Briefing

Atom
SMALL BUSINESS EXPERTS

New product development

The right approach to developing a new product (or service) helps reduce the risks involved in turning your idea into reality. Planning and teamwork are critical.

1. Can you complete it?

Apart from having the right product idea in the first place, there are three essential ingredients for successful new product development.

You need the relevant skills

- For example, if you are developing a new food product, having a technician who can create the right look and taste is only the starting point. Other issues include sourcing ingredients, the mass production process, quality control, pricing and so on.
- You may need to include several people from outside your business in your team.

You need to commit sufficient resources

- If you can only afford a half-hearted attempt, do not even begin. Without the critical mass of people, time and money invested, your project will be doomed to failure.
- If you commit too many resources, the rest of your business may suffer.
- You may need to raise finance.

You need personal commitment to the success of the project

- Though teamwork is important, in a smaller business it is often the owner-manager who must drive the project.
- In practice, most new product development is incremental - improving on an existing product. Compared with starting a product from scratch, this is relatively straightforward.

Non-starters

While a good product idea is no guarantee of success, a bad product idea is a guarantee of failure. Here are some of the fatal flaws.

You cannot sell at the price or volume necessary to make a profit

- For example, UK shoe manufacturers face cut-throat price competition from firms at home and abroad. Even the most stylish new line may have to be discounted.

Your product can easily be copied

- For example, you may invest heavily to develop a brand new type of service and build up a market for it. Competitors can launch me-too services at lower prices, as they have not incurred all the costs.

You lack market power

- For example, a new piece of software may be the best in the market, but it could be doomed to failure if you lack an effective route to market.

> **Your product is over-ambitious**
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> - For example, a new methane car would require breakthroughs on several fronts - engineering the car, persuading petrol stations to offer methane fuel, persuading consumers to buy the car and getting finance for the project in the first place.

2. Reducing the risks

Identify major risks early on, so you can decide if the overall risk is worth the potential reward. The killer blow for a new product will often be something you have not even considered.

Analyse all the market risks

For example:

- Establish the likely volume of sales, and the marketing and sales cost of achieving each sale.
- Is your target market growing or shrinking? Are there any foreseeable changes in your market that could affect the success of your product launch - such as new product safety legislation?
- Are there any competing products already in the market that may block your route to entry? What are the strengths and weaknesses of the product? Can you offer something different and unique?

Analyse the technical risks

- For example, do you need in invest in new equipment or technology to make the production of the new product possible?

It is extremely helpful to have a working prototype to test out

- Potential customers, suppliers and members of the development team can give extremely valuable feedback once they see what the product is and how it works. This need not be an expensive process.
- For mechanical devices you may need both a 'works-like model' and a 'looks-like model'.
- If you are improving on an existing product, you may only need to model the new features.
- Start with a simple prototype such as a drawing. Good feedback at this stage can save time and money.

Avoid being the pioneer who has to learn everything the hard way

- Look for evidence of what others have achieved before you.
- Look at recent developments in related products. Visit trade shows to get a preview of forthcoming products and trends before they hit the market.

Work out how to reduce each risk to an acceptable level

- For example, can your new design be patented or protected in some other way?

3. Know what you are doing

You need to know the what, when and how much of your new product before you can turn your idea into a project.

Start by defining a basic specification ('spec') for the product

- List the features and how they translate into specific requirements.

Make sure you have a unique selling proposition ('USP')

- This provides a reason for customers to switch over to your product.
- Ask yourself what will make customers choose your product over a rival's.

The design of your product can be crucial to its success

- Use in-house or external designers to plan the design.
- Get them to sign confidentiality agreements if necessary.

Pencil in a launch date

- When should the product be ready? If it is delayed, how will that affect pricing, sales volumes and profitability? Unless you and a competitor are racing to launch similar products, hitting a particular launch deadline may not be vital.
- Plan to launch a pilot version of the product with a few favoured customers, to identify and sort out the inevitable problems before the main launch. This also helps you build up your order book before the launch.
- If you need any approvals or certification (eg for any electrical product), book the product tests. Ask if the approvals body can also test your prototype to identify any problems early on.

Decide on the likely selling price for the product

- Based on this, work out what your maximum unit cost of production can be.
- Many new products are based on achieving cost reduction. The aim is to provide the same quality of product at a lower price and with better profit margins.
- Other products rely on superior design or technology to win market share, and can be priced at a premium. But you still need to build to a price, to avoid pricing your product out of the market.

Estimate volumes and delivery demands

- How many will you make and sell each month? What will typical order sizes be? How quickly will customers need delivery?
- If you will sell the new product in volume, it is important to achieve a low unit cost of production. To do this, you may have to invest heavily in the development stage.

4. Your team

Hand pick your team to suit the project.

Every new product needs a product champion to lead the team

- This individual should regard the product as his or her 'baby'. Without such a champion, the project will lack the passion and perseverance needed to overcome the inevitable setbacks.
- Give the team leader the authority to run the project (within an agreed budget and timetable), without continual interference.

Create a team with all the skills needed to make the project a success

- Involving a complete team from the start allows people to work in parallel, reducing the overall development lead time. Without this approach, problems can remain hidden until late in the day.
- Involve key customers, if appropriate.
- Involve any suppliers that will provide key components of the product.

Make sure all the team members are agreed about the main objectives

- The requirements are based on the basic spec.

Be prepared for negativity and keep the team motivated

- If anyone is unco-operative or has a 'can't do' attitude, this will have a corrosive influence on the rest of the team. Avoid including such a person in the first place.
- Most projects go through a honeymoon period, while you are generating ideas. Putting these ideas into practice can be a long and tiring process.
- Make it clear that there will be failures along the way, so individuals are neither afraid of making mistakes, nor depressed by setbacks when they occur. If making the new product was easy, someone would have done it already.

5. Project management

Having formed the project team and agreed that the new product is commercially and technically viable, you need to get the details right.

The team leader should decide the key parameters for the product specification

- Where appropriate, allow each individual to decide the more detailed specifications, within these agreed parameters.
- By allowing individuals to take personal responsibility for each part of the project, you end up with a highly-motivated team.
- Use a series of SMART objectives (specific, measurable, agreed, realistic, time-limited) to control progress. This helps to identify problem areas that you can then focus on.

Draw up a critical path diagram showing the order tasks must be completed in

- By agreeing some working assumptions, your team can start work on different bits of the jigsaw puzzle.
- For major projects involving several people, use a project management package (eg Microsoft Project). This allows you to schedule in factors such as people's other commitments. You can then spot likely delays and bottlenecks.

As the project proceeds, you usually need to adjust the spec and planning assumptions

- When you show customers the prototype, you may be forced to re-think the whole product in the light of feedback received.
- Keep asking yourself if the project will meet its commercial objectives.

Efficient manufacturing

Test proposed designs to see if they can be manufactured cost-effectively

- Develop manufacturing plans at the same time as developing a new product design.

Design new products with an eye to minimising the number of components

- Try to reduce the complexity of assembly.

Use standard parts wherever possible, so they are inexpensive and easy to source

- Standardisation is especially important if production volumes will be low.
- Consider using parts that you already use in existing products.

Avoid reinventing the wheel

- Where possible, buy in components that can be sourced at competitive prices. This can slash development costs and lead times.

6. Cost control

Without planning and monitoring, costs can spiral out of control.

Use top-down cost estimating if you have done a comparable project before

- Using the previous project as a benchmark, you might double the cost (if the new project will take twice as long, using the same number of people) then add in an inflation factor.

Use bottom-up cost estimating if there is no comparable project

- Each team member calculates the cost of his or her part of the project. These costings are agreed with the team leader.
- Add up these costings and add in a contingency factor to estimate the total cost. This is the budget for the project.
- Bottom-up estimates often seriously underestimate the costs, because tasks take much longer than people expect.

7. Long-term planning

You need to adapt and innovate constantly to stay ahead of the competition.

Plan for new product development on a scheduled basis

- Extend product life cycles by repackaging, adding new features and finding new applications for the product.
- Do not wait until competitors launch their 'next generation' product before starting on your own.

Budget for new product development

- Put aside money to make improvements and money for totally new products.
- Set targets, each year, for the number of improvements or new products you aim to complete.

Signpost

- Read about the role of market research in product development from B2B International.
- Read advice on buying design services from the Design Business Association (020 7251 9229).
- Find out about protecting your intellectual property from the Intellectual Property Office (0300 300 2000).
- Find advice and connections for innovators looking to commercialise new ideas across Europe through the Enterprise Europe Network.