

# MEDICAL DEVICES



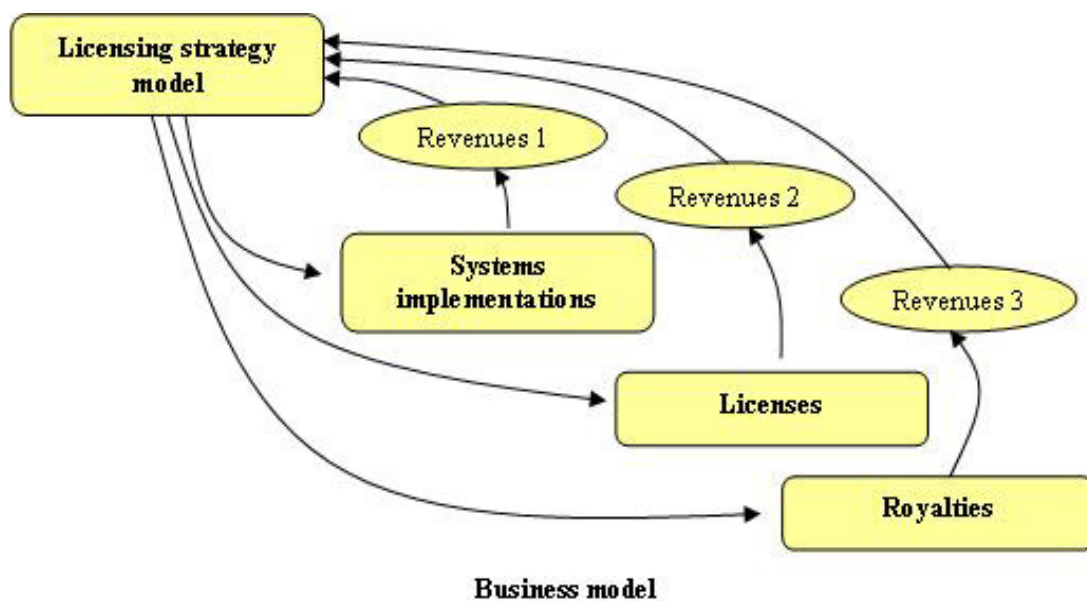
# TECHNOLOGY

## *Executive Summary*

Medical device technology is essential for millions of people worldwide allowing chronic organ dysfunctions to find remedy and support through research and development. Globally, 30 million people have implanted devices or make use of support devices to help their health condition. The market for technology used to develop medical devices evolves very rapidly and was estimated at 28 B\$ USD in 2009. Advances in materials, concepts and technology helps the market expand at an averaged rate of 6% per annum and is estimated to reach 40B\$ USD by 2015. **Newco** has developed design tools allowing medical devices to be developed in less time and reach clinical testing much sooner.

The market is ready and favorable to the implementation of the new technology that will improve the development cycle, improve efficiency and reduce costs. **Newco inc.** created by john smith, successful business man, has developed an innovative new technology which improves the performance of medical device design tools. The new breakthrough technology coined **Newtech®** is engineered as a platform system to be sold to all medical engineering firms involved with the design of miniature devices. Already, **Newtech®** has received preliminary acceptance by authorities in USA, Canada and Europe and is expecting to be awarded 3 patents by year end.

The management team has conceived a business model that ensures early revenues in the form of license fees, planned system deliveries, scheduled royalties and first call on production volume for protected markets. This four level business model will generate revenues growing at 200% per year for the first five years.



The team involved in the deployment of **Newtech®** was built by John Smith former CEO of Polestar Technology which he led from 1M\$ sales and token profits to a 100M\$ sales multinational delivering above average dividends in just five years. John Smith will lead the company and also take on the challenges of implementing the **Newtech®** systems at customer sites and supervising initial operations. The technology aspects will be handled by Albert Stein member of the brilliant engineers association and enjoying a solid reputation among his peers. The finance management aspects of the company will be handled by Joseph Money, a veteran finance manager and controller at Tour international. He led two businesses to their initial public offering (IPO) on the NASDAQ stock market. The association between Mr. Smith, CEO, Joseph Money, CFO and Albert Stein, CTO goes a long way combining 75 years of successes.

Based on approvals and test results, NEWCO has received 2.5 M\$ worth of contracts in the last month to supply **Newtech®** and targets 16 M\$ sales for 2013. Because the company owns the full rights and patents of both the process and the raw material, sales will grow exponentially as more and more manufacturers switch to **Newtech®**. As a result NEWCO foresees a highly profitable start of its operations with the following results;

		<b><u>FY 2012</u></b>	<b><u>FY 2013</u></b>	<b><u>FY 2014</u></b>
Sales	M \$	1,0	2,0	4,0
Gross margin	%	42%	42%	41%
EBITDA	k \$	180	360	730
ROI	%	15%	29%	59%

These forecasted results require that an investment of 2 M\$ will be available to implement necessary operations and to fuel the company's growth. Investors exit strategies will be implemented as planned and include three possible options including;

1. Buy back from treasury fund.
2. Second round expansion venture investment.
3. Initial public offering.

A cumulative rate of return of 30% is estimated and calculated after conservative cash reserves have been set aside for new equipments, process expansions and implementation of investor exit strategies.

## TABLE OF CONTENT

<u>Section</u>	<u>Title</u>	<u>Page</u>
	<b>Executive summary</b>	
<b>1.0</b>	<b>Business description</b>	6
1.1	Overview	6
1.2	Business goals	8
1.2.1	Mission	8
1.2.2	Management objectives	8
1.2.3	Business model	8
1.3	Resources	9
1.4	Product/solution	9
1.4.1	Innovation	10
1.4.2	Intellectual property	11
1.4.3	Valuation	11
1.5	Project costs	12
1.6	Ownership	13
<b>2.0</b>	<b>Management team</b>	14
2.1	Organization	14
2.2	Responsibilities	15
2.3	Core competencies	16
<b>3.0</b>	<b>Market</b>	17
3.1	North American market overview	17
3.2	Target market	18
3.3	Market challenges	20
3.4	Competitors	21
3.5	Comparative analysis	24
3.6	SWOT analysis	25
<b>4.0</b>	<b>Strategic plan</b>	26
4.1	Sales objectives	26
4.2	Value proposition	27
4.3	Market development strategies	28
4.2.1	Positioning	28
4.2.2	Pricing	29
4.2.3	Promotion	30
4.2.4	Product	30
4.3	Web strategy	31
4.4	Action plan	32

## **TABLE OF CONTENT (Continued)**

<b><u>Section</u></b>	<b><u>Title</u></b>	<b><u>Page</u></b>
<b>5.0</b>	<b>Operations plan</b>	32
5.1	Facilities & equipment	32
5.2	Key processes	32
5.3	Quality system	32
5.4	Supply chain	33
<b>6.0</b>	<b>Financial plan</b>	35
6.1	Projected results summary	35
6.2	Funding requirements	36
6.3	Sensitivity analysis	36
6.4	Investment strategy	37

## **Appendices**

<b>A</b>	Financial projections	38
<b>B</b>	Founders Resumes	39

## **LIST OF FIGURES**

<b><u>Figure</u></b>	<b><u>Title</u></b>	<b><u>Page</u></b>
1	Milestone schedule	6
2	Business model	8
3	Organization	13
4	Core competencies analysis	15
5	Comparative analysis	21
6	SWOT analysis	28
7	Sales objectives	29
8	Initial licensing territories	30
9	Licensees agreements projected	30
10	Web strategy	31
11	Supply chain modules	35

## 1.0 BUSINESS DESCRIPTION

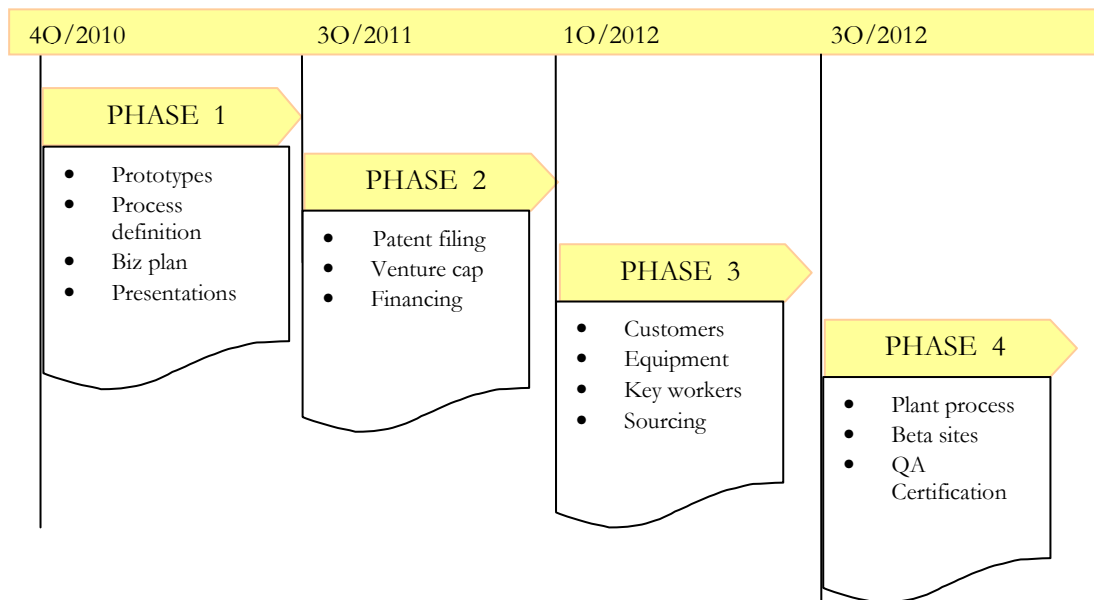
### 1.1 OVERVIEW

**Newco Inc.** immersed from a concept introduced by Albert Stein. After developing the idea further, Stein consulted experts at rapid prototyping whom demonstrated the technical feasibility of producing the new technology at competitive costs.

The innovative solution was presented at business matchmaking where Albert Stein met with John Smith and Joseph Money, two veteran and serial entrepreneurs. The new team decided to form NEWCO and to further develop the technical and operational aspects of the potential business and to seek funding at one of the VC networking events held on the US east coast.

The founding team rapidly established the superiority and uniqueness of the technology and decided to file for international patents on the concept, formulation and equipment. Numerous prototypes were made and demonstrated to customers in trade shows. The new business is now ready to implement its production facility and seek to attract 2M\$ for its startup. The plant location will likely be in the area of Albany New York which is an ideal location for all three founders; upcoming workforce and product logistics.

### Project milestone schedule



**Figure 1, Project Schedule**

The first step was obviously to produce a solid business plan and financial projections highlighting each and every step of the startup and its first 3 years of operations. To produce their business plan, the founders hired English-Pare, a private consulting firm specializing in high tech businesses plans.

Upon completion of the business plan, the founders will be presenting the technology in front of venture capitalist during a matchmaking events held in Boston, New York, Philadelphia and San Jose.

During the financial analysis and due diligence, the founders will focus on preparing the startup which involves numerous tasks as depicted by the milestone schedule above.

Potential customers will be visited with the goals to sign 5 beta platform installations and sell 3 licensing agreements for equipment and materials. Potential customers will be found mostly in the medical engineering sector.

Beta sites consist in highly supervised technology applications requiring constant monitoring by scientists and engineers in order to fine tune and finalize the product implementation. The five beta sites are sought within the north east so that proximity to the plant will allow the optimization of the technology.

Implementing the supply chain management is time intensive and requires a fair amount of preparation. Materials suppliers and equipment needed for processes must be identified, evaluated and certified. This period is critical to the success of the business.

Upon identifying all the equipment and processes involved throughout the operations, processes will be prepared and corresponding human resources will be sought.

Once the investment is secured, equipment will be ordered, install and tested to ensure proper throughput. At that stage, the QA procedures will be implemented and the plant will prepare for audit and certification. This phase is critical as every task and multiple milestones culminate at one point for initial startup.



## 1.2 BUSINESS GOALS

### 1.2.1 MISSION

The company's mission is to lead its industry technologically maintaining superior customer satisfaction delivered by innovative technology.

### 1.2.2 MANAGEMENT OBJECTIVES

The management team elaborated an efficient management plan applying control in key functions such as:

#### **Project management**

- Responsible project teams
- Planned reporting
- Milestone schedules implementation

#### **Finance**

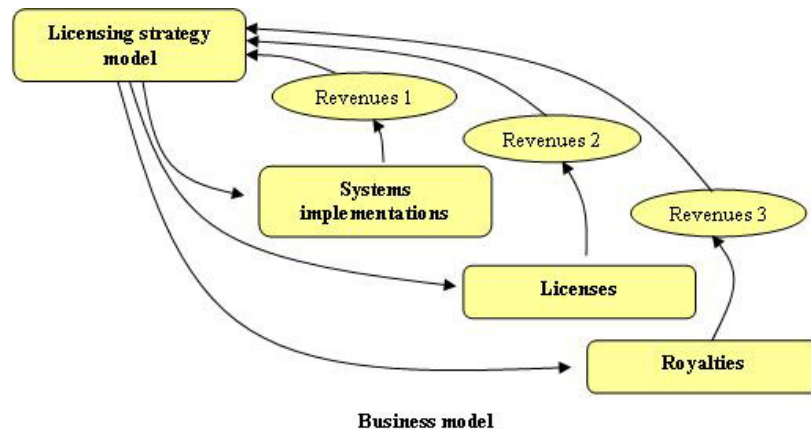
- Cost control
- Improved margins
- Lower inventories
- Faster collection
- Tighter rules with subcontractors

#### **Technology**

- Implement sustainable development innovations
- Target high efficiency goals
- Introduce an upstream application think tank

### 1.2.3 BUSINESS MODEL

The business model was optimized to deliver revenues by providing services, licensing the technology and collecting royalties on controlled materials. The business model is illustrated below.



**Figure 2, Business model**



### 1.3 RESOURCES

The human resources required to implement the new technology include numerous trades. Most of the labor has been identified and are ready to join the action. To allow for growth, a training plan will be developed that will ensure each critical trade is filled with multiple candidates.

These include:

- Process operators
- Field technicians
- Electricians
- Assemblers
- Project engineers

70 new jobs will be created over the 3 years of this business plan. The salaries & wages plan shows salaries and wages after 3 years will be totaling 20M\$ and nearly 8M\$ of source income taxes and employer contributions.

### 1.4 PRODUCT/SOLUTION

The technology developed by NEWCO to achieve the best efficiency is based on new concepts applied to design techniques, improved design tools and material properties. Contrary to traditional technologies that require huge number of iterations and trial and error design cycles, the NEWCO technology combines improvements in techniques, equipment and materials to deliver unequalled precision and performance.

Here you have to present the features of the new technology as well as advantages that differentiate your product or solution from competitors.

Key product advantages
<ul style="list-style-type: none"><li>• Patented</li><li>• Range of functionalities</li><li>• Superior elemental approach</li><li>• Demonstrated efficiency</li><li>• Straightforward to implement</li><li>• Measurable results</li></ul>

The patents held by the company will contribute to secure a share of the market and guarantee our licensees that their market will be protected. No part of the technology or its documentation will be reproduced without the prior consent of the company's management.

The principles behind this innovation have evolved into concepts after years of research and development before being physically integrated and tested with materials. New materials were discovered through trial and error test cycles and became the materials of choice for most miniaturized devices. The technology looks at every aspect of the design and its materials to enhance its performance.

Businesses involved in medical device engineering will be able to acquire a license, attend training and proceed with implementation of the system at their sites.

The secret of Newco's innovation is in the design model, its versatility and mostly in the approach taken to each element being treated as a functional part and awarded functions with inputs and outputs while assessing the performance of each elements and the sum of the elements.

### 1.4.1 INNOVATION

This new technology yields unprecedented design flexibility and precision compared with the latest design systems. NEWCO developed a high throughput advance platform system that can be used in most medical device projects to increase efficiency, performance, reduce cost and accelerate the development cycle. The outcome is safe for the patient and meets all FDA regulations and engineering design standards. The design platform is totally modular and can be implemented upon certification of the customer.



The platform system helps improve the development cycle by breaking down component analysis into modules while maintaining full interaction with the device. Tests can be simulated in a 3D modeling environment to predict performance outcome and formulations while remaining within set parameters and/or boundaries. The efficiency at given parameters can be monitored and compared for different mapping of outcome as a function of set parameters

and boundaries. Initial feedback from customers and industry specialist indicate a high level of satisfaction and acceptance by design engineers.

The company's innovation process follows a methodology developed by the Massachusetts Institute of Technology (MIT). This innovation process pictured above generates marketable goal oriented ideas that are in line with customer objectives and industry needs. Management has introduced this process at the early stages of Newtech ® development and it paid off because Newtech ® rapidly gained customer acceptance, certification and will be easily integrated to the marketplace.

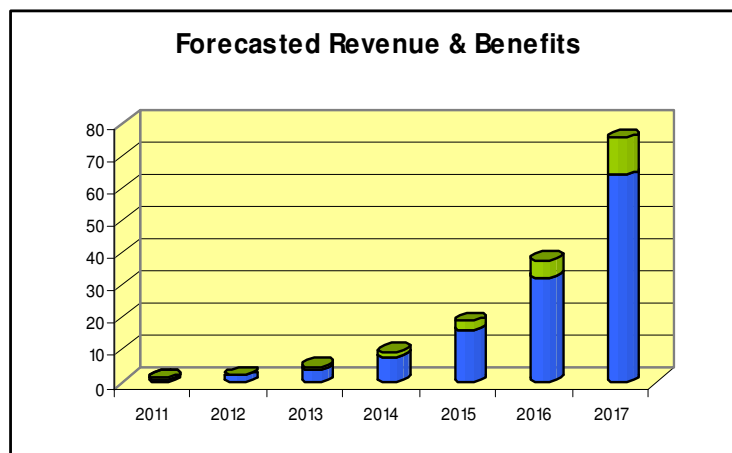
Efficiency wise, the innovation took care of a huge problem within the industrial market, that of accountability. With a reduction of materials cost by 5-9%, customer acceptance will be easily gained. Not to mention, the increase in efficiency.

### 1.4.2 INTELLECTUAL PROPERTY

NEWCO has filed two initial international patents and trademarks in Canada and the US. It is currently developing an IP strategy with a patent attorney. The company will complete the filing of its IP portfolio upon closing of the initial venture capital investment. All the IP was created by the founders and has been assigned to NEWCO pursuant to a conditional license. Further licenses will be awarded covering specific territories and include conditional rights and cost. Typical license cost will be 100K\$ per territory.

### 1.4.3 VALUATION

The valuation of the intellectual property was performed on the basis of the actual value of future benefits generated by the technology over the period of 7 years. The intellectual property value was estimated for the purpose of the negotiating the



participation of a venture capital firm. An estimated 22M\$ USD net profits will be generated by the technology over the selected period.

## 1.5 PROJECT COSTS

### **Use of funds**

Equipment	300 000.
Development equipment <sup>1</sup>	250 000.
Beta projects	250 000.
Market Development	1 200 000.
<b>Total cost</b>	<b><u>2 000 000. \$</u></b>

### **Sources of funds**

Founders <sup>2</sup>	200 000.
Venture capital <sup>3</sup>	1 200 000.
Licensees <sup>4</sup>	300 000.
Small Business Loan <sup>5</sup>	300 000.
<b>Total funds</b>	<b><u>2 000 000. \$</u></b>

### **Other cashflow (collected in initial 3 years)**

Research and development tax credits	1 400 000 \$
Labor tax credits	400 000 \$
Assets investment tax credits	30 000 \$
<b>Total future cashflow</b>	<b><u>1 830 000 \$</u></b>

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<sup>1</sup> The development equipment is eligible to RS&DE investment tax credits.

<sup>2</sup> The founders have invested 400K\$ to date in cash and another 600K\$ in-kind investment. The new capital injection will bring their total investment to 1,2M\$.

<sup>3</sup> The venture capitalist is expected to invest 1,2 M\$ for a participation of 20% in ordinary voting shares.

<sup>4</sup> Three licencees will be recruited at 100K\$ each prior to startup.

<sup>5</sup> The company will file a bank loan application on the small business loan program to support its initial equipment. The SBA is guaranteed by the government at 90%.

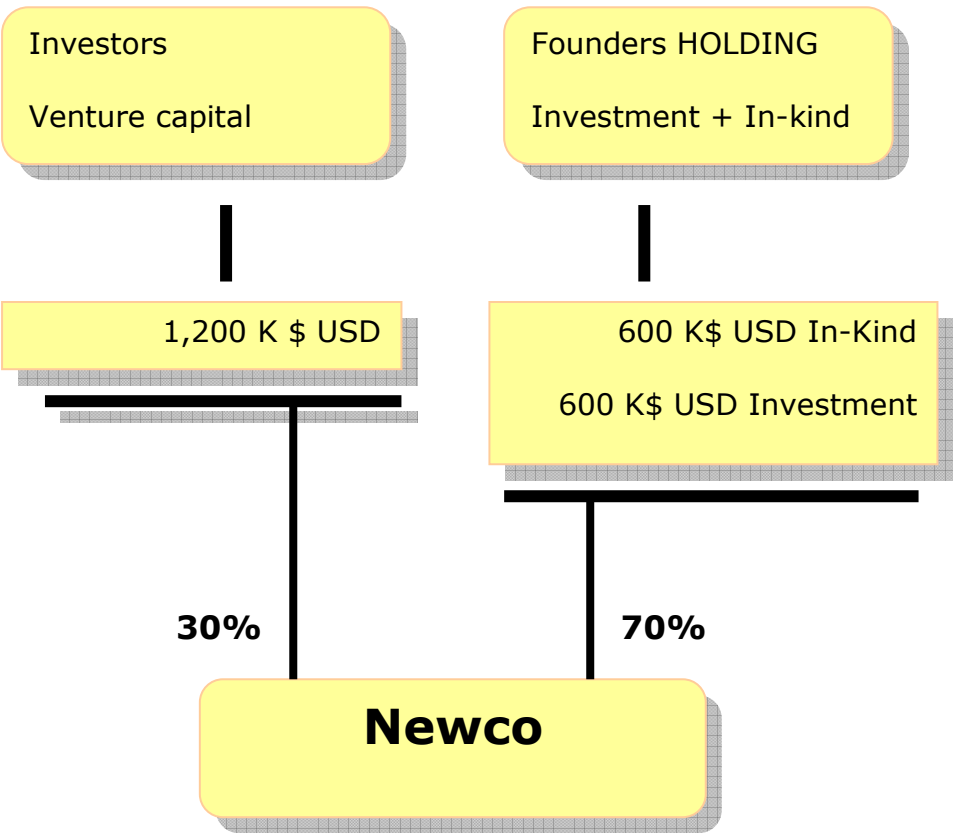
1.6 OWNERSHIP

The founders are the company shareholders listed below. All shareholders have agreed to a shareholders agreement which is held at the company lawyer’s office.

The shares issued are ordinary voting and participating.

<u>Shareholders</u>	<u>voting participation</u>
John Smith	33 %
Albert Stein	33 %
Joseph Money	33 %

The proposed investment scenario is as follows:



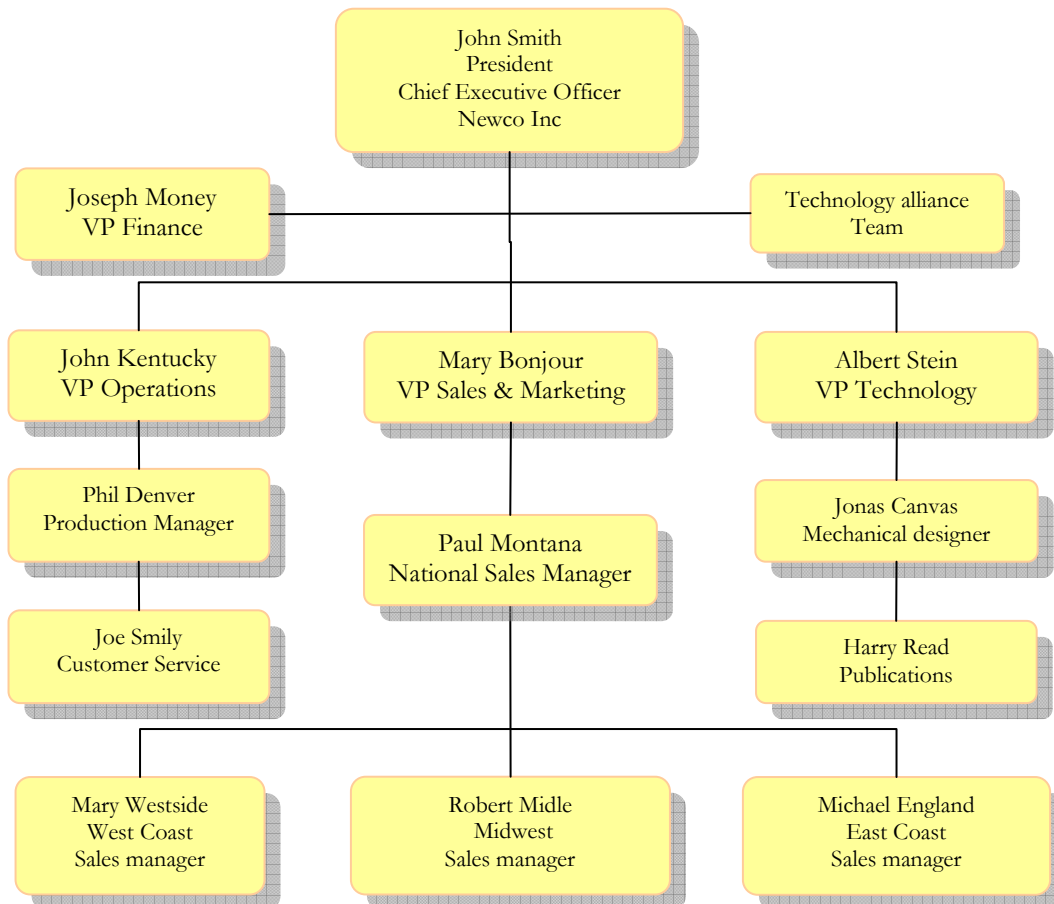
## 2.0 MANAGEMENT TEAM

### 2.1 ORGANIZATION

John Smith directs the company and provides the necessary leadership assisted by a team of engineers and scientist. Outside consultants provide expertise in finance, accounting, strategic management, IP and information technology.

The founders:        John Smith, CEO  
                              Albert Stein, VP Technology  
                              Joseph Money, VP Finance

The founders and the development team form a highly concentrated core competent team providing in-depth expertise needed to deliver the project. They are familiar with the numerous manufacturing sectors and technology market segments and have previously delivered successful products targeting high demand market opportunity.



**Figure 3, Organization chart**

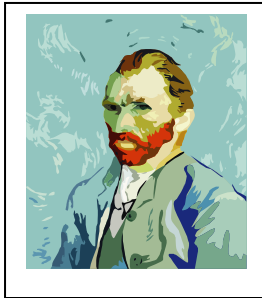


## 2.2 RESPONSIBILITIES



### **John Smith, President & CEO**

John Smith will manage and lead the company to its objectives with a team of veteran he recruited during the project planning phase. John is a graduate from Harvard University in business administration and possesses a strong 30 + years of market, design and production experience. He was involved in previous business successes and contributed to lead businesses to their initial public offering. John is a result oriented person and a strong leader. His ability to integrate all aspects of business makes him a highly performing executive and trustworthy individual.



### **Joseph Money, Vice-president Finance**

Newco's finance and administration responsibilities are handled by Joseph Money, a professional accountant with over 20 years experience as controller. Joseph will implement in-house cost controls and operations monitoring capabilities which will play a major role in ensuring that job costing improves furthermore with larger scale production. Joseph's expertise can lead NEWCO to advantageous product costs and increase net value.



### **Albert Stein, Vice-president Technology**

Albert is an engineer, a member of engineers association and enjoys 30 years of experience in leading technology roles. He developed the Newtech technology and patented it. He also owns several other patents in related applications and will lead the technical team in the company's development challenges as well as beta site performance. The acceptance of the new technology by users is crucial and on high priority. Beta sites have been targeted and will play a major role in demonstrating the new technology performance.



### **John Kentucky, Vice-president operations**

Newco's operations are handled by John Kentucky, a veteran of 30 years within the construction materials industry. John has joined NEWCO on day one, participated to the process development and the implementation of production operations capabilities. He is experienced in material requirement and production planning in multiple plant organizations which will be a strong asset in managing the future production operations at Newco. He is responsible for implementing the various aspects of the supply chain and most importantly the quality system audit and certification.



2.3 CORE COMPETENCIES

The founding team possesses the experience and key competencies to lead **NEWCO** to its goals successfully. In addition to having the vital spheres of business well covered, that is; market, finance and technology, the three founders were involved in similar technology startups previously. In all previous endeavors, they have succeeded in meeting their respective goals.

The figure below illustrates the unique competencies and roles of each founder and the common or core competencies of the team.

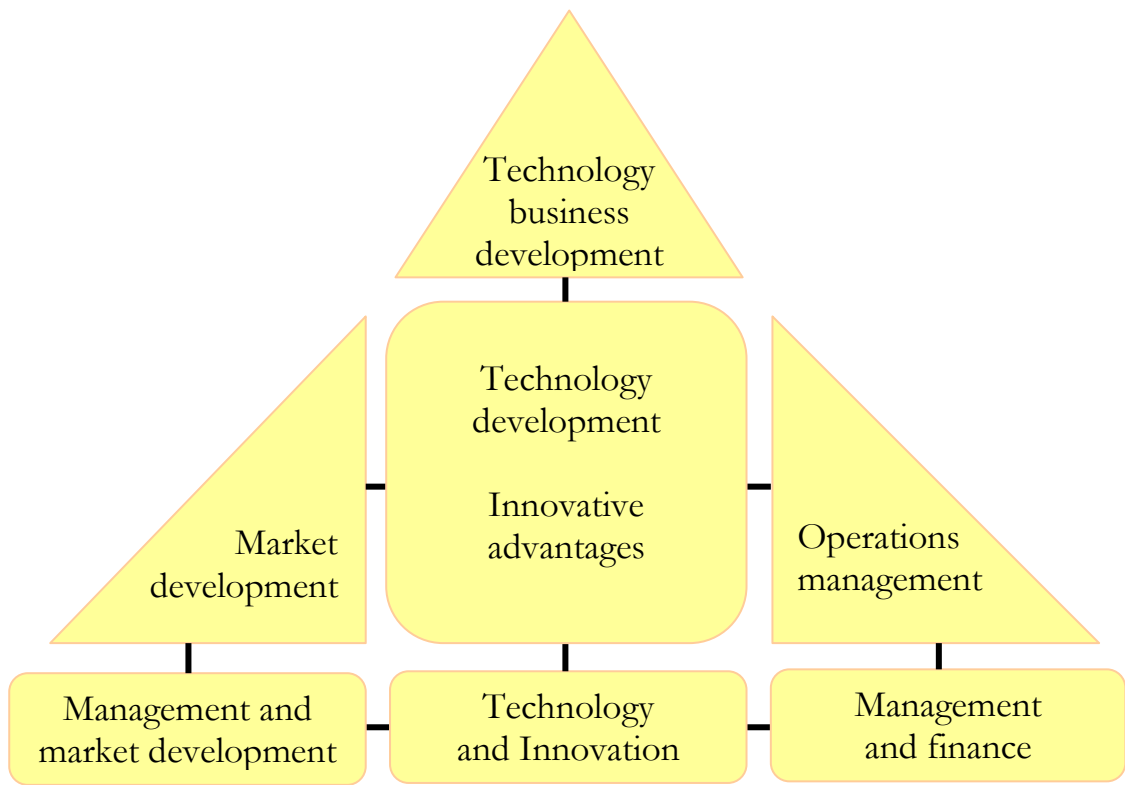


Figure 4, Core competencies analysis

### **3.0 MARKET**

#### **3.1 NORTH AMERICAN MARKET OVERVIEW**

With a population over 300 million, the USA is the third largest country in the world, behind China and India. The largest state is California, with a population of 37 million. At an estimated US\$94.9 billion in 2010, the US medical device market is the world's largest. Per capita expenditure, at US\$306, is the third highest in the world. Design tools procured to equip engineers and allow devices to be developed represented an estimated 28 B\$ USD in 2009.

Much of the market is in private hands; there is no single health system. Public healthcare systems, known as Medicaid, for those on low incomes, are operated by each State. Since 1960, the Medicare system has provided hospital care for the elderly; this has also provided prescription drug coverage since 2006.

President Obama succeeded in signing his healthcare reform bill into law on 23rd March 2010. The bill, formally called the Patient Protection and Affordable Care Act HR 3590, will eventually extend health insurance cover to an estimated 32 million Americans who don't have any form of health insurance.

The USA is home to many of the world's leading medical device manufacturers, such as Johnson & Johnson, General Electric, Baxter, Covidien and Medtronic. Seven out of the world's top ten device manufacturers are US companies.

Espicom Healthcare Intelligence reports that imports are forming an increasingly significant part of the market, and now account for around 31% of the total. This growth is partly explained by US manufacturers using cheap locations abroad, such as Ireland or Mexico, in order to re-export to the US market.

The market is highly regulated, and can be an expensive one in which to operate. It is, however, transparent and 'rules-based.'

Research and development capacity and infrastructure are essential to build a medical device industry. Europe is intensively involved in research and development and characterized as a knowledge industry while Asia combines both knowledge and manufacturing capabilities.

Internationally comparable data show resurgence in service-sector R&D in several industrialized countries. In 2000, service-sector industries, such as those involved in healthcare and medical development, accounted for 30 percent of all R&D performed by industry in the United States. Large increases in service-sector R&D are also apparent in many European Union (EU) countries, especially Italy, the United Kingdom, and France.

### **3.2 TARGET MARKET**

The pharmaceutical and biotech industries are two sectors of equal interest and importance in the global medical device industry while medical devices, in reality, include a wide range of sub-industries like: diagnostics, imaging, cardiovascular devices, surgical devices, and orthopedic devices.

Each of the above industry segments has large and important sub-segments, and convergence in this industry is a key trend. Some of the major imaging companies, GE, Philips, and Siemens, have acquired key diagnostic companies, e.g. Siemens acquisition of Chicago's Dade-Behring substantially increased its investment in the imaging field, while cutting back or divesting of its conventional consumer-related business segments. GE recently announced, for example, that it was exiting its well-known consumer appliance business.

Likewise, medical device technologies and products are increasingly converging with drug-related technologies. The area of stem cells and nanotechnology is having significant impact on tissue and bone regeneration, which may change the whole character of the "nuts and bolts" (pediments, screws, and even joint implants) part of the medical device industry. The medical imaging companies are not the only ones analyzing closely these convergence trends, Johnson & Johnson, Abbott Labs, Hoffman La Roche, and Baxter International represent four drug companies with strong business segments in medical devices.

The medical device market is about 50 percent of the world pharmaceutical market in terms of relative size, but is also growing faster than its drug counterpart. It is dominated by U.S. companies (16 of the 25 companies are US based) with 72 percent of the revenue. Estimates show that the medical device market will reach sales of \$350 billion in 2011.

According to experts<sup>6</sup>, although the top 25 companies represent the lion's share of sales (almost 60 percent), there are an estimated 20,000 medical devices companies around the world. Only one company showed a decline (however slight) in growth, and two companies had flat sales. The remaining 22 companies all posted positive growth with 15 companies showing double-digit growth. Others with substantial sales and growth; are companies like Toshiba Medical Systems, Hitachi Medical Systems, and Gambro.

The medical device industry faces a number of challenges in addition to the technology convergence factor mentioned earlier. In general, this industry is at lower risk than its pharmaceutical/biotech drug counterpart for a couple of reasons:

- Shorter product development cycle (about 33 to 50 percent of drug development time).
- Less regulatory (Food and Drug Administration) approval risk.

Additional factors favoring the growth of this industry include the greater physician need for better and more precise diagnostics and imaging to guide them on patient disease status and proper disease management, whether surgical or pharmaceutical (or both).

The industry has responded with better products and technology. The growth of the biomarker industry segment of diagnostics and imaging has been a testament to the FDA's interest in this technology for enhanced disease status prediction.

The convergence of the medical device and drug industry has been positive in terms of development of improved products: drug-eluting stents and glucose monitoring systems incorporated into insulin pumps, etc.

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<sup>6</sup> According to Pharma and the Medical Devices Association

### 3.3 MARKET CHALLENGES

The factors that may influence the market and the projected results of NEWCO are related to efficiency and the discovery or development of competitive technologies. New competing technologies will emerge in a far future estimated to 24 to 48 months leaving NEWCO a comfortable market lead.

New technologies are likely to explore new materials and processes, modifications of the NEWCO system as explored by competitors in their 5 year plans.

Other factors affecting the industry globally are:

1. The much needed support of governments to encourage industry research could lead to new processing technologies and enhance competitiveness.
2. Government incentives and programs to promote valuable resources for projects that propose immediate solutions.
3. The facilitation of the intellectual property filing and protection and implementation of controls in developing countries like China.
4. The availability of venture capital and private equity from early stage to beta and implementation phases.
5. The implementation of new economic incentives to accelerate industry and consumers confidence.
6. The implementation of new tax incentives to stimulate investment in small & medium size businesses.

Other factors rest with government policies, budgets and initiatives to restore the economy and our ability to secure some of the incentives.

#### **Medical Device Regulations**

The Safe Medical Devices Act of 1990 established requirements for manufacturers to ensure that products entering the market are safe and effective, particularly in the areas of premarket approval and post market

surveillance. For example, premarket notification applications, commonly referred to as 510(k)s, for certain types of medical equipment must include a summary of safety and effectiveness data or state that such information is available upon request. The law also requires that for high risk devices introduced after 1990, manufacturers must conduct postmarket surveillance.

The Food and Drug Administration (FDA) also may require postmarket surveillance for any other device if the agency believes this action is necessary to protect public health. Other provisions of the law call for regulating hybrid products, which are a combination of device, drug, or biologic; track distribution and end use of certain devices; and require hospitals and other end-users to report deaths associated with faulty medical devices. The law also calls for stricter FDA enforcement. Any manufacturers that are not in full compliance with specified good manufacturer practices may face civil penalties, recalls, or cessation of shipments.

### **3.4 COMPETITORS**

The key leading competitors in this market are Johnson & Johnson, General Electric, Baxter, Covidien and Medtronic. However, the company's immediate competition is composed of smaller private businesses that we compete with daily but under the influence of leaders whom acquired small but key leading competitors.

#### **Baxter**

Baxter International Inc. (Baxter) is a global, diversified healthcare company. The Company, through its subsidiaries, develops, manufactures and markets products that save and sustain the lives of people with hemophilia, immune disorders, infectious diseases, kidney disease, trauma, and other chronic and acute medical conditions. It operates in three segments: The BioScience, Medication Delivery and Renal segments. Baxter is engaged in the medical devices, pharmaceuticals and biotechnology to create products that advance patient care worldwide. These products are used by hospitals, kidney dialysis centers, nursing homes, rehabilitation centers, doctors' offices, clinical and medical research laboratories, and by patients at home under physician supervision. Baxter manufactures products in 27 countries and sells them in more than 100 countries.



### **Covidien**

Covidien Public Limited Company, formerly Covidien Ltd. is engaged in the development, manufacture and sale of healthcare products for use in clinical and home settings. The Company operates its businesses through three segments: Medical Devices, Pharmaceuticals and Medical Supplies. Medical Devices includes the development, manufacture and sale of endomechanical instruments, soft tissue repair products, energy devices, oximetry and monitoring products, airway and ventilation products, products used in vascular therapies and other medical products. Pharmaceuticals include the development, manufacture and distribution of specialty pharmaceuticals, active pharmaceutical ingredients, contrast products and radiopharmaceuticals. In July 2010, its Medical Devices segment acquired ev3 Inc. In July 2010, its Medical Devices segment acquired Somanetics Corporation. In November 2009, its Medical Devices segment acquired Aspect Medical Systems, Inc.

### **Medtronic**

Medtronic, Inc. (Medtronic) is a medical technology company. The Company is engaged in research, design, manufacture and sale of products to alleviate pain, restore health and extend life. It manufactures and sells device-based medical therapies. It operates in two segments: Cardiac and Vascular Group which includes, Cardiac Rhythm Disease Management, CardioVascular, Physio-Control, and Restorative Therapies Group which include Spinal, Neuromodulation, Diabetes, Surgical Technologies. Its primary customers include hospitals, clinics, third party healthcare providers, distributors and other institutions, including governmental healthcare programs and group purchasing organizations. On February 25, 2011, the Company acquired Jolife, a privately-held company. On January 13, 2011, the Company acquired Ardian, Inc. In August 2011, the Company acquired PEAK Surgical, Inc. and Salient Surgical Technologies, Inc.

### **Siemens**

Siemens AG is engaged in electronics and electrical engineering. The Company is an integrated technology company with activities in the fields of industry, energy and healthcare. Siemens operates in six segments: Industry, Energy, Healthcare, Equity Investments, Siemens IT Solutions and Services and Siemens Financial Services (SFS). Industry, Energy and Healthcare are reported along with 14 divisions, which comprise the divisions, Industry Automation, Drive Technologies, Building Technologies, OSRAM, Industry Solutions and Mobility, belonging to the Industry Sector, the Divisions, Fossil Power Generation, Renewable Energy, Oil and Gas, Power Transmission and Power Distribution, belonging to the Energy Sector and the Divisions, Imaging and Information Technology (IT), Workflow and Solutions and Diagnostics, belonging to the Healthcare Sector. In November 2009, Siemens acquired a controlling interest of 100 % in Solel Solar Systems Ltd., Beit Shemesh/Israel (Solel).



**General Electric**

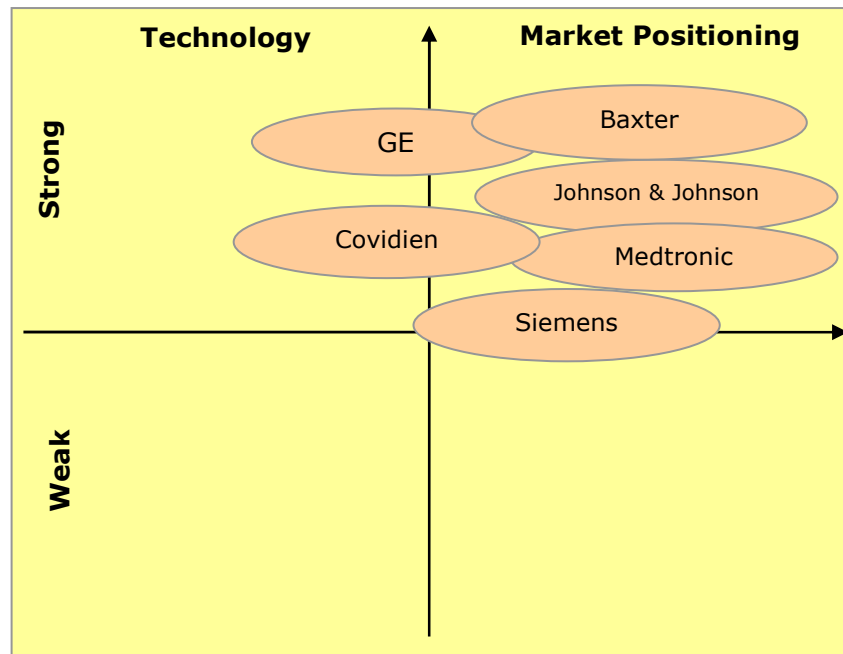
General Electric Company (GE) is a diversified technology, media and financial services company. The Company's products and services include aircraft engines, power generation, water processing, security technology, medical imaging, business and consumer financing, media content and industrial products. The Company serves customers in more than 100 countries. The Company operates through five segments: Energy Infrastructure, Technology Infrastructure, NBC Universal (NBCU), Capital Finance and Consumer & Industrial. In September 2009, the Company sold its 81% interest in Homeland Protection business to Safran SA. In September 2009, the Company acquired ScanWind. In September 2009, Moog Inc. completed the acquisition of the Company's GE Aviation Systems' flight control actuation business. In November 2009, GE Aviation acquired Naverus, Inc. In October 2010, the Company acquired Opal Software.

**Johnson & Johnson**

Johnson & Johnson is a holding company. The Company and its subsidiaries are engaged in the research and development, manufacture and sale of a range of products in the health care field. It has more than 250 operating companies conducting business worldwide. The Company's operating companies are organized into three business segments: Consumer, Pharmaceutical and Medical Devices and Diagnostics. The Company and its subsidiaries operate 139 manufacturing facilities occupying approximately 21.8 million square feet of floor space. Within the United States, 7 facilities are used by the Consumer segment, 11 by the Pharmaceutical segment and 36 by the Medical Devices and Diagnostics segment.

### 3.5 COMPARATIVE ANALYSIS

With the growing interest for new technologies by consumers, doctors, entrepreneurs and service providers, performance, development and research will continue to play a greater role and force businesses to compete among each other on costs, efficiency, features and more.



**Figure 5, Comparative analysis**

The comparative analysis was performed using 10 comparative factors related to quality, perception, performance, innovation, cost, ease of installation, durability, service and delivery. The resulting score gave a positioning rating that is shown by the above graphic.

### 3.6 SWOT ANALYSIS

The SWOT analysis tells us that NEWCO masters the technology and has a very good understanding and strategy to capture the opportunity. It also shows a weakness in finance and capital availability to fuel its strategies and action plans. As a result it must attract new investors. Since the company identified a very unique opportunity derived from a patented technology, it should look for investors in the technology field. Moreover, it should develop a funding strategy where it will attract its customers and chip in some capital.

STRENGTH	WEAKNESSES
<ul style="list-style-type: none"> <li>• Patent protection</li> <li>• Patent strategy</li> <li>• Technological competencies</li> <li>• Core competencies</li> <li>• Product advantages</li> <li>• Proven innovation process</li> </ul>	<ul style="list-style-type: none"> <li>• Start-up</li> <li>• Limited capital availability</li> <li>• Economic climate</li> <li>• Raw material access</li> </ul>
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> <li>• Upcoming high demand</li> <li>• Market trends</li> <li>• Potential licensing</li> </ul>	<ul style="list-style-type: none"> <li>• Financial market</li> <li>• Government regulation</li> </ul>

**Figure 6, SWOT analysis**

4.0 STRATEGIC PLAN

4.1 SALES OBJECTIVES

The company’s objectives are to secure constantly growing revenue from its multiple license strategy while contributing to the protection of the environment.

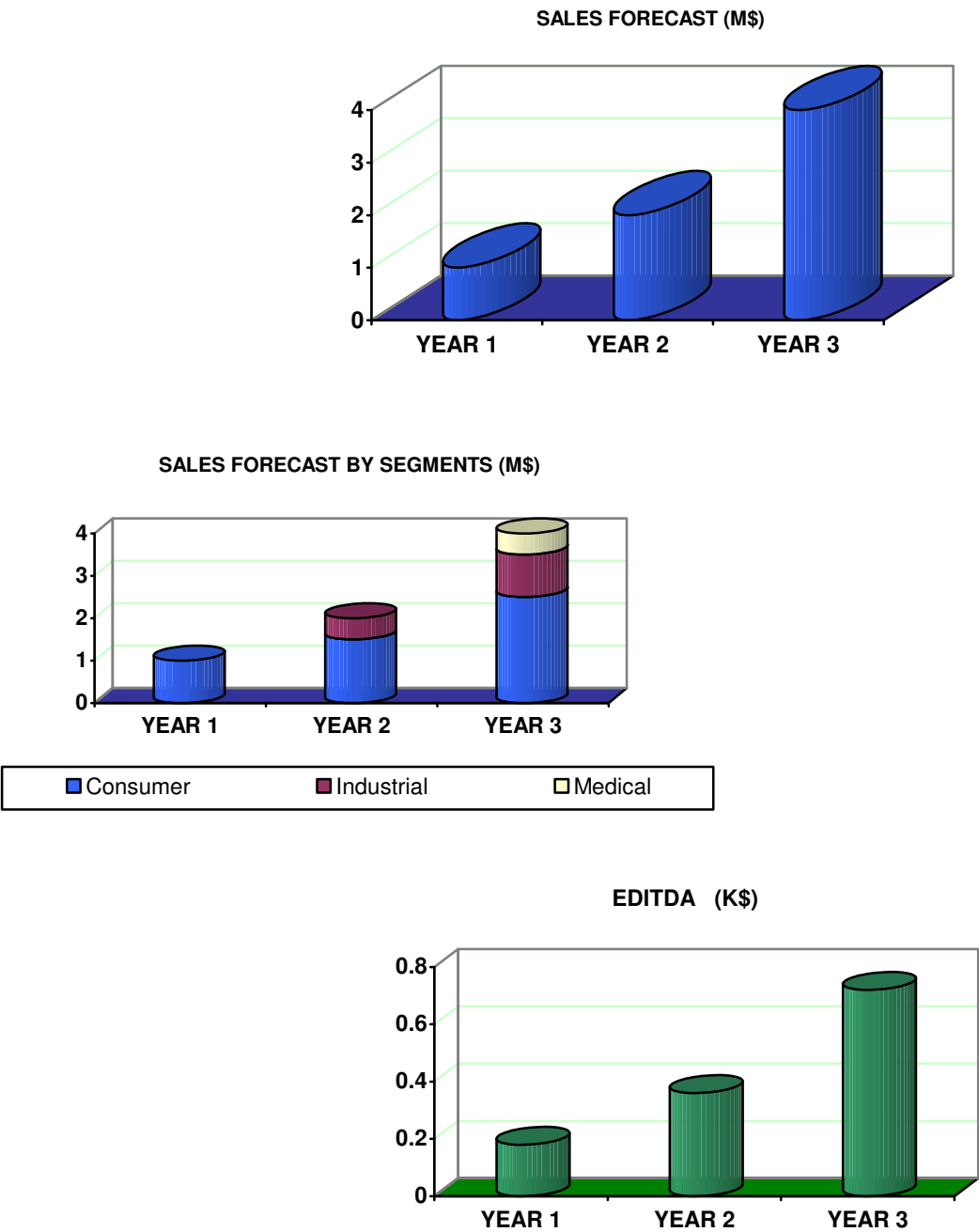


Figure 7, Financial objectives

## 4.2 VALUE PROPOSITION

A strong value proposition will be developed that demonstrate key elements of performance within each targeted sectors and customers. The value proposition will be specific to the target customer and take its business process into consideration.

The key part of the value proposition strategy will be;

1. Demonstrate using customer parameters.
2. Propose achievable goals.
3. Deliver a one-year payback system.

In each proposition, we will;

1. Evaluate and analyze the customer's needs and report.
2. Identify clearly feasible achievements.
3. Propose a plan of action.

Finally, having delivered a high level of comfort, we will sell a shared analysis and proposal cost approach. The methodology will be straight forward so each representative follows the same procedure and reaches the highest level of success. Such selling process will follow the steps below;

1. Identify target customers on the basis of business results.
2. Meet customer and obtain information in exchange to proposed solutions report.
3. Present report while underlining the customers situation and known expectations.
4. Expose the potential benefits of implementing the solution with respect to cost of solution distributed over useful life. Show payback calculation details.
5. Demonstrate the process by which the solution will be implemented.
6. Present a realistic milestone schedule.
7. Obtain customer commitment.

### 4.3 MARKET DEVELOPMENT STRATEGIES

A licensing strategy will be used to market the new technology, allowing licensees to acquire the rights to execute contracts within the consumer, industrial and medical segments, commercial and public markets progressively. Management will create alliances with large OEM and large contractors, technology project financing firms, VCs and engineering firms to best position its technology solution.

#### 4.2.1 POSITIONING

The market development plan is based on licensing the new technology at a cost allowing the licensee to recuperate his initial license investment within one single year. The licensees will be able to sell their services at a competitive rate to ensure the profitability of their operations.



**Figure 8, Initial licensing territories**

Below is the number of licenses that we plan to hire in the first years of the project. The initial licensees will be targeted on the east coast to minimize representation, delivery, and installation and training costs.

<b>Number of licenses</b>	<b><u>Yr 1</u></b>	<b><u>Yr 2</u></b>	<b><u>Yr 3</u></b>	<b><u>Yr 4</u></b>	<b><u>Yr 5</u></b>
United states	3	3	5	5	5
Canada			2	2	2
Europe				1	2

**Figure 9, Licensees agreements projected**

We plan to instate solid representation in key territories. Initial markets targeted by NEWCO are those of East coast New England, Mid Atlantic, the Mid West, Canada and Europe. As licensees get settled in the numerous urban areas of these key territories, the company will expand to other lucrative areas.

A licensing strategy was chosen by management because of its revenue potential and rapid growth potential. It will also ease control and support. **NEWCO** will position its market development force on the Canada-US east coast, which constitute 55% of the North American population. This strategy ensures lower technical and training costs.

Initial licenses will be awarded in the New-England and Mid Atlantic areas to firms already involved in proposing technology based solutions.

#### 4.2.2 PRICING

The pricing strategy has been established as follows:

Licenses will be sold and transferred for an amount of 250 000\$.

- An initial amount of 100 000\$ constitute the license fee paid at signature.
- A second amount of 150 000\$ constitute the software, data items and training cost paid upon delivery.

This strategy allows margins of 44% to be reached from year one.

Resources needed to develop customer technology applications are composed of the licensee staff and Newco's training staff. Delivered software and data items can be reproduced on site and only represent 1,5% of the applications cost.



### **4.2.3 PROMOTION**

The company's promotional plan consists in focusing publicity, promotion, brochures and publications toward its local market in order to raise the impact and efficiency.

Among the actions that are planned are:

1. A major update of the web site.
2. The placement of ads in technology magazines.
3. The placement of adds in the Innovation today magazines.
4. The preparation of an innovation brochure showing tangible outcome.
5. Brochure mailings
6. Participation to trade shows within the local community in order to leverage market development effort rather than industry association.

The costs of the promotional campaign are outlined in section 4.4.

### **4.2.4 PRODUCT**

The product strategy consists in continuing to improve the new technology in order to optimize its efficiency, performance and maintain our lead.

The performance savings strategy is supported by proven cases. The industry requirement calling for higher level efficiencies require that we deploy all the potential of the Newco product which is superior to all competitive products.

The company will produce a new technology efficiency publication which it will instate as a reference with customers, representatives and service technicians. When people think of efficiency they will think of Newco.

In addition, the product strategy calls for renewed research and development initiatives in order to maintain our lead and to include new attractive features that help serve customers better by adding ease of application.

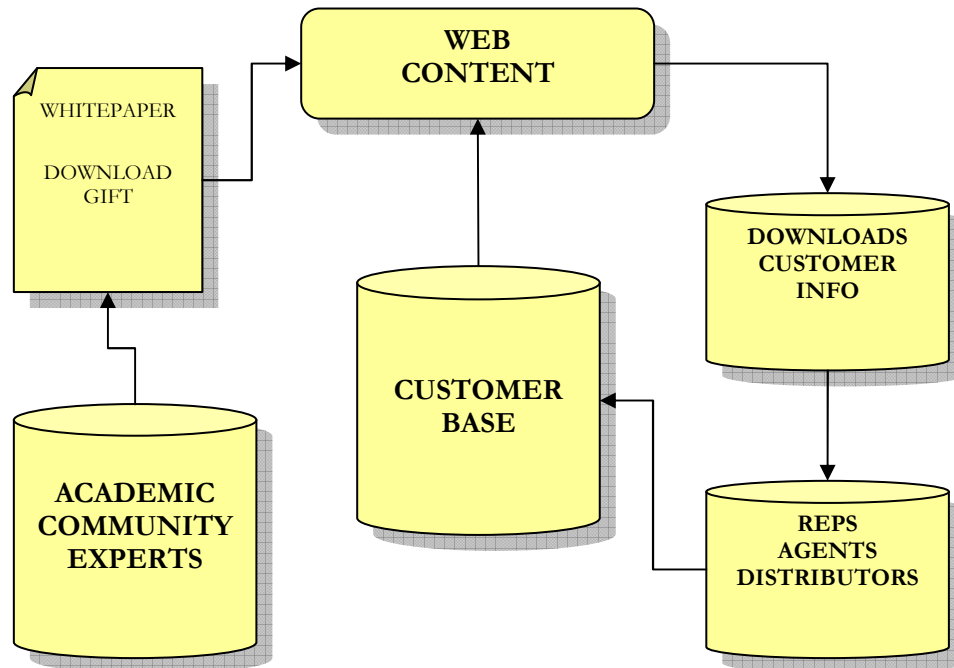
Newco's investment in R&D amounts to approximately 2% of its revenue and is eligible to investment tax credits amounting to approximately 60% of eligible expenses. As part of its strategy, NEWCO will develop an alliance with a leading university.

### 4.3 WEB STRATEGY

A web strategy will be implemented to achieve multiple simultaneous goals:

1. Display a corporate and business image.
2. Deliver product information.
3. Attract new customers using a downloadable gift strategy.

The later will consist in a whitepaper gift highlighting the innovations of the technology and made available on the company website as well as associations, universities and trade event web sites. The whitepaper will be prepared by a recognized scholar who will increase its interest. The goal of the white paper will be to demonstrate the technological edge of Newco's technology.



**Figure 10, Web strategy**

The university scholar was identified and the whitepaper preparation is being prepared in conjunction with Newco's technical staff.

In addition, a series of monthly newsletters will be prepared and sent to the customers registered into the database. Newsletters are an excellent and proactive way of informing customers as well as potential customers.

4.4 ACTION PLAN

ACTIVITIES	COST		
	YEAR 1	YEAR 2	YEAR 3
Salaries & Commissions	20000	40000	80000
<ul style="list-style-type: none"> <li>Recruit sales agents in North East USA</li> <li>Set-up agreement with technology firms in North East</li> <li>Install free hot line for technical support</li> </ul>			
Publicity & promotion			
<ul style="list-style-type: none"> <li>Update corporate web site</li> <li>Place US technology add</li> <li>Place Canadian technology add</li> <li>Issue press releases in major new paper</li> <li>Produce sample data solutions as giveaways</li> </ul>	15 000		
	15 000	30 000	60 000
		20 000	20 000
Brochures & publications			
<ul style="list-style-type: none"> <li>Prepare Innovation brochure</li> <li>Brochure mailings</li> <li>Prepare efficiency application doc</li> </ul>	20 000		
	5 000	10 000	15 000
Representation			
<ul style="list-style-type: none"> <li>Develop customer visit, project bids &amp; follow up plan</li> <li>Visit potential customers</li> <li>Hire field support technicians</li> <li>Visit potential licensees</li> </ul>	10 000	20 000	30 000
	10 000	20 000	30 000
	Salaries		
Trade shows	40 000	60 000	80 000
<ul style="list-style-type: none"> <li>Participate to local trade shows</li> <li>Team up with agents and licensees for other trade shows</li> </ul>			
Plan total	135 000	200 000	315 000

## **5.0 OPERATIONS PLAN**

### **5.1 FACILITIES & EQUIPMENT**

The NEWCO management will establish its Head Quarters, production facilities, marketing & sales operations within the State of New York. By the 3rd quarter of 2012, the company will have selected its location within the city of Albany.

The company will require an initial facility of 10,000 sq. ft which will be expanded to over 20,000 sq. ft. by year 3 of the project. The facility will be equipped with the latest technology reproduction equipment and management information systems.

Initial equipment in the amount of \$ 550 thousand will be purchased or leased over the period of four years. Such equipment will be required to satisfy reproduction and development.

A material requirement planning system will be implemented in the first quarter 2011.

### **5.2 KEY PROCESSES**

The new technology can be adapted to comply with all the company's processes and configurations of processes. NEWCO can adapt to most product manufacturing processes and supply its new technology and data at advantageous conditions.

Newco's own development, test, simulation, reproduction and implementation have been submitted to the most stringent requirements.

### **5.3 QUALITY SYSTEM**

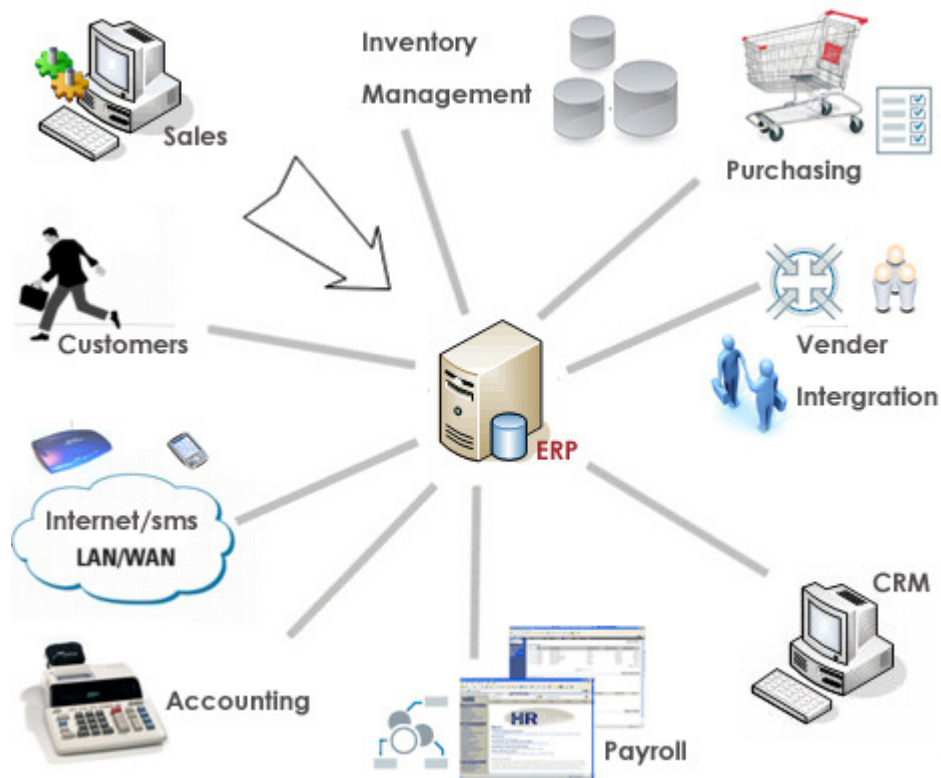
NEWCO will be deploying an industry standard quality management methodology such as Six Sigma or ISO 9000, or implementing a quality best practice to reduce costs, shorten cycle times and improve overall product and process quality. These standards will bring the organizational focus on customer satisfaction and continuous improvement and take a process-centric approach towards quality management and assurance. Most of NEWCO competitors comply with ISO9000 or operate other quality systems. NEWCO could gain credibility fairly rapidly by implementing its quality system from the start.

The goals are;

- |                             |           |
|-----------------------------|-----------|
| 1. Quality policy plan      | 1Q / Yr 1 |
| 2. Procedure implementation | 2Q / Yr 2 |
| 3. Audit and certification  | 3Q / Yr 3 |

## 5.4 SUPPLY CHAIN

NEWCO will implement the concept of supply chain management (SCM) to ensure our way of doing and procedures respect the best economic and quality standards for us and our customers. This implies that the company finds the quality resources it needs to make its solutions deliverable to its customers.



**Figure 11, Supply chain modules**

The following are the four basic components of our SCM policy.

1. **Plan**—The company will implement a strategy for managing all the resources that go toward meeting customer demand. A big piece of SCM planning will be to develop a set of metrics that monitor the supply chain so that it is efficient, costs less and delivers high quality and value to customers.

2. **Source**—Next, the company will choose suppliers to deliver its needed materials according to set specifications. Therefore, the operations manager will develop a set of pricing, delivery and payment processes with suppliers and create metrics for monitoring and improving the relationships. And then, the operations manager will put together processes for managing the materials inventory, including receiving and verifying shipments, transferring them to the manufacturing floor and authorizing supplier payments.

3. **Make**—The operations manager will schedule the activities necessary for production, testing, packaging and preparation for delivery. This will be the most metric-intensive portion of the supply chain—one where the company is able to measure quality, production output and productivity.

4. **Deliver**—The operations manager will coordinate the receipt of orders from customers, develop a network of warehouses, pick carriers to get products to customers and set up an invoicing system to receive payments.

## 6.0 FINANCIAL PLAN

### 6.1 PROJECTED RESULTS SUMMARY

<b>Projected Profit &amp; loss</b>	<b>Yr 1</b>	<b>Yr 2</b>	<b>Yr 3</b>
<b>Revenue</b>	1 000 000	2 000 000	4 000 000
<b>Total revenue</b>	1 000 000\$	2 000 000\$	4 000 000
<b>Operations expenses</b>			
Direct labor			
Operations salaries	45,000	90,000	300,000
Fringe benefits	10 000	10 000	10 000
Sub contracts	1 000	1 000	1 000
Equipment rental	50 000	50 000	50 000
Delivery expenses	10 000	50 000	170 000
Packaging & handling	10 000	50 000	170 000
Operations overhead expenses	10 000	50 000	170 000
<b>Total operations expenses</b>	136 000	301 000	871 000
<b>Gross margin</b>	864 000	1 699 000	3 129 000

<b><u>Administration expenses</u></b>	<b>Yr 1</b>	<b>Yr 2</b>	<b>Yr 3</b>
Salaries	55 000	105,000	250,000
Fringe benefits	15 000		
Rent	60 000	120,000	120,000
Energy	6,000	6,000	6,000
Communication	4,200	4,200	6,000
Insurance	3,000	3,000	4,500
Maintenance	4,800	4,800	12,000
Office expenses	2,400	4,400	8,000
Office supplies	1,800	3,800	5,200
Mail & deliveries	20,000	100,000	204,000
Leasing expenses	60,000	60,000	120,000
Accounting fees	5,000	10,000	20,000
Professional expenses	15,000	15,000	25,000
Amortization	10,000	10,000	10,000
Development expenses	250,000	160,000	160,000
<b>Total administration expenses</b>	497,200	606,200	950,700
<b><u>Sales &amp; marketing expenses</u></b>			
Salaries & Commissions	120,000	300,000	500,000
Publicity & promotion	120,000	200,000	200,000
Travel expenses	120,000	200,000	200,000
Representation	100,000	180,000	200,000
Trade shows	150,000	225,000	225,000
<b>Total sales &amp; marketing expenses</b>	610,000	1,205,000	1,325,000
<b>Total expenses</b>	1 107 000	1 811 200	2 275 700
<b>EBITDA</b>	0	0	853 300
Income tax			127 500
Depreciation	35 000	33 000	31 000
<b>Net profit /(loss)</b>	( 278 000)	(144 800)	694 800



Projected Balance Sheet	Day 1	Yr 1	Yr 2	Yr 3
<b>Current assets</b>				
Cash	190 000	202 000	(343 000)	332 000
Accounts Receivable		250 000	450 000	470 000
Inventory	20 000	20 000	20 000	20 000
Other receivables				
<b>Current Assets</b>	<b>210 000</b>	<b>472 000</b>	<b>127 000</b>	<b>822 000</b>
Equipment assets	400,000	950 000	950 000	950 000
Building assets	0	0	0	0
Depreciation		ND	ND	ND
<b>Long term assets</b>	<b>400,000</b>	<b>950 000</b>	<b>950 000</b>	<b>950 000</b>
<b>TOTAL ASSETS</b>	<b>610 000</b>	<b>1 422 000</b>	<b>1 077 800</b>	<b>1 772 000</b>
	<b>Day 1</b>	<b>Yr 1</b>	<b>Yr 2</b>	<b>Yr 3</b>
<b>Liabilities</b>				
Accounts Payable	10,000	0	0	0
Accrued Liabilities		0	0	0
<b>Current Liabilities</b>	<b>10,000</b>	<b>0</b>	<b>0</b>	<b>0</b>
Financing	0	300 000	300 000	300 000
Mortgage	0	0	0	0
Government Grants/Loans	0	0	0	0
<b>Long term liabilities</b>	<b>0</b>	<b>300 000</b>	<b>300 000</b>	<b>300 000</b>
Equity external investors		1,200,000	1,000,000	1,000,000
Equity founders	600,000	200,000	200 000	200 000
Net (Income) / Loss cumulated		(278 000)	(422 800)	272 000
<b>Shareholders equity</b>	<b>600 000</b>	<b>1 122 000</b>	<b>777 800</b>	<b>1 472 000</b>
<b>Total liabilities &amp; equity</b>	<b>610 000</b>	<b>1 422 000</b>	<b>1 077 800</b>	<b>1 772 000</b>

## 6.2 FUNDING REQUIREMENTS

Newco's management requires 2 M\$ to put the project forward and lead the business to its objectives. The team is willing and able to inject 10% additional funds (200K\$) which will be recorded as advances but prorogated for the entire startup phase.

The facilities preparation will be partly absorbed by the building owner and partly by equipment suppliers whom will guaranty installation and hookup.

The investment will be used to acquire assets described in section 1.5 (shown below) and includes equipment, patent filing and market development expenses needed to attract the customer base.

### **Use of funds**

Equipment	300 000.
Development equipment <sup>7</sup>	250 000.
Beta projects	250 000.
Market Development	1 200 000.
<b>Total cost</b>	<b><u>2 000 000. \$</u></b>

## 6.3 SENSITIVITY ANALYSIS

A sensitivity analysis was performed which demonstrate the criticality of meeting sales objectives at a minimum of 75% to meet cash flow budget goals.

Projected results at year end (,000 \$)	100%	75%	50%	25%
Cumulative revenue 2012-2014	7 000	5 250	3 500	1 750
Marge brute	5 692	4 269	2 846	1 423
BAIIA	500	(923)	(2 346)	(3 769)
Profit net <sup>8</sup>	272	(956)	(2 414)	(3 868)
Encaisse	202	(343)	(2 340)	(4 200)

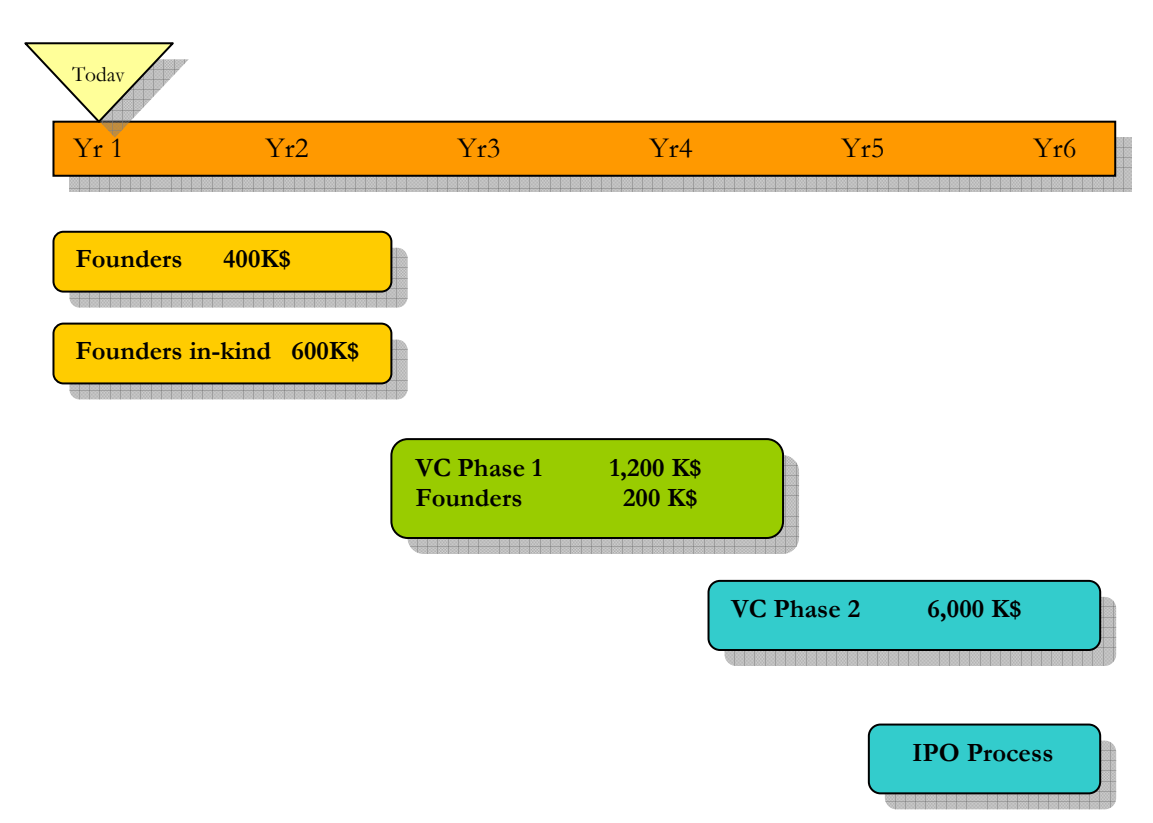
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<sup>7</sup> The development equipment is eligible to RS&DE investment tax credits.

<sup>8</sup> Assume un impôt combiné de 22%

6.4 INVESTMENT PLAN

Newco is seeking private equity or funding from an institutional organization involved with the new technology field for its phase 1 business development.



Newco’s strategy is to pursue its investment process in two phases while the business reaches full maturity and becomes attractive for the public market through an initial public offering (IPO). That is, a phase 2 investment is foreseen at the end of year 3 and will range from 6-8M\$. The initial investors will be repaid at that stage.

We believe that this structure reduces risks considerably with respect to return.

An IPO would be expected for year 6.

## APPENDIX A

### FINANCIAL PROJECTIONS 2012 -2014

## APPENDIX B

### FOUNDERS RESUMES