Singular route to success

By Paul Major

In the race to be first off the block with a new product, many manufacturing engineering firms are handicapped by a 'silo' project approach, suggests Paul Major of Program Framework.

In the highly complex and competitive world of manufacturing engineering, only the fleet of foot can win the race to market.

The problem is that, all too often, companies are not embracing a more effective approach to developing and producing new products. They are bogged down in the old silo mentality – one team doing its bit, passing it over to the next and so on, until the product is finally ready for the assembly lines. By which time the race is lost and it may not even be a product that would have sold anyway.

They need to be better at developing and bringing projects to market in a shorter time span than others if they want to gain that competitive advantage.

Of course, this is not true of all. The smarter organizations, such as Siemens, Ford and BAE Systems, have made a huge investment in their project management capability because they have fully understood the need to improve their ability to manage complex product-development projects.

The next challenge is for mid-market companies. These are often first-tier suppliers, heavily involved in product development. They need to understand that, while they may be talking about project management generically, they are not really addressing the big speed-to-market issue that will give them that all-important edge.

It is an issue that starts from the sales opportunity and the risks surrounding that, to understanding the scope of the project through to design, specification and prototype.

Bringing all the different components together is hugely complex – and complexity can be a killer. It presents one enormous project management challenge, but many an engineering manufacturing project fails because it has not been viewed as one end-to-end project that can then be broken down into more manageable parts with a formal, structured approach.

The actual manufacturing process is an operation and not a project. The real project management challenge comes in the way events leading up to 'job no. 1' are managed. This begins with asking the questions: Is it the right project? Is it what the market wants? Can we manufacture it? How do we reduce the cost and time of getting it to market?

Historically, engineering manufacturing organizations have had different teams – or silos – working away doing their own thing. The sales, marketing, design, engineering and manufacturing teams all have their own projects and targets. The trend is exacerbated as business increasingly looks to offshore assembly, manufacture and even design, so adding collaboration, cultural differences and language barriers into the already complex mix.

There are solutions

Addressing these challenges is not a new issue. The development and marketing of the Dodge Viper sports car by Chrysler back in the 1990s was a great example of bringing an exciting product to market at a different price point from anything the competition could produce.

The Viper pioneered the concept of a 'platform' team where all those involved in the development life cycle were brought together from the start. Even the salesman was involved in the design of the car! It was treated as one product, one project, one team.

So, can these principles be applied to product development for our mainstream UK engineering manufacturing businesses and, critically, can they help us to compete in an ever-increasingly competitive environment?

The concept of 'enterprise' project management is rapidly gaining momentum in financial services, IT and other tertiary industries. IT reduces cycle times, increases speed to market and allows more effective use of scarce resources.

Applying these innovative principles and tools to the wider engineering manufacturing industry is critical to sustaining competitive advantage in a rapidly changing world and is a fundamental challenge that rapidly needs addressing.

Working in practice

First, fast and difficult is the tagline of Roke Manor Research Ltd, which adopts a one-team, end-to-end project approach to deliver its promise.

It was this philosophy that helped Siemens to be the first to market with a mobile broadband device connecting PCs and laptops to a mobile phone network. It also allowed US mobile phone operator Cingular Wireless to lead the field in providing emergency services with pinpoint location accuracy for 911 emergency calls from a mobile.

A wholly owned subsidiary of electrical engineering and electronics giant Siemens, Roke specialises in contract research and development. Its customers want a product that works, can be manufactured cost-effectively and will make a profit.

At Roke, this begins with the business case, concept and a core team drawn from all the skills involved to see the project through to the end.

This team includes sales and commercial departments, as well as design and development specialists, steered by a project manager. A kick-off meeting in the first week of the concept phase brings in the key stakeholders, including the customer, the factory and vital component suppliers.

'The customer will have a wish list, but it is only through involvement and discussion that we really begin to understand what is actually required and how that affects the business case,' says Russell Taylor, projects director at Roke.

'It is essential to have detailed knowledge of test and production costs, risks and timescales in order to carry out a full investment appraisal so that our customer – the owner – understands the total cost.

'We also need to know where the emphasis lies. For example, is being first to market with a new product more important than cost?'

First to market was the driver for the Siemens mobile broadband device. It began with a simple wish list that entailed developing a data card for mobile broadband connection ready for a live demonstration at an industry exhibition within 12 months.

'This was a complex project. It had not been done before and was not just development to produce a

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product. Production test equipment for the data card was part of the design and risk assessment process and any cost implications built into the business case,' explains Taylor.

'With only one in ten development projects making it to market, a company does not want to blow its investment, so the business case depends on development all the way to the end of the concept phase.'

A $1 billion mobile infrastructure project for Cingular Wireless included a mobile phone emergency-call-locator project with a tight, nine-month schedule. The infrastructure project had stringent time penalty clauses that could have threatened this major contract for Siemens in the US.

'Siemens had all the other parts of the infrastructure ready to go and had developed a demonstrator for the emergency call locator, but this product's time to market was between two and three years. Cingular wanted it in nine months and if we were late, Siemens wouldn't get paid for the whole contract,' says Taylor.

'We were only able to deliver because we took the end-to-end, one-team approach. If this project had been passed from department to department at its various stages, we would not have developed the product in time.

'It is the project manager who ensures that all the angles are covered. When I am interviewing for project managers, I find that the biggest failing is that people do not have that end-to-end knowledge. They don't know because "somebody else does that". But it you don't understand the reasons behind the project requirements, it could have huge implications.'

About the author:

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