity as imports from China have led to more competition and lower margins."

"Where the customer benefits is when the manufacturer really understands the underlying electronics that make the products work," says Clarke. "Other companies don't have those skills and that is where we are winning."

"Our strapline is about making people's lives easier, and this means if there's something more we can do for customer we will tell them,; we don't leave customers in a position where they could suffer from a problem if there something we can do about it. One of the ways in which we can compete is on speed of reaction if we see an opportunity

we think we should go for. In other companies it's all market research and business plans but in a small company you can move much faster."

Which helps, in a field where the speed of development of technology is particularly pacy. "In the early 2000s we moved into PC architecture," recalls Clarke, "but by the time we got it to market the next generation was already there, so for that particular product we brought it in from Taiwan, on the basis of if you can't beat them, join them." This approach enables the company to bring in and distribute foreign-made projects to meet different price points. "Fifteen years ago," says Clarke, "we would have gone to California to find out about the latest technology in our area of work; now it's Taiwan."

Clarke says he is constantly surprised by the rate of change of technology. "Computing has gone full circle," he suggests. "We saw mainframes become personal computers and now they're connected to the cloud, which is effectively a mainframe. Who knows what will happen next?"

Then there's the Internet of Things, although Clarke thinks much of the talk about that is marketing hype. "Would you really want your fridge talking to the supermarket? I wouldn't. But I'm

the wrong person to ask," he admits. "I remember going to a demonstration about the world wide web and thinking it was a very clever idea but it had no practical applications!"

As it happens, Clarke's not keen on the idea of keeping his data in the cloud either, preferring to be in control of it. "We would be totally dependent on the internet connection and there would be a third-party monitoring of our system," he says.

One of the issues for BVM is consolidation among distributors as smaller suppliers tend to be more flexible in his experience. "We could buy just a couple of chips from a small supplier and try them out; now we would have to buy probably twenty-five, each costing a couple of hundreds pounds," says Clarke.

A particular challenge for manufacturers is regulation, which Clarke describes as "well intentioned but not joined up". He explains: "I can see the need for it but these legislators write the rules without thinking everything through. Big companies can offload the responsibility onto smaller sub-contractors and suppliers. Then there's the requirements for PCBs not to contain certain metals. The lead directive comes from a research paper that totally missed the point; it was supposed to be about lead in

batteries. The amount of lead in solder is tiny and we have to recycle it anyway. Why make electronics less reliable by using something inferior instead."

Clark started his career as a mechanical engineer but later "fell into" computers and found he enjoyed the technical challenge. He always wanted to run his own business and the chance to do so was "handed to me on a plate" when, while working for Vero in 1989, he got the opportunity to take part in a management buyout of the division the company no longer wanted.

As part of the aim to increase the order size and to develop on-going customers rather than one-off project work, BVM have hired a new sales director and a business development manager in the past couple of years. The investment in salaries has been "heavy" but has meant the internal structure is now right for growing sales.

With a smile which could be described as enigmatic, Clarke says his goal is to "go and lie on a beach" and so he's hoping that the developing structure of the business means it can run without him. He currently has 60% of the equity, with the rest owned by the technical director.

Going forward, what's important for BVM is to continue to understand not just the electronics but also the nuances of the commercial world to which their product will be applied. Clarke can provide a salient reason why. "We supplied a system to a military customer; it worked fine, the customer was happy," he recalls. "Then they added a remote camera and it stopped working. The customer said there must be something wrong with the mother board we supplied, but what their engineer didn't appreciate is that what they were doing was causing electrical currents to go in unexpected directions. Theory is one thing and practice is another. We have to be able to understand what will make the product work, or not work, in the real world.

"So sales people in manufacturing need to be able to really get to grips with what the customer plans to do with the product, and that means knowing the right questions to ask to find out what they really want to achieve."



Dynamics Consultants are made up of experts in business management software, from ERP solutions to e-Commerce websites, are approved as Microsoft Enterprise Resource Planning and nopCommerce partners, and provide consultancy, implementation, support, training and development services.

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