

This report while a good one for a 1st year student, is not as good as the 'distinction level' example provided to the students as part of their packs. While it covers most issues the quality of the analysis is not as good. It would be a pass level assignment

Feasibility Study Report

Review of request of £400k funding for development of Energyflo™ Cells



PREPARED BY: XXXXXXXX
EMAIL: XXXXXXXX
DATE SUBMITTED: 10/03/2006

Contents

1. Introduction	3
2. Features and Potential Benefits	4
2.1 Evaluation of Proposed Construction Benefits	4
2.2 Evaluation of Proposed User Benefits.....	4
3. Marketing Growth Sales Strategy.....	5
Further Comments	6
4. Potential Competition	7
Further Comments	7
5. Potential Human Factors.....	8
5.1 The 'Chicken-Gun Test'.....	8
5.2 Ease of Installation	8
5.3 Designers	8
6. Potential Project and Development Issues	9
6.1 Business Experience/Knowledge	9
6.2 Project Management	9
6.3 Market Analysis	9
6.4 Technical Targets.....	9
6.5 Warranty	10
6.6 Logistics	10
6.7 Intellectual Property.....	10
7. Risk Analysis.....	11
7.1 'Project-termination' Factors.....	11
7.2 'Project Scale-down' Factors	11
Further Comments	11
8. Conclusion/Next Steps	12
8.1 APPENDIX A – COMPANY MANAGEMENT	13
8.2 APPENDIX B – BIBLIOGRAPHY	13

1. Introduction

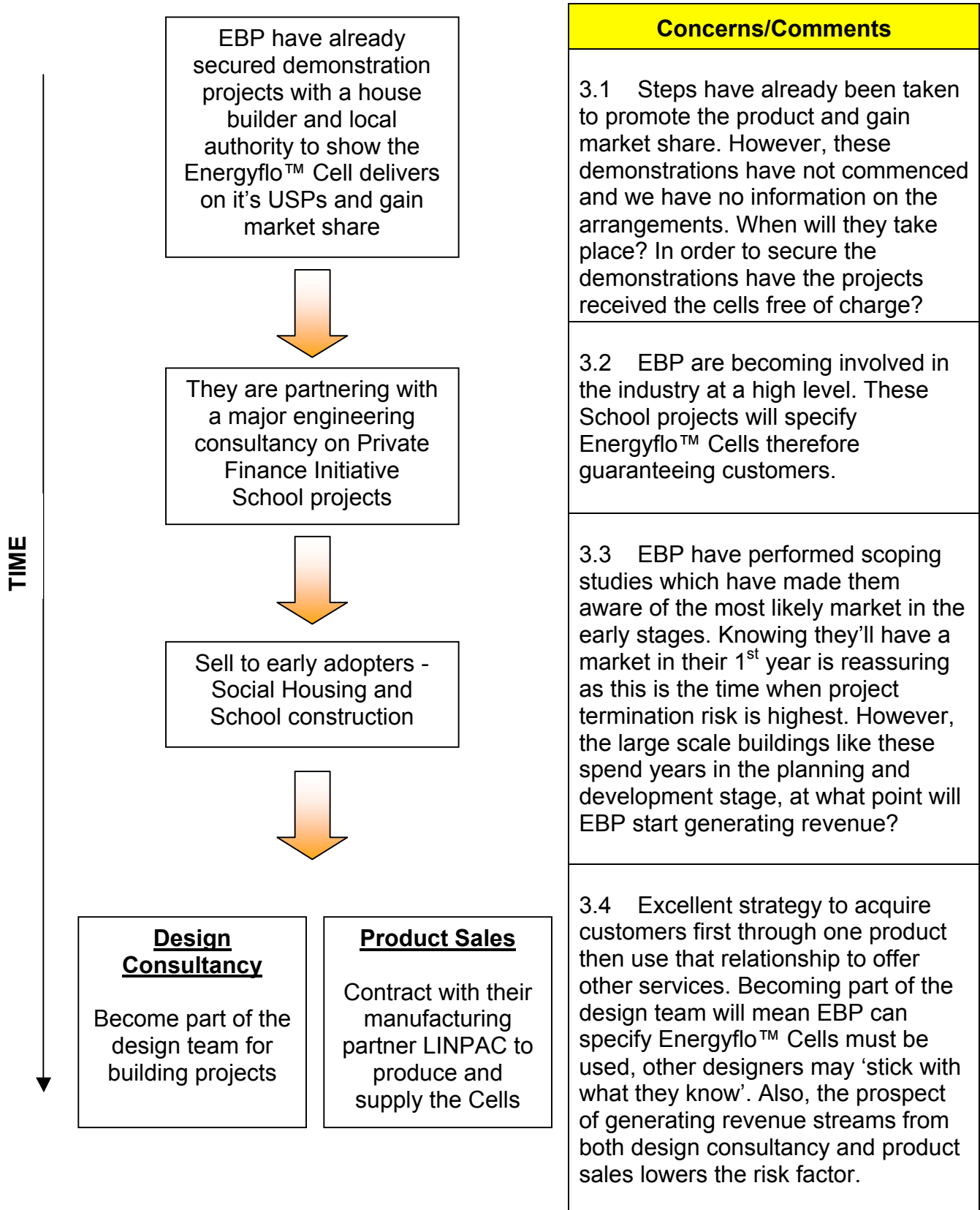
The Environmental Building Partnership Ltd (EBP) - 'The innovators of modular breathing wall systems'. They are an established building engineering consultancy which aims to develop energy efficiency in building products and services. EBP proposes to produce and sell the Energyflo™ Cell, a new 'breathing wall product'. They have developed it to replace traditional insulation and it works according to a whole building concept known as 'dynamic breathing buildings' which offers many benefits to the builder and building occupants.

EBP are seeking funding of £400k to support product development and business operations.

2. Features and Potential Benefits

Feature	2.1 Proposed Construction Benefits	Concerns/Comments
Insulation and ventilation will not have to be put into the building separately.	2.1.1 Reduces man-hours when building.	By how much will the man-hours be reduced, is it a worthwhile reduction?
It has been designed to be modular, easy to assemble and to fit within existing construction methods.	2.1.2 No extra training will be required for construction workers if this is the case.	Have EBP actually tested this with the people who would be working with it? Would this modularity place restrictions on the design of buildings that use it?
Feature	2.2 Proposed User Benefits	Concerns/Comments
The Energyflo™ Cell manages airflow so that the external wall becomes an efficient heat exchanger, this reduces operational energy use of a building.	2.2.1 Therefore reducing the cost of heating it.	By how much does it reduce the cost of heating the building by? 2% or 20%? Is it worthwhile?
Internal space is de-pressurised causing ventilation air to be drawn into the building via air permeable external walls.	2.2.2 Improve indoor air quality.	Excellent USP to market as society calls for cleaner healthier environments. But by how much is the air quality improved and how is this measured?

3. Marketing Growth Sales Strategy



Further Comments - Markets

EBP's business strategy appears to be well thought out and sensible. Once they have completed the initial stages I believe the market could be expanded to almost any type of building from hospitals to livestock buildings where ventilation is a major issue.

The fact that EBP claim their technology will future proof existing construction methods against 2008 regulations is very important. The Government have recently raised the energy efficiency specifications that buildings must meet, and if the Energyflo™ Cell can achieve today's standard easily then it could come to obtain a greater share of the market in the future when these regulations change again and conventional insulation methods 'can't keep up'.

4. Potential Competition

Potential Competition	Concerns/Comments
4.1 Existing insulation methods and companies that are well established within the industry.	The construction industry as a whole may be sceptical of new technology and prefer to stick to conventional methods. Many different people would need to be convinced of the product.
4.2 Other innovative technologies that have already been put into practice such as insulating building blocks where the insulation is in the external wall, reducing the need for insulation inside.	EBP would have to be aware of other technologies and the developments they are making so as not to become complacent.
4.3 Development of the separate technologies - ventilation and insulation.	They could become more efficient separately.

Further Comments

The initial competition for EBP will be the existing companies, but once they have broke into the market they could do well and grow quickly.

5. Potential Human Factors

Issue	Concerns/Comments
<p>5.1 The ‘Chicken-Gun Test’ How can EBP claim that the Energyflo™ Cell converts the external wall into an air filter <i>for life?</i></p>	<p>Prototype product design phase has been completed and demonstration projects are organised. However, no testing has been done over long periods of time to support the claim of long term effectiveness.</p>
<p>5.2 Ease of Installation Has the product been tested by builders or the people who are actually going to work with it?</p>	<p>In practice it may be found that training is required which would discourage buyers as training would cost time and money.</p>
<p>5.3 Designers Will buildings using the Energyflo™ Cell need to be designed around them because of their modularity?</p>	<p>Architects and Engineers would rather have as few restrictions as possible to accommodate creative designs.</p>

6. Potential Project and Development Issues

Issue	Concerns/Comments
<p>6.1 Business Experience/Knowledge</p> <p>6.1.1 Are EBP a sufficiently experienced/knowledgeable company to undertake a venture such as this?</p> <p>6.1.2 Is it sensible to contract with their manufacturing partner LINPAC?</p>	<p>EBP have been winning awards for their innovative technology designs since they won the Smart Scotland Award in 2002 which shows a good knowledge of this technology. However, there is no record that they have any experience in the commercialisation of technology.</p> <p>LINPAC Group is a £1.1 billion global business established in 1959 so have much experience and knowledge to offer. LINPAC - “Our worldwide presence ensures a consistent level of quality and supply, no matter where our customers are based.” A relationship with such a reputable company will bring credibility to EBP.</p>
<p>6.2 Project Management</p>	<p>EBP have a well structured company management team (see appendix. 8.2) with a designated project manager which is important to ensure everything is managed properly in a project. Despite this they are sensible in their act to seek a Chief Executive Officer (CEO) with relevant construction industry background to steer their marketing strategy.</p>
<p>6.3 Market Analysis</p> <p>EBP predict “break even in 2007, achieve £3.1 million turnover in 2009 and gain 5% of the global insulation market with its Energyflo™ product range by 2015”</p>	<p>Here EBP have performed top-down market analysis, which could produce misleading results.</p> <p>The value of the global insulation market is not readily available it is therefore impossible to say what scale of growth the company will have undergone when they go from £ to %?</p>
<p>6.4 Technical Targets</p>	<p>Since EBP have come up with a completely new idea there are no technical targets for it as such, only that it must meet government regulation standards, standards which EBP say the Energyflo™ Cell can reach easily. However, due to the lack of long term testing there is nothing to support this claim.</p>

<p>6.5 Warranty</p>	<p>From the business model there is no indication of what would happen if in fact the product failed to work for any reason.</p>
<p>6.6 Logistics</p>	<p>Insulation, although light, tends to be bulky and therefore expensive to store and transport. EBP do not address this, however LINPAC have a logistics division which could be used.</p>
<p>6.7 Intellectual Property (IP)</p> <p>6.7.1 What type of IP? 6.7.2 Where does it protect? 6.7.3 How long will it protect? 6.7.4 Who owns the IP?</p>	<p>EBP's business model tells us the technology is patented, but fails to say in which countries the patent is applicable, how long the patent will last or who owns the patent i.e. the company or the inventor?</p>

7. Risk Analysis

7.1 'Project-termination' Factors	Comments
7.1.1 Unrealistic profit projection from top-down market analysis.	The product may simply not be as successful as predicted.
7.1.2 Change in demands or requirements.	For one reason or other the combination of insulation and ventilation could be disregarded as unnecessary.
7.1.3 The product not lasting the test of time as predicted.	This would terminate the project in the future, wasting much money and time.
7.2 'Project Scale-down' Factors	Comments
7.2.1 Cost of Energyflo™ Cell in relation to existing Products.	If the cell and possible related costs such as training, prove to be more expensive or even similar in price to existing products the project will inevitably not do as well as expected.
7.2.2 Hidden costs such as logistics that appear not to be thought of.	It may be that money will have to be spent on things EBP have not already thought of, therefore the project will not have the funding to grow as previously anticipated.

Further Comments

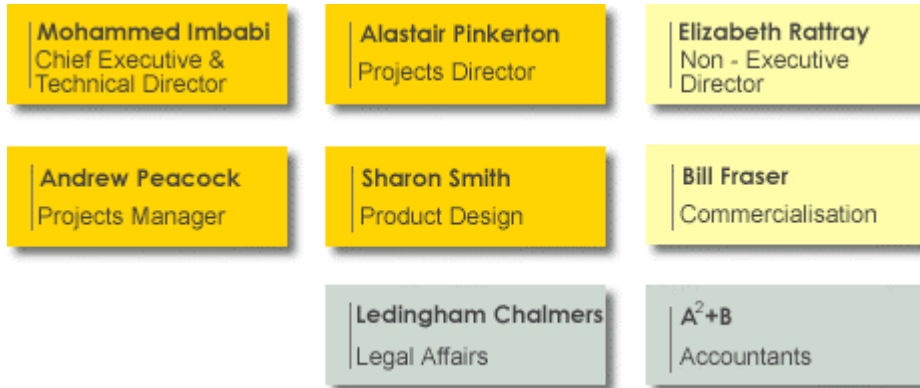
At present I believe the projects' most important termination factor to address is EBP's complete disregard to producing actual figures and qualitative information to support claims made and measure effectiveness of the product. Is this information absent in order to make the product appear more attractive? Or have EBP not considered figures and values in their business plan because of their lack of experience?

8. Conclusion/Next Steps

I find the £400k investment opportunity in EBP both interesting and potentially worth supporting. However, before seriously considering this I would like to see:

- The ease of assembly tested by builders
- A more in depth market analysis to give a more accurate projection
- More information on how they can make claims of life time effectiveness and the accuracy of these
- The scoping study (mentioned 3.3)
- What could go wrong with the cell and the possibility of this happening
- More research into logistics
- More detailed patent information
- EBP's historic financial results
- EBP's projections from when the company started – have they achieved them?
- Detailed 3-5 year projections
- What we would receive for the £400k investment
- When we could expect return on investment
- Contract terms with LINPAC
- Independent report on the technology
- CV's of EBP's management team – are they only scientifically competent?
- A CEO in place *managing* the project, not (mentioned 6.2) simply *steering* the marketing strategy. The use of 'steering' implies many people want to be involved in the overall management. I feel the project would benefit from just one experienced manager, namely the CEO.

8.1 APPENDIX A – COMPANY MANAGEMENT



8.2 APPENDIX B – BIBLIOGRAPHY

- http://www.connectonthenet.com/Web/Site/SpringboardPresenter/Springboard05_pres enters.asp
- www.yzen.com
- Kevin Parker and Michael Mainelli, "[Great Mistakes in Technology Commercialisation](#)", Journal of Strategic Change, Volume 10, Number 7, pages 383-390, John Wiley & Sons (November 2001).
- <http://www.environmental-building.co.uk/index.shtml>
- <http://www.the-infoshop.com/study/ah35419-insulation-market.html>
- <http://www.linpac.com/aboutus.asp>