Industry Forum
Business Excellence Through Inspired People

September 2014

New Product Introduction: the route to success

Innovation has been climbing corporate agendas for some while. Bigger firms are these days being warned that they face the threat of a smaller firm coming up with a disruptive innovation that may well weaken their competitive position and may even result in their demise. This kind of disruptive innovation will be equally serious for smaller firms in the supply chain.

Everyone knows that innovation is a risky process and this means it is bound to feature when risk management becomes a key feature in the forthcoming revision of ISO 9001, the global quality management standard. More and more organisations will be under pressure to review and improve their innovation risk management approach.

Innovation can cover either product or process development. Within product development the set of ideas that Eric Ries developed under the heading 'lean startup' has become very popular particularly in the thriving startup communities in London and other major cities in the UK. Lean startup is a way of managing one of the major risks in new product development – the risk that the product developed doesn't meet a definite and identifiable customer need. It is a very clever extension of the one of the key ideas in classic lean – that value exists in the eyes of customers.

Lean startup often involves the rapid prototyping (RP) methodology. In modern RP the goal is to develop, test and modify prototypes as fast as possible – maybe moving through two or three prototypes in a single day. This is simply the application of the lean idea of the PDCA Deming Loop to the product development process. It's the practical consequence of the idea that value exists in the mind of the customer. The more you explore the customer's reaction with prototypes the more likely you are to end up with a product that is seen as valuable. By proceeding in this way the risk of customer rejection is reduced. This remains the single biggest cause of the failure of new products.

RP originally was linked to the emerging method of additive manufacturing/3D printing and this growing market is still partly driven by growth in prototyping needs. Modern RP methods use a variety of prototyping methods not just 3D printing, sometimes with very simple models which can be quickly created from standard physical modelling resources – literally the sort of resources used by kids on Blue Peter projects.

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Another major risk in new product development is the inverse of the first challenge a new product must surmount. Products often fail because they match the market needs more successfully than anticipated and a rapid ramp up in production is needed. Clearly the more effective that RP is in getting value into the product, the more likely it is that it will appeal to the market in a big way and demand will take-off.

Failing to expand production into the market revealed by your new product hits another area of risk – the risk that a competitor will be second to market and be more successful. A large firm may well have the capability to take your product, reverse engineer it, make some modifications and market their derivative product more successfully. This scenario means the value created in the product development phase is taken over by a competitor.

Start-ups often manage this risk by using contract manufacture selecting a contractor who has the ability to expand production if necessary. These contractors are often elsewhere in Europe in the lower cost countries in Southern Europe or Asia. However this approach isn't risk free. The risks associated with partner choice are best managed by a formal structured approach where proper evidence is gathered in and an objective comparison is made between several potential partners.

But even if the selected partner is effective in being able to scale up production, there are additional risk factors in working in virtual teams where say the designers and marketers are in one location and the production team are in an overseas location. The issues raised by this approach are usefully explored by Deborah Duarte and Nancy Snyder in their book, Mastering Virtual Teams. One of the several critical success factors that Duarte and Snyder identify is the need for standard organisational and team processes.

They suggest that common standard technical processes are useful in:

- Definitions of requirements
- Estimates of Costs
- Procurement
- Team Charters
- Project Planning
- Documentation and document sharing
- Reporting
- Controlling

The virtual scenario means that ideally each of these is supported by software which is proven and well understood by all the team members. In addition there needs to be accepted team processes in soft areas like conflict resolution procedures and communication protocols.

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Duarte and Snyder point out that the leadership challenges are substantial with virtual teams and they recommend that the leader should be competent in:

- Coaching and managing performance without traditional forms of feedback
- Selecting and using communications software
- Leading in a cross cultural environment
- Networking and building and maintaining trust
- Developing and adapting organisational processes suitable to the task at hand

Much of this will also be needed if the new product team are all in the same locality in the same organisation. But the problems of getting a successful new product team working when there are distances in time, space and culture plus organisational interfaces are obvious and clearly several orders of magnitude greater.

An excellent foundation for assessing and overcoming these challenges are Industry Forum's New Product Introduction (NPI) services. These can assess your existing NPI processes and help design a process which really meets your needs and is underpinned by an effective approach to project management. Risk management is an important theme in the IF package which also encompasses programme management and feasibility analysis.

The automotive industry has in depth experience of NPI and the UK industry has a good reputation in this regard. Tools which have been developed and perfected in this sector such as Advanced Product Quality Planning (APQP) and Production Part Approval Process (PPAP) will be introduced both inside the customer organisation and across the supply chain. The automotive industry also has in depth knowledge and experience of what is involved in fast ramp-up of production levels so that break-even is achieved on schedule or even ahead of it.

We can be sure that innovation is a business theme that is here to stay. Getting a sound NPI process designed and in place has to be a major strategic priority for most businesses who want to meet today's global business challenges. Industry Forum is an ideal partner in this kind of work.

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