
**Start your own company –
and ensure it prospers**

Professional Brief Series



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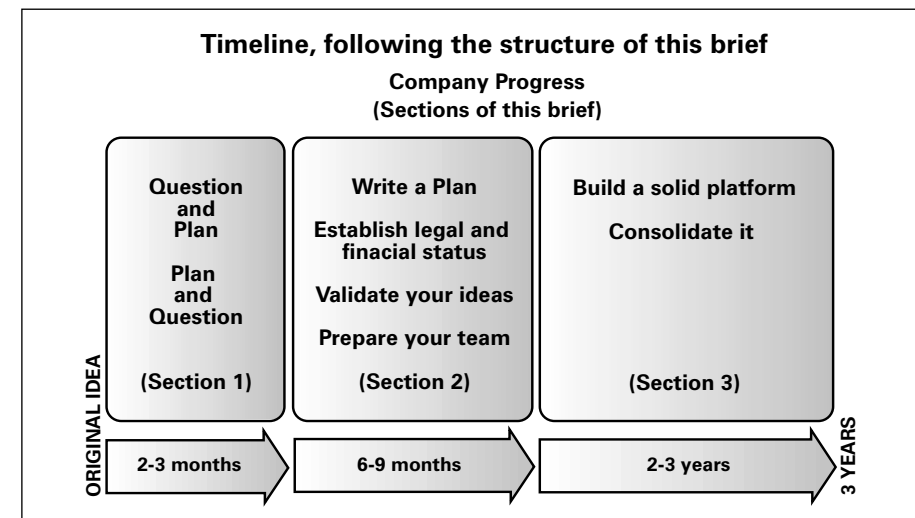
Introduction

Frequently during the professional life of a physicist, an idea for a sustainable business strikes us. In some cases it may seem attractive to exploit the idea ourselves - especially if we might be constrained in our current employment.

The purpose of this professional brief is to provide guidelines, food for thought and first levels of assistance in these very circumstances. In order to maximise the usefulness and value of the brief, we have adopted a ‘minimal jargon’ approach in delivering the messages contained within it.

There is no doubt that taking the step of establishing a company to exploit our hard-won techniques and know-how *can* be extremely rewarding, both technically and financially. However, never has it been more true that “without pain, there is no gain” in the start-up arena. This brief therefore points out the main issues to be settled at each stage of the process for successful start-up. It is not intended as a replacement for detailed professional advice, but reading it carefully will make discussions with advisors and partners more fruitful and realistic than would otherwise be the case.

We begin in Section 1 at the ‘idea stage’, and emphasise the quantity and quality of early thinking which is essential even this early in the process. Armed thus with educated resolve and a robust business plan, in Section 2 we cover the practical issues to be resolved before the company begins to trade. In Section 3, we look at what is needed to ensure a healthy take-off and growth over the ‘crucial period’ of up to three years after foundation. The final section provides references, further reading and contact details for additional practical help.



1 Question and plan, plan and question

Starting a company is likely to involve the most intense period of reflection and planning in the lifetime of those involved. The process should not be rushed. It should involve many return visits and iterations to ensure that a robust business plan is prepared, and suitable identification and assessment of risks made.

This section points out the main points to be covered in this process. It is also important to note that ‘soft’ people-oriented issues are at least as significant in this process as ‘hard’ issues, such as technology performance and financing.

Key basic questions

Before even beginning to consider the contents of a business plan, there are a few basic qualifying questions which *must* all be answered in the affirmative if later activities are to have a firm base.

Am I prepared to spend very long periods of time (often at the expense of family time, weekends, holidays, etc.) in pursuing the success of the company?

Do I have a source of requisite business, commercial and human resource management skills immediately available - marketing and sales, financial management, training, legal and patents (e.g., an experienced founding partner, trusted advisors and investors, etc.)?

Am I prepared to accept personal liability in the case of possible problems in the company’s financial and legal performance?

Can I successfully and happily handle detail, and boring or repetitive work, which may be handled at present by my existing employer or support staff working with me?

Can I honestly say that I have convinced myself and enquirers that I know:

- Who will buy the product or service that I plan to deliver?
- Why they will buy (benefits available to them, and problems solved)?
- The specification of what I should deliver?
- How it will be developed, made, and sold?
- The uniqueness of what I offer, and how I will handle competition?
- The major risks and uncertainties in my idea, and how I will mitigate them?
- How I will retain my customers and encourage repeat purchases?

Having spent at least several weeks getting real answers to the above, the next essential phase is the preparation of a business plan.

The business plan

It is important that this is written by the founders themselves (you, and or founding partners), with total commitment by all to what it contains. Any dispute or incomplete ‘buy-in’ at this stage is the commonest source of later friction between partners. This, in turn, can easily lead to disputes, which threaten the take-off phase of the fledgling company.

The business plan will be the key document in attracting financial support (of whatever sort) from third parties. Its main function is to convince all concerned of why and how the business is to be successful, and also to convey what is particularly unique about the company.

Essential contents are:

1. Executive summary

This is always written last and made subject to the most rigorous re-drafting and checking. Quite possibly this will be the only section to be read fully by interested third parties. Structure, impact and crispness are therefore key considerations. ‘Sales talk’ and realism (e.g. discussion of risks and their mitigation) need to be balanced, and the whole summary should be no more than two pages in length.

2. The market – the *why* of your company

Key questions requiring thought and crisp answers are:

- Which sector will the company operate in? What is its size and geography? What are the key influences on its development? Is it growing or mature? What are the future prospects as predicted by respected experts?
- How does the company and the product fit into this market - regarding present and future competition, and price, performance, quality, costs, margins, and marketing channels?
- Who are the major competitors, and what are their strategic positionings, strengths and weaknesses, and current market shares? What are the barriers for a new entrant to this market, and how will they be overcome by your company?
- Who are the potential customers, where are they, and how strong is the current relationship with them? How much might they buy and why? How will you attract and interest them? How will you define your sales targets, and what (in numerical terms) will they be?

This section should conclude with a short statement of marketing strategy, consistent with the above, indicating what will be done, where and when, by whom and to whom, to attract and retain customers. You should also mention what considerations have been made to determine the pricing policy for expected business.

3. Your product or service - the *what* of your company

In very plain English, explain:

- what the products or services do
- what the reasons are for your customers electing to buy (e.g. a new cost-effective approach to a known problem, cost savings, improved price/performance, quality enhancement, faster, smaller, easier to maintain, etc.).

It is also very important to explain:

- ‘world class’ elements of technology involved, with indication of patent status (and equivalent details for competitors too, if relevant)
- possible vulnerabilities to technological advances made elsewhere
- opportunities to move to ‘second generation’ versions of the product or service to ensure long-term customer retention.

Product listings and pricing policies/costing issues should also be included.

4. The management team - the *who* of your company

This section describes how, in human terms, the plan will be brought to reality.

The senior management team should ideally span a wide range of complementary business skills:

- management strategy
- marketing and sales
- finance
- personnel management
- technological capability.

Each member’s role should be specified and their key targets and measures of performance stated. CVs should be included, highlighting contributions made to past commercial success.

The ideal CV will show a mix of technology and business skills. Where an individual has exceptional proven flair or achievements, there will still be a need to demonstrate balance and controls provided by other team members. This may often

be provided by non-executive directors with wide experience of corporate growth at various stages in the life of a company.

If the company founders themselves do not credibly possess the mix of commercial and technical skills required, it remains important to point this out, and to indicate steps to be taken to close the gap in missing expertise. If assistance is to be given by advisors, mention can be made here.

5. Corporate strategy - the *how* of your company

Entirely consistent with everything which has gone before, this section is a resume which spells out succinctly the ‘big picture’, and provides all interested parties with clearly visible landmarks which can be used later to track the progress and hoped-for success of the proposed business.

The main statement here concerns the company’s objectives for the short (12 months), medium (1-3 years) and long term (3 years and more). These may be couched in terms of milestones to be achieved technically, financially and with respect to future ownership or funding mechanisms (e.g. public flotation).

You should outline:

- how you will make or buy, and promote and sell, your product or service
- how many people expect to be involved
- how, where and when you will recruit, train and reward them
- expected capital purchases
- major fixed cost items (e.g. office and factory rental)
- the extent and importance of continuing research and development (R&D), and the objectives and reasons for it.

It is essential to point out elements of risk in your strategy (e.g. development delays, competitor response, implications of cash-flow shortages), their implications, and steps you have taken, or will take in future, to mitigate such risks.

6. Financial projections - the *how much when*, and *what if* of your company

What is required here is a 3-5 year profit and loss statement and balance sheet. Although an appreciation of the implications of what is contained in this section is essential to the founders, it is certainly not necessary for them to be financial experts. Indeed, this is probably the section of the plan which would benefit most from involvement and comment by a financial specialist, or even a friendly bank manager.

A realistic sales assessment and consideration of costs (both fixed and variable), cash flow and working capital is involved. In the planning stage, it helps greatly to make these easily adjustable, using normal spreadsheet programmes.

It is very important to explain any assumptions made in creating these documents, and also to refer to any external figures, e.g. market forecasts, used in constructing them. Assumptions most commonly refer to sales price, available market share, timing and extent of recruitment, capital investment, completion of R&D, and availability and extent of investment monies. There should also be a clear indication of budgets and targets, which will be translated into expectations placed on the company's senior management.

The financial statements should also allow 'what if' scenarios to be investigated, and the impact on profitability, cash flow and funding requirements to be evaluated in consequence. Typical such scenarios include development delays, unforeseen cost issues, sales undershoots, and impacts of competitive suppliers. This, therefore spells out the implications of the risks described above, and can also be used to describe the likely impact of actions you might need to take to mitigate such risks.

The level and timing of financing injections should also be made clear, as should the source(s) to be tapped, e.g. bank overdraft, equity injections by partners, business angels, and venture capitalists (VCs) - especially if several investment stages are foreseen.

Further help in understanding how to structure financial projections in a manner attractive to investors, and in assessing the financial attractiveness of plans, can be found in the Institute's Professional Brief on 'Business Project Appraisal'. (Ref. 1)

The overall plan should be clearly laid out and well presented, with plenty of graphs, tables and diagrams used to reduce overall length. Jargon and heavy technical descriptions should be avoided, and any detailed justifications (e.g. of the full financial statements) should be contained in appendices. A total of 15-20 pages will probably suffice for a start-up plan.

It is unusual for the iterations on the business plan to occupy less than three months. This allows for much re-checking of assumptions, seeking full partner support, and having early discussions with potential customers and professional advisors. Furthermore, it allows you to check the status of the market and to convince yourself that everything has been considered and included in your plan.

Be very prepared to question and plan, plan and question. Quality thought and discussion at this stage will pay off handsomely in the long run.

While the plan will specify how your business is expected to work, there is a clear need to ensure that all the basics are in place before you actively trade. These cover wide areas, and include both strategic and, no less important, mundane issues.

Start-up team composition, and their key tasks

First and foremost, you will need to have an over-riding personal commitment to the success of your venture and to be able to transmit this to others, most notably the co-founders and first employees of the company. As mentioned above, your start-up team should include individuals with in-depth experience in 'non-physics' areas - notably in marketing and sales, finance, and legal and patents. Should the team require professional advisors, they should by now have been chosen. At the very least, the advisors should be financial, legal, and patent specialists, well versed in provision of services to high-tech start-ups.

Help in identifying such experts, and in specifying what they should be doing in areas such as:

- company and VAT registration
- provision of start-up finance
- looking after your intellectual property to your best advantage
- providing a knowledgeable and critical opinion of the business plan,

is usually available from:

- the Business Link organisation of the Small Business Service
- the clearing banks
- specialist providers of business 'incubation' units, or operators of technology parks
- dedicated local authority financed 'enterprise' units
- within universities, from university-owned technology transfer and spin-out specialist units.

There are several practical and useful 'self-help' publications (Ref. 2, for example), which will help you in confirming that all 'pre-start' tasks have been completed.

Legal and financial issues

At this stage you should also be quite clear as to:

- who will own the shares in the company
- basic company law, and the implications and responsibilities of being a director
- where start-up cash will be coming from, and what consequences arise to you as a result of obtaining such finance.

There is no set formula for who might own company shares. However, ownership *can* be a source of great motivation, not only for the founding group and early investors, but also for key new recruits into the business - even if they are not actually in place on the official launch date of the company.

There are some basic legal and financing issues which can be more carefully structured, and which appear in the next two boxes.

Basic company law

1. Most start-ups begin as a 'limited company', as this arrangement basically 'limits the liability', i.e. financially protects the owners from the company's creditors.

2. However, all such companies must have directors who, in turn, have responsibilities which are designed to maintain the best interests of the creditors.

Major responsibilities are :

- To keep accounts which accurately reflect the company's financial condition
- To publicise such accounts via timely lodgement at Companies' House
- To cease trading if and when the company becomes insolvent (basically when debts cannot be paid from assets)
- To act as trustees of the company, and not benefit personally at the company's expense.

It is important to note that directors are personally liable for the legitimate and effective discharge of the above responsibilities, as well as for the more specific corporate discharge of responsibilities towards tax and VAT, customs and excise authorities, and with respect to health and safety issues, and employer/employee legislation.

Company financing modes

Although a wide range of financing and ownership models exist (and this is where an experienced financial advisor is essential), there are two basic extremes - equity capital and debt/loan financing. The former comes most commonly from business angels or VCs, and the latter, usually from a high-street bank.

The bank loan or overdraft route has a range of flexibilities built in. For example, the term of the loan can be short or long term as required, and draw-down of negotiated overdraft facilities can be deferred if necessary. However, usually the cash is forwarded with comparatively little support or personal assistance. This may be seen as a plus, but it is essential to ensure (and the bank will expect) good positive cash flow to allow service charges or repayments to be made as scheduled. Things can become extremely uncomfortable if the company's cash flow does not meet planned levels. Security given by you against loans may be called in. In the possible case of business failure, the bank may have first call on the assets of the company, may put the business into receivership to recover its loan, and may declare you personally bankrupt if you are unable to meet the guarantees made against the loan.

VCs (Ref. 3) will work far more closely in collaboration with the founding director(s), and will usually be prepared to manage to some extent on a day-to-day basis, sharing risks with the management. This does not come without returns to the VC, however. They will usually seek a share in the equity of the company, i.e. you will have to 'share' your company and all associated decision-making with them. The VC will probably seek an exit for himself after a prescribed period, usually when a given corporate valuation is reached, or when additional funding (e.g. from a share flotation) may be attainable. The VC is also more likely to provide hands-on assistance to see the company take-off, and is motivated to work to protect the value of his holding in the event of cash-flow problems, as above. Needless to say, an appreciation of corporate valuation techniques is a particularly important attribute required of the founder, in order to allow realistic negotiations with VC organisations at all stages in the company's growth.

It should be noted that VC involvement is relatively unlikely at start-up, although specialist companies involved in the provision of the necessary first stage 'seed funding' can be found.

Being clear on the above obligations and considerations is certainly necessary, *but by no means sufficient*, to ensure that your company starts off well.

Pre-start commercial landmarks

The following key commercial progress should have been made *before* starting trading:

1. Definition and comprehension of the market, and customers' reactions to your proposition *must* be understood, and checked. That is, who will buy your product or service, and why, must be firmly established – ideally, by means of direct pre-start sales approaches. *This is most important of all, since such understanding and early negotiation are fundamental to creating a cash flow into the business.* Such experience will also provide the material for the wider promotional messages you will build into brochures, web-pages and other channels needed to 'spread the word'.

2. You must demonstrate, to yourself and your co-founders, that you have a position of technological leadership in your market. This should be evidenced by a product or service (ideally patented) prepared for early delivery in volume, or at least available to prototype, trial or demonstration stage - again to facilitate earliest possible cash flow.

3. You need to transmit to all concerned (within the company and without) that, even from day one, you have a well thought-out operational organisation. That is, everyone in the company (even if it is only yourself to begin with), knows what their targets, priorities and key responsibilities are. In addition, you need to have arrangements in place for handling all corporate issues (e.g. legal, financial, health and safety, and quality issues), even if some of these services might have to be bought in as required in the early days.

With your target market (or even individual customers), product, finance, corporate organisation and staff awareness measures in place, (*backed by continuing questioning and monitoring of your overall business plan*), you should be confident of beginning to trade. This will, in all probability not be the case until at least 6-9 months after your first serious consideration about starting-up the company.

However well you have handled the planning and start-up phases, your company will remain vulnerable for the first 2-3 years of its trading. During this time, it is essential to create long-term viability, continuing growth of revenues, products, skills, and both quality and quantity of well-motivated employees.

This period demands the creation and nurturing of a series of strong foundations, or as expressed in one helpful publication, establishment of a '*Business Platform*'- (Ref. 4). Evidence shows that if the 'Platform' is not firmly established within the 'vulnerable period', companies eventually fail.

Expanding on some of the ideas in Ref. 4, the 'Platform' to be attained includes increasingly high performance and attainment in key areas such as:

- definition of, and penetration into, a large and profitable market
- successful delivery of completed and accepted products
- repeat orders, and further development of customer access, communications and marketing channels
- continuing evidence of technical leadership, and protected Intellectual Property into next-generation products
- sound and lasting relationships with third party companies - suppliers, distributors, financiers and providers of professional services
- recruitment, development and retention of key employees
- continuing and widening expertise and commitment of the key management team.

The Institute of Physics has produced an interactive CD-Rom package entitled 'Planning for Success' (Ref. 5), expressly focused on the issues and strategies necessary in business for a healthy and successful future.

Continuing availability of finance to ensure growth will remain a major concern. Such financial considerations increasingly enter the domain of specialists as your company grows. However, in addition to doing the above activities well, keeping cash flow under control, and consequently meeting ongoing financial obligations, will cause a path to be beaten to your door by organisations willing to assist your longer-term development.

In other words, success in these day-to-day endeavours will lead to the long-term rewards you might at the start have only dreamed about!

References

1. 'Business Project Appraisal'. A professional brief published by the Institute of Physics, 1997. Free to members; £5 to others.
2. 'Starting a Business'. Published by LloydsTSB Bank and Penguin Books - a general guide to business start-up, with several practical checklists and tables.
3. 'A Guide to Venture Capital'. Published by the British Venture Capital Association, BVCA. (<http://www.bvca.co.uk>)
4. 'The Business Platform' by Magnus Klofsten, published by TII (European Association for the Transfer of Technologies, Innovation and Industrial Information), Luxembourg, 1998. (<http://www.tii.org>)
5. 'Planning for Success', creating strategies for technology-based small businesses. CD-Rom, 1999. Available from the Institute of Physics.

Further Reading

There are numerous publications available from local booksellers in the general areas of business start-up guidance, as well as specialist relevant web sites. Among these, two American web sites deserve particular mention:

<http://www.abusinessresource.com>

<http://businessbookshop.com>

Practical assistance and several templates, examples, tutorials and advice in business plan writing are available from <http://www.bplans.com>

The Institute of Physics

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In Great Britain and Ireland the Institute is active in:

- providing support for physicists in all professions and careers;
- encouraging physics research and its applications;
- providing support for physics in schools, colleges and universities;
- influencing government and informing public debate.

Contacts

The internet is an excellent starting point for identifying the contacts required, and questions to be asked, by those starting up their own business. Web sites provided to help start-ups in the UK include:

<http://www.businesslink.org>

This is provided by the UK Government's Small Business Service, with frequently asked questions, guidance and contacts identified in all of the areas you are likely to encounter in setting up your own business. There are also specific introductions to the local Business Link Service available in your own region. Tel: 0845 600 9006.

<http://www.smallbusinessadvice.org.uk>

This is provided by the National Federation of Enterprise Agencies. It is a free and independent source of advice for those starting and running a business based in England with fewer than 10 staff. There are tools, reference documents, checklists, personal enquiry facilities, free downloads, and a particularly comprehensive and easy-to-read set of link pages.

<http://www.startups.co.uk>

This site is dedicated to 'inspiring entrepreneurs and helping them to start and grow successful businesses'.

<http://www.natwest.com>

The web site for the NatWest Bank has a popular and clear 'Small Business' section of particular interest to start-ups. Introductions to locally-available help and services are also highlighted.

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