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How can an R&D group get others interested in its ideas?

Research and development creates value, but only when its ideas are commercialised. However, R&D departments often find it difficult to get even the best ideas adopted by others, and hence this value is wasted.
Anne Miller discusses the reasons for this, and gives examples of techniques used to get buy-in in a variety of organisations.

Successful innovation needs engineers with the skill to develop great products and the ability to engage others in support of their ideas. Unfortunately, even where a research and development (R&D) organisation is demonstrably cost-effective, it very often finds it hard to get enthusiastic support for its ideas.

This is in part because selling ideas is never easy. The need may not yet be apparent, the benefit unquantified, the feasibility unproven. The idea may challenge the status quo, or be seen as a threat. Ideas may also be less valuable than the vendor imagines, or pitched at the wrong time, or in the wrong way, or to the wrong recipient.

However, in many situations the most serious barriers relate to human behaviour, rather than a rational assessment of the merits and risks of the idea. This need not be the fault of the recipients. Researchers can be so in love with their ideas that they can't understand why anyone should cast doubt on the market potential.

Creative personality traits

Unfortunately, creative people have a number of characteristics that can increase the chance that their ideas will be rejected. Creative people often care very deeply about their ideas. They typically have an unusually strong sensitivity to rejection, and are often very persistent. These factors can combine to create a tendency to bulldoze forward and avoid information which might cast doubt on the perfection of their initial ideas. Unfortunately, if this includes ignoring information about the market need or technical problems, this just increases the probability that they will face rejection.

Most department heads can probably name a few individuals who are clearly creative, but it is frustratingly difficult to get them to produce ideas that will actually become commercial successes. They are creative mavericks, but not yet creative stars.

Managers can often help their 'mavericks' out of this cycle by focusing on another common strength of creative people: conceptual fluency – in other words, their ability to generate multiple ideas very easily. If a manager can provide what the innovator perceives as excessive levels of appreciation and reassurance about an idea, or at least some aspect of it, the innovator will be receptive to the suggestion that they should use their creativity to explore more and better

ways to improve the idea. In my experience, this twin-barrelled approach plays to people's strengths and is much less frustrating than trying to get them to drop an idea completely and do something else.

Not Invented Here syndrome

Even if the idea is a good one and addresses a genuine need, the Not Invented Here (NIH) syndrome can be a serious barrier. This is not just because people tend to prefer their own ideas. As was shown by Katz's classic study,[1] NIH begins to reduce the productivity of development groups after the team has been together for as little as four years. From healthy self-reliance, they tend to evolve towards closed-mindedness, where novel information and ideas are either ignored or forced into existing categories. This can result in ideas being inappropriately rejected on the basis that 'we tried that years ago and it didn't work', or being categorised incorrectly as a competitive threat to one of the group's own ideas. The group often only breaks out of this frame of mind when forced into restructuring the mental models it uses to structure its experience.
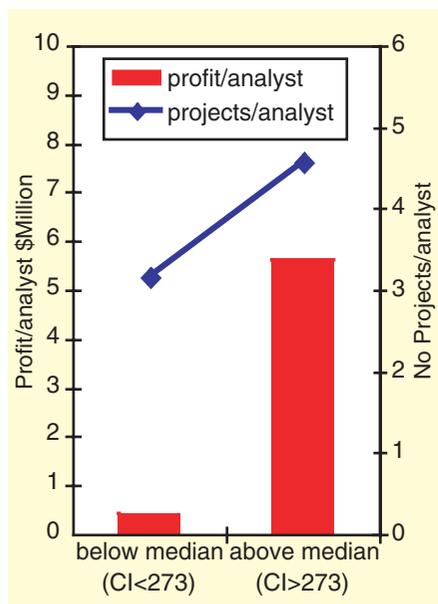

Figure 1   Analyst personality grouping, MBTI Creativity Index

This 'group think' played a major role in fiascos such as the US planning of the abortive Bay of Pigs invasion of Cuba in 1961, or NASA ignoring the risk of catastrophic seal failure on the space shuttle in the lead up to the Challenger disaster in 1986. The auction for 3G licences in 2000 was carefully designed to encourage 'group think' amongst the isolated bidding groups in order to maximise the licence revenue raised. This strategy was even more successful than anyone had expected, resulting in a transfer of £22 billion from the UK telecoms sector to Her Majesty's Government. It's still a matter for debate, however, whether on balance this transfer was good for the UK.

Value

In some cases, R&D's good ideas are ignored by the wider organisation because the R&D group is not valued. This can lead to a vicious circle. Where a group feels that it is not valued, group members can start to lose their self-respect and confidence. This may reduce their ability to resist unreasonable demands (for example, impossible product specifications or delivery timescales) and makes further 'failures' likely. In cases like this, performance can be transformed by regenerating a healthy sense of self-respect and taking action to improve the things that are genuinely unsatisfactory.

In one recent example, a technical director asked The Creativity Partnership to help his R&D group of 120 engineers address the problem that their ideas were being largely ignored by the rest of the organisation.

The process of change was begun with this simple act of formulating the problem, in this case the need to be seen as 'creative, effective and respected', and inviting in a neutral external agent to obtain people's views. It was a powerful indicator to the group of the technical director's resolve to address the problem, and consequently they felt able to discuss their views openly.

The simple act of having someone asking supportive questions started people talking. These discussions rapidly made it clear that the group was more respected by the other departments than it realised, and just publicising some of the comments made by outside managers helped raise morale and self-confidence.

Some time later it became apparent that many engineers believed that they were only involved in incremental innovation, and that this didn't really count as innovation. It was true that much of the work was in product support and incremental improvements to products, but this attitude was effectively dampening initiative within the group. The core group decided that this needed to be addressed, and hence included a discussion of the issue at the next monthly R&D meeting (another recent initiative). The one-hour session included a simple exercise, in which participants were asked to spend a few minutes in groups of three or four and nominate their 'favourite, reasonably current, innovations within the company'. People were not allowed to nominate their own innovations. This generated a wide variety of nominations, ranging from an improved test process to the design of a critical component on a new product. The results were then shared in the meeting, and the full list collated and circulated by email.

There was no attempt to judge or rank the innovations, but it seemed to be an effective step in the process of stimulating creative self-confidence. It also helped encourage an awareness of and curiosity about the work that was being done elsewhere in the department, thus encouraging more communication. This growing self-respect resulted in the engineers regaining the respect of the rest of the organisation, which subsequently gave more serious consideration to their ideas.

Managers were encouraged to think about their development projects as a portfolio, analogous to the portfolios of companies within a venture capital fund. The rule of thumb for early stage

VC fund managers is that in a good fund, 20% of investments will do very well, you will get your money back on 60%, and 20% will fail. If there are no failures, the fund is probably being too cautious to get the best return. Some of the R&D managers found this a very helpful analogy when they were challenged by managers in other departments over failed R&D projects.

All these measures were designed to help the engineers gain the respect of others, and hence have more attention paid to their ideas. Like all change programmes, this involved multiple interventions, actions and changes, some of which were planned and some serendipitous. However the programme helped create a significant change. In initial discussions we had been told 'The trouble is, they're just not creative.' 18 months later we were told 'They're coming up with so much good stuff, we're reorganising marketing to cope.'

Selling ideas is never easy, but it is possible. The chances can be improved by adopting the most productive approach. This involves four stages:

- Understanding
- Motivation
- Morphing
- Transfer

Understanding the customers

In the first stage of the selling process, the key task is to try to identify and understand the unmet needs and issues facing the customer. For example, if the idea is for a better way to help people with arthritis to open child-proof pill bottles, the first step for the would-be innovator is to discuss the problem with some people with arthritis to tap into their first-hand experience of the problem. If the idea is for a better way of arranging an engine test schedule, much the easiest way to sell the idea is to find out what the head of engine testing is concerned about and position the idea as a potential solution.

Many engineers and scientists find this first stage difficult, and so this critical first step is often simply left out. However, research shows that ideas that are led by market pull are much more likely to be commercially successful than ideas driven by technological push.

Even if the unmet need has been identified by the marketing department, at this early stage there is no substitute for direct first-hand contact between the engineer and the problem. When Toyota wanted to develop better cars for the European market, they sent teams of their development engineers from Japan to drive on European motorways, thus giving them a deep and tacit understanding of the speeds involved, and of the needs of European drivers.

In some companies, the marketing department is very helpful in enabling this sort of contact to take place. In others, interdepartmental suspicions make them reluctant to help.

Motivation

In the second stage, the key task is to create the motivation to adopt an idea. This applies in organisational change, in personal development and in the adoption of technological innovation.

It involves creating an atmosphere in which people feel secure enough to voice dissatisfaction with the status quo, and in which this can be connected to an issue about which the recipient cares deeply. This is particularly important where groups are in denial about the need for any improvement.

This stage is also often omitted, and hence ideas fail to take root. Many will be familiar with the situation of an R&D manager who, under constant pressure from the MD to deliver a critical project, said 'When he keeps going on at me, I just do my teenager act and stop listening'. It's not enough just to tell someone they are not performing. You need to lower their defences enough

so that they want to listen too. They must also care sufficiently to want to do something about it.

When Bill Bratton took over as Chief of Transit Police in the New York Police Department, he wanted to persuade his senior officers to deal with subway crime.[2] However, they were focused on figures that showed that only 3% of major crimes took place on the subway and so were not totally engaged with the problem. He succeeded in breaking through their complacency by instructing that, for a period of time, all senior staff (himself included) were to travel by subway, not in their chauffeured cars. This personal experience made each of them realise how dangerous and unpleasant the subway was, and they became receptive to ideas for solutions.

Two years later, Bratton had reduced robberies on the subway by 40% and felony crime by 22%.

When Merck developed the first practical anti-cholesterol drug, Mevacor (launched in 1987), a key element of its marketing strategy was to publicise an obscure Finnish study showing a link between high cholesterol levels and heart disease. This made GPs want to reduce their patients' cholesterol levels, and thus created a market.

Morphing

In the third stage, the key task is to achieve the right balance between holding fast to the original vision for the idea, and being flexible in response to new information and ideas from the recipient. Research[3] over a 10-year period in a major chemicals corporation showed that project

leaders of above average creativity completed more projects and generated 13 times more profit than their peers – equivalent project leaders of below average creativity (as measured by the MBTI creativity index). The key characteristic seemed to be their ability to reshape ('morph') ideas in response to objections and changing circumstances.

It is usually impossible to prove in advance that at an early stage, ideas will deliver the promised value, so idea adoption is ultimately a matter of faith and trust. It therefore helps significantly if the proponent of the idea is visibly open to refining it to meet the needs and concerns of the recipient. This helps give the recipient confidence that the aim is to find a good solution to their problem, rather than to force their problem into the solution that's been proposed. Where there is a culture of competition between groups, it can be particularly difficult for a person to feel relaxed and confident enough to be flexible about their intial idea. This can create a vicious circle of increasing rejection, antagonism and competition.

Transfer

During the fourth and final stage of the selling process, ownership of the idea transfers. Here the key task is to relinquish control while helping the idea recipient take true ownership and make the idea a success.

If the recipient doesn't feel they've assumed ownership, ideas will often fail at this stage because no-one is motivated to deal with the inevitable problems. This is sometimes evident when a product is transferred from R&D to production, or between R&D groups. The idea originator must manage the difficult balancing act of releasing control and allowing the new team to make their own mistakes, but also being supportive. They must also allow the new team to take credit, but be tactfully firm about asking for some recognition for the originator's own

contribution. No matter how large that contribution, in the long run, asking for permission to say that 'We played a key role in the success of product X' works much better than trying to claim that 'We developed product X.'

The aim of this final stage of the selling process is that the recipients look back and see that the project was a success, that the results were good for them, and that the idea originator helped them achieve that success.

If this aim is achieved, the recipients will be much more interested in the R&D group's ideas in the future. ∎

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Further reading

1   Robert Katz and Thomas J Allen, 'Investigating the Not Invented Here (NIH) syndrome: A look at the performance, tenure and communication patterns of 50 R&D project groups', *R&D Management* **12**, (1) 1982.
2   For an excellent discussion of the full transformation process, see Kim and Mauborgne, 'Tipping Point Leadership', *Harvard Business Review*, April 2003.
3   Stevens and Burley, 'Piloting the Rocket Ship of Innovation', *Research Technology Management*, Mar–Apr 2003, pp16–25.

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Before moving into the learning and development field, she was a co-founder of TTP Group, now Europe's leading independent technology innovation organisation. She ran their Innovative Engineering sector from 1988 to 2000. She has a degree in Engineering, and numerous patents.