Starting up

Achieving success with professional business planning

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Contents

THE NEW VENTURE BUSINESS PLAN COMPETITION

An incentive for setting up companies

New Venture is a business plan competition that gives students, researchers and others in the Netherlands the opportunity to set up a company on the basis of an innovative business idea. The stichting New Venture is an initiative of McKinsey & Company and is organized by de Baak, Management Centrum VNO-NCW.

New Venture is looking for ambitious new business ventures based on promising and viable ideas. Projects of this nature require great commitment and farsightedness on the part of their initiators, experience in starting up companies, and - of crucial importance - access to investors who are prepared to finance such projects. New Venture provides participants with the ideal environment for learning, refining, and actually setting up a promising business venture.

Three rounds

The Dutch New Venture business plan competition includes the following rounds:

Round 1: Concept and presentation of a business idea. This round focuses on how to articulate your business idea. This is the first step towards the actual writing of a business plan: you have to get a clear picture of *what* exactly you want to deliver to *which* customers.

Participants of this round have to describe what problem their idea solves, what is new about their product, why customers would want to use it, who the target group is and who is going to pay for the product.

The jury, which mainly consists of professional venture capitalists, will provide feedback to the participants who entered an innovative idea at the end of the round.

Round 2: Assessing the feasibility and potential of the start-up company. This round examines the feasibility of your idea and what need the product or service adresses. With the help of your team coach (experienced manager), and market researchers, lawyers and accountants, you will not only estimate your idea's chances of success, but also discover unexpected opportunities.

In this round you have to answer the following questions: Are you able and allowed to produce your product on the necessary scale? In what way is your product better than its competition? Who are your competitors, and how can they be prevented from copying your idea? What is the current and long term market potential? What price are your customers willing to pay for your product, and will that be enough to make a profit?

The analyses of this round will eventually end up in your business plan - if your idea proves to have the required potential. Should your idea fail to "pass" this feasibility test, you have at least been prevented from writing an entire business plan for nothing.

Entries to this round will again be judged by the jury. The participants will be provided with feedback.

Round 3: Preparation and presentation of the business plan. A strong business plan meets the requirements of investors in terms of both form and content. In this round, participants again have access to their coaches, and to a wide range of specialists that will help make the business plan a "winner".

Your business plan must answer all questions regarding your future enterprise an investor might have, so it must report your product idea, the profiles and competencies of the management team, the marketing possibilities of your product, the way your company will operate, the detailed time planning of the realization of your company, the risks involved and the financial planning.

At the end of this round, there will be a presentation to the jury of the most promising plans. There are three prizes of €25.000 each for the best business plans.

Additional information

You can get additional information about the requirements for each round of the competition at our web site, **www.newventure.nl**, and from several **kick-off and networking events** at universities.

The New Venture Business Plan Competition offers ongoing support and a wide range of information. In preparing your business plan, you will have access to experienced coaches, at no cost.

How to use this book for the competition

This book was written to be used by anyone who wants to set up a high-growth company, and it does not fully reflect the rounds of the competition in its structure.

For round 1, participants can follow the instructions of part 2 of this book: **The business concept and its presentation.** The example at the end of part two extensively describes what is necessary for the competition; check the New Venture website or the **"deelnameset"** for more information about the requirements of entries for round 1.

As round 2 in fact amounts to drafting parts of your business plan, instructions are to be found in part 3 of this manual: **Developing the business plan.** The following sections are important:

Chapter 2, *Product idea*, sections *The irresistible business* idea and *Protecting your business idea* (pages 63 to 64)

Chapter 4, *Marketing*, sections *Market and competition* and *Choosing the target market* (pages 79 to 87)

Chapter 8, *Financing*, section *Basic accounting principles* (pages 140 to 151). For an example entry for this round, check the website.

For round 3, participants should follow part 3 of this book: *Developing the business plan*, entirely, and compose their entry accordingly.

Have fun!

We wish all participants in the Business Plan Competition an exciting and instructive time. The excellence of your work coupled with a bit of luck - you will need that too - could even be rewarded with one of the prizes: a great encouragement to pursuing your promising idea.

PREFACE

The Netherlands has a long and respectable tradition of entrepreneurship across the Globe. Our predecessors during the Golden Age threw themselves into audacious adventures on the Seven Seas and the land bordering these seas. Also more recently in the 20th Century we all know of many names of entrepreneurs like Anton and Gerard Philips that left indelible marks on the make-up of Dutch industry. All big things, whatever they are, have started on the basis of an idea and a relentless commitment of one or a couple of individuals who had the courage to try.

Now more than ever in a world that changes at an accelerating pace the need for innovation and entrepreneurship as a source of economic and societal prosperity is paramount. Unfortunately the character of the Dutch and the make-up of our society in the Netherlands seems to have weakened our willingness to take risk and men's natural drive for distinctive performance. Thus recent evaluation of economic indicators suggests the need for a fundamental revival of our entrepreneurial spirit.

Several years ago McKinsey & Company undertook a project evaluating strengths and weaknesses of the Dutch economy and noted amongst others this particular gap in our economic profile. Rather than limiting itself to the observation of this condition and the obvious recommendation to boost our entrepreneurial spirit, McKinsey decided to launch "New Venture"; a business plan competition that is unique in terms of its orchestration, team support and intensity of coaching. A special McKinsey team produced this manual in support of such a program.

The New Venture business plan competition exists from 1998 and has blossomed in terms of the number of participants and the exciting ideas and subsequent enterprises that have been established. This book has been particularly useful in supporting the starting teams in the development of practical business plans for their dream ventures. Thousands have studied it and have benefited tremendously from the simple and orderly way in which the process of business planning is laid out here.

On behalf of the organizing team and all the institutions and companies that support this competition we wish you great satisfaction in turning your dreams into reality.

Wiebe Draijer	**Managing Partner** McKinsey & Company, The Netherlands
Alexander van Wassenaer	**Chairman of the Board** New Venture, The Netherlands
Claire Arens	**Project Leader** New Venture, The Netherlands
Mickey Huibregtsen	**Chairman of the Jury** New Venture, The Netherlands

ACKNOWLEDGEMENTS

This manual was originally created on the initiative of the Swiss office of McKinsey & Company. McKinsey's worldwide knowledge and experience of numerous start-up projects have contributed significantly to the content. Right from the start, however, the project has also enjoyed a great deal of support from outside sources. Many practitioners - experienced entrepreneurs and leading venture capitalists – have provided first-hand accounts of how successful enterprises come about, and the points that need particular consideration when starting up a company: Bernard Cuandet, Peter Friedli, Matthias Reinhart, Olivier Tavel, Hans van den Berg, Branco Weiss, Brian Wood, Hans Wyss and Peter Sijmons.

Many of our colleagues from McKinsey Switzerland have contributed to this work in one way or another, in particular Benedikt Goldkamp, Jules Grüniger, Ralph Hauser, Ueli Looser, Felix Rübel, Bruno Schläpfer and Barbara Staehelin. Further, we thank the Dutch New Venture team for adapting the text to the Dutch competition and their many suggestions for improvement.

It is our hope that this manual will prove to be a reliable and helpful tool to all those who turn to it.

The authors
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Heinz Marchesi
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About this manual

Victory usually goes to those green enough to underestimate the monumental hurdles they are facing.

Richard Feynman
Physicist

About this manual

This manual is aimed at helping you through the first stage of starting up an innovative, high-growth company: writing a professional business plan. Read it if you have a new business idea with high-growth potential which you want to develop and realize. Your goal might for example be to set up a business that, in five years time, has sales of around €25 million, employs at least 100 people and operates nationally, if not internationally.

Basically, everything you need is available in the Netherlands. There is no lack of promising innovative ideas, our research and technology have an international reputation and financing is available in the form of venture capital or investment funds. In short, conditions here are almost ideal. The trick is to take advantage of these conditions to achieve a breakthrough.

Think big

Do not hesitate to do things on a large scale. Setting up a company is by far the largest step you'll take: it involves a tremendous effort. Comparatively, the extra effort required to generate €25 million sales as opposed to, say, € 2,5 million, is small. Thinking big can even make the task easier, as many potential partners are more interested in large-scale proposals than less ambitious ones.

The importance of a business plan

Professional investors will only back projects that have a well-prepared business plan. They consider business plans very important for reasons that are relevant to anyone setting up a business.

The business plan

- Forces the people setting up the company to think their business idea through systematically, thus making sure that it will have sufficient impact
- Reveals gaps in knowledge, and helps to fill them in in an efficient and structured manner
- Ensures that decisions are taken, so that a focused approach will be adopted
- Serves as a central communication tool for the various partners
- Lists the resources that will be needed, and thus reveals which resources will have to be acquired
- Is a dry run for the real thing. No damage is done if the likeliness of a crash landing is revealed in the business planning phase. Later on, however, the effects on the business, the investors and the employees of the company might well be disastrous.

A sound business plan, therefore, is the basis on which a business idea can be realized, and serves to obtain the capital required for setting up and successfully developing a business.

FOR WHOM THIS MANUAL IS INTENDED

This manual is aimed at anyone who wants to set up a business - particularly a high-growth business. It takes account of the fact that people who start up successful companies are not necessarily management or marketing experts.

To those with no management training this manual offers:

- A step-by-step introduction to the concepts needed to prepare a business plan and arrange the financing of a business idea.
- The basic knowledge needed to participate effectively in discussions and negotiations, and ask the right questions.
- The necessary business language: all the jargon and technical expressions you need to know are explained and used in the text. There is also an extensive glossary in the appendix of the book.
- References for further reading.

For those who have had management training, the manual offers a systematic approach to writing a business plan.

MANUAL DESIGN

This manual has been conceived both as a practical working tool and as a reference guide. This is reflected in its design, which basically matches the stages in the preparation and writing of a professional business plan that could successfully attract venture capital.

Part 1, Starting up a company - how companies grow, describes the consecutive stages that a typical start-up company will go through on its way to realization and success.

Part 2, The business concept and its presentation, describes how business ideas arise, what to look out for when describing a business idea, and how to recognize whether a business idea is likely to attract financing. This part also includes an example of what a business idea might look like.

Part 3, Developing the business plan, is the core of the manual. It contains eight chapters: one for each of the sections a business plan should include. The stages in the preparation of each section are set out in detail. People without prior business experience will also find some basic business knowledge in this part.

CatchMabs business plan is an example of a professional business plan in both form and content.

Part 4, Valuing a start-up and raising equity, advises you how to deal with venture capitalists and private investors. It helps you to gain acces to financial resources and learn how to negotiate.

The appendix contains a detailed table of contents, a glossary of important terms and references for future reading.

PART 1

Starting up a company - how companies grow

Many are stubborn about the path they have chosen, few about the destination.

Friedrich Nietzsche
Philosopher

Starting up a company - how companies grow

New high-growth companies are entrepreneurial ventures with the ambition of achieving substantial sales of, for example, €25 million or employing, say, 100 staff within five years of their foundation. During this period, what began as a start-up should have become an established enterprise. This is a significant distinction compared to less ambitious company foundations. New high-growth companies are rarely in a position to finance themselves; they can only be realized with the assistance of powerful professional investors.

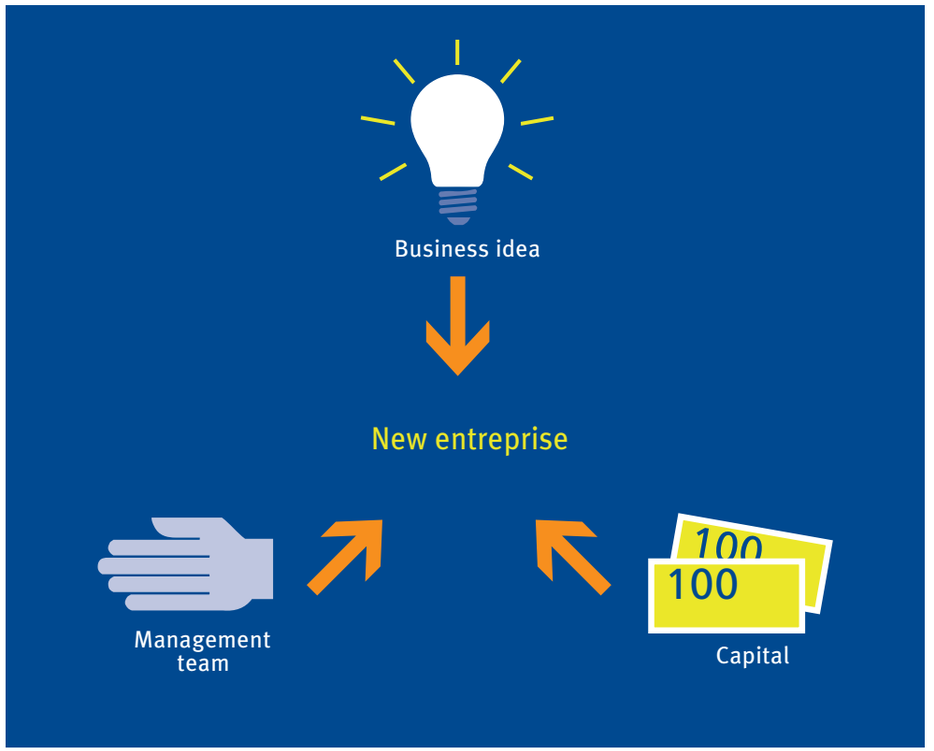
Thus, for anyone setting up a high-growth company, finance is the existential issue. This means that, right from the start, the concept must be regarded from the perspective of future investors.

In this chapter, you will find:

- The essential factors in starting up a successful company.
- How professional investors look at new companies.
- The typical process for starting up a high-growth business.

STARTING UP A SUCCESSFUL COMPANY

Successful companies are set up by combining three elements.



1. Without a business idea, there is no business. However, the idea is not the end of the creative process, it is its beginning. Many people are so in love with their idea that they fail to see that it is, at best, the point of departure for a lengthy development towards a mature business idea, and that it must withstand tough challenges before it even has any prospects of financing and market success.

2. Money is essential. Luckily, adequate capital is available in the Netherlands, so that projects that are promising from the point of view of investors will undoubtedly find funding: the trick is to look at an idea from the investors perspective.

3. The management team is the critical element in setting up a company. What distinguishes a good management team is discussed in full in Chapter 3, *The management team*. High-growth new companies are not one-man bands; they can usually be realized with a team of three to five entrepreneurs with complementary skills. Forming a team is well known to be a difficult process that requires a great deal of time, energy and sensitivity. So start on it right away, and continue working on it throughout the entire planning process.

TAKE THE INVESTORS' PERSPECTIVE

The entire start-up process must be geared toward the successful procurement of capital. Professional investors are the toughest test of a business idea's chances of success. So, focus all your communication on investors; learn to think the way they do. Even if you do not need an outside investor, you should look at your venture from this perspective.

Investors will not be satisfied with a simple description of a business idea - however attractive it may be. Investors want to know exactly what they are putting their money into, and who the people behind the project are. For them, the team is at least as important as the idea. Investors also want to know, from the start, when their involvement will end, and how they will get their investment back. Making a profit is always the reason why investors want to get involved.

Financing a business with venture capital

What is venture capital?

Venture capital is money for financing new businesses, made available by risk- capital partnerships or individuals. Typically, venture capital is invested in projects that offer a chance of high profit, but also involve high risk. Venture capitalists expect a profit from their investment corresponding with the risk involved. Accordingly, they follow a start-up project very closely to ensure that the potential is actually realized.

Besides financing, what do professional venture capitalists have to offer to a new entrepreneur?

- Coaching and motivation for the founding team
- Specialist knowledge in building up new businesses
- Access to a network of experienced entrepreneurs, potential clients, business partners and managers who can help you make your business a success
- Advice on how to realize the success of the company (sale, listing of shares on stock exchange).

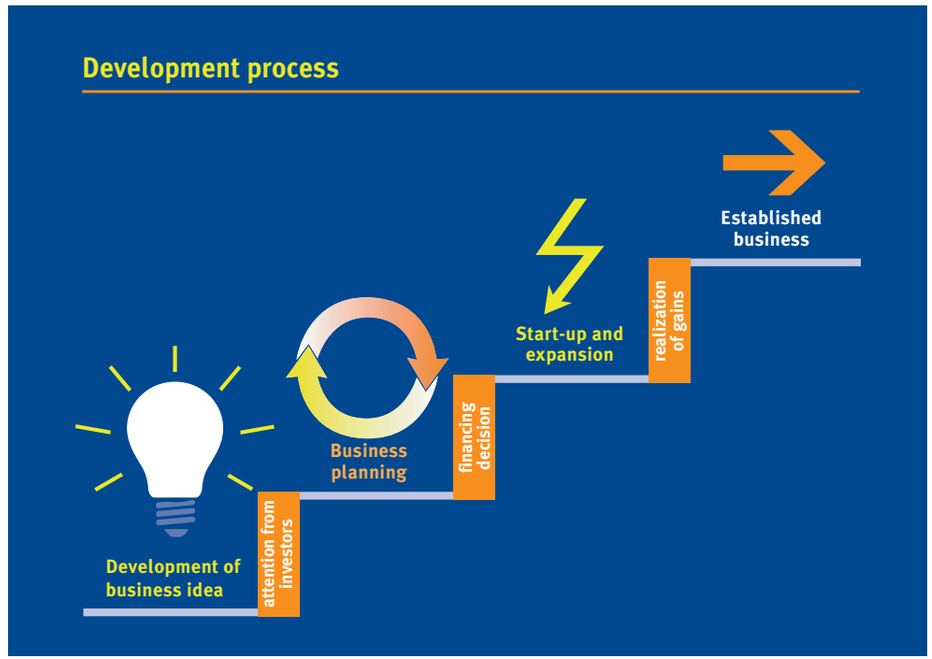
Venture capitalists will also move into the drivers seat if the management team fails to achieve its targets.

How to choose a venture capitalist?

Venture capitalists generally expect to take a significant share in a new business. But they also provide powerful support, that goes far beyond their financial involvement, and share decisive responsibility for the success of the business. There are differences between the various venture capitalists, and the management team should know its investors well. If you would prefer to have 20% of a €100 million business than 80% of a €5 million business, you should not only choose your investors according to who offers the most money at the best conditions.

THREE STAGES IN THE START-UP PROCESS

The investor's perspective is reflected in the typical start-up and development process for high-growth businesses. For an investor, each stage ends with a milestone; for the entrepreneur with a hurdle that must be surmounted. It is important to have a clear understanding of the work involved at each stage, and the challenges that the hurdles represent. This will spare you not only unnecessary effort in setting up your company, but also disappointments.



In Stage 1 you put your business idea down on paper and analyze its marketability on the basis of a few key indicators. The hurdle that might be facing you as a founder at this stage is getting the investor interested in the business idea and convincing him that it is basically worth financing.

In Stage 2 you will elaborate your business idea and turn it into a detailed business plan. Your hurdle at this stage might be to get access to the funds necessary to build up the business.

Use the planning process to decide if the business is really as good as you think. Ask yourself if you really want to spend five years of your life doing this.

Eugene Kleiner
Venture capitalist

Stage 3 will require the most effort on your part. Business plan in hand, you will now have to build up a company that functions. Your goal is a successful business. One that is profitable and provides interesting employment for many people. When this stage is completed, it is time for the initial investors to withdraw: the company is no longer a start-up, but an established firm, which can be listed on the stock exchange or, alternatively, sold to another company.

If you want to be successful, this setting-up process will provide a structure for your task as the initiator of a business idea, and for the path leading to your own company. The investors' requirements will have a decisive effect on how, and with what approach, you handle the various stages of setting up your company.

Stage 1: Developing the idea

The starting point is one “bright idea” - the solution to a problem. This may be a new product or service, but it may also be an innovation within an existing business for example, a new production process, a new form of distribution, or some other improvement in the design, production or sale of a product or service. The idea must be tested to see whether there are customers for it, and how large the market might be. Basically, the idea itself has no intrinsic value. It only acquires economic value when it has been successfully realized in the market.

You need to start putting together a team and finding partners who will develop your product or service until it is ready for the market (or very nearly so - in the case of a product, this would probably be a working prototype). During this phase you will usually have to manage without venture capital. You will still be financing your enterprise with your own money, with support from friends, perhaps with state research subsidies, contributions from foundations, or other resources. Investors refer to this as “seed money”, as your idea is still a seed, not yet exposed to the harsh climate of competition.

Your goal in this phase must be to present your business idea and your market – the basis of your new company - so clearly and impressively that potential

investors would be interested in developing the idea further with you. You will find some basic practical tips on this in Part 2 of the handbook.

Stage 2: Developing the business plan

In this phase, it is vitally important to keep an eye on the overall picture. Don't get lost in the details. The business plan will help you here: you must think through and weigh up the risks in your business idea. You must be ready for the unexpected, and learn to think in "scenarios". You must prepare plans and initial budgets for the most important functions of the business - for development, production, marketing, distribution and finance. And you will, of course, need to make a lot of decisions: which customers or customer segments will you address? What price will you ask for your product or service? What is the best location for your business? Will you do your own production or cooperate with third parties? And so on.

During the planning phase, you will be in contact with many people outside your founding team. Potential investors will not be satisfied with just reading a business plan. They will usually want to participate in its preparation before they get involved in the future company. If they are to support, coach, and contribute their industry experience and relationship networks, they will want to get to know the people behind the idea: Do they tackle their tasks with confidence? Do they demonstrate management and communication skills? Are they open and honest? Do they have relevant experience? Last but not least, are they able and willing to put their ideas into practice?

Apart from the investors, you will also need to talk to a large number of specialists: lawyers, tax consultants, market researchers, advertising agencies. You must also get in touch with your potential customers, to start estimating the size of the market. You must find your suppliers, and perhaps sign the first contracts. And you will want to get to know your competitors.

Limiting the risk

Taking the business planning phase seriously, and doing the work conscientiously always pays off. Ultimately, it will be the market that decides on the value of your business idea, and its judgment will be ruthless. The purpose of the business plan is to subject the idea to a thorough examination prior to this ultimate test; it's the ideas trial run before it faces the realities of the business world. While preparing the business plan, you and your future investor will together put all aspects of the business through a dry run. The professional venture capitalists will be the most rigorous judges, because they will be the most realistic. During this phase, you will have to show that the business can function, that the operating assumptions in the plan are realistic, and that you and your team are in a position to make the business successful in the marketplace. Despite every precaution, a highgrowth company remains an investment risk. Experience shows that out of every ten venture-capital-financed businesses, on average only one will be a huge success, three will yield adequate returns, three will stagnate, and three will suffer total loss. So, it is understandable that investors do everything possible to limit the risks to their investment -- on the other hand, risk is also their business.

Financing expenditure with your own funds

During this intensive concept phase, you will naturally be running up costs. The team must earn a living, a basic operation must be kept going, and a prototype developed. However, in this phase too, you should be able to have a good idea of the costs involved. Funds will still have to come from the same source or sources as in the first phase, though investors may on occasion be prepared to make an advance.

For you as the founder of the company, this phase is successfully concluded when investors declare themselves prepared to finance your venture. You will find more about this in Part 3 of the handbook.

Stage 3: Setting up the company, market entry and growth

The conceptual work is now largely complete, and it is time to put the business plan into practice. From being the designer of the business, you now become its constructor. Business success must now be sought and achieved in the market. Typical important tasks are:

- Setting up the company
- Building up the organization and management
- Building up production
- Publicity
- Market entry
- Reacting to threats: competition, technological developments
- Expanding production
- Entering new markets
- Developing new products

This phase will show whether your business idea was a good one - and will finally be profitable.

Goal achieved: realizing your success

Realization provides proof of the success of your enterprise. If all goes well, you will be able to sell the business with at least the profit envisaged in the business plan. For the investor, a profitable exit has been the goal from the start. This need not mean that you too, as entrepreneur, leave the business. Entrepreneurs often remain in the business, though in many cases with reduced financial involvement. This enables them to enjoy the financial fruit of their labors.

Taking the capital out can be done in various ways. Normally, the business is sold, for example to a competitor, a supplier or a customer, or it may be listed on the stock exchange, by means of an Initial Public Offering (IPO). Another possibility is that those investors who wish to get out are bought out by the others.

The reward for your efforts

What began as a risky venture has now become an established business. In the course of its short life you have created a large number of jobs and gained many customers with your innovative solution. And the effort has also been worthwhile financially.

If your efforts are not crowned with success, at least you have gained some valuable experience, which will leave you better placed for a subsequent venture.

**Shoot for the moon.
Even if you miss it
you will land
among the stars.**

Les Brown
Renowned public speaker

PART 2

The business idea concept and presentation

You look at any giant corporation, and I mean the biggies, and they all started with a guy with an idea, doing it well.

Irvine Robbins
Entrepreneur

The business idea - concept and presentation

The starting point for every single successful enterprise is a convincing business idea. It is the first milestone in the process of starting up a high-growth company. In order to be successful you should consider your idea from the investor's perspective. This means showing, clearly and concisely, what customer benefit your idea will deliver in which markets, and how it will produce money. Lastly, of course, you must present your idea convincingly.

In this chapter you will find out:

- How business ideas are identified and developed.
- What a convincing business idea must include.
- How to present your business idea to investors.

The CatchMabs case study at the end of this chapter shows the scope and degree of detail required in a developed business idea, and an example of how an idea might be presented.

The best way to have a good idea is to have a lot of ideas.

Linus Pauling
Chemist

HOW TO IDENTIFY A BUSINESS IDEA …

Research has shown that most original and successful business ideas are developed by people who already have several years of relevant experience. It takes profound understanding of the technology involved, of customer behavior, or simply of the sector concerned to develop a business idea to the necessary level of maturity. Gordon Moore and Robert Royce, for example, already had several years experience at Fairchild Semiconductors before they founded Intel.

However, there are examples of revolutionary concepts that have been discovered by utter novices. Steve Jobs and Steve Wozniak broke off their university studies to found Apple. Fred Smith had the idea of FedEx, the global parcel service, while at business school.

… AND HOW TO DEVELOP IT

In economic terms, even a “divine spark of genius” is worth nothing, however brilliant it may be. Usually, a lot of time needs to be invested in the idea for it to develop into a mature business idea: time for further development work involving various parties.

First, the idea must pass a plausibility check. This means making a rough check of the opportunities in your market, reviewing the feasibility of the project, and checking how innovative it is. Very quickly, you will be confronted with a wide range of questions, and the first problems will arise. You must overcome these step by step, by improving and refining your product idea, and by re-checking its plausibility. Do you have good answers to the questions? Are you showing ways to resolve the problems? Have you improved your idea’s chances in the marketplace? If not, keep working on it.

Discuss your idea with friends, professors, experts, potential customers: the more broadly and thoroughly you investigate for your idea, the more clearly

you will be able to express its benefits and its market chances. Then you will be properly prepared for discussions with professional investors.

How long does it take to develop a business idea? That depends. Considering the development stages we have looked at, less than a month is highly improbable and hardly realistic. The business idea for a product or process development, for example, is only ready to be financed when it is concrete enough to be brought to market in the foreseeable future, and at a reasonably predictable risk. This may take years. Investors refer to this period as the business idea's "seed phase"; it is usually financed with "soft money", i.e., with funds that make no hard and fast demands on the success of the business.

It may also take a long while if the idea is ahead of its time. The perfect product has been discovered, but it cannot yet be realized, because the complementary systems or technologies have not yet been developed. An example of this is the Internet. There were plenty of ideas for marketing goods and services, but commercial exploitation of the Internet was long hampered by the inadequate security of the available payment systems.

Three ways to present a business idea

A young engineer has an idea for a new product, and wants to present her "business idea" to a potential investor. She knows that she must come straight to the point if she is to get a hearing.

Example 1: the sales approach

"I have a great idea for a new, customer-friendly payment system with enormous potential. This is what you have always wanted, and it will make you a lot of money". The investor thinks "All hot air. I've heard hundreds of "great ideas" - boring".

Example 2: the technological approach

"I have an idea for a computerized machine control system. The key to it is a fully integrated SSP chip with 12 GByte RAM and direct governing of the control unit via asymmetric XXP technology; it's taken five years to develop". The investor thinks "Computer nerd; in love with the technology. She's her own market".

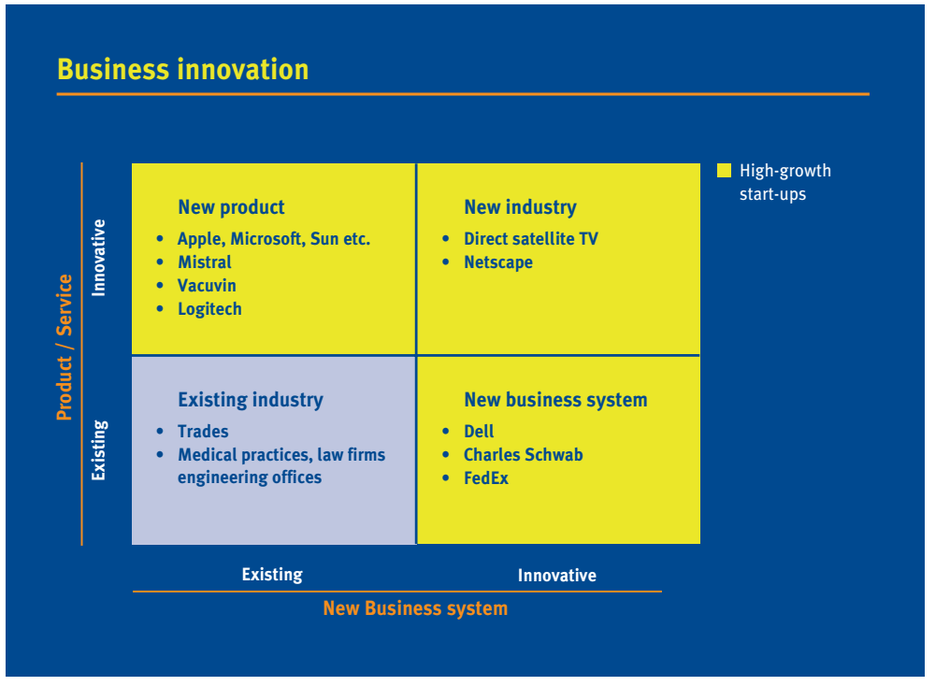
Example 3: the entrepreneurial approach

"I have an idea that offers a business with up to 100 staff cost savings of 3-5%. Initial cost/price analyses have convinced me that there is a potential margin of 40-60%. With the Small Businesses Association and ABC magazine, I have access to a focused publicity channel. Distribution would be via direct sales". The investor thinks "Ah; she knows what the customer benefit is, and has even quantified it. She's also thought about the market and the potential profit, and she knows how she intends to get the product to the customer. Now I should really like to know what sort of a product it is".

Part 2

Innovative business ideas

Business ideas can be positioned according to two dimensions. The first dimension is the product/service the idea contains; the second is the way the product/service is developed, manufactured and marketed, referred to as “business system”. In both dimensions, it is possible to further develop what already exists, or to develop something entirely new. You will find more on business systems in the chapter 5 of part 3, *Business system and organization*.



The concept of innovation is usually applied to new products or services that use conventional production methods and are distributed to customers using conventional distribution channels. Microsoft, for instance, developed the new DOS operating system, yet used IBM’s existing sales organization to market it. Mistral used existing sports shops to distribute its surfboards. Bernd Schneider’s Vacuvin can be bought in any shop for household goods.

Innovations in the business system are less obvious, but every bit as important. Dell's success was due to its significantly lower costs made possible by a new type of production and direct distribution system: computers were produced very quickly but only after they had been ordered. FedEx used central sorting and 24-hour operation to revolutionize letter delivery.

When developing new products, the emphasis must be on improving “customer benefit”. The point of innovations in the business system is above all to reduce costs. This benefit can then be passed on, at least in part, to the customer, as a price reduction.

Occasionally, it is possible to combine both dimensions of innovation - product and business system. This means inventing a new “industry”. Netscape made an essential contribution to the success of the World Wide Web when it made its new browser available at no cost via the Internet - Netscape makes its money by selling software to commercial customers and space for advertisers on its home page. Satellite TV offers an almost unlimited selection of programs, sidelining traditional program distributors, like cable or broadcasting companies, by operating its own satellites and by selling the necessary receivers through traditional consumer outlets.

If you can't say it simply and clearly, keep quiet, and keep working on it till you can.

Karl Popper
Philosopher

CONTENT OF A CONVINCING BUSINESS IDEA

The business idea has to appeal to an investor. It is neither an advertising leaflet for a supposedly amazing product, nor a technical description, but rather a decision-making document, which answers the following three questions:

What is the customer benefit; or, what problem does the idea solve? Market success comes from satisfied customers, not from amazing products. Customers buy a product because they want a need satisfied or a problem solved - be it by eating and drinking, reducing effort, increasing pleasure, enhancing their image, etc. So, the first characteristic of a successful business idea is that it clearly states what need it will satisfy, and in what form (product or service). The distinctiveness of the product is often referred to by marketing specialists as its "Unique Selling Proposition".

What is the market? A business idea only has real economic value if people want the product or service. So, the second characteristic of a successful business idea is that it demonstrates the existence of a market for the product or service, and identifies the target customer group(s).

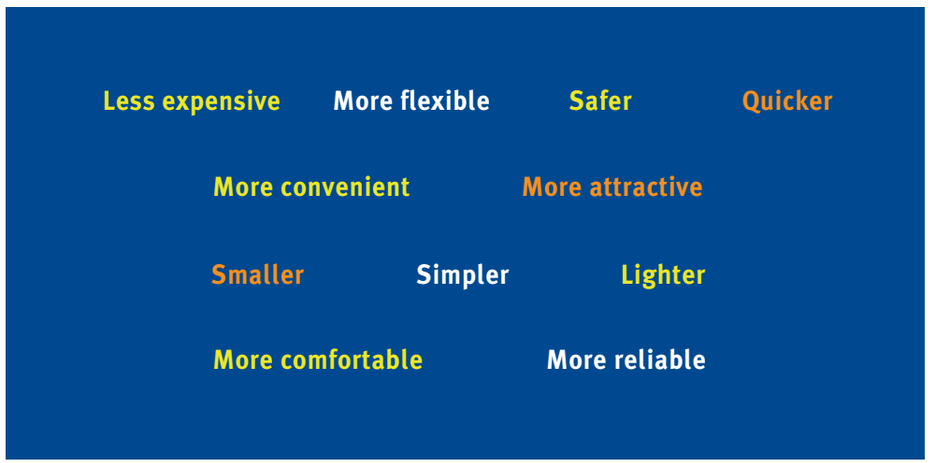
How will it make money? Most products make money directly, from sales to customers. In some cases, however, the "revenue mechanism" can be more complicated: for example, the product is given away for free to the consumer, and paid for by advertisers. So, the third characteristic of a successful business idea is that it makes clear how money will be made, and how much.

Customer benefit

Your business idea must be the solution to a problem that matters to potential customers in a market. Many entrepreneurs make the mistake of thinking about the technical details of the product when they refer to a "solution". Investors do not think this way. They first consider the business idea from the perspective of the market and the customer. For them the key factor is customer benefit - everything else is of secondary importance.

Anyone who says: "Our new equipment can carry out 200 operations an hour", or: "Our new machine has 25% fewer parts", is only thinking about the product. On the other hand, anyone who says: "Our new equipment saves the customer 25% of his time and thus 20% of his costs", or: "With our new solution, you can increase your production by 50%", has adopted the point of view of the customer. In other words: the product or service is a means of providing customer benefit, never a benefit in itself.

The customer benefit of a product or service is determined by what is new or improved about it, compared to alternative solutions. It is thus an essential means of differentiation, and decisive in the market success of your business idea. You should also try, whenever possible, to express the customer benefit in figures.



In marketing theory, the customer benefit must often be expressed in terms of a Unique Selling Proposition, or USP. There are two aspects here. First, the business idea must be offered to the customers in a form (selling proposition) that makes sense to them. Many new companies get nowhere because their customers fail to understand the product's advantages, and do not buy it - and you cannot blame them for this. Second, the offer must be unique. The customer must choose your solution among those offered on the market. So you must also convince the customer that your product or service offers greater benefit or more value. Only then will the customer choose your product. It is difficult to entice people away from what they are used to and comfortable with. A potential customer who is interested in a new product will first look at what established manufacturers have to offer. You will probably find it easy enough to check the truth of this statement against your own consumer behavior.

When describing your business idea, you don't yet need to present a fully matured USP - but its principles should be made clear to the investor. You will fill it out later, when you work out the business plan.

Market

Thinking about the market and the competition requires some marketing knowledge. Readers with no business experience are therefore recommended to first study the chapter on marketing in part 3 in this manual.

What is the market for the product or service offered?

Investors are particularly interested in two questions when they think of the market:

- How large is it?
- What are the primary target groups or segments?

Detailed market analysis is not necessary at this stage. An educated guess of the market size and segments will be enough for the business idea. To be more certain, you could make an estimate based on easily verifiable basic data from the Department of Statistics, from trade associations, or from the trade or business press. It should be possible to define the size of the target market by using reasonable assumptions based on these data.

Obviously, it is not easy to define and specify target segments. For the business idea, an initial notion of who the target customers are will be enough. You should, however, show why your business idea offers particular benefits to precisely these customers (e.g., people with high incomes, those keen on technology) and why this group is particularly interesting to you economically. In the CatchMabs example, the business idea is interesting for all companies in processing industries that have waste flows that require purification or contain high value compounds. This is the case for a lot of companies in the agro-industry, with large fractions of valuable proteins in their waste flows.

Revenue mechanism

Greatly simplified, the classic profit calculation for a business works as follows: a business buys materials or services from suppliers, the payments for which represent costs for the business. The business then sells products or services to its customers, and this produces revenue. Later, when you prepare the business plan, you will have to set out the business system and the revenue mechanism of your business in more detail (see Part 3, Chapter 5). If possible, try to make a rough estimate of cost and revenue. A rule of thumb for high-growth businesses is that during the start-up phase they should achieve gross profit (revenue minus direct production costs divided by revenue) of 40 to 50 percent.

Not all businesses follow the classic pattern. Leasing and renting are other common revenue mechanisms. Three further examples: McDonald's earns its money from license fees charged to the franchise holders: the restaurant owners pay McDonald's for the use of the name and the model for running the restaurant. *ViaVia*, a classified ads newspaper, is financed by the price paid by the people buying the paper; the advertisements appear for free. In the CatchMabs example, revenues are generated in three ways: sales of products, royalties related to the value of the recovered components and license fees for the use of the technology outside CatchMabs' core sector. If your business idea also combines multiple revenue streams or is based on an innovative form of revenue mechanism, you will need to explain it at the business idea stage.

Checklist

Does your business idea answer the following questions?

- ❑ Who is the customer?
- ❑ Why should the customer buy the product?
  What need does it meet?
- ❑ What exactly is innovative about the business idea?
- ❑ Why is the product better than comparable alternatives?
- ❑ What are the competitive advantages of the new company,
  and why can a competitor not simply copy them?
- ❑ How unique is the business idea? Can it be protected by patent?
- ❑ Can the product make money? What are the costs involved,
  and what price can be asked?

PRESENTING THE BUSINESS IDEA

Professional investors have clear basic requirements that business ideas must meet to merit their consideration. Your venture will only survive this stage if it meets these “killer criteria”. Naturally, although investors live with the risk of losing their money, they will always try to limit this risk as much as possible. A single reason can be enough for them to stop pursuing a business idea.

Characteristics of a promising business plan:

- Meets a customer need - a problem is solved
- Innovative
- Unique
- Clear focus
- Offers long-term profitability.

The way you present your business idea to an investor will be the acid test of your efforts so far. What really matters is to get the investor to take notice and show interest - because of the content, and because of your professional presentation. Good venture capitalists for example, receive up to 40 business ideas every week, and their time is limited.

Your first goal, therefore, is clarity. You should not expect investors to be familiar with your product's technology or the jargon of your trade. Investors are unlikely to take the time to find out what a confusing term or concept means. Conciseness of content and expression is your second goal. There will be plenty of time later for detailed descriptions and exhaustive financial calculations.

Formal presentation of the business idea

Title page

- Name of the product or service
- Name of initiator/entrepreneur
- Confidentiality notice
- Illustration, if appropriate.

Maximum of two pages of text, including:

- Description of product or service
- Customer benefit
- Innovative characteristics
- Description of customers
- Revenue mechanism.

Maximum 4 illustrations or charts, if necessary, to understand the idea

Part 2

Copy __ of 10

CatchMabs

Business Idea

May 2001

CONFIDENTIAL

CATCHMABS BUSINESS IDEA

The problem

Industrial waste flows, for instance in the agro-industry, contain a lot of proteins and other organic compounds, which are either harmful and need to be removed or highly valuable and reusable as ingredients in other products. As current technologies for bulk isolation at molecular level are very expensive, costs of purification of waste flows have increased significantly with tightened government regulation and recovery of valuable components has not been proven cost-effective.

The solution

CatchMabs provides a low cost solution for capturing valuable or harmful compounds present in minuscule amounts in bulk industrial waste flows. This solution is based on the bulk application of affinity chromatography using a proprietary, stable design of molecular affinity bodies. Using CatchMabs' industrial affinity chromatography technology, industrial companies in a wide range of sectors can gain significant revenues by isolating and trading valuable organic compounds from their waste flows and reduce their purification costs dramatically, by low-cost isolation of harmful components. Examples are the isolation of the valuable protein lactoferrin from whey, or the removal of metal components from water.

The innovation

CatchMabs will develop specially constructed industrial molecular affinity bodies (iMab®) that are optimized for bulk scale industrial application. The basic scaffold protein is designed to withstand the often harsh chemical environments of processing industries and carries a highly specific recognition site for almost any target. The simple, modular design allows for high yielding, cheap microbial production. The affinity bodies can be regenerated well over 1,000 times when immobilized on a suitable matrix. Combined with the cheap production and excellent stability, the use of iMabs is 10,000 to 1,000,000 times cheaper than conventional monoclonal antibodies, the current method of choice for affinity chromatography. This substantial reduction in costs breaks down the one barrier for industrial application of antibodies. The ideas for design and potential applications of the affinity bodies will be filed to acquire a legal date stamp and will be used for preliminary patent filings.

Customers

The industrial possibilities are endless and range from compound recovery in process streams to surface reactive-dyes, from novel cosmetics to antibiotic replacements, eventually leading to ton scale sales of recombinant designer proteins. Potential customers can be found in agro-related industries, environmental industries and in the pharma- and cosmetics sector. CatchMabs's initial focus will be on customers in the agricultural/food sector (e.g. Unilever, Campina, FCDF, Avebe, Numico, Nutreco, Genencor). This sector is especially promising, due to the high amount of valuable proteins in the processing waste flows.

Business model

CatchMabs will focus on developing a range of proprietary affinity molecules for specific applications. It will work with suppliers and partners in mass-producing the molecules and in installing and servicing the affinity chromatography columns on the customers' site.

Once the technological feasibility is validated and the first products are developed, CatchMabs will generate three forms of revenue;

- Bulk sales of iMabs for industrial applications (kg quantities, production outsourced to third party manufacturers)
- Royalties related to the value of recovered products (depending on quality and stability of our iMabs, market price of the target product, etc).
- Licenses to sectors outside our core-business (pharma, cosmetics etc.) Total revenues are expected to reach € 10 mln within 5 years, with operating margins of 40% to 60%.

The required initial investment of around € 0.5 mln in equity and debt will be spent mostly on R&D to realize a proof-of-concept and to develop the first products. The current team of three people will therefore initially be expanded with scientists. Once the first products have been developed the team will be strengthened with sales & marketing experts.

PART 3

Developing the business plan

Writing a business plan forces you into disciplined thinking if you do an intellectually honest job. An idea may sound great in your own mind, but when you put down the details and numbers, it may fall apart.

Eugene Kleiner
Venture capitalist

Developing the business plan

You now have taken the first steps on the way to starting up a business. You have clearly formulated the customer benefit of your product or service, and your initial market research has given you confidence that there is a market for your idea, and that a successful launch and rapid growth are possible. You may already have convinced investors of your idea's possibilities and won them over as partners for its further development. However, there is still much to be done before you can expect a positive decision on financing. The business plan gives you a tool that will enable you to develop your business idea systematically until it is ready for presentation.

Structure of the business plan: The business plan should contain eight sections, which are extensively discussed in the remaining chapters of this part of the book. Order the parts of your plan as they are ordered here. The business plan for the CatchMabs case represents one possible practical example of a plan's development and presentation.

Content of the business plan: Your business plan should give clear and concise information on all important aspects of the proposed business. This includes practical matters concerning its start-up, operation and management, and analyses of costs, sales, profitability and growth prospects. This information will reveal whether your business idea stands up to closer examination, and where you may need to make modifications, or even think again. If you deal with professional investors, they will support your planning efforts and act as coaches and mentors. By doing this, they will take on an important role in starting up the company.

Writing a business plan requires more basic business knowledge than the previous phases. Readers without specific business education or experience will find the necessary basic knowledge in the following chapters. The information is presented in a concentrated form, which will help you consider the most relevant issues and enable you to act as a competent discussion partner. Readers with a business education or experience can use it as a guideline for key issues to consider when starting up a high-growth company.

Formal design of the business plan

A professional business plan is:

Effective: It contains everything investors need to know in order to finance the enterprise - nothing more and nothing less.

Structured: It has a clear and simple structure (for an example, see the structuring of the chapters in Part 3 of this manual and the sample business plan).

Comprehensible: It is written clearly, and to the point. It uses precise wording, no jargon, no waffle.

Brief: It does not exceed 30 pages, including appendices.

User-friendly: The type is at least 11 pt, with at least 1 1/2 line spacing, and the margins are at east 2.5 cm.

Attractive: The figures and tables are simple and easy to grasp; avoid graphic “special effects”.

Conciseness is also a matter of style

Some tips from well-known authors

The guiding principle of style should be that a person can only think one thought seriously at any one time.

Schopenhauer

Choose the particular word, not the general one.

Classic rule of style

Never use a long word where a short one will do.

George Orwell

Before you use an adjective, come and see me on the third floor and ask me if you need to.

Georges Clemenceau, newspaper publisher, to a young journalist

Main clauses. Main clauses. Main clauses.

Kurt Tucholsky's advice to speakers

The verb is the backbone of the sentence.

Ludwig Reiners

Read what you write aloud.

Wolf Schneider

He said, nice and clearly, what was to come first, second and third.

Wilhelm Busch

A good Executive Summary gives me a sense of why this is an interesting venture. I look for a very clear statement of the long-term mission, an overview of the people, the technology, and the fit to market.

Ann Winblad
Venture capitalist

1. Executive Summary

The executive summary gives a quick overview, and provides everything that a reader who is under time pressure must know about your business plan. Clarity and comprehensibility are particularly important here. The summary is, as it were, the pencil sketch of your venture; the business plan is the finished picture. Nevertheless, it must give the reader every significant element of the whole picture. The subsequent chapters of the business plan elaborate on the information in the summary, and provide more detailed technical information. However, they should contain no surprises in the form of entirely new messages or concepts.

Producing a clear and concise summary of a business plan in two pages is often more difficult and time-consuming than writing twenty pages of detailed description. Synthesis requires an additional thought process and therefore time. And think of the reader: make sure the structure is clear and understandable. Use uncomplicated language - this will make it easier to read quickly. Make sure the plan is clearly presented - this will encourage people to read it. The idea is to get investors to read on. Before they finally decide to finance the start-up of your company, investors will want to know more about it, and find out if your plan will stand the critical test of the market.

And there is an additional benefit. As the synopsis of your insights, the executive summary can serve as the basis for clear and concise communication - for a short verbal presentation, for example: all the key points covered in two minutes.

There is nothing in the world as powerful as an idea whose time has come.

Victor Hugo

2. Product idea

The whole purpose of any new company is to provide a solution for a problem that exists in the marketplace - to fulfill a need of its potential customers. So your business plan begins by setting out the customer need and the proposed solution. You have already roughly sketched out some of the key elements of your future enterprise - customer benefit, market and revenue mechanism - in the description of your business idea. Now, in the business plan you need to specify and detail these elements. What is it that will make your idea irresistible in the marketplace?

Considering your business idea from a more practical perspective generally involves an iterative process, in which new insights into one element of the plan can affect others. Remain open to criticism and, whenever possible, get advice from experts, investors, entrepreneurs, colleagues and potential customers.

In this chapter you will find out:

- How to make your business idea irresistible
- How to protect your business idea
- What to keep in mind when presenting your business in a plan.

We keep moving forward, opening new doors, and doing new things, because we're curious and curiosity keeps leading us down new paths.

Walt Disney

THE IRRESISTIBLE BUSINESS IDEA

How does your business idea become a "killer idea" - something that is irresistible in the marketplace? You have already sketched out what is innovative about your business idea, and described a rough Unique Selling Proposition (USP). You must now define the selling proposition in the form of a recognizable and convincing customer benefit, and be more specific about its uniqueness. For example, it may be possible to improve the customer benefit by improving the product or process development.

The CatchMabs case provides an example of the way the business plan takes the problem and solution set out in the business idea a step further in terms of depth and detail.

PROTECTING YOUR BUSINESS IDEA

Only a very few ideas are genuine, unique sparks of genius. Truly powerful ideas are not easily copied. In most cases you will have to find a middle way, that provides sufficient protection while still enabling fruitful discussion.

Patenting

Early patenting is particularly advisable for new products or processes. Get an experienced patent lawyer involved: the future success of your business may depend on patent protection. All industries have financially powerful competitors ready to use their clout to avoid the granting of an inconvenient patent - and they can continue giving you a hard time after the patent has been granted! Be careful: patenting may fail in its aim of protecting an idea, by making it public. This is particularly important if devoting a little effort to improving the product or process can invalidate the patent. Thus, for example, the formula for Coca-Cola has never been patented because a patent could have been effectively circumvented by making minor changes to the recipe without affecting the product's taste.

Confidentiality agreement

Lawyers, accountants and bank staff are obliged by law to observe confidentiality with regard to their clients' affairs. Professional venture capitalists also have every interest in preserving the confidentiality of their clients' ideas: anyone who gets a reputation for poaching ideas is unlikely to be offered new ones. The same applies to consultants. Nevertheless, a confidentiality agreement may be useful in some cases, as long as you are clear about its limitations. Even if you have a confidentiality agreement, infringements are often difficult to prove in court. In any event, have the agreement drawn up by a experienced lawyer. A better approach is usually to do some research into the reputation of any possible discussion partners, before you discuss your business idea with them.

Rapid implementation

Probably the best protection against "intellectual theft" is putting the idea into practice quickly. Getting from idea to successful business takes an enormous effort. This effort - known as scaling the "entry barrier" - can discourage potential plagiarists. Ultimately, victory goes to the fastest runner, not the one with the best running shoes.

PRESENTING YOUR PRODUCT IDEA

In this chapter of the business plan you demonstrate in a clear and straightforward way how your business idea solves a particular problem. Your argumentation should be comprehensible to non-experts and should include the following aspects:

- Outline the problem and its solution.
- Describe what is innovative about your idea; explain to what extent your solution provides the customer with a unique benefit; and quantify this customer benefit.
- Describe the patent situation, and, if relevant, details of the patent.
- Communicate visually. A picture of the product, the prototype, the service "in action", or a flow diagram of the process will make it easier for the reader to get a clear idea of what you have in mind. It also documents the state of development the product has reached.
- Go easy on the technical details - they are of no interest to investors, and are unlikely to have a positive effect on the decision whether or not to invest.

Product idea checklist

Does your business plan answer the following questions?

- ❑ What problem(s) does your idea solve? What customer need does it meet?
- ❑ What kind of product or service do you want to sell? What exactly are you offering?
- ❑ What is innovative about your product or service?
- ❑ How near is the product or service to being unique? How will you protect its uniqueness?

I invest
in management,
not ideas.

Eugene Kleiner

3. Management team

Starting up a high-growth company is a very ambitious undertaking. Success must be achieved and often fought for, step by step. In addition to the right idea, an appropriate environment and support from a wide range of partners, it will also require the untiring drive of the management team. Ultimately, it is the way that the business plan is put into practice that will make the difference between success and failure - and that will be entirely in the hands of the team.

The management team is thus the crucial factor in a company that is starting up. That is why this chapter has such a prominent position in the business plan.

In this chapter you will find out:

- Why the management team is so important for the start-up and what its distinguishing features are
- How to form a “dream team”
- How to present your management team to an investor.

Teams outperform individuals, especially when performance requires multiple skills, judgments, and experiences.

Jon R. Katzenbach

THE NATURE AND IMPORTANCE OF THE MANAGEMENT TEAM

There are three reasons why the team is particularly important for the start-up:

- There is a lot to do - the necessary allocation of tasks is only possible with a team that brings together complementary skills.
- New sorts of problems continually arise - a well-functioning team, welldeployed, will find the best solutions.
- Above all, external investors are putting their money into the team - it is ultimately the people behind the idea who will make it successful.

The team also has the advantage that the whole burden is shared across the team - if one member drops out, there should be no risk that the whole enterprise will collapse.

The team: Allocation of tasks based on complementary skills

Building up a business is a process that requires a wide variety of talents that are rarely all found in a single person. Because the idea for the company is usually new, there are no standard solutions for the problems that arise. A group of people with complementary skills will always solve problems better than any individual ever could.

Simply by working as a team, you can avoid typical mistakes that occur in many start-ups. For example:

- Going off course: changes in direction are necessary in building up any business. They are often resisted by the founder, out of fear that the business concept may be watered down. In a team, criticism will more often be based on purely practical motives.
- Poor quality communication: presentations can be rehearsed before a critical audience, thus avoiding embarrassing mistakes.
- Learning from mistakes: a sales pitch that goes wrong can be better analyzed within a team. Was it the message? The people? The presentation? Should we try again?

Interaction within the team is the most important advantage of teamwork. But there are also more mundane advantages of having a group. During the start-up, for instance, information gathering is an important task. Since there is no money for professional advice, team members rely on their colleagues and contacts for information. A team naturally has access to more sources than an individual would have. Also, simple matters like having someone there to pick up the phone are more easily arranged when you have a team. Being easy to reach is important to customers, who regard absence as a sign that you are not yet ready to handle orders in a professional manner.

The team:
Excellent performance if properly deployed

Building a team is not as straightforward as it may appear. What looks like a team may in fact be no more than a working group. What's the difference? A working group produces the sum of the individual performance of its members. A team, on the other hand, produces a result that is greater than the sum of each member's individual performance - but only if it is properly formed and finds the right way of working together.

Teams are capable of excellent performance, but in practice opportunities to set up and use teams properly are regularly missed. One reason for this is that many people are brought up to aspire to individual performance. Grades at school, for example, are given on an individual basis, and many people are uncomfortable with being evaluated as a team. Another reason is that many people have already had unsatisfactory experiences with teams. They may, for example, have worked on a team just for the sake of being part of the team, which is ultimately a waste of time. Disappointing "teamwork" also characterizes groups that are actually dominated by one individual.

Simply bringing together a number of people will not result in good teamwork. A team must be properly formed and find the right way of working together, if it wants to significantly improve its chances of success in starting up a company. Follow the basic rules in this chapter and try to build the characteristics of an effective management team into your company.

Characteristics of an effective management team

- Complementary skills and strengths
- Shared vision - everyone wants to succeed in a shared pursuit
- At least three people, seldom more than six
- Flexible approach to problems
- Sticks together - especially in difficult situations
- Doesn't give up in the face of adversity, but reforms and clears the hurdle at the second or third attempt.

The team:
In the eyes of the investor

Investors tend to be much more impressed by the people behind an idea than by the idea itself. The personality, professional and social competence, and motivation of the initiator and his or her team will often determine the investor's decision for or against the project. This is why positive signals from the team can be decisive, particularly in the initial phase. Someone who cannot quickly get a group of people enthusiastic about working on an idea may well run into problems later, when

What professional investors are looking for:

- Has the team worked together before?
- Do the members have relevant experience?
- Do the founders know their weaknesses, and are they ready to correct them?
- Are the founders clear about their future roles? Is the ownership of the company clear?
- Has the team agreed on a common goal, or are there unexpressed differences of opinion?
- Are the individual members fully committed to the undertaking?

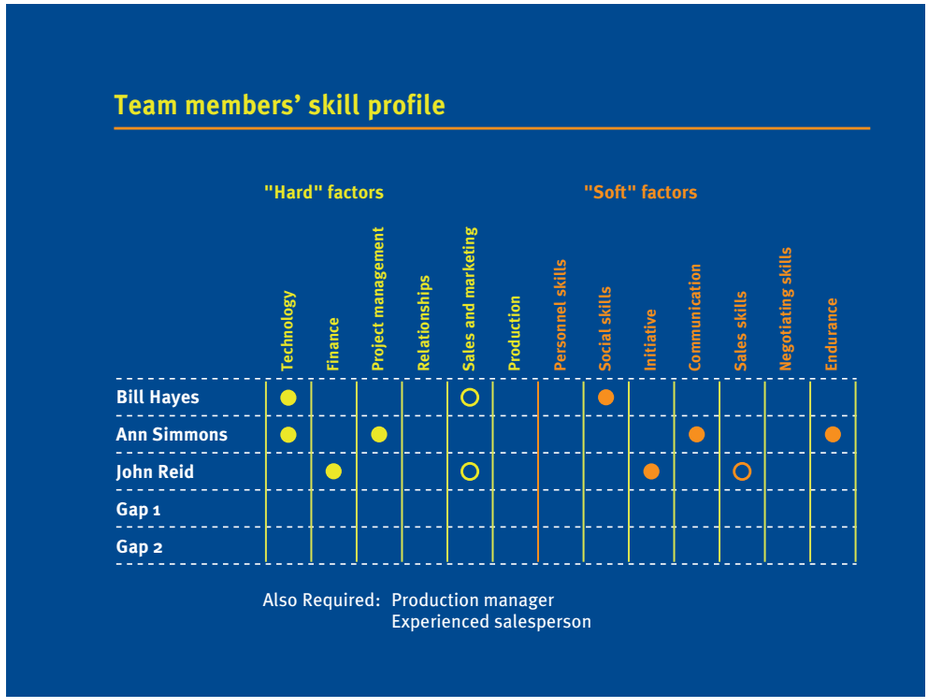
trying to get customers enthusiastic about it. Someone who lacks the social skills to help colleagues through the uncertainties of the start-up phase may later have problems managing a larger business.

FROM MANAGEMENT TEAM TO “DREAM TEAM”

To avoid blind spots in the development of the business, your team must bring together the most important skills required for the company. You can find out which skills you need by going, step by step through the organization and the business system (see Chapter 5). The exact requirements will obviously vary from business to business. Typical requirements, in addition to professional competence, are “soft” elements, such as communication skills, acceptance by the professional peer group, or by customers.

How does your current team match up to these requirements? How far away is your founding team still from the “dream team” that meets all these requirements? You can answer the questions by drawing a grid, putting the tasks to be carried out on one axis, and the available skills on the other (see figure). This will not only enable you to make best use of the abilities of those involved, but will also reveal any gaps. Be open and honest when making this assessment: recognizing that there are some gaps is nothing to be ashamed of, but a constructive step on the way to the dream team.

Filling the gaps is not easy. Your circle of friends may lack the necessary contacts (engineers tend to know other engineers, but not many economists). An experienced coach is particularly valuable here, and venture capitalists can also help.



Very few founders of new companies are in a position to employ the necessary team members, and thus retain full ownership of the company. Self-financing is particularly difficult with high-growth companies. To avoid disappointment, it is advisable to formulate a clear understanding of the ownership stakes in the future company at an early stage. The management team should agree on this before it begins talking to investors. A good approach for distributing the shares is to take account of the actual previous and future contribution of the members. Thus, for example, the “inventor” of the idea and the future chief executive would be entitled to larger shares.

PRESENTING THE MANAGEMENT TEAM

By setting up a founding team and by working hard to become a “dream team”, you have achieved a great deal. Now, you must convince your investors of the motivation and effectiveness of your team. Put yourself in their position: what would you regard as important? Describe the characteristics and skills of the team and its individual members, for example, in the following terms:

- **The team as a whole:** complementary skills of team members; evidence that the members can work together and also stick together under difficult circumstances; the members’ personal involvement in the team; distribution of ownership among the members; and role of each member in the team.

- **Individual members:** significant items of their CVs, such as education, professional training, practical experience, time spent abroad, management and communication experience; indications of special skills, particular hobbies or achievements in sports, music, etc. Be brief: not more than one-third of a page per member; complete CVs can be included in an appendix.

Management team checklist

Does your business plan answer the following questions?

- ❏ Who are the members of your management team, and what distinguishes them (education, work experience, success, business reputation)?
- ❏ What experiences and skills does the management team possess that would be useful for the realization of your business idea?
- ❏ What experience and skills does the team lack? How and with whom should the team be expanded?
- ❏ What motivates the individual members?

4. Marketing

The principal task of any company is to meet the needs of its customers. That is the basic idea of marketing. Marketing is not to be equated with “sales” or “publicity” - these simply represent the implementation of marketing ideas. Marketing is more comprehensive: whatever a business does - research and development, production and administration, sales and customer contact - there are always two key questions to be answered: What benefit does it offer the customer? What benefit does it bring the company vis-a-vis its competitors?

A company that bases its activities on a marketing approach will always strive to meet the needs of its customers - and to do so better than the competition.

The marketing plan is thus one of the key elements in your business plan. You must be able to convince investors that there is a market for your business idea - one that you can serve profitably. Investors would want to be sure that their expectations of the growth potential of the business can be met and so should you. For this purpose, it is not necessary to present a ready-to-run marketing plan as part of your business plan - nor would it be possible to do so in the 3-4 pages you have available. What is important, though, is a clear statement about the expected market, the pricing strategy, and distribution. For readers without business experience, a summary of the most important elements of a marketing plan have been included, to give them an idea of what matters most.

In this chapter you will find out:

- How to analyze your market and the competition
- How to choose your target market
- How to determine your marketing strategy.

If you don't know what the customer benefit is, the whole thing's a waste of time.

Branco Weiss
Entrepreneur

Basic elements of the marketing plan

Marketing is not an exact science and, particularly in the case of new business ideas, you must often rely on your common sense and instinct. The worst mistakes in business plans are often in the marketing design. These mistakes occur because of two reasons: firstly, you must put yourself into your future customers' shoes, and adopt their way of thinking and their emotional attitudes, which is not easy and often does not receive enough attention. Secondly, there are many market factors that you cannot influence directly: for example, the key question - How many customers will buy our product? - can never be answered accurately in advance, but at best be approximated. Nevertheless, rigorous analysis of the market and the competition can significantly improve the quality of your forecasts.

It makes sense to prepare the marketing plan in three stages:

1. **Analyze the market and the competition:** at this stage you become more familiar with the market for your business idea, and analyze the strengths and weaknesses of your competitors.

2. **Choose your target market:** here, you choose the group of customers ("customer segment") whose needs your product meets best, and to whom you have the most to offer, compared with the competition. You also define how you want to distinguish yourself from the competition ("positioning through differentiation").

3. **Determine your marketing strategy:** at this stage you determine how you will reach and address your customers, with specific measures covering product design, pricing, distribution and communication.

If there is no competition, there is probably no market.

Brian Wood

MARKET AND COMPETITION

A thorough knowledge of customers and their needs is the basis for any business success. The customers provide your company with its raison d'être, and decide on its success or failure by buying - or not buying - your product or service. Customers will only buy your product if they believe it offers them greater benefit than buying a competitor's product.

Market size and growth

You should have some initial estimates of market size, in terms of number of customers, the number of units and the total sales in euros. When preparing the analysis, note the difference between an existing market and an entirely new market. If you are bringing out an improved version of a product that is already available on the market (such as a more effective toothpaste) these figures will be fairly easy to get hold of. You will find data in the trade publications, or receive them from public authorities or trade associations. Check your data for plausibility. Ideally, you should forecast the growth of the market over the next five years, using the rates for the past five years for comparison.

The market size is more difficult to estimate if you are starting with something completely new. In this case, you will have to derive the figures from the number of potential customers or customer segments. You will probably need to do some market research yourself, using a small questionnaire. Alternatively, you could conduct some interviews with experts on the subject or with people most likely to become your customers.

How to make an accurate estimate

Estimating is an important part of the planning and decision-making processes. This applies to both the start-up and the growth phases of businesses. Stick to the following principle: “It is better to be approximately right than precisely wrong”. It is better to produce a roughly accurate estimate, than to calculate to several decimal points a supposedly exact figure that cannot possibly be right given the uncertainty in the assumptions. This applies in particular to estimates of the size of a market or customer segment.

Some helpful hints when estimating:

- **Start from a solid basis:** there may be many unknowns, but if you use easily verifiable figures as a basis, you will build your estimate on solid foundations
- **Follow a logical path:** the logic of an estimate should be clear - there should be no breaks in the chain or unspecified assumptions
- **Compare your sources:** wherever possible, check information, such as statements in an interview, against other sources
- **Be creative:** the shortest distance is not always a straight line. For example, if one value is unknown, try to find a substitute value that relates to the one that is missing
- **Check for plausibility:** for every estimate always ask yourself: “Does the result actually make sense?”

A sample estimate

How many disposable diapers are currently used per day in the Netherlands? Possible procedure:

- **Basis:** the population of the Netherlands is 16.3 million (Centraal Bureau voor de Statistiek)
- **Assumption:** an average child wears diapers for 2 years (ask parents)
- **Basis:** average life expectancy in the Netherlands is 77 (geography textbook)
- **Calculation:** at a rough estimate, the number of Dutch diaper-wearing children is 2/77 = 2.6% of the population, or 424,000 children
- **Refinement of assumption:** the population is not distributed evenly across age-groups, since the current birth rate is relatively low and the number of people per age group decreases with increasing age. We assume that these effects roughly cancel each other out, and account for this uncertainty by choosing a range of 404,000-444,000 diaper-wearers.
- **Assumption:** daily consumption of diapers (ask parents again): 4-6 diapers
- **Result:** estimated average daily consumption of diapers in the Netherlands = 1.6-2.7 million

Actual figure: 2.2 million

Know your competitors

Anyone offering something in a market will have to face competitors. If you are to challenge the competition successfully, you will need to find out who the most important suppliers in the market are, what their market share is, how they operate, and what their strengths and weaknesses are. Also you will have to try and estimate whether, and if so how quickly and at what cost, another supplier with a similar product could enter the market, and what effect that would have on the success of your business. Make clear that you understand the competition. Name your competitors specifically, and describe why and how your company will be better.

There is competition in everything. Take into account existing or potential direct competitors, but also think about substitutes. Substitutes are products that provide the same customer benefit in a different fashion. When Sony and Philips brought out the CD, there was at that time no direct competition from other digital sound systems. At first, the CD was competing with existing analogue products - records, tapes and cassettes - as well as with entertainment media in a more general context. However, other digital systems very soon appeared, followed by new CD formats.

Competitors can also create an opportunity. In some cases selling your venture to a competitor or a major customer might be a good alternative for an initial public offering. For example, a year after the introduction of WebTV Internet terminals, WebTV was acquired by Microsoft.

CHOOSING THE TARGET MARKET

Your business idea will not be of equal interest to all customers, because they do not all have the same needs. Therefore, you will have to identify those customers within the total market who will benefit most from your product or service, can best be reached by you, and are ready to pay for it. In marketing language, you must choose your “target market” and define its characteristics.

Your marketing plan should contain statements of the total market, your target market and market share. You should also estimate the future development of these segments.

Your marketing plan must answer four questions:

- Who are your customers or customer groups (“segmentation”)?
- Which customers or customer groups are particularly attractive financially?
- How can you differentiate yourself from the competition (“positioning”) for these attractive customers?
- What market share and what level of sales do you expect to achieve with these customers?

Who exactly are your customers?

With your product or service, you intend to meet a customer need - as accurately and efficiently as possible. Since it will usually not be economically viable to tailor your product and publicity to each individual customer, you must apply appropriate criteria to group your potential customers. In marketing language, this is called “customer segmentation”. Criteria are appropriate if they produce customer groups that are as internally consistent as possible, but large enough to allow you to serve them efficiently. The criteria must also be applicable to product design, pricing, publicity and distribution. This is no trivial matter. Purchasers of TV sets, for example, could be segmented into those with blue, brown or green eyes- but what would be the point? If, on the other hand, you find out that young people with low incomes (e.g., students)

prefer small, portable TVs with stereo sound and a price tag of less than € 400, you may have defined a useful target segment.

Customer segmentation has two purposes. First, it helps define the market that your product can reach. One of the greatest marketing mistakes is to overestimate or underestimate the actual market. If, for example, you were bringing out a new type of toothpaste, you might start from the assumption that all the inhabitants of the Netherlands are potential customers. More rigorous analysis might, however, reveal the following picture: 50% are out of the question as consumers, because they buy their toothpaste from the major retailer you cannot supply. Of the remaining consumers 40% buy on price - the fact that your toothpaste cleans teeth better matters less to them than the price - you lose them because your toothpaste is more expensive than the products of your competitors. Of the remaining 30% of the total population, you lose a third because your toothpaste is unsuited for the elderly. The actual market for your toothpaste is therefore just 20% of the total market.

Sample customer segmentation criteria

For consumer goods

1. Geographic: country (the Nederlands, Belgium, Germany, etc.) or population density (urban/rural, etc.)
2. Demographic: age, gender, income, profession, etc.
3. Lifestyle: technofreaks, the environmentally conscious, Generation X, etc.
4. Behaviour: frequency of usage, application of product, etc.
5. Purchasing behavior: brand preference, price consciousness, etc.

For industrial goods

1. Demographic: company size, sector, location, etc.
2. Operational: technology employed, etc.
3. Purchasing behavior: central or decentral purchasing, contracts with suppliers, etc.
4. Situational factors: urgency of need, order size, etc.

Second, customer segmentation helps you design a specific - and thus more effective - marketing strategy for each customer segment. Different customer segments may be interested in your product for quite different reasons. Children may like your new toothpaste because of its taste, parents because of its greater effectiveness against decay. If consumers are segmented into uniform groups by these preferences, measures can be taken to "position" the product effectively with each customer segment. You will find much more on marketing strategy in the next sections of this chapter.

Choosing the target segment

Once you have divided the market into individual customer segments, you will have to consider which segments to concentrate on. The aim is not to serve all segments, but to concentrate on those that promise the greatest profit, now and in the future.

Various criteria are useful in reaching a decision here:

- Size of the segment
- Growth of the segment
- Match between product and customer needs in a segment
- Potential for differentiating your own product against competing products.

Positioning vis-à-vis competitors

Why should a potential customer buy your product rather than that of one of your competitors? Because it offers the customer more than the competing product does; because it is "better", either rationally or emotionally. Or as marketing specialists would put it, because you have developed a Unique Selling Proposition (USP).

Formulating a USP and anchoring it firmly in the minds of your customers is the key task of marketing communication. Marketing experts talk about the positioning of a product, a brand or a business. Well positioned products always make a particular impression on consumers when they think of them. This is why the most important guideline for

positioning is: adopt the customers' perspective; the idea is to find a better way to meet their needs, not to present a product's new attributes. Customers must be able to grasp immediately why your product is better in a way that matters to them. At the same time, your positioning should be readily distinguishable from that of your competitors. Only if this is the case will they associate the additional benefit that you are offering with the name of your product or company, and so buy your product.

Because the positioning of your product is so important for market success - and consequently for the long-term success of your business - you should pay a lot of attention to it. A convincing positioning will not come about of its own accord; it will require a good deal of effort, and will need to be revised continually to achieve maximum effect. A point of departure for the positioning is the product idea itself. You will get additional insights as you refine and modify your product in the course of its development, as you bring it closer to your customers' needs.

The path to successful positioning

- Identify relevant customer needs or problems
- Define clear customer segments of sufficient size
- Design an attractive proposition in terms of products or services
- Define your uniqueness by differentiating against the competition
- Address the subjective perception of your potential customers
- Ensure customer satisfaction after the purchase too.

Market share and sales volume

One of the key questions in business planning is what market share and sales volume you can reach within the first five years. Your considerations on positioning will give you some useful indications of how many customers you could reach in the various segments. You should also consider whether you will be able to win away customers from the competition, and, if so, how many. Wherever you offer the maximum benefit, you will win the most customers. But be realistic!

MARKETING STRATEGY

A strategy describes the approach to achieve an objective. The marketing strategy defines the measures you will employ to reach the objectives set out in the marketing plan - which will result in sales. Generally speaking these measures can be grouped under the "4Ps" of marketing: Product, Price, Place and Promotion.

Product: what characteristics must your product have to meet the relevant customer needs?

Price: what price can you ask for your product, and what goal are you pursuing with your pricing strategy?

Place: how are you going to reach customers with your product?

Promotion: what means of communication will you use to convince your customers of the benefit of your product?

Product: product characteristics

Your original product idea has already given you some sense of the characteristics of your product. Now that you have made a closer analysis of the needs of various customer segments, you must consider whether your product really meets them, and to what extent it may need to be adapted. This raises the question of whether you should produce a standard product for all segments or adjust the product to meet the needs of particular segments.

Price: pricing

With your positioning, you have decided how you will differentiate your product against the competition - this includes pricing. Specifically, you should answer the following questions:

- What price can you ask?
- What pricing strategy will you adopt?

What price can you ask?

The price you can ask is the price the customer is prepared to pay. This contradicts the widespread opinion that price is determined directly by cost. Of course cost is a factor, but the cost/price ratio only becomes critical when the price that can be asked does not cover the costs. This, by definition, means the business is unattractive. Cost naturally also plays a role because the difference between cost and price defines the profit - and the ultimate goal of any commercial enterprise is to maximize profit.

The price you can ask depends entirely on how much the benefit of your product or service is worth to the customer. You have defined, and perhaps also quantified, the customer benefit in your business idea or product description. Now you should define a price bracket, using the method shown in the “Pricing by Customer Benefit” box below. You can verify and further refine your assumptions in discussions with potential customers.

What pricing strategy will you adopt?

Your pricing strategy depends on your goal: do you want to penetrate the market quickly with a low price (“penetration” strategy), or do you want to get the highest possible return right from the start (“skimming” strategy)?

Pricing by customer benefit

(value-based pricing)

Previously, when a telecommunications company wanted to increase its transmission capacity, it had to lay new cables. Depending on the conditions, the excavation work costs € 25-50 per meter. Accordingly the costs of 50 km of new cable was € 1.3 - 2.5 million.

As an alternative, Ciena Corporation offers electronic equipment that extends the capacity of existing glass fiber cables by wavelength multiplexing. Instead of using a single beam, light is sent through the cables as several colors of different wavelengths. Each color carries as much information as the entire original beam. Equipment that will multiply the transmission capacity by 24 costs Ciena Corporation about as much to manufacture as a well equipped PC. What price can be asked to cover the development costs and, above all, reflect the benefit of the idea? Ciena Corporation offers the system with 24 channels for € 1.3 million, at the lower end of the average cost of laying 50 km of cable with other technologies.

There are usually good reasons for new companies to pursue skimming strategies:

- The new product is generally positioned as “better”, so its price can also be higher.
- Higher prices generally produce higher margins, thus enabling the new company to finance its growth itself. New investment can be financed out of profit, and there is no need for additional outside investors.
- Unlike a skimming strategy, a penetration strategy generally requires high initial investments to produce supply adequate to meet the high demand. Whenever possible, investors prefer to avoid this additional investment risk and adopt a skimming strategy, retaining the option to adopt a more aggressive approach when appropriate.

A penetration strategy may be appropriate in the following cases:

New standard: when Netscape, for instance, distributed its Internet browser for free, it was able to set a new standard. Apple, on the other hand, followed a skimming strategy with the Macintosh, and thus missed the opportunity of establishing it as a standard.

System-related: businesses with high fixed costs must find a large number of customers very quickly if they are to be profitable. FedEx is the classic example: air transport and sorting offices require similar investments, whether the company moves thousands or millions of letters.

Competition: low entry barriers make strong competition likely. A penetration strategy is the best way of securing a large market share more quickly than the competition. However, this raises the question as to whether a business of this sort is appropriate at all for a start-up company.

Place: distribution

Your product or service must actually reach the customer. Behind this simple statement lies an important marketing decision. In what way - via what "distribution channel" - will you distribute your product? Various questions will influence your choice of distribution channel. For example: How many potential customers exist? Are they companies or individuals? How do they want to acquire the product or service? Does your product need to be explained? Is it in an upper or a lower price bracket? You will have to make a basic decision as to whether your company will do the distribution itself, or have it done by a specialized organization instead. This sort of "make or buy" decision will have a significant effect on the organization and business system of your enterprise (see Chapter 5, Business system and organization). The choice of distribution channel is thus closely related to other marketing decisions, and affects other measures you will take.

Typical gross margins

Gross margins vary from business to business, and they depend on various factors. For example:

- The competitive situation in the market (strong competition produces low margins)
- The entrepreneur's business efficiency (improves the margins)
- The complexity of the product (increases margins), the quantity, throughput time and stock levels (the higher the number of units and the shorter the throughput time, the lower the margins).

Retail trade

Pharmaceuticals	35%
Textiles	40%
Sports goods	35%
New cars	15%
Groceries (Supermarket chains)	20%

Wholesalers

Packaging materials	25%
Textiles	25%

Manufacturers

Printing	55%
Publishing	60%

The distribution channel: gateway to the customer

Technological developments, particularly in information technology, have greatly expanded the spectrum of distribution channels over the past years. Here is a selection:

Third-party retail businesses: products are sold via retailers with good access to potential customers. It is important here to get a good shelf position, which is obviously also sought by the competition, and accordingly expensive. The product must also offer retailers an attractive profit if they are to include it in their range at all.

Outside agents: specialized companies act as agents for the distribution of the products of various manufacturers. Outside agents are relatively expensive, but only for the sales they actually make (if they make no sales they receive no commissions). This makes them an attractive channel for new companies, as the risk is limited. However, good agents are not always easy to find.

Franchising: a business idea is put into practice independently by a franchisee, on payment of a license fee (McDonald's is a well known example of this approach). The franchiser maintains control over the brand strategy and product decisions. Franchising enables rapid geographical growth and control of the distribution concept with limited investment.

Wholesalers: a small company may find it difficult to maintain contacts with a large number of retailers. Wholesalers with good retail trade contacts can fulfill this function. They can help improve market penetration and reduce distribution costs. But wholesalers also require a margin for their efforts.

Own outlets: own-outlet distribution will be the choice when the design of the "purchasing experience" is of particular importance for the product, and only a small number of outlets is required to cover the market. Own outlets require investment, but offer the best control over distribution.

Own sales agents: these are mainly used for complex products (e.g., investment goods), which require knowledgeable sales staff. Personal visits to customers are time-consuming and expensive, so the number of customers must be relatively small. Own agents are comparatively expensive as a distribution channel, and are only worth considering for high-value products.

Direct mail: selected customers advertising material directly by mail. Good databases are available in most countries, selling adresses sorted by specified criteria (e.g., women from 40-55 years old, unmarried, working, with an income over €28.000) The success of direct mail depends on making an immediate appeal to the customer, otherwise the direct mail will end up in the wastepaper basket.

Call center: customers are invited in the advertising material to order a product by phone. This is a way of getting simple products to customers without having shops throughout the whole sales area. You can also contract call center services from specialist operators, who receive the orders and forward them to you.

Internet: the Internet is a relatively new marketing channel. In principle, a global market is accessible at minimal cost. The Internet is still only used by a limited, though rapidly increasing, number of potential customers.

Promotion: communicating with the customer

Your potential customers must know about your product before it can attract their interest. You must advertise in order to get noticed, provide information, persuade and create confidence. You must explain to your customers the advantages, or the "customer benefit", of your product or service. You must convince them that it meets their needs better than competing products or services, and also better than any alternative solutions. There are various ways of getting your customers' attention:

- Classic advertising: newspapers, magazines, specialist publications, radio, TV, cinema
- Direct marketing: direct mail to selected customers, telephone marketing, Internet
- Public Relations: articles about your product, company, you personally, in the print media, written by you or a journalist
- Exhibitions, trade fairs
- Customer visits.

Communication is expensive, so make the best possible use of it. Work out exactly how much advertising you can afford per sale, and select your communication media accordingly. Focused communication yields better results.

When you address your customers, concentrate on the people who actually make the buying decision. In most families, the wife makes most purchasing decisions. In companies, purchasing departments make most decisions themselves, or they make recommendations which usually amount to preliminary decisions.

Sample advertising costs

The cost of a campaign depends on many factors. For example, is it a new product? Is it known, and should it arouse sympathy? Which segments should be addressed? What are the segments' communication preferences? A national campaign could use any of the listed media.

Media	No. of outlets	Type of ad.	Typical number per outlet	Cost, €
Daily national newspapers	8 titles	Full page b/w	6 ads	1,000,000
Daily regional newspapers	10 titles	Full page b/w	6 ads	450,000
Weekly newspapers	6 titles	Full page b/w	4 ads	48,000
Business press (managers)	8 titles	Full page b/w	4 ads	225,000
Mass-market magazines	10 titles	Full page color	4 ads	380,000
Dutch TV	3 (Ned, RTL4 Veronica)	30-sec. spot	28 ads	485,000
Cinema	175 cinemas	30-sec. spot	2 week-period	46,000
Local radio (local areas)	20 stations	20-sec. spot	40 ADS	650,000
Bill boards	1,600 sites	Abris	2 week-period	87,500

Marketing checklist

Does your business plan answer the following questions?

- ❑ Is the Unique Selling Proposition formulated precisely and from the customer's perspective?
- ❑ Who are your competitors? What substitutes are available for your product?
- ❑ Which customers make up your target segment? Why is this segment particularly interesting for your company?
- ❑ How large is the whole market? How large is the market you are interested in? How will it develop?
- ❑ How do you expect your market share and your sales volume to develop?
- ❑ What price are you asking?
- ❑ What distribution channel(s) will you use?
- ❑ How much will your advertising cost?

5. Business system and organization

With the marketing plan, you have defined the purpose of your enterprise from the customer's perspective. Now you must actually realize the customer benefit. You have to decide what separate activities are necessary, and how they can be combined into a "business system". All the steps involved in manufacturing the product or providing the service must be performed systematically and cost-efficiently as part of a coordinated process. Only then will there be economic benefit for both customers and the company. For a business system to be able to function, it must be clear what it contains and how the various elements interact. Organizational aspects include the allocation of tasks and responsibilities, personnel planning, management and corporate culture. Of practical importance is the question as to which activities the company will perform itself, and which products or services it will obtain from third parties ("make or buy").

In this chapter you will find out:

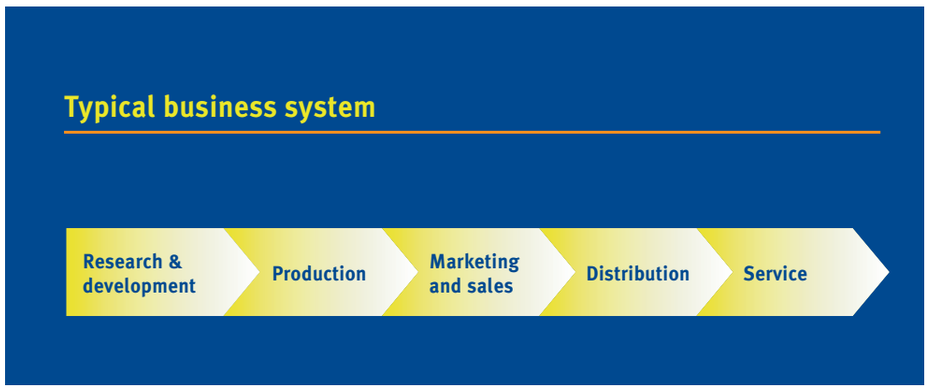
- ◆ What a business system is, and what to look out for when designing one
- ◆ What organizational questions you will need to answer
- ◆ What to take into consideration when thinking about producing yourself or leaving it to third parties, and about partnerships.

What tips me off that a business will be successful is that they have a narrow focus of what they want to do, and they plan a sufficient amount of effort and money to do it. Focus is essential.

Eugene Kleiner

THE BUSINESS SYSTEM

Any entrepreneurial task is made up of a combination of separate activities. When they are represented systematically in relation to one another, the result is a “business system”. The business system describes the activities that need to be performed to produce a product and deliver it to the customers. For clarity’s sake, these are grouped in functional blocks. A typical business system, common to almost all industries and enterprises, is shown below.



The business system is a good way of understanding the business activities of a company, thinking them through systematically, and representing them clearly.

From a typical business system to a specific one

Take the typical model as a starting point for designing your own business system. To be able to put it into practice, you must apply it to your own specific situation. For a manufacturing company, for example, it makes sense to subdivide the production stage into purchasing, raw material processing, component production and assembly. It may also be necessary to subdivide the distribution stage into logistics, wholesale and retail.

The appropriate business system will depend largely on the sector you are in and, of course, on your company itself. A computer manufacturer's business system will be very different from that of a fast food chain. But a department store's business system will also look quite different from that of a direct distribution enterprise, although they may sell the same products. There are no generally applicable rules or standards for business systems: yours should be logically structured, complete and helpful in your planning. But don't let it get too complicated!

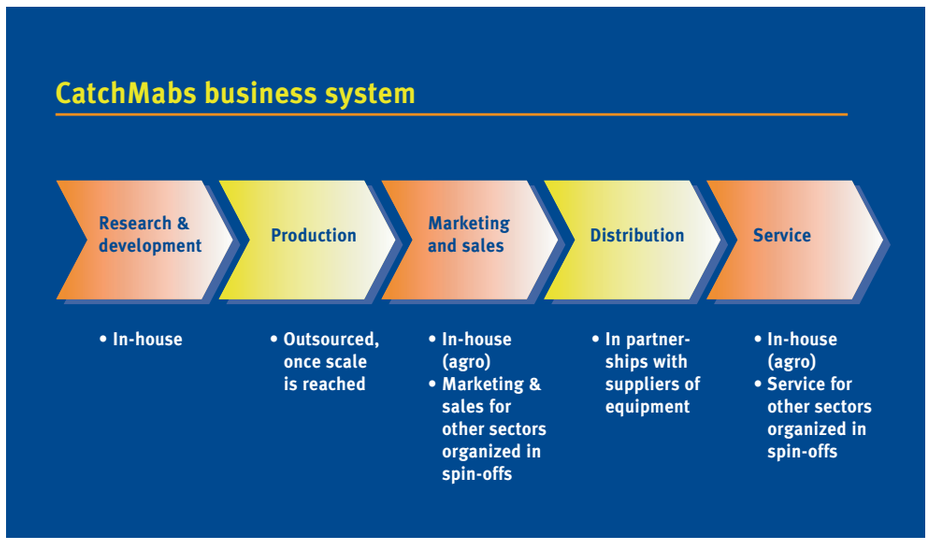
Focus, focus, focus

One of the key questions that need to be answered when designing a business system relates to which tasks and activities the business should concentrate on, and which tasks it should leave to others, be they suppliers, clients or business partners. A team of three to five people will not be able to perform all the tasks themselves - either because they lack the skills, or because they cannot do them with the necessary efficiency. So, get together with your management team and think hard about those activities that are really creating something new, and how you and your staff can make the best use of your time to create the greatest benefit for your customers, and thus get ahead of the competition. The key word is focus: once you understand the stages of the business system, choose to perform those activities yourself that you can do better than anyone else. The trend to specialization can be clearly seen in a wide range of industries.

When Henry Ford started making cars, it was his intention to carry out every stage of the business system himself. He even bought large forest tracts to provide the necessary wood for the Model T chassis. Today, Ford concentrates on only a few stages of the business system, namely development and marketing. Production for Ford is now no more than final assembly, with all other production stages being carried out by subcontractors. Sales, distribution and service are in the hands of independent dealers.

Specialization is particularly important for start-ups: they need to concentrate all their energy on a few stages in the business system. Even Microsoft, now a software giant, started by concentrating exclusively on the development of the DOS operating system; all the other functions of the business system, including production, distribution and marketing of DOS, were carried out by IBM.

The CatchMabs case illustrates the focus and the business system of a technology company. CatchMabs concentrates on research & development and completely contracts out production, once scale is reached. For the company's core sector, the agro-industry, marketing & sales, distribution and service are part of CatchMabs' business model, with distribution organized in partnerships with equipment suppliers. For other sectors, these activities will be organized in separate (daughter) companies or joint-ventures with a technology license.



Organizations exist to enable ordinary people to do extra ordinary things.

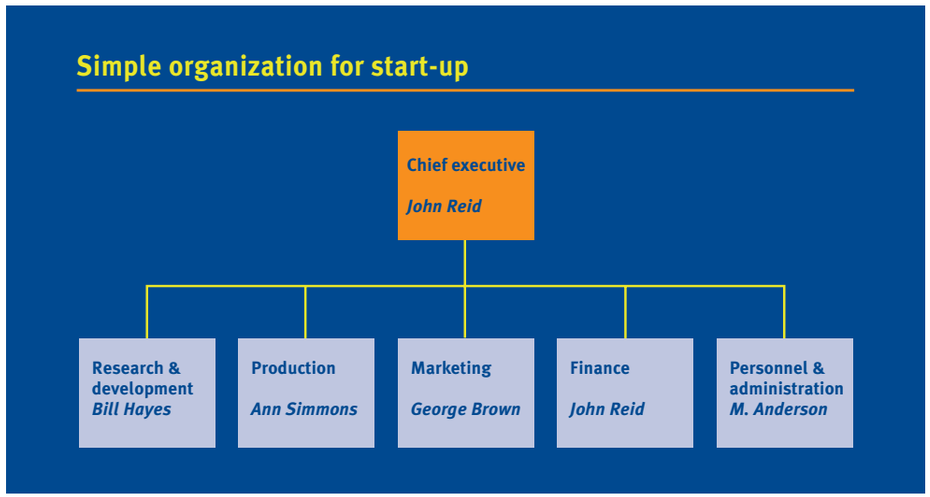
Ted Levitt
Editor, Harvard Business Review

ORGANIZATION

In addition to the business system, you will need to consider several organizational issues. For a start-up, it is not necessary to draw up a complicated blueprint of the whole organization. What really matters to begin with, is that the responsibilities are clearly allocated, and that you design a simple organization with only a few levels: chief executive, heads of department, departmental staff. Everything else will be dictated by the requirements of the business activities. Your organization must be flexible, and always able to adapt to new circumstances - you should expect to have to reorganize your company several times in the first few years.

An effective organization

When you were putting together your "dream team" (see Chapter 3, Management team), you already started thinking about the work your company would do and the way it would do it. This was the basis for the "competencies" your company would need. You can now use the business system to group them into appropriate areas. For each area, you should define who is responsible for what (allocation of tasks and responsibilities). Once you have set up cross-area functions, such as an executive committee, personnel management, finance and adminis-



Sample personnel costs

Personnel costs depend on a wide range of factors, for example, the sector, the age and capabilities of the employee. Here are some typical values:

Function	Annual salary, €
Chief executive	100,000
Commercial manager	60,000
Computer programmer	47,500
Administration manager	45,000
Electronic engineer	40,000
Systems manager	37,500
Personnel manager	37,500
Chemical analyst	32,500
Laboratory assistant	27,500
Accounting assistant	25,000
Metalworker	22,500
Graphic designer	20,000
Receptionist	17,500

Employers' contributions beyond wage and salary costs (supplementary wage costs) amount to 75-80% of the wage costs.

tration, you will have an organization that is ready to run. If you keep the organization simple, you will ensure that each member of the team takes on clearly defined tasks and carries them out independently. A certain amount of coordination is of course necessary, to allow for both integrated actions and to be able to fill in for a missing team member on short notice.

Personnel planning

With the rapid growth of the new company, systematic personnel planning becomes essential. Growth requires more people: new staff must be recruited, integrated into the organization and trained. A clearly structured working environment will help you produce clear job descriptions and search for the right new people. You should be aware that qualified specialist personnel is not easy to find in the Netherlands, even in times of high unemployment. You will often be forced to attract good people from your future competitors - given that notice periods extend to about two months, you will need to plan ahead accordingly.

Values

As well as giving thought to the formal aspects of the organization, you will also need to consider the "soft" factors. Like all communities, enterprises develop their own patterns of conduct, and these influence the behavior of the entire organization and of the individuals who make it up. The term generally applied to these standards and values is "corporate culture". The values derive mostly from the management team and its vision, and they may be explicitly formulated. What matters, though, is that they are "lived" - by everyone. Elegant "Guidelines" in a golden frame alone will do no more than relieve the conscience. If, however, you manage to develop a corporate culture that radiates both internally and externally, you will find this to be a competitive advantage. Values make a company attractive to outstanding staff in the long term. Corporate culture in a broader sense may also include issues concerning salary and incentive systems (e.g., share options or a performance-related bonus).

Examples of standards and values

- We are always there for our customers
- We preserve our integrity, even if this is to our financial disadvantage
- We rely on team performance, not individual performance
- We want to be the biggest and the best
- We reward outstanding performance
- We regard our staff as our most valuable resource
- We intend to be market leaders
- We strive for the highest quality in all that we do.

The right location

In some circumstances the right location can be a decisive factor in the success of a business. It will matter more or less depending on the activity involved. Some classic location factors are:

- The legal environment: liability legislation, taxes
- The political environment: ownership guarantees, extent of regulation
- The economic environment: economic climate, unemployment, land price, rents
- Proximity to purchasing or sales markets (depending on product)
- Access to specialist personnel and skills (now the key factor in most sectors).

In view of your anticipated growth, you must expect your business to move its location several times in the first 5 years. So avoid long-term rental contracts and look for flexibility when choosing accommodation.

Sample accommodation costs

The amount of space you will require depends directly on the activity involved. Costs for office and industrial space vary widely according to the location.

Average rental for office accommodation	€ per m2 per year
The Netherlands	88-125
The Randstad conurbation	100-175
Amsterdam	115-250

Space required	m2 per person
Open-plan offices	9-10 m2
Individual offices	15-20 m2
Managers' offices	25 m2

Average rental of industrial accommodation	€ per m2 per year
The Netherlands	23-58
National airport (Schiphol)	40-83

Source: DTZ Zadelhoff

"MAKE OR BUY" AND PARTNERSHIPS

When you have determined the core activities of your business, and laid out the necessary business system, you will have to decide who will best carry out the individual stages. Activities outside the chosen focus should be assigned to third parties. Also, supporting activities within the new company need not necessarily be performed by the company. These include, for example, accounting or personnel management. For each individual activity, the same basic question should be asked: "Do it ourselves or have someone else do it?" - or in business jargon: "Make or buy"?

Make or buy

"Make or buy" decisions should be made deliberately, after considering all the advantages and disadvantages. Partnerships with suppliers, for example, often cannot be dissolved from one day to the next, and many partners are hard to replace if they drop out. When making your "make or buy" decisions, you should rely mainly on the following criteria:

Strategic importance: your ability to render a specific service better than the competition was a major factor in your decision to start a company in the first place. This service is of "strategic" importance to your company, and should be kept under your own control. A technology company would never let go of research and development, and a manufacturer of consumer goods will never hand over marketing to a third party.

Best provider: any entrepreneurial activity requires specific skills that may not be available within the management team. Your management team must therefore consider whether, in specific instances, it makes sense for the company to carry out a particular task itself. Should the company want to acquire the necessary skills, or would it be more advantageous to assign the task to a specialized supplier? For example, a team developing some electronic equipment has mastered the electronics, but it lacks the necessary manufacturing capability - so it would do better "buying" this task. Their experience often enables specialist companies to perform a task better, and more cheaply, due to their higher production volume.

Availability: before you can make a decision to buy, you need to find out whether the product or service is available on the market in the desired form or with the necessary specification. Whenever possible, negotiate with several suppliers: you generally end up with better terms, and you will also find out more about whatever you are purchasing. You can also often help a supplier improve an offer. If you cannot find a supplier for what you need, you may be able to find a partner who is prepared to develop the necessary skills.

Partnerships

Any company has business relationships with other companies -- as a purchaser, as a supplier, or as an equal business partner. These relationships vary in their quality and intensity, from a loose, more or less coincidental relationship (a company buys its office supplies from the supermarket with the cheapest range) to a strategic alliance that results in intensive cooperation and mutual dependency (e.g., Microsoft and Intel in the 1980s). Exchanging ideas and people with a partner, and jointly developing products or components can prove to be very fruitful.

For a start-up company, the question of how to work together with other companies is particularly relevant. Every type of cooperation has advantages and disadvantages:

- Loose, casual partnerships represent no great obligation for either side. Both partners can end the partnership quickly and simply; both, however, also live in the knowledge that supply or demand can dry up quickly. Furthermore, a supplier will not take much notice of a customer 's particular requirements, as he will not be able to sell individually adapted products to his other customers. Loose relationships are thus typical for mass-market products, undemanding services and standard components, for which replacement suppliers and purchasers are easily found.

- Close partnerships are characterized by a degree of tight interdependence between the partners; they are typical for highly specialized products and services, or for large volumes. In such situations, it is usually difficult for both sides to change partners at short notice, to obtain large quantities of specialized components quickly from another supplier, or to find a market for such components. The advantage for both sides is the security of a firm relationship and the possibility of concentrating on one's own strength, while also profiting from the partner's particular strengths.

For a partnership to develop into a successful business relationship various elements need to be in place:

"Win-win situation": both sides must get fair shares of the advantages of the situation; without an incentive for both sides, the partnership is not viable in the long term.

Balance between risks and investments: partnerships involve risks, and often not enough attention is paid to these risks, particularly when business is good. A supplier with an exclusive contract can find himself in a difficult situation, for example, if his customer suddenly cuts back production and purchases fewer components. This is even more the case if the supplier has purchased special production tools which cannot easily be used for other customers' orders. Conversely, a customer can find himself in serious difficulties if a supplier cannot deliver (on account of bankruptcy, fire, strike, etc.). Risks and their possible financial consequences need to be taken into account in advance and, if necessary, considered in the contract.

Dissolution: just as in human relationships, tensions can arise in business relationships. Make sure that in any partnership, the conditions under which the partnership may be dissolved or one partner may withdraw are clearly defined from the start.

While working on the business plan, start thinking about who you will cooperate with later, and what form this cooperation will take. Partnerships offer your new company the chance to profit from the strengths of established companies, and to concentrate on building up your own strengths. In this way, you can usually grow faster than you could on your own.

Checklist for business system and organization

Does your business plan answer the following questions?

- ❑ What does your company's business system look like?
- ❑ What activities within the business system will the company perform and which will it buy in ("make or buy")?
- ❑ What are you focusing on?
- ❑ What entrepreneurial functions make up your organization, and how are they structured?
- ❑ What values and standards characterize your organization (corporate culture)?
- ❑ What partners will you work with? What are the advantages of this cooperation, for you and for your partners?

Business is like chess: To be successful, you must anticipate several moves in advance.

Professor William A. Sahlmann

6. Realization schedule

Realistic planning is not easy. This is particularly true when you have little experience in building up a business, and even more so when no-one has had any experience with your particular business idea - which is a normal start-up situation. Don't let the thought that your plan will be rapidly overtaken by reality stop you from planning as realistically as possible, for failure to plan is very likely to have fatal consequences for your business.

The realization plan has a significant influence on the financing and the risks of your business. So you will be helping both yourself and your partners if you think the interactions through in advance, and analyze the effects of the various influences.

Planning is a tool - use it! In this chapter you will find out:

- How you can plan better
- What the consequences of faulty planning can be
- How to present your planning in the business plan.

The seeds of every company's demise are contained in its business plan.

Fred Adler
Entrepreneur

PLANNING EFFECTIVELY

Effective planning has an organizational and procedural aspect. Four simple rules will guide you here:

1. Break tasks down into "work packages"

Building up an enterprise involves a great deal of detailed work, which makes it even more important that you keep an eye on the whole. You can make things simpler by grouping individual tasks into work packages. The business plan should not, however, contain more than a dozen of these packages - the people concerned can subdivide their own packages further if they wish. Break each package down into simple steps, each of which should end with a "milestone" - a specific target.

2. Get advice from experts

Make use of expert knowledge when working on the important planning stages. By definition, there will be no expert for the entire business, but there will be for the individual stages. For example, a marketing specialist can tell you how long it takes to design and carry out a marketing campaign. If the time suggested by an expert does not agree with your own ideas, question the assumptions: what needs to be changed to move forward more quickly? But remain realistic about this.

3. Follow the critical path

All overall planning consists of a series of events (some sequential, others parallel) which are more or less closely interconnected. The series of activities in which a delay of any one activity means a delay for the entire project is called the "critical path". Obviously, you should pay particular attention to activities on the critical path: if you are looking to save time, you will have to find some way of streamlining the activities on the critical path.

4. Reduce risks

Whenever possible, try to reduce risks at the earliest possible stage. For example, you could carry out market research early on and not wait until you are almost ready to enter the market. If early market research reveals that your business idea has real potential, you can use this information in planning the build-up of your business.

Why realistic planning is important

1. You gain credibility with investors and partners
2. You increase your enterprise's chances of success by thinking through the various activities and their interrelationships
3. You will endanger your company if you adopt the wrong - and in particular, too optimistic - targets. You risk losing your stake in the company.

POSSIBLE CONSEQUENCES OF FAULTY PLANNING

When planning, you always have to start with assumptions. There is always the danger that they will be too optimistic or too pessimistic. Both errors can have serious consequences for the future of your enterprise.

Consequence of optimistic planning

Over-optimistic planning puts you in double jeopardy. On the one hand, you will rapidly lose credibility with your partners. On the other, over-optimistic planning can easily result in the failure of a new enterprise a little further down the line. Here's what could happen:

- Resources - material and human - are built up rapidly, according to plan, and costs rise accordingly. The jargon term for this is a high "burn rate" - the money is used up very quickly.
- Some delay occurs, perhaps in product development, market entry, or in reaching sales targets. Income is delayed, while at the same time the costs of under-utilized resources are rising. The enterprise is not just posting book losses, it is losing cash.
- Inevitably, the money runs out before the planned success is achieved. New funds are needed, in an emergency situation to save the company.
- If no investors can be found, the enterprise fails. If there are investors who still believe in its success (which is doubly unlikely after the loss of credibility due to faulty planning), they will provide further funds. However, for the entrepreneurs this often means a painful reduction in their share of the company, and perhaps even the total loss of their equity.

Consequences of pessimistic planning

At first glance, pessimistic or conservative planning seems the lesser evil. You and your partners will be pleasantly surprised by your progress, and everything will go better, and happen more quickly than expected. However, pessimistic planning can have just as serious consequences, as shown in the following two scenarios:

- The business takes off, but the necessary resources are lacking. One option is to try and meet the demand with the available resources, but this is bound to produce quality problems that will put the long-term success of the enterprise at risk. An alternative is to grow according to plan, in the knowledge that potential sales are being lost, and with the risk that a competitor will enter the business. In any event, significant value-added is lost, for both entrepreneur and enterprise.
- The business grows more quickly than expected. However, growth requires liquid assets (cash) and usually investments in production. The company quickly runs out of money, although it is posting book profits. The entrepreneur therefore needs to find additional funds earlier than planned, under time pressure and on unattractive terms. This road leads to insolvency: you can literally "grow yourself bankrupt".

Be honest with yourself in your planning, and try to be as realistic as possible. Take account of uncertainties by presenting risks openly and making your best estimate of their possible effects.

PRESENTING YOUR PLANNING

Concentrate the presentation of your realization plan on the significant milestones and the important interdependencies. Three elements will normally suffice:

- A chart showing your schedule
- The important milestones
- The important interdependencies between the work packages.

The CatchMabs business plan shows how these forms of presentation can be used in practice.

Checklist for realization schedule

Does your business plan answer the following questions?

- ❑ As your company grows, what tasks will it need to perform, and how can they best be grouped into work packages?
- ❑ What are the most important milestones in the development of your enterprise, and by when must you reach them?
- ❑ Which tasks and milestones are directly interconnected? What is the critical path?

7. Risks

Every enterprise involves risk - and this is particularly true of new, high-growth enterprises. When you start up a company, you might want to share this risk with investors. A thorough and open consideration of the risk involved will both win the confidence of your investors, and increase your own. By including the risks in your business plan, you show potential investors that you have thought your business idea through. If you don't do this, potential investors must assume that your presentation of the business idea or the development of the business is over-optimistic. So be careful: on the basis of their own experience, they may judge your business plan more harshly than it deserves - or even reject it entirely. However open you are about the risks, though, they should not take up more space in your business plan than the opportunities. If your business idea contains more risks than opportunities, there must be something wrong with it!

In this chapter you will find out:

- How to identify risks
- How to use sensitivity analysis to assess and represent risks.

One of the greatest myths about entrepreneurs is that they are risk seekers. All sane people want to avoid risk.

William A. Sahlmann

IDENTIFYING THE RISKS

Every enterprise is exposed to risks. There are risks in the company itself, and risks can arise in the environment that the company operates in. Risks are not static: they must be continually reassessed, and recognized in good time. Entrepreneurs must stay on their toes.

In your business plan, you should also include the countermeasures you propose to take. For example, you can hedge against exchange rate variations, or conclude long-term contracts with important suppliers, or have alternative distribution concepts ready in case of need.

Examples of risk

In the company

- Key positions cannot be filled
- A key member of staff, such as the head of development, leaves
- The loss of the prototype delays development and the launch of the product.

In the environment

- You can only sell half as much as you expected
- A key supplier's factory burns down
- Shortly after the launch, a competitor brings out a cheaper alternative product
- You cannot patent the technology
- Your distribution partner ends your partnership agreement.

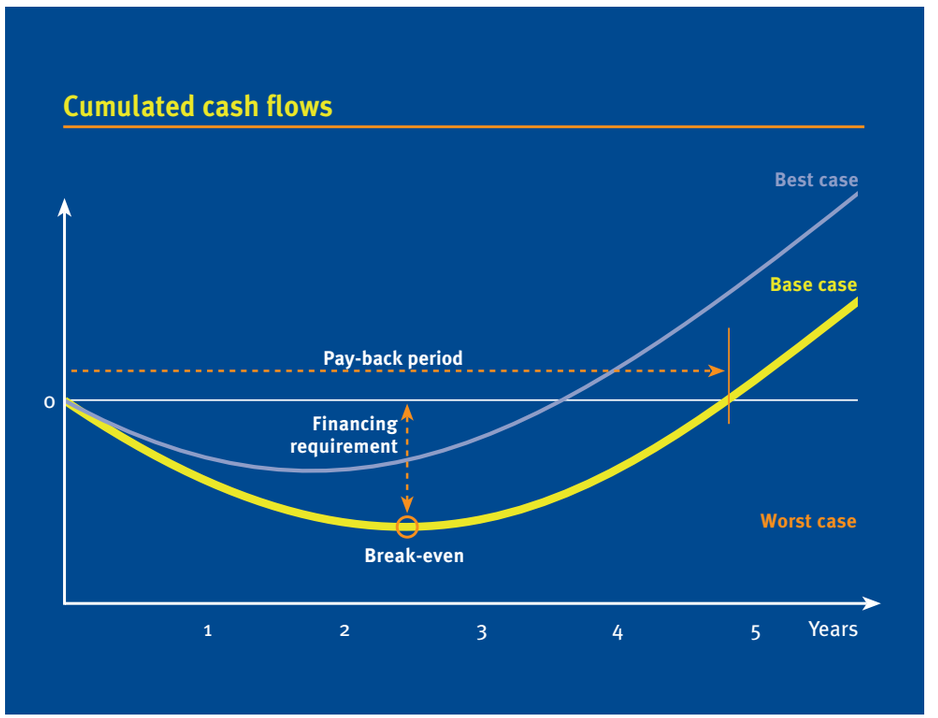
Venture capitalists can take a lot of bad news, but they hate surprises.

Jack Hayes
Entrepreneur

SENSITIVITY ANALYSIS

Assessing risk is a matter of forecasting. Risks are never absolute, and can only be estimated on the basis of assumptions. These are generally displayed in the form of scenarios that enable the future development of the business to be simulated under various conditions. Your business plan should not contain more than three scenarios. The usual ones are:

- The “base case scenario”: what is, as far as you can tell, most likely to happen
- The “best case scenario”: what will happen if you can seize the opportunities you see, and your positive expectations are generally fulfilled
- The “worst case scenario”: what will happen if the risks do indeed occur, and your negative expectations are generally fulfilled.



These scenarios will give you insight into the possible development of the business and the funds that will be required. This insight will provide the management team and potential investors with a broader picture of the company's future. The "worst case scenario" also offers some more specific information on the stability of the business and the overall risks involved.

Give a short description of the scenarios in the business plan. What events, sales figures, prices, constants are they based on? You should provide a detailed description of the base case scenario; for the other two, a summary of the analysis in the form of the three most important key figures will be sufficient (the specialist terms are explained in Chapter 8, Financing):

- Financing requirement: How much capital is needed to finance the business?
- Time to break-even: When will there be a positive cash flow?
- Internal Rate of return (IRR): How much effective return will there be on the investment?

Risk checklist

Does your business plan answer the following questions?

- ❑ What risks can you see that might threaten the success of your enterprise?
- ❑ How will you deal with these risks, and how will you minimize their impact?
- ❑ What is the quantitative effect of the individual risks (scenarios)?
- ❑ How would the business survive the worst case?

8. Financing

The first question in financing is how much money it will take to launch and run the business successfully. To estimate the amount required, you can use a financial plan based on the assumptions you have used for the development of the business. The second question is how much cash you need to have available at any given moment for the company to be able to meet its current liabilities. This is a key financial planning task. The third question is how, and from where, you can obtain the funds you need. In the vast majority of cases the management team itself can only provide a fraction of the funds required. Finding investors thus becomes of existential importance for the company - "To be or not to be?" becomes a question of money.

In this chapter you will find out:

- Why liquid funds are crucial for every aspect of the business ("cash is king")
- What to include in your financial planning in the business plan
- How a company can be financed
- What to watch out for in the financing deal
- What you need to know about balance sheets, profit & loss statements, and cash flow calculations.

What kind of numbers do we like to see? The more mature a business is, the more we rely on numbers. For a newer business, the numbers matter less and the words matter more.

Robert Mahoney
Investment banker

CASH IS KING

Imagine that it is a cold winter's day and you have just ordered a hot dog from a stand on the street. There it is, steaming appetizingly, just the way you like it, with mustard and ketchup. You open your purse and are horrified to discover that it contains just 65 cents and 20 pence left over from your last holiday. Your credit cards are of little use here. Although financially sound, you are unable to pay for the product: you are insolvent.

The same thing can happen to your business if you do not plan properly. Your product may be fully developed, and your customers ready and waiting. Your business may be worth a good deal, in terms of future revenue; your books may show a profit, and your equity (the company's actual worth) may be increasing by the day. Nevertheless, the end of the month comes, there are wages, rent and bills to be paid, and there is exactly € 1,000 in the bank. True, you have sent out invoices for over € 50,000, but your generous payment terms mean that you cannot count on having enough money in the bank at the end of the month. In fact, you will not be able to meet your liabilities - you are successful beyond your wildest expectations, but nevertheless insolvent.

The common factor in both cases is that bills have to be paid in cash, and that a basically sound revenue situation is not of much help if you are insolvent. The hot dog case could have been solved easily enough with a trip to the nearest ATM. Your company, on the other hand, will need to find new sources of financing, and that will not be so easy to do at short notice. Careful liquidity planning would have enabled you to see the shortfall coming months in advance, thus giving you plenty of time to arrange a loan.

It is easy to forecast numbers with today's software. Show me the business model and your assumptions.

Brian Wood

When you start your company, you will be incurring costs before you generate income. Money will be going out faster than it is coming in - you will have negative cash flow. The cash flow will remain negative until the point at which the incoming payments equal the money going out - the cash break-even point. The total negative cash flow till break-even must be financed in advance. So, if you expect that your company will have a cumulative negative cash flow of € 3.7 million, you need to ensure that financing of at least € 3.7 million (plus a bit extra to avoid liquidity problems) is available before you start up. Or, at the very least, you must know when and how you can get access to the money you will need.

FINANCIAL PLANNING IN THE BUSINESS PLAN

An enterprise should have access to the key figures regarding the business situation at any time. These numbers include profit or loss, the development of the cash flow, and the size of future capital requirements. You will find the basic financial information that you require in the section on “Basic accounting principles”. If you have no prior business education or experience, we recommend that you read that section before you proceed.

The business plan should contain information on the company’s future financial development, backed up with a rough financial plan. Detailed financial calculations are not necessary, as forecasts are by their nature approximate, and even more so for a new company. Professional investors are impressed by a small number of well thought through key numbers. Your business plan must answer the following questions:

- How much money does the company need over what period?
- When established, how much profit is the company likely to make?
- Which are the main assumptions underlying the forecasts?

This information will give investors an idea of how reasonable and plausible your numbers are. This will determine whether they will regard the project as attractive, and worth taking the risk of investing in it.

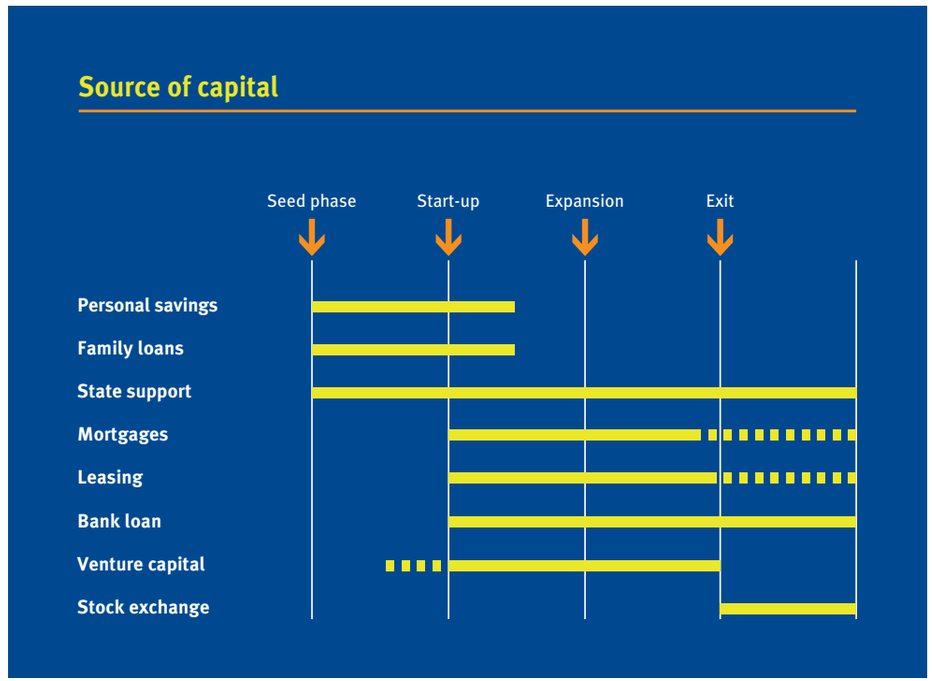
The minimum requirements for the financial planning in the business plan are:

- Cash flow calculation, profit & loss statement, balance sheet
- Forecasts for the next three to five years, and at least one year beyond break-even
- The first two years, shown quarterly or monthly, the rest annually
- All numbers based on thought through assumptions (only the most important need be mentioned in the business plan).

SOURCES OF FINANCE FOR NEW BUSINESSES

Once you know how much capital you need for your business, the next question is where it is to come from. The capital is usually not needed all at once, but spread out over the various stages in the company’s development. The diagram below shows what sort of capital is generally available at the different stages.

A company generally has access to a wide range of sources of capital. There is a basic distinction between equity (the owner’s own funds) and loan capital. Providers of loan capital frequently require security for it in one form or another, such as a mortgage. Often, they also require particular accounting measures, so called covenants; otherwise the loan can be called.



The main sources of capital

Loan capital

- Family loans (loans from friends and relations, usually on very favorable terms)
- State support, e.g., research, job-creation or sector stimulation programs
- Mortgages
- Leasing
- Bank loans (a.o., “Tante Agaath” loan for new companies).

Equity

- Own savings
- Venture capital; professional companies or private investors
- Funds from established companies for research cooperations
- Stock exchange, via Initial Public Offering (IPO).

Family loans

- Suitable for: providing “seed money”
- Requirements: friends or relations prepared to risk own funds
- Advantages: simple, informal process, sometimes extremely favorable terms, direct personal relationship with the lender, tax-deductible interest payments
- Disadvantages: size of loan usually restricted, friends and relations exposed to risk, possibility of excessive interference by lender on account of personal relationship.

State support

- Suitable for: all start-up and development phases of the business
- Requirements: good knowledge of the possibilities, compliance with the conditions
- Advantages: generally very favorable terms (interest-free loans, long repayment periods or even grants)
- Disadvantages: process sometimes bureaucratic, long waiting periods, reporting requirements.

Mortgages

- Suitable for: financing business property and long-term investments in operating assets (machinery, etc.)
- Requirements: mortgageable property
- Advantages: easily determined and relatively favorable long-term conditions, no dilution of ownership of company, tax-deductible interest payments, low repayment rates over long periods
- Disadvantages: complete financing of mortgaged object rarely possible.

Leasing

- Suitable for: financing machinery, equipment, vehicles, etc.
- Requirements: leased object must be easily resellable - no specialized machinery
- Advantages: complete financing of object, no dilution of ownership of company, tax-deductible interest payments, some flexibility in return or exchange of object if requirements change (e.g., more powerful machine required)
- Disadvantages: limited to working life of object leased, higher interest rates than other means of financing, sometimes redemption payments at the end of the lease.

Bank loans

- Suitable for: short-term operating capital, from start-up to exit
- Requirements: secured against receivables (payments due from customers), inventory or equity
- Advantages: highly flexible, can be adjusted to current/seasonal needs, no dilution of ownership of company, tax-deductible interest payments. (The Dutch government has created the so-called "Tante Agaath" bank loan especially for starting companies, offering capital on favorable terms.)
- Disadvantages: security required, room to maneuver limited by minimum requirements for solvency of business ("Tante Agaath" loan is less strict).

Venture capital (professional)

- Suitable for: all stages from start-up to exit
- Requirements: sound business plan, business with high growth targets, investors must be able to exit completely via an IPO or a trade sale (sale of the company to a competitor, customer or supplier)
- Advantages: advice and active support of management team, assists in exit, no running costs (interest, loan repayments)
- Disadvantages: challenging and very time-consuming to obtain, larger dilution of ownership, risk of loss of control over business if targets are not met.

Private investor (business angel)

- Suitable for: seed phase and start-up phase in particular
- Requirements: depending on the investor, similar either to family loans or to venture capitalists
- Advantages: generally better conditions than venture capitalists
- Disadvantages: often have less time and energy for assisting management team in times of trouble.

THE DEAL

Money is never available for nothing. Your family may ask little in return, professional investors will ask more. All that the management team has to offer against the investors' cash are promises - not really a strong negotiating position. Nevertheless, you have every chance of doing very well financially if your business is successful, because professional investors are interested in seeing that the team achieves top performance. Just be clear about your own requirements and expectations, and those of your investors.

The management team's requirements

If you are looking for long-term commitment, and are satisfied with a small company, then you are probably well advised to make use of family funds, and loans from friends and banks. You will thus retain the majority shareholding, but you are restricting your opportunities for growth.

If, on the other hand, you want your business to grow quickly, you may need to work with venture capital. Venture capitalists usually expect to take a large share of the companies they invest in, although they may not want a majority shareholding. Professional investors are not, however, interested in running the company as long as it meets its targets, even if they have the majority of the shares. They have, after all, invested in the management team to lead the company to success. They will provide active support in managing the company and contribute their special expertise (e.g., operational, legal or marketing), relationships and contacts.

Think about these points:

- Should you insist on keeping the majority shareholding?
- Would having effective control over the company be sufficient?
- How much risk are you ready to bear? Would you be ready to share with more parties to reduce the level of risk?
- What are your financial expectations?

Investors feel a lot better about the risk if the venture's endgame is discussed upfront.

William A. Sahlmann

The investors' requirements

All professional investors require a profit appropriate to the risk. There are, however, still considerable differences between investors, principally on the following points:

- Type and scope of risk deemed acceptable
- Size of investment
- Legal aspects, particularly tax breaks
- Period of time after which the return is required
- Extent of control required over the investment or the business, and mechanisms for exercising this control.

Many investors are prepared to wait a long time for their return, provided that when it comes, it will be high enough. Others are subject to time limits due to legal requirements, or the demands of their own lenders. This is the case, for example, with some investment funds that put some of their money into venture capital projects. If you intend to make use of several sources of capital, it makes sense to organize the future cash flows in order to meet the requirements of your investors as well as possible. For example, in a project involving property, it may be possible to use the substantial depreciation involved to win some tax breaks.

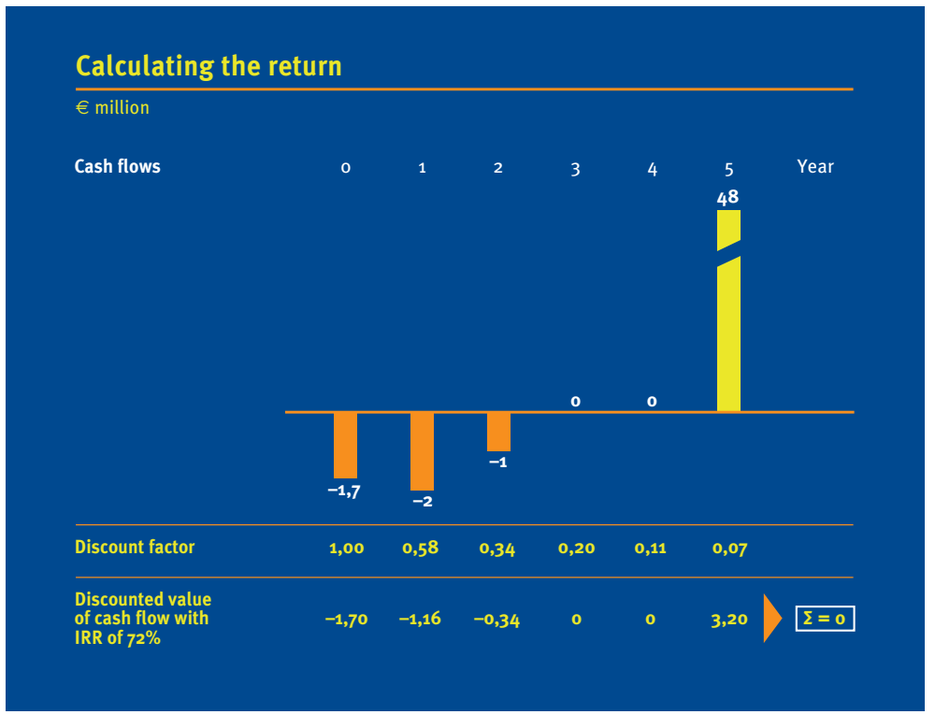
A deal can be very complicated. It is always advisable to get in touch with experienced entrepreneurs, and to get expert advice from accountants, tax consultants and lawyers.

Do not be put off by complicated arrangements - there are usually legitimate reasons for them, such as tax breaks, or control over the funds invested. But make absolutely certain that you understand all the details of the deal.

Calculating the investors' return

Investors assess the success of an investment in terms of the return they get on the capital invested. The expected return should therefore be visible at first glance in the business plan.

In the following example, investors put a total of € 4.7 million into the enterprise over the first 3 years: 1.7 million in the first, 2 million in the second and 1 million in the third. When the company goes public after 5 years, it should realize a total of € 48 million. What is the return in this case?



From the investors' perspective, all funds put into a new company at first represent negative cash flow. After break-even, the company will not immediately pay out its positive cash flow in the form of dividends, but use it to strengthen the balance sheet. Cash will flow back to investors only upon the exit. As cash flows occur over several years, they need to be discounted; that is to say calculated back to the present (compound interest effect). The discount factors for the individual years can be worked out using the following formula:

$$\text{Discount factor} = \frac{1}{(1 + r)^T}$$

where r = the discount rate in %, and T = the year in which the cash flow takes place. The basis for calculating the return is the Internal Rate of Return (IRR). The IRR is the discount rate at which the sum of all positive and negative cash flows, discounted to the present, is zero. The IRR for the above example is 72% - that is, the investors get an annual return of 72% on their capital. This represents a high, but reasonable, return in view of the risks involved and the capital required to start the business.

Most pocket calculators and spreadsheet calculation programs have a special IRR function (e.g., in Excel the IRR() function). You can also do the calculation iteratively by hand.

Pricing a company - i.e., working out how much the market is prepared to pay for it when it goes public - is an art in itself. Prices are subject to investors' expectations of profitability and risks as well as market conditions, such as interest rates. A simple approach could be to analyze the price investors are willing to pay per unit of profit in a company with similar activities. This multiple of price to earnings can then be used to calculate the value. For most steady businesses, this multiple is at least 6. For the above example, six times the net profit in year 5 (€ 8 million) gives a value of € 48 million.

BASIC ACCOUNTING PRINCIPLES

Financial accounts have three parts: the profit & loss statement, the balance sheet and the cash flow calculation. The profit & loss statement shows the financial results over a period - usually one year. The balance sheet represents the financial situation of the company at a given date - frequently the end of the year. The most important calculation when planning and starting up an enterprise, however, is the cash flow calculation. It shows both entrepreneur and investors, what liquid funds were consumed or generated by a company over a given period.

The profit & loss statement

The profit & loss statement lists all the company's revenues and costs. It has a dual function: for one thing, it shows the result. A profit or a loss of the company's business activities over a period of time. It also shows what components make up the company's result, and how they relate to one another. You can see, for example, what percentage of the total costs is accounted for by wage costs, or what proportion of total turnover is represented by material costs.

Comments on the items in the profit & loss statement

Revenue: income from products and services. This includes all income derived from the sale of products or services.

Cost of materials: all costs incurred through the use of materials are shown here. These include the raw materials used and the finished components purchased, as well as all the consumable materials used in production, such as adhesives, lubricants and maintenance materials.

Personnel expenses: these include all the costs involved in employing people: the wages themselves, employer's state pension and disability insurance contributions, pension fund contributions, and also payments such as contributions to the staff canteen or to the running of a company's day care center.

Example of a simple profit & loss statement

The Sample Co. N.V.

Revenue		31.12.1996
- Income from products and services		**1,350**
Costs		
- Cost of materials	480	
- Personnel expenses	390	
- Rent and leases	20	
- Depreciation	50	
- Maintenance costs	2	
- Other costs	3	
= Operating result		**405**
- Interest expenses	70	
- Taxes	115	
= Net income		**220**

Rent and leases: rental costs for buildings, equipment, vehicles, machinery, etc.

Depreciation: depreciation is not a cost in the sense that you spend money on it, but in the sense that it reflects the decrease in the value of the company's assets, which is booked as a cost. Depreciation has no effect on the cash situation, but it does compensate for the impact of investments on the profit or loss. For example, if a company buys a used vehicle for € 5,000, this investment represents a cash outflow.

The vehicle is used for five years and then has residual value of zero. So € 1,000 can be depreciated every year, and shown as a cost on the profit and loss statement.

Maintenance costs: the costs of maintenance and repair work required for the normal usage of buildings and equipment.

Other costs: income and expenditure that has no relation to the actual business activities of the company are booked here. This might include, for example, contributions to local associations.

Interest expenses: all interest due on loans, bank overdrafts, etc.

Taxes: Companies are taxed on their profit after interest payments. The total tax burden in the Netherlands is about 40%.

Net income/net loss: the profit or loss is the difference between revenue and costs over the accounting period. Profit or loss will be one of the most important yardsticks for measuring the success of an enterprise.

The size of the individual items in the profit & loss statement depends on what the business does. The table below shows the typical structure of the profit & loss statements in seven sectors. The examples used are established companies. New companies would need significantly higher net income (30% - 50%) to have any chance of success.

Structure of the profit & loss statement in various sectors (%)

	Textile industry	Machinery	Supermarket chains	IT sevices	Electronics	Advertising agencies	Publishing
Revenue	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Costs							
Cost of materials	50	46	78	26	60	52	8
Personnel expenses	21	26	10	40	17	16	26
Third parties	5	5	0	0	4	0	29
Depreciation	4	3	2	4	3	5	3
Interest expenses	2	1	1	0	1	1	1
Other costs	14	13	7	20	11	14	17
Net income	**4**	**6**	**2**	**10**	**4**	**12**	**16**

Source: Rabobank Cijfers & Trends

The balance sheet

The balance sheet presents the assets and liabilities of a company on a given day. It shows where a company's capital comes from and how it is invested.

Comments on the items in the balance sheet

Current assets: these include assets that are available at short notice, such as liquid assets (petty cash, bank and post office accounts, receivables [outstanding customer invoices]), stocks of finished goods, raw materials and components.

Fixed assets: fixed assets can generally not be disposed of at short notice. They include moveable equipment such as machinery, vehicles and computers as well as land and buildings.

Current debt: liabilities that must be met within one year are defined as short-term. Creditors are unpaid invoices from suppliers. Operating credits are short-term debt incurred in carrying out daily business, such as a current account overdraft.

Long-term debt: mortgages and bank loans are two examples of loan capital. There is a wide range of possibilities, and various financing possibilities are available, depending on the size of the business.

Equity: equity is the capital provided by the owner(s) of the business, plus the reserves and any retained earnings or accumulated losses. In the initial development phase, equity can be used to develop the business. Not infrequently, the equity is almost entirely consumed in the form of accumulated losses before the company's financial situation is such that it can be built up again in the form of retained earnings.

A basic principle of financing is that long-term assets should be financed with long-term capital, and short-term assets with short-term capital. This way you can ensure, for example, that there is no need to raise capital at short notice to refinance a long-term investment such as a piece of production machinery.

Example of a simple balance sheet — ***The Sample Co. N.V.***

Assets

	31.12.95	31.12.96
Current assets		
Liquid assets	20	270
Receivables	30	35
Reserves and inventory	50	55
Fixed assets		
Equipment	200	200
Property	150	170
Balance sheet total	**450**	**730**

Liabilities (capital)

Current debt		
Creditors	25	35
Operating credits	25	25
Long-term debt		
Loans	200	200
Mortgages	100	120
Equity		
Share capital	90	90
Reserves	5	5
Retained earnings/accumulated losses	5	255
Balance sheet total	**450**	**730**

Part 3

Balance sheet structure in various sectors (%)

	Foodstuff	Metal	Chemical products	Retail	Wholesale	Transport & Communication	Services
Assets							
Current assets	37.8	42.8	31.2	47.8	54.3	24.8	40.4
Liquid assets	5.8	7.8	3.1	10.9	8.3	6.7	11.6
Receivables	20.7	22.8	21.7	16.9	32.3	16.5	26.4
Reserves and other current assets	11.3	12.2	6.4	20.0	13.7	1.6	2.4
Fixed assets	62.2	57.2	68.8	52.2	45.7	75.2	59.6
Financial	35.8	35.3	35.4	20.0	33.3	9.5	29.0
Property, plant & equipment	26.4	21.9	33.4	32.2	12.4	65.7	30.6
Liabilities							
Debt	52.5	54.5	54.5	62.7	67.0	65.1	68.6
Current debt	27.6	31.1	27.0	33.2	42.1	21.5	39.0
Long-term debt	24.9	23.4	27.5	29.5	24.9	43.6	29.6
Equity	47.5	45.5	45.5	37.3	33.0	34.9	31.4

Source: Centraal Bureau voor de Statistiek

The asset structure depends on what business company is in. A factory, for example, will have to invest a good deal more money in plant and equipment than a management consultancy.

The same is true of capital structure. A high proportion of equity is more customary in some sectors than in others. It is generally the case, though, that companies with a good proportion of equity find it easier to raise additional capital. The table shows the proportion of equity in seven different sectors. Note, however, that the figures all apply to established companies. Start-ups will find it virtually impossible to obtain unsecured bank loans, and will generally have a very high proportion of equity.

Cash flow from operating activities

The cash flow is the real measure of how much revenue a business is generating. It can be calculated directly, using the cash payments into and out of the company, or it can be derived from the balance sheet and the profit & loss statement.

The cash flow shows whether the operating activities are generating or consuming cash. There will be periods when the cash flow is negative, particularly when the enterprise is being built up. The total of these outflows of cash represents the financing requirement of the business.

Direct calculation of cash flow:

The table shows how to calculate the cash flow directly, using the movements of cash into and out of the business. The individual items in the calculation are explained in the section on the profit & loss statement. Note also:

Income from sales: what matters here is money actually received. Outstanding invoices do not count, even less confirmed orders; all that counts is invoices paid by customers.

Costs: here too, it is the actual money going out that counts. The time gap between production (cash costs) and the receipt of payment (cash income) produces the need for working capital, which must be financed. When a customer orders a machine, the company must first spend money on manufacturing it: on raw materials, for example, finished components, production time and transport costs. This cash outflow is only compensated by the arrival of payments: the intervening period must be covered by financing.

With a growing business, the net liquid assets will be rising continuously. Stocks will increase, more products will be delivered to customers before payment arrives, and so on. So, it is possible for a growing company to have a negative cash flow, which will require financing.

Direct calculation of cash flow

Month	*1*	*2*	*3*	*4*	*5*	*6*	*7*
Income from sales							
Orders received/confirmed		100	150	80	210	130	120
Invoicing (= revenue = turnover)		→	→	100	150	80	210
Payment (= income)				→	→	→	100
Costs (= expenses)							
Materials purchasing	10	30	50	40	140	60	70
Personnel incl. social security	50	50	50	50	50	50	50
Publicity	20	20	50	40	30	20	20
Rents	10	10	10	10	10	10	10
Other	10	10	10	10	10	10	10
Tax	0	0	0	0	0	0	0
Interest	2	2	2	2	2	2	2
Total costs	**102**	**122**	**172**	**152**	**242**	**152**	**162**
Cash flow	-102	-122	-172	-152	-242	-152	-62
Investments (= expenses)							
Plant and equipment	500	500	300	140			
Liquidity							
Cash outflow (-), inflow (+)	-602	-622	-472	-292	-242	-152	-62
Cumulated liquidity	-602	-1,224	-1,696	-1,988	-2,230	-2,382	-2,444

As well as the operational cash flow, money is needed for investment in future activities. These investments have an immediate effect on the cash situation (unless they are made via leasing or credits from suppliers). The income they will generate only becomes available at a later date, however, so they too need to be financed.

When a business is generating sufficient operational cash flow to finance its investments, it has become "self-financing". Established companies are generally self-financing; start-up companies, on the other hand, must generally finance their growth with external funds (loan capital or equity).

Calculating the cash flow from the profit & loss statement and the balance sheet

The table shows how to calculate the cash flow indirectly, using the profit & loss statement and the balance sheet.

To calculate the cash flow indirectly, you start with the operating result in the profit & loss statement. The first step is to add all expenses that have no effect on the cash situation, e.g., depreciation. The second step is to take account of all changes in the balance sheet that do effect the cash situation. If, for example, inventory levels have risen, this additional value must be paid for in cash. An increase in the number of creditors, on the other hand, produces an added flow of cash, as goods and services have been obtained, but their suppliers have not yet been paid.

Indirect calculation of cash flow		***The Sample Co. N.V.***
Operating result (profit & loss statement)		405
+	Depreciation (profit & loss statement)	+50
-	Increased value of stock (balance sheet)	-5
+	Increased value of creditors (balance sheet)	+10
-	Increased value of receivables (balance sheet)	-5
+	Sale of property and equipment (balance sheet)	0
-	Investments in property and equipment (balance sheet)	-20
Operational cash flow		**435**
-	Interest (profit & loss statement)	-70
-	Taxes (profit & loss statement)	-115
Net cash flow		**250**

Financing checklist

Does your business plan answer the following questions?

- ❑ What assumptions is your business plan based on?
- ❑ How large is the company's capital requirement until break-even? How much cash will be needed in the worst case?
- ❑ Where will that capital come from?
- ❑ What does the deal look like for potential investors?
- ❑ What return can investors expect?
- ❑ How will they realize their profits?

It's a funny thing about life; if you refuse to accept anything but the best, you very often get it.

Somerset Maugham

CatchMabs business plan

Comments on CatchMabs

CatchMabs start-up

The original version of the CatchMabs business plan was prepared in 2001. For this manual, it was adapted slightly, for the purpose of confidentiality. Based on this plan, CatchMabs secured financing of € 0.5 million in September 2001. Following the realization of a proof-of-concept in the beginning of 2003, another € 2 million in additional financing was raised. Currently CatchMabs has twelve employees, it has developed its first working product and it has started two new joint ventures to exploit the technology in sectors outside the agro-industry. See also www.catchmabs.com.

From technology push to market pull

The founders of CatchMabs participated in the New Venture Business Plan Competition 2000 with a plan called CellScreen. In the first, second and third round they were awarded a top-10 position. However, they did not manage to find investors or customers interested in their novel method for the identification of gene functions. Several changes to the plan followed:

During discussions with other researchers they identified an interesting alternative for their gene identification method using small antibodies (plan 2). Furthermore, industrial applications for such antibodies were identified in discussions with a potential customer: the isolation of highly valuable or harmful ingredients, present in minuscule amounts in their waste flows. That's when the team decided to discard their original plan and technology and focus solely on the use of these small antibodies for the isolation of ingredients from industrial waste flows. A key element of this 'plan 3' was the acquisition of a license for the use of the small antibodies, patented by a big multinational. When it became clear the acquisition of this license would be too expensive, the founders were forced to change plans again: "We now had a customer, but no technology". After a three-day brainstorm they figured out a way to bypass the patent, leading to the development of plan 4: 'CatchMabs' was born.

Copy __ of 10

CatchMabs

Business Plan

September 2001

CONFIDENTIAL

CatchMabs business plan

Contents

1. Executive Summary

Type of Business

CatchMabs will be a specialist biotechnology company with a focus on agro-industrial applications for designer affinity proteins.

Company Summary

CatchMabs will apply specially constructed protein molecules to capture valuable or harmful compounds from bulk industrial waste flows, using affinity chromatography columns. These molecules, called industrial molecular affinity bodies (iMab), have the ability to bind with specific organic compounds, much like antibodies do in blood. The proprietary, stable molecule design allows for application in bulk scale industrial process flows. We will supply complete purification solutions with immobilized affinity bodies at unprecedented low prices bringing together two separate worlds: molecular protein engineering and agro-industrial processing industries.

Added Values

The basic scaffold of iMabs is designed and constructed to withstand the often harsh chemical environments of processing industries and carries a highly specific recognition site for almost any target compound. Furthermore, the scaffold is optimized for high yielding, cheap microbial production in yeast.

After binding the specific compound, iMabs can be reused well over 1000 times by immobilizing them on a suitable matrix. Combining the cheap production and excellent stability, the use of iMabs is 10,000 to 1,000,000 times cheaper than conventional monoclonal antibodies, the current method of choice for affinity chromatography. This substantial reduction in costs breaks down the one barrier that is blocking industrial applications of antibodies. The industrial possibilities are endless and range from compound recovery in process streams to surface reactive-dyes, from water purification to antibiotic replacements.

Management Team and Staff

The start-up management team combines top scientific expertise in relevant area's, decades of experience in business development and sound financial expertise.

Business System

CatchMabs will focus on R&D and the development of applications for the iMabs technology. Within the agro-industry it will be active in product development, marketing and sales. For other sectors these activities will be organized in spin-offs, joint-ventures or licensed partner companies. CatchMabs will generate three forms of revenue:

- Bulk sales of iMabs for industrial applications kg quantities, production outsourced to third party manufacturers)
- Royalties related to the value of recovered products (depending on quality and stability of our iMabs, market price of the target product, etc)
- Licenses to sectors outside our core-business (pharma, chemical, etc.)

Finance

Our growth forecasts predict a break-even in the 4th operational year, with sales volume (excluding subsidies) reaching €2.4 million in year 4 and €13.8 million in year 5. Sales and gross margin can grow at a high rate as a result of royalty income on industrial applications and license fee income. Net income is expected to reach €7.5 million in year 5.

The founders have provided start-up equity of €140,000. An initial investment of €250,000 in equity and debt is planned from a launching customer, matched by the Biopartner investment fund. Combined with subsidies, this will suffice for the proof-of-concept for industrial applications that is based on our proprietary technology. Once the technology is validated, venture capital will be attracted for product development and marketing activities into different industrial sectors. Already at this stage, the valuation of the company can be substantial, as is illustrated by comparable technology platforms, yielding a high ROI for the first investors.

Exit

The product portfolio and business model for CatchMabs has the potential to grow not just into a large company, but to develop into a major industry. Eventually, an IPO can be considered as exit for the VC-shareholders or CatchMabs may become a very interesting acquisition for a major supplier of purification technologies.

In conclusion, the profitability of CatchMabs will be substantial and will generate high shareholders value. It can become the world's major supplier of designer affinity proteins for industrial purposes, based on the superior qualities of our products at extremely competitive prices, generating attractive profit margins for our clients.

2. Products

Recent breakthroughs in molecular biology, using the latest modeling and shuffling techniques have shown us that evolution does not necessarily produce the most optimal protein for a specific application under a specific circumstance. On the contrary, there is ample room for improvement when we combine a set of requirements that would never be present in nature, but that would sure help us in current industrial environments. Inspired by antibodies, nature's most versatile affinity molecules that have evolved as part of our immune system, we set out to design an affinity protein that was optimized for industrial application rather than for its presence in blood, but retains its versatility to ensure a myriad of applications in different industrial sectors.

In the past 25 years, ever since the ability to produce monoclonal antibodies (MAbs), i.e. a single source of antibodies directed against one specific target, the number of applications for these molecules has exploded to hundreds of thousands, ranging from applications in research and diagnostics to the development of new pharmatherapeuticals. All these examples are high value, low volume markets as MAbs are expensive to produce. We predict a new wave of applications now that the production price for iMabs will come within the range of €2 per gram. This could revolutionize the use of Mabs on an industrial scale the same way that the transistor-on-a-chip revolutionized computing.

Industrial use of iMabs

iMabs are ideal molecules for large scale separation of compounds from complex mixtures in industrial processes. The availability of cheap iMabs in kg-ton quantities, which can be immobilized in a stable way, will find its use in a very broad spectrum of possibilities (Table 1).

TABLE 1: POTENTIAL APPLICATIONS FOR iMABS IN NON-PHARMACEUTICAL SECTORS

Market / Industry	Examples of applications
Food / feed industry	Recovery of high value protein from process water Inhibiting enzymes that cause food spoilage Protecting sensitive motives during processing Remediating process waters
Non-food agro processing	Separating products from intermediates Compound recovery from process water Clean-up of process waters
Fine chemicals	Catalytic affinity bodies Reducing purification costs for industrial enzymes Protecting sensitive motives during processing Stain removal, reactive adhesives, dyes, etc. Purification of stereo-isomers, chiral separations
Environmental	Removing micro-organisms from water Removing organic pollutants from water Bioremediation of soils

Adapted from Harris (1999) Exploiting antibody-based technologies to manage environmental pollution's. Trends in Biotechnology 17; 290-296.

CatchMabs Products

- Bulk quantities of custom-designed iMabs
- Contract research for industrial applications
- iMabs-based separation units for placement in current processing lines

What's new about CatchMabs Products?

- Unique breakthrough technology that will revolutionize industrial separation processes.
- Based on low cost of production, the high stability and the high level of re-usability, iMabs are 10,000 to 1,000,000 times cheaper than conventional antibodies in terms of recovered units per unit affinity body.
- iMabs are stable in harsh chemical environments and can be optimized for a wide range of specific industrial processing environments.

3. Start-up Team

The start-up team combines decades of experience in molecular and processing technology in agro industry and is complemented with commercial business and financial backgrounds.

Dr. Peter C. Sijmons (founder, technology acquisition and strategy) has a long track record in plant biotechnology. After a PhD in plant physiology, he was one of the first science employees of Mogen in Leiden, now a Zeneca subsidiary. He moved from scientific into executive positions at the Institute for Agrotechnology (ATO-DLO) in Wageningen where he became research director in 1997. He started a consultancy firm for Agbiotech in 1999 and founded Cellscreen (now CatchMabs BV) in 2000 to start a biotech company based on new screening technologies from Wageningen University.

Dr. Bert Tournois (co-founder, early stage development / processing technology) is biochemist by training. After receiving his PhD in chemistry at the State University of Utrecht he joined the Agrotechnological research institute ATO-DLO in Wageningen where he developed from researcher to head of division. In 1995 Dr.Tournois joined the directorate as Commercial Director, responsible for the Commercial Strategies and Management, Legal affairs and Licensing, Marketing and Public Relations. He was vice chairman of the program council of the Wageningen Centre for Food Science. In 1999 Dr Tournois started a consultancy B.V. for business development and was co-founder of CatchMabs.

Henk-Jan de Ruiter MSc (co-founder, early stage development / finance) is involved in start-up and financing of innovative companies and public-private (real-estate) projects. He was manager of a seed-capital fund. He worked for 12 years for the Gelderland Development Authority, where he accompanied knowledge based start-up companies and was involved in the development and management of public-private real estate projects (science parks, incubators, facility centres etc.). Mr. de Ruiter has a background in mechanical / economical engineering and has a MSc in management from the Boston University. Early 1999 he started his own company for (real estate) business development and was co-founder of CatchMabs in 2000.

Dr. Erwin Houtzager (chief scientist molecular biology) is a specialist in design and development of phage display libraries, an expertise he developed at the Hubrecht Laboratory in Utrecht and at Ubisys (now Crucell). His expertise is precisely on mark to be a member of the scientific start-team of CatchMabs.

Sijmons will be the CEO during the start-up phase, but when the growth of CatchMabs requires additional expertise, a CEO with a strong business background will be attracted to strengthen the management team and Sijmons will transfer to another management position in CatchMabs. Tournois and De Ruiter are actively involved in the establishment of CatchMabs but will eventually transfer to a board position.

A start-up team of scientists and technicians with relevant hands-on experience is already selected and will be available for CatchMabs on short notice.

4. Marketing

Market Size

The market for industrial application of iMabs is difficult to predict, as this will form a breakthrough technology in several sectors of industry. It can lead to entirely new products with unprecedented functionalities creating their own demand. The different sectors are all multi-billion $ industries (dairy, cosmetics, food/feed ingredients, specialty chemicals, environmental, non-food agro processing).

In most of these industries, very substantial 100,000 liter per hour) process streams are present that contain high value minor components which so far have never been considered for isolation or are being isolated at high cost. With highly selective affinity chromatography in a process-compatible form, a range of targets becomes feasible; protein recovery from process waters, removal of bitter compounds during brewing processes, enzyme stabilization during processing, compound recovery for cosmetics industries, isolation of nutraceuticals, etc. A representative example is used to calculate potential income per application: the recovery of lactoferrin from whey. The FAO estimate for dry whey production (a by-product from cheese manufacturing) in the world is almost 2 million ton protein with over 1 million ton produced in Europe. The most "abundant" minor protein is lactoferrin, with a total of 18,300 ton in European whey. At a current market price of €400/kg, this represents a market value of more than €7 billion. One iMabs chromatography column containing 10 kg of iMabs, which can be reused a thousand times, has the potential to recover 37,500 kg of lactoferrin from whey (only 0.2% of the available quantity in Europe). This would generate revenues of €300,000 for the supply of required iMabs (10 kg) and €450,000 from royalties (3%) on recovered lactoferrin. Taking into account all whey produced in Europe this would mean a revenue potential of €375 mln for lactoferrin recovery only.

Both more valuable and cheaper proteins can be recovered from the whey fraction at the same time, simply by plugging CatchMabs columns in series into the whey process stream. Similar scenarios can be envisaged for other large-scale agro-processes, ranging from the protein-rich fraction in the starch industry to the pulp fraction of the citrus industries. Other fields for application were given in Table 1. The proven versatility in the high-end markets demonstrates the great potential once iMabs reach the industrial markets.

Customers

- Agro-related processing industries (food, feed, non-food, e.g. Unilever, Campina, FCDF, Avebe, Numico, Nutreco, Genencor)
- Environmental industries (e.g. Paques, Birds Engineering)
- Agro-chemical industries (e.g. Bayer, Monsanto, Syngenta)
- Pharmaceutical industries (licenses will be sold where possible)

Market Growth and CatchMabs Marketshare

At present, there are no industrial applications for MAbs implemented, as the price of such complex biomolecules is clearly inhibitive. The vast number of applications in high-end markets for purification, diagnostics and therapeutics underpins the potential of industrial use of monoclonal affinity bodies. CatchMabs will have its own proprietary technology portfolio and will focus from the start on the agro-industrial markets. This way we will be able to establish a considerable market share in a technology that may become an industrial sector on its own.

Due to the surplus of agricultural production and the increased importance of environmental issues from waste materials, there is a trend to recover additional functional compounds and increase the value of the total product. It is in this field of large-scale separation/fractionation that bulk uses of iMabs can be foreseen.

Although the design of our iMabs will give us freedom to operate also in the pharmaceutical sector, we do not intend to explore those markets but rather sell an exclusive license to a specialist company who is active in that particular market or start a separate daughter company.

Marketing approach

Industrial applications of iMabs will have to fit in with existing infrastructure to enter such markets effectively. The management team has strong networks in the agro-industry and a few carefully selected companies have been approached to act as launching customers. These pioneering industrial partners are already familiar with compound recovery from their process flows and have developed markets for such products (see paragraph on Business System). CatchMabs will develop not only the customized iMabs but also the processing technologies to implement them in current industrial processes, in collaboration with specialist hardware companies and suppliers of chromatographic materials. Successful implementation will be our visiting card for other industrial sectors. As the diverse applications in different industrial sectors will require different expertise's in process technology, research and marketing teams will be developed around industrial sectors rather than scientific expertises, possibly even in the form of spin-outs to maximize the innovation drive.

Pricing

In the bulk market, CatchMabs can be very competitive as iMabs are relatively simple molecules and cheap to produce in micro-organisms such as yeast (Table 2).

TABLE 2: PRODUCTION COSTS FOR THERAPEUTIC RECOMBINANT MAB PROTEINS (OUTPUT ~ 1 TON / YEAR)

Production method	Production Cost range ($/gram)
CHO cell culture	400 - 500
Yeast	50 - 100
Transgenic Animals	23 - 39
Transgenic Plants	13 - 14
Estimate iMabs production in yeast	2

Source: BioPharm, May 2000, except for iMabs data.

Even more important, iMabs will be designed for high stability when they are immobilized on column materials and should survive regeneration well over a thousand times without any significant loss of their specific binding affinity. In contrast, conventional MAbs fragments are unstable and loose their affinity after 3-10 regeneration cycles. Combined, these two aspects make iMabs 10,000 - 1,000,000 times more cost effective than conventional antibody-Fab fragments (Table 3). The sales price for industrial iMabs will be set according to the price level and margin of the compound that it is recovering. This can be substantially higher than the current minimum production price. Next to the upfront payment for the antibodies, a royalty payment on the turnover of the recovered or purified compound will be expected from our clients. The ratio upfront / royalty will be negotiable and can be linked to the stability performance on site of the industrial client.

TABLE 3: COST COMPARISON FOR USE OF CONVENTIONAL MONOCLONAL ANTIBODIES AND IMABS TO PURIFY A PROTEIN OF 60 KD AND A BULK MARKET VALUE OF €300 / KG.

Parameter	Conventional MAbs	iMabs	units
Molecular weight Mab	100,000	12,000	dalton
1 kg MAb binds max *	0.6	5	kg protein*
# times column re-use	5	1,000	
Total protein recovery	3	5,000	kg/column life
Market value recovered protein	900	1,500,000	€/kg ab
Production costs ab	150,000	2,000	€/kg ab
€ recovered / € cost	0.006	750	

** (assuming 50% binding saturation, a worst case scenario)*

Competitors

In the biotechnology landscape, antibody-producing companies have relatively long track records. Most cater to a specific niche, such as mouse-based MAbs, fully humanized MAbs, customized MAbs for specific research targets, secondary antibodies or bulk production in different transgenic systems. Camel MAbs, small single chain antibodies, are a direct competitor for us. Examples of competitive companies are listed in Table 4. The level of competition is indicated in the last column, scaled as follows:

◆◆◆ = Competition with substitute technology and strong financial backing.
◆◆ = Competitor in non-target markets, can become competitor when focus is shifted towards agro-industrial applications.
◆ = Not a current threat, but has technology with promising future or that could become a substitute technology.

As our products will usually be implemented as modules that hardly interfere with standard procedures and infrastructure, we do not anticipate strong competition from hardware suppliers. They may have long-standing relations with our target clients and we would collaborate with them to smoothen the introduction of new technology rather than competing with their hardware.

Another group of competitors will be suppliers of chromatographic materials. When we can replace 4-step chromatography by single step affinity columns, we may become a threat to their business. Although our applications will be completely new to processing industries (increasing the total demand for chromatographic material in the long run), we intend to team up with a major supplier such as Amersham/Pharmacia Biotech. They will bring in state-of-the-art matrix technology that will be essential to immobilize our iMabs. For such a company, we will expand their business rather than compete with it.

A next level of competition can be found on the markets for the actual products that are recovered or improved through CatchMabs technology. The market

TABLE 4: POTENTIAL COMPETITORS (SHORTENED)

company name	market cap ($)	est.	focus	target market	level
BAC / MatchX	-	2001	Camel antibodies	Wide	◆◆◆
Cambridge Antibody Technology, UK	2 bln	1990	Phage-display human antibody libraries	Pharma	◆◆
Dyax, USA	0.4 bln	-	Phage display technology	Industrial enzymes	◆◆
Epicte Pharmaceutical, USA	-	-	Plantibodies	Bulk production, human and animal health	◆
Genencor	-	-	Industrial enzymes	Wide	◆◆
Integrated Protein Technologies, USA	-	-	Plantibodies	Bulk MAbs in corn, human health	◆
MPB Cologne, Germany	-	1998	Plantibodies	Bulk MAbs in potato and seeds, human health and industrial	◆
Pepscan, Netherlands	-	1999	Peptide libraries and affinity scanning	Wide, contract research	◆
Scil Proteins, Germany	-	1999	Eye-lens based affinity bodies	Pharma, affinity chromatography	◆◆◆
Semorex, Israel	-	-	Molecular imprints to develop specific binding sites	Therapeutics, assay development	◆

for lactoferrin for example would be under a strong price pressure once we begin isolating tons of it. Our clients will improve their market share, but also, we expect that entirely new applications will evolve for such products once their prices go down. This will only increase the demand for iMabs further.

The industrial market for affinity chromatography will prove to be enormous and will not be filled by a single company. End-users, resin manufacturers, hardware suppliers, etc. will quickly team up with important players. Different patent portfolio's to approach the same market will prevent complete market domination. CatchMabs' proprietary molecule design, the experienced team and its well-established network within the agro-industry will give it the ability to become one of the top-level suppliers.

Technological position

The careful design and process to develop iMabs very deliberately bypasses a number of patents or patent applications, especially around our most threatening substitute technology, camel antibodies (see below). This strategy will create a freedom-to-operate within our core business and prevent a cost increase as a result of expensive licenses that would otherwise have to be paid. The ideas for design and potential applications will be filed to acquire a legal date stamp and will be used for preliminary patent filings as soon as we have sufficient data to support it. Details of the technical approach will only be revealed to third parties after signing a unilateral secrecy agreement with CatchMabs BV.

Substitutes

Obviously, existing use of monoclonal antibodies are substitute technologies for iMabs. We will not compete in the market for therapeutic human or humanized Mabs but we will compete directly with the small single chain antibodies derived from camels or lamas. Although the primary focus for the firms that work with these antibodies is on pharmaceutical applications, industrial applications will also be part of their combined business development. Once this field becomes established, it will undoubtedly attract new players. Just as we are able to bypass patents from our major competitors, so will others be able to bypass our own patent position. However, the market for industrial affinity chromatography will be so tremendous, that no single company will be able to capture the whole market and there will be plenty of opportunity to grow into a substantial and very profitable business.

In terms of processing technology, there are substitutes for iMabs to purify compounds even at industrial scale (ion exchange or size-exclusion chromatography, membrane filtration, reverse osmosis, etc.) but these techniques are substantially more expensive per kg purified product than the use of immobilized iMabs and therefore pose no threat to the application of iMabs.

For examples such as lactoferrin, new production methods such as transgenic cows or plants may eventually arise. However, also from these sources, lactoferrin needs to be purified and iMabs will be a very competitive method.

5. Business System and Organization

Business System

CatchMabs will focus first on a successful proof-of-concept in collaboration with a launching customer from the dairy industry, using a small team of top experts in the fields of molecular biology and affinity chromatography, supplemented by experts in whey processing from our partner. Once the proof-of-concept is demonstrated, CatchMabs will quickly increase the critical mass of scientists to widen the scope of our applications. Business developers with a background in the agro-industrial sector will be hired to establish our market as fast as we can. Strategic partnerships are envisaged with suppliers of industrial resins and chromatography hardware, who will be keen to team up with CatchMabs as this breakthrough technology will establish new markets for them as well.

On the production side, as soon as our first prototype iMab fits the requirements, small production runs can be outsourced to e.g. the Institute for Agrotechnological Research in Wageningen. Full-scale productions (10 kg) will be outsourced to companies who have major fermentation and down-stream processing facilities (e.g. Genencor, DSM-Gb).

Since our applications will be customized for different industrial sectors, each with their own specific challenges and problems, we consider to group both scientific and marketing teams with a focus on a specific sector, possibly as separate spin-outs from CatchMabs BV, in order to maximize their ability to penetrate into their core industrial sector.

TABLE 5: CATCHMABS' BUSINESS SYSTEM

Suppliers & Strategic Partners

A small number of partners are now signed on or are subject to negotiations. They will be paramount for the proof-of-concept phase:

- Dairy industry launching customer
- Wageningen University and Research Center (modeling, molecular biology)
- TDI Wageningen (processing technology)

Future collaborations, either through (inter-)national subsidized technology development projects or through partnership relations, include:

- Resin supplier
- Hardware chromatography supplier
- Agro-industrial partners
- NIZO (Netherlands Institute for Dairy Research (Ede)
- University of Delft (processing technology)

A substantial number of major food processing companies are located in the Netherlands, concentrating a large critical mass of relevant research groups, an essential condition for implementation of iMabs technology at industrial scale in the agro-processing sector.

Operating Locations

During the proof-of-concept phase, we will be operating from the University of Wageningen in the group of Prof. Dr. Sacco de Vries, with whom we already have a collaborative project in the area of protein affinity measurements. CatchMabs will purchase all basic hardware facilities; expensive analytical equipment that is present on site will be rented from the university. The second phase is planned to run parallel with the opening of the Life Science Bio-incubator that is currently being build in Wageningen and where we will hire laboratory space and possibly a tech hall for up scaling experiments.

Personnel Planning

The personnel forecast according to level is given in Table 6.
The data after 2002 are estimates.

TABLE 6: PERSONNEL PLANNING BY LEVEL

year	2001	2002	2003	2004	2005
Senior scientist	0.5	0.5	1	3	5
Scientist	0.5	1	2	3	5
Senior technician	0.5	0.5	1	3	5
Technician & maintenance	0	0	2	3	5
Sales &marketing	0	0	0	1	4
Support	0	0	2	3	4
Management	0.8	1	2	3	3
Total	2.3	3	10	19	31

6. Realization Schedule

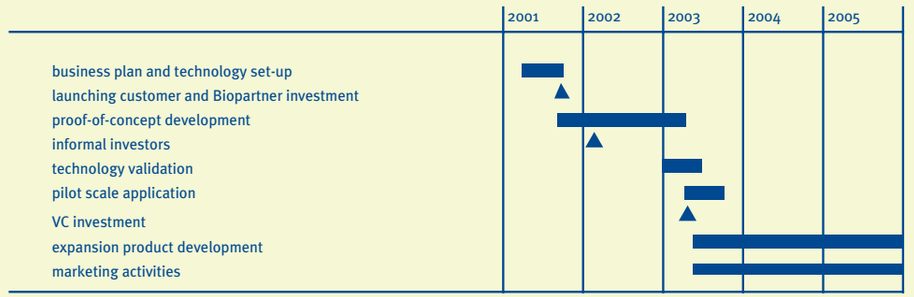
Growth Strategy

Development of industrial applications will start immediately for the dairy industry where a well-defined processing infrastructure and a homogeneous product flow is present. Such factors will maximize the chances of successful implementation of a new technology into existing infrastructure. A global dairy company will be launching customer and will invest in the hardware and implementation of large-scale affinity chromatography.

Once proof-of-concept has been shown in a high profile food company, we expect other companies in the same or in other industries to follow quickly. The incentive for the launching customers in each sector will be to be first on its respective market, and possibly, when additional patentable technology is developed in collaboration with CatchMabs, they can receive royalties on that specific part. This will make our clients more competitive than others in the same market.

Other agro-industrial sectors will be targeted for lead applications to follow the dairy example. In order to optimally penetrate into new industrial sectors, we plan to form partnerships or joint ventures with technology companies that are main players in these sectors. These JV's will be financed separately and will obtain a license from CatchMabs.

PLANNING AND MILESTONES



7. Risks

There are a number of factors that could influence the success of CatchMabs. The most important risks are summarized here, plus the measures we will take to minimize them.

Technical Feasibility

There is considerable substantiation for the engineering of proteins to perform specific tasks. iMabs will be an accumulation of product specifications that all by themselves have been demonstrated, but are now brought together to form one powerful technology. In all aspects, iMabs will be optimized for its application in an industrial process and will not be the result of an in vivo evolutionary process. The most important technology elements that will be integrated in CatchMabs proof-of-concept are:

- Hyper mutated recognition sequence
- The affinity constant for the target compound (high enough for affinity purification, but low enough to release the compound with simple, non-destructive and non-toxic techniques
- Resistance to protease degradation
- Optimizing structure for high 3D stability (temp. and pH resistance)
- Optimizing for expression in and secretion from industrial micro-organisms
- Versatility for immobilization to different carrier molecules

Demand Side

Implementation of iMabs in processing industries may be too disruptive. These sectors have little or no experience with affinity chromatography and may have difficulty to integrate such a technology, both at the level of infrastructure and the product portfolio. Our technology will be compared to a next version of proven and reliable equipment. When we venture into a new industrial sector, we select a launching customer with care (background knowledge, innovative drive, market availability etc.) and develop the new products in close collaboration with their process engineers, ensuring a smooth introduction into their plants. Also strategic alliances with current suppliers, for example of chromatographic media, will help to penetrate new sectors.

Legal Obstacles

For large-scale iMabs production, genetically modified micro-organisms are involved. iMabs as such are the result of advanced genetic engineering. Although in our major application, affinity chromatography, there will be no iMabs present in the end product as they are irreversibly bound to carrier resins, it is not yet clear if such a processing step would have effect on the non-GMO status of a consumer product. The matter is raised for the Dutch COGEM committee who will address the issue at one of their next meetings.

For the construction and optimization of iMabs, we will require no additional licenses, as our molecules are not derived from immunoglobulins, but are designed from scratch to fit our purposes.

8. Finance

Summary of Financials

The most relevant financial data are presented in more detail in Appendix 1:

- Key financial assumptions
- Income statement
- Cash flow statement
- Balance sheet

Profitability

Our launching customer will be rewarded for their early investment in CatchMabs, both via early access to developed technology, but also through an exclusive license for their sector and by a favorable royalty scheme for the use of iMabs. Once our technology is proven, our negotiation position will be strengthened towards other clients and we can obtain a substantial fraction of the market value of recovered compounds. This royalty arrangement is the ultimate cash cow and will far outweigh the income generated by direct product sales or contract research. As application of bulk scale affinity chromatography can generate exceptionally high margins, there is a wide bandwidth to negotiate with our clients and leave a satisfactory margin for all involved. We expect to generate our first royalty income in ca. 4 years time.

With a sales volume of € 2.4 million (excluding subsidies) in the 4th operational year, this will be the first year with a net income before tax. The profitability in following years can grow at a high rate as a result of increased sales, improved profit margin and royalty income (Table 6). The operating expenses per unit sold will decrease as a result of the decreased production costs for bulk iMabs, the improved validation of our libraries and the higher flow-through capacity.

TABLE 6: KEY FINANCIALS (€ MILLION)

	2001	2002	2003	2004	2005
Revenues (including subsidies)	0.06	0.10	0.27	2.65	14.21
Total operating expenses	0.16	0.24	0.70	1.51	2.64
Net Income (after Interest expenses and Tax)	-0.11	-0.17	-0.48	0.71	7.48
Capital expenditures	0.04	0.01	0.29	0.33	0.38

Revenue Assumptions

iMab Sales

The sales price of iMabs will vary according to the deal that can be made with different clients. Some would prefer a high upfront payment that would be linked to the value of the recovered compound for a fixed set of affinity runs. When the stability exceeds the number of runs, the additional profit is entirely for the client. Others would prefer a low upfront payment and a performance-based royalty. As basis for the revenue forecast we estimated average sales to be €300,000 per 10 kg of supplied iMabs, which will be the amount a customer would use in a year for one application (run). The number of sold applications (runs) is expected to grow from 4 in 2004 to 20 in 2005. On the longer term we expect to build up a base of 100 installed applications.

Royalties

We have used the application of iMabs for the extraction of lactoferrin from whey as a representative example to calculate expected royalty fees. With a 10 kg iMabs column, which can be re-used a 1000 times, 37,500 kg of lactoferrin can be recovered from 3.5 billion liters of whey, i.e. the annual turnover of a major dairy company. This amount accounts for only 0.2% of the available lactoferrin in the European dairy industry and has a market value of €15 million (€ 400/kg). The lactoferrin isolation is realized at a fraction of the current costs and at a much higher purity (99% vs. 95% in current practice). Circa three percent

royalties for CatchMabs on the customer's lactoferrin turnover should therefore be feasible, still leaving a very high profit margin for our client. In our forecasts, this example royalty income (€450,000) is used as an average for all applications sold, with revenues only realized one year after the sale is made.

License Fees

CatchMabs will actively seek for opportunities to license the technology outside the agro-industry. Commercial applications of the iMabs technology will be organized per industry in separate joint-ventures or spin-offs or handed over completely to interested partner companies. This is expected to generate substantial revenues from license fees, as the iMabs technology will be suitable for numerous applications in various industries. Furthermore, each industry will need some degree of customization to integrate the use of iMabs into their process, both in terms of specificity, compatible carriers or hardware adjustments. This type of case-by-case development may also lead to contract research for CatchMabs. For launching customers in new industrial areas, CatchMabs will co-invest in development and seek subsidies to decrease development costs.

Highest Cost Factors

Personnel expenses, R&D consumables and outsourced molecule production are among the highest cost factors for CatchMabs. Production costs will be relatively low compared to the sales price. Personnel costs will be kept at a minimum by limiting salary levels, while offering attractive option packages for employees. Other costs include patent cost, housing (laboratory) expenses and general & administrative costs, including travel expenses for management and commercial personnel.

Subsidies

The high initial costs of a biotech start-up can be reduced substantially through a range of subsidies from national and European institutions. The management team has wide experience with these financial incentives. Subsidies for innovative technologies will also be applicable for most product development that is planned in collaboration with industrial partners.

The company will have a very active policy to minimize all these cost factors by applying for all possible subsidy arrangements that are available in the Netherlands and the EU (WBSO, TS, Mibiton, Dutch Platform Life Sciences, EU-Framework V, VI).

Financing

The initial seed capital of €140,000 is invested from private capital of the founders. For the first phase of CatchMabs will be financed by a strategic partner and will be matched by the Dutch venture fund Biopartner. Their investments (€80,000 in equity and €420,000 in long-term debt) are milestone-dependent and will depend on the progress of our proof-of-concept and the ability to secure additional subsidies. The latter will be a substantial part of our financing; using the latest tools from the Ministry of Economics Affairs for Technology Collaboration (TS). Venture capital is planned for 2003, where we will expand both the science and the business base of the company. The amount will depend on the most opportune speed of expansion.

At that stage, the valuation of CatchMabs can already be substantial, as is illustrated by the initial capital that was raised recently for MatchX, the VIB spinout for pharma-applications of lama-antibody technology (€8 million).

Depending on market developments and the success of CatchMabs technology, an IPO can be considered to boost further growth, start in-house production facilities and to finance possible daughter companies in different industrial sectors.

TABLE 7: FINANCING ROUNDS (IN EQUITY AND LONG TERM DEBT)

	Year	Amount (€ million)	Source
Seed capital	2001	0.14	Founders
Round 1	2001	0.50	Launching customer & Biopartner Fund
Round 2	2003	p.m.	Venture Capital

Worst Case Scenario

Three scenarios could hamper the development of CatchMabs. The first may occur at an early phase and is ignited by a rejection of the subsidy application for Technology Collaboration (TS, from the Dutch Ministry of Economic Affairs). As the entire first phase consists of the development of a new technology, we consider the total CatchMabs costs of this project to be eligible for the maximum subsidy percentage (60%). This would stretch out the investment for phase 1 considerably. A rejection of our proposal would immediately require additional investments from informal investors of € 500,000.

The second scenario considers a delayed income from product sales and royalty income with at least one year, due to a slower acquisition of customers. At that point in time, our technology should at least have shown feasibility and we will need to double the venture capital investment to develop phase 2 of CatchMabs. Break-even would also be delayed with at least one year.

A third scenario can be envisaged whereby CatchMabs 'proof-of-concept' is not fully realized and the product does not yield the required results. The capital at risk in this scenario is limited due to the gated funding, which means capital investments are only granted when agreed milestones are achieved.

Realization Strategy

In conclusion, the profitability of CatchMabs will be substantial and will generate high shareholders value. It can become one of the world's major suppliers of monoclonal affinity bodies for industrial purposes, based on the superior qualities of our products at extremely competitive prices, yet still generating high profit margins for our clients.

Appendix - Detailed financials

Due to rounding differences, the presented totals may deviate from the sum of the presented figures.

Exhibit 1 - Financial assumptions

CatchMabs - Financial and Personnel assumptions (thousand €)

EXPENSES

Cost of Goods Sold	**2001**	**2002**	**2003**	**2004**	**2005**
# iMAbs applications	-	-	-	4	20
Cost of Goods Sold (€ thousand/10 kg MAb)	9	9	9	9	9
Cost of Goods Sold	**-**	**-**	**-**	**36**	**180**

Personnel development (FTE)						**Salary level per FTE**
	2001	2002	2003	2004	2005	2001
Management						
CEO	0.8	1	1	1	1	44
CSO (chief scientific officer)	-	-	-	1	1	40
Commercial manager	-	-	1	1	1	34
Research & development						
senior scientist	0.5	0.5	1	3	5	34
scientist	0.5	1	2	3	5	30
senior technician	-	-	1	3	5	34
technician	0.5	0.5	2	3	5	30
Marketing & support						
marketing & sales	-	-	-	1	4	30
controller	-	-	0.5	1	1	30
office management	-	-	0.5	1	1	25
administration	-	-	0.5	1	2	25
Total fte	2.3	3.0	10	19	31	
Annual increase in salaries	5%					

Personnel expenses

Management	35	46	86	137	143
R&D	47	65	207	445	778
Marketing & Support	-	-	44	127	273
Total	82	111	337	708	1,195

Other operating expenses

R&D consumables	25 per scientist / technician (FTE)
General & administrative (including travel expenses)	10 per employee (FTE)

CatchMabs - Financial and Personnel assumptions (cont'd) (thousand €)

Investments & depreciation	2001	2002	2003	2004	2005	
Investments in fixed assets						depreciation (%/yr)
Office	2	4	8	5	5	20%
ICT & bioinformatics	5	7	32	20	20	25%
General lab equipment	36	-	100	100	100	10%
Special lab equipment	-	-	150	150	200	20%
Total	43	11	290	275	325	
Investments in intangible assets						depreciation (%/yr)
Technology acquisition	-	-	-	50	50	20%

Interest & Lease Costs

Short term debt	7%
Long term debt	8%
Financial lease	10%

REVENUES

Industrial markets	2001	2002	2003	2004	2005
# iMAbs applications	-	-	-	4	20
average price per run (€ thousand/10 kg MAb)	-	-	-	300	300
Sales industrial MAbs	-	-	-	1.200	6.000

Royalties on recovererd Compounds

# iMAbs applications	-	-	-	4	20
Royalties per run (€ thousand/10 kg MAb)	-	-	-	450	450
Royalty income - one year delayed	-	-	-	-	1,800

Subsidies

WBSO	20% of R&D personnel expenses
TS subsidy on phase 1 (yr 1-3)	60% of non-personnel project costs
TS subsidy on phase 2 (yr 4-5)	20% of non-personnel project costs

BALANCE SHEET RATIO'S

Accounts receivable	4 months
Subsidies receivable	6 months
Accounts payable	1 month
Salaries payable	0 months

APPENDIX - DETAILED FINANCIALS

Exhibit 2 - Income statement

CatchMabs - Income Statement (thousand €)

	2001	2002	2003	2004	2005
Revenues					
Industrial markets	-	-	-	1,200	6,000
Royalties -	-	-	-	1,800	
Licenses -	-	-	1,200	6,000	
Grants & Subsidies	61	98	265	251	406
Total revenues	**61**	**98**	**265**	**2,651**	**14,206**
Expenses					
Costs of goods sold	-	-	-	36	180
Personnel expenses	82	111	337	708	1,195
R&D consumables	38	50	150	300	500
Patent cost	3	10	35	100	150
Housing & facilities	6	11	38	104	162
Professional fees (third party)	5	26	39	20	30
General & administrative	23	30	95	190	310
Depreciation and amortization	-	6	8	52	108
Total operating exp.	**157**	**244**	**702**	**1,510**	**2,635**
Income before interest and taxes	(96)	(146)	(437)	1,141	11,572
Interest expenses	11	22	42	49	57
Income before taxes	**(107)**	**(168)**	**(479)**	**1,092**	**11,514**
Taxes	-	-	-	382	4,030
Net income	**(107)**	**(168)**	**(479)**	**710**	**7,484**

Exhibit 3 - Cash flow analysis

CatchMabs - Cashflow Statement (thousand €)

	2001	2002	2003	2004	2005
BEGINNING CASH	**-**	**159**	**95**	**421**	**141**
Sources of Cash					
Net income	(107)	(168)	(479)	710	7,484
Add depreciation/ Amortization	-	6	8	52	108
Plus changes in:					
Acounts payable		-	-	3	12
Salaries payable		-	-	-	-
Taxes payable		-	-	-	-
Short term debt		-	-	-	-
Financial lease	-	-	86	69	81
Long term debt	140	140	140	-	-
Total sources of cash	**33**	**(22)**	**(245)**	**834**	**7,685**
Uses of Cash					
Less changes in:					
Accounts receivable	(20)	(12)	(56)	(795)	(3,852)
Subsidies receivable	(31)	(19)	(83)	7	(78)
Gross fixed assets	(43)	(11)	(290)	(275)	(325)
Gross intangible assets	-	-	-	(50)	(50)
Total Uses of Cash	**(94)**	**(42)**	**(429)**	**(1,113)**	**(4,304)**
CHANGES IN CASH (CASHFLOW)	**(61)**	**(64)**	**(674)**	**(280)**	**3,381**
FINANCING (Equity Investment)	**220**	**-**	**1,000**	**-**	**-**
ENDING CASH	**159**	**95**	**421**	**141**	**3,522**

Exhibit 4 - Balance sheet

CatchMabs - Balance Sheet (thousand €)

	2001	2002	2003	2004	2005
ASSETS					
Current Assets					
Cash & cash equivalents	159	95	421	141	3,522
Accounts receivable	20	33	88	884	4,735
Subsidies receivable	31	49	133	126	203
Inventory	-	-	-	-	-
Total current assets	**210**	**177**	**642**	**1,150**	**8,461**
Investments fixed assets	43	54	344	619	944
Accumulated depreciation	-	6	14	66	164
Fixed assets	43	48	330	553	780
Investments intangible assets	-	-	-	50	100
Accumulated amortization	-	-	-	-	10
Intangible assets	-	-	-	50	90
TOTAL ASSETS	**253**	**225**	**972**	**1,753**	**9,331**
LIABILITIES					
Short term liabilities					
Accounts payable	-	-	-	3	15
Salaries payable	-	-	-	-	-
Taxes payable	-	-	-	-	-
Short term debt	-	-	-	-	-
Total of short term liabilities	**-**	**-**	**-**	**3**	**15**

Financial lease	-	-	86	155	236
Long term debt	140	280	420	420	420
Total liabilities	**140**	**280**	**506**	**578**	**671**
Equity					
Issued & paid-in capital	220	220	1,220	1,220	1,220
Retained earnings	(107)	(275)	(754)	(45)	7.440
Total Equity	**113**	**(55)**	**466**	**1,175**	**8,660**
LIABILITIES & EQUITY	**253**	**225**	**972**	**1,753**	**9,331**

PART 4

Valuing a start-up and raising equity

Dealing with venture capitalists and private investors

The good thing about talking to a venture capitalist is that they bring you down to earth. It's not that they're negative, but they'll give you a feel for what it will really need to succeed.

Eugene Kleiner
Venture Capitalist

Valuing a start-up and raising equity

A business plan quantifies the financial resources that the business will need. How will you be able to gain access to these resources? You will probably quickly realize that debt, such as bank loans or mortgages, is unlikely to be available to new businesses. The only practical option is often participation by an investor in your company's equity. As this represents a high-risk investment over a period of years for investors, they will require both a certain rate of return and a certain share of the company. You will have to negotiate with investors over this. The basis for such negotiations is a company valuation. In addition to purely financial support, entrepreneurs should also estimate the investor's support in terms of "smart money". As this relationship will probably last over several years, it is essential, during the negotiations, to create a basis of trust for the cooperation.

In this chapter you will find out:

- How the interests of investors and start-up management teams can differ
- How to reach a deal
- How to value the business in preparation for the negotiation
- What to watch out for in the negotiations
- How to raise further capital.

DIFFERING INTERESTS

When you have prepared a business plan for your enterprise, you will need to get an investor involved. You will need to identify suitable investors, arouse their interest, and negotiate with them. No one is going to make funds available for free. All that the management team has to offer in return for the investor's cash is promises - not normally an advantageous negotiating position. Nevertheless, you can generally expect to get a fair deal, because professional investors are interested in seeing that the team as a whole is successful.

The management team's interests

If you are happy with a small company, then you will probably be well advised to make use of family funds, loans from friends and personal bank loans. This way, you retain the majority holding in the company, but significantly restrict your ability to grow. You should check whether "cheap" money is available anywhere else, like, for example, from state development funds. Start-ups sometimes have recourse to what are known as "business angels" - private investors and retired entrepreneurs who usually invest smaller amounts compared to venture capitalists, but with less demanding information requirements. They can also use their experience to help with non-strictly financial questions.

If, however, you want to expand quickly, you will generally need the help of venture capitalists, or similar types of investor. First, stop and think whether you really need as much capital as you think you do. A venture capitalist will want a significant share of your company - you may not even be able to keep the majority holding. However, profession- al investors are not generally interested in running the company, as long as you meet your targets.

Bear in mind that the negotiations are not just about money. It is important for you that an investor is prepared to give your management team active support - and is in a position to do so geographically - and can also provide the necessary expertise (e.g., legal or marketing knowledge) and contacts. This element, known as "smart money", is particularly important at a time when the management team is forced to rely on outside experience and support. In retrospect, this, and good chemistry between management team and investor, will probably seem much more important to the success of the business than the size of the investment.

Consider these points:

- To what extent are you prepared to give up ownership of the company?
- What non-financial support are you also looking for from your investor?

The investor's interests

Investors require a return that matches the risk involved. However, there are significant differences between investors, generally over the following matters:

- Type and extent of acceptable risk
- Size of investment
- Extent and content of additionally agreed rights and requirements, particularly with regard to possibilities of exerting influence (see "Term Sheet" in "The Way to the Deal")
- Time horizon for the required return.

In addition to financial interests, many investors, such as industrial groups, have other reasons for their involvement - strategic ones for example. It may be a way, for instance, for an industrial group to keep a "window on technology" open - a window on new technologies and markets, but also on possible competitors.

THE WAY TO THE DEAL

If your business plan has aroused an investor's interest in your business and your team, the next step is initial discussions and negotiations. The investor will confirm his intention to embark on serious negotiations with a Letter of Intent (Exhibit 1).

Typical venture capital financing process *Exhibit 1*

Source: Modified version of Scheidegger et. al.: Swiss Venture Capital Guide 1998/99

After an initial review, a preliminary contract, known as a Term Sheet, is generally concluded (example on pp. 200-202). This sets out the financial aspects of the participation - the size and form of the investment and the investor's resulting share of the business. It also regulates other important points, such as:

- Monitoring, information and decision-making rights
- Possible limitations on liability of the parties to the contract, confidentiality declaration
- Type and extent of management support
- Arrangements for any distribution of profits, stock option plans, powers of disposal and increases in capital
- Duration of investor's involvement, disposal and termination rights
- Procedure for additional financing.

Before deciding on an involvement, the investor will review the business plan again in detail this is known as a Due Diligence Review. When all the responsible bodies at the investor have approved the preliminary contract, negotiators have clarified the open questions, and the team has met the preconditions set out in the Term Sheet, the financing phase moves to the next stage, the closing, with the signature of the shareholders' commitment contract. One of the most important elements in the whole process is mutual trust and confidence, for the deal is the start of an intensive cooperation over a period of years.

Term Sheet (Preliminary Contract) between Venture Capital Example and Start-up Company

Set out below are the main elements concerned in a participation by Venture Capital Example - hereinafter VCE in Start-Up company - hereinafter SUC. Final agreement is dependent on the fulfilment of the conditions set out in this preliminary contract. This preliminary contract is based on the information contained in the project plan of ... (year), and of further documents included in the appendix.

Company: The legal form of SUC shall be ... The domicile of the Company shall be ... The applicable jurisdiction shall be ...

Placement and supplementary financing: VCE shall make available to SUC funds to the amount of ... ; this represents ... shares with a value of ... per share.

The founders may also make an investment of ... The same conditions shall apply for such an investment as for that of VCE.

In future financing rounds . . .

- Definition of decision-making process
- Determination or reallocation/adjustment of shares

Shares in the Business: On the assumption that both the founders and the investor make investments, regardless of the chosen legal form, the shares in the company shall be as follows:
Founders: ...%
Investor: ...%

Use of profits: Concerning the use of future profits, it is agreed that ...

Stock option plan: The board, the supervisory bodies and the employees shall be allocated up to ... % of the equity on the basis of a stock option plan (see the appendix for the applicable provisions). The special exercising rights for the stock options apply for ... years.

General management: Mr/Mrs...is appointed as general manager of the company

Management team: The founders of SUC are ...

Supervisory body: Until further provisions are made, the supervisory body of the company shall consist of ... members. VCE is entitled to appoint ... members, and SUC shall appoint ... members
A further ... people shall belong to the body, in the capacity of independent experts, who shall be appointed by agreement between VCE and SUC.

Investor rights agreement On closing, the partners shall agree on an investor rights agreement, that shall include the following points:

- Distribution of voting rights in the annual general meeting and provisions concerning the right of veto
- Partners' right of first refusal
- Provisions concerning joint sale
- Provisions concerning the recall of shares in the business
- Contractual agreements and applicability of the contract

Powers of disposal: For all disposals, transfers and sales of shares in the business, the following consensus-based decision-making process shall apply:

- ...

Right of first refusal: Should a partner wish to dispose of shares, he or she shall first offer those offers he or she wishes to dispose of to the other partners. Should the other partners take up this offer only in part, or not at all, the procedure shall be ...

Joint sale provisions: Should there be an interest on the part of third parties in purchasing shares, the procedure shall be defined in accordance with the following points:

- Provisions for the decision-making process
- Duration of the provisions

Provisions concerning patents and other projective agreements: Concerning the patents and other inventions made in the course of work performed for the company or in the company's area of activity and the company's resulting protective agreements, agreement is reached on the following:

- Rights and duties concerning the provision of information
- Property rights in the patents and agreements

Confidentially declaration: The founders, the investor, all members of the supervisory body, and ... shall maintain confidentially and shall sign an appropriate confidentially declaration in this regard.

Particular agreements: Mutual agreements have been reached on the following points:

- Penalties for contravention of agreements reached
- Negotiations with third parties
- Exclusivity, where appropriate
- ...

Closing: The closing of this transaction (hereinafter "closing"), on which both parties shall agree, shall be achieved by ... at the latest.

The following shall be regarded as preconditions for the closing:

- Availability and accuracy of documentation and information
- Approval process before signature of contact
- Conclusion of part-agreements (e.g., patents)
- ...

Costs: In the event of closing, ... shall bear all the legal costs and other expenses related to the conclusion of the contract.

VALUING THE BUSINESS

With their experience of company valuations, venture capitalists can quickly get a picture of what a company is worth, and what share in it they will be looking for. Venture capitalists thus go into negotiations with very clear ideas. Your management team is most unlikely to have access to such experience. So you will need to arrive at your own idea of what your business is worth, and consider how large the investors stake should be, and what form it should take. To do this, you will need to make your own estimates.

Venture capitalists' procedure

In assessing a start-up, venture capitalists usually apply the following criteria:

- Is the management team experienced, competent and ready to implement the planning and take personal risks?
- Is the market attractive and capable of expansion? Does the product provide a platform for further development?
- Is there a sustained competitive advantage, capable of further development?
- Are the strategy and the operational planning convincing?
- How far has implementation already progressed, and what are the initial results (e.g., patents or customers)?
- Is the expected return realistic and a subsequent sale possible?

The venture capitalist will review these criteria in detail, and decide how far your business meets each one of them. How much the business is worth will generally be decided highly pragmatically, on the basis of empirical values and the investor's current competitive situation. These values may vary widely, depending on the sector and the phase of its existence in which the start-up finds itself. *Exhibits 2* and *3* below show some sample figures for start-ups in the areas of information technology and life sciences. Note that these are values for fast-growing, successful businesses, that are operating in dynamic sectors and will quickly be ripe for a stock market listing. The dynamics in these sectors also mean that these values can change quickly. The range of values quoted show

that there can be wide variations from business to business. Depending on how well it meets the given criteria, a venture capitalist will locate the start-up at either the upper or the lower end of the typical range for the sector concerned.

Possible development of the value of fast-growing IT start-ups in Germany

Exhibit 2

Development phases Financing rounds	Seed	Start-up First stage	Expansion 2nd stage	Later stage	IPO or sale	Total
Value of business (pre-investment)						
€ million	-	1-40	30-160	100-430	170-1,000	170-1,000
Investment						
€ million	0.5-1	1-10	10-20	20-30	20-40	50-100*
Value of business (post-investment)						
€ million	-	2-50	40-180	120-460	190-1,040	190-1,040
Investor's share of the business	-	20-50%	30-50%	35-70%	40-75%	40-75%
Management team's share of the business	100%	50-80%	50-70%	30-65%	25-60%	25-60%
Value of management team's share						
€ million	-	1-40	20-125	40-290	50-620	50-620
Duration of the phase						
Years	1-2	1-2	1-2	1-2	-	4-8*

* Cumulated over the whole period

Source: McKinsey New Venture, Spring 1999

Possible development of the value of fast-growing Life Science start-ups in Germany

Exhibit 3

Development phases Financing rounds	Seed	Start-up First stage	Expansion 2nd stage	Later stage	IPO or sale	Total
Value of business (pre-investment)						
€ million	-	10-70	70-260	150-620	250-1,400	250-1,400
Investment						
€ million	0.5-1	10-20	20-40	30-50	40-80	100-190*
Value of business (post-investment)						
€ million	-	20-90	90-300	180-670	290-1,500	290-1,500
Investor's share of the business	-	20-50%	35-50%	40-70%	50-80%	50-80%
Management team's share of the business	100%	50-80%	50-65%	30-60%	20-50%	20-50%
Value of management team's share						
€ million	-	10-70	45-200	50-400	50-750	50-750
Duration of the phase						
Years	1-3	1-2	2-3	2-3	-	6-11*

* Cumulated over the whole period

Source: McKinsey New Venture, Spring 1999

Calculating the value of the business yourself

The value of a company is generally understood to mean the market value of its equity ("equity value"). You can get a first feeling of how highly venture capitalists will value your business from colleagues: talk to other management teams that have recently taken up capital. But you also need to do some calculations yourself. As start-ups are not listed on the stock exchange, their market value can only be defined indirectly, by means of a company valuation. Some investors doubt the value of such calculations. Pointing out that the figures they produce can raise unrealistic expectations - for, regardless of your calculations, your business is only worth what an investor is prepared to pay for it after the negotiations! Thus, the point of your calculations is not so much to define the "right" value for your business, as to get a feeling for the factors that determine its value. Work on the basis that the way is the goal.

Also, doing your own calculations will give your management team clarity at an early stage on what percentage of the business you will probably need to sell to "outsiders". You can work through the financing possibilities, and take alternatives into account. Lastly you will have a factual basis that will enable you to represent your position more confidently in the negotiations. But do not overdo your efforts here - in this phase, you need to devote your time above all to the business itself!

Both theory and practice combine various methods to value a company. Start-ups are frequently so dynamic that using one process only can easily lead to false conclusions. You should use:

- The Discounted Free Cash Flow method (DCF)
- Estimating with multiples

The mechanics of both types of calculation are shown in simplified form below, using a fictional new business in the IT sector *(Exhibit 4)*. The individual stages are presented in the separate boxes.

Figures for the sample IT business *Exhibit 4*

€ 000

Year	1	2	3	4	5
Free cash flow	-1,960	-660	-150	380	880
Net profit (annual surplus)	-1,580	-1,490	-640	340	905

Calculating with Discounted Free Cash Flows (DCF)

From an investor's perspective, it is not the fixed assets of a business (offices, equipment, etc.) that determines its value, but rather the cash flow that can be achieved with these assets. Cash is the means by which you pay investors for their investments. This requires a forward looking perspective, as can be seen from time to time on the stock exchange: a company's share price falls although it is currently successful - investors take the view that the future cash flow will be less than forecast. Net profit (or the annual surplus) itself is only of significance in determining value to the extent that it enables a more exact estimate of the cash flow.

In the DCF method, all the future free cash flows (see DCF box) are defined, discounted and added together. The result is the "entity value" - the value of the equity plus the debt. The value of the business - the "equity value" - is arrived at by subtracting the debt.

Company valuation using the DCF method

Exhibit 5

€ 000

* Assumption: free cash flow at end of year 5 is 1,100, annual growth rate in subsequent years is 16%.

Source: Business plan

Cash flows typically occur at different times, as shown in *Exhibit 5*. Simply to add them together would be much the same as adding up apples and oranges. Future values must be recalculated - discounted - to their current value (see chapter 8, pp 125 ff.). Applied to our sample business, discounting the future cash flows to the current value gives the company value of some € 2.5 million shown in the diagram.

The discount rate to be used can be a matter of controversy. In the start-up phase, it is mainly dependent on the profitability expected by investors, the risks of the business, and the returns from comparable enterprises. Venture capitalists often use the return they expect as the discount rate: depending on the development stage of the business, the industry involved and the known risks, this may be between 30% and 75%. In general, the higher the risk, and thus the expected return, the lower the current value of the business.

Venture capitalists justify such - apparently high - discount rates for reasons such as:

- Newly started companies are more risky
- Unlike shares in listed companies, shares in start-ups are not really tradable, and therefore not liquid
- They need to give the management team intensive support during the period of their investment
- The founders' forecasts are often over-optimistic and need to be revised.

So consider, before the negotiations, which of the risks set out in the business plan you have already been able to either avoid altogether or minimize by your actions as an entrepreneur.

The DCF method can be problematic for start-ups in the initial phase: new businesses typically start with negative cash flows and very uncertain forecasts, as there is no past history to fall back on. Apply it all the same, though: it will give you a better understanding of the assumptions implicit in your business plan, and the factors that influence the value of your business. By using it together with estimates using multiples, and the empirical values of your colleagues, you can get a clearer definition of the range in which the value of your business lies.

Part 4

In the subsequent growth phase, the DCF method described here will no longer suffice, as the capital structure (e.g., taking on debt), tax rate and growth rate of your business will increasingly change. You can find more information on a refined DCF methodology in, for instance, the standard reference work "Valuation: Measuring and Managing the Value of Companies" by Copeland, Koller, Murrin.

The Discounted Cash Flow method (DCF)

In the business plan, you have already calculated your cash flows. The DCF method uses these to determine the value of the business, using the total of the discounted cash flows minus the debt.

1. Determining the current value of future cash flows

- Decide the period for which you can make reasonably certain forecasts of your cash flow (forecast period). For start-ups this would typically be a period of 5 to at most 10 years.
- Determine the free cash flows for these years. These are the same as the operational cash flows indirectly derived for the business plan (see p. 148).
- Set a discount rate for each year that reflects the risk level. This rate should be reduced by 5-15% per year in subsequent years, as the initial risk level will fall continuously (e.g.: r1 = 65%, r2 = 55%, ...). At the end of the forecast period, the rate would typically not be more than 10-20%.
- To set the discount factor for each year, use the general formula:

$$\text{Discount factor} = \frac{1}{(1 + r)t}$$

where r = discount rate in percent and t = the year in which e.g. the cash flow occurs.

In our example, the discount factors for the first years are:

$$\frac{1}{(1+0.65)}, \quad \frac{1}{(1+0.55)^2}, \quad \frac{1}{(1+0.45)^3}, \ldots$$

- The current value of the free cash flow for each year is given by multiplying the free cash flow by the discount factor for the year in question.

The Discounted Cash Flow method (DCF) *(continued)*

2. Calculating the continuing value

- To take account of the cash flows after the forecast period, what is known as a continuing value is used. This is approximated with the following formula:

$$FW_t = \frac{FCF_t\ (1+ g)}{r\text{-}g}$$

where FCFt = free cash flow at the end of the last forecast year (in the example t = 5), r = discount rate, and g = annual rate of growth of the cash flow for the subsequent period (in the example 6%). As this continuing value applies for the end of year 5 or the beginning of year 6, it must be discounted with the appropriate discount rate (r) for year 5, so you should multiply the continuing value by

$$\frac{1}{(1.25)^5}$$

3. Determining the actual value of the business ("equity value")

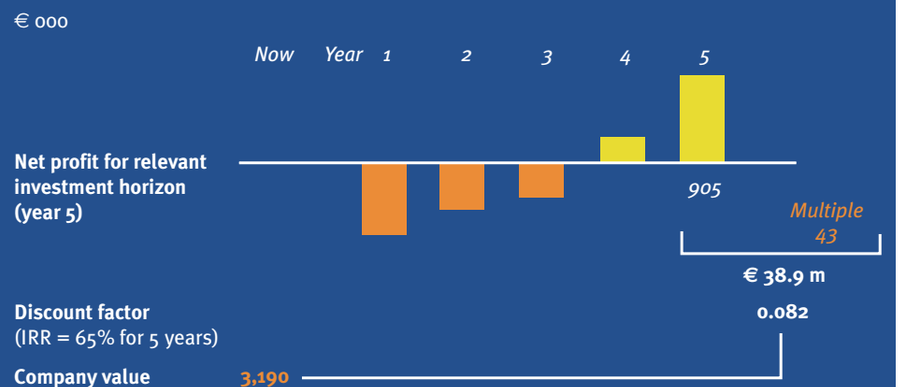
- The value of the business is the total of all the discounted cash flows during the forecast period plus the continuing value minus the debt.

Estimating with multiples

The value of a business can also be estimated with the aid of comparable values from already established businesses, known as multiples. One possible such comparable value is the price/earnings ratio (PER), others are listed in the "multiples" box on page 203. Usually, when using this method, you multiply the appropriate value for your business (e.g., the net profit) with the corresponding multiple. This gives you the value of the business ("equity value") at the end of your investor's investment horizon known as the exit point (the investment horizon is typically between 5 and 10 years). This value is then discounted to give the current value of the business.

Company valuation using multiples

Exhibit 6



Source: Business plan

In the case of our sample IT business, there are two comparable companies in the market, with PERs of 37 and 49. The average of these two values, 43, is used for the calculation *(Exhibit 6)*. By way of comparison: the average value (median) of the PERs on the Neue Markt (Frankfurt) at the end of 1998 was about 40. Multiplication by the net profit in, for example, year 5 produces a future value for the business of about €39 million in year 5. As with this method only one value is discounted, the discount rate must reflect the total risk; in our example, the expected return is 65%. Discounted, the current value of the business is some €3.2 million.

Multiples

The value of the business is often also approximated on the basis of comparable values from established businesses, known as multiples. Frequently used multiples are the price/earnings ratio (PER) and the market value to sales ratio.

1. Determining the future value of the business using multiples

- Search the market for companies as like your business as possible, in terms of sector, product range, risk, growth rate, capital structure, and cash flow forecasts. Good sources are the annual reports of listed companies, or the analysts' reports of banks.
- For the comparable company, form the desired multiple for the year in which it was listed on the stock exchange: for example the PER. It is a necessary condition for using the PER that the company is profitable.

$$PER = \frac{P}{G}, \text{ where } G = \frac{\text{net profit}}{\text{no. of shares}} = \text{earnings per share, and P = current stock price}$$

If you have identified several companies, you can form an average. Consider for what reasons, if any, your multiple might be higher or lower in the year of stock exchange listing and if necessary, adjust the multiple.

- Multiply the net profit shown in your business plan for the time of the investor's exit by the comparable PER. The future value of the business (FV) is PER x net profit.
- Alternatively, use other multiples, e.g.

$$FV = \frac{\text{Market value of the equity}}{\text{sales i}} \text{ x sales j,}$$

where i = comparable business and j = your business or

$$FV = \frac{\text{Market value of the equity}}{\text{Average no. of i "clicks" on the homepage per week}} \text{ x no. of j "clicks" per week}$$

Possible multiples result from the relationship between the market value of the equity and the number of customers or of staff, or the R&D costs.

Multiples *(continued)*

2. Discount the value of the business to current value

- The calculated figures represent the value of the business in the year of exit of your investor (e.g., year 5). Set a discount rate that reflects the risk involved (r), and calculate the appropriate discount factor, e.g.

$$\frac{1}{(1+0.65)^5}$$

- The current value of the business ("equity value") is reached by multiplying the calculated future value of the business by the discount factor.

Synthesis of the various values of the business

The calculations produce the following values for the business:

Calculated equity value

Discounted cash flow	c. € 2.5 million
Multiples with average values of comparable business	c. € 3.2 million
Average of both processes	**c. € 2.9 million**

The range of values (post-investment) for the business of € 2.5 - 3.2 million thus calculated provides a good basis for discussions with investors. Such a value is realistic to the extent that we assume that we are dealing here with a new company, with little experience, and that has so far gained few customers.

How to get a better feeling for figures

- Calculate the value in several different ways to get a clearer idea of the range of values, and compare your results with experience from your sector
- Play through various scenarios, taking account of the optimum development track for the business ("best case"), and also the delays or other obstacles involved if everything possible goes wrong ("worst case")
- Where possible, check your results with experts
- Talk to other management teams in comparable situations who have already negotiated with investors
- If your value is at either the upper or the lower end of the spectrum, consider why this is so.

Bear in mind that the worth of such a valuation depends largely on the plausibility of your assumptions. What assumptions are implicit in your calculations? If your assumptions for the first round of financing are too optimistic, and you are later unable to meet the expectations you have raised, you will lose your credibility, which will be a major obstacle in subsequent financing rounds.

Calculating the investor's share

Mathematically speaking, the investor's share is calculated on the basis of the size of the investment (need for funds) and the current value of your business, using this formula:

$$\frac{\text{Investment}}{\text{Value of business}}$$

Let us assume that an investor is interested in providing the first tranche of capital required by our sample business, € 1 million. What share of the business might he expect in return?

Part 4

Use a good accountant or book-keeper, and a good lawyer, and listen to their advice. Get help in those areas in which you aren't familiar

Martha Johnson
Owner, Suppers Restaurant

Investors' share

Post-investment value of the business	€ 2.9 million
Investment	€ 1 million
Investors' share	$p = \frac{\text{Investment}}{\text{Post-Investment value}} = \frac{1}{2.9} = 34\%$
Management team's share	1-p = 66%

Different approaches by venture capitalists and the management team in calculating the shares can give rise to misunderstanding. The venture capitalist generally calculates the value of the business before the investment - known as the "pre-investment" value. What the venture capitalist is really interested in is what the business is worth on its own. Then he adds on the investment and thus arrives at the "post-investment" value.

You, on the other hand, will arrive automatically at the post-investment value if you use the DCF and multiples processes described here in your calculations. This is because your cash flow and net profit forecasts are based on the assumption that the necessary capital - your own and that of outside investors - is available, and that all the necessary and planned realization steps, such as purchasing equipment or carrying out publicity campaigns, can be implemented. Be sure that the same value is being used by both sides in any discussion.

Some investors will offer you an investment based on performance if you achieve the agreed targets ("milestones"), the originally calculated management share applies. If your business is less successful, the investor's share will, after a review, be increased.

There is one thing you should not overlook in all these calculations. Ultimately, the value that matters is the one you agree on with your investor, regardless of your previous calculations. The calculations enable you to get a feeling for the value of your business, and provide a basis for your arguments. Be self-critical: after you have done the calculations, ask yourself whether you would be prepared to make an investment of € 1 million in return for, for example, a 34% share of your business.

THE NEGOTIATION

You have prepared your business plan, and your estimates of the value of the business and the capital you need have given you a clearer idea about participation by investors. Now, you can approach investors: if they are interested in your business, they will have their own idea of its value. Neither of the values arrived at should be regarded as absolutes. They simply provide starting points for what can often be a tedious negotiation process, in which the differing interests can be brought together.

Negotiating with investors is sometimes described as a race between greed and fear - on the one hand the management team's fear that they will not be able to get the finance they need, and on the other, their wish not to give away too much of the business too quickly and too cheaply. Raising capital in stages is thus advantageous, though it involves repeated rounds of negotiation. But you should at all costs avoid playing off the different interested investors against one another. Talk to several investors, though; these discussions will quickly show you where you are being realistic, and where you may have got somewhat "carried away".

Essential elements of the negotiations are soundly based arguments and the personal conviction of the management team, the urgency of their need for capital, the maturity of the business idea (e.g., existing customers, patents), and the return expected by the investor. Lastly, there are two decisive factors:

1. How much "demand" is there for your business? This depends on how many investors you have been able to interest in your business, and how realistic your expectations of them are. A convincing business plan, presented by a committed and competent management team, is the most effective means of communication.

2. How far will you be able to convince investors of your intentions? When preparing and during the negotiations, put yourself in your discussion partner's position: the better you understand his interests, the more likely you are to be able to reach a solution acceptable to both sides. Be ready to compromise. A commitment by an investor will generally be for 5-8 years, so mutual confidence is essential. This is particularly the case inasmuch as your investor's advice and support (the "smart money") will ultimately be at least as important for your business as his financial contribution.

A deal can become very complicated; it is always a good idea to make contact with experienced entrepreneurs, and get expert advice from accountants, tax specialists and lawyers - particularly once the Term Sheet is signed. Do not be afraid of complex constructions: there is usually a legitimate reason for them - such as tax breaks, or control over the funds invested, but make sure that you are absolutely clear about all the details of the deal.

RAISING CAPITAL FROM ADDITIONAL INVESTORS

Your business will probably need to raise further capital in the years ahead, in order to finance its subsequent development. Raising capital is thus not a one-time exercise - there will be further negotiations and capital increases in the growth period.

For further capital increases, you will need to revalue your business, define the shares, and agree with the investor on a contract.

Procedure for further capital increases

The assumption is that, after eighteen months, our sample business will need to raise a further € 2 million from another investor.

- Redefine the relevant values - using the free cash flow for the coming years, the net profit and sales - and the discount rate for the intended investment horizon. This will take the development so far into consideration. Calculate the current value of the business as described.
  Example: The recalculated values for the forecast period procedure a post-investment value for the business of about € 10 million.

- Determine the shares in the value according to the investment involved.
  Example: The business is worth € 10 million, € 2 million of this belongs to Investor B. Of the remaining € 8 million, € 5,3 million belongs to your management team (previous share of 66% times 8 million) and € 2,7 million to Investor A.

- Determine the percentage shares.
  Example: Investor A has 27 % (€ 2.7 million of € 10 million), Investor B 20 % (€ 2 million of € 10 million), and you have 53%.

Repeat this procedure for each subsequent increase of capital.

We know we will have to give up a significant stake in the company, but we're willing to do it on the theory that a small piece of a big pie is better than a big piece of a small pie.

Larry Leigon
President, Ariel Vineyards

Your share of the business decreases with each further increase of capital. After the second round, you only have 53% of the business, for example. Do not be alarmed by this: this smaller percentage has a greater absolute value - the investments are financing your growth

Checklist for valuing the business and raising equity

- ❑ Do your ideas and calculations answer the following questions?
- ❑ Who are the investors you want to deal with?
- ❑ Can the investor achieve his target return, and satisfy his other interests with your business?
- ❑ What is a realistic value for your business? What assumptions are the calculations based on?
- ❑ What investment will you get for what percentage of your equity?
- ❑ What additional contribution can the investor make, apart from his financial commitment ("smart money")?
- ❑ What are the contractual arrangements for the investor's exit, and for further increases of capital?

Appendix

The hardest thing to see is what is in front of your eyes.

Goethe

EXTENDED TABLE OF CONTENTS

GLOSSARY

Agent	Intermediary in **distribution**/sales who does not belong to one's own firm; as a rule, an Agent also distributes products or services from other suppliers
Asset	Items belonging to a firm that have a commercial or exchange value; typically classified as **Current assets or fixed assets**
Balance sheet	A financial statement of account that shows the **Assets and liabilities** of a company on a given day
Bank limit	Credit line commitment up to a maximum amount; interest is charged only on the amount actually borrowed
Bankruptcy	Cessation of all payments by a company as a result of its inability to pay its **Debts**, followed by **liquidation** of the company's **Assets**
Best case	Business scenario based on the assumption that the majority of events affecting the targeted result will be positive
Book profit/loss	Profits (losses) resulting solely from adjusting accounting records to reflect the increase (decrease) in the value of an **Asset or liability**
Bookkeeping	Function or technique applied to measure and describe the financial position and success of a company
Break-even	In the context of a **start-up**: point in time when positive **Cash flow** is achieved; generally: point in time when the profit threshold is crossed and a profit is realized
Burn rate	Speed at which money is spent; e.g., expressed in euro's per month
Business angel	In the context of a start-up: a wealthy individual who provides venture capital; non-professional venture capitalist
Business plan	Report or working paper that clearly and concisely presents all aspects of a new company that are important for investors; information about the product idea, the market, the people who will manage and run the business, growth prospects, financial analyses, etc.
Business system	Description of the individual activities of a company and their interdependencies; the business system shows which work is performed in what sequence to produce a product or provide a service

Call centre	Office with a telephone bank capable of handling a large volume of calls; typically set up and run to accept orders resulting from direct sales (e.g., mail-order businesses) or to provide information and make reservations (telephone companies, airlines)
Cash flow	Net change in a company's cash account during a defined period; takes into account all changes in cash in operations, investments, and **financing**
Competitor analysis	Observation and comparison with rival firms in the same sales market with the aim of understanding their strengths and weaknesses more thoroughly
Copyright	A form of protection of intellectual property that prohibits unauthorized imitation of an idea, a name, or a product
Current assets	**Assets** that can be easily converted to cash or cash equivalents in the normal course of business activity
Current liabilities	Also referred to as short-term **Debt**; debts or other obligations that must be repaid within a business year (creditors, open accounts)
Customer segments	Distinct customer groups (= segments) within a market that each have common distinguishing features in categories such as geography, sociodemographics, or behaviour, e.g., preferences
Customer value	Utility (or benefits minus price) of a product offering for a customer as defined by supplier or perceived by customer or both
Debt	External **financing**; outside capital made available to a company in exchange for fulfilment of an obligation, e.g., repayment with interest; types of **debt** are distinguished by the source of funding and maturity (due date) of the obligation, e.g., short-term and **long-term debt**
Depreciation	Reduction in the book or market value of an **asset**; e.g., annual **depreciation** of computer hardware
Differentiation	**Marketing** concept denoting the differences between the features, advantages, and benefits of similar product offerings, i.e., how competing products and services differ from one another
Direct mail	Method of approaching customers by mail (in contrast to advertisements in the print or electronic media); in order to send direct mailings to a targeted group of recipients, the addressees are typically classified and selected in accordance with specific demographic criteria

Distribution	Planning, implementing, and controlling the transport of products and services from their source to a customer
Distribution channels	Physical path that a product moves along from the supplier to the customer
Early stage	In the context of **start-ups**: phase in the development of a company from the founding of the company to market entry and initial market success
EBIT	Earnings before interest and taxes
EBITDA	Earnings before interest, taxes, depreciation, and amortization
Equity capital	Pure assets of a company: assets minus debts; equity capital consists of capital stock, statutory reserves, other open reserves, profit brought forward, and hidden reserves
Exit	In the context of a start-up: divestment; sale of shares in a business and realization of profits by investors
Exit strategy	Investor's plan for realizing a profit on an investment
Expansion phase	Further intensive growth of a (new) company, e.g., after its initial successes on the market (for new companies, this phase follows the start-up phase)
Extraordinary income	Profit from sources other than the company's stated business, e.g., from investments, the sale of machinery at a price above book value, etc.
Financial planning	Analysis of the financial situation of a company and forecasting-/estimating the company's future financial development, e.g., capital requirement, depending on the actions taken by the company
Financing	Obtaining or providing financial resources or capital for a project or business
Fixed assets	**Assets** comprising durable goods for recurrent, successive, or permanent use
Franchising	Sales and licensing system in which self-employed franchisees use bran name, merchandise or services provided by the franchiser. The franchiser determines business policy; the franchisee pays a licence fee
Gantt chart	Diagram showing the course of a project over time; the sequence and duration of the various project activities are represented as bars
Going public	See **Initial Public Offering**

Gross margin	Surplus amount remaining from sales proceeds or revenues after deduction of the costs directly relating to the product or service offering; often expressed as a percentage of **sales revenue**
Guaranty	A promise by the guarantor to answer to the creditor for the **Debt** of another if the debtor defaults; (sometimes spelled guarantee, which is the more universal term both for the act of giving a security and for something given or existing as a security)
Hard money	Capital that must earn a return, e.g., **venture capital**
Hurdle rate	Minimum return **(internal rate of return)** that must be earned so that an investment is attractive (venture capitalists typically expect 30-40%)
Income or earnings	Budgeted expenditure and projected proceeds within a defined period target (usually 1 year); difference = profit (loss)
Income statement	Also called a profit and loss statement; presents the expenditures and receipts (both gross) within a defined period (usually a year)
Informal investor	In the context of a **start-up**: a wealthy individual who provides **venture capital**; non-professional venture capitalist
Initial Public Offering	Also referred to as IPO; first occasion on which shares in a company are registered ("listed") on a stock exchange and publicly offered for sale, i.e., the public at large is given the opportunity to invest in the company
Internal auditing	Function in a company that reviews financial statements (**Balance sheets**, profit & loss statements, etc.) to determine whether they conform with the accounts prepared by **Bookkeeping**, whether accounting and **Bookkeeping** are performed satisfactorily, and whether the financial statements are in conformity with the relevant standards and regulations
Internal rate of return	Also referred to as IRR; discount rate at which the **present value** of the future **Cash flows** of an investment equal the cost of the investment
IPO	See **Initial Public Offering**
IRR	See **Internal rate of return**
Leasing	A type of rental contract for usage of equipment, tools, and real estate in which the lessor remains the owner, but grants the lessee the right to use them in return for rental payments
Leverage	Degree of a firm's indebtedness, usually expressed as the ratio of **Debt to equity** in a firm's capital structure

Liability	Description of the sources of capital and the associated repayment obligations of a company
Licence	Contractual authorization to make or produce a **patented** product or service, usually in exchange for a licence fee
Licence fee	Amount of money charged in exchange for a **licence**
Liquidation	Sale of **Assets** of the company, followed by repayment of **Debt** and dismantling of the company
Liquidity	Ability to meet payment obligations when they fall due, e.g., by converting **Assets** to cash or cash equivalents
Loan covenants	Conditions, put on the extention of a loan, such as maximum leverage, minimum earnings margins, minimum liquidity. When a **covenant** is broken, the bank can call the loan.
Long-term debt	**Debts** that do not have to be repaid within a business year (**mortgages**, multi-year loans)
Make or buy	Decision whether to produce a product or service in one's own company (make) or to purchase it from others (buy)
Margin	Difference between sales price and total production cost (in manufacturing) or cost of sales (in trading)
Market analysis	Analysis of supply (or "purchasing") and sales markets with the aim of determining whether and how a given market accepts a product
Market penetration	Percentage of the number of customers in the target market that use your product or service
Marketing	Canvassing of markets to initiate and complete (exchange) transactions that satisfy the buyers' needs; in many cases, a company function (the **Marketing** Department), often also a company philosophy that orients a company's activities systematically to the requirements of the market
Mezzanine	Funding sought or obtained mid-way in the development of a new company; commonly refers to the last **round of financing** before an **Initial Public Offering**
Mortgage	**Debt** instrument giving a creditor a legal right to or interest in the debtor's property as security for the repayment of a loan, e.g., given to a bank by a borrower; (having a legal interest in another's property is also referred to as holding a lien on the property)
Net income	Profit after deduction of all expenses and taxes
Nominal case	Assumption of the most likely business scenario to the best of one's knowledge ("normal case"); also often referred to as the "base case"

Normal case	See **Nominal case**
Operating result	Profit from the ordinary business activity of the company = profit minus **extraordinary income**
Patent	Legal protection of intellectual property; protection can be obtained not only for products, but also for processes; in the latter case, the products produced with the process are also protected from unauthorized imitation by the patent; a company can exploit a patent itself or licence it to a third party
Payback period	Time elapsed from an investment is made until all negative **Cash flows** relating to an investment are compensated for by positive **Cash flows**
Penetration strategy	Strategy aimed at achieving a defined **market share** referred to as the "target penetration" level, e.g., by introducing a new product at a low price (contrast with **"skimming"** strategy)
Positioning	Concept from **Marketing**; refers to where and how a product or a company is or should be placed from the customer's perspective, e.g., with respect to various **Customer segments** or in comparison with competitors
Post-money valuation	Value of a company after a new **round of financing**
Pre-money valuation	Value of a company before a new **round of financing**
Present Value	Value today of a future payment or stream of payments, discounted at an appropriate discount rate
Profit mechanism	System whereby a company earns its profits; examples: buying and selling by a trading company; **franchising** by a fast-food company
Profitability	Earnings of a company in relation to **sales revenue** or to capital employed
Promotion	Materials and activities intended to communicate the value of a product or service to customers to induce them to buy it
Rollover credit	Medium-to-long-term unsecured loan for which the interest rate charged is adjusted to the prevailing rate at regular intervals
Rounds of financing	Steps or stages a company goes through to obtain outside capital
Sales channel	There are various forms: direct sales, retailing, agency sales, **franchising**, wholesalers
Sales revenue	All money (earnings, proceeds) that a company generates from the sale of products or services
Seed money	Funds to support a **start-up** early in its existence **(seed phase)**
Seed phase	First stage of development of a company, usually before its legal founding, in which the business idea is developed
Sensitivity analysis	Description of the effects of possible changes in revenues and costs on the overall profitability of a project or a company
Skimming	Pricing strategy in which price is initially set at a high level to obtain a high profit; is mainly used for new products or services for which there are few alternatives for the customer (typically contrasted with a "penetration" pricing strategy
Small and medium	Class of companies with up to about 100 employees sized businesses
Soft money	Capital provided without obligation to repay it with interest; usually from family and friends, the government, and charitable foundations
Start-up	Phase immediately after the founding of a company, often also refers to a growth company ("a start-up"); the start-up phase concludes with an **Initial Public Offering** or with the sale of the company
Start-up phase	See Early stage
Substitute	Dissimilar products or services that meet the same customer requirement or need
Trademark	Protected name, symbol, or combinations thereof referring to a protectible product, service, or business (monopoly usage)
Unique selling	Also referred to as USP; concept from **Marketing** denoting the winning proposition sales argument or the special quality of the product or service that is perceived by customers as offering more **Customer value** than competing products
USP	See Unique selling proposition
Velocity	Speed at which the **Business plan** is implemented: "high velocity" gives a new product or business an advantage over competitors
Venture capital	Funding from investors for the **financing** of new, fast-growing companies; also referred to as risk capital
Venture capital fund	Professionally managed funds from which venture capitalists finance their investments
Win-win situation	Circumstance in which all parties or companies gain or obtain a fairly distributed benefit
Worst case	Business scenario based on the assumption that the majority of events affecting the targeted result will be unfavourable

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