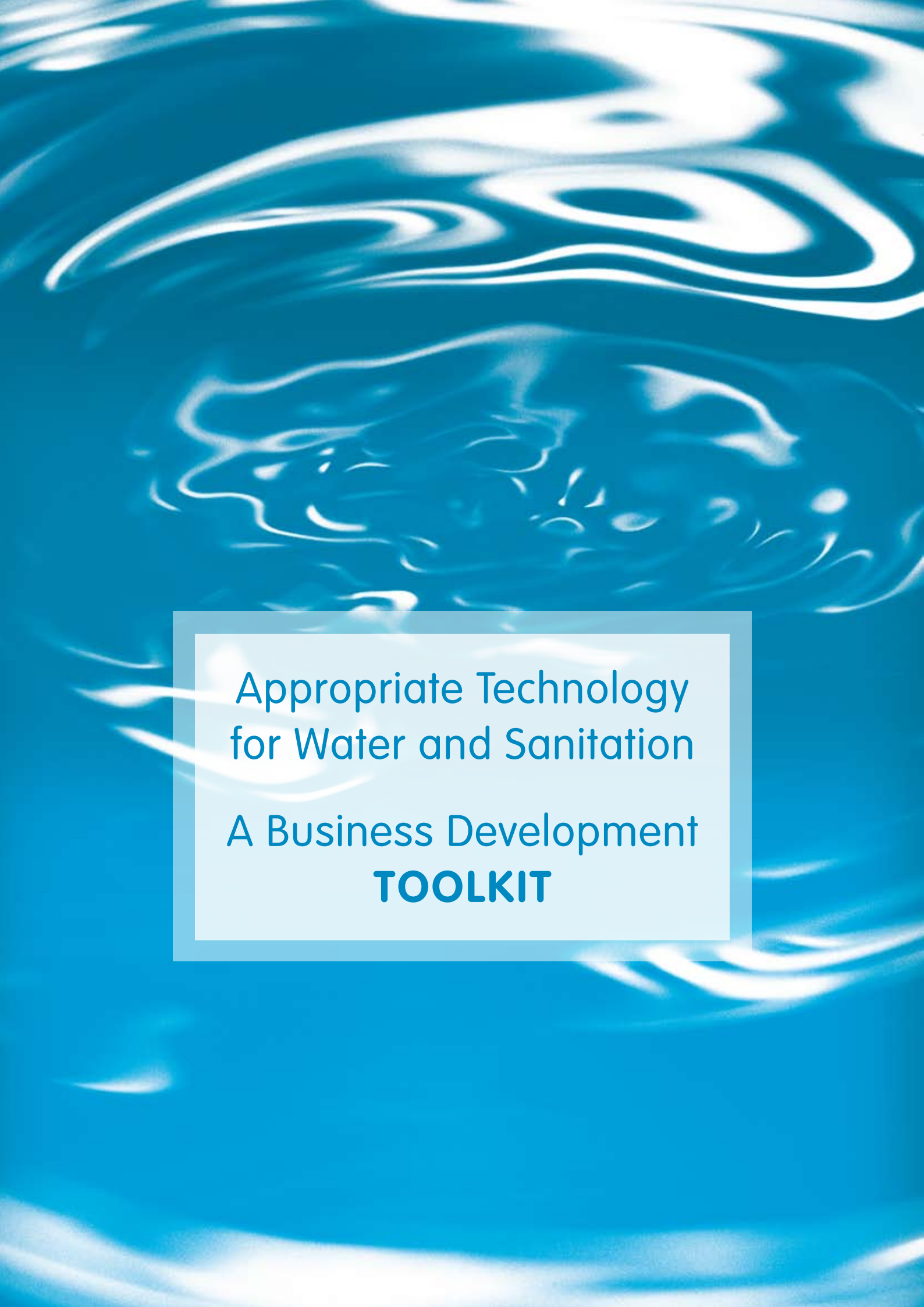


Appropriate Technology for Water and Sanitation

A Business Development **TOOLKIT**

Initiated by

AT@Work

Developed by

aidenvironment

Financed by

PARTNERS VOOR WATER
Bundeling van krachten

Executive summary

A Business Development Toolkit

Appropriate Technology for Water and Sanitation

Water and sanitation problems are primarily concentrated in areas where people live in extreme poverty, on an income of less than $1 a day. Are viable solutions available for such difficult circumstances and if so, how can they best be implemented? In addition to the more traditional development aid programs, private companies are now finding ways to combine poverty alleviation with sound entrepreneurship. By adapting their products and their strategies to markets in developing countries, they are able to serve the poorest of the poor at “the bottom of the pyramid” (BOP).

Can this approach be applied to water and sanitation products? If so, how can they best be developed and launched onto BOP markets? Aidenvironment and BiD Consult, two Dutch consultancies, have gathered answers to these questions while supporting four Dutch entrepreneurial startups in India.

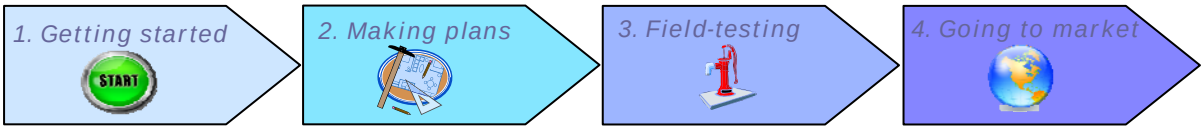
The lessons and insights gained from these projects have been collected in a Business Development Toolkit. Besides assisting entrepreneurs, the Toolkit will help development organizations and financial institutions to comprehend what it takes to launch a business on these markets. The Toolkit explains the principles of doing business at the bottom of the pyramid, offers a step-by-step business development approach, and provides practical tools, tips and background information, all based on and illustrated by the experiences of four Dutch entrepreneurs.

Principles of Appropriate Technology

To be successful on BOP markets, products must be purpose-built or adapted to local needs and conditions. In other words, they must be “appropriate technologies”. Appropriate Technology (“AT”) is defined as “technology that is designed with special consideration to the environmental, ethical, cultural, social, and economical aspects of the community it is intended for. AT typically requires fewer resources, is easier to maintain, has a lower overall cost, and has less impact on the environment.” The four Dutch entrepreneurs have found their way to the BOP markets for water and sanitation products in India. Their experience has shown that certain key conditions must be met for the product to be successful: physical and financial accessibility of the product, easy and low cost operation, and availability of spare parts.

Business development step by step

The experience of the four entrepreneurs provided the input for the business development process presented in the toolkit and offers an insight into the essentials of doing business at BOP markets. It is a four-step approach that will guide an aspiring entrepreneur through the preparation, trial and launch of his product onto the market. Every step provides information about four major elements: product, market, business and finance.



Step 1: Getting started

The first step is to translate an idea into a prototype, roughly define its potential market, and start thinking about a possible business set-up and how to finance the project.

Step 2: Making plans

In this second step the ideas set out in step 1 become a reality. The prototype is developed into an “appropriate” product. Based on targeted (field) research, a marketing strategy is identified, the business is further developed and financial requirements are addressed.

Step 3: Field-testing

Before actually launching a product on the market, the product and plans have to be tested in a real-life market environment. Based on the results of this trial and relevant feedback, the business plan is adjusted and finalized.

Step 4: Going to market

Thorough preparation and the trial results enable a favorable launch. Once the business is up and running the focus will shift to ongoing further refinement of the product and the marketing strategy, structuring of the organization and long-term financial management and control.

Lessons learned in India

The toolkit is based on experience in the water and sanitation sector in India, but will also hold for other markets in other developing countries. The enterprises showcased in the toolkit are at different phases of development. Their products also differ, varying from small household appliances to technologies for small communities and villages. This broad perspective has revealed key factors for success: the need to focus on product affordability, close cooperation with local entrepreneurs and NGOs, and creative distribution solutions in order to reach the consumer.

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The toolkit is by no means an end product. It will evolve and expand over time, providing new business initiatives and projects focused on BOP markets with practical tools and information. It will also offer entrepreneurs, development organizations and financial institutions an opportunity to share expertise and experience.

AT@Work

Appropriate Technology for Water and Sanitation
A Business Development Toolkit

Acknowledgements

The outline and content of this toolkit has been peer reviewed and commented upon by a wide variety of interested organizations and individuals. The creators of the toolkit would like to thank all the people and organizations that have contributed to this toolkit, in particular Partners voor Water, for their generous support, and the participating innovators: Basic Water Needs India, Clean Water Now!, Aqua-Aero Water Systems and the Ecosan participants Waste, Fodra, Scope and Mythri for their spirit and insightful experiences.

The project has also benefited from the continuous participation of Aqua4all, Zonnewater, Ecological Management Foundation (EMF), and IRC International Water and Sanitation Center (IRC). Aqua4all and EMF have also been important initiators in bringing this toolkit to life. Furthermore, we have borrowed from and referred to many different sources. The Novem *Innovatie Toolkit* and McKinsey & Company's handbook *Starting Up* have been especially valuable.

PARTNERS VOOR WATER
Bundeling van krachten

Partners for Water Program

"Strengthening the international position of the Dutch water sector by uniting forces"

Partners for Water is a program that aims to strengthen the international position of the Dutch water sector by uniting forces (private sector, public sector, not-for-profit sector and knowledge institutes). Public-private cooperation can give a powerful impulse to the water sector by developing innovative solutions to the world's water problems. The program runs from 2005 to 2009 and focuses on policy alignment and on cooperation between government, companies, knowledge institutes, and NGOs through network meetings and information exchange.

Further reading: www.partnersforwater.nl

The toolkit was developed by:

BiD Consult
BiD Consult provides business consultancy on New Business Development to entrepreneurs that are active at the Base of the Pyramid. The initiative is started and owned by Mantijn van Leeuwen and operates as a not for loss private company, operating from an ideological basis.

Aidenvironment
Aidenvironment is a value-driven, independent not-for-profit consultancy based in Amsterdam, The Netherlands. Aidenvironment advises private and public organizations in solving sustainability issues. Sustainable business development is one of the core services of Aidenvironment.

Introduction

Access to safe drinking water and basic sanitation[1] is still a problem in many parts of the world. More than 1 billion people – that is one in six – have no choice but to use potentially harmful sources of water. Procuring adequate water is a daily time- and energy-demanding task, especially for women and children. The magnitude of this challenge will only increase in the face of population growth, conflict situations, rural to urban migration and the predicted effects of climate change.

In 2000, procuring access to safe drinking water has become a major goal of countries around the world. By 2015, the number of people that lack access to safe drinking water and proper sanitation must be halved.

Exhibit 1: The World Economic Pyramid (World Resources Institute, www.wri.org)

Water and sanitation problems are primarily located in areas where people live in extreme poverty, on an income of less than $1 per day. Can one find sustainable solutions in such difficult circumstances and what are the best ways to implement them? In addition to the more "traditional" development aid programs, multinational companies have found ways to combine poverty reduction with good business sense. They have adjusted their products and their strategies to markets in developing countries, the "bottom of the pyramid" (BOP) markets. These markets represent a vast potential with a total population of 4 billion people. And although individual incomes are low, the collective purchasing power is actually quite large. Many companies have been able to reach these new customers, also the poorest, with success. More and more, the idea of running a profitable business in developing countries has become acceptable.

Millennium Development Goals (MDGs)

In 2000,189 nations committed themselves to the Millennium Development Goals (MDGs). The MDGs stand for a renewed commitment to overcome persistent poverty and address many of the most enduring failures of human development. One of the targets defined within these MDGs is halving "by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation."

Further reading:
www.unicef.org

Is this approach applicable to water and sanitation products? If so, how can they best be developed and introduced on the BOP markets? Aidenvironment and BiD Consult, two Dutch consulting firms, have collected and consolidated answers to these questions while supporting four Dutch entrepreneurial startups in India. Sponsored by the Partners for Water program, they advised the entrepreneurs on how to adapt their products and business plans to the peculiarities of these markets, assisted them in making contacts and developing partnerships, and facilitated the actual market launch.

The businesses of all four entrepreneurs are developing well and their products are now in different phases of development, ranging from a plan to raise an eco-sanitation company to the launch of a low cost ceramic

[1] The process of sourcing, collecting and processing of human excreta.

filter, ready to scale up. Based on their experiences, one can say that selling water and sanitation products in developing markets can be a profitable and worthwhile undertaking.

The lessons and insights gained during these projects have been collected and transformed into a “business development toolkit”, a powerful instrument that we expect will help many aspiring entrepreneurs. Although the toolkit is based on experiences in the water and sanitation sector in India, it might also hold for other sectors and markets in other developing countries. Besides helping entrepreneurs, the toolkit will be useful for NGOs and financial institutions, helping them to understand the intricacies of doing business in BOP markets.

The toolkit comprises four different sections. Section 1 explains the key success factors for doing business at the bottom of the pyramid and what it means to make products and business models appropriate to these specific markets and customers. Section 2 presents our four-step model for introducing a product and starting a business. Section 3 provides background information on doing business in the water and sanitation sector in India and describes the experiences of the four Dutch entrepreneurs. Finally, section 4 contains relevant background information and gives an overview of all the tools, instruments, and references.

The toolkit is by no means an end product. It will develop and grow over time, providing new business initiatives with practical tools and information, and offer an opportunity to share expertise and experiences.

1. Appropriate Technology for Water and Sanitation: Basic Principles

Basic concepts

Water and sanitation

When we talk about water and sanitation, it is good to specify what we mean.

- *Water* can be used for drinking, cooking, processing foods and beverages, cleaning, irrigating, and washing. In this toolkit, we cover water related to household consumption
- *Sanitation* refers to the sourcing, collecting and processing of human excreta.

Related to water and sanitation is hygiene, which is a very important condition for health, the safe use of water and the proper use of sanitation.

Household and community products

When we talk about products it is important to understand the difference between household and community-based products, services and solutions:

- Household-based solutions are products or services that are used by households: the end users are members of a household. The products and services are often possessed by families or individuals.
- Community-based solutions are products or services that are used by a community: the end users are members of a community (which may be a village or slum, or parts of these). The products or services are possessed and/or operated by the community.

For example, the ceramic filter produced by Basic Water Needs India, one of the entrepreneurs involved in the toolkit, is a typical household product, while the WaterPyramid produced by Aqua-Aero WaterSystems B.V. is a typical community-based product.

Centralized and decentralized

Products or services solving water- and sanitation-related issues are generally separated into centralized and decentralized solutions/products. Centralized products often involve complex and extensive water and sewage systems. Decentralized products are small-scale stand-alone products and are not connected to a system. This toolkit focuses on products providing a decentralized solution.

Further reading:
www.irc.nl
http://en.wikipedia.org/wiki/Water_supply_and_sanitation_in_India

Appropriate Technology

Definition

It is becoming increasingly clear that low-income countries offer a potentially interesting market, also referred to as the “bottom of the pyramid” (BOP). Many innovative entrepreneurs and organizations have developed affordable and sustainable products or projects for this market. However, introducing products on these markets has proven to be difficult, usually because it requires a fundamentally different approach to product development, sales and distribution, pricing, service, and maintenance than in high-income countries. To be successful, products must be fully purpose-built or adapted to local needs and conditions; in other words, these markets require “appropriate technologies”.

Appropriate Technology (AT) is defined as “technology that is designed with special consideration for the environmental, ethical, cultural, social and economical aspects of the community it is intended for. With these goals in mind, AT typically requires fewer resources, is easier to maintain, has a lower overall cost, and has less impact on the environment.”

Appropriate Technology (“AT”) Protocol
Together with different stakeholders from the Dutch water and sanitation sector Aqua for All has developed an “Appropriate Technology” protocol. According to this protocol, criteria for determining whether a technology can be considered appropriate are:

- Accessibility (for low-income individuals and communities)
- Functionalit y
- Quality
- Sustainability / Enabling environment (having the least possible ecological impact)
- Manageability

Tool 1: AT protocol
This tool can also be found on the website of AT@Work (www.atatwork.org)

Key success factors
The four Dutch entrepreneurs involved in this toolkit have found the way to their markets for water and sanitation products in India. But their success did not come easily; it required a lot of hard work, perseverance, ingenuity and willingness to learn. Based on their experiences, certain aspects of the products can be identified that are essential for success:

- Physical accessibility of the product. BOP markets lack proper infrastructure. Smart distribution of the product using existing networks of partners is a critical success factor when launching a product on BOP markets.
- Financial accessibility of the product. Although the price per liter of clean water produced is affordable, the up-front investment can be a big hurdle. Low cost (and often local) production and low cost operational usage are important conditions to meet.
- Easy operational usage of the product. Environmental circumstances in developing countries are often harsh and users are not well educated. Products must be robust and easy to operate.
- Availability of spare parts. When broken, products must be easy to fix by local craftsmen. Replacement of specific parts (like filters) must be easy to perform. Setting up an effective and efficient after-sales organization is an important condition for success.

Interesting examples of Appropriate Technologies and products can be found in the “Smart Solutions” booklets published by the Netherlands Water Partnership (www.nwp.nl).

Further reading:
http://en.wikipedia.org/wiki/Appropriate_technology

Doing Business at the Bottom of the Pyramid

People at the BOP are more likely to use surface, ground or rain water and less likely to have access to piped water. An alternative, especially in (semi-)urban areas, is to buy from mobile water vendors. But this option typically involves a significant price penalty. One study showed that in eight major cities water vendors charge prices 8–16 times those charged by public utilities (UNDP 2006). Another study, covering 47 countries, found that mobile

distributors such as tanker trucks charge unit prices up to 10 times the price of piped water. In rural areas, water availability as well as cost is often an issue.

Small-scale decentralized water and sanitation solutions initiated by private sector players can play an important role in solving these issues. To build successful businesses it is important to understand the needs of customers and how these can be transformed into effective demand. Understanding the local business environment, the institutional context and the role of actors involved will facilitate the process of setting up businesses catering to the BOP. These aspects are explained below.

Understanding demand and customer constraints

Most poor people need to spend a high proportion of their income on necessities, partly because resources are scarce. In some areas, they spend a high proportion (up to 25%) of their income on clean water (WEDC 2005). Millions of women and girls around the world spend hours every day fetching drinking water. Also, unsafe water and improper sanitation harm the health of consumers, leading to high health care costs and opportunity costs (related to not being able to work). Access to safe water and proper sanitation is therefore key for these people. This implies very attractive market potential in terms of volume. The challenge is then to understand what products might meet the needs of consumers in low income countries:

- What are current water consumption patterns and how are they serviced?
- What are the constraints of current water and sanitation supply (money, time, quality, security, accessibility of supply) that the customer wants changed?
- What priority does the customer give to spending money on water and sanitation in relation to other needs like food, communication, health care, etc.?
- Do customers use water to run a business (food stall, water sales) or would they be interested in doing so? A positive answer will create a need for larger quantities.
- Can the customer prefinance equipment (e.g. water purification unit, tanks, latrines, etc.)? If not, what kind of credit provision would fit their situation? What is the credit need?

Transforming a need into effective demand

Everybody needs safe drinking water and proper sanitation. But this does not mean everybody wants to pay for good water services or decent sanitation. Consumers will only pay when they value the product or service in an economic way. Five important conditions have to be met (the AT protocol closely relates to these aspects):

- Safe water and proper sanitation must be high on their list of daily priorities. In spite of what we might think, this is not always the case. Food, clothes, a job or even a cell phone may be ranked higher and this may change from day to day.
- People must understand the economic and social benefits of drinking safe water or using proper sanitation. Education and awareness raising provided by local trusted partners are key in explaining these benefits to the local population.
- The value proposition (see Step I, Chapter 2) of the product or service must be very clear compared to the current situation, not only with respect to the product but also to the application of the product, the social benefits and product-related services.
- The product or service must be affordable. Calculating the Total Cost of Ownership and comparing the outcome with alternatives in the market is an essential step. You should focus on people who are able to spend a small amount on water and sanitation products. The ultrapoor (living on < 1 USD a day) often rely on donor support or emergency aid and cannot be served cost-effectively, unless if NGOs pay for the product or service
- Products or services must comply with the AT protocol (see tool 1).

Understanding the business environment and the institutional context

Having an extended network in a BOP market is essential, but building networks takes time. It is important to realize that you need a local partner who understands the market, how people work together, the way relationships work, and the organizations that are important to work with.

The challenge in BOP markets is how to reach your customers physically. BOP markets are often located in rural areas or slums; both lack proper infrastructure (roads, transport), communications (Internet, TV, radio) or financial services (banks). Setting up your own network is costly, so you have to plug into existing distribution networks.

For the water and sanitation sector in particular, understanding the institutional market context is essential. Control over water resources provides a strong power base in developing countries: whoever controls water resources can provide access to water. Market entrance of water (technology) providers, such as AT related products, can therefore be seen as a threat to the power basis of established parties. In most cases, these will be governments or government-owned institutions. Besides, water is linked with health and because health is often seen as a public issue, government policies will be in place and must be complied with.

As governments (or semi-governmental bodies) have a broad set of instruments to defend their market position, they have been known to frustrate market entrance of AT related products. This risk is even higher for foreign companies that enter the market, as governments often target them to demonstrate market protection and national pride. Alternatively, having institutional support will speed up and scale up successful market introduction of AT related products.

Working together: actors involved in a BOP market

As mentioned above, entrepreneurs need to understand the importance of working together with different actors in a BOP market. Customers demands, the issues related to water and sanitation, and the products or services depend on the local context. This context must be understood well. Specific actors are:

- Local, regional or national government, starting at the community level, who run large water and sanitation programs
- Local and other NGOs working close together with communities and providing donor-driven support, who understand the BOP market and know how to approach your future clients
- Small SME banks or Micro Finance Organizations, who show increasing interest in financing water and sanitation activities
- Women's Self Help Groups, because women, being part of a household, play an essential role in water and sanitation
- Local and other research or capacity building centers, educating locals and conducting research into water- and sanitation-related issues

Further reading:
Info Sheet 1**:** BOP strategies

http://en.wikipedia.org/wiki/Bottom_of_the_pyramid
http://en.wikipedia.org/wiki/Appropriate_technology

Lessons learned in reaching the world's poorest

Christian Seelos, director of the Platform for Strategy and Sustainability at IESE business school wrote an interesting essay on business lessons in reaching the world's poorest. His recommendations:

- Look for organizations (NGO's, businesses) in low-income markets that are already serving the poor.
- Build relations with a number of organizations (especially NGO's, businesses and governmental organizations) as early as possible; businesses become more visible and credible when engaging with organizations who are already working at the BOP.
- Understand how business is done locally and how different stakeholders act and react at the BOP.
- Once relationships have been built, identify and manage possible bottlenecks in working with partners involved in BOP markets.
- Start to think about "Western" competencies suitable to replicate in Southern BOP markets. This may naturally fit higher-income clients, but this approach will generate revenues and mitigate business risks, buying you time to solve the bottlenecks in your local partner's strategy.
- Ensure your business model supports an increase in the real income of people at the BOP by involving them, e.g. in the distribution or production of your product.
- Partnerships are not static. As the local environment changes, potential opportunities and threats may emerge that can affect the sustainability of your partnership. Share insights on these issues with your partners.

The lessons learned by the entrepreneurs involved in the toolkit underline these recommendations. However, they added three important aspects in interviews:

- Focus on the affordability of your product.
- Your product must be easy to repair.
- Spare parts must be easy to obtain.

These aspects ensure that your customer has easy and sustainable access to your product.

Further reading:
"Company lessons in reaching the world's poorest", Christian Seelos, March 17, 2008
http://intouch.emeraldinsight.com/

2. Business development: a step-by-step approach

Developing a product and introducing it successfully to a bottom of the pyramid (BOP) market are not easy tasks. Apart from the normal challenges of running a business, you have to gain an understanding of a different (business) culture, and of customers with different needs and means. It takes time, perseverance and creativity, but the rewards can make it worth your while. Several Dutch entrepreneurs have already shown the way. Their experiences provided the input for the business development process presented here.

Outlined below is a step-by-step approach that will guide you and help you to prepare, try out and introduce your product onto the market. It is designed primarily for water and sanitation products, but most of it should apply to other BOP products and services as well.

Steps				
Product 	- product definition - product affordability	- product development - lab testing, compliance and certification - value proposition	- technical pilot - commercial pilot - diversifying product applications	- continuous improvements
Market 	- target market - target group - competitive landscape	- market research - pra techniques	- social marketing	- market introduction - market feedback
Business 	- entrepreneurship - business model - basic financial analyis - financial model	- start-up team - organization - distribution - network building - realization schedule	- setting up your local organization	- business systems - financial management and control
Finance 	- credit need and cash flow - blend of financial instruments	- cash flow - seed money and venture capital	- finding local financial partners	- near equity - loans
Key deliverables 	- blueprint of product, market and business	- business plan	- pilot project(s) in progress - adjusted business plan	- a profitable enterprise with potential to grow

Every step provides information about four major elements: product, market, business and finance. In each step the focus is different. Throughout the process, case studies, insights from the field, info sheets, questions to ask yourself and practical tools will help you to develop the necessary skills and insights to develop your business.

Questions 	questions you might ask yourself when you are developing your business
Tips 	practical tips, often derived from lessons learned by the entrepreneurs involved
Info sheet 	straightforward information on a certain topic
Tools 	practical tools e.g. for calculating your financial forecasts
Attachments 	booklets, articles, and presentations containing useful background information

At the end of this chapter you will have a good impression of what it takes to write a solid business plan, find the partners you need to work with, attract funds to invest in the necessary resources, test your product in the market and finally set up your business to launch the product and scale it up.

Step I: Getting Started

The start of your business! You have an idea about a product or service for which you feel there is a market. The first thing you will have to do is to assess whether the basics of your idea will hold. Briefly sketch the product, outline the potential market, define the business concept and estimate the initial funding. The end product of Step I will be a "blueprint" of your product, market and business.

This Step I consists of five elements: Product, Market, Business, Finance, and Key Deliverables. We will discuss them all in sequence.

In this section on Product, we provide an overview of the key issues related to developing your product. Spend time to calculate the total cost of ownership of your product and be sure your product is affordable to your future clients.

Steps	
Product 	- product definition - product affordability
Market 	- target market - target group - competitive landscape
Business 	- entrepreneurship - business model - basic financial analysis - financial model
Finance 	- credit need and cash flow - blend of financial instruments
Key deliverables 	- blueprint of product, market and business

Product definition

Define what you are going to sell. Will it be a service or a product, and will it be for use by individual households or communities (e.g. operating in a village)? Define your product using the following questions:

- Will it be a product, a service, or a combination of a product and a service?
- Is it a stand-alone product or does it depend on other companies' products?
- Will it be a household or a community-based solution?
- What will your product do (e.g. treat water, deliver water, store water or improve sanitation)?
- What kind of inputs can it handle (water with different types and levels of contamination, urine, feces, household sewerage)?
- What kind of outputs does it deliver (water for consumption, other quality water, fertilizer, etc.)?

Product affordability

Successful products serve customer needs to perfection: they deliver the right value for the right price to the right customer group. A key aspect you have to consider in this first step is the product affordability: "Is the intended customer able and willing to pay for this product?"

Of course, a customer need not be an individual or family; it could also be a community, an NGO or a government entity. To assess affordability, you will have to try to calculate the total cost of ownership (TCO) as best as you can. Take into account the following costs a customer might incur while purchasing your product:

- Investment in the initial purchase: the initial purchase often exceeds the amount the customers in BOP markets have readily available, so it is not uncommon for them to use a finance structure (like a loan) to finance for the initial purchase of the product. However, these finance structures often lead to additional costs.
- Consumables: water products make use of consumables (like a filter piece). The price of the consumables determines to a large extent the TCO of a product.
- Maintenance costs: maintenance costs are often not known at the beginning of a product development cycle, but you will need to take something into account.
- Disposal cost: in some cases, disposing of consumables or the main product at the end of its useful life may incur a cost.

When the TCO of a product has been calculated it can be compared with the competitor's information. An example is given in the schedule below, where we have calculated the TCO of a mainstream water purification product.

Calculating the total cost of ownership

Consider a water filter that costs €15 to purchase and works with filter cartridges that cost €1 and can treat 3,500 liters per piece. What is the TCO of this system?

Costs per year:

Price of the unit when purchased: €15, depreciates in 10 years		1.5 €/year
Maintenance (replacement of seal, pump rubber, etc.) estimated at		0.5 €/year
Use of filters: 7,000 liters requires 2 filters at €1 per filter		2.0 €/year
	Total	4.0 €/year

For 7,000 liters of water per year, costs are €4.0 per year, or €0.57 per 1,000 liters.

This example does not take into account potential costs to the customer of obtaining €15 to make the initial purchase. There might be costs if a loan needs to be obtained from a bank or moneylender.

Exhibit 2: Calculating the total cost of ownership – an example (BiD Consult)

Market

In this section on Market, we provide you an overview of the key issues on marketing your product. Choose your customer segment carefully and compare your product with competing products in the market.

Target market: geographical segment

Once you have determined what your product can technically do, define what this means in practice. People are not aware of contamination, but they are aware of the different water sources they have at their disposal: open wells, closed wells, deep bore wells, surface water (lake or river), rainwater, tap water, etc. From your technical understanding, you need to

define the kind of water sources your product is suitable for, and then you need to find out whether this fits the target market. In India, data on what type of water sources people use in which states is available from the Census of India 2001, which is attached to this Toolkit. Other information is also available, so please consult a local Chamber of Commerce and local government office. Be creative in looking for your information; a simple Internet search on relevant key words is the minimum, but you can also try friends, libraries, and many other sources. When you have collected data, analyze your information to define your potential market in geographical terms.

Further reading:
Attachment 1: Census India

Analyzing the potential market

When Water4life, a DSM initiative in India, was exploring the local Indian market in Tamil Nadu, the Water4life team approached a local NGO to discuss the local needs and the local market potential. Consulting the data in Census of India 2001, Water4life concluded that in Tamil Nadu, a state with 5.9 million households, 35% of the households still used a source other than tap water. Also, in rural areas 75% of the households did not have a source of drinking water on their own premises. Local experience from the NGO found that even if households used a local tap for drinking water (often supplied by tankers) the supply of water was unreliable, especially during difficult seasonal periods. This meant that for the Water4life product, targeted at households that use a non-tapped water source, Tamil Nadu presents about 2 million customers, and possibly more if a campaign was conducted to promote the use of the filter in situations where tap water supplied from tankers was used. Further investigation with the local NGO identified local communities within the state that matched the profile. This first top-down approach was enough to show that the market in Tamil Nadu for the Water4life product by itself was already sufficiently large, and that, initially, no other states needed to be targeted to launch the project with a sufficient market potential.

Target group: customer segment

Besides the geographical scope of your market, you should also define the target market in terms of target customer segment (target group), based on e.g. income level of the target customers. Information for this can be obtained from local government, the local Chamber of Commerce, the Dutch business support office, local consultants and other sources similar to the list outlined above for the geographical market. Beware of the following major risks:

- Choosing the wrong customer segment will most likely doom your business idea (but you did not need this toolkit to tell you that!). To be realistic you must select a customer focus group that can afford the product and are most likely to buy it (we will study this in detail later).
- Not making a clear choice will lead to serving different markets at the same time with the same product, spending more on your marketing and increasing distribution costs, probably without realizing sufficient revenues. This might mean a considerable waste of resources. Although there is plenty of opportunity later in the project to make adjustments, it helps a lot if you focus on a clear target customer group from the start. So try to limit yourself, define the group as well as possible, and design the product to meet the needs of that group the best you can.

This choice is not necessarily final. Make an initial choice and change it later on as information comes in on actual market acceptance and other issues.

Competitive landscape of water technologies

Get an indication of the competitiveness of a technology in India by comparing the TCOs of different products. Even a product with a high purchase price can be successful. There is more to the total product offering than the initial price.

Product	TCO components purchase	maintenance	consumables	TCO euros/m3	depreciation period years
Slow sand filtration (household)	30	0.25	0.25	0.36	15
Gravitational ceramic candle filters	7	0.5	2	0.46	10
Purator (Basic Water Needs Foundation)	4	0.5	2	0.47	5
Purit	15	0.5	5	1.00	10
Aqua Guard	100	5	0.5	1.74	15
PUR	0	0	70	10.00	0

Exhibit 3: Comparing the total cost of ownership of different water purification technologies (BiD Consult)

The information for this table was collected from public sources. It is meant to be illustrative of the field of water purification products. Market prices can change and there might be a difference in pricing over regions, markets or market channels.

We have attached three small booklets to this Toolkit that illustrate appropriate techniques and some of the products mentioned above.

Further reading:
Attachment 2: Smart Water Solutions
Attachment 3: Smart Sanitation Solutions
Attachment 4: Smart Water Harvesting Solutions

Business

In this section on Business, we provide an overview of the key issues when you start up and build your organization. Make sure you spend adequate time on developing your business model and especially the way your business will create value (like profit).

Entrepreneurship

A successful business requires a combination of a good business idea and an entrepeneur (or group of entrepreneurs) who can bring the idea to a successful product. Do you have what it takes to be a successful entrepreneur? You do if you fit the following description: "Entrepreneurs are optimistic and future oriented; they believe that success is possible and are willing to risk their personal resources in the pursuit of profit. They are fast moving and flexible, willing to change quickly when they get new information. Entrepreneurs are persistent and determined to succeed, because their own money and ego are at risk" (www.moneybiz.co).

Do you feel you fit this profile? Are you ready to join them? If so, answer the following questions:

- What opportunities exist today for you to create or bring new products or services to the market that people want, need and are willing to pay for? What are your three best opportunities?

- How can you find new, better, and cheaper ways to sell your products or services or to reduce your operational costs?
- Are you willing to move out of your comfort zone, to take risks if necessary and to build your business?
- Are you clear about your personal motives for starting a business?
- Are you going to manage your company? Be honest with yourself about what you want. You could leave general or commercial management to someone else and focus on operations or development.

Further reading:
Info Sheet 2: Do I have what it takes?

One of the best ways to maximize your chances of success is to find and work with a mentor, someone with business experience who can guide and assist you. Most countries have systems to help entrepreneurs find an experienced mentor. Two organizations that can help you to find a coach in the Netherlands are:

- The Consularis Foundation (www.consularis.nl), which makes the knowledge and experience of entrepreneurs and entrepreneurial managers available to other entrepreneurs.
- Ondernem ersklankbord (www.ondernemersklankbord.nl), which consists of 225 former entrepreneurs, managers and specialists from trade and industry who give their time and effort, free of charge, to increase the success chances of small and medium-sized enterprises (up to 100 employees), especially those small entrepreneurs who cannot afford professional advice at commercial rates.

Business model

A business model describes the way a business creates value. Traditionally this is about the way your business will be able to create revenues. People are now realizing that creating financial value does not necessarily ensure business continuity in the long run. A company's social and environmental impact may affect future performance.

Traditional business models

Generally speaking, traditional business models focus on creating financial value (like turnover, margin, profit or cash flow). Good and solid financial results are highly important to ensure continuity and sustainable growth. If it does not make money, your business idea will not survive in an environment dominated by free markets and modern capitalism. Investors will only provide capital if they are convinced they will get their money back, plus a certain rate of return. And of course, making it big can be a powerful motive for entrepreneurs.

You have to think whether your business idea has the potential to create profit. At the end of this discussion of Step I we introduce a quick scan and a one page questionnaire for checking and summarize your business idea. A very simple financial model will help you to determine whether your idea is profitable as well.

Further reading:
http://en.wikipedia.org/wiki/Business_model

Social entrepreneurship

Social entrepreneurship is a business model that emphasizes social goals in the business model. This relatively new business model is described quite well in Muhammad Yunus' book, *Creating a World Without Poverty* (2007). In his view the ultimate goal of social enterprises is to eliminate poverty while making enough profit to secure financial sustainability. Unlike mainstream investors, the owners or investors investing in a social

business do not primarily have a commercial drive. They are happy with a modest return on their investment in money and time.
Further reading:
http://en.wikipedia.org/wiki/Social_enterprise
www.socialenterprise.org.uk

Cross-subsidizing

In short, cross-subsidizing is a business model in which a profitable activity subsidizes a non-profitable activity. Not all business activities are profitable from the start. A certain scale or market position is often needed to cover all related costs. On the other hand, the entrepreneur might decide to put social goals before financial ones. In this case an economically profitable activity subsidizes a business aiming to reach certain social goals.

Cross-subsidizing has an important downside risk: the subsidized activity is not profitable itself and depends on the performance of other activities. When not managed properly these activities can "eat up" healthy results and jeopardize a company's future. Also, a non-profitable activity runs the risk of having its financing cut off abruptly if the mood of the owner changes.

Further reading:
Info Sheet 3: Cross subsidization models

Basic financial analysis

When thinking about your business model you must be very clear about your intentions and your goals. Entrepreneurs or organizations launching water and sanitation products in low-income markets can have different motives: social or economical, or a combination of both. But even if the social goal dominates, the operation needs to become financially sustainable to secure the future of the business.

Without going into too much detail, define some basic choices about your business. In this phase it is just preliminary, so feel free to change things later on in the process. Use the following questions as a guideline:

- How do I deliver my product to the end users?
- What will your company do and what will it outsource to third parties?
- How will you make your profit?
- How will the final customer pay for the product?
- What is the role of NGOs in your business?
- Who will own the company?
- What is the geographical distribution of activities between your country and the target market? (Please refer to the section on Step II in this chapter, as this is an important issue.)

Financial model

A financial model is a calculation in a certain format regarding your cost price and forecasts on profit and loss, cash flow and the balance sheet. During Step I you start calculating your cost price and make some rough financial projections. During Step II your financial projections become important in persuading financiers to invest in your business. The key focus in Step III is financial control to ensure you meet your budgets while piloting your product. By Step IV all these financial activities should be in place and easy to execute in a professional way.

Info Sheet 3 describes two different ways to calculate your cost price: full cost price calculation, comprising all costs involved, and marginal cost price calculation, which calculates only the variable costs that arise when producing a single unit. To make profit your revenue must cover all the costs involved plus a certain margin. But from the cases we have seen, the question is whether all product development costs (made during Steps I, II and III) can be covered by the cost price while the product remains affordable to clients at the BOP. If your first calculations support this assumption, you should try to finance these development costs with subsidies, grants or in kind contributions from yourself and / or your partners. If you expect to earn back development costs you still have to try to attract subsidies and / or grants as these instruments provide financial means against attractive conditions.

Calculating a full cost price is the starting point, including an overhead percentage covering the indirect costs like marketing, communication and management. We advise you to calculate the development costs separately, including your in-kind contribution as an entrepreneur or innovator (all the hours you spend during Step I–IV, multiplied by a reasonable fee).

The way you calculate your cost price depends on the product itself and your decision on how to make it. To start with, it is difficult to calculate a cost price in a scenario in which you want to produce most parts of the product yourself, since it will be difficult to just loop up market prices for these parts. You will probably need a partner with experience in producing water and sanitation products to support you. Start to find out the cost price of different components and estimate the time needed to assemble the product. If parts of the product are not available yet, or need to be adapted or made from scratch, ask possible manufacturers to give you an indication of the cost price. Try to calculate two models:

- Source components, assemble them and export the end product to your sales market
- Export (often high-tech) key components to your sales market and source, assemble and distribute locally in the same market

Do not forget, if applicable, to include in your calculations:

- All kinds of import/export duties and taxes
- Custom handling and paperwork
- Transportation costs, intercontinental and local
- Breakage (e.g. 3% of the total cost price)
- Packagi ng
- R oyalties
- Installation locally, including instructions on use.

Now you must make an assumption about the overhead costs. This is a percentage (the value depends on your business model and your sales forecasts) calculated on the cost price you have already made. Our advice is to start small as a business and stay “lean and mean”, incurring the lowest possible indirect costs. The four entrepreneurs mentioned in this Toolkit all have a low overhead (5–15% of the total cost base).

You need your estimations on the cost price as an input to calculate the total cost of ownership (TCO) so you can compare your product with competitors. You can also make better assumptions about which types of clients are able to buy your product. You must be sure your product will sell before you start to make concrete plans.

Finally, start making rough forecasts by building two scenarios:

- A management case, starting from a realistic but ambitious sales forecast
- A base case, starting from a minimum (often no profit) sales forecast

You need your management scenario as a guideline to manage your business and to present to the partners you need (like financiers) to convince them to join you. The base case scenario is a worst case scenario. This is your early warning indicator for when the business is not performing well. You might show it to financiers to convince them the worst case is a scenario which will probably not occur. Of course, if your base case stills shows profit, this will comfort you and potential investors!

Do not forget to include product development costs, allocated to the period you need to develop your product. While you are developing your product, you will generate no revenues. You need to estimate when you expect your first revenues and calculate the time needed to reach the break-even point (zero profit). Especially to investors, the break-even point is an important indicator of the potential profitability of the business. Crossing the break even point means your business model is working. Although no golden rules exist, a reasonable break-even period would be 3 years (management case) to 5 years (base case).

Tool 2: Simple financial model for making a first forecast

In this section on Finance, we provide an overview of the key issues related to financing your business. Make sure you spend adequate time on these issues. Enthusiastic entrepreneurs often fail to secure adequate financing, and/or forget that if the cash runs out, the business is dead. If necessary, obtain professional advice.

Credit need and cash flow

To assess the amount of financing you will need, answer the following questions:

- How much money will it take to launch and run the business successfully?
- How much cash do you need to have available at any given moment for the company to be able to meet its liabilities?
- How, and from where, can you obtain the necessary funds?

The simple financial model, introduced as tool 2 in the previous paragraph, can be used to make a first estimation of the credit need. Please note: this is a cash flow model, referring to actual money flows. Your profit and loss statement will look different, because you will capitalize most investment. For a young business, cash is king!

Cash is king: cash flow

In short, cash flow is the difference between cash in and cash out of the company. When you correct the net profit with non-cash items like deferred taxes, provisions, amortization and depreciation (these are costs, but not cash outs) you calculate the "operational" cash flow. This money is used to finance investments and the working capital mutations. The remaining cash flow is called "free" or "net cash flow".

EUR 1000	**Year 1**
Net Profit (NP)	100
Ammortisation and deprecialtion (A + D)	20
Investments (I)	-30
Operational Cash Flow (OCF)	90
Mutation Trade Debtors (+/-) (MTD)	10
Mutation Stock (+/-) (MS)	5
Mutation Trade Creditors (+/-) (MTC)	10
Net Cash Flow (OCF-MTD-MS+MTC)	85

Source: Micro Water Facility

The free cash flow can be used to:
- Repay debts
- Allow dividend payments (sometimes these are mandatory)
- Strengthen the company's liquidity position
- Finance business activities like expansion and investments

Exhibit 4: A cash flow example

A simple way to present your results is to fill in a "uses and sources" overview. The uses are the different components of the credit need; the sources are the different sources of capital.

Uses (EUR)	**Year 1**	**Year 2**	**Sources (EUR)**	**Year 1**	**Year 2**
Product development	25000	15000	Own Means	25000	35000
Market Research	5000	10000	Informal Capital	10000	10000
Demonstration Pilot	10000	15000			
Inventory	5000	0			
Working Capital	0	25000	Credit Need	15000	30000
Head Room	5000	10000			
	50000	75000		50000	75000

Exhibit 5: Example of a financial model

When you start your company, you will be incurring costs before you generate income: you will have a 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 until the break-even point must be financed in advance. For example, if you expect your company to have a cumulative negative cash flow of €100,000, you need to ensure that financing of at least €100,000 (plus a bit extra, which is called "head room") is available before you launch your business.

Blend of financial instruments

Different types of financial means exist. Which type you should aim for depends on your personal circumstances of your product.

- Own means (including the cost of your time) and informal capital
- Subsidies and grants
- Seed money and venture capital
- Near-equity and loans.

Tool 3: Financial options

At each stage the business requires a different type of financing, as the risk profile of the business differs. But because your business will develop dynamically, the different types of financing will not follow each other in a straightforward sequence. Create a blend of different financial instruments that fit the phase your business is in and be ready to finance your next step. In the first stages, creating a blend of the first two instruments is important; financing the next step will require seed money and/or loans.

Own means and informal capital

In the initial phase of their existence most ventures are financed partly out of own means and partly by family or friends. This allows you to stay in control and the risky startup phase is financed on very friendly conditions. On the other hand, these funds are often limited and conflicts may arise when expectations are not met. Do not forget that the cost of your own time represents a financial investment as well; you could use that time to make money doing something else, after all.

Subsidies and grants

A whole range of subsidies and grants are available for a typical startup. For instance, there is a range of possibilities for getting additional financial support for setting up small business enterprises selling water solutions to the BOP market. You should be aware that most subsidies have many conditions you have to comply with and report on. This can be time consuming. Also, most of the time you need to bring in own means, capital or an in-kind contribution as a condition for attract subsidies. To meet reporting obligations it is important to have a financial accounting system and a proper overview of the hours you spend on product development.

Key deliverables

By the end of Step I you will be able to draft a blueprint of your product, market and business, together with a simple forecast model. We have developed three tools to help you to summarize all your research, thoughts and figures:

- A short one-pager to present your idea to partners and possible investors
- A quick scan to check and assess all business aspects of your idea
- A very simple forecast model, which might help you to make your first calculations

Remember:
- Keep it simple
- Start small
- Try, try, try again!

All are included in this Toolkit and are easy to use. We advise you to start writing down all aspects you have figured out, even though you still have some questions or blank spots to figure out. You might become overwhelmed by all the activities you still have to do, or be disappointed when the calculations do not support a feasible business model. Our three-part motto: Keep it simple, start small and try, try, try again!

Tool 2: Simple financial model to make a first forecast
Tool 4: One-pager to present your idea
Tool 5: Quick scan to assess and check all business aspects of our idea

Frequently asked questions:

Question	Answer
It seems to be very hard to NOT like an idea in this phase of the NBD process. What can I do to be more objective about judging my own ideas?	Do your desk research. Seek help from friends, NGOs and network partners who can challenge you. Do some simple financial mathematics.
Why don't I just skip this step and move to Step II? The real work seems to be done there.	In many or even most cases, investing the thousands of Euros required to make a business plan is wasted. Doing Step I saves you this expense.

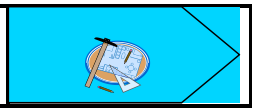
Step II: Making plans

At the end of the Step I you will have a clear outline of what you want to do and how. The next step is to develop the outline into a solid business plan. Your business plan must give clear and concise information on all aspects of the proposed business. This includes practical matters concerning business startup, operation and management and analyses of costs, sales, profitability and projected growth. "Starting Up"[1] presents the necessary background information and a standard structure for a business plan. If you address all the elements of the structure in this Step II you will obtain a comprehensive and practical business plan. Therefore, this Step can be seen as extensive commentary on the Starting Up business plan model; it is not a business plan writing guide in itself.

The elements of Step II are the same as in Step I, but the approach is more thorough.

Tool 6: Business Plan Format

Further reading:
Attachment 5: Starting up

Steps	
Product 	- product development - lab testing, compliance and certification - value proposition
Market 	- market research - pra techniques
Business 	- start-up team - organization - distribution - network building - realization schedule
Finance 	- cash flow - seed money and venture capital
Key deliverables 	- business plan

This section discusses product development for Appropriate Technology, complying with laws and regulations, formulating the advantages of your product (value proposition) and techniques to identify customer needs (Participatory Rural Appraisal).

Product development for Appropriate Technologies

Developing your product is a creative and iterative process, which converges on a solution as you work through versions and drafts. Again and again, you compare the advantages of your product with the needs and problems of your customers. Part of a BOP strategy is to co-develop your product with your future clients. Talk to Western NGOs who work closely together with local NGOs and have a good view of the market. If they like the idea, plan a field visit and talk to local people, NGOs or other local organizations.

[1] Kubr et al. (1998)

Product development

Mantijn Nitzsche, director of Aqua-Aero Watersystems B.V. (www.aaws.nl) explains his vision on product development: *"It is like building a house using Lego blocks together with your architect. He starts building the walls and the roof. You mention that you need to create a door because your client likes to stay in the house instead of watching it. A window would be nice as well, because your client likes to have light in the house and a nice view of the street. The architect builds a garage next to the house to protect your client's car against rain and thieves, and then you add: a garden would be beautiful to work in or rest after a hard day's work. That is how innovation works: you develop your product by switching from your product's benefits to the needs of your clients; it's an iterative process and you never know where it will end!"*

A general approach that can be used to fit your idea or product to the needs of your customers is the "Excellerator", a method developed by Excellerator (www.excellerator.nl). Start by defining the most important trends and market developments that underpin your idea. The next step is to identify your clients and their needs and problems. Further develop your product by switching from your idea to the needs of your clients again and again.

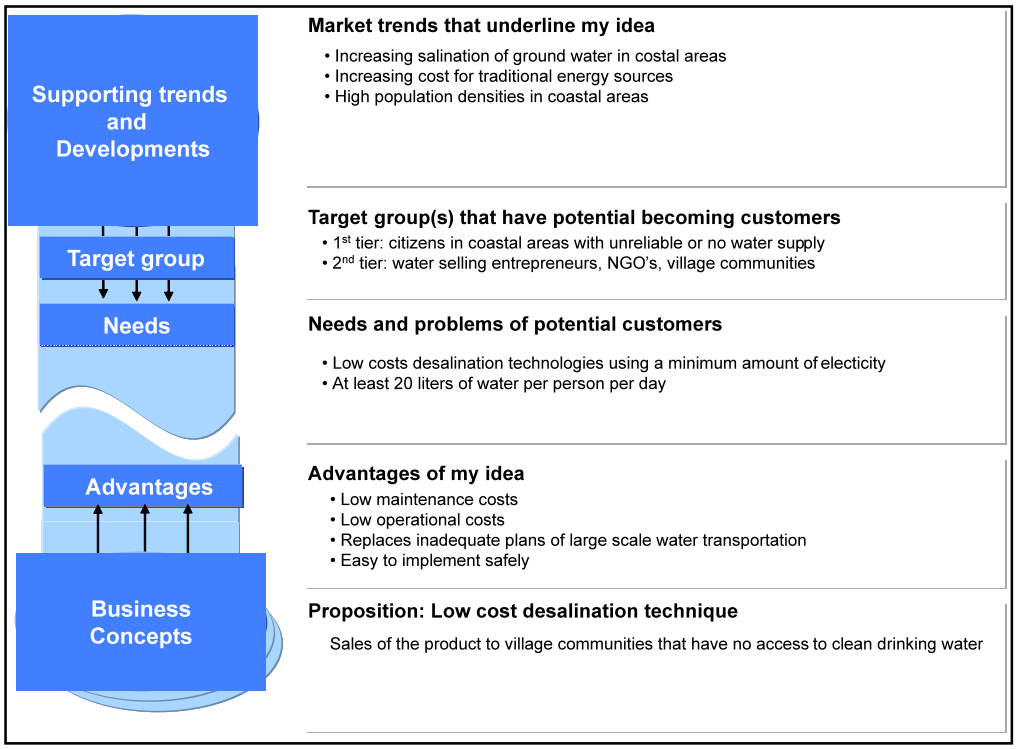


Exhibit 6: The Excellerator (www.excellerator.nl)

You might have a look at the needs of your future clients in depth. Try to get direct contact with end users in villages. You will need an interpreter because these people often only understand the local language. They can often be found in the nearest town (or check your hotel). When arriving at the village, the village elder is the person to talk to (be sure to observe local customs in approaching the village elder!). If he is positive, he will arrange a meeting with the community and useful information can be gathered. Having obtained the first facts, you will need to cross-check them with a local NGO. Although this method takes some time, it will give you a good idea of the appropriateness of the product. If you need a quick scan on your product, you might contact some specialists working at NGOs or educational institutes who have a lot of experience "in the field".

Using student potential

Jan de Koning from Zonnewater explains how he was able to develop his product in a very cost-effective way: "*There is an institute called IHE in Delft, where each year tens of mostly technical students from foreign countries (many in Africa) come to study. They are highly knowledgeable about the local conditions, critical and very willing to be of assistance. They form a kind of ideal, close at hand, testing committee for AT solutions for water and sanitation. If you use this potential wisely you will be able to develop your product very effectively at relatively low cost."* Also there are technical colleges everywhere that can bring you into contact with students looking for technical internships. The product development phase of an AT water or sanitation solution is a very welcome subject.

Attached to the Toolkit you will find the AT Checklist, including guidance on how to use it. The checklist is useful as a self assessment tool, but it can also be used to compare different types of products.

Further reading:
Info Sheet 4: Product development, the case of the Basic Water Needs Foundation

Tool 7: AT Checklist

Lab testing, compliance and certification

Prototypes of your product need to be tested, and when the final prototype is ready it will need some kind of certification or third party assessment.

You may be able to test your product during the product development phase in your own laboratory. However, if you do not have the facilities or the skills to do this, you must outsource the work to one of the institutes equipped to conduct these tests. In the Netherlands, for example, both KIWA and Wetsus, perform product testing and third party certification. Also there are several commercial organizations that can help with water quality assessments. Entrepreneurs can do the testing in their own facilities or collect samples in the field and go to these facilities for the necessary analysis of the water samples.

Water quality criteria

The WHO norms for safe drinking water are the most widely accepted water quality criteria. These can be found on the internet: www.who.int

National governments also set criteria for drinking water quality for piped or bottled water. Although your product may perhaps not be used for delivering piped or bottled water, it would make sense to familiarize yourself with these criteria and make sure that your product is in compliance or, if not, that you understand and know where it deviates from these criteria so that you can explain this if you are asked about it.

Compliance with legislation on food contact materials

Your product will most likely be in direct contact with drinking water. Although most countries have no legislation in place covering materials like drinking water filters, it makes sense to comply with the general legislation on food contact materials. You are not legally bound to do this, but it is good business practice to do so.

Legislation on food contact materials is different in each country. As an example, we examine European legislation, which is widely recognized as one of the most complete sets of regulations in the world. Compliance with this legislation is a sound basis to start from.

However, it does not relieve you of the requirement to check the legislation in the country of production and country of sale of your product. And if European standards of legislation will make your product unaffordable, you may consider falling back on less stringent norms.

European legislation on food contact materials

Central in European legislation is the Council Directive 78/142/EEC. Within this framework article 3 is the central article: all food contact materials have to be manufactured in compliance with GMP so that constituents do not transfer to food in such quantities that it endangers human health or bring about an unacceptable change in the composition or organoleptic characteristics of food.

But how can you demonstrate that your product poses no harm to food safety? The EU has drawn up directives for most of the relevant industrial sectors. An important one is the “Plastics Directive”, which deals with materials and articles made of plastic that are intended to come into contact with foodstuffs. The directive contains guidance on how to demonstrate that your product is safe. It also sets guidelines on the migration of materials from the product to the food, limiting these to quantities that should pose no harm to public health. The directive works with a positive list detailing all components allowed for use in food contact materials (monomers, additives, colorants, etc.), sets specific migration limits for components and gives calculation factors to be considered in your migration tests and calculations. You will need an expert lab to perform the migration tests or calculations if you need to have them done.

As an entrepreneur putting together a consumer product, you have to get a “declaration of compliance” from your suppliers. Such a declaration states that the product does not contain components that can migrate to food in such amounts that it poses a risk to public health. Often this can only be stated for a specific application, which you need to specify (e.g. a sheet of x mm thick and a total surface area of y dm2 in contact with z grams of water for v days at w degrees Celsius).

Now here is the catch: in principle, products for drinking water are not included in the Plastics Directive. The directive can be used to determine whether the product would be safe for food contact, where the food is liquid – but the directive has no legal status for water. However, article 3 of the above Council Directive 78/142/EEC remains applicable: you have to show that the material is safe. This can only be done by providing supporting data and calculations.

The complete legislation on food contact materials is a lot more complex than this. This section of the Toolkit is therefore only intended to be a brief introduction to the legislation and does not provide guidance on compiling your own food contact compliance statements. You should always consult an expert to ensure that you meet all your obligations in the proper manner.

Exhibit 7: European legislation on food contact materials

Value proposition

The value proposition is built up of different elements (see Exhibit 8: The value proposition ***(BiD Consult)***. The basis is formed by the hard and soft product features (see below for a definition of "hard" and "soft"). The next building block is the environment in which the product is offered, consisting of the competition and target customer group. The last element of the value proposition results from the interaction between the customer target group and the product: the customer insights. The value proposition answers important questions: Who will buy the product? Why should they buy it from us? What will they get? How much will it cost?

Value proposition

A specific promise of benefits provided to target customers that differ from competitors at an explicit price.

Hard and soft product features

The product benefits are an important aspect in your market research. To determine these benefits, use a product description that includes the hard features of the product, such as:

- Amount of water filtered per hour
- Content of the vessel
- Lifetime of the filtering element
- Cost of the product
- Cost of the consumables
- Size of the product
- Weight of the product.

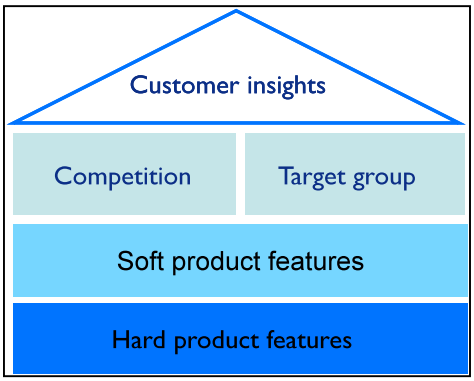


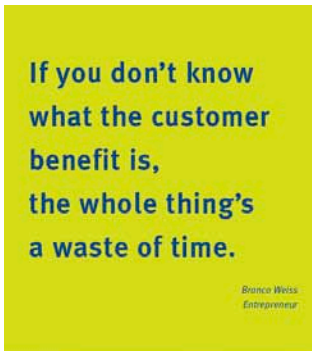
Exhibit 8: The value proposition (BiD Consult)

The softer promises you make to the customer – for instance a water filter could very well alter the taste and smell of the water – provide additional customer benefits. Possible customer benefits of a water filter can be:

- Improved taste of the water
- Improved smell of the water
- Improved clarity of the water
- Reduced illness rates
- Peace of mind
- Safety
- Better temperature of the water (cooler)
- Being a good parent
- Social status.

Differentiation from competition

An important part of the value proposition is the competitive environment. Describe clearly what makes your product different from the competition. Remember that you do not always have to compete with similar products; you could also compete against another technology (substitutes). For instance, a water filter competes with other water filters, but also with buying bottled water and boiling water. Make a list of competing products and technologies and simply state distinctive features for each. Then determine how to differentiate from each of the listed competitive offerings.



Target group

During Step I you already defined the target group as being the most ideal customer segment to sell your product to. Take a look on the criteria you used and compare these with the soft / hard product features. Does your target group's needs match with the value proposition of your product? Do you offer a good alternative compared with competing products in the market?

Customer insights

The softer product features can be accompanied by customer insights arising from the testing sessions. These could provide additional reasons for a customer to purchase the product and could be used in your marketing effort.

Now you have built up the first draft of your value proposition, which is an important addition to your business plan. It can be used to show potential investors what your product is all

about and how it will beat the competition. It shows that you understand your product and your customers' needs and that there is a fit. Besides, writing down your value proposition in a structured way makes it more transparent. It will help you think about how to improve your proposition and allows you to be challenged by others on this.

Market research

The market needs to be researched to identify the potential for your product. Where is the market? How big is it? How should you approach it? We have split the research process into two steps: general market research and specific market research.

General market research (macro environment)

The first step studies demographic data, total market data and general information on the market. General market research is usually desk research. Data are collected from as many sources as possible and then interpreted to obtain an overall picture of the market situation.

Try to collect as much data as you can on the relevant market. For instance, if you are to enter the market for water purification devices in India, collect data on:

- Water sources used in the different states of India
- Number of water filters sold
- Distribution channels normally used to sell water filters (e.g. information may be obtained from the local chamber of commerce or government, potential distribution partners and websites of competitors)
- NGOs active in water projects
- State profiles, ranking the states on relevant aspects (see Chapter 3)

Further reading:
Attachment 1: Census of India 2001

Use the collected general market data to build up a picture of the total market.

Specific market research (micro environment)

The second step, specific market research, involves going to the market (by phone or plane) and interviewing potential customer groups to get specific data. The information collected from these different sources only describe a small segment of the total market, but they are important because they provide more qualitative information about the market and how your product might be received by this market.

In the total target population of customers, certain groups represent the ideal customer for your product(s). Identify them and learn as much about them as you can. Social entrepreneurs are often assisted by their NGO partners in this effort, who often practice what we call Participatory Rural Appraisal (PRA, see following section) in which they use local customer groups to collect feedback on (new) products and services.. If you do not have a local partner, or they do not use PRA, you can set up a specific market research yourself. It is not complicated, but it can be a lot of work.

A simple specific market research program may involve the following steps:

- List the consumer aspects you find important for your product and market.
- List your product and its characteristics.
- Interview potential customers about your (new) product.
- Be sure to collect all the consumer aspects of the customers.

You will learn a lot about your potential customers, but it requires a significant amount of time. Always balance how much time you can spend against what you might get out of it.

Further reading:
Info Sheet 5: Market research Ecosan

Participatory Rural Appraisal

Interviewing customers in BOP markets is very different from a market survey on the streets of a European city, with the background support of a large population database. Poor rural customers in villages and dwellings spread over several hundreds of kilometers; in urban areas they are usually found in a large number of different slums. Also, the urban marketing environment is totally different from rural markets. Rural consumer behavior is "deeply tied to their culture and belief system" (www.ndcindia.com). Fortunately, there are market research firms specializing in researching the preferences of BOP consumers, ranging from top-end firms like ORG-MARG of AC Nielson (www.in.nielsen.com) to smaller firms like RS Market Research Solutions (researchsolutionindia.tradeindia.com) and N&D Communications (www.ruralone.com). However, water and sanitation for BOP consumers are not key areas for these firms.

Instead, it may be better to carry out a PRA (see info sheet 6 for more details) through a local university, consultant or NGO. While PRA is routinely applied in health, education, water supply, sanitation and hygiene, forestry, and poverty projects, it can also be used to elicit information on potential rural – or urban – markets. There are at least three advantages. First, individuals or organizations familiar with the target community will find it easier (than you!) to approach and elicit information. Second, it could be part of an already planned bigger questionnaire developed to collect information on a range of topics from a group. Third, you can have a greater say in the issues to be covered, the methods to be used, and how the results are to be presented.

Further reading:
Info Sheet 6: Participatory Rural Appraisal

When you have worked out your idea, defined your product and market, developed your value proposition and drafted your business model, it is time to set up your organization. This does not mean you actually start buying everything you need. The purpose of setting up your organization is to make sure that you are not forgetting anything. Identify everything you need and plan the activities.

Your organization must be fully equipped to support your strategy. This does not mean that you have to do it all yourself. You must make decisions on insourcing, outsourcing and strategic partnerships. Above all, it must be clear which activities your organization must perform to make your plan work.

The diagram below shows the main elements of a business plan. It is a *general* overview that reflects the key philosophy and activities of a company. By now you know what your view is on water and sanitation issues (vision) and how your business is going to contribute to a possible solution (mission), both included in element I in the diagram. You have started to outline a strategy, focusing on your product, the market and your business model (II). Comparing your product with alternatives has given you insights about the value proposition (III).

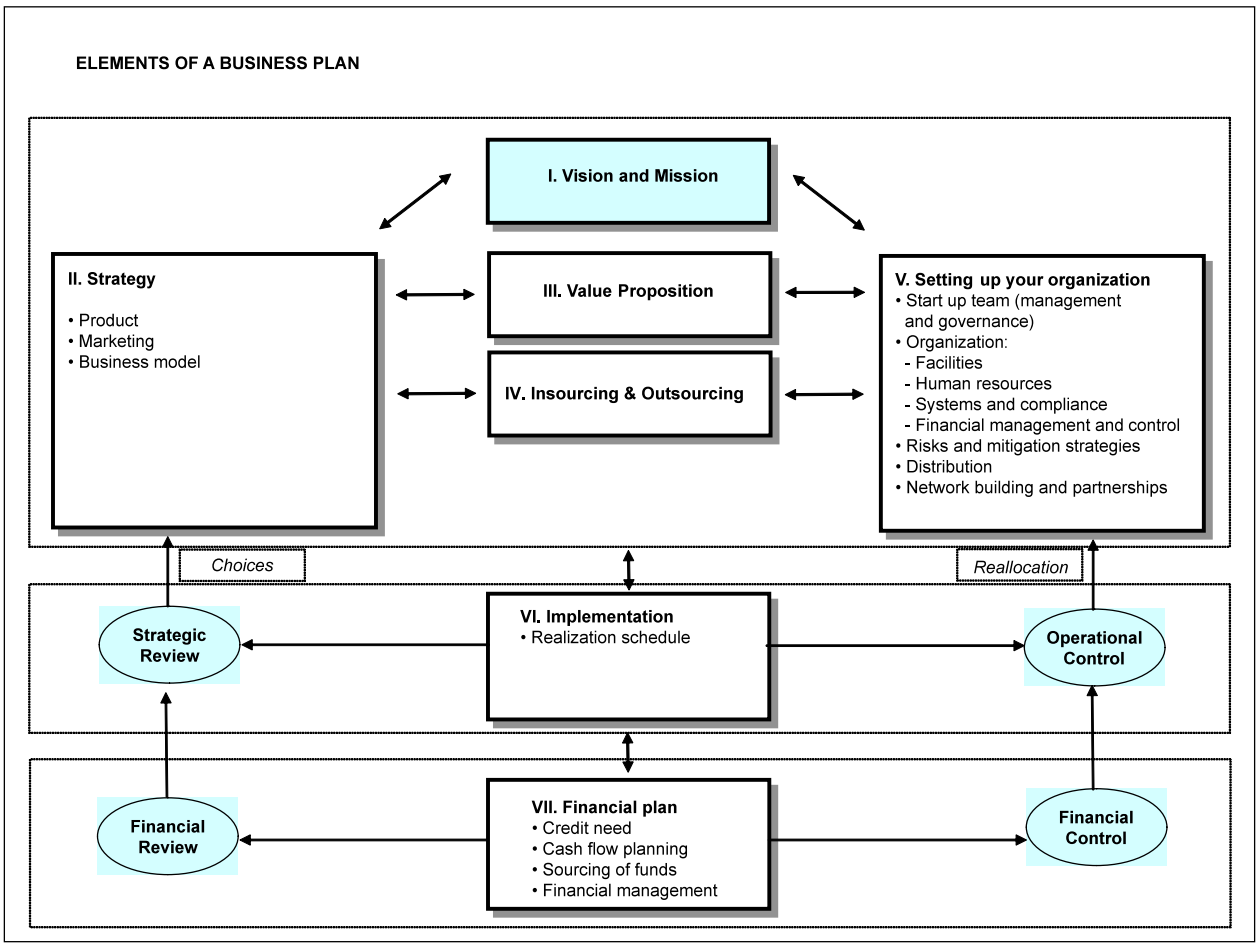


Exhibit 9: Elements of a business plan (Aidenvironment)

Before you set up your company, you must make decisions on insourcing and outsourcing (IV). Clean Water made the decision to outsource production, while Basic Water Needs set up a factory themselves. These decisions directly affect the organization and the amount of investment needed to start up the business.

Small-scale water and sanitation solutions are often innovations or unique modifications of existing techniques. If your product is unique, you should not immediately outsource the production of vital and innovative parts. You want to be sure that the quality of your product meets your clients' expectations and you do not want potential competitors copying your product. On the other hand, producing simple and standard components can be done by others (outsourced to a third party).

While you are setting up and implementing your organization (V and VI)) you have to think and make decisions on the following topics.

- Startup team, management and governance
- Organization
- Risks and mitigation strategies
- Distribution
- Network building and partnerships
- Realization schedule.

Startup team

Basically this process starts with deciding with whom you want to start this venture. Alone? With a friend or someone from your network? Or perhaps with a local partner? The answer depends on your character, skills and personal situation. Also, it depends on where most of the work will need to be done. In addition, an extra partner can bring in additional funds.

The startup team must reflect all competencies needed to set up and run the business. Investors in particular look carefully at the background, competencies, experience and compilation of management teams. Remember: plans are important, but people make the business.

The second step is to decide on an appropriate legal structure. The Chamber of Commerce may be able to give useful advice on this matter. Keep in mind that setting up legal entities in developing countries can take time, so you will have to start as early as possible. The following websites provide good checklists and guidelines.

Dutch legal identities: www.kvk.nl
Indian legal entities: www.rnebizguideindia.org

In the process of establishing your legal entity you often need to appoint directors who are responsible for helping you run the business. Formalize all authorities and responsibilities. It is important to be clear in which cases shareholders have to be consulted or asked for permission. The startup team has to authorize the other managers and employees and this should all be documented clearly and not be in conflict with any applicable laws.

Further reading:
Info Sheet 7: Steps to form an Indian company

Organization

The organization is the physical body of your business and consists of:

- Facilities
- Human resources
- Systems and compliance
- Financial management and control

Facilities: housing, manufacturing, stock building and sourcing

Especially when you aim to launch your product on the BOP market, it is crucial to understand the local market well and engage with the local community. Moreover, customers like to do business with local organizations; besides legal and taxation aspects, culture plays an important role too. You save money when you establish production and distribution locally, as labor costs are (in most cases) cheap and the distance to your sales market is small. In other words, local presence has a lot of advantages.

In some countries it is worthwhile to choose a location in an industrial or special economic zone, which offers good infrastructure, tax incentives or other benefits. More information on choosing the right business location in India can be found at: www.rnebizguideindia.org

Tool 8: Helping you choose a proper location

During this phase you should already start thinking about how to produce your product. The ventures we refer to in this Toolkit tend to outsource the production process to a "Western-based" trusted partner located in their home country. However, in many cases the first prototype was built in their own garage or backyard, using materials and components which they bought from local stores!

Strategic partnerships

Involve professional "Western-based" suppliers or producers from the start. Build strategic partnerships and involve them during the product development and business development stages. Strategic suppliers are willing to invest time and sometimes money in product development: risks, resources and rewards are shared and important relationships are forged.

Involving strategic producers or suppliers during this phase speeds up the market introduction of your product and ensures that production is feasible. This will make potential investors or donors feel more confident about your business and increase the chances of your making successful applications for subsidies. Strategic producers can help you develop your prototype quickly into a demonstration application and finally into a producible design.

When you enter a strategic partnership you have to record all mutual agreements on paper. In this phase you must write an attractive proposal to possible suppliers or producers. Draw up a shortlist of possible candidates and meet with them before making your choice and formalizing your partnership in a Memorandum of Understanding (MOU).

Remember, most successful BOP products are low cost products, produced locally. Strategic suppliers in Western countries mostly benefit from integrating the technology into their existing product portfolio or from the sales of a key component. Focus on these aspects and avoid long-term production contracts.

Exhibit 10: Strategic partnerships

You have to invest money when you are building up stocks, so include the credit you need to cover this when you make your financial calculations. One of the best ways to finance your business is to pay your suppliers late and make your buyers pay early! Stocks require storage space and logistics, which need investments too. How you build up your stocks depend on the business model:

- If you start producing when you receive an order, your stock will be limited to the components and raw materials you need to be able to rapidly start production.
- If you manufacture your product in small series, anticipating orders from prospects, your stock will have a higher volume. Serial production requires stock policy not only for components, but for end products as well.
- Mass production is the opposite of production in response to incoming orders. Your stock volumes will probably be very high. Managing your stock level (keeping it as low as possible) is critical in this case.

Further reading:
Info Sheet 8: Experience in setting up a business organization in India (Basic Water Needs India, Private Limited)

Human resources

"Keep your organization lean and mean" is the best advice when you start up your business. This applies especially to hiring employees; not only do they have to be paid; you also have to educate, coach and guide them, and manage the administrative workload.

Identify the key positions in the company. These positions depend on which strategic activities you definitely do not want to outsource. Describing key positions gives you insight into the activities which derive from them and makes it easier to draft a profile of your ideal candidate. It helps you to decide whether you should hire someone in your home country (e.g. the Netherlands) or abroad.

Investigate which legal and social regulations are relevant when hiring staff. Social insurance, taxes and pensions cause extra costs. Local Chambers of Commerce or business support offices can provide you with useful information. Hiring personnel also puts pressure on your overhead expenses, as do communication costs, day-to-day travel expenses and office equipment. In this phase, the easiest way to budget for this overhead is to calculate it as a percentage (e.g. 20–30%) of the salary and specify these costs in more detail when you make your final budgets.

In developing countries, finding qualified and dependable personnel can be a major problem. It is also more difficult to rely on formal qualifications as you do not have any references for them. Start by offering temporary contracts, which gives you the chance to observe your employees working behavior, and ask for third party references.

Systems and compliance

Your business can be jeopardized if you do not comply with the relevant legislation, regulations, certifications, industrial standards, taxation and accounting principles, etc. Look at your core business and identify which requirements you have to comply with. This Toolkit cannot give a complete overview as it depends on your business and the country in which you are operating. Start early because the process of applying for licenses or waiting for approvals takes time. Obtain advice from local consultants, advisors, lawyers or accountants. Such advice is very expensive in the Netherlands, but much cheaper in developing countries.

Financial management and control

One of the sections in Step IV describes the systems you should take into account when launching your product. As financial management and control is an important aspect in running a business, you should start by deciding on a good financial system to keep track of budgets and forecasts.

Financial management consists of three different areas:

- Financial accounting: the field of accountancy concerned with the preparation of formal financial statements for decision makers, such as investors, suppliers, banks, employees, government agencies, and other stakeholders.
- Management accounting: the activities concerned with the provisions and use of accounting information to managers within organizations, to provide them with the basis to make informed business decisions that will allow them to be better equipped in their management and control functions.
- Corporate Finance: an area of finance dealing with the financial decisions corporations make and the tools and analysis used to make these decisions. The primary goal of corporate finance is to maximize corporate value while reducing the firm's financial risks.

Further reading:
http://en.wikipedia.org/wiki/Financial_accountancy
http://en.wikipedia.org/wiki/Corporate_finance
http://en.wikipedia.org/wiki/Management_accounting

As financial reporting obligations might be applicable, depending on the legal entity, set up a proper financial administration that delivers information that is easy to convert into financial statements (financial advisors, accountants and bookkeepers might give you useful information). Many affordable and user-friendly bookkeeping systems are available and worth investing in, including web-based solutions.

The type of enterprises covered by this Toolkit will not have much to do with corporate finance issues. Nevertheless, it is important to give consideration to managing business risks, which is a part of corporate finance activities. This will enable you to secure access to the financial resources you need to continue and scale up your business. We will talk about business risks in the next section; ways of securing access to financial resources will be explained in Step IV.

For the time being, though, you should focus on management accounting. During all the steps you take in launching your product you have to plan, attract, pay, manage and control all the resources needed to execute your business plan. When we talk about financial management and control, we will concentrate on managing your financial resources as a business activity. The finance sections will deal with the different type of financial sources and instruments.

In managing your financial resources, three different types of activities are important to understand and execute:

- Cost calculation: calculating the cost price of your product
- Financial planning: making financial projections and budgets
- Financial control: checking budgets with the actual realization

All activities you are planning to set up will have an impact on your cost base (the costs derived from your business activities). Include these costs in your cost price calculations (refine the calculations you made during Step I). By now you have a better understanding of your market and the sales price of your product. Estimate sales volumes and refine your revenue forecast. Because the process of setting up your business has an impact on your investment forecast, refine your investment needs and associated credit needs. We will deal with financial control later on in this chapter.

Business risks and mitigation strategies

The risks of a water and sanitation business depend on the specific situation (technique, product, country, type of client). A few general risks:

- Macroeconomic, political and country risks are always present and very difficult to manage. It is important to understanding the local institutional framework and form a partnership with local organizations that are familiar with managing the stakeholders (from local authorities to central government).
- Market risks are related to the specific behavior of people at the BOP, which are not always known to you, difficult to predict (may change from day to day), and difficult to quantify (large geographical markets, difficult to access). To mitigate this risk, you need to work with trustworthy local organizations on the ground (like NGOs, local business people).
- Competition and concentration in the water and sanitation sector is clearly a risk. The market in this sector is (in most cases) imperfect and inefficient. Products are

subsidized or sponsored, and often given away for free under government and NGO programs. It is important to select your geographical market thoughtfully and research the possibility of unfair competition.

- Production risks are especially associated with local production. It is important to manage issues like sourcing of components, spare parts and hiring staff. Again you need to work with trustworthy local organizations and make good decisions on insourcing and outsourcing.
- Management risks relate to both technical (water or sanitation) and business/economic experience and knowledge. The management team must have a good understanding of the local context and they must be open to working with different partners.
- Compliance risks of water and sanitation have a direct impact on health. Health is a public issue and in most cases it is regulated by the public sector. Businesses have to comply with policies and local regulations or must decide to start the business while "flying under the radar" (see Info Sheet 1).

Distribution

As we explained in Chapter 1, distribution is critical if you want to launch your product in developing countries. Especially if you cater to the BOP market, physical distribution is a complex issue to resolve and these markets will often be unfamiliar to you. During this phase you have to start thinking about how to involve local partners in your business model. Generally speaking, you will have to involve partners for the following issues:

- Awareness raising: creating visibility and word-of-mouth awareness. Your product might be new to your potential users and the need to buy your product is not at the forefront of their mind. Find local partners (who are trusted by your future clients) to create awareness among your potential buyers.
- Capacity building: local training. Explanation will be needed on how to use your product properly. Because your product directly relates to health, you must educate your potential clients. This will create content customers and mitigate the risk of wrong usage which can cause undesirable affects to health, leading to possible claims.
- Import/export: getting your product into the country. Rules on import and export differ from country to country, so you must find local expertise to support you. Embassies, business support offices or local chambers of commerce can help you to find suitable partners.
- Physical distribution: getting your product to your customer. The chambers of commerce can help you to find the right partners to ship your product into and out of the country. Find reliable local partners to distribute your product to remote villages. Southern markets often lack proper infrastructure, which makes it difficult to deliver your product (in one piece!) to your client. A good tip here is to make as much use as possible of existing distribution channels (like markets, fairs, multinationals, school programs).
- Spare parts: after sales. You have to think about setting up or tapping into an effective infrastructure to provide after-sales services like maintenance and repairs. When you design your product keep in mind the components and relevant know-how (technical skills) that must be available in the local market.

Your partners involved in the distribution of your product must provide you with market information as well (especially feedback from your customers). Your partners also have their own agendas, so you must budget several trips abroad to check which partners fit into your business and how customers react to your product.

Network building and partnerships

By now you have probably noticed the importance of creating partnerships. The best advice we can give you is to focus on partnerships that enhance the launch of your product. Building a consortium of strong and committed partners is an important aspect during this phase.

The different types of partners can be separated into six groups:

- Financial partners, providing you with financial resources, sometimes in combination with management assistance
- Network partners, providing you with all kinds of different partners – often focused on a specific sector (e.g. Netherlands Water Partnership) or a type of partner (e.g. Streams of Knowledge)
- Operational partners, providing you with resources which enhance the operations of your business (e.g. production, distribution, etc.)
- Field partners, providing you with resources which facilitate the launch of your product on a specific market (e.g. a NGO providing capacity building)
- Knowledge partners, providing you with specific knowledge on technical and local social aspects, local regulations, legal and tax matters, etc.
- Launch customer, providing you literally with your first order and closely involved in the demonstration of your product, with a network which facilitates you in scaling up your product

At a minimum, you should work with a knowledge partner, an operational partner, and a launch customer.

> *"One of the most important things I learned when launching our filter in developing markets is the importance of a strong network. You need to find the right partners, and the type of partners change during the process of developing your idea into a successful product."*
> Klaas van der Ven, director of Basic Water Needs India Pvt Ltd.

How do I find suitable partners? The best way to start is to use your own network and focus on finding a partner with a good reputation and, ideally, a reputable brand. This will help you to find other partners and, eventually, customers; a solid trusted partner with a splendid reputation will convince others to join you. Network partners or specialized organizations like the Micro Water Facility (www.microwaterfacility.org) can help you to identify and contact possible partners.

The list describes key factors to think about in partnerships

- Focus, focus and focus again on finding a launch customer
- Ask reliable partners to recommend others
- Get all partners to commit to a specific goal
- Determine and agree on mutual benefits
- Appreciate differences and accept different agendas
- Decide when and how to quit
- Build trust

> *"Business partnerships are like any relationship – you have to kiss a few frogs before finding the ideal companion."*
> Robert Kiyosaki, investor, businessman, self-help author and motivational speaker.

Realization Schedule

Read the section related to this subject in “Starting Up”. Doing business in developing countries takes much more time – one of the entrepreneurs involved in the Toolkit included at least 50% extra time. We have identified five important stumbling blocks in planning a water and sanitation business catering to BOP markets:

- Complying with government procedures and regulations, and applying for all necessary permits and approvals often presents problems.
- Local financial infrastructures (bank accounts, payment systems) are still developing and therefore still bureaucratic and inefficient.
- Marketing your product. In many of the cases we have investigated, a lot of time and resources had to be spent on awareness raising of clients and capacity building of partners.
- Operating the local business. You need to have strong and reliable local management to execute the planning properly.
- Attracting appropriate and sufficient financial resources. Many funds are available, but are often difficult to apply for (procedures, conditions), as many investors have difficulties understanding the business case and the specific business risks involved in the BOP.

Finance

In this section, we talk about specific characteristics of cash flow in water and sanitation businesses and explain the role of informal investors and venture capitalists.

Cash flow

The willingness of investors to finance your business depends on expected cash flow weighed against business risk and the amount of capital required to generate the cash flow. Cash flow is defined as the actual money which comes into a business in a period; it can also be calculated as net profit plus depreciation minus investments plus changes in working capital. Business risks determine the predictability of the cash flow. The better you mitigate your business risks, the better you can predict your cash flow, and the easier it will be for you to convince investors to finance your business.

Cash flow out of a water and sanitation business catering to the BOP market is not that different from other types of businesses, but a few issues are worth mentioning:

- The cash flow will either be derived from high volumes sales with low margins in a retail business model (which is often the case with products for use in households, like filters) or low volume sales with high margins in a business-to-business or business-to-NGO model (which is often the case with community-based applications, like community toilets).
- To create a fair, local value-added model, partners involved in the business model (e.g. distributors) will require a reward for their activities or involvement, which comes out of your profit. Assuming a low or medium margin business model (most likely the situation you are in), you cannot involve too many partners in the business model as this will put pressure on your margin and on your cash flow, so choose the number of partners you work with carefully.

- Starting small and planning to scale up (as we advise you to do) will lead to “lean and mean”, or low overhead, businesses: the depreciation and investment component is low, so the cash flow profile will rely on the quality of your net profit.
- Whether a business is capitalized or not (e.g. when you have few investments in machines), scaling up always influences your working capital: stocks will grow and trade debtors need to be financed.

As we explained in Step I, there are four basic types of financing sources:

- Own means and informal capital
- Subsidies and grants
- Seed money and venture capital
- Near-equity and loans

During this phase you probably still have to focus on your own capital and the grants and subsidies you need to develop and pilot your product. But you have to think about bridging the gap between grants/subsidies and regular credit (loan) facilities. This gap is filled with the third type, external equity.

Further reading:
Info Sheet 9: Differences between equity and loans

Seed money and venture capital

When own means, informal capital, subsidies and grants are not sufficient or no longer an option, you will probably have to look for seed money, which is provided by an informal investor, also called a “business angel” or “angel investor”. Business angels are private, often highly professional investors with a personal interest (socially or professionally) in their preferred sector. Most will take a minority equity stake in the business. The British and Dutch TV show Business Dragons features business angels. Their experience and network can be very important to your business. Sometimes business angels like to be involved more closely, which can be useful but also difficult – especially if you want to make decisions yourself. So it is important to choose the right person and not only focus on his or her money!

Venture capitalists (VCs) are professional investors. They work at arm’s length and invest through funds together with third parties (e.g. banks) to spread the risk and revenues. That is why they have a financial focus: they have to make a good return on the investment in order to keep other investors satisfied. They also work with complex documentation to enhance their legal position and their control in the business. They need this control so that they can put the breaks on if the business looks like failing.

VCs either invest at an early stage, at the pre-market launch, or at a late stage when the business is running and capital is needed to grow. It is important to know if VCs are interested in minority or majority stakes, as most VCs have a clear and rigid point of view on this. Often, VCs will aim for a sale of their stake in 3-5 years (through an Initial Public Offering on the stock market or through a sale to a corporation). VCs can add value by coaching you on business development, and your business might benefit from their professional attitude. VCs bring an extensive network with them, which is very useful in developing partnerships.

It is important to agree with the VC on their strategy for creating value out of the investment. VCs can create value through:

- An exit strategy (sale of their equity stake)
- Buy and Build strategy (combining different companies, creating synergies)

These strategies affect your company strategy and you should create a workable solution to meet all expectations.

Often the ventures we talk about in this guide will seek for funds from social VCs. These VCs invest money in companies not just to achieve financial returns. A typical social VC focused on water is Acumen.

A social venture fund: Acumen

Acumen is a social venture fund, focusing, among others, on water and health. Its head office is in New York, with branches in Nairobi, Hyderabad, and Karachi. Currently (2008) 5 people work in the Indian branch. Acumen India has €7.6 million of assets in portfolio, of which €4.3 million is committed (2007). In 2008 Acumen expects the Indian portfolio to grow to €12.9 million.
Acumen uses several criteria to assess a proposal:

- The quality of senior management
- The intention of management underlying the decision to enter the business
- The social impact of the proposal
- Financial sustainability (revenue model)
- Scalability (to a national level, based on the product, business model and quality of senior management)

Acumen's mission is, ideally, to target the poorest of the poor, but slightly above poverty levels will comply with the policy. Cross-subsidy business models (cash flow gains from sales to wealthy clients are used to subsidize sales to poor people) are accepted. The affordability of products is a key factor in decision making.

Exhibit 11: Acumen fund

We finish this section by giving you a few tips if you decide to attract equity.

- Try to keep control of the business by keeping a minimum of 50% of the shares.
- Do not accept too many clauses that restrict you from selling or pledging your shares.
- Always negotiate the right of first refusal if your investor sells his/her shares, and try to make agreements up front on how the share price will be calculated.
- Stay in control of your business as far as you want to be, and put all agreements on this topic in the shareholders agreement.
- Agree on clear procedures in the event of a possible conflict between you and your investor.
- Offer preferred shares when you expect profits to increase more quickly than the investor expects.

Further reading:
http://en.wikipedia.org/wiki/Venture_capital

Key deliverables

The key deliverable in this Step II is a business plan, generally a text document containing the sections outlined above. This section, together with Starting Up, should have yielded a professional business plan which is well targeted to your situation and those meant to read i, such as potential partners and investors.

During this process, you will have developed a better grasp of the way your business and organization will work. You have refined your revenue model, cost price and credit need. You can start to work on a more sophisticated forecast, including your projected cash flow. You also have a clearer idea of your product and market. These insights, together with the financial calculations, result in a solid business plan. You need this plan to convince investors to invest in your business and to make solid estimates of the budgets required to cover the development of your product.

We have included two other, more complex financial models in the Toolkit, one developed by the BiD Network and one by Micro Water Facility, together with a business plan format.

Tool 6: Business Plan Format
Tool 9: BID Financial Model Format
Tool 10: MWF Financial Model Format

Frequently asked questions:

Question	Answer
How can I minimize development costs?	Use students to work for you. Plan well. Borrow what you can.
Who might challenge me on my ideas?	Use foreign students, for example those at UNESCA-IHE in Delft, as a forum to challenge your ideas. They have in-the-field experience, are well educated and motivated to work with you to create better solutions.
How do I get in contact with potential (social) investors or other groups that I can use to finance my business?	Tool 3 will give you an overview of possible financiers. You might contact organizations like Micro Water Facility which provide financial engineering services.
I find it hard to find data for market research. What should I do?	Market statistics can be found on the internet easily. All major NGO's and intra governmental organizations (like World Bank or Asian Development Bank) have market statistics on their websites. Several commercial companies like Baytel provide specific market research on small scale water products.
How do I know my competition?	Desk research, Western and local interviews

Step III: Field Testing

Step II, the making of your business plan, involved a lot of planning, market assessment and product development. Now you are ready to proof your product and business concept. In this third step you will focus on testing the technical concept, the pricing and revenue model and the value proposition. Based on the outcomes of the tests, you can fine-tune your business plan and prepare the market introduction. Testing your product in the local market will give you the opportunity to find the local partners you will probably need in order to set up your local business.

Steps	
Product 	- technical pilot - commercial pilot - diversifying product applications
Market 	- social marketing
Business 	- setting up your local organization
Finance 	- finding local financial partners
Key deliverables 	- pilot project(s) in progress - adjusted business plan

To prepare yourself before field testing you must:

- Have a solid business plan.
- Have a separate realization schedule (or implementation plan) of the field test.
- Have all financial funds in place to finance the field test.
- Have all partners on board to execute the field test.

During field testing you will have to:

- Test the product technically and commercially.
- Test and refine your marketing strategy.
- Prepare yourself to set up your organization locally.
- Prepare yourself to attract local financial funds.

In this section we advise you to spend adequate time on the commercial pilot of your product as most water and sanitation entrepreneurs we met tend to focus on the technical aspects of the field testing.

As you are approaching the end of the initial product development, your final prototype is now ready for testing in a “real life” environment. Testing under field conditions is not only important from a technical point of view; it is also important for your marketing and financing. You need to demonstrate convincingly and objectively to customers and investors that your product performs well.

Two kinds of pilots are important here; the technical and the commercial pilot. The following paragraph deals with the technical pilot, whereas the next paragraph discusses the commercial pilot.

Technical pilot

The purpose of a technical pilot is to determine whether your products work as designed and intended. When developing a technical pilot, you have to take into consideration the following aspects:

- A third party must be involved to ensure objectivity (testing institutions, universities, NGOs with testing/analytical capabilities, etc.).
- Test conditions should reflect final future working conditions.
- All important parameters need to be assessed. These may vary from product to product, but remember that potential investors/customers are often knowledgeable about this technology; they will notice if relevant information is missing. Take time before testing to determine all the data/parameters that need to be collected.

The field test(s) need to be well documented and analyses need to be done by reputable institutions/laboratories. The best procedure is to compile a complete report on the final field test and provide this to potential investors.

Conducting a field test takes a lot of time and resources. Approach a university and ask about internship students. Employing students minimizes your labor costs, but you still have knowledgeable people working on the case. Some universities have also acquired experience with the BOP market (TU Delft for instance).

Further reading:
Info Sheet 4: Product development, the case of the Basic Water Needs Foundation

Commercial pilot

The purpose of a commercial pilot is to determine if your product and the intended marketing mix fit the intended market. One element is whether the pricing of your product is right. You should also check whether the target consumer group you had in mind is actually the group that will buy your product, and to check your market communication (e.g. the marketing mix you are thinking of using; see the section on the marketing mix). Are you promoting the product effectively and are you getting through to your target group?

Select an area (or more than one if possible) that you know well and bring the product to market. For example, you could actually sell the product in a limited number. You could use the same distribution channel you are considering using later when you go fully commercial (distribution partner or NGO partner). You might consider selecting a different distribution channel you will use only this once to lower the risk of losing a good distribution partner if results during the field tests do not match expectations immediately.

Keep track of the consumers buying the product and ask for feedback. Sell a significant number of products while trying different price levels in different areas, if possible. Take enough time to collect adequate feedback. Stop after you have sold a predetermined maximum number of articles and continue to collect consumer feedback for at least several weeks after you have stopped the pilot. Meanwhile, start buying competing products and buy them, test them yourself, and compare the results with your own product.

The statistics on a commercial pilot for a household water filter could look like this:

- Number of units sold: 600

- Number of locations used: 3
- Three different price levels tested
- Consumer feedback collected from 200 consumers (out of maximum of 600)

Important parameters to measure your success are:

- Number of units returned
- Number of consumers coming back with problems with the unit
- Verbal feedback from consumers (perhaps using PRA)
- Number of consumers willing to provide feedback on the product
- Failure rate of parts in the product
- Turnover rate of the units at tested price levels, e.g. how many units sold during a certain period at different price levels

Further reading:
Info Sheet 6: Participatory Rural Appraisal

Diversifying product applications

Ask yourself if and how your product can fulfill unexpected needs of local end users. The purpose is to know about and tap into all potential revenue streams from your product. Say your product consists of a solar panel to power a UV light water treatment system. Electricity produced can also be used to recharge cell phones or to operate a fridge, for example. The filtered water can be used in lemonade or for making ice cubes in small bars; the same product can be sold to different client groups for different uses.

thly cost, income, revenues ans cash position for month:……..... **WaterPyramid project, site:……..**

ermanager:…… **Date & signature:……..……..…..**

Cost regular operations (fuel, transport, small repairs)

		cost	
week 1	from……..to…..		
week 2	from……..to…..		
week 3	from……..to…..		
week 4	from……..to…..		
week 5	from……..to…..		
		0	**total cost operations**

Cost employment salaries

	cost	
watermanager		
assistant		
nightwatchmen		
other:…..		
other:……..		
	0	**total cost salaries**

Other cost (please describe…)

date	item	cost	
		0	**total cost other**
		0	**total cost**

Income out of sales

Jerry cans	nb. sold	income	
week 1		0	
week 2		0	
week 3		0	
week 4		0	
week 5		0	
tot. number	0	0	**total income jerry cans**

Distilled water	nb. sold	income	
week 1		0	NB wholesale price in formula
week 2		0	
week 3		0	
week 4		0	
week 5		0	
tot. number	0	0	**total income distilled water**

Juice	nb. sold	income	
week 1		0	
week 2		0	
week 3		0	
week 4		0	
week 5		0	
tot. number	0	0	**total income other**

Mobiles	nb. charged	income	
week 1		0	
week 2		0	
week 3		0	
week 4		0	
week 5		0	
tot. number	0	0	**total income other**

Ice blocks	nb. sold	income	
week 1		0	
week 2		0	
week 3		0	
week 4		0	
week 5		0	
tot. number	0	0	**total income other**
		0	**total income**

enues this month

total income	0
total cost	0
Revenues	0

Cash position end month

in petty cash box	
on bank account	
total cash positon	0

Exhibit 12: Report as received by AAWS (AAWS)

A good example of product diversification is the way Martijn Nitzsche, director of Aqua-Aero WaterSystems (AAWS) developed different product applications (see the case description in Chapter 3).

AAWS developed the WaterPyramid concept for tropical rural areas. The WaterPyramid makes use of simple technologies to process clean drinking water out of saline, brackish or polluted water. Most of the energy needed to clean the water is obtained from the sun.

“I always ask myself how can I make as much money as possible out of a product or service,” Martijn Nitzsche explains. To answer this question you need to cooperate closely with local entrepreneurs distributing and selling the produced water. These entrepreneurs have the knowledge of local habits and customs and they understand the behavior of their customers. To increase the added value of the water produced by the WaterPyramid, Nitzsche co-created new product applications with local entrepreneurs and end-users.

In Gambia the water is used to make juices, distilled water, ice cubes and drinking water. Meanwhile, cell phones are charged using the solar panel equipment. In order to monitor results, AAWS receives a very straightforward report (illustrated above) on income and costs on a monthly basis. A local NGO supports the process on the ground. This way of reporting is a good example of co-creating a business while checking in the market to see whether new product applications meet the needs of customers and whether they are willing to pay for it.

In this section on market we introduce the traditional “4P” marketing mix you can use to collect and frame your market research, value proposition, price strategy and possible ways to promote your product. In addition we explain 4 social marketing “Ps” which are relevant to take into account when introducing water and sanitation product to BOP markets.

To prepare for the introduction of your product onto the market you need to draw up a marketing plan or approach. In business this is termed the marketing mix: the tools you are going to use to market your product. The marketing mix is generally accepted as the use and specification of the “4 Ps” that describe your strategic position in the marketplace: Product, Price, Place and Promotion. In our case we will focus on social marketing. Since your business model might include social aspects and goals, a social filter can be applied to the more traditional marketing mix.

Social marketing

Social marketing is the systematic application of marketing, along with other concepts and techniques, to achieve specific behavioral goals for a social good. In other words, social marketing is marketing adapted to social imperatives, with “social good” as the primary aim. The aim of commercial marketing is primarily financial. Like commercial marketing, the primary focus in social marketing is on the consumer and learning what people want and need rather than trying to persuade them to buy a product.

Social marketing builds on "normal" marketing, which is focused on the consumer, not on the product. Marketing strategy takes this consumer focus into account by addressing the elements of the marketing mix. This means making decisions about the 4 Ps: (1) Product, (2)

Price, (3) distribution (Place), and (4) Promotion, which are being explained in Starting Up on page 87. However BOP (4P) water and sanitation marketing strategies comprise some specific characteristics:

(1) Product

The social marketing "BOP product" is not necessarily a physical offering. A continuum of products exists, ranging from tangible, physical products (e.g. filters, spare parts), to services (e.g. educating programs, maintenance), practices (e.g., breastfeeding) and finally, more intangible ideas (e.g., environmental protection). As explained before your product must be appropriate.

(2) Price

Your product must be affordable to your clients. When the benefits are perceived to be greater than the costs, there is a greater chance of trial and adoption of the product. These perceptions of costs and benefits can be determined through your field research, and used in pricing the product. In the case of marketing a drinking water filter, you should try to focus on the hidden costs of sickness caused by poor drinking water quality: the loss of income, the costs of medical care, but also the costs of boiling water every day.

(3) Place

As a physical infrastructure often lacks in BOP markets, the way that the product reaches your client is a crucial element in your marketing strategy. By determining the activities and habits of the target audience, as well as their experience and satisfaction with the existing delivery system, you can pinpoint the most ideal means of distribution for the offering. These may include doctors' offices, shopping malls, markets, fairs, mass media or in-home demonstrations. Besides delivering your product, you must ensure accessibility of the offering and quality of the (after-sales) service.

(4) Promotion

You must determine the most effective and efficient channels to reach the BOP market and increase demand. Results out of field testing can also be used to gain publicity for your product at media events and in news stories. By determining the activities and habits of the target audience, you can make decisions on channels to use like public service announcements, paid ads, coupons, media events, editorials, "Tupperware"-style parties or in-store displays.

Additional social marketing "Ps"

(5) Public

This refers to the public domain (local communities and the social environment of the business). You often have many different audiences (stakeholders) that you have to address in order to be successful. "Public" refers to groups affecting your marketing. Public groups include policy makers and those who are involved in some way with either approval or implementation of the product. NGOs and media that might influence public opinion are important stakeholders to take notice of as well.

(6) Policy

Social marketing programs can be effective in motivating individual behavior change, but this is difficult to sustain unless the market you are focusing on supports that change over the long run. Often, policy change or an educational program is needed, and media advocacy programs to influence the public and political agenda can be an effective complement to a social marketing program.

(7) Partnership

Social and health issues are often so complex that one organization on its own cannot make an impression. To really be effective you will probably need to team up with other organizations in the community. You need to figure out which organizations have similar goals to yours – not necessarily the same goals – and identify ways you can work together.

(8) Purse Strings

You will probably finance your social marketing programs through funds provided by sources such as foundations, governmental grants or donations. NGOs will probably work with you by providing in-kind contributions. The question is how to integrate your product into such campaigns without financiers and NGOs complaining about using public money to finance commercial initiatives. You must act thoughtfully and try to balance the different points of view with your own agenda.

Start your social marketing with a quick scan on the above-mentioned aspects. You will avoid a tendency to start generating and crafting messages or interventions before a deep understanding and insight into the customer is achieved. It also ensures that you immediately identify the behavioral changes you need to accomplish. Use the understanding and insights gained during a quick scan to select appropriate marketing methods and develop marketing plans (i.e. what will achieve and sustain the desired behavior). Initial insights also provide a baseline and starting point for measuring and evaluating interventions.

Further reading:
www.nsms.org.uk
www.social-marketing.com
http://en.wikipedia.org/wiki/Social_marketing

Business

In this section you prepare yourself setting up your business locally. You test and implement the different elements of setting up your business you formulated in Step II (Business section).

Setting up your local organization

During this step you have the opportunity to prepare yourself for starting up your business locally. During Step II you have made decisions on insourcing and outsourcing. During field testing you have to check if outsourcing is still an option, who will be the best partner, and how will it affect your business model and calculations.

You need local partners and advisors to set up your business locally. The best advice we can give you is: do not do it yourself.

Business support offices, Chambers of Commerce and local business consultants may advise you on the question of which legal entity is best suited to your needs and how to set it up. As in Step II, you have to investigate, find partners for and make decisions on the following topics:

- Startup team
- Organization
- Risks and mitigation strategies
- Distribution
- Network building and partnerships
- Realization schedule

Remember that these activities take much more time than expected. It can be very useful to plug into an existing organization or distribution network instead of doing it all yourself.

Startup team

Hiring local people to work in simple jobs is in most cases easy. Finding qualified and reliable management is difficult. You have to be sure local management fully supports your business strategy and it is important that your relationship with these people "clicks". It has proven to be successful when good incentives are in place for local managers to benefit from a successful business as well.

Some more tips:

- Use references by trusted parties to check the resumes of personnel.
- Check, double check and triple check your personnel on aspects like responsibility, reliability, trustworthiness, etc.
- Hire local people who live near your premises.
- Start small; with a large team on your payroll you will be visible for unities.
- Outsource all administrative and legal work.
- Hire, train and coach middle management.

Organization

In Step II we discussed the organization as the body of your business, consisting of:

- Facilities

  During Step III you have to visit the locations you selected in Step II and check whether they meet your expectations. For instance, two entrepreneurs involved in the Toolkit started using a location provided by one of their local partners. At a later stage, though, when you are scaling up your business, you will want or have to move to a location you rent yourself. When renting your own location, you definitely need a professional partner to advise you on real estate contracts, but for now you should avoid long-term contracts and look for a flexible "startup" location.

  As mentioned in Chapter 1, affordability (low cost products) is a critical aspect of appropriate technology and BOP strategies. It is important to investigate possibilities for local production and assembly of (parts of) your product. In Step I you calculated the cost price and refined this calculation during Step II. During the pilot phase you must break down your cost price and calculate each component again, assuming your product will be produced locally. Comparing this information, you can decide which part of the production you will outsource locally and which vital component will be manufactured in your "Western" home market, either by yourself or a by production partner (e.g. to protect your intellectual property).

  The next step is to specify the criteria for selecting different producers. Talk to them and make an initial selection of two or three possible production partners. Then ask these to provide you with indicative prices or, if possible, firm quotations. You need

this information to recalculate your cost price, forecasts, budgets, and credit need, and finally contract your local production partner.

- With respect to the sourcing of materials, we advise you to check aspects like availability, quality, reliability, and pricing while building a network of potential suppliers.
- Start thinking about quality control systems as well. This starts with setting the standards your suppliers will have to comply with.
- Perform cost and time studies on assembling and producing components, packaging, production, quality control, etc. This will give you a better understanding of reasonable local cost prices, whether or not you are producing your products yourself.
- Don't forget the after sales! If your product needs maintenance or simply breaks down you need to offer assistance. Include after sales in your product or service and make sure that spare parts are available locally at a reasonable price.
- When you have selected possible partners to work with, ask them to provide indicative prices or, if possible, concrete offers. You need this information in order to calculate your budgets, attract your funding and finally contract your partner.
- While you are demonstrating your product you have the unique possibility to show your product to possible partners. This works better than presenting your product on paper.
- It is not always easy to perform all research yourself. We recommend that you look for people with local experience, for example business consultants, and work with them while you are demonstrating your product.
- Always double check your information and make sure that your partners are able to deliver on their commitments. In some cultures it is an offence to respond negatively to requests.

Further reading:
Info Sheet 10: Sourcing strategies

- Human resources
  See "Startup team" in this section.

- Systems and compliance
  During Step III it is important to check two key aspects:

- Meeting legal requirements
- Complying with certification and regulation

Again, the best advice we can give you is: start early and do not do it yourself.

Business support offices, chambers of commerce, local business consultants, and local legal advisors may advise you on which legal requirements and certifications apply to your business. Because water and sanitation are health-related issues, government is in most cases highly involved in both topics. Because government structures are not always strong in developing markets, it may be difficult to understand how legislation and certification affect your business. Complying with

laws, regulations and certifications requires expertise, good contacts and patience. These processes take time.

- Financial management and control
  Executing a pilot is a project on its own and includes a lot of activities which have to be budgeted and controlled well.

- Because you are going to build a first or second prototype, you need a production partner who is going to provide you with calculations.
- If you do lab testing, you need to ask your knowledge partner to give a quotation on the R&D costs. It might be useful to have your product tested by an official government approved organization, as it can speed up the application process for permits or certifications. Take all these costs into account when drafting budgets.
- To pilot your product abroad, you must transport your prototype and import it. You need to budget for all the activities of the local pilot team, not only the technical research but the market research as well.
- We also advise you to budget for unexpected costs as case studies show that you need financial resources to perform all kinds of extra tests and activities during the field tests.
- You must identify all possibilities for lowering your cost price by shifting production and other activities to the local market. The field test will give you information for recalculating your forecast as well. It has proven to be critical to have a look at your assumptions on the overhead costs again.

Document this process well, because it can provide you with a scenario you can use in other pilots. Besides, subsidies granted to finance pilots often come with strict conditions on reporting on progress and costs.

> ***Lowering the cost price***
>
> One of the entrepreneurs involved in the preparation of this Toolkit decided to ask for quotations on moulds and spare parts locally and piloted local assembly of the product, which reduced assembly costs by 90%. He outsourced almost everything except one critical step in the production process, which secures the high quality of the product. However, he imported several spare parts abroad, which did not function at all, and it took a lot of time testing and developing the different prototypes.

Risks and mitigation strategies

During all the activities mentioned in Step III, keep your risk mitigation strategies in mind to keep you focused on solving critical issues which reduce your business risk.

- It is important to have a good grasp of the government structure and the policies, legislation and regulations relating to water and sanitation.
- Investigate your local market by talking to your clients directly and engage with local NGOs who have a good understanding of client needs and local water and sanitation issues.
- Take time to investigate the competition in the market, especially the possibility of unfair competition.

- Check whether all resources (both intangible, like knowledge about the market, and tangible, like spare parts, materials, labor) are available locally.

Distribution

When you are doing business in developing countries, distribution is one of the most difficult aspects. You will only be able to manage distribution yourself if you produce after receiving an order and your product is very complex and expensive (you will probably only sell a couple of products each year!). In all other cases you need partners. Present your business model to possible distributors you have in mind. Develop criteria for identifying candidates and work out a sound business proposal in which the added financial or (if an NGO is distributing your product) social value is clear to the distributor, who might become your partner.

In general, there are three ways of distributing your products:

- Distribution through commercial channels. You might investigate working together with multinationals that have an efficient distribution network in developing countries. You might also choose to sell your product to professional distributors or work with local agents.
- Distribution through government programs. Governments often spend a lot of money on water and sanitation programs. But it is not always easy to plug into these programs and it takes time to understand how these programs work (e.g. tendering procedures). On the other hand, being part of a program can have a huge impact on your sales.
- Distribution through NGO networks. NGOs often run large programs on water and sanitation. Because they are closely involved with the BOP market, they are able to reach your potential customer through their extensive networks. On the other hand, NGO decision-making processes are often time consuming and the policies and focus of NGOs may change from time to time.

During Step III entrepreneurs and organization often experience difficulty in reaching potential clients in rural areas (and even in urban slums). A good physical distribution network (roads, rail, etc.) is lacking and it is not easy to market products while potential clients do not have enough awareness of personal water and sanitation issues. Besides, it is not easy to build trust and confidence with potential end users of products. In Chapter 3 we give you some practical information on how to find clients in the Indian market. For now we conclude with some general tips:

- Start small and focus on a specific area and a specific client group.
- Use existing distribution channels.
- Visit places where your potential clients go, like markets, schools, public buildings, train stations, fairs, festivals, etc., and include these in your distribution model.
- Engage with women's self-help groups or small women's microfinance communities; they often have capacities to market and sell your product.
- Do not do it yourself. Work with trusted partners.

Further reading:
Attachment 6: Cannes Lions 2008

Network building and partnerships

Through the network of embassies, business support offices and local chambers of commerce, you can easily find local brokers and agents who can help you to do business in a developing country. It is important to find trusted partners, so checking for references is no luxury. The best way to ensure you are dealing with a good partner is to check with fellow entrepreneurs, trusted NGOs, representatives of your government and contacts with local branches of solid multinationals like banks or accountancy firms.

We refer to Chapter 3 in which we give practical information on how to build partnerships with NGOs, financiers and government in India.

Realization Schedule

Please refer to the paragraph "Financial management and control" (Step III). Executing a pilot is a project on its own. You have to take all the aspects described above into account. Draft a separate realization schedule to break down each activity into work packages, including a specific budget for each. Remember, doing business in developing countries takes much more time then expected as you are unfamiliar with the local customs, culture, procedures, etc.

Finance

In this section we emphasize the importance of attracting local financial means.

Finding local financial partners

During Step III, you have the opportunity to start meeting potential local financiers. Local funds and financial resources are highly important when your local activities are starting to grow and you want to scale up. There are six reasons for sourcing funds for local activities from local financiers:

- Your local activities cause cash flow in local currencies; financing your activities in the same currency eliminates your currency risk for these activities.
- Local investors understand the local business risks and may be more willing to provide capital at proper conditions.
- Western financiers are reluctant to put money into markets which are not familiar to them; they have problems estimating the risks and lack infrastructure to release and collect funds.
- Local investors might have local networks and local knowledge which can be valuable to your business.
- Bringing in foreign financial resources may be restricted by foreign capital restrictions imposed by governments.
- By expanding the range of different financiers, the business is less sensitive to a possible changing commitment by one of your financiers.

During this phase, the only way to get bank capital (like commercial bank loans) is by offering a bank a valuable security like a mortgage on real estate or a bank guarantee. The most common way to attract local capital is by asking your local pilot project partners for financial

support, plus their support in applying for local grants or subsidies. Local partners might have good contacts with possible (commercial) financiers; try to use their networks to get in touch with them.

Finally, you need to prepare yourself before talking to local financiers. You will need to present your business plan and, if possible, a good introduction by a reputable organization. We recommend that you read the finance section in Step IV, in which we explain more about near-equity ("mezzanine") finance and (commercial) loans. In Chapter 3 we provide a short list of some Indian financiers who have a minor or major focus on financing water and sanitation businesses. Finally, Info Sheet 11 briefly explains the phenomenon of microfinance and microcredits. In developing countries microfinance institutions (MFIs) play an important role in financing small-scale local businesses or activities in BOP markets.

Further reading:
Info Sheet 11: Microfinance and microcredit for water and sanitation

Kev deliverables

At the end of this section you have pilots in progress, giving you technical, commercial and financial information. If the information confirms the assumptions made in your business plan and you are ready to launch your product, your pilot has been successfully executed.

In most cases field testing is a “learning by doing” process and you have to adjust your product, sharpen your view on your market and figure out how to market your product, including setting your sales price.

If the outcome of your pilot does not support the business model you have in mind at all, you must reconsider your idea. It is better to change or quit your plans at this point than continue building a non-sustainable business.

You have also met many potential local partners and are ready to make decisions on the way you will set up your business locally. By now you have a complete business plan describing all aspects needed to launch your product and scale up your business.

Step IV: Going to market

To start with, you should realize that launching your product onto the market does not occur at a single moment in time. The process starts before the official launch, and does not end with it. It is influenced by market responses and initial orders and may be a complex process. In this fourth and final step, the focus is on the official market launch, getting feedback from the market and building a "real" business.

Steps	
Product	- continuous improvements
Market	- market introduction - market feedback
Business	- business systems - financial management and control
Finance	- near equity - loans
Key deliverables	- a profitable enterprise with potential to grow

In this section we explain the importance of continuous improvements on your product. On the other hand we advice you not to change too much as this will directly affect your cost base.

Continuous improvements

Now that your product has actually been launched, you should not change your product in any way for a certain period of time. First, collect market feedback from customers and, after some time, identify potential product improvements that respond to the feedback from your customers. These product improvements can make your product better, i.e. cheaper or more appealing to your customers. Once you have identified such product improvements, you can start thinking about introducing them. However, keep in mind that now that your product has been launched, modifications to the product will have more impact. You will have different product versions on the market which may require different spare parts, different servicing, different manuals, etc. It will increase the complexity of your business and affect your cost base.

Further reading:
Info Sheet 4: Product development, the case of the Basic Water Needs Foundation

It is up to you to decide how much attention you want to attract to your business at the market launch. Some businesses just slide into existence and start to offer their product. Others prefer to organize media attention and make a big event out of the market launch. If you are not sure about marketing yourself, ask for advice, perhaps from an NGO or local consultant. Your local partners can also play an important role. They often understand better than you the best local approach for product introductions on your selected market. However you choose to mark the launch, there is a moment when your product is actually on sale.

In this section we present the Mytri case by Acumen fund, which comprises important lessons learnt when launching a water business. Spend time on collecting consumer feedback, which gives you the opportunity to improve your product.

Market introduction

One of the cases on the market introduction of an AT water product that has been extensively documented and made available is the Mytry case by Acumen Fund. This case is specifically interesting because not many BOP water and sanitation initiatives have been commercial for so long. This is then one of the few examples about which information has been made public for knowledge sharing purposes.

Further reading:
The Mytry case has been written up by the Stanford Business School and can be obtained for $6 via the Internet: www.gsb.stanford.edu

The Stanford business case

This case details some of the problems Mytry faced during their market launch. It is a case rich in information and gives a good insight into the operational aspects of starting up an AT water business. Even though the case focuses on the choices Acumen Fund, as an investor, was facing, it still illustrates the potential challenges you could face when starting up your AT water or sanitation business. Below we summarized the main challenges Mytry faced during their startup years. A very important choice in their case was to focus on (big) government and NGO orders. These were often delayed without prior warning and payment was always late, resulting in liquidity problems and very irregular ordering. This is surely something every AT water business will recognize. In the water sector there will always be an understandable tendency to go for government or NGO orders. These parties with large budgets to spend play an important role and they cannot be ignored. However, they do sometimes change their orders and tend to be late at paying their bills, and you will have to find a way of coping with this.

Some of the challenges Mytry faced:

- Inexperienced management
- Delayed equipment delivery
- Difficulty with expanding the dealer network
- Delays in setting up manufacturing
- Delays in orders from government
- Difficult communication between India and USA (financing partner)
- Inadequate data and information available for management
- Late payment by government and UNICEF (liquidity problems)

Exhibit 13: The Stanford business case

The problems faced by Mytry (see Exhibit 13: The Stanford business case) should be noted by others planning to enter the water and sanitation BOP market. We cannot go into potential solutions to the identified problems here, and neither does the Mytry case study offer solutions at this moment. However the case provides lessons learned and identifies potential pitfalls.

Collecting your own market feedback

Working with an NGO partner who is active in social marketing and/or PRA often provides the opportunity to learn more from the market than you would when using only conventional marketing techniques. When your NGO partners organize awareness raising sessions on the issues surrounding unsafe drinking water and lack of sanitation, you will have a natural opportunity to learn about their response to your product or about competitive offerings in the marketplace. This is a very worthwhile exercise to go through and your NGO partner will know how to help you.

If you are not working with NGO partners for social marketing then you should arrange to obtain market feedback yourself. You could either ask a market assessment agency to perform this study for you or actually do it yourself. Carrying out such a study yourself will take quite some time and will divert your attention away from operational issues, which at this time will be significant.

In this section we introduce important systems and methods, which will help you to manage your business when it is scaling up. A complete overview on all systems and methods does not fit into the scope of this toolkit. We focus on two key aspects: Enterprise Resource Planning (ERP) and financial management and control.

Business systems

Particularly for high-volume products, you will need systems to manage and monitor your stocks, purchase your goods, control your cash flow and plan the resources involved in your operation. Larger enterprises use tailored Enterprise Resource Planning (ERP) systems, which are expensive and time-consuming to set up. Suppliers include Exact, MS Business Solutions and Oracle. It does not make much sense to install such a tailored ERP system when you are just starting up. But increasingly, affordable off-the-shelf ERP packages are becoming available for small and medium businesses to assist you in your operational control and planning. Small business software is easy to install and intended to grow with your business. If you face challenges with setting up an ERP system, you can always consult a local expert, which helps you to make an appropriate choice for your business.

Further reading:
http://download.microsoft.com
www.business.com

Financial management and control

Now that your business is up and running, your attention will switch to continuously improving your operation. You will want to improve your processes, so that you can increase productivity, reduce costs and make your business grow further.

Financial information is an important indicator of how well your business is running. Analyzing your financials gives you better insight into the way your strategy is working out, and you can adjust your forecast if needed or intervene directly on the operational side to improve your results. Financial information is like the gauges on the dashboard of a car.

The question now is to determine which financial information (indicators) reflect your business in a way that allows you to manage your activities effectively. Of course, this depends on the type of business. For example, if you are a manufacturer, investments in fixed assets are important, whereas if you are a trader, your focus should be on managing your stock level.

In answering this question, we recommend that you to take the following steps:

- Identify and quantify your financial goals.
- Identify and quantify the critical success factors that you have to manage.
- Develop a reporting format (you might want to use the templates you used to set up your financial forecasts).
- Set up a budget process leading to yearly budgets and financial forecasts.
- Formalize a reporting process with regular meetings in which financials are discussed, formalize responsibilities, and draw up action plans.

Financial goals

At the minimum, you need enough money to run your business the next day, week or month: "cash is king". The most sustainable source of cash flow is operational cash flow generated by your core business. Especially when your business is growing and you need to expand (e.g. invest money in stocks, machinery or trade debtors), operational cash flow might be insufficient to meet your credit need. You therefore need to manage your working capital and secure access to external financial means.

Examples of financial goals are:

- Targets on liquidity, meaning the ability to pay debts in the short run.
- Targets on solvency, meaning the ability to pay debts in the long run.
- Targets on profitability, meaning the ability to make profits and return on investments.
- Targets on bankability, to retain access to external capital (on attractive terms).

Managing your financial critical success factors

An important question is which items are driving your cash flow. In meeting above mentioned financial goals, cash flow is often a critical success factor. In general you can identify the following cash flow drivers:

- Turnover (or sales): volume times sale price. Focus on sales volume, especially of high margin products.
- Margin: turnover minus cost price. The margin (if possible allocated to different types of products) is a good indicator to focus on. Besides the volume of your sales, the margin reflects the efficiency of your production process or sourcing / buying power.
- Fixed cost base: overhead, depreciations, etc. The (fixed) cost base is often called "overhead", which has to be covered by your margin. Keeping your overhead at the lowest possible level is essential practice.
- Working capital: the sum of stocks and trade debtors minus trade creditors. In most cases, the outcome will be positive, which means you have to finance your working capital with own means or external funds (e.g. short-term credit lines). Your focus should be on keeping your working capital as low as possible by managing your stock and 'urging' your clients to pay in time (or much better: up front).
- Investments: the money you spend on purchasing assets. If your business is growing, you need to plan your investments carefully. The cash that is created by depreciations should be used to finance replacements. In most cases, expansion of your business will have to be financed by external funds, like leasing facilities or bank loans. Arranging these types of facilities takes time: you have to make investment

proposals, negotiate conditions and comply with loan and legal conditions before funds are available.

- Financial costs: interest, fees, currency results. In most cases the financial costs are a fraction of the total cost base, except when your business is leveraged with large debts or if you are financing your operation with “high inflation” currencies. Focus on attracting financial means in the same currency as your turnover and / or cost base is.

As we explained in Chapter 2, financiers check the health of their investments by monitoring financial results, which are often reflected in specific indicators like solvency rate and liquidity ratios. These indicators may be conditions in a loan or investment contract and are usually fixed at a specific level. You have to focus on managing these ratios so that the outcomes meet agreed levels or are in line with your financier’s expectations. This will enable you to retain access to financial sources on attractive terms.

Further reading:
Info Sheet 12: Business risks

Develop a reporting format

It is important to understand the differences between internal and external reports. External reports have to be delivered to comply with laws, regulations or credit facility agreements. Internal reports are used to manage the company’s activities internally. Although general standards do not exist, external reports are, in most cases, produced annually. The timing of internal reports depends on the topic you report on:

- Your sales, working capital and your bank account balance: weekly
- Your profit and loss: monthly
- Your profit and loss, balance sheet, cash flow and financial ratios: quarterly

In your monthly and/or quarterly (Q) reports you need to be able to compare your results with:

- The similar period last year (Q1 2008 against Q1 2007)
- The budget (Q1 2008 with Budget Q1 2008)

Each quarter you should revise your original annual budget to yield the latest forecast of your expected annual results. You can then compare this forecast to the original budget. At the end of the year, you should compare results with the business plan original forecast.

Reporting process, responsibilities and action plans

Don’t spend too much time calculating and analyzing your financials as this will not directly improve your business. You must transform your financial analysis into action plans. You need to formalize the reporting process and discuss outcomes on a regular base with your staff. You need to delegate responsibilities and formulate action plans to improve your business if needed. If you identify any problems, especially regarding your liquidities, immediate action will be required (lowering stocks, sending out invoices, calling debtors, talking to financiers).

Budget process and three-year forecasts

A couple of months before you close your accounts (year end) you should calculate your budget for the coming year to ensure it is ready before the beginning of the new business year. We recommend that you include a three-year forecast in this process. If you need extra financial means you will then have a three-year forecast ready to present to financiers.

Further reading:
http://en.wikipedia.org/wiki/Managerial_finance
http://en.wikipedia.org/wiki/Management_accounting

Finance

Recall that in the previous steps we discussed the first three of the following four types of financial means:

- Own means and informal capital
- Subsidies and grants
- Seed money and venture capital
- Near-equity and loans

It is now time to look at the last one: near-equity and loans.

Near-equity

Most financial sources in the previous steps relate to equity. As the word suggests, near-equity is an instrument positioned between equity and loans. It is used to finance high risk activities by using a loan. This loan has a high yield (its interest rate is above the market rate) and includes a warrant (an option to transfer (part of) the loan into equity under certain conditions). In return, near-equity is subordinate to loans. If a company cannot pay the interest in its loans and goes bankrupt, the assets are sold. The lenders then get their money back before the near-equity holders, who come before the equity holders. The activities of the ventures we talk about in this Toolkit are often not suitable to finance with common mainstream near-equity as they are too small in deal size; in other words, the size of the loan will be too small to cover transaction costs like due diligence. However, social venture capitalists often offer loans combined with a warrant to finance new ventures.

Loans

Generally you can say investors will provide financing when the business generates or will generate cash flow in the near future, from which they can get their money back. Of course, you cannot give them a 100% guarantee about the amount and timing of the return. Therefore, financiers providing a loan often ask you agree on specific loan conditions, divided into:

- Loan taking entity
- The term of the loan
- Security
- Financial ratios
- Other (soft) conditions

Loan taking entity

The loan taking entity, or borrower, is an important part of the credit agreement. Generally, the borrower is the legal entity that has a credit need which is financed by the lender, i.e. the corporation you have set up. Sometimes, lenders want other legal entities to sign the credit agreement as well, in case the credit facility is used by several other legal entities, or if other

legal entities can provide extra security. This may mean you need to co-sign the lending agreement on your personal assets.

Term of the loan

The term of the loan depends on the expected free cash flow, which can be used to repay the loan, and the type of asset which is financed. Real estate can be financed with long-term loans for up to 15 or sometimes 20 years. Machinery is financed either by leasing or mid-term loans up to 7 years. The credit need for investments in working capital (trade debtors and stock) is financed by factoring arrangements or working capital facilities (short-term credit facility). This type of facility is often uncommitted, which means these facilities can be terminated by the bank on a day's notice.

Security

Security is the assets which the lender can claim if interest payments are not made. If a bank finances your office, you normally provide them with a mortgage on the real estate. If a financier asks for another pledge or a personal guarantee, you provide them with additional security. It is common practice to provide additional security when you have just started up your business and are earning your first profits. The amount of security required depends on the business risk, the loan size, the value of the security and your talent in negotiating with financiers.

Sometimes the value of the security determines the size of the loan. We call this "loan to value", or in the case of working capital, "the borrowing base". Golden rules on the value of securities do not exist, but we would like to provide you with some *unofficial* "Dutch bank guidelines".

Asset	Security	Value	Coverage rate	Remarks
Cash	Pledge, often part of the banks general loan conditions	Nominal Value	100%	Depending on the currency
Public Shares	Pledge in accordance with banks standard documentation	Share price	70-90%	Depending on the type of shares
Real Estate	Notary Deed	Liquidation value	60%-80%	Depending on the marketability of the object
Trade debtors	Pledge in accordance with banks standard documentation	Current value (< 90 days)	60%-70%	Depending on the quality and average outstanding days
Stock	Pledge in accordance with banks standard documentation	Current value minus trade creditors	50%	Depending on the marketability of the stock
Machinery	Pledge in accordance with banks standard documentation	Current value minus defered payments	30%-40%	Depending on the marketability of the object
IPR	Pledge in accordance with banks standard documentation		0%	Soft security
Companies shares	Pledge in accordance with banks standard documentation		0%	Soft security

Financial ratios

Often financiers use financial ratios to monitor the risks on their investments. The range in which the value of ratios might fluctuate is often a condition in credit agreements.

Further reading:
Info Sheet 12: Business Risks

The ranges in which the value of ratios are set and agreed upon depend on your business's risk profile, the provided securities and the type of funds you have attracted. When

negotiating with financiers your goal should be to negotiate ratios at values you are comfortable with.

Other (soft) conditions

A loan agreement may also contain other conditions. These may be any kind of condition an investor wants to have in place to mitigate his credit risk. The most common conditions are:

- No further debt clause: the borrower cannot attract more loans without the approval of the lender.
- Change of ownership or management clause: the credit agreement can be reviewed by the lender when the ownership of the company (borrower) or (senior) management changes.
- No (further) pledge of assets clauses: the borrower is not allowed to pledge any or specific assets to third parties.
- First right to pledge (certain) assets clause: the lender has the right to pledge (certain or specific) assets on first demand.
- Dividend clauses: the borrower is restricted in transferring dividends out of the company.

We finish this section by giving you some tips when applying for a loan.

- Use a realistic or even worst-case scenario when you determine your capacity to pay back a loan.
- If you expect your credit need to fluctuate during the year, apply for a short-term credit line which gives you the possibility of drawing the amount needed to fulfill the credit need.
- Try to apply for a committed facility, which means the lender has the right to ask you to repay the loan only when stated conditions have been breached.
- Try to negotiate a pricing grid, which means that the interest rate decreases when financial ratios (and the risk profile) improve.
- In most cases professional lenders ask starting entrepreneurs to agree on an unlimited personal liability. Instead, try to negotiate a limited liability during a specific period (e.g. decreasing to zero in two to three years, depending on a ratio).
- It is important to realize that financiers in low-income countries (which often have less developed financial infrastructures) impose stricter conditions when they provide funds, and interest rates may differ significantly from developed financial markets.
- Make sure you match the currency and fixed interest rate period to your needs. To match currency, aim for lending in the same currency as your revenues. To find the optimal fixed interest rate period, you will probably need to ask for outside help from an expert (usually your bank, if you feel you trust them!).

Key deliverables

Congratulations! If you succeeded well your deliverable after Step IV is a business that is up and running. You have launched your product and built an organization to support your sales activities. You are ready to scale up your activities. During this process you will be able to manage all the resources you need to increase your sales activities. It is not the end of your journey; it is the beginning. You made a start. You did it!

3. India: Facts, Figures and Lessons Learned

Compiling a toolkit without taking the local context into account would only be a theoretical exercise. Therefore, in this toolkit we have included the experience gained by four entrepreneurs while setting up their water and sanitation businesses in India, a country which is under severe water stress, lacks proper sanitation services and with approximately 250 million poor people

Exhibit 15: Map of India (www.theindiatravelguide.com)

India is the world's second most populous country (after China), with a population of nearly 1.07 billion people, and a gender ratio of 933 females to 1000 males. Nearly one-quarter of the population lives in urban areas. Twenty-three cities in India have a population exceeding one million people**,** and three cities – Mumbai (Bombay), Kolkata (Calcutta) and Delhi – have populations exceeding 10 million people. According to data from the National Council of Applied Economic Research, nearly one-quarter of India's people live in poverty, most of them in rural areas. Only 65.4% of the people can read and write an Indian language and perform simple mathematics. At the national level, literacy levels are 54.2% (women) and 75.9 % (men)

Rural India has a population of 790 million, which contributes 50% of India's Income. During the last 10 years, 100 million people have been pulled out of poverty and have become part of the middle class. The amount of rural people earning $2 or more per day will grow nine times to 200 million by 2025. By 2017 rural consumption levels will equal current urban levels.[1]

Later in this chapter we will go into more detail about the water and sanitation sectors and doing business in India, but we will start by introducing the four entrepreneurs and their businesses.

Case descriptions

The four entrepreneurs worked closely for eighteen months with the authors of the toolkit, sharing their experiences. In this section we briefly describe their activities. As we have not disclosed important strategic information, you might not find all the answers to questions that arise when reading the case descriptions.

Clean Water Now! B.V.

Company and product history

Clean Water Now! ("CWN!") is a Dutch Limited company, owned by Dick van Dijk and his business partner and director of CWN!, Evert Groeneveld (www.cleanwaternow.nl). CWN! wants to foster sustainable development in villages and urban areas that lack a reliable connection to electricity, by providing on-site disinfected drinking water produced by the Naïade drinking water purification system. The Naïade was invented in 2002 by Dick van Dijk, a Dutch engineer and entrepreneur with a long career in industrial water treatment. It was intended as a stand-alone unit for rural areas in developing countries. The Dutch

[1] Kubr et al. (1998)

electronics company Nedap N.V. developed prototypes and the final design, and bought the intellectual property rights in 2003. The Naïade is now marketed both by Nedap N.V. and by Clean Water Now! B.V

The product

The Naïade is a water purification device based on filtration and UV disinfection. It has a holding tank of 100 liters and a maximum purification capacity of 5 l/min. The water is delivered by pressing a button that activates an electronic valve, which is automatically disabled if the UV lamp is defective or if the filter bags are missing. Electric power comes from a photovoltaic panel (solar cell) with a connected battery. The filter bags can be cleaned easily and the UV lamp and battery must be replaced occasionally, depending on the usage pattern and intensity. The annual cost of spare parts is around €50. The initial sales price of the entire unit will be € 3,500 (FOB warehouse), depending on production quantities and locations. Modules have been developed to absorb arsenic and fluoride and the initial cost price of this additional component is €500. The Naïade equipment has a technical life span of 10 years; the arsenic filter has to be refilled after 6 years.

Exhibit 16: The Naïade

Current status of the business

When the toolkit project started, the CWN! organization and team was ready to scale up, focusing on the Indian market. Survey and tests had been carried out in Gujarat and Andhra Pradesh by Nedap and CWN!. The purpose of the program was to field test five units, monitored by a state approved laboratory, leading to cooperation with an Indian launching customer.

The outcome of the test report was very positive, indicating that rural people in Gujarat were willing to pay for safe drinking water (Rs 2 per family per day). The total cost of ownership per amount of disinfected water was and still is very low: the production cost for 20 liters of clean water is Rs 1.14 or Rs 1.15 including an arsenic-removing filter (€1 = Rs 62). However, the initial sales price is *perceived* by NGOs and others to be high, making the product less attractive, although most organizations are aware of the huge positive economical impact when people have access to safe drinking water.
A business plan was drawn up using the formats and guidelines in this toolkit. A strategy was developed to bridge the initial sales price of the Naïade by lowering import duties and providing a financing deal (e.g. lease facility) to help customers to buy the product. The business plan contains a marketing strategy that focuses on a few specific client groups and on developing business models to stimulate local entrepreneurs to operate the Naïade purification system and sell clean water at a reasonable price.

So far, 40 Naïades are operating according to expectation in the Indian market. CWN! will look for potential partners to improve the implementation of the business plan.

Lessons learned and the way forward

CWN! has a good and proven product for disinfecting water that has been tested by several well known institutes (such as Unesco-IHE). The Indian market is a good choice for three reasons:

- It offers plenty of market potential, with over 1 billion people with rising incomes.
- Expertise on maintaining the equipment and spare parts is available locally.
- Operating costs are very low, leading to an affordable price per unit of clean water, which is important as the Indian market is very price sensitive.

Potential customers tend to look at the initial purchasing price. Local production is the best way of lowering the cost price but this is currently not an option. The challenge for CWN! is to

investigate potential options for this, while continuing to build solid partnerships with organizations that can facilitate access to specific client groups. CWN! strongly believes that offering customers assistance with the financing of the initial purchase will increase sales volumes, but the concept must prove itself in practice.

This case shows the challenges entrepreneurs face when launching a product with a relatively high initial sales price in a price sensitive market. Financial incentives are needed to make the initial purchasing costs affordable, but the way forward is focusing on the low Total Cost of Ownership per liter of clean water.

Another approach to bridge the initial sales price is to finance local entrepreneurs operating the Naïade. Therefore, convincing local entrepreneurs or communities to invest in operating the Naïade as an attractive business opportunity is an effective marketing strategy. These entrepreneurs or communities understand the local market, sell the water per unit at an affordable price, and take the business risk of financing the initial purchase.

Aqua-Aero WaterSystems B.V. / Dutch Water Solutions

Company and product history

Aqua-Aero WaterSystems B.V. ("AAWS") has developed the WaterPyramid concept for use in tropical rural areas. The WaterPyramid combines state-of-the-art technology, capacity building and local entrepreneurship to achieve a long-lasting (financial) sustainable situation. AAWS is owned by Martijn Nitzsche, a technical engineer and successful entrepreneur, is based in the Netherlands and works closely with national and international partners. (www.aaws.nl).

Exhibit 17: WaterPyramid

The product

The WaterPyramid is a uniquely designed foil structure, utilizing energy from the sun to evaporate dirty or polluted source water and condense high-quality drinking water. The concept uses solar-still principle and rainwater harvesting.

- The WaterPyramid is the first, stable large-scale solar-still application optimized for large ground areas, with a ground area of 650 m^2. By covering such large areas, the WaterPyramid can capture large amounts of solar energy and produce substantial quantities of drinking water. The WaterPyramid can provide communities of hundreds of inhabitants with enough drinking water to meet their basic water needs.
- The WaterPyramid can also be used for *rainwater harvesting*. The outside of the WaterPyramid and its slightly tilted guttering system captures rainwater in large quantities.

Status of the business

Since the workforce is locally recruited and direct energy costs are low, operating costs are low. The investment costs of the WaterPyramid are comparable to the cost of purchasing a state-of-the-art reverse osmosis system in combination with appropriate power supplies and other necessities. Due to the low operational cost, the WaterPyramid can easily compete with other desalination technologies.

As mentioned above, the WaterPyramid is designed primarily for small communities and villages in rural areas in tropical countries. In order to make the WaterPyramid financially sustainable, a mix of grants, (soft) loans, and micro financing tools are combined to enable

customers to purchase the product. Private (local) banks, NGOs and communities play a vital role in the financing of the package.

Local entrepreneurs play an important role in creating a financially sustainable business model. Entrepreneurs distribute and sell the treated water, have the knowledge of local habits and customs, and understand the behavior of customers. Different applications for the treated water (e.g. ice cubes, lemonades) are being developed to increase revenues and build a strong and sustainable business model.

When the Toolkit project was in its initial stages, AAWS was about to launch the WaterPyramid on the Indian market. From earlier experience, AAWS understood the importance of local reliable partnerships, but knew how hard it can be to find partners you can trust. Because other water and sanitation entrepreneurs have the same experience, AAWS decided to create a bridgehead in India, which can help other Dutch entrepreneurs to set up their local business, too.

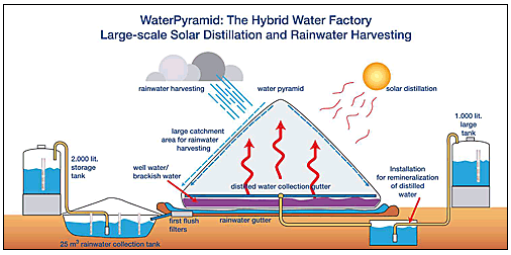


Exhibit 18: The WaterPyramid - large-scale solar distillation and rainwater harvesting

Together with a Dutch and an Indian partner, Martijn Nitzsche established Dutch Water Solutions (DWS) to operate as a bridgehead to water entrepreneurs who want to enter the Indian market. DWS supports Dutch entrepreneurs in setting up their water business in India by helping them to reduce production costs and by providing a sales channel for introducing their water products onto the market. DWS is located in Ahmadabad, Gujarat. Its launching customers are AAWS and Genap B.V., one of its present Dutch production partners.

A business plan was drawn up using the formats and guidelines presented in this toolkit and DWS is now up and running. It is currently (September 2008) assisting AAWS with market research and finding the right partners to set up shop locally. DWS is building an assembly facility to service the assembly needs of its customers. Meanwhile, AAWS is piloting two WaterPyramid projects in India and has investigated opportunities to produce part of the WaterPyramid locally.

Lessons learned and the way forward

DWS is investigating the possibility of establishing additional bridgeheads in other parts of India. The challenge is to find the right local partners to work with. DWS' ambition is to build up a portfolio of different water products and solutions to market to Indian clients. The challenge is to source sufficient Dutch entrepreneurs to fill this portfolio. DWS is currently (September 2008) talking to several Dutch organizations that have expressed interest in the concept.

This case illustrates the importance of working with professional and reliable local partners. The commitment of Indian business partners strongly depends on the financial benefits they expect to receive. Value is shared between all the partners through the creation of DWS, in which current partners have an equity stake. On the other hand, personal relations must be good as well; mutual respect and trust are the foundations of Indian partnerships. By building a bridgehead, DWS will provide a shared distribution network for potential clients. The experience of AAWS highlights the importance of using partners to help you distribute your product and create a distribution network

Basic Water Needs B.V.

Company and product history

Basic Water Needs B.V. ("BWN") was founded by the Basic Water Needs Foundation (BWNF) and entrepreneur Klaas van der Ven. BWNF started to develop products in 2002. Assembly and production is organized in India through Basic Water Needs India Pty Ltd in Auroville, Tamil Nadu.


Purator HD filter

Exhibit 19: The Purator

The product

BWN has developed the Purator, an innovative small-scale device with a ceramic filter cartridge that effectively removes all pathogens from the source water. The Purator operates with a suction device and uses static hydraulic height to create a small pressure system that gives it a significantly greater capacity than traditional ceramic filtration units. The Purator HD filter is able to treat water sources with high turbidity.

Status of the business

BWN was at a crucial moment in its history when the toolkit project started and it joined this project as one of the innovators. At the time, the first orders had been received and financing the startup and successful production and sales had to be realized within 6–12 months.

A business plan was drawn up within the framework of the toolkit project and successful talks were held with potential investors. BWN obtained a bank credit line sufficient to finance the first production series. The focus then moved to India, where successful production of the first series was established and scaled up: 40,000 filters will be produced and delivered before the end of 2008. One filter is able to support a household of up to ten people.

Lessons learned and the way forward

BWN has a potentially very successful product in the Purator. The product is very cost effective, affordable for most people at the BOP and is easy to use. The key to further growth of BWN is going to be financing and scaling up of production in India. Finding good local management for its Indian organization will be crucial. Within the framework of the toolkit project, a solid business plan has been put together and financing has been secured. Now the company will enter a new phase of growth, in which it will continue to face the twin challenges of sound management and additional financing.

The case of BWN should teach you how time-consuming the process of setting up a local company in India can be. It has shown in practice that entrepreneurs wishing to set up a local company should plan well ahead and make sure they are properly informed and supported by someone with experience in the local market.

Furthermore, the case highlights the challenge of finding good local management and capable and reliable staff. As you will often not be around and will have to delegate many daily duties to your local manager, it is important there is sufficient trust.

Further reading:
Info Sheet 8: Experience with setting up a business in India

Ecosan Ltd.

Company and product history

Ecosan Ltd. was set up to market urine diversion toilets by three NGOs, FODRA, Scope and Mythri. All three have been actively promoting Ecosan for several years.

FODRA is an ideologically, politically and religiously independent civil society organization undertaking development initiatives. Its immediate focus is to positively impact the lives of urban poor people. Registered as a foundation in 1997, it has been working to minimize the dangerous imbalance in which the most pressing socioeconomic needs of poor people are being neglected and where their immense potential is not being utilized. FODRA works to promote consciousness about the inherent capacity of poor people by encouraging and enabling their participation in the processes of governance (www.fodra.org).

Scope's main aim is to empower women by raising their awareness of basic sanitation and hygiene. It organizes them into groups to improve their capacity and skills for livelihood options. Scope also constructs toilets for individuals and in schools, etc. In close association with governments, national and international funding agencies and NGOs, Scope has built over 15,000 pit latrines. It also works closely with communities to promote watershed and wasteland development projects, micro-enterprises and diary farming. (www.scopetrichy.com).

Mythri Sarva Seva Samithi, which means "friendliness and service to all", is a registered non-profit organization. Mythri started in 1987 in Bangalore, India, where it was mainly concerned with issues related to shelter and welfare of street children involved in waste collection activities. Over time, this concern has diversified into various programs aimed at addressing issues related to the urban poor and the environment. (www.ecosanindia.org).

The product

What is Ecosan? Ecological sanitation is an ecosystem approach to waste disposal based on three key principles: sanitation should be safe from a health perspective, it should be non-polluting, and it should be based on the principles of reuse and recycling of the valuable nutrients in human excreta. In other words, ecological sanitation is an approach to human excreta disposal that aims to recycle nutrients back into the environment and into productive systems. Reuse of human excreta was the norm in most cultures and societies until recently, and is still common in rural communities in China and Vietnam and in urban areas in Yemen.

Conventional sewage systems, based on flush toilets, have failed to solve the sanitation needs of developing countries. Over 95% of sewage in developing countries is discharged untreated, polluting rivers, lakes, and coastal areas. Water-based sewage systems were designed and built on the premises that human excreta are a waste and suitable only for disposal, and that the environment is capable of assimilating this waste. The other conventional sanitation solution for poor people in developing countries, the pit latrine, also has shortcomings, especially in densely populated areas where space is limited. Groundwater is almost inevitably polluted, putting the drinking water supply at risk.

There are two basic techniques in ecological sanitation. One is urine diversion, in which urine and feces are kept separate. The second technique is composting; urine and feces are mixed and transformed into humus through a composting process. In each type of ecological sanitation it is possible to manage the system with little or no water, and it is also possible to keep the end products out of ground and surface waters.

Status of the business

When it joined the toolkit project as an innovator case, Ecosan was no more than an idea. They started to formulate a business plan in which all aspects had to be covered, and after

several months of work the first draft was formulated. However, it needed verification with market data and it also needed improved financial planning and marketing sections before it could be presented to potential investors, partners and grant providers.

Two workshops in India were held and much work was done by the local partners. A first market assessment was made, but the experience revealed just how difficult this can be if you do not know where to start. A solid business plan was finally drawn up and now investors and partners need to be found, based on this plan. Meanwhile, a field demonstration site has been set up and is demonstrating the value of the system in practice.

Lessons learned and the way forward

What Ecosan has taught us it that it is important to realize what your driving force is in deciding to enter into a commercial venture. Sometimes outside forces push the entrepreneurs forward, although they may lack the proper skill set and/or drive to run the business. Going back to Step I in the business development process and asking yourself whether you "have what it takes" and if you really want to run the venture as a business, you may find yourself realizing that it is not for you, or that you would rather take a different approach.

The Ecosan business case also shows that sanitation presents opportunities for developing businesses with solid potential for financial returns.

The rural water supply sector in India

India has substantial surface water and groundwater resources, and for centuries rural users have used wells, ponds, tanks, streams and rivers for their drinking water needs. This is the case even today in many parts of rural India, despite substantial Government investments in water infrastructure over the last two centuries to supplement these private sources. But with the growth of urban water demand, irrigated agriculture and industrial production, water is becoming increasingly scarce, particularly the groundwater that supplies wells. The conclusions of a comprehensive six-volume assessment of India's water resources in the late 1990s by a joint team from the World Bank and other donors and the Government of India (World Bank 1999, Executive Summary) are particularly worrying, as they are relevant even today:

> *"Water is becoming an increasingly scarce resource in India, yet it continues to be used inefficiently on a daily basis in all sectors, while sector demands (such as in drinking water, industry, agriculture and others) are growing rapidly in line with urbanization, population increases, rising incomes and industrial growth … There is, furthermore, insufficient water available in most basins to address environmental and ecological considerations."*

Main players

The state and central Governments are the main players in rural water supply. Water is a "state subject" according to the Indian Constitution, and so the 28 State Governments and 6 Union Territories have the task of providing and managing rural drinking water through hand pumps and piped water systems. At the central level, rural water supply is the responsibility of the Department of Drinking Water Supply (DDWS), previously known as the Rajiv Gandhi National Drinking Water Mission (RGNDWM) within the Ministry of Rural Development. In the States, either the Public Health Engineering Department (PHED) or the Department of Rural Water Supply (RWS) is responsible for water supply. Despite the Constitutional mandate, State Governments do not have the funds to create the necessary infrastructure and so the central Government provides the bulk of the funds.

International agencies (such as the World Bank, Asian Development Bank, Unicef and UNDP), bilateral donors (like the Netherlands Department for International Development, the UK and Swedish International Development Agencies and KfW and GTZ of Germany) and international NGOs (such as Water Aid, Plan International, Oxfam and Care) are present in India, but they are not major players as in some other developing countries. Such agencies design and provide water supply schemes through various projects (e.g., the World Bank's Rural Water Supply Projects, the EU's Water Resources Projects) but these are only in selected states and on a relatively small scale (see Exhibit 20: Major international organizations working on rural water supply in India).

Major international organizations working on rural water supply in India

- United Nations International Children's Education Fund (www.unicef.org) has an active water and sanitation program in India.
- The World Bank's Water and Sanitation Program (www.wsp.org) is an international partnership to help the poor gain sustained access to improved water supply and sanitation services.
- The United Nations Development Program (www.undp.org) supports water-related projects in their efforts towards empowerment of communities through a process of social mobilization and people-centered development.
- Aus Aid (www.ausaid.gov.au) supports projects for improvement in water supply services.
- Wate rAid (www.wateraid.org.uk) is dedicated exclusively to the provision of safe domestic water, sanitation and hygiene education.

Exhibit 20: Major international organizations working on rural water supply in India

Programs

The Government of India has made significant investments in rural drinking water supply. Allocations for rural drinking water and sanitation have risen from €90 million in 1969–74 (India's Fifth Five Year Plan) to €7.5 billion for the period 2002–2007 (the Tenth Five Year Plan). The three main centrally-sponsored programs that provide the bulk of finances to the state Governments for water supply provision are the following:

- Accelerated Rural Water Supply Programme (ARWSP)
- Swajaldhara Programme
- Bharat Nirman Programme.

The ARWSP directly funds state efforts to increase water supply coverage, but states have to provide matching funds. In 2006–2007, the national Government spent around €444 million on this program nationally. Swajaldhara is the national community-based water supply program, where funds are channeled directly to communities to construct their own water supply systems. Started in 2002, the annual allocation in 2006–07 was €74 million. The Bharat Nirman Program provides additional funds for rural drinking water, but only for a fixed period, from 2005 to 2009. As in the case of the ARWSP, state Governments have to put up an equal amount of funds. The national outlay under Bharat Nirman for 2005–06 was €723 million.

Performance

The basic unit of water supply coverage in rural India is the "habitation", which can be a single village or a part of a "revenue village" that includes several habitations. There are a total of 1.6 million habitations in India. The Department of Drinking Water Supply of the Government of India has defined drinking water supply norms (see Exhibit 21: Government norms for rural drinking water supply) for rural India.

Government norms for rural drinking water supply

- Human Consumption: 40 liters per capita per day (lpcd) all over India. This is to meet the following requirements: drinking (3 lpcd), cooking (5 lpcd); bathing (15 lpcd), washing utensils and the house (7 lpcd) and ablution (10 lpcd). For a family of 5 this works out at 200 liters per household per day.
- Animal consumption: 30 lpcd in hot and cold desert ecosystems (in 36 districts in the States of Andhra Pradesh, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka and Rajasthan).
- Water source availability: With a normal output of 12 liters per minute, one hand pump or stand post is estimated to be required for every 250 persons.
- Coverage: There are three types of situations:
  - *Not covered* (NC): A habitation with no safe private or public drinking water source (i.e. without quality problems such as excess salinity, iron, fluoride, arsenic or other toxic elements or biological contamination), adequate (i.e. 40 lpcd for 250 persons or less), accessible to all, and within 1.6 km of the habitation (or 100 m elevation in hilly areas);
  - *Partially covered* (PC): Habitations with a private or public drinking water source that is safe, accessible to all and within 1.6 km in plains (and 100 m in hilly areas) but with a capacity of only 10 to 40 lpcd;
  - *Fully covered* (FC): Habitations with a private or public drinking water source that is safe, adequate and accessible to all, providing 40 lpcd for all residents, and within 1.6 km of the habitation (or 100 meter elevation in hilly areas) (Ministry of Rural Development, Government of India, Annual Report 2002 (p. 144), www.ddws.nic.in).

Exhibit 21: Government norms for rural drinking water supply

Coverage statistics in India are quite confusing. Until 2005, official statistics reported that more than 95% of these 1.6 million rural habitations were fully covered or partially covered. But a detailed Habitation Survey in 2003 estimated a figure of only 83% (57% fully covered and 26% partially covered), and this is now considered the most reliable figure.[2] The main official reasons given for the lower estimate are "slippage" due to lack of maintenance (i.e. habitations once considered fully or partially covered are now in the "not covered" category), and worsening water quality. The Bharat Nirman Program (2005–2009) focuses on "slipped" habitations and those with water quality problems, and estimates that there are 275,000 such habitations (17% of the total number of habitations).

Priorities

The two main priorities of the programs are to sustainably extend coverage to all habitations, and to address problems of water quality. The main threats to sustainability are a lack of maintenance of water infrastructure created by Government investment and decreasing availability of good quality groundwater. While the quantity of available groundwater is affected by extensive withdrawal for irrigated agriculture, water quality problems of fluoride, iron and arsenic increase due to such over-withdrawal.

Sustainable water use

The current methods of water use in rural India are clearly unsustainable. The 2001–2002 Annual Report of the Ministry of Rural Development identifies the following key problems:

- Fast depletion of the ground water level, which increases water quality problems like arsenic and fluoride.
- Existing water sources running dry.
- Poor attention to maintenance of existing infrastructure and an emphasis on new construction.
- Low community involvement in operating and maintaining water supply systems.

[2] The Approach Paper to the XI Five Year Plan published in December 2006 by the Indian Planning Commission states that there are only 1.44 million habitations: http://planningcommission.nic.in

- ❖ Neglect of traditional water management practices and systems.

Water quality

The number and type of habitations suffering from water quality problems appears to be decreasing (see Exhibit 22: Water quality problems identified in rural India ***(2000 and 2008)***), but the data are not very reliable.[3]

Water quality problems	Number of habitations		
	2000 estimates	2008 estimates	% change
Excess fluoride	31,306	25,572	-18%
Excess arsenic	5,029	6,095	+21%
Excess salinity	23,495	18,217	-22%
Excess iron	118,088	61,349	-48%
Excess nitrate	13,958	10,368	-26%
Multiple quality problems	25,092	13,438	-46%
Total	216,968	146,708	-32%

Exhibit 22: Water quality problems identified in rural India (2000 and 2008)[4]

Almost every state in India has some quality-affected habitations. The ten states with the highest number of such habitations are Rajasthan, Assam, West Bengal, Orissa, Karnataka, Maharashtra, Tripura, Chattisgarh, Madhya Pradesh, and Gujarat (see Exhibit 23: Indian states with the highest number of habitations whose drinking water is affected by various contaminations).

State	Region	Number of habitations whose water is affected by …							Total
		Iron	Arsenic	Nitrate	Fluoride	Salinity	Multiple	Others	
Rajasthan	West	40	2	5,650	9,618	14,621	5,391		35,520
Assam	North-east	26,396	472	1	223	0	789	48	27,929
West Bengal	East	10,837	5,489	0	1,374	2	594	0	18,296
Orissa	East	9,217	0	0	286	450	37	100	10,090
Karnataka	South	1,470	10	2,114	2,135	343	1,852	1,564	9,488
Maharashtra	West-central	1,149	21	1,690	1,545	374	1,947	702	7,428
Tripura	North-east	2,759	1	0	0	0	1,984	1,611	6,355
Chattisgarh	Central	4,932	11	0	17	61	0	0	5,021
Madhya Pradesh	Central	307	5	63	4,060	411	38	49	4,933
Gujarat	West	1	1	688	2,473	997	112	87	4,359

Exhibit 23: Indian states with the highest number of habitations whose drinking water is affected by various contaminations [5]

Assam, West Bengal, Orissa and Tripura are in eastern India, where surface water availability is high, but arsenic, iron and fluoride occurs in the rock strata. Rajasthan and Gujarat are in western India, Maharashtra, Madhya Pradesh and Chattisgarh are in central India, and Karnataka is in south India. In these states, rainfall is low and groundwater is overexploited. These problems are detailed below.

In March 2006, the Government of India set up a National Rural Water Quality Advisory Committee, which is mandated, among other things, “to identify innovative approaches, best practices and possible R&D gaps for improving the quality of the programme”

[3] For instance, the findings of the 2003 National Habitation Survey, given on the website of the Department of Drinking Water Supply (http://ddws.gov.in/) reports that only around 118,000 habitations suffer from water quality problems, which is lower than the 2008 estimate!

[4] Sources: Department of Drinking Water Supply, Ministry of Rural Development. Estimates of the 2000 survey are quoted in the webpage on Bharat Nirman (www.bharatnirman.gov.in), while the 2008 estimates are from the webpage on the Integrated Management Information System (www.ddws.nic.in).

[5] Source: Department of Drinking Water Supply, Ministry of Rural Development, www.ddws.nic.in

(www.ddws.nic.in). This may be a useful niche for the AT entrepreneur working on water quality improvements. AT entrepreneurs can get in touch with either Unicef India or the Department of Drinking Water Supply to engage with this initiative.

In addition to the chemical contamination described above, contamination by fecal bacteria is widespread in the country, linked to poor sanitation practices like open defecation.

The rural sanitation sector in India

Sanitation has been a long-neglected sector in India and coverage levels are extremely low. The International Decade of Water Supply and Sanitation (1980–1990) and the recent UN International Year of Sanitation in 2008 have provided some stimulus to sanitation coverage. India's Total Sanitation Campaign has been massively scaled up from 266 districts in 2003 to 587 districts today, with a total funding today of more than $3.2 billion, making it one of the largest rural sanitation programs in the world. The current annual budget allocation of $250 million is almost nine times more than the allocation in 2001. A total of forty million households and half a million schools have been provided with sanitation facilities (www.unicef.org/india).

The two main issues faced by Government efforts to decrease open defecation and increase the use of toilets are: (1) the cost of construction of toilets, and (2) the attitude and behavior of rural communities. The Government provides subsidies for toilet construction, but traditional attitudes have hampered their use. Information, education and communication (IEC), capacity building and hygiene education are the new thrust areas of the Government rural sanitation program. Agencies like UNICEF have been promoting EcoSan toilets in India, but local attitudes towards human waste disposal and use have hampered their effective spread.

Main players

The state and central Governments are the main players, although there are several NGOs that are active in this area (see Exhibit 24: Major NGOs working in rural sanitation in India).

Major NGOs working in rural sanitation in India

- Gram Vikas (www.gramvikas.org), an NGO in rural Orissa with an impressive record of rural sanitation coverage outside the Government system
- Swayam Shikshan Prayog (www.ssp.org), an NGO in rural Maharashtra working in Osmanabad and Latur districts, facilitating women's self-help groups to work on a range of water supply, sanitation and hygiene issues
- WaterAid India (www.wateraid.org), works through partner NGOs in rural and urban India in selected states all over the country; it is dedicated exclusively to the provision of safe domestic water, sanitation and hygiene education
- SPARC (www.sparcindia.org), an NGO working to provide sanitation facilities in urban slums in Mumbai and Pune in Maharashtra state
- Sulabh International Social Service Organization (www.sulabhinternational.org), an NGO that has developed low cost sanitation systems for urban areas, and has been contracted to set up and run pay-and-use toilets in several Indian cities

Exhibit 24: Major NGOs working in rural sanitation in India

Programs

There are two sanitation programs in India that are worth mentioning: the Total Sanitation Campaign and the Clean Village Campaign.

The Total Sanitation Campaign

The Total Sanitation Campaign (TSC) is the main program of the Government of India (GOI) to tackle rural sanitation in the country (www.ddws.nic.in). Started in 1999, it is a people-centered and demand-driven program with the broader goal to eradicate the practice of open defecation by 2010. The implementation unit of the TSC is a district, which size varies from state to state. The key intervention areas of the TSC are the following:

- Individual household latrines (IHHL): provides a partial subsidy to construct toilets in houses.
- School Sanitation and Hygiene Education (SSHE): provided through rural schools.
- Community Sanitary Complex: constructed for the community when space is not available to construct individual toilets.
- Rural Sanitary Marts (RSMs): stocks and sells material like pipes, pans and rings, which are needed to construct toilets.
- Production Centers (PCs): where sanitary material is produced and sold.

In support of the TSC, GOI has also launched the Nirmal Gram Puraskar, a system of cash awards to recognize the efforts of individuals and institutions towards full sanitation coverage in their area of operation (www.ddws.nic.in).

Clean Village Campaign

In addition to this central Government effort, the Government of Maharashtra has been running an impressive sanitation program called Clean Village Campaign ("CVC") since 2001. The CVC is not a program or scheme and is, instead, a campaign to educate and motivate rural communities. It offers annual prizes for clean villages, which are named after Rashtrasant Tukdojee Maharaj, who spread the message of sanitation through *Gramgeeta* (village songs) in all corners of Maharashtra in the early 19th century. Each year villages are evaluated by a team of experts using a set of criteria and awarded cash prizes. Villages interested in participating in the competition register and undertake to implement various specified work, using their own resources, that leads to an environmentally clean village. A village that wins at the state level would receive around €7,000 as prize money.

Performance

Currently, rural sanitation coverage is officially reported to be 50%. India is committed to increasing this to 100% by 2012, four years from now, in line with the MDGs. The performance so far is not very encouraging for individual household latrines, despite the TSC offering subsidies for toilet construction (see

Exhibit 25: Progress in sanitation coverage, as in June ***2008***).

	Target	**Achieved**	**% achieved**
Individual household latrines	118.811.048	44.835.196	38%
Sanitation Complex	27.562	13.318	48%
School toilets	1.177.193	622.389	53%
Toilets for balwadis	423.056	203.744	48%
Rural Sanitary Marts	4.136	5.186	125%
Production Centers	139	2.759	1985%

Exhibit 25: Progress in sanitation coverage, as in June 2008[6]

The construction of sanitation complexes in villages, toilets in schools and for child care centers (*balwadi*) is nearly 50% of the target. The two areas where targets have been exceeded by a significant margin are Rural Sanitary Marts (selling pans, fittings and items for

[6] Department of Drinking Water Supply, Ministry of Rural Development.

toilet superstructure) and Production Centers (producing toilet accessories). These rural sanitary marts could be a useful marketing outlet for the AT entrepreneur working on rural sanitation. They can be accessed through the officials of the state Government's Public Health Engineering or Rural Water Supply Departments.

If you are interested in detailed descriptions of the water and sanitation situation in three Indian states - Tamil Nadu, Gujarat and Delhi – we direct you to the attachments 7 and 8. The three states described in more detail are the states where the four entrepreneurs are setting up their business. The descriptions will help you plan your strategy and approach to best suit local conditions.

Further reading:
Attachment 7: Rural Water Supply and Sanitation Sector in Selected States
Attachment 8: India Water Market Scan
http://en.wikipedia.org/wiki/Water_supply_and_sanitation_in_India

Starting a business in India

Starting a business in the Netherlands is quite different from starting a business in India. That is why specific information on the business situation in India is included.
The Dutch Government has produced a useful and practical guide for Dutch investors and entrepreneurs, which covers all the points included in Step II and Step III in Chapter 2 on business development. In our opinion, this guide is useful to other organizations in other countries as well. We recommend that you read the information in the following links:

www.hollandinindia.org
www.rnebizguideindia.org

The cheapest and easiest way to start a business in India, especially during the demonstration phase, is to set up a liaison office, representative office, project office or branch office (the differences are being explained on the above mentioned web sites). You can set up such an office once you have the approval of the Reserve Bank of India. It is a simple application procedure, no startup capital is needed and the fees are very low. However, you do need to have an address, so you will have to either rent office space or move into an existing address. You have to appoint a representative as well.

Evert Groeneveld, director of CWN!, explains the way his company is entering the Indian market: "*We have decided to start operating through a representative office. Setting up is quite easy and does not involve too much paperwork or large investments. Our local contact can represent us, scan the market on possible deals and do market research. When we expect business will increase we can always decide to establish an Indian Limited. Meanwhile, we run our operations through our Dutch limited.*"

Further reading:
www.rnebizguideindia.org
www.nicct.nl

We recommend Dutch entrepreneurs starting to export to India to read
Info Sheet 13: Questions for a starting Dutch entrepreneur

To start up a business, the most common legal entity to use is the Indian Private Limited Company (Pvt Ltd). Although some local certified accountants have informed us that it is not difficult to set this up, the experience of one of the entrepreneurs involved in developing this

Toolkit was different. It took much more time than expected. Filling in the memorandum of associations is the most important step. This has to be signed by a notary or certified accountant. Officially, this process will take 30 to 60 days. The estimated costs (2008 prices) of incorporation are an advisory fee for incorporation of around Rs 30,000 and registration fees of around Rs 10,000.

Further reading:
Info Sheet 7: Steps to form an Indian company

We have attached a presentation by an Indian certified accountant which describes in detail the steps involved in setting up a private limited company.

Attachment 9: Formation of a company

We have collected some interesting examples of water and sanitation businesses in India, and have compiled them in an attachment.

Attachment 10: Water and Sanitation as a business: Best Practices from India

Building networks with NGOs in India

Networks can be a useful means for the AT entrepreneur to reach potential markets and also to get feedback and advice on products and services. Networks are formal or informal structures that bring together diverse social actors to pursue common goals.[7] A well-organized network can influence economic, political and cultural structures and relations in ways that are impossible for individual actors. In these networks, the members are autonomous organizations – usually NGOs or community based organizations – and sometimes individuals.

Network functions

Although network functions vary, these may be broadly categorized as follows:

- Advisory: providing a service that responds to information requests through top quality professional advice.
- Advocacy: organizing seminars, workshops, conferences, campaigns, lobbying on specific issues, etc.
- Capacity building: organizing training programs and exchange visits for members.
- Coordination: facilitating partnerships, avoiding duplication, working to change policy.
- Information dissemination and communication: acting as an information broker, providing a digital library, news, monitoring reports of conferences and workshops, publishing newsletters, fact sheets, etc.
- Public relations: promoting and disseminating promotional materials (leaflets, posters) on various organizational and sector issues.
- Research: organizing working groups on thematic issues, identifying knowledge gaps and commissioning studies to fill these gaps.

Network membership

Networks usually have a wide membership base, drawn from national and international NGOs (e.g. WaterAid, Plan International), academic institutions, donors and financial institutions (e.g. UNICEF, Water and Sanitation Program) as well as individuals. AT entrepreneurs can register as individual members with these networks since corporate participation is still not welcomed by many networks. Membership is either free or subject to a nominal payment of one-time or annual fees.

[7] Castells, M.(1998)

Membership benefits

Membership provides access to a larger pool of resources and provides opportunities to interact with experienced sector professionals. Membership also allows the use of network services such as the network newsletter, workshops and conferences, demonstrations and joint applications for social funding, all of which can be of immense use to the AT entrepreneur. Some of the membership benefits are as:

- Use of the network newsletter**:** Almost every network has a regular printed newsletter or an e-newsletter to communicate with members. This could be a good opportunity for an AT entrepreneur to share information about his/her product, advertise for staff, announce demonstrations, and ask for advice.
- Advertising in workshops and conferences: Many networks organize conferences and workshops to invite different stakeholders to share their experiences. As network members, AT entrepreneurs can display promotional material in the conference display areas and thus reach out to large number of people at a minimal cost.
- Demonstrations for network members: NGO and institutional members of a water and sanitation network usually have access to a large number of villages and urban communities where Government-funded and donor-funded water supply and sanitation projects are being implemented. Many of these projects purchase, promote, and install water and sanitation infrastructure like water filters and sanitary pans. AT entrepreneurs can therefore demonstrate their products and services to NGOs members in networks during annual network meetings.
- Access to projects: Since most NGO network members and donor agencies partner in several donor-funded water and sanitation projects, AT entrepreneurs can enter into arrangements to supply their products to such projects and thus gain access to a large number of villages (typical projects involve 1,000 villages).

Useful networks

Some major water and sanitation networks that can be useful to AT entrepreneurs at the national, regional and global level are listed in
Exhibit 26: Useful networks for water and ***sanitation***.

Name of network	Coverage	Service	Website
Water and Environmental Sanitation Network of India (WES-Net India)	India	Website and email-based information exchange	www.wesnetindia.org
UN Solution Exchange	India	Email-based query and answer system	www.solutionexchange-un.net.in
Community Led Environment Action Network (CLEAN India)	India	Urban environmental assessment, awareness, advocacy, and action spearheaded by school students	www.cleanindia.org
Innovative Ecological Sanitation Network India (IESNI)	India	Promotes innovative ecological sanitation in India	
The Honeybee Network	India	Identifies and supports small innovators	http://knownetgrin.honeybee.org
Consortium for Dissemination of DEWATS (CDD Network)[8]	Tamil Nadu and Karnataka	Promotes decentralized wastewater disposal system in urban areas	www.borda-sa.org
Pravah Water Supply and Sanitation Network	Gujarat	Coordinates civil society movements to improve water and sanitation services	www.pravah-gujarat.org
Women and Water Partnership	Global	Promotes sustainable development; with a focus on water & sanitation and poverty eradication	www.womenforwater.org
Gender and Water Alliance	Global	Information exchange on gender and	www.genderandwater

[8] DEWATS stands for the Decentralized Wastewater Disposal System, and CDD is a 12-organization network set up to promote DEWATS.

Name of network	Coverage	Service	Website
		water issues	.org
Sustainable Sanitation Alliance (SuSANa) Network	Global	Promotes sustainable sanitation systems	www.sustainable-sanitation-alliance.org
SWITCH Consortium	Global	Promotes sustainable integrated urban water management	www.switchurbanwater.eu
Global Water Network		Raises awareness about water issues and funds to help build water and sanitation projects where they are needed most	globalwaternetwork.org

Exhibit 26: Useful networks for water and sanitation

Three key networks in India are described in more detail in Exhibit 27: Three Indian networks.

Three Indian networks

WES-Net India was set up in 2005 as a learning alliance of stakeholders in the Water and Environmental Sanitation sector, including NGOs, UN agencies, private sector, consultants, Government departments and donors. WES-Net's objective is to improve knowledge sharing and coordination within the water and sanitation sector, focused on achieving the Millennium Development Goals. The network aims to enhance horizontal and vertical exchange of information and experiences through continuous feedback from people who use the network. WES-Net is also the Water and Sanitation Community of the UN's Knowledge Management Partnership Initiative. The solution exchange platform (e-discussions) enables WES-Net members to participate by raising and addressing issues which are shaping the water and sanitation sector in India. As WES-Net develops, it will link up with other networks to strengthen knowledge sharing and advocacy.

PRAVAH emerged as an initiative in 1994 as a result of collective concerns raised and interest expressed by a group of individuals and institutions on addressing drinking water and related developmental issues. The overall goal of PRAVAH is to initiate a movement in Gujarat for ensuring safe, adequate, sustainable and self-reliant water supply for drinking and other domestic purposes for everyone, all year round. The broad objectives are also to build a common perspective amongst all the partners about the need for decentralization of water systems, through this effort of building a platform to evolve and act on a common action plan. PRAVAH has been instrumental in creating *Jal Disha 2010,* a collective vision and framework for action on drinking water, sanitation and hygiene for the state of Gujarat (see www.pravah-gujarat.org; www.wecaretoo.com).

The Honeybee Network is a knowledge network that supports and brings together creative and innovative individuals – farmers, artisans, mechanics, fishermen, women, and laborers – who have solved a problem on their own without any outside help from the state, market, or even NGOs. The network searches for and identifies such technological or institutional innovations nationally and even globally. It then provides support to develop and market the innovations created by individuals, even in remote urban and rural communities. It also aims to bring together venture capitalists, potential investors and entrepreneurs, create a registry of innovations and secure intellectual property rights for small innovators. The network originally worked through a printed newsletter, but given the long time taken to exchange information through printed material, the network has recently launched an electronic knowledge network known as KnowNet-Grin.

Exhibit 27: Three Indian networks

Scaling up through Government structures

While the commercial marketing channel is the conventional avenue for an entrepreneur to reach the target market, there is another channel with huge potential: the Government. The Government is mandated to provide access to safe water and sanitation services to all citizens in the country, and it therefore regularly installs piped water supply schemes, and

community toilets, or provides subsidies for individuals to install individual toilets on a large scale, right across the country. Concerning water supply, the Government of India has a nationwide community-based water supply program called *Swajaldhara*. The Total Sanitation Campaign (TSC) is similarly a central Government scheme for sanitation, which also depends largely on community groups such as women's self help groups (SHGs) for production of sanitary wares and implements.

Further reading:
Attachment 11: Structure of Indian Government

Advantages of working with Government

The biggest advantage of working through the Government system is the size of the market that can be accessed. There are around 720 million rural Indians in 550,000 villages in 610 districts spread across 28 states and 6 union territories. Assuming a 40% poverty rate, this is around 300 million in rural India.

The next advantage is that instead of approaching a number of small organizations, approaching a single official at the state or district level can give access to a large number of customers. At the district level, for instance, a District Collector in charge of administering the district can call a meeting of the heads of Government and non-Governmental organizations, or direct his administrative staff to facilitate a pilot program with the innovation. There are around 22 districts per state on average (ranging from 70 in Uttar Pradesh and 50 in Madhya Pradesh to 2 in Goa) and each district has around half a million people on average (although most are around 2 million or so).

If AT entrepreneurs can convince Governments to install or procure their products (e.g. in areas with water quality or access problems) in the regular course of setting up water supply and sanitation systems, they will have reached a much larger market more quickly

Understanding how Government works

Water being a state Government subject in India, the central Government largely passes on funds through "centrally sponsored schemes" to the state Governments, which usually implement schemes on the ground. Therefore, while it is good to meet officials in central Government institutions such as the Department of Drinking Water Supplies (DDWS) [9] of the Ministry of Rural Development, the people you really must focus on are the state Government officials.

Each state Government has slightly different administrative structures, but drinking water is usually the responsibility of either the Public Health Engineering Department (PHED) or the Department of Rural Development (DORD). These Departments are headed by bureaucrats (called Secretaries or Principal Secretaries, depending on their seniority) and Commissioners who take policy decisions. Actual operations on the ground are usually handled by a senior engineer (called an Engineer-in-Chief) with a large staff (of Superintending Engineers and Chief Engineers), in the Rural Water Supply Department. It is good to meet both sides, as the bureaucrat will not take a decision on technical issues (such as procurement) unless technical "approval" is granted by the engineer (and later, the community groups!).

Community groups (such as Self Help Groups ("SHGs") are now major stakeholders in water supply and sanitation provision, especially in rural areas. If they are convinced of the value of the product, they will promote the product within their villages. In some states, SHGs have formed district-level federations, but there are no state-level federations yet. While these are state-level decisions, the real action is in the districts, where engineers actually design the scheme, procure materials and set it up. If they are convinced of the product, they can take

[9] This is also called the Rajiv Gandhi National Drinking Water Mission (RGNDWM)

operational decisions to include these into their regular procurement and implementation plans. Although this could mean quite a lot of travel, as there are around 25 districts on average in most states, it is far better than having to travel to convince individual traders or villages.

Convincing Governments

This is usually a three-step process:

1. Meet and make presentations to senior bureaucrats, engineers and through them, the community groups, at state and/or district levels.
2. If they find the presentation and subsequent discussions useful, they may ask for a demonstration of the product in a small sample of 10–30 villages over a year or two, with a small amount of Government funds.
3. If the demonstration yields good results, state or district Governments may take it forward and include the innovative product in the water and sanitation systems they set up.

A foreign entrepreneur would be well-advised to find a local Indian partner, preferably one who has worked in the area for some time and knows the local officials and other NGOs. This local partner can then arrange meetings with the district Government officials. Finding the local partner may be best done by contacting a local network (see Building Networks with NGOs).

Uncertainties and risks

One definite risk is that the concerned Government officials may be replaced in the middle of the whole process, and you will have to repeat step (1) above. But if the product shows benefits and the demonstration is going well, even the new officials will be convinced.
Another risk is that a “commission” (bribe) may have to be paid to local officials to issue a contract for the supply of the product to the Government agency. Today, in many parts of India, this is not considered corrupt, but a “service charge”, just as a bank charges a fee for issuing a demand draft. There is always the choice of accepting or not accepting the contract with the attached commission. But complaining to the bureaucrats may not be a good idea as these “commissions” usually go all the way up to the top of the chain.
The biggest risk in the process is that the community groups may not be convinced of the product, given the alternatives available or their limited understanding of the health risks of contaminated water or open defecation. And if these groups do not accept the product, the Government will not take any further steps. AT entrepreneurs should therefore consider organizing demonstrations and awareness generation visits to these SHGs and community groups. These could be organized either through the state or district-level federations of SHGs or through local NGOs.

While the size of market is a definite advantage over working through Government, a significant amount of time and effort has to go into “networking” with Government officials to ensure a contract. And there are also uncertainties and risks. But most large and well-known local NGOs that have worked in the area for a considerable period of time have good relations with the local Government officials and will be able to arrange first meetings with senior Government officials. After that, it is the quality of the product and its selling points that will guide the next steps.

Overall, it will not be wise to concentrate only on the Government channel. This may be a good second move after establishing a profile in the commercial market, or it could be done simultaneously with commercial marketing.

Funding options for an AT entrepreneur

There are a range of funding options for an AT entrepreneur working in India, ranging from equity funds, pure business loans to venture capital to grants of various types. Some of these can be accessed directly by the AT entrepreneur, others can be accessed through NGOs or research institutions as partnerships.

Further reading:
Attachment 12: Funding options in India for AT in water and sanitation

4. Practical Background Information

This Toolkit provides many different tools, instruments, examples, case studies, practical experiences and background information. They are by no means exhaustive, but will equip many starting entrepreneurs with essential instruments.

This section of the Toolkit presents an overview of all the information that might be useful:

- Info Sheets; practical, theoretical and Q&As
- Tools
- Attachm ents
- References

The Toolkit will be regularly updated and new experiences and tools will be added to it.

Info Sheet 1: BOP strategies

Theoretical info sheet about several successfully tested Base of the Pyramid (BOP) strategies

Who should read this info sheet?

Entrepreneurs who would like to find an answer to the question “Why are some enterprises successful in meeting BOP needs, and others are not?” should read this info sheet.

Key topics

Successful enterprises operating in these markets use six broad strategies that appear to be critical.

Engage first, design second

Engagement (the practice of meeting local people and asking for their feedback and help in developing a product) opens up the possibility of identifying the real needs from the point of view of the local people themselves. It also helps to focus and direct the technology and product development required to become truly native to a place. It often requires significant investment of money and management talent.

Co-invent with local partners

Unconventional partnering with governments, NGOs or groups of multiple stakeholders can bring the necessary capabilities to the table. Nontraditional partners like women’s self help groups, local communities, and small entrepreneurs provide intelligence on the local context, local legitimacy, and access to needed resources, none of which is available to Western organizations attempting to go it alone.

Focus on improving affordability

Purchasing a product is often the first hurdle a person at the BOP has to take. Improving affordability means working on financial and technical aspects. Lowering the initial price depends on the possibility of producing locally, on the expectation of future (cheaper) mass or on adapting the product so that it needs fewer or less expensive resources to make. Another approach is to allow “loss leaders”, where you expect future sales to a customer to help you recoup losses on the initial sale. Apart from affordability, accessibility might also improve if a product is combined with a smart financial structure like leasing or a microcredit.

Offer a fair added value proposition to local partners

To reach the poor you need a broad distribution network, which can only be set up with local partners who understand the market well. Localizing value creation through franchising and agent strategies that involve building local ecosystems of vendors or suppliers can be very effective, but require substantial investment in capacity building and training. A business model should be in place that allocates added value to all partners in the supply chain, making it attractive to anyone to “stay in business” while keeping the product affordable to end users.

Plan to scale up, but start small

Try to “fly under the radar”. Immediate engagement with a large governmental program might put the lucrative business model in the spotlight of all kind of officials or others who would like to benefit from either derailing the project or from currying favor before it is allowed to move forward. Bypassing the need to deal with central government avoids complexity and corruption. On the other hand, prepare yourself to scale up immediately when the concept and product have proven to be successful.

Build social, not legal, contracts

Reaching the BOP requires entry strategies that move past preoccupation with Western-style rule of law and intellectual property protection, because these do not exist in the BOP.

Business models based on trust, fairness, mutual benefits and respect have proven to be more effective than formal agreements between seller and buyer.

People at the BOP can be approached as either consumers or equal business partners. Designing business models that include small entrepreneurs at the BOP in the value chain can increase the chances of a well-planned market launch, create jobs at the BOP and lift people out of poverty.

Further reading:
Capitalism at the Crossroads: The Unlimited Business Opportunities in Solving the World's Most Difficult Problems, Steward Hart, 2005
The Next 4 Billion: Market Size and Business Strategy at the Base of the Pyramid, WRI and IFC
http://en.wikipedia.org/wiki/Bottom_of_the_Pyramid
www.nextbillion.net
http://bop-protocol.org

Info Sheet 2: Do I have what it takes?

Q&A info sheet on what it takes to start a business

Who should read this info sheet?

This info sheet is very useful to entrepreneurs who want to check whether they are ready to start a business.

Key questions

Do you have what it takes to join those thousands of people who start their own businesses every year? Do you have the determination, persistence and ability to do thorough research? If you can answer the following questions you'll know you properly equipped to run your own company.

1. Have you spent enough time researching your new business and its market?

Many new businesses fail because the business owner (that's you) didn't do enough research. Make sure that your business idea can work. Investigate the market carefully to see who the primary players are and how your new company fits in.

2. Do you have enough money to get your company up and running?

Don't underestimate how much it will cost to get your company through its startup phase. If you didn't do enough research or were too optimistic about your product, you could find yourself underfunded. Be critical on your own projections and make sure that you have money set aside for unforeseen events.

3. Are you wasting money on facilities?

While it might be nice to have your own office with a fancy desk in a nice new building, such comforts can eat into your startup budget. Begin as simply and as cheaply as you can. Start the business in your garage if you have to, and don't spend too much on offices until you've actually sold some products or services.

4. Do you have a backup plan?

Murphy's Law states that if anything can go wrong, it will. Believe it. Nothing ever goes according to plan, and so you must always have a backup plan. Even if your research was perfect, something or someone will certainly throw a wrench – even if it is just a small one – in the works. But if you have done your homework and created a backup plan, you'll be able to stop, make adjustments and move forward again.

5. Do you have partners you don't need?

Before you take on a partner, think the decision over carefully. Have you chosen someone who will work as hard as you do? Partners should earn the privilege of owning a portion of the business. If they bring money to your operation, that's a convincing reason to keep them.

6. Are you hiring the right people?

When you hire people, you want to choose those with the right skills and the right attitude to help your business grow. Especially with a small business, you can't afford to employ someone who won't be a good fit.

As a general rule, don't bring friends or family into the business – unless, maybe, your niece just graduated with an MBA from Stanford or INSEAD at the top of her class. Of course, if it's a family business, exceptions to the rule can be made.

7. Can you see the big picture?
Too often new business owners get caught up in the day-to-day running of the business and don't look at the big picture. You need to have both long- and short-term goals and you should review them every month to make sure that you and your company are on track. No matter what stage your business is in, you must have an idea of where you and the company are going.

8. Do you take "no" for an answer?
Successful entrepreneurs don't take no for an answer. When others tell them that "it can't be done" or "nobody's ever tried it that way before," entrepreneurs set out to prove those people wrong. As an enterprising businessperson, you must achieve a comfortable balance between stubbornly sticking to your ideas no matter what and accepting limitations that others would like to put on you. In other words, if people declare "it's not possible," don't accept their word for it. Be critical and do your own research and come to your own conclusions. After all, it's your company.

9. Are you looking for validation, or are you looking for the truth?
Even wildly successful business owners can occasionally be uncertain about what to do next. In those cases, the ones who continue down the path of success are not interested in simply having their ideas validated by people they turn to. They want the truth. So if you are going to run your own business and go it alone, find an impartial third party – an executive coach, a mentor or a trust advisor – to talk to about your concerns and your plans. Family members, employees and even your spouse may only tell you what they think you want to hear.

10. Do you know what you want out of the business?
Why are you starting a business in the first place and what do you want out of it? You have to know these answers before you can do long- and short-term planning. What is your exit strategy? It may seem an odd question to ask at the beginning of your startup process, but you need to know how you are going to get out of the business. Do you want to sell it and retire to the Greek Islands? Do you want to spin your first business off into another one?

Whether you want to work fewer hours, create a family legacy or do what you love to do, you need to know what you want out of the business before you can create goals and track them to fruition.

In the "Big Five model of psychology", entrepreneurs score highly on Openness to New Experience and above average on Conscientiousness and Extraversion (Ocean model). If you have honestly – and thoroughly – answered all the above mentioned ten questions, you should know now if you've got what it takes to start your own small business. But if you're still in an introspective, questioning mode, ponder these statements. Do they describe you?

Openness:

- When I'm interested in a project, I need less sleep.
- I examine mistakes and I learn from them.
- I have new and different ideas.
- I am curious.
- I like to learn something new and to explore unfamiliar subjects.
- I experiment with new ways to do things.

Conscientiousness:

- I am persistent.
- When there's something I want, I keep that goal clearly in mind.
- I keep New Year's resolutions.

- I have a strong personal need to succeed.
- If something can't be done, I find a way.
- I'm willing to make sacrifices for potential long-term rewards.
- I like to be in control.

Extraversion:

- I am intuitive.
- I see problems as challenges.
- I take chances.
- I'll gamble on a good idea even if it isn't a sure thing.
- I can recover from emotional setbacks.

Agreeableness:

- I am adaptable.
- I usually do things my own way (reverse).
- I tend to rebel against authority (reverse).
- I often enjoy being alone (reverse).
- I have a reputation for being stubborn (reverse).

Neuroticism:

- I'm a positive person (reverse).
- I feel sure of myself (reverse).

If you answered, "yes, that describes me" to most of the questions, the chances are good that you have the makings of a successful entrepreneur. If you answered "maybe" or "no" to any of the questions, those may be areas of weakness that you can work on.

But remember, these kinds of questions cannot truly mark out who will succeed in starting a business and who will not. That determination is in your hands, and under your control.
Further reading:
www.gaebler.com

Many web sites offer on line big 5 tests like www.outofservice.com/bigfive.

Info Sheet 3: Cross-subsidization models

Theoretical info sheet about cost prices and cross subsidization models

Who should read this info sheet?

If you start calculating cost prices, this is an interesting info sheet to read. This info sheet is about the dilemma of selling your product and covering all your costs while keeping your product affordable to your clients. To deal with this, entrepreneurs can use cross-subsidization models.

Key topics

As you can read in Info Sheet 1, "BOP Strategies," product affordability is a critical aspect in catering to the Bottom of the Pyramid. The consequence is that often you have to produce your product or service at a very low cost price. This is often very hard to accomplish when you start your business because your sales volume will probably be low and you will have made high upfront investments in product development. You might decide to sell your product below cost price and subsidize your loss by profitable activities (from different products or client groups). This is "cross-subsidizing" (If you sell the product below cost price, but expect to make money from the same customer in the future, it is called a "loss leader"). Before we elaborate more on this, we give you two examples.

Examples of cross-subsidization models

A producer of water filters sells the same product to two different client groups: local (very poor) people and local NGOs. The local NGOs have deeper pockets so the entrepreneur charges them a higher price which covers the fully absorbed cost price, including development costs. At the same time the entrepreneur sells his products to local people at a price below the full cost price, but above marginal cost.

In 2005 the Grameen Bank started investing in healthcare. Four Grameen companies stepped forward to be the social investors. The eye care hospitals are based on a business plan that may become the simplest and most popular format for social business. To become sustainable while also achieving the social objective of delivering expensive eye care services to the poor, the hospitals employ a differentiated pricing policy. They charge the regular market price to patients who have no difficulty in paying the fee, while providing the same service to the poor at a highly discounted rate or token fee. The profit made on the market rate charges subsidizes the service provided to the poor.

Rather than distributing profits to shareholders, the entrepreneurs in these examples recapitalized profits and allocated the funds to socially-driven activities. This kind of policy can be applied in many social businesses. The only advice we want to give you is to stay in control and monitor this strategy carefully.

Cross-subsidizing in relation to cost prices

To calculate a cost price you must know the difference between two different types of costs calculation methods:

- Full costs calculation, taking all costs into account (total cost price).
- Marginal cost calculation, taking the marginal costs into account (marginal costs are sometimes called unit level costs as they vary with the number of units produced).

The traditional way to calculate a cost price is to include the total costs involved. However, if your sales volume exceeds your forecasts you have already covered your fixed costs (fixed costs are covered by a contribution margin included in the cost price based on your sales forecasts). If your fixed costs are being covered, you only have to "earn back" your marginal costs.

The relation between cross-subsidization and cost prices can be explained by describing three possible scenarios:

- Selling your product at or above the total cost price is a sustainable strategy, as all costs involved will be covered by your cost price. Cross-subsidization does not apply.
- Selling your product at or above marginal cost price is a sustainable strategy when your fixed costs are (or will be) covered. You are not making losses, but you will not contribute to the coverage of your fixed costs. Cross-subsidization only applies when your product should contribute to cover fixed costs and you need the contribution from other activities to fill in this gap.
- Selling your product below marginal cost price is not a sustainable strategy because you are making losses on a specific activity. However, an incentive to do this is when the social value of these activities offsets the financial loss. You subsidize the loss-giving activities by transferring money from profitable ones. This strategy should not jeopardize a company's sustainability; you must be sure that enough money remains available to invest, grow or cover unexpected losses.

Cross-subsidization and development costs
Development costs can be quite high. These costs must be covered as well in the end. When you start up and your sales volume is low, including these costs could increase the cost price to a high level, making the product less affordable to the BOP market. You might decide to cross-subsidize the development costs with profits made by other products or other client groups in a later stage.

Further reading:
Creating a World Without Poverty by Muhammad Yunus (2007) (chapter 8)

Info Sheet 4: Product development, the case of the Basic Water Needs Foundation

Practical info sheet about the development of a ceramic filter by Basic Water Needs Foundation

Who should read this info sheet?

Entrepreneurs and innovators who are starting to develop their water or sanitation product might find this information very useful. This storyline of Basic Water Needs Foundation ("BWNF") shows that your product is never really finished, as bigger and smaller modifications are constantly made.

Practical experiences

Klaas van der Ven started to develop products in 2002 for the Basic Water Needs Foundation. Basic Water Needs B.V. ("BWN") was founded by BWNF and Klaas van der Ven in 2007 to market a specific product. Assembly and production is organized in India through Basic Water Needs India Ltd. in Auroville, which is a city with a separate status in India within the area of the state of Tamil Nadu.

Exhibit 28: The Purator

BWN has developed the Purator, an innovative small-scale device with a ceramic filter cartridge that effectively removes all pathogens from the source water. The Purator operates with a suction device and uses static hydraulic height to create a small pressure system that gives it a significantly greater capacity than traditional ceramic filtration units. The Purator HD filter is able to treat water sources with high turbidity.

January 2007

BWN is active in Africa and received the first feedback from customers who experienced problems with frequent clogging of the filter. People had no means to describe how dirty their water actually was. Turbidity (NTU) values cannot be used as clogging is caused mainly by fine clay particles. At that time, BWNF was working on a pre-filter for a different purpose and decided to test this technique in Africa. It worked very well and it is now a part of the standard product, adding an extra unique selling point to the product. The filters were tested with this new pre-filter for eight months and all seemed to work well.

January 2008

BWN finished research on silver impregnation and this technique was ready to be incorporated into the product. A large number of lab reports made clear that the effect of silver impregnation on bacterial removal is substantial. The silver impregnation was introduced and the new filter put on sale. It was also offered to Waterlaboratorium Noord in the Netherlands for independent approval and qualification.

BWNF switched to a new supplier of ceramic filters and these filters function better. The new filters were introduced into the product when the stock of the old filter ran out a few months later.

February 2008

The choice for the transparent PET jar around the filter proved to be the wrong one. The transparent material becomes scratched when the material has been cleaned a few times and soon looks worn out. A new material was selected and unfortunately the mold for the jar also needed to be changed. This was all decided quickly and the new jar was ready to be

introduced within 4 to 6 weeks. The new colored material will look good, even after frequent cleaning.

One of the suppliers was not willing to bring his price down to an acceptable level and BWNF decided to go for in-house production of this item. It is not a critical item and after the molds were made, manufacture of the new pieces began in July under BWNF's own supervision at a local injection molding company. An additional benefit is that the color of the piece can now be matched properly to the rest of the product, improving the appeal of the final product and bringing down the cost price by €0.10.

The packaging was changed. Once a proper new product name has been chosen (still undecided at time of writing) the product will have changed almost completely within a period of 5 to 6 months, adding to its appeal and improving its performance.

The continued product improvement is paying off. The product has already been on the market for a full year and has sold in thousands.

Further reading:
This information was gathered from interviews with Klaas van der Ven, director of Basic Water Needs India Pvt Ltd.

Info Sheet 5: Market research Ecosan

Practical info sheet about the way Ecosan performed specific market research

Who should read this info sheet?

This info sheet contains an example of a specific market research effort (microenvironment) as part of Step 2 in the business development process. You might find this info sheet very useful as an example when you start to investigate the market.

Practical issues

In this example we describe the questionnaire and interview method used to study the market potential of an ecological sanitation solution called Ecosan.

The business

Ecosan is an ecological sanitation solution that allows the user to separate the urine from the feces. The urine and feces can each be used as a fertilizer. Urine diversion sanitation prevents the risk of contamination of groundwater aquifers. The Ecosan is also a dry toilet, so it reduces water consumption in the household.

The market

An Indian party wished to research the market for Ecosan toilets to identify the potential customer groups and target these in their marketing. From their experiences in testing and demonstration projects they learned that the following customer aspects can play a role in the customer's decision to buy an Ecosan toilet:

List 1

- Household income
- Setting (urban/rural)
- Possession of a toilet (yes/no)
- If yes, aspects of the toilet
- Soil type near their household (rocky, sandy, etc.)
- Water table under their household (high/low, level)
- Availability of water to the household (proximity of source, cost)
- Physically handicapped people in the household (yes/no)
- Senior members in the household (numbers and age)
- Size of their property
- Size of their household

This list of consumer aspects was used in the interviews with customer groups.

The product

Next, the marketing proposition of the Ecosan product was listed (see list 2). This proposition is important and was shared with the customer groups in the interviews to collect their response.

List 2

- Above-ground system with 2 pans, on-site composting
- Can be very efficiently used in rural and peri-urban settings
- In urban setting this can only be set up as a shared facility because of the space needed
- Price will be around Rs. 5,000 for a complete system
- Uses 2 pans, one of which is always in composting mode
- Typical sizes of the system are included, with a product sketch
- The product produces compost that can be used in the house garden as a fertilizer

- The system does not produce any smell
- The system uses no water

Using these two lists Scope/Fodra conducted their market research through interviews.

Interview setup: concept test by interview
The market acceptance of the Ecosan product concept (list 2) was judged by potential customers. This is usually done by interviewing focus groups, which are 1 to 2 hour sessions with a small number of people (6–8), led by a moderator. It is also possible to interview consumers individually if conditions require it, although this is of course more labor intensive. All the people interviewed were asked about the market aspects. A questionnaire (not included in this Info Sheet) was drawn up to guide the interviews. This questionnaire includes questions about how the consumer values the product, which aspects are valued most, whether the consumer intends to buy such a product, and why.

What information was obtained from this interview?

- Overall product diagnostic (uniqueness or differentiation from other products, believability, importance in solving a customer's problem or desire, inherent interest, value for money)
- Purchase intention per consumer group
- Attribute diagnostic (which benefits of the product appeal most to the customer and attribute to the purchase intention)

Respondent profiling attributes were used to analyze how different types of customers respond to the offered concept/product. This information can be used in targeting customer groups and deciding how to promote the product.

Info Sheet 6: Participatory Rural Appraisal

Theoretical background info sheet about the Participatory Rural Appraisal market research method

Who should read this info sheet?

Entrepreneurs who want to work together with NGOs and include social marketing methods in their marketing strategy might find the information in this info sheet useful.

Participatory Rural Appraisal (PRA) is an approach used by non-governmental organizations (NGOs) and other agencies involved in international development. The approach aims to incorporate the knowledge and opinions of local and often illiterate people in the planning and management of development projects and programs.

Definitions

Participatory Rural Appraisal (PRA) is a label given to a growing family of participatory approaches and methods that emphasize local knowledge and enable local people to make their own appraisal, analysis and plans. The approach is often used by non-governmental organizations (NGOs) and other agencies involved in international development.

PRA evolved from *Rapid Rural Appraisal* (RRA), a systematic but semi-structured activity by a multidisciplinary team in the field that is designed to obtain new information and to formulate new hypotheses about rural life. RRA can therefore be seen as a bridge between formal surveys and unstructured research methods.

The main difference between PRA and RRA is that the first emphasizes processes which empower local people, whereas the second is mainly seen as a means for outsiders to gather information.

Key topics

Origins of participatory rural appraisal

The roots of PRA techniques can be traced to the activist adult education methods of Paulo Freire and the study clubs of the Antigonish Movement. In this view, an actively involved and empowered local population is essential for successful rural community development. Robert Chambers, a key exponent of PRA, argues that the approach owes much to "the Freirian theme that poor and exploited people can and should be enabled to analyze their own reality."

By the early 1980s there was growing dissatisfaction among development experts with both the reductionism of formal surveys and the biases of typical field visits. In 1983, Robert Chambers, a Fellow at the Institute of Development Studies (UK), used the term Rapid Rural Appraisal to describe techniques that could bring about a "reversal of learning." Two years later, the first international conference to share experiences relating to RRA was held in Thailand. This was followed by rapid growth in the development of methods that involved rural people in examining their own problems, setting their own goals, and monitoring their own achievements. By the mid 1990s, the term RRA had been replaced by a number of other terms, including Participatory Rural Appraisal (PRA) and Participatory Learning and Action (PLA).

Overview of PRA techniques and principles

Hundreds of participatory techniques and tools have been described in a variety of books or taught at training courses around the world. These techniques can be divided into four categories:

- Group dynamics: learning contracts, role reversals, feedback sessions, workshops
- Sampling: transect walks, wellbeing (or wealth) ranking, social mapping, preference ranking, modeling, seasonal and historical diagramming
- Interviewing: focus group discussions, semi-structured interviews, key informants, short simple questionnaires

- Visualization: direct observations, diagrams, matrix scoring, timelines, local histories and case studies, biographies, participation in activities

For explanation of these categories we refer to the links mentioned at the end of the document.

Social mapping, wellbeing ranking and focus group discussions
Of all the PRA tools and techniques, social mapping, wellbeing ranking and focus group discussions are perhaps the most useful for the BOP entrepreneur. These are indirect means of gathering market information, and are useful supplements to questionnaire-based information. They are briefly explained below.

Social mapping and wellbeing ranking
These two techniques involve community members setting criteria to identifying different classes within the community, classifying their own community into these classes, and marking them on a map. For instance, villagers may define a poor household as one with debts, with insufficient food for the whole year, no land, and no assets. They can then list the households in their village that satisfy these criteria. Similarly, they can identify all households without toilets or access to a public water tap or a household water connection. Wealth ranking helps with identifying the size of different wealth groups, such as the very poor households or only the well off, and hence the potential market for the entrepreneur's product.

Focus group discussions
These can be held with any target group, including women, farmers, schoolchildren or the entire village, to collect group-specific information on the proportion of poor families (defined by the prevailing government norms), age distribution, occupational profile, social organization, sociopolitical context, needs and values, and community-based institutions (that could be useful marketing and feedback channels in future).

In some communities, relative wealth/poverty is a very sensitive topic and this technique may need to be conducted in a private setting to allow participants to talk freely. In some cases you may not be able to do it at all! This technique has sometimes proved problematic in urban areas, where people tend to be less familiar with their neighbors than in rural communities. Also, the results of the wellbeing ranking should be cross-checked by using other means of addressing the issue of relative wealth and wellbeing, such as a social mapping exercise. Finally, make sure you compensate villagers for their time – for them a single day devoted to answering your questions is a day of wages lost!

Principles
Different sources recognize different principles of rural appraisal. Nevertheless, some general principles can be recognized:

- Triangulation: cross-checking data by using various techniques, thereby also expressing the complexity and diversity of local people's realities
- Participation: local people's input is essential, learning directly on-site and face-to-face
- Offsetting biases: identify and offset biases by being relaxed, listening rather than lecturing, being unimposing, and using multidisciplinary teams
- Flexibility: there is no blueprint, hence improvisation, being neutral by making a trade-off between accuracy, quantity, relevance, use, and timeliness

Rapid Rural Marketing Appraisal
Rapid Rural Marketing Appraisal (RRMA) focuses mostly on making informed decisions about improving agricultural marketing systems in developing countries, but also emphasizes

the essential role that marketing plays in the rural development process. Hence, RRMA stresses that it is necessary to appreciate the role of good rural marketing research to reduce the risk in rural marketing decision making. RRMA focuses on what the consumer needs and wants, looking at rural people as the target market. It is about identifying and prioritizing marketing problems, and evaluating practical means of improving marketing functions. In RRMA, it is important to first describe accurately and meaningfully the systems that exist, and second, to evaluate these structures and their performance. RRMA is used to:

- Identify the needs of the rural community
- Identify existing and potential markets
- Test that a project is on track
- Design appropriate technologies
- Study decision-making processes and dependency patterns
- Evaluate marketing systems
- Analyze marketing feasibility and social acceptability
- Understand and improve price efficiencies.

Pros and cons of PRA

PRA can be described as “fairly quick” and “fairly clean”, as opposed to “quick and dirty” and “long and dirty”. Quick-and-dirty approaches are also known as “rural development tourism”: a brief rural visit by the urban-based expert. This is often low cost, but mostly not cost-effective. Large misperceptions and misinterpretations of the rural reality are often the result. Formal and accurate studies are longer and more costly. They are often preferred by well-trained professionals, but are often inefficient and already outdated before they are published.

PRA overcomes these drawbacks by determining which information is really relevant, opportune, understandable, and actually useful for the decision makers. This means that it generates results that seem less precise, but they have greater evidential value than in traditional quantitative research: it gets the big things broadly right rather than achieving spurious statistical accuracy. Moreover, in developing countries it is sometimes difficult to apply standard marketing research techniques employed elsewhere because there is often a paucity of baseline data and poor facilities for marketing research. This is where PRA comes in very useful.

Unfortunately, there has also been much abuse of the PRA method by outsiders, who only want to obtain information quickly and use it for their own purposes. In such cases, local people are brought into a process in which expectations are raised and then frustrated. To avoid this, those wishing to use PRA techniques need to be transparent about their intentions. If you call what you are doing PRA, you must make a commitment, if asked, to do your best to support the actions that local people have decided upon.

Further reading:
http://en.wikipedia.org/wiki/Participatory_rural_appraisal
www.fao.org
www.worldbank.org
www.iisd.org/casl
http://portals.wi.wur.nl/ppme

Info Sheet 7: Steps to form an Indian company

Practical info sheet about several Indian legal business structures and the way to incorporate them

Who should read this info sheet?

Entrepreneurs who are planning to set up a local business in India should read this info sheet carefully.

Practical issues

We refer to the India Business Guide 2007 by the Dutch Ministry of Foreign Affairs. The section “Setting up your business” provides you with a good summary of all the steps you need to take to form an Indian company.

There are a variety of factors for the BOP entrepreneur to consider when starting a business in India. At the outset, a clear understanding of the options available is essential. Fortunately, almost all this information is available on a comprehensive government website (business.gov.in). The main issues involved in starting a business in India are given below. It summarizes information from the main government website, which contains the details.

Registering a business in India

In India, incorporation of a company is governed by the Indian Companies Act of 1956. It is the most important piece of legislation that empowers the Central Government to regulate the formation, financing, functioning, and winding up of companies. It applies to all of India and to all types of companies, whether registered under this Act or an earlier Act.

Registrars of Companies (ROCs) appointed under Section 609 of the Companies Act, covering various States and Union Territories, are vested with the primary duty of registering companies floated in the respective States and the Union Territories and ensuring that such companies comply with the statutory requirements under the Act. Their offices function as registry of records relating to the companies registered with them.

To register and incorporate a company you must file an application with the Registrar of Companies of the State in which the company is proposed to be incorporated, accompanied by the selected names of the business, a Memorandum of Association, Articles of Association, and other necessary documents.

Under the Companies Act, an entrepreneur can form two types of companies: a private company or a public company. Most BOP businesses are likely to be private companies.

Forms of business organizations

A business enterprise can be owned and organized in several of the following forms:

- Sole Proprietorship
- Private Limited Company
- Public Limited Company
- Partnership Firm
- Cooperative s
- Joint Hindu Family Business

Each form of organization has its own merits and disadvantages. The right choice of the form of the business is crucial because it determines the power, control, risk, and responsibility of the entrepreneur as well as the division of profits and losses. Being a long-term commitment, the choice of the form of business should be made after considerable thought and deliberation. The most appropriate organizations for BOP entrepreneurs are the sole

proprietorship, private limited company and the partnership firm, all of which are detailed below. Note that only the key features are provided here. Full details and requirements are specified on the government website (business.gov.in).

Sole Proprietorship

This is the oldest and the most common form of business. It is a one-person organization where a single individual owns, manages and controls the business. It is the easiest to form as no agreement has to be made and registration is not essential. However, the owner may be required to obtain a *license* specific to the line of business from the local administration. The owner has complete control over all the aspects of the business and takes all decisions (although he may contract others to carry out day-to-day activities). The owner alone enjoys the benefits or profits of the business, but also bears all losses, if any. The business depends on the life of the proprietor and illness or death of the owner brings an end to the business.

Partnership Firm

A partnership is defined as a relation between two or more persons who have agreed to share the profits of a business carried on by all of them or any of them acting for all. The owners of a partnership business are individually known as the “partners” and collectively as a “firm.” It is also easy to form as no cumbersome legal formalities are involved. Its registration is also not essential. However, if the firm is not registered, it will be deprived of certain legal benefits.

The Registrar of Firms is responsible for registering partnership firms. The minimum number of partners must be two, while the maximum number can be 10 in case of a banking business and 20 in all other types of business. Ownership of the legal entity of the partnership firm usually carries with it the right of management and therefore every partner has a right to share in the management of the business firm. The liability of the partners is unlimited. This means that if the assets and property of the firm are insufficient to meet the debts of the firm, the creditors can recover their loans from the personal property of the individual partners.

The firm has a limited span of life. Legally, even a ten-partner firm must be dissolved on the retirement, mental incapacitation, bankruptcy or death of any partner. A partnership is formed by an agreement, which may be either written or oral. When the written agreement is duly stamped and registered it is known as a “Partnership Deed”. Ordinarily, the rights, duties and liabilities of partners are laid down in the deed, and it also specifies the following:

- Name of the firm
- Nature of the business to be carried out
- Names of the partners
- The town and the place in India where the business will be carried out
- The amount of capital to be contributed by each partner
- Loans and advances by partners and the interest payable on them
- The amount of drawings by each partner and the rate of interest allowed thereon
- Duties and powers of each partner
- Any other terms and conditions to run the business.

Private Limited Company

A private limited company is a voluntary association of not less than two and not more than fifty members, whose liability is limited, the transfer of whose shares is limited to its members and which is not allowed to invite the general public to subscribe to its shares or debentures. It has a legal existence independent of the members. It is relatively less cumbersome to organize and operate as it is exempted from many regulations and restrictions which apply to public limited companies. For example, unlike a public limited company, it need not file a prospectus with the Registrar, it need not obtain the Certificate for Commencement of

business, it need not hold statutory general meetings or file statutory reports, and the liability of its members is limited. A private limited company has to have a minimum of two members and must have the words “Private Limited” (or Pvt. Ltd.) as the last part of its name. Additional restrictions are:

- The company has to register a unique name with the Registrar of Companies (ROC), which reflects the activities of the company. A local company with no international links may be denied the use of the word “International” in its name (e.g. Water India International Pvt. Ltd.).
- The proposed name will be accepted by the Registrar of Companies only if there is no other existing company with the same name.
- The minimum paid up share capital is Rs.100,000 (€1,785).
- The number of (non-employee) members is limited to fifty, but there is no limit on the number of past or present employees who are members of the company.
- It cannot invite or accept any deposits (equity) from persons other than its members, directors or their relatives.

Steps to be taken to incorporate a private limited company

- Select, in order of preference, a few suitable names, not less than four, that indicate the main objects of the company.
- Ensure that the name does not resemble the name of any other company already registered and does not violate the provisions of Emblems and Names (Prevention of Improper Use) Act, 1950.
- Apply to the relevant ROC to ascertain the availability of a name in Form 1A of the General Rules and Forms, including a fee of Rs.500. If the proposed name is not available, apply for a new name on the same application.
- Arrange to have the Memorandum and Articles of Association drafted by solicitors, vetted by the ROC, and printed.
- Arrange to have the Memorandum and Articles stamped with the appropriate stamp duty.
- Get the Memorandum and Articles signed by at least two subscribers in their own hand, stating their father’s name, occupation, address, the number of shares subscribed for, and witnessed by at least one person.
- Ensure that the Memorandum and Articles are dated after the date of stamping.
- Get the following forms duly filled out and signed:
  - Declaration of compliance – Form 1
  - Notice of the situation of the registered office of the company – Form 18
  - Particulars of the director, manager or secretary – Form 32
- Present the following documents to the ROC with the filing fee and the registration fee:
  - Stamped and signed copies of the Memorandum and Articles of Association (3 copies)
  - Forms 1, 18 and 32 in duplicate
  - Any agreement referred to in the Memorandum and Articles
  - Any agreement proposed to be entered into with any individual for appointment as managing or whole time director
  - Name availability letter issued by the ROC
  - Power of attorney from the subscribers in favor of any person for making corrections on their behalf in the documents and papers filed for registration
  - Payment of the registration and filing fee by demand draft or banker’s check if it exceeds Rs.1000 (€17.85)
  - Certificate of Incorporation from the ROC

Exhibit 29: Steps to be taken to incorporate a private limited company

Regulatory requirements

An entrepreneur has to take into account the basic regulatory requirements for setting up the business, the most important regulations being the Indian Companies Act, 1956 and environmental regulations under the Environment Protection Act, 1986 and any other relevant legislation.

The Companies Act, 1956

The Companies Act, 1956 contains provisions relating to the formation of a company, powers and responsibilities of the directors and managers, raising of capital, holding company meetings, maintenance and audit of company accounts, powers of inspection and investigation of company affairs, reconstruction and amalgamation of a company, and even winding up of a company. The Ministry of Corporate Affairs, previously known as the Department of Corporate Affairs under the Ministry of Finance, is primarily concerned with administration of this Act as well as other allied Acts and rules and regulations adopted under these Acts.

The Companies Act, 1956 is administered by the Central Government through the Ministry of Corporate Affairs and various other government offices, including the Office of the Registrar of Companies, Official Liquidates, Public Trustee, the Company Law Board and the Director of Inspection. The Registrar of Companies (ROC) controls the task of incorporating new companies and the administration of running companies.

Environmental regulations (Environmental Protection Act, 1986)

Environmental protection has been given constitutional status and a good environment is a constitutional right of the Indian citizen. The Directive Principles of State Policy states that it is the duty of the state to “protect and improve the environment and to safeguard the forests and wildlife of the country.” It imposes a fundamental duty on every citizen “to protect and improve the natural environment including forests, lakes, rivers and wildlife.”

In India, the Ministry of Environment and Forests (MoEF) is the top administrative body for (i) regulating and ensuring environmental protection; (ii) formulating the environmental policy framework in the country; (iii) undertaking conservation and surveys of flora, fauna, forests and wildlife; and (iv) planning, promotion, coordination and oversight of the implementation of environmental and forestry programs. The Ministry is also the coordinating agency in the country for the United Nations Environment Programme (UNEP).

The organizational structure of the Ministry covers a number of Divisions, Directorates, Boards, Subordinate Offices, Autonomous Institutions, and Public Sector Undertakings to assist it in achieving all these objectives. Besides these, the responsibility for prevention and control of industrial pollution is primarily executed by the Central Pollution Control Board (CPCB) at the Central Level, which is a statutory authority, attached to the MoEF. The State Departments of Environment and State Pollution Control Boards (SPCBs) are the designated agencies to perform this function at the State Level.

Production and product standards

The Bureau of Indian Standards (BIS) is the only body in India authorized to set standards and certify products according to these standards (see http://bis.org.in). It awards the ISI (Indian Standards Institutions, being BIS’ former name) mark for certified products, which is now well known even in rural India as a hallmark of quality on products ranging from iron water pipes to electricity cables and fittings. “Good Manufacturing Practices” are a set of regulations, codes, and guidelines for the manufacture of drug substances and drug products, medical devices, *in vivo* and *in vitro* diagnostic products and foods. These do not apply to water supply yet. In India, Good Manufacturing Practices are overseen by the Ministry of Health and Family Welfare and by multinationals and foreign enterprises working in India (www.cfpa.com).

Further reading:
www.rnebizguideindia.org
www.business.gov.in
www.cfpa.com

Info Sheet 8: Experience in setting up a business organization in India (Basic Water Needs India, Private Limited)

Practical info sheet on how Basic Water Needs Foundation set up a business in India

Who should read this info sheet?

Entrepreneurs or other organizations that are planning to set up a business in India should read this practical experience carefully and take this further as lessons learned by one of the entrepreneurs involved in this Toolkit.

Practical issues

Basic Water Needs Foundation ("BWNF") is a Dutch foundation working on a low-cost water filter technology for household use, as well as a bigger UV water purification unit for community use. Most of the work was done in the Netherlands until November 2006, when it was decided to set up a local organization in India. The area was already chosen from previous experiences (pilot projects): close to Pondicherry and close to Auroville in the State of Tamil Nadu.

November 2006

BWNF located a suitable place where they can assemble the larger UV unit. The space was rented by Klaas van der Ven privately at a cost of €120/month. Klaas also located a few people willing to work freelance. He found these people via a friend who knows the area. The person responsible for making the electronics for the UV unit takes over as manager of the local operation while Klaas is absent.

Klaas stayed in India on a six month business visa, obtained on invitation from a local NGO. He had to leave the country after this period because he was also needed in the Netherlands to run the operation there.

BWNF cooperates with a research lab in Auroville, staffed by Western scientists working for a low fee and delivering high-quality work. This is one of the reasons for choosing this location.

July 2007

Basic Water Needs BV ("BWN") was founded in the Netherlands in July 2007 and this is the basis for the commercial operation. Until this date all activities were run from the Foundation. BWN imported the filter cartridges (10,000 units) into India, with the assistance of a local importer. The local importer asked for a fee of 8% of the commercial value of the goods and it worked well. The filters arrived in India and are owned by BWN.

September 2007

Klaas visited India again and started the process of establishing Basic Water Needs India Ltd. The first step was to have the name researched by Delhi, which was cleared after six weeks. Then the process of registering the Private Limited Company began, which involved a lot of paperwork. This was all done by a local accountant. Please note that, to start a local limited company, you need a certified copy of your passport. This has to be obtained in the country where the passport was issued, so Klaas had to go back to the Netherlands to get it and then return to India to apply for the registration of the limited company, which needs to be done in person.

January 2008

BWN India Ltd. was established and a Director Identification Number (DIN) was issued. The process of applying for a VAT (= PIN) number could then begin. This is only possible after a company has first opened a bank account. Meanwhile the first orders started to come in. The

filter had been successfully tested in the field and the first organizations started to place orders. However, BWN India was still a long way from having an import/export license and did not even have a bank account.

March 2008
After six weeks, the bank account applied for at ICICI Bank was still not available due to internal problems at the bank. Klaas decided to switch banks and apply for an account at the local department of Citibank, although he still favored ICICI Bank. Citibank approved the account within a week, and after some problems with activating the account (a check for €2,000 issued on the name of the new limited company was needed) the bank account was opened.

Klaas could now apply for a VAT number. Without a VAT number you cannot sell anything. Buying materials is not a problem, although without an Indian bank account all transactions are done against cash, which is taken from the local ATM machine (with a daily limit, which is inconvenient). Note that when you apply for a VAT number you will be inspected. You can check on the Internet how much you need to pay the inspector to be assured of a smooth inspection (Rs.10,000).

All in all, it took more than three and a half months to open a bank account! The company now has a bank account at ICICI Bank. Because the opening of a bank account took so much time, the application process for the VAT number could not start. The next step is to apply for an Import/Export Code ("IEC") with the customs authorities.

Meanwhile, the first orders needed to be delivered. This was done with the help of the local exporter again, with an invoice for the goods at a reduced price (since customs need an invoice with the goods) and later a second invoice by BWN for the rest of the amount due. This might not be entirely according to the letter of the law, but it worked and the goods were delivered.

The process of getting the right numbers, accounts, permits, etc. took little over nine months It is advisable to start this process in good time. From overseas, you can ask a local consultant or accountant to at least start the process of checking the name and filing the limited company. Then the DIN can follow, then the bank account, VAT number, and IEC (import export code). For a complete description of the legal requirements for starting a company in India we refer to Info Sheet 5. The Dutch Business Support Office in Chennai gives an overview of the process in its business guide.

May 2008
The process of applying for the import/export license and the Small Scale Industry License was set in motion. For the latter the authorities even ask for the amount and value of the tools that are used.

Further reading:
This information was gathered from interviews with Klaas van der Ven, director of Basic Water Needs India Ltd.

Info Sheet 9: Differences between equity and loans

Theoretical info sheet about the differences between equity and loans

Who should read this info sheet?

Entrepreneurs who need to make fundamental choices in the way they want to finance their activities.

Key topics

There is a lot to tell about the difference between equity and loans, but we will keep it short. Debt holders have the first claim on the cash flows of a company. Only after interest payments have been made, can equity owners receive a return on their investment (dividend). Therefore, debt is less risky than equity, but it usually gets a lower rate of return. More specifically, equity gives its owners (shareholders) the right to do the following:

- Make or approve specific decisions with respect to the business activities. These rights are subscribed by law and agreed in the shareholders agreement or assigned to certain types of shares (called priority shares).
- Claim dividend as a return on their investments. Of course, dividend can only be claimed when a profit is made, but the sequence of who claims first and how much depends on the type of share (preference shares).
- Sell or pledge all or part of their stakes. The possibilities and procedures to be followed need to be included in the shareholders agreement. In most cases, existing shareholders have the right of first refusal, meaning that the selling shareholder has to offer his/her shares first to the other shareholders.

A simplified example

You are 100% shareholder of WaterCo Ltd. You are not making any profit. You need €100,000 to build a prototype, test it and finance the startup of production. An independent accountant values your business at €50,000. You own 100 shares, so the share price is calculated at €500. If you offer an investor 50 common shares (€25,000) and 150 cumulative preference 15% shares ("prefs") (€75,000), you keep your majority (75%) but your investor has the first right to receive a yearly €11,250 dividend (15% of €75,000).

During the first two years all profit is used to finance the business. After the third year, WaterCo Ltd. makes €40,000 profit of which €35,000 is declared as dividend. Your investor has the first right to claim €33,750 (3x €11,250) as preferred dividend. You are entitled to claim €833.33 (75% of the remaining €1,250); €416.67 is claimed by your investor as dividend on common shares. Next year, a profit of €125,000 is realized. €111,250 is declared as dividend and €11,250 is claimed by your investor on the preferred shares. €100,000 remains and your claim is €75,000.

Lenders do not have a share in the profit of the business. The rights of investors who give you a loan are put down in a loan agreement. The loan conditions reflect the rights and obligations of lender and borrower and apply to the following topics:

- Installments and scheme of payments (the term of the loan)
- Interest and fees (the interest rate plus other recurring or upfront fees)
- Security (deeds, registered pledges or private security documentation)
- Ratios (see Info Sheet 8 on business risks)
- Other conditions (like dividend clauses, ownership clauses, etc.)

Further reading:

http://en.wikipedia.org/wiki/Loan
http://en.wikipedia.org/wiki/Stock

Info Sheet 10: Sourcing strategies

Theoretical info sheet about strategies that organizations use to source goods

Who should read this info sheet?

Almost every entrepreneur will have to deal with this issue. Sourcing of goods is often an important element in the business model.

Key topics

Companies source many different items. These items can be classified according to their importance for the company (high to low) and the complexity of the supply market (high to low). When we rank the items we divide them into 4 quadrants. The figure below shows these quadrants and the characteristics of the purchase items in them. No matter how much effort you put into a sourcing strategy, you should always keep this in mind and rank your purchase items accordingly. It will help you to determine how to spend your limited time and resources.

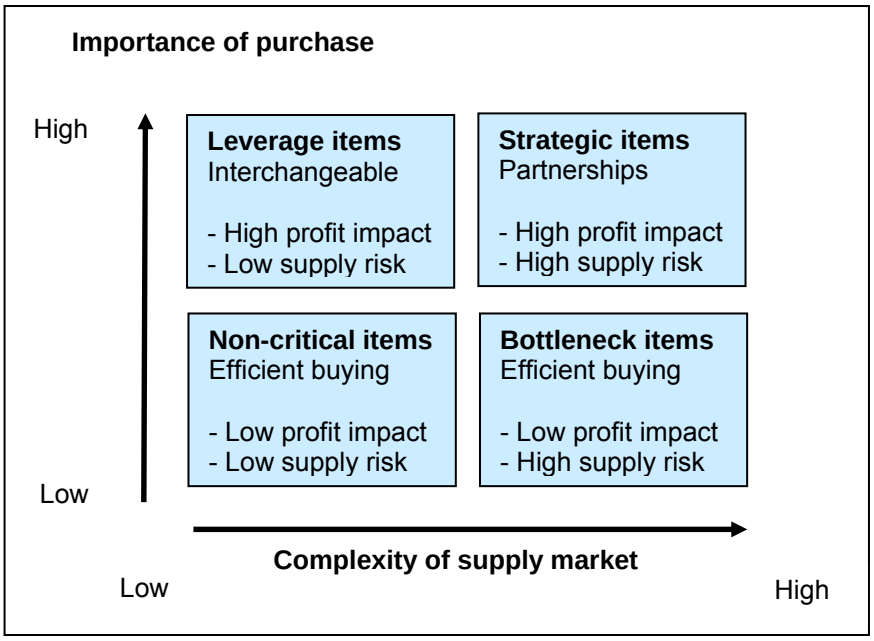


Exhibit 30: Characteristics of purchase items

Sourcing strategic items

In this category of goods the focus is on longer-term benefits. It makes sense to consider having these goods manufactured under your own supervision or sourced at companies with whom you can form some kind of solid partnership. Take, for example, the production of a certain piece of injection molded plastic typical for your design or important for the proper functioning of your product. It could make sense to consider making your own mold(s) to give you the freedom to switch between suppliers and/or use two suppliers so that certainty of supply is guaranteed. This way you gain some protection against opportunistic supplier action on pricing. Aim for long-term and stable supplier relationships.

Sourcing bottleneck items

These items represent a group of purchase items that, although they do not have a huge impact (in value) on your product, they are still complex to buy. It does not make sense to spend much time and energy thinking about making them yourself. Focus on long-term stable supply relations and inventory control, and make a contingency plan. Try to have access to multiple suppliers for this group of products.

Sourcing non-critical items
For this group of products you should try to use your full purchasing power. There are many suppliers and the market is simple and often transparent. Volume and logistic optimization help to get the best deals. The items do not have a big impact on your operation, but they could offer an opportunity to use your purchasing power. Examples of goods often found in this group are office suppliers, packaging and standard components.

Sourcing leverage items
This group represents items that really offer an opportunity to make a difference to your operation. They have a big impact and the market is not too complex, so there is enough opportunity to use your purchasing power. Spend enough time on this group to ensure you get the right deals. If possible, consider pooling with others to create more purchasing power. Examples of goods often found in this group are the costs of IT, travel, and temporary labor forces.

Further reading:
http://en.wikipedia.org/wiki/Strategic_sourcing

Info Sheet 11: Microfinance and microcredit for water and sanitation

Theoretical info sheet about microfinance as an instrument to finance water and sanitation activities

Who should read this info sheet?

Those entrepreneurs who need better access to credit for the poor to reach the BOP market.

Although not a new concept, microfinance has become very popular in recent decades. Its potential has become attractive to mainstream corporate players (like commercial banks, investment funds, and corporate firms), looking for ways to enter the low income segments in society. If you have the ambition to launch water and sanitation products on Southern markets, microfinance enables the poor to access financial products which can be used:

- To make your product affordable, financing the initial purchase price
- To stimulate entrepreneurship, e.g. financing a small water kiosk selling your product

Definitions

Microcredit is the extension of very small loans to poor people who traditionally were not considered bankable. As they lack employment and a verifiable credit history they cannot meet the minimal qualifications to gain access to traditional credit.
Microfinance, on the other hand, is the provision of a wider range of financial services to the poor and includes any financial service used by poor people, including those they access in the informal economy. Microcredit is thus a form of microfinance. In practice, however, the word microfinance is often used to refer to institutions whose goals include profitability as well as reducing the poverty of their clients. It also refers to a movement that envisions "a world in which as many poor and near-poor households as possible have permanent access to an appropriate range of high quality financial services, including not just credit but also savings, insurance, and fund transfers".

Key topics

Historically, microfinance has not been available for financing water supply and sanitation activities because the link with income generation was not directly obvious. More recently, however, the use of microfinance in the water sector has received growing attention. One reason for this is that linking microfinance to water and sanitation can be used to create a business model. Such a business model makes it possible for projects to start functioning without subsidies and to scale up. In addition, the link with microfinance creates ownership for customers, leading to better care for the product and a longer useful life.

Potential clients of microfinance for water and sanitation include small-scale private water providers as well as households. Microfinance has been used for the construction of household latrines and public toilets, manual latrine-cleaning services and various water purifiers.

Partnerships

Companies involved in water and sanitation often partner with microfinance institutions ("MFIs") and NGOs in order to capitalize on the advantages of microfinance. NGOs and MFIs may also start partnerships. In such partnerships, NGOs engage in awareness raising and capacity building, identify specific water and sanitation needs and often act as financial intermediaries between MFIs and their users, for example by creating and supporting Self Help Groups ("SHGs") and linking them to MFIs. Companies offer water and sanitation products appropriate to the BOP market, while MFIs make sure that the necessary funds are available. Microfinance and commercial projects can also be linked to subsidized activities such as sanitation promotion. Three examples of successful partnerships are given below.

Case 1: ACCESS and Hindustan Unilever Limited, the Purelt

ACCESS Development Services (an Indian non-profit organization) and HUL (Hindustan Unilever Limited) work together to provide safe drinking water to the poor. HUL designed a

household water purifier, PureIt, which does not require electricity or running water. ACCESS facilitates loans to rural women to buy these water purifiers through its partner microfinance institutions. PureIt costs €30. Women in SHGs pay installments of €1.50 to €3.50 every month, plus interest. Within three months, 1,500 SHG members had purchased the filter. To date, the loan repayment rate has been 100%.

Exhibit 31: The PureIt

Women in these SHGs are more than willing to make an investment in clean water because many people in this area fall ill from the tap water. This leads not only to high healthcare costs, but also causes many worries about the health of their families and children.

Case 2: India's first sanitized slum

Gramalaya uses microcredit for many of its activities. However, in this case it is not MFIs that provide the funds, but the local women themselves who form SHGs and are involved in savings schemes. Startup funding for the Community Toilets project was given by WaterAid.

Sanitation and Hygiene Education Teams ("SHE Teams"), formed by the women of the SHGs maintain the community toilets and collect the money that villagers pay for using them. This money is put into a bank account and used for expenses like the salary of the night watch and cleaning materials. The amount saved is pooled and used for other health and sanitation related activities, like the renovation of an abandoned community toilet and the construction of a child-friendly toilet. Open defecation is no longer necessary, allowing this community to become "India's first sanitized slum."

Case 3: Financing urban sanitation in Wogodogo, Ouagadougou, Burkina Faso

In Wogodogo, a low-income neighborhood in Burkina's capital Ouagadougou, a savings-credit initiative was set up for the management of domestic waste. Credit was provided by LAGEMYAM, a women's association working for improved sanitation, which also agreed to finance the initial 70% required to start up the credit system. The interest rate was set to cover administrative costs only. Credit was provided on moral grounds: it was difficult to make households repay the credit as the population was used to getting sanitation facilities for free; any revenues from solid waste collection were invested in basic needs rather than paying back the loan. After an awareness campaign to help the population develop self confidence and commitment, the beneficiaries realized that the system could not continue if they did not pay back their loans. The system runs well now and the rate of reimbursement is more than 80%.

Conclusion

The above examples show that using microfinance in the water and sanitation sector can result in successful projects. Poor people are willing to pay for water and sanitation facilities, and assets created can be maintained if a sense of ownership is present. Microfinance can be used to start up such facilities in various different ways: facilities can be created and maintained by the community, women's groups or local entrepreneurs (even if we have not found such examples yet). Microcredit can be made available by MFIs, banks or SHG saving schemes. NGOs may or may not be involved in awareness raising activities.

Further reading:

http//en.wikipedia.org/wiki/Microfinance
http//en.wikipedia.org/wiki/Microcredit
www.irc.nl/page/40649
www.nextbillion.net

FMO, Intellecap and Goodwell (date unknown) *'Flows: Filling up the Base of the Pyramid: Business and Finance Solutions to Scale up Water Access for India's Poor',* FMO, Intellecap and Goodwell

George, M., Maheswari, A. & Pandian, N. (2007) *'Inverting the Pyramid: The Changing Face of Indian Microfinance'*, Intellecap

Info Sheet 12: Business risks

Theoretical info sheet about business risk to take into account when starting up a business

Who should read this info sheet?

Entrepreneurs making business plans to present to financiers should read this information carefully.

Key topics

Business risks

From an investor's perspective business risks are all kind of risks that affect the predictability of the cash flow. Generally, cash flow has three drivers:

- Cash flow from operational activities (caused by turnover and cost base)
- Cash flow from non-operational activities (caused by sale of assets)
- Cash flow from financial activities (caused by receiving or providing financing)

Operational risks

Much has been written on this subject. From an investor's point of view the following categories may apply:

Macroeconomic and political risks (risks at country or regional level)

These risks relate to the economic and political activities of a country or region. Examples are the development of the national income, inflation, import/export, currency fluctuations, political instability, government budget, etc. The scariest scenario related to political risk is that a change of government could mean the nationalization of foreign-owned companies without compensation.

Market risks (risks related to the market you want to launch your product on)

These risks relate to the behavior of your potential customers. What affects their decision to buy your product? You can describe the development of their income, buying power, existence of competitive products, possibility to enter the market as a competitor (barriers of entry), etc. If forecasts on buying power are positive, your revenues and cash flow are most likely to increase.

Production and organizational risks (risks at company level)

These risks relate to the production process and all organizational activities that support it. It starts with the risk of sourcing the raw materials, spare parts and equipment needed, and dependency on additives. Quality (spoilage, waste and malfunctions), efficiency (not meeting your standard production cost price) and quantity (not meeting the delivery time) are risk indicators during the production process. If materials and/or end products are taken in stock, price and market risk of stock (the chance your products become unsellable) comes into play. When you have sold your product, there is a risk of trade debtors: will you receive your money in time? And finally, even after receiving your money your company might be liable to product malfunctions.

Management and governmental risks (risks at management level)

These risks relate to the composition of the management team and the way the company is managed. It starts with the CEO or director. Are you competent enough to lead the company? Who will replace you? As nobody is perfect, risks can be reduced if you put together a management team that fulfills all the competencies needed to make the business a success. Besides the management team, who are the key persons in the company and how are they being motivated to stay with the company in the long run? How is the strategy implemented? What is the organizational structure that triggers and controls revenue?

Contingencies (legal, tax and compliance risks)

These risks concern the compliance with law (legal, tax), regulations, industry standards, certification, and the degree of liability that comes with it. As water is a consumer good and has a direct impact on health, compliance with regulations is a topic you should investigate carefully. Regulations will definitely apply when selling water directly to end users (e.g. bottled water) and may apply when your product is used by end consumers to access or cleanse unsafe water. But even when no law or regulation is in place, reputation risk is something to consider because you do not want to end up in the newspaper being accused of selling inferior goods or products!

Concentration and competition risks

Say you are ready to sell your product in the market and suddenly a NGO gives the same kind of product away for free! And when you have convinced them to subsidize your product too, a governmental program is launched to construct a water pipe to provide clean water in the district you have chosen to be your key market. Water and sanitation are topics on which charities and governments often focus. These stakeholders might consider safe water and proper sanitation as a right instead of a service, offering products for free, effectively "kicking you out of the market."

Besides the risk of competition, you face the risk of concentration. This is when your competitors merge to form big and powerful companies, or work together in joint ventures. Both risks should be identified carefully and you should develop plans to mitigate these risks before they appear.

Reputational risks

Because water and sanitation products are linked to health, defaults can lead to casualties. Small incidents in a remote area, managed professionally, will not harm a business, but think about the possibility that people may die or really get sick because of a product. Water and sanitation is on the radar of NGOs and they know how to reach the media or officials when thinks go wrong. On the other hand, word of mouth can be quick, using modern communication means, and the media are powerful nowadays. Businesses should stay in dialogue with those key players and have a plan ready in case things go wrong. Malfunction of products can force the direct closure of a factory, especially when people start falling ill.

Non-operational risks

These risks apply to activities and assets that are not the core business of the company and not directly involved in the sourcing, production, and marketing process. Most of these risks relate to the revaluation of assets due to currency fluctuation, inflation or change in market prices. Usually these risks become evident when your business has to sell assets to meet other obligations. The best way to mitigate these types of risks is to focus on the core business when you are going to invest money in assets ("put your money in machines instead of bricks").

Financial risks

You need capital to run your business. If your cash flow is insufficient to finance investments or expansion, you will have to rely on external financial sources. The risk of not matching these sources with your current and future credit, plus not being able to meet the obligations which come when attracting these sources, is called financial risk. It can be separated into three specific risks:

- The risk of not being able to attract external funds (on attractive terms)
- The risk of not being able to meet current financial conditions
- The risk that current financial costs (interest or fees) increase

These risks all relate to the risk profile of your company. When operational or non-operational risks increase and you are not able to mitigate them, the risk profile of your business increases. Financiers might then not be willing to provide additional financing against suitable conditions, or change current loan or other financial conditions (e.g. increase interest rates or request additional security). In the worst case, if you are not able to meet your financial obligations (interests, installments, financial ratios and other conditions) you are “in default”, the precursor to bankruptcy. Investors may have the right to ask you to repay the facilities at once, even by liquidating all or part of your assets.

Financial ratios reflect financial risks and financiers often use these ratios to monitor the risks on their investments. The most common ratios are:

Solvency Ratio (S)

This is the ratio of own means to total assets. This definition may differ depending on the country and accounting standards. Banks often recalculate the own means of a company by:

- Adding unrealized reserves of solid fixed assets like real estate
- Deducting intangible assets like R&D costs, startup costs and goodwill
- Deducting the value of minority participations

Interest Rate Coverage Ratio (IRC)

This is the ratio of EBIT (earnings before interest and tax) to annual interest payments. It tells investors roughly how much operational profits can fall before interest payments can no longer be met.

Total Debt to EBITDA ratio

This is the ratio of total debt (all interest bearing liabilities) to EBITDA (earnings before interest, tax, depreciation and amortization). This ratio reflects a company’s ability to pay off all of its total debt out of cash flow, of which EBITDA is a measure.

Debt Service Coverage Ratio (DSCR)

This is the ratio of net cash flow to all obligatory installments on credit facilities. A DSCR > 1.3 tells an investor your company is able to repay its current debt according to the agreed installments. This ratio is used when a company is leveraged with high bank debts (in the case of a management buy out or a merger).

Further reading:
http://en.wikipedia.org/wiki/Risk_management

Info Sheet 13: Questions for a starting Dutch entrepreneur

Q&A info sheet about what to ask when you start to export your product

Who should read this info sheet?

Dutch entrepreneurs who want to export their product to BOP markets.

Key questions

Are subsidies available to a novice exporter?

There are several subsidies, for example the Dutch program for starters on foreign markets (Programma Starters op Buitenlandse Markten, PSB). This program has supported SMEs that had little or no experience in entering a new (or practically new) foreign market. The support varies from free recommendations on how to develop and implement an export strategy to a contribution to the costs of a number of activities resulting from that strategy.

The PSB applies to all countries in the world. The EVD, an agency of the Dutch Ministry of Economic Affairs, administers the scheme and cooperates with the regional chambers of commerce and a number of export promotion organizations. An appointment with the consultant for international trade at your regional chamber of commerce is advisable. Consult the website for subsidies and regulations:

- International trade consultant at your regional chamber of commerce ("KvK")
- Subsidies and regulations

Where can I find export training?

Several export training courses exist, such as export management, export operations, documents at export and international transport. Training is given at several locations and is organized by Fenedex and EVO. For an overview of export training, contact the following organizations:

- Fenedex
- EVO
- Export training (international)

What can the trade promotion network do for me?

The trade promotion network can help you to explore foreign markets by supplying relevant information about sectors, statistics, subsidies, practical information, and useful agencies. The EVD can help you to make contact with foreign trade partners. You will find most of the information on the EVD website. Other export promotion organizations that might be helpful are:

- Dutch centre for trade promotion
- Chambers of commerce
- Fenedex
- Getting in touch with foreign partners (EVD)

Where can I find market information about my product?

As a starter on the foreign market it is important to know if your product has any chance of success. When exploring your market be sure to find information on the spending pattern, the gross national product, competition, etc. The EVD provides this information for a large number of countries worldwide:

- World in visibility, country comparisons (EVD)
- Country pages (EVD)
- Market explorations (EVD)

How do I find consumers abroad for my product?
The trade promotion network might help you in your search for a foreign trade partner. Address information is available for a number of countries. If not, visit agencies or Internet sites that provide information about foreign distributors. The network also organizes regular matchmaking activities which can put you in contact with your future trade partner. Other agencies which are helpful for identifying foreign consumers:

- Chambers of Commerce
- Trade applications worldwide
- Office for trade information
- Kompass address files
- Guide for export information (KvK)
- Agenda (international)

How do I know if a foreign partner is reliable?
Entrepreneurs who want to know if their foreign partners are reliable can contact Dun & Bradstreet and Graydon. Dun & Bradstreet and Graydon have information reports that enable you to analyze the financial strength of a potential partner. The information reports give a picture of their creditworthiness and the company connections of your existing or future partner. Moreover, they provide insight into their payment behavior and other essential data:

- Dun & Bradstreet
- Graydon the Netherlands

How do I find reliable transportation?
As a starting exporter it is important to know which logistical service providers can look after your transportation. The Rotterdam transport handbook provides an overview of the different means of transport. Other organizations in the transport sector that can be helpful:

- Fenex
- EVO
- VRC
- Rotterdam transport handbook

Who can insure my export operations?
In the majority of export operations the exporter runs financial risks. The exporter can cover these financial risks with export credit insurance. Atradius Dutch State Business plc insures payment risks which Dutch companies run on internal and foreign consumers. Atradius Dutch State Business plc is the only credit insurance company in the Netherlands which insures political risks. More information about insurance can be obtained from Atradius Dutch State Business plc in Amsterdam (+31 20 553 22 04):

- Atradius Dutch State business plc

Where can I find model contracts?
Several model contracts exist, such as distribution and sales contracts. These model contracts are available at ICC Netherlands, part of ICC - The World Business Organization:

- ICC Netherlands

Further reading:
www.internationaalondernemen.nl

Tools

Attachments

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