**BUSINESS PLAN**

**Add-X Biotech AB**

**OCTOBER 2005**ADD-X BUSINESS PLAN

|  |  |
| --- | --- |
| Date Stamp of Originating Document: | 28/09/05 |
| Version of Originating Document: | V 1.1 - Business Plan Underlag.1.1.doc |
| Date Stamp of this Document: | 10/10/05 |
| Version of this Document: | V 0.1 |
| Author/Editor of this Document: | Gunnar Forsberg |

Disclaimer

This business plan has been prepared by Add-X and is being provided to a limited number of persons, at their request. This document is confidential and is only being made available to parties who agree to keep it confidential. Neither this business plan nor any part of it shall be copied, reproduced or distributed to others at any time without the prior written consent of Add-X. By accepting this document the recipient is deemed to undertake and warrant to Add-X that the recipient will keep it confidential and that the recipient shall return all copies of this document to Add-X immediately upon request.

Although Add-X has taken reasonable care to ensure that the information contained in this document is accurate, no other representation or warranty, express or implied, is or will be given by Add-X or any of its agents. No responsibility is or will be accepted by Add-X or any of its agents as to the accuracy or completeness of this document or the information or opinions contained herein. Recipients must make their own investigations and must satisfy themselves as to the condition and prospects of Add-X and the accuracy and completeness of statements contained herein.

Any financial projections given in this plan are illustrative only. Because of the early stage nature of Add-X’ business, none of the projections given in this document should be taken as guaranteed to be attainable, nor should they be taken as implying any indication, assurance or guarantee that those assumptions are correct or exhaustive.

|  |  |
| --- | --- |
| Issued to: | ……………………………… |
| Company: | ………………………………  ……………………………… |
| Date of Issue: | ……………………………… |
| Copy Number: | ……………………………… |

Add-X AB - Business Plan

Table of Contents

[1 Executive Summary 5](#_Toc110475710)

[1.1 Overview 5](#_Toc110475711)

[1.2 Market Opportunity 7](#_Toc110475712)

[1.3 Business Proposition 8](#_Toc110475713)

[1.4 Financial summary 8](#_Toc110475714)

[2 Market Opportunity 9](#_Toc110475715)

[2.1 The Opportunity for Add-X 9](#_Toc110475716)

[2.2 Addiflex® **Error! Bookmark not defined.**](#_Toc110475717)

[2.3 ? **Error! Bookmark not defined.**](#_Toc110475718)

[3 Add-X Product Proposition 10](#_Toc110475719)

[3.1 Add-X’s Unique Proposition 10](#_Toc110475720)

[3.2 Business Model 11](#_Toc110475721)

[4 Target Market 11](#_Toc110475722)

[4.1 Market Context 11](#_Toc110475723)

[4.2 ? **Error! Bookmark not defined.**](#_Toc110475724)

[4.3 Market size and characteristics 13](#_Toc110475725)

[4.3.1 ? Market **Error! Bookmark not defined.**](#_Toc110475726)

[4.4 Market Validation 14](#_Toc110475727)

[5 Market Development Plan 14](#_Toc110475728)

[5.1 Direct Sales 14](#_Toc110475729)

[5.2 Marketing & PR 16](#_Toc110475730)

[6 Competition 17](#_Toc110475731)

[6.1 Competitive advantage 17](#_Toc110475732)

[7 Intellectual Property (IP) Assets 18](#_Toc110475733)

[7.1 Technology Context 18](#_Toc110475734)

[7.2 Add-X Solution 18](#_Toc110475735)

[7.2.1 ? **Error! Bookmark not defined.**](#_Toc110475736)

[7.3 Future IP Developments 20](#_Toc110475737)

[8 Business Growth and Resource Plans 20](#_Toc110475738)

[8.1 Staff Recruitment **Error! Bookmark not defined.**](#_Toc110475739)

[8.2 Facilities 21](#_Toc110475740)

[9 Financial Plan & Funding Assumptions 21](#_Toc110475741)

[9.1 Financial History 21](#_Toc110475742)

[9.2 Financial Projections 21](#_Toc110475743)

[9.3 Use of Funds 21](#_Toc110475744)

[10 Exit Strategy 22](#_Toc110475745)

[11 Risk & Opportunity Analysis 22](#_Toc110475746)

[11.1 Risks 22](#_Toc110475747)

[11.2 Opportunities **Error! Bookmark not defined.**](#_Toc110475748)

[12 Company History & Management Profiles 23](#_Toc110475749)

[12.1 Company Background 24](#_Toc110475750)

[12.2 Current Equity Structure 25](#_Toc110475751)

[12.3 Management Team 25](#_Toc110475752)

[12.4 Corporate information 26](#_Toc110475753)

[12.5 Location & Contact Details 26](#_Toc110475754)

|  |  |  |
| --- | --- | --- |
|  | Executive Summary | |
|  | Overview | |
|  | Environmental issues are at the top of the agenda for consumers, pressure groups, scientists, and increasingly for governmental organisations. Recent catastrophic events such as the tsunami and Hurricane Katrina, and reports of the decline of the ice cap have provided a wake up call that urgent action is needed. Effective solutions to the impact of man made waste and global warming are now seen as mainstream essentials, rather than esoteric and radical whims.  One of the most pressing environmental issues is that of the disposal of man made packaging materials, and in particular plastics.  **Add-X AB** (Add-X) has developed a patented solution to the problem of how to produce biodegradable plastic packaging at a price that is acceptable to the manufacturer, the retailer and ultimately the consumer.  This is currently sold as **Addiflex®**, a non-toxic additive available in a variety of formulations dependant on the specific production requirements. | |
|  | Add-X’s vision is to be the leading supplier globally of additives for biodegradable plastic packaging products. Add-X provides value-added solutions to distributors and retailers by making their packaging materials biodegradable.  Add-X delivers its additives to the manufacturing process via the raw material producer. The finished material cost including Add-X’s additives is not significantly greater than for raw materials that are not biodegradable  Add-X is proven to have the best and most viable technology in the marketplace. The Company anticipates a strong phase of market expansion in the near future and recognises the need to invest in marketing to increase its visibility in the market and to improve support to the distribution network as grows. Time to market is now a key issue; market presence and a clear focus on strategic customers will be major factors in determining whether Add-X’s technology lead results in it securing a similar lead in market share, and thereby profitability. | |
|  | The key driving forces on the market are:   * Brand owners and retailers (BORs) are keen to communicate their use of environmentally sustainable plastic packaging, and are consequently supporting the case for the added value of biodegradable materials. * The high price of plastic raw materials is encouraging the BORs to seek alternative global production sources.   Add-X‘s primary objective is to inspire the BORs to specify its additives when sourcing biodegradable packaging materials from its suppliers.  Add-X’s broader objective is to encourage the move to biodegradable polyolefins, and the use of more renewable, natural material combinations and new packaging concepts. This will lead to more environmentally sustainable waste stream at the lowest possible cost. This will be achieved by inspiring all of the actors in the value chain, from raw material suppliers to the BORs, to recognise and promote the benefits of Add-X’s technology. | |
|  | Add-X’s technology has four major competitive advantages:   * The additives are non-toxic and can be used both with recycled and with conventional polyolefins, as well as with renewable and natural materials. This means that biodegradability can be achieved at a cost of materials similar to that for non-biodegradable materials, and compatible with existing manufacturing techniques. A longer-term goal is to evolve the additives so that there is an overall decrease in the cost of materials for the producer. * Addiflex® has the lowest energy input requirements during the production process. * Addiflex® based biodegradable materials do not generate methane during the biodegradation process, under anaerobe composting conditions, unlike other direct biodegradable products. * Addiflex® achieves a waste volume reduction in biomass as low as 10%-20% of the original volume by weight. | |
|  | Add-X is an operational business with a proven track record.  Add-X with the support of its distributor Omya AG (based in Switzerland) has achieved a comprehensive list of high potential sales, either as new applications or applications currently using the materials from competitors.  Furthermore Add-X has proven that Addiflex® is more viable and durable than any other direct competitive material on the market. Consequently customers are now beginning to specify Addiflex® technology when sourcing plastic packaging materials. | |
|  | Market Drivers | |
|  | There are a number of factors which are now working to Add-X’s advantage:   * Increasing public awareness of environmental issues. * Subsequently brand-owners/retailers have an increasing commercial interest in the value added benefits to be accrued in terms of brand positioning and improved margins. * Increasing legal responsibility placed on producers for the environmental impact of their products. * A new EU directive (valid as from 2005) stating that organic waste can no longer be deposited at waste sites but must be collected. * Higher costs in the waste management chain for producers, distributors, retailers and end consumers. * Higher raw material costs. | |
|  | Business Proposition | |
|  | Add-X’s business idea is to sell added values to distributors and retailers by making their packaging materials biodegradable and supplying the company’s additives to the manufacturing process via the producer.  Add-X provides the features:  The first and only oxo-biodegradable technique on the market to be proven via independent test institutes.  The most cost effective additive – less material for the same result  The most effective additive on the market – initiation time could be controlled  The highest quality and durability – high process ability in the manufacturing process | |
|  | Financial summary& investment proposition | |
|  | ADD-X has a significant customer base and is generating revenues of €330,000 for 1Q-3Q 2005. There are currently 15 customers and a further 80 companies conducting trials of Addiflex®.  It is anticipated that with an aggressive increase in sales and marketing activity a break even position is achievable within 18 months of completion of the current investment round. Thereafter a net profit margin of n% by FY ??  ADD-X has a cash requirement of £?m to fund sales and marketing expansion and is therefore seeking investment of £nm. | |
|  | Market Opportunity | |
|  | The Opportunity for Add-X | |
|  | Worldwide the total market for plastic materials is 150m tonnes pa with a sales value of €?bn. Approximately one third of that market is for plastic packaging applications (equal to 50m tonnes pa). Polyolefins – polyethylene (PE) and polypropylene (PP) - constitute 60-65% of that volume (i.e. 30m tonnes pa).  Biodegradable applications are relevant to about 10% of the total market. With an average let down ratio (i.e. the ratio of additive to the volume of the final product) of 5% for Addiflex® this represents a total addressable market for ADD-X of 150,000 tonnes.  Assuming a 20% market share of the biodegradable market the potential for Addiflex® equates to approximately 30,000 tonnes pa, or equivalent sales value of €100-120m pa. | |
|  | Market Segments | |
|  | Add-X has identified three major application markets in the area of packaging materials:  **Film /bags**   * This includes carrier bags (the largest market), waste bags, refuse sacs, wrapping film, and mulch film. * Production technique is mainly blow moulding. * Plastic material mainly PE   **Trays and other packaging**   * Food trays, containers and trays as holder and transport concept including any other packaging application. * Production technique is mainly thermo forming. * Plastic material: Mainly PP   **Pots**   * Nursery and sylviculture pots for salads, flowers and forest plants. * Production technique is mainly injection moulding and thermo forming. * Plastic material mainly PP | |
|  | Add-X Product Proposition | |
|  | **Biodegradable plastic materials**  In the agricultural industry degradable plastics has been used since the 1970s. It is used as mulch film, to cover large commercial areas to assist the crops to grow faster and to protect them against heat and cold. When the season is over the plastic has also degraded.  Diapers, one-time usage articles for cleaning, pots for plants, food packaging and ordinary plastic bags are other products suitable for biological degradation.  Within the scope of biodegradation of polymers there are two main existing technologies:   * Direct biodegradation or hydrolisation, achieved by materials such as starch and cellulose * Biodegradation via oxidisation (the Add-X technique), achieved by lignin (all wood contains lignin up to approximately 25% of volume)   Addiflex®, an additive for making plastic biodegradable, is a non-toxic product with several unique properties. Various types of natural and renewable fillers, as calcium carbonate (chalk etc.) and fibres could replace part of the plastics and provide additional features to the end material. There are a number of Addiflex® formulations relating to the various applications and differing requirements for biodegradation. Generally Addiflex® is mixed with the plastic material in let down ratios of 2-20%. The mixing is achieved directly within the production process. Most current plastic production processes can utilise Addiflex®. Recycled plastic materials are also candidates for use with the additive Addiflex®. The physical production of Addiflex® is outsourced to a partner company in Switzerland. | |
|  | Add-X’s Unique Proposition | |
|  | Addiflex® represents a major advance on the current additives designed to promote biodegradation of polyolefins:   * The first and only oxo-biodegradable technique on the market to be proven via independent test institutes. * The most cost effective additive – less material for the same result * The most effective additive on the market – initiation time can be closely controlled * The highest quality and durability – high process ability in the manufacturing process * The only oxo-biodegradable technique on the market suitable for essentially all plastic processes | |
|  | Business Model | |
|  | Add-X enables distributors and retailers of plastic packaging materials to add value to their products, by supplying the additive Addiflex® to the polymer manufacturing process.  Add-X promotes the concept to the Brand Owners and Retailers (BOR) and supplies the material itself to the manufacturer. In addition the benefits need be communicated to the end customers so as to create the demand from the BORs for environmentally viable materials.  The company has the following sales, marketing and distribution structure:   * Production is outsourced to an independent compounder, Polycompound (CH) * Omya (CH) is selling and distributing in Europe, Asia, Africa and S America. * A sales and distribution network is to be established in North America (USA and Canada) * Add-X provides technical and marketing support to the distributor * The additives are supplied either via the distributor or directly to the customer * Add-X invoices the distributor, who takes the sales cost and invoices the customer * Add-X is to communicate and market the Addiflex® concept to BOR and priority customers     (replace with new value chain) | |
|  | Target Market | |
|  | Market Context | |
|  | In the plastic packaging market there are strong relationships between packaging producers, distributors and end-users. Add-X will actively promote and work for an international market for biodegradable plastic packaging materials based on existing polyolefins by supplying its additive to the packaging producer.   * Add-X will supply the additive to the packaging producer via international distributors * Add-X will manufacture the additive, the strategic component * Add-X will protect its IPR via patents   Add-X is today, via our distributor Omya, having marketing and sales activities in the whole of Europe and has now also started activities in Australia, Thailand and Malaysia. Further activities will also start in India and China.  Of the priority market segments the highest potential volumes are for bags/film, and in that about 44% of the volumes are related to carrier bags. See Diagram 2. The overall interest from the brand owners/retailers is also well defined in this segment and the actors are rather big and not so many, thus the marketing efforts could be focused.  Further more the BOR are very often sourcing the production in Asia and countries like Thailand and Malaysia. Other segments will certainly follow as well when the forthcoming work is being done. | |
|  | Market size and characteristics | |
|  | This equates to a global revenue opportunity of ???  **Diagram 1** Yearly market potential | |
|  | Market Validation | |
|  | Add-X’s materials are all non-toxic and have been tested and proven for biodegradability. The tests have been conducted by SP in Borås and by EMPA in Switzerland. Normpack in Sweden has also approved Addiflex® for use in connection with food packaging and production processes.  Add-X is continuously running tests in order to fulfil the demand from market and from environmental authorities. A comprehensive number of production tests at customers are also ongoing for various application areas (see Annex 2 for a summary of test results). | |
|  | Market Development Plan | |
|  | Sales Process | |
|  | The basic sales process is described as follows   1. Invitation To Tender (ITT) or sales lead 2. Customer visit - decision to proceed to test 3. MNDA (non-disclosure agreement) and NA (non-analysis agreement) signed off - release of test material 4. Test evaluation leading to acceptance or new test 5. Acceptance - Specification set 6. Order placed by or Presentation to the "end customer"   The distributor is involved in all of the steps and Add-X normally provides support in steps 2,3 and 6. An MNDA/NA (Mutual Non Disclosure Agreement & Non-Analysis Agreement) is signed between Add-X and every new customer in order for them to receive the test material and relevant technical information from the distributor or from Add-X. | |
|  | **Current distributor**  In 2002 Add-X and the Swiss company Omya AG have signed a Distribution Agreement giving Omya the right to act as a global distributor for Add-X’s product Addiflex® in the market for plastic packaging materials. Omya AG, having its Head Office in Oftringen in Switzerland, is an international white minerals company supplying high quality calcium carbonates and talcs. The company's major markets include paper, plastics, rubber, coatings, adhesives, building products and agriculture. Omya is a privately owned company, and as a result, it is able to pursue longer-term goals than comparable publicly listed companies. Omya has grown steadily since it was formed more than 115 years ago. The Company has around 5600 employees in more than 100 locations in over 40 countries.  Add-X provides technical and marketing support to Omya. Add-X is in the process of signing a new agreement with Omya. | |
|  | Target Customers | |
|  | Add-X’s prime target group is the distributors and the retailers within the area of plastic packaging materials. The secondary target group is the manufacturer and converter of the actual packaging material. The aim is to have the brand owner/retailer to specify Add-X for any biodegradable applications of packaging materials.  A large number of local, international and global actors have been identified on the market within the value chain for the company’s additives. During the last 18 months the company has gained an in depth understanding of the interaction between those actors, and is consequently well positioned to capitalise on its technical superiority. Key actors are described in the matrix in Annex ??. This is now the base for the strategy to focus resources in order to develop the market potential further.  Examples of typical interactions are:   * Amcor is producing and distributing to Co-op (UK). * Baco is distributing to Co-op (UK) but using ThaiPlastics (TH) as the producer. * Europackaging is both producing and distributing to Tesco and Sommerfield. * Papier Mettler is doing the same for Tesco, Carrefour, Auchan and H&M. * RPC is producing for Kraft and Unilever, both of whom buy directly from RPC.   Some of above actors already have existing biodegradable applications using Add-X’s direct competitors. In several cases Add-X is now directly involved in taking the business from those competitors. Also  Additionally a number of brand owners and retailers are starting to specify Addiflex® and Add-X’s technology to their packaging producers. | |
|  | Current key customers | |
|  | Add-X currently has ongoing activities with approximately 100 prospective customers mainly in Europe and Asia. These represent a potential sales volume of approximately 1,500 tonnes of Addiflex® or €6m in revenues.  Add-X’s 10 largest customers in 2004 and through to 3Q 2005 are as follows: | |
|  | Marketing & PR | |
|  | A very important success factor is Add-X’s ability to promote sustainable packaging solution and to be highly visible in the market place.  Add-X’s goal is to be the provider of choice in the initiatives to make polyolefins biodegradable. This will be achieved by inspiring the various actors in the value chain.  Add-X will encourage and support an independent international association for promoting sustainable polyolefins. This will be established at the Swedish Research and Test Institute SP, in Borås, Sweden. The association will be a non-profit entity. A number of interested potential members are already in discussions on the matter.  Potential members are larger polyolefin suppliers, converters and manufacturer of packaging products. Universities and Institutions as well as end users, retailers and brand owners will also be candidate members. One of the major tasks for this group will be to promote oxo-biodegradable technologies. Add-X will be the prime provider for the oxo-biodegradable technique in this group. | |
|  | Competition | |
|  | The history behind biodegradable plastic materials is dominated by the development of the use of starch from corn as the base for biological degradation  There are in the market a number of actors using different technologies in order to achieve biodegradation following the two technologies direct biodegradation and indirect biodegradation.  Of these there are two direct competitors working with the same technology, oxo-biodegradation, but with a different technique to that developed by Add-X.  Those are:  ***EPI***, Canada/USA  Product name: “TDPA”  Base: Using thermo oxidants and photo oxidants  Start: 1992  ***Symphony*,** UK  Product name: “d2w”  Base: Using thermo oxidants and photo oxidants (copy of EPI)  Start: 1995 | |
|  | Competitive advantage | |
|  | Add-X has comprehensive experience in biodegradable technologies, starting to work with starch-based materials 10 years ago.  Due to the very expensive nature of starch-based materials (3-5 times more expensive than non-biodegradable products) Add-X struggled to complete with traditional polyolefins. Consequently in 1998 Add-X decided to develop its own additive based on a low cost oxo-degradable technology. Today Add-X’s own formulations (Addiflex®) are the most viable and cost effective ones on the market. | |
|  | Intellectual Property (IP) Assets | |
|  | Add-X Solution | |
|  | **Patents** | |
|  | Add-X has established a comprehensive knowledge base within the area of oxobiodegradble additives. This includes patents and technical documentation as well as know-how owned by the company in regards to the additive Addiflex®.   * A Swedish patent was filed 2004. * A PCT was filed in 2005. * Addiflex® is a registered trade name | |
|  | **Know-How** | |
|  | The network Add-X has established over several years has generated special know-how and skills within several critical segments.  In addition to that Add-X has formed an informal Advisory Committee consisting of scientists, professors and other skilled people with high competence within the company’s business area.  Together with the existing personnel and know-how this has created a very valuable intellectual capital base, which will be a vital part of Add-X’s marketing programme.  The network and Advisory Committee consists of:   * Russel Johnsson   MSc. ex Environmental Manager at the IKEA Group. A member of “The natural Step”, and on the committee of the Gothenburg environmental award etc.   * Thomas Hjertberg   Professor at the institute of polymer technology at Chalmers University of Technology.   * Ignacy Jacubowicz   PhD in Physical Chemistry. Scientist and Section Leader for the Chemistry and Polymer Technology at SP in Borås.   * Göran Värmby  MSc. Project Manager at the environmental section of Business Region Göteborg. Add-X is a member of the Plastic Technical Committee at the Swedish Standardisation Institute since 2004 and also an active member of several working groups with the CEN, the European Normative Work Committee. | |
|  | Future IP Developments | |
|  | Addiflex® is the current focus for ADD-X with plastic packaging as the prime application for the technology.  Future developments include diversification into other applications for plastics (carrier bags, diapers, much film etc) and reformulation to address specific technical requirements such as use with recycled materials, or to suit particular manufacturing processes.  There is significant scope for professional service revenues from plastics materials suppliers, and from end product manufacturers wishing to use Addiflex® or to specify reformulations. | |
|  | Business Growth and Resource Plans | |
|  | Current structure & resources | |
|  | Add-X’s early growth strategy has been to work with a comprehensive network of scientific and operational specialists in order to minimise the requirement for in-house company resources.  This was suitable when product development was intensive in the company. However Add-X is now moving to a phase of significant marketing development so it is vital to build competence and know-how within the company itself. This will build added value internally, particularly as the company business model is dependent on its intellectual capital assets. | |
|  | Staff Recruitment | |
|  | The company has a need for staff recruitment in the areas of sales & marketing, and technical development over the next three years as follows:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Personnel Development** | **2005** | **2006** | **2007** | **2008** | | MD | 1 | 1 | 1 | 1 | | Admin/logistics | 1 | 1 | 1 | 1 | | Sales/Marketing | (1) | 2 | 4 | 5 | | Technical | 2 | 2 | 2 | 3 | |  | **4** | **6** | **8** | **10** | | |
|  | Facilities | |
|  | ADD-X is an IP business and any physical production is outsourced. Consequently the company’s growth and success will not require significant investment in facilities.  The current operation in ??? has sufficient space to accommodate ???  A UK operation will be established??? | |
|  | Financial Plan & Funding Assumptions | |
|  | Financial History | |
|  |  | |
|  | Financial Projections | |
|  |  | |
|  | Use of Funds | |
|  | ADD-X has developed its core IP and is already active in the market. The current round of investment will provide funds to accelerate sales and marketing activity, in order to firmly establish ADD-X’s position as the supplier of choice, on a global basis, for additives to achieve biodegradability in plastics materials and packaging.  ADD-X’ technology is superior to that of the competition but this message must be clearly communicated both to the specifying BOR (Brand Owner/Retailer) and to the materials manufacturers/distributors.  While ADD-X will work with existing actors in the supply chain there will still be a vital promotional and support role:   * Promoting to and educating the BORs about the benefits and viability of current solutions for biodegradability * Supporting the distribution channels in their initiatives to sell to the BORs and the plastics materials manufacturers * Advising and supporting manufacturers in the use of ADD-X additives in their production process | |
|  | Exit Strategy | |
|  | The most likely exit scenario is a trade sale, with potential candidates being manufacturers and distributors of plastics raw materials and additives, processed plastics, or packaging materials.  It is anticipated that there should be sufficient market momentum and revenue growth to negotiate an attractive acquisition agreement within a 2-4 year timeframe. | |
|  | Risk Analysis | |
|  | Add-X AB is taking the step from acting on a local or regional market level to being a global marketing supplier. A marketing success may not be fulfilled. This risk is balanced by the high potential and if Add-X is successful to develop the prosperous markets.  The Board and Management of the company are actively working to minimise the risks. Below is a summary of the areas of most concern and a view on how these are being handled by the company. | |
|  | Risk assessment and management | |
|  | **Financial risks**  Risk: During the process of getting external capital there are several factors of which the company can’t influence.  Strategy: The company is working towards set targets and is providing a correct update on regular basis on how the development phase is proceeding.  **Competition**  Risk: The market has large potential volumes and thus up scaling advantages. This implicates that competition is working hard and global. Presence on the market is a key factor for success and to show creditability to the customers.  Strategy:  Add-X has established international distribution networks, via Omya, and proved viability of the products. During 2005 the company has managed to prove in comparison tests that the additive Addiflex® is technically more viable then any of the existing actors supplying thermo oxidative additives on the market.  **Patent**  Risk: One can’t exclude that other actors on the market might have successful research on competitive technology. This could implicate that future patents or launching on the market could be more difficult or even impossible than foreseen.  Strategy: To protect the technology via patent or other propriety rights and create strong relationship with the market including comprehensive networks within area of the biodegradable plastics. The company has applied for a patent during 2004 and has continued filing of the patent via PCT in 2005. Further patents based on new developed products in strategic areas will come. Agreements with strong distributors on the market, e.g. Omya, will provide strong relationship with the actors on the market to guarantee success.  **Financial development**  Risk: A marketing success may take much longer time. Brake-even will have to wait or might not even be full filled.  Strategy: The sales of Addiflex® have earlier come from a much segmented area of the market and Add-X has now created a Targeting Plan together with the distributor Omya to develop the prosperous markets. | |
|  |  | |
|  | Company History & Management Profiles | |
|  | Company Background | |
|  | 1. K.M.L Invest AB is completing a 100% buyout of the existing Add-X AB. The company concentrating its operating on biodegradable additives for plastics. The development of an own additive starts.   1997/1999 Development and testing in production of Addiflex®.  2000 Continuous testing and development  2001 Positive results at tests at SP in Borås and EMPA in S: t Gallen Switzerland, concerning biodegradation.  2002 The company name is changed to Add-X AB.  A product Advisory Committee is established.  A distribution agreement is signed with Omya AG concerning global sales of Addiflex®.  The company is signing a licensee agreement concerning Functional Coating  2003 A comprehensive introduction on the market starts with Omya in Europe.  A Eureka projects gets approval, ECOMATRIX, regarding a composite    2004 Very positive tests of mulch film at the Institute CNEP – Centre National d’Evaluation de Photoprotectionat in France, Addiflex® is rated No 1 in the market.  Market brake-through in England. Sales to Co-op UK.  Patent application filed concerning packaging materials and packaging.  2005 Comparison tests with direct competitors give Addiflex® superior test result.  Market activities outside Europe starts.  Market activities outside Europe starts.  First orders from Asia – Thailand.  Patent application filed world-wide via PCT concerning packaging materials and packaging.  Addiflex® is being requested by larger customers for the first time. | |
|  | Current Equity Structure | |
|  | The existing share capital is SEK 2.5 million and There are currently five owners in the company with the following shares:   |  |  |  | | --- | --- | --- | | **Shareholder** | **Shares held** | **% Equity** | | K.M.L Invest AB | 52,800 | 48 | | Walco | 28,200 | 26 | | Gunnar Forsberg | 12,500 | 11 | | Eugen Mössner | 11,000 | 10 | | Graham Chapman | 5,500 | 5 | | **TOTAL** | **110,000** | **100%** | | |
|  | Management Team | |
|  | ADD-X has the advantage of highly experienced personnel responsible for three vital aspects of the business – strategy, technology development, and operations. The key managers are:  **Gunnar Forsberg**  MSc and MBA was engaged in 2002 as a new Managing Director. He was coming from LightLab AB (publ), a company on the NMG Equity List. Gunnar Forsberg has during the last 20 years been in management positions at several international and Swedish companies. He is responsible specifically for the market development and co-owner.  **Graham Chapman**  PhD in Chemistry. Operating in Canada. Responsible for the biodegradable additive development. Dr Chapman is one of very few in the world with very comprehensive knowledge and experience in regards to biodegradable and compostable materials. He is a co-owner.  **Eugen Mössner**  MSc. Operates as Technical Director in the company. He has experience as being responsible for R&D at General Electric’s plastic division. He has a comprehensive knowledge in production technology concerning plastic manufacturing processes. He is a co-owner. | |
|  | Corporate information | |
|  | Directors |  |
| Registered Number |  |
| Registered Office |  |
| VAT Number |  |
| Company Auditors |  |
| Company Lawyers |  |
| Company Bankers |  |
|  | Location & Contact Details | |
|  |  | |

# ANNEX 1

# Market Players

|  |  |  |  |
| --- | --- | --- | --- |
| **Geographic** | **Manufacturer** | **Distributor** | **Brand Owner Retailer** |
| **Local** | Amcor (UK)  Stenqvist (SE)  bpi (UK)  Papier Mettler (GE)  Trioplast (SE) | Amcor (UK)  Stenqvist (SE)  bpi (UK)  Papier Mettler (GE) | Co-op (UK )  Axfood (Sweden)  Tesco (UK)  Auchan (F)  Sommerfield (UK)  Morrison (UK) |
| **International**  **”Glocal”** | bpi (UK)  Huhtamäki (SF)  Papier Mettler (GE)  Trioplast (SE)  Swedeponic (SE) | Baco (UK)  bpi (UK)  Papier Mettler (GE)  Greenpac (UK)  Bunzl (UK))  Huhtamäki (SF)  Trioplast (SE)  Swedeponic (SE | Co-op (EuroCoop)  H & M (EU)  Carrefour (EU)  Metro (EU)  Ahold (EU) |
| **Global** | Europackaging (UK)  ThaiPlastics (TH)  Borealis  Omya (CH)  RPC (GE) | Europackaging (UK)  Bunzl (UK) | Tesco  Walmart  Metro  Carrefour  Kraft  Unilever  Ikea |

# ANNEX 2

# TECHNICAL VALIDATION - TESTS & REPORTS

**Background**

The existing norm EN 13432 and the testing procedures for composting of packaging materials have not yet been adapted for thermo oxidative additives. Thus separately tests have been made of Addiflex®® to determine and prove compostability, quality of soil and ecotoxicity, germination and heavy metals at different test facilities as

* SP Borås, Sweden
* EMPA St Gallen, Switzerland
* SV Kompostieranlage Bellach AG, Switzerland
* Centre National d'Evaluation de Photoprotectionat (CNEP)

**Results of testing**

* reached the goal acc. To ASTM standard D 6400-99
* (Standard specification of compostable plastics)
* fulfilled the quality test of the soil acc to EN 13432
* fulfilled the germination test acc EN 13432
* all analysed heavy metals values well below DIN 54900 and EN 13432
* proved induction time under photooxidation and thermooxidation of PE films

**Current activities**

* To repeat the earlier test results
* To achieve the relevant certificates related to existing test procedures
* Customer direct related tests are running at large scale compost plants and at various test institutes

**Test report references**

* Material Safety Data Sheets (MSDS),
* SP Report Kmle6230-1b , SP Report Kmle6230-1, EMPA Report 414000,
* SP Report F221840:D, EMPA letter 2002-07-03, EMPA Report 422809,
* I Jacubowicz Paper "Evaluation of degradability of biodegradable polyethylene

(PE) Polymer Degradation and Stability 80 (2003) 39-43

* SP Appendix to Kmle6230-1a
* Report CNEP May 2004, SP Statement Toxicity 2005-01-17
* Normpack Certification No 134 15 001 1848 20.