

## DEVELOPING BREAKTHROUGH NEW PRODUCTS

### How to break out the box of incremental development

*Marketing experts estimate that two-thirds of all new products fail within two years of launch. There are many reasons for this. However, given the huge costs in launching new products and the short timescales for achieving success in the market, if you can develop a product which truly changes the basis for competition, which has 'breakthrough' technology rather than adding a new line extension, your chances for success are far greater. This paper discusses how you can introduce innovative thinking into your new product development process.*

*"Imagination is more important than knowledge. For while knowledge defines all we currently know and understand, imagination points to all we might yet discover and create."*

*Einstein*

### SET STEP-CHANGE GOALS

The first (and in many ways the most difficult) step to developing breakthrough new products is to change your way of thinking. Are you happy doing a bit better than you did before? Or are you ready to visualise a *step-change improvement* in the way things are done? If you currently have 10% market share and your goal is to have 12% share, you will develop plans which might result in 11% or maybe even 13% share. Such plans will never capture 50% share or higher, because the expectation is not there. Setting stretch targets fundamentally change the way people think.

### BUILD KNOW-HOW

However, a step-change objective without the knowledge and tools to achieve your goals will flounder. There is a saying which can be applied to most companies: "If a company only knew what the company knows". A vast store of information resides in each company, disseminated in various reports, documents and in the minds of its employees in all departments.

Knowledge can be either tacit or explicit. Explicit knowledge is the overt expression of information, found in instruction manuals, books, lectures and presentations. Far more powerful is the tacit knowledge, which is a build-up of an individual's experience. It includes insights, understandings and generates gut feeling and instincts.

One good method for accessing this knowledge is to ask a person to vocalise as they carry out a particular task. Watching a surgeon carry out an operation, for example, you could ask him to explain the reasonings behind his actions. His decision on where to make the first incision will be based on a textbook knowledge of anatomy together with a visual assessment of the patient in front of him and the 'feel' of the patient's skin and underlying organs. This is a combination of explicit and tacit knowledge.

When developing new products, the aim is to identify sources of potentially relevant knowledge and to apply this knowledge to the project in hand. Ideally, you would include a group of customers - a Customer Advisory Group (CAG) - who would be involved throughout the development and launch. You now have gathered a group of people who know what the problem is you are trying to solve and a group of people who know of

possible solutions. A meeting of minds at this level is crucial to developing breakthrough products.

## GET CREATIVE

Brainstorm sessions bring the group together to voice their ideas, no matter how bizarre and unrealistic they may seem. It is useful to have an external coordinator, as this allows for greater objectivity and fewer pre-conceived ideas of how things should be done or what the end result will be.

Einstein said that imagination is more important than knowledge. Creativity is the key to breaking down the barriers that keep companies in the safe zone of incremental product development. Traditional development uses logic-based thought, which comes from the left half of the brain. If you want to move to creative thinking you need to access the right half of the brain where imagination resides. The secret is to combine both approaches and become 'whole-brained'.

There are many effective techniques to trigger access to the whole brain. The *reversal method* takes a situation and turns it round, upside-down, the opposite.

For example, think of what the worst possible container for coffee:

- ❖ *unstable*
- ❖ *cools down too quickly*
- ❖ *difficult to grip*
- ❖ *leaks*
- ❖ *taints taste*
- ❖ *cannot be stacked for storage*

Having generated ideas, these can be reversed – have stable base, maintains temperature, easy to grasp and hold etc. You can then drill deeper into these suggestions to come up with a novel method for creating a cup which cannot be knocked over, for example.

Another creative technique is to use *analogy and metaphor*. An *analogy* is when you examine another set of actions with similarities that may provide an insight. At first glance endoscopic surgery and oil exploration have little in common. However, they both need to decide the best approach, make an entry, find what they are seeking, extract it, then exit. Perhaps a discussion around lighting methods for the sea bed might result in new ideas for illuminating the field of operation.

A *metaphor* is a comparison between two unlike things, in which one thing is identified with the other. In problem solving, the use of metaphor helps to break out of a stereotyped or obvious view. The metaphor might be something traditional, like 'All the world's a stage' or original, like 'This chair is like Christmas'. Shiny, green, red and gold, covered in presents, smelling of pine trees, drinking hot chocolate? Following the theme of smells, you might select to investigate designing a chair which has aromatherapy headrest built in. Or when discussing drinks, you might want to design a chair which has a handy cup stand!

In creative thinking the *reversal method, analogies and metaphors* help examine the problem in a new light to come up, revealing new insights.

*"Creative techniques look at a familiar problem in a new light, revealing new insights."*

*"It is better to have enough ideas for some of them to be wrong, than to be always right by having no ideas at all".*

*Edward de Bono*

## DEVELOP, GROUP AND SCREEN

Once the flow of ideas has dried up it is the co-ordinator's role to iterate the idea generation process, triggering new and deeper observations. In this way the superficial responses are noted, allowing the group to discuss and come up with more original ideas.

Writing the ideas on Post-It notes and grouping them on flip chart paper makes it easy to change grouping and take the ideas away for writing up later.

Grouping shows if there are any gaps and provides opportunity for further ideas. It also allows the team to expand on the ideas gathered. Ideas which seemed really 'wacky' initially can then be reviewed, positive aspects extracted and elaborated on to make them much more feasible.

The screening and ranking process usually takes place at another session. Criteria are drawn up, based on the attractiveness and fit of an idea. This varies according to the company and the idea, but typical questions might be:

- ❖ What is the value/benefit to the customer?
- ❖ Can the idea be patented?
- ❖ What is the time to market?
- ❖ Can we make it?
- ❖ Is it suitable for the export market?

Answers are scored and perhaps weighted for added usefulness in order to identify the idea with the most potential for success.

## SUMMARY

Developing breakthrough new products takes more discipline and foresight than many companies are prepared to spend on their new product development process. However, the rewards can be spectacular in terms of increased market share, improved employee satisfaction and increased profits. To break out of the box of incrementalism you need to set step-change goals to stop self-limitation. Then you need to gather explicit and implicit know-how on the topic in hand from those who know the problem and those who hold ideas on the potential solution. Finally creative brainstorming, followed by careful analysis will provide you with a list of possible opportunities for an explosive new idea.

## ABOUT MOUNTAIN ASH CONSULTING LIMITED

Mountain Ash Consulting Limited works with small and medium sized companies to help them develop winning new products. We can offer assistance at any stage of the product development process, from concept, design and engineering, prototype testing through to launch. Running workshops in creative ideation is just one of the approaches we have for new product development. For more information on how we can help your company go to [www.ma-consult.co.uk](http://www.ma-consult.co.uk) or call +44 (0)1698 389 456.